Journal of Contemporary Management
Volume 15: Special Edition: Fourth Industrial Revolution presented by UKZN

Barriers to E-commerce adoption in African countries. A qualitative insight from Company Z

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Abstract

With the rise of e-commerce, most organisations are turning to online activities as a way of conducting their businesses. This change in doing business has been found to have been a preferred option for penetrating certain markets. However, as great and innovative this is for retailers to shift into the e-tailing space, it has been met with challenges in the different countries across the African continent. There were barriers identified in different countries some common across different countries and others not so common. Deeply entrenched in the narrative about e-commerce barriers in Africa are factors that are socio-economic, cultural, institutional and cognitive. It is crucial for organisations present in Africa or those that wish to enter the different African markets to understand how best to participate in this region. In an attempt to understand e-business participation for African Multi-Country strategy, Company Z was approached to learn more about their best practice and failures learnt in participating in e-business within different countries in Africa. What was clear from their responses is that Africa is not a country, but a continent with different countries that have different barriers. This study was an exploratory study into this phenomenon, to create a better understanding of the barriers organisations may face and how best to deal with them. The study followed on interpretivism philosophy as it aimed to understand the decision rationale that management at this organisation followed. Data was collected through semi-structured individual interviews, which were analysed using thematic analysis. Conclusions were reached that identified a model for e-commerce barriers in the African context. Three phases were identified, namely the Environmental Phase, Growth & Sustainability Phase and the Control Phase. Though the results are not confirmed for all countries, they can be used as a guide in understanding how best to approach various countries in Africa, provided environmental variables are similar to those discussed in this article.

Key phrases

Institutionalisation; security and socio-economy

1. INTRODUCTION

E-commerce is critical to the fourth industrial revolution, which countries are starting to include within their economic narrative. Africa in particular, with its fast growing population is said to benefit the most from this era, if approached correctly (Cilliers 2018). This era is seen as the time when there will be a new understanding of people and machines, the birth of ‘cyber-physical systems’ (Davis 2016). For the fourth industrial revolution to prosper it needs the technologies provided by e-commerce during the third industrial revolution (Borhauer 2018). That said, this means economies are heavily dependent on technology for them to thrive. This however could be problematic for developing countries like those in Africa with limited resources and different economic and cultural landscapes. It therefore is critical that each African country uses its own context when developing policies and strategies and makes use of the outcome of this article as a guide. Development of frameworks to guide strategy in entering the different African markets is thus very important for African countries to have their own strategies. Alyoubi (2015) suggested e-commerce adoption works best when common critical factors are present within a country. Colla and Lapoule (2012) advise that there are Key Success Factors (KSFs) that need to be available in order to motivate consumers to purchase online, which create value from the consumer’s point-of-view. This article aims to identify the barriers to e-commerce that influence adoption in developing countries as experienced by Company Z. Company Z is a fashion e-tail company. It functions as a business unit to a trusted parent company, which provides most of the News and Magazine consumption options in South Africa and internationally. For ethical, anonymity reasons, this parent company shall be referred to as Company X and the company the research is based on will be referred to as Company Z. Company Z is situated in the central business district of Cape Town, Western Cape. Company Z forms part of Company X’s e-commerce business units.

2. BACKGROUND

This study identifies themes that define barriers faced by businesses when approaching new markets for online purposes. These are critical themes that need to be fulfilled in order to achieve a successful e-commerce adoption. They include customer behaviour, skills & technology, logistics and infrastructure.

2.1 Customer Behaviour

E-commerce is commonly described as the ability to do business over the internet. This is usually the selling and buying of goods online. This has been found to be an option that businesses could use to penetrate markets. E-tailing is a derivative of this concept where the retailer builds a presence on an online platform. According to Karahanna, Williams, Polites, Liu and Seligman (2013) the most important factor for e-commerce success is consumers' propensity for e-commerce. Travica, Borislav, Ejub, Maraijana and Emilija (2017) refer to this as a 'cultural layer'. This degree of readiness comes from consumers' historical association, or a lack thereof, with e-commerce (Alyoubi 2015). It is crucial for companies to understand local customs, customer needs and the particularities of local markets before entry. A major factor embedded within the 'cultural layer', and its adoption of e-commerce practices, is trust (Lu, Fan & Zhou 2015). Even in developed markets such as the United States, where customers are generally used to the practice of online shopping, trust issues are still evident (Alyoubi 2015). In developing countries where e-commerce is still in its infancy, Sim Shagaya, the founder and chief executive of DealDey and Konga in Nigeria, suggested that companies need to do things differently for consumers (Media24 2014). To build trust and create brand awareness, Konga and DealDey rely on social media and word-of-mouth, which is significant in Nigeria (Media24 2014).

2.2. Skills and Technology

Other important factors that support the success of e-commerce adoption are technical and managerial skills (Alyoubi 2015). In order to enhance their competitive positioning, countries need to concern themselves with factors such as skills, higher education and training, efficient markets and the sophistication of business (Yunis, Koong, Liu, Kwan & Tsang 2011). When countries can create and maintain an environment that sustains the competitiveness of businesses, they are in effect contributing to the competitive intelligence of organisations, which in turn improves a country's competitive advantage. Competitive intelligence provides a significant advantage for companies and plays an important role in their strategic management. It also provides a company with an analysis and understanding of its external environment (Coff & Kryscynski 2011). In leading, highly competitive countries globally, quality education and high investments in research and development are common denominators (Strauss & du Toit 2010). In Africa, where governments have not done enough to invest in education, companies such as Konga and DealDey have had to rely on technical and retail skills from skilled people outside of Nigeria. These companies also need collaboration and investment from other countries in order to operate (Media24 2014).

2.3. Infrastructure

In countries where successful e-commerce adoption and progress is the aim, e-payment and banking systems, as well as software services, need to be made available. In Africa, overcoming payment barriers is a work in progress, with banks equipping themselves with systems for e-payments and local software (Alyoubi 2015). Emerging retail markets in Africa have the potential to leapfrog brick-and-mortar stores, as poor transport infrastructure and high levels of crime in many African cities may make it easier and safer for customers to purchase products from their homes (Media24 2014).

Telecommunications infrastructure, which remains a key challenge in Africa, is important for e-commerce adoption (Hubbard 2015). In Kenya, with many inhibiting factors to access to the country's markets, M-Pesa has established itself as the most successful mobile phone-based financial service in the region and in other developing countries (World Trade Organisation 2013). According to the World Trade Organisation (2013), the continuing success of M-Pesa in Kenya is the result of the development of a highly popular, affordable payment service with only limited involvement from a bank. As a branchless banking service, M-Pesa enables users to complete basic banking transactions without having to visit a bank branch. It offers consumers mobile-based payment and money transfer services, including depositing money into an account saved in a customer's mobile phone and sending balances using SMS technology to other users, which include sellers of goods and services. Users are charged a small fee for sending and withdrawing money using the service. By 2012, 17 million accounts had been registered with M-Pesa (Kiveu & Ofafa 2013). A number that is growing rapidly as similar products are being rolled out in many African countries.

2.4 Logistics

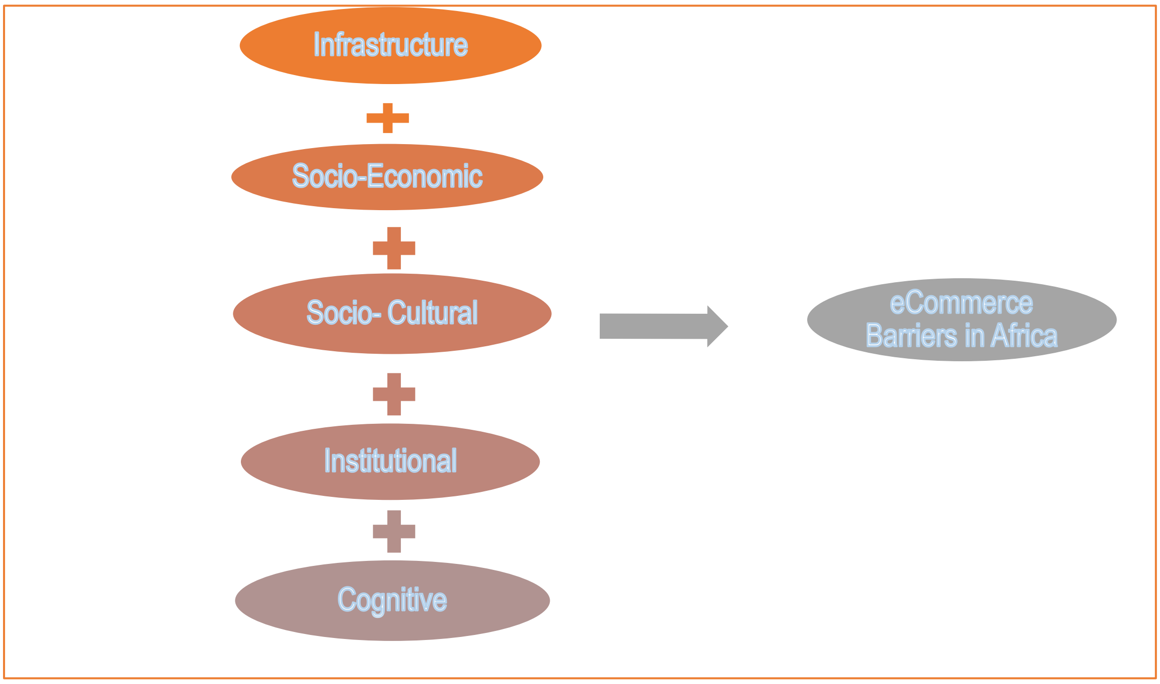
Logistics systems, including both delivery services and traffic infrastructure, are preconditions to the development of e-commerce (Alyoubi 2015); many researchers and practitioners argue that infrastructural barriers are the greatest challenge for e-commerce in developing countries (Hajli, Sims & Shanmugam 2014; Lawrence & Tar 2010:23-35). A country cannot be successful if e-commerce companies have to build major infrastructure before undertaking any business initiatives (Hubbard 2015). Delivery services are dependable, and when combined with technology that is out-of-date and stringent custom laws, international shippers become hesitant to do business in developing countries (Wresch & Fraser 2011). When compared to the United States where anyone can run an e-commerce business, in Africa, businesses need to have a delivery system that can assist with delivering products to customers. Even in a country like South Africa where infrastructure and transportation networks are more developed, logistics is still a concern in South Africa (Hubbard 2015).

To overcome problems of inefficient logistics systems, merchants need to experiment with various fulfilment models to ensure that products are delivered on time (Dholakia & Zhao 2010). For instance, in Nigeria, last-mile courier services company MAX, allows customers to use a custom-built Application Programming Interface (API), text messaging or other platforms to book a courier, and the package arrives within three hours. While many logistics companies charge deliveries according to weight, customers using MAX are charged for distance. Furthermore, the company offers same day and next day courier options (Adepoju 2015). To overcome a lack of delivery infrastructure, Konga invested in motorbikes with reliable drivers who deliver products in Lagos, Nigeria (Media24 2014). In addition, Konga customers have the option of paying for their products using cash on delivery, or using a wireless terminal on a mobile network - a payment system which is essential in a country where consumers do not trust online payments (Adepoju 2015). Other models that can be used in the African context include micro-jobbing, where customers sign up via mobile devices to do small jobs such as making deliveries; or acquiring entire logistics businesses, such as Takealot.com which acquired 60% of Mr Delivery - a national fast food home delivery business (Hubbard 2015).

3. FRAMEWORK

Colle and Lapoule (2012) suggested that there are KSF’s that enable e-commerce to be successful. A number of these KSF’s have been identified as critical in dealing with e-commerce. For purposes of this research these factors were used to create a conceptual framework that best defines the phenomenon of barriers faced by e-tailers in Africa, with the motivation to create solutions and guide strategy for them. In Figure 1 below the barriers influencing E-Commerce Adoption are outlined.

Figure 1: Barriers Influencing E-Commerce Adoption



Source: Authors Own

Five KFS's were considered in this study. The first factor considered was infrastructural; lack of adequate infrastructure is a major barrier for e–commerce to strive (Alyoubi 2015; Lawrance & Tar 2010). Socio-factors play a significant role in the success and/or failure of e-commerce (Olatokun & Kebonye 2010). According to Lu *et al*. (2015), socio-cultural barriers are very important especially because Africa as a continent has diverse cultural contexts. What applies in one country does not necessarily apply in another country. Different organisational and government environments are also critical in implementing e-commerce strategy. According to the United Nations Conference on Trade and Investment-UNCTAD (2015), for e-commerce to thrive there has to be a supportive institutional environment. Lack of adequate education and skills is also an impediment for e-commerce. Fang, Qureshi, Sun, McCole, Ramsey & Lim (2014) believe that cognitive considerations are key in unfolding the difficulty for online business existence for organisations, and using it for transacting purposes.

Many researchers have analysed the adoption of the Internet and other related Information Communication Technologies (ICTs) to conduct business practices in developing countries (Awa, Awara & Lebari 2015:143-164). While some of the benefits offered by e-commerce may certainly be advantageous for businesses (Wresch & Fraser 2011), many studies have suggested that organisation in developing countries have not fully benefited from the expected gains offered by e-commerce (Abbad, Abbad & Saleh 2011; Aboelmaged 2014; Terzi 2011). However, few studies have evaluated how organisations in developing countries can overcome the barriers associated with e-commerce in order to gain from the potential benefits (Ghobakholoo, Arias-Aranda & Benitez-Amado 2011; Lambert & Davidson 2013; Zaied 2012).

The factors which impact the adoption of e-commerce need to be understood in relation to developing countries (Savrul, Incekara & Sener 2014). In African countries, specifically, technology usage lags behind other markets (Kyobe 2011). Furthermore, the use of the Internet for business practices has meant that the different characteristics of infrastructural, socio-economic and socio-cultural factors have created a difference in the adoption of e-commerce on the continent (Iddris 2012). A study by Lawrence and Tar (2010) describes and suggests that the presence of technological infrastructure and socio-economic, socio-cultural and governmental policies in a country are the barriers which hinder the adoption of e-commerce in developing countries. Lee and Coughlin (2015) meanwhile suggest that cognitive barriers play an important role in the early stages of e-commerce adoption. This study will use the aforementioned to identify, describe and suggest the barriers which hinder the adoption of e-commerce in developing countries.

Part of this research is concerned with the factors that need to be overcome in order for e-commerce adoption to take place in Africa; researchers who have studied these factors have presented isolated cases in their studies (Kyobe 2011). For instance, researchers who have proposed the influence of environmental factors as a determinant of e-commerce adoption have emphasised issues such as the economic stability of a country and its infrastructure as critical to the adoption of e-commerce (Toesland 2014). Others have studied the relationship between the adoption of e-commerce and the importance of an efficient logistics system in supporting e-commerce business practices in a country (Doherty, Shakurb & Ellis-Chadwick 2015; White, Afolayan & Plant 2014). Yet others have recommended a greater focus on the level of e-commerce knowledge within an organisation (Zamberi, Bakar, Rahim, Mohamed, Zaki & Anwar 2015), while some have paid attention to the characteristics of e-commerce systems which assist in developing a web presence for companies (Huang & Benyoucef 2013). Each of these studies has made a significant contribution to understanding the factors that influence e-commerce adoption. However, more research needs to be done in order to understand how the environmental barriers prevalent in emerging markets can be overcome for the successful adoption of e-commerce at an organisational level (Al-Hudhaif & Alkubeyyer 2011).

An understanding of how these barriers can be overcome will enable the identification of a business model that may be suitable for organisations operating in Africa. Online business models that have been made available through e-commerce are important to existing companies (Cavalcante, Kesting & Ulhoi 2011). Many business models that have passed their prime must be updated to meet the changing demands of the digital age consumer (Baird & Gonzalez-Wertz 2011). These new business models are essential for gaining a competitive advantage over a company’s existing competitors, while also deterring new, similar business models from new entrants to the market (Chesbrough,2010).

In this study, Lam and Harrison-Walker’s (2003) two-dimensional model is used as a framework for business model implementation. This framework uses relational and value-based objectives to investigate and summarise business models used by Internet companies. The focus of this study will be on evaluating these dimensions and investigating how they can be used for the successful adoption of e-commerce. The theory will be presented through a model which illustrates the various phases a company needs to overcome in order to successfully adopt e-commerce business practices. Please see Table 1 for studies that made a contribution.

Table 1: Studies contributing to the adoption and implementation of e-commerce

Authors	**Study relevance**
Lawrence and Tar (2010)	The presence of technological infrastructure and socio-economic, socio-cultural and governmental policies in a country are barriers which hinder the adoption of e-commerce in developing countries.
Kyobe (2011)	Technology usage in African countries lags behind, impacting the adoption of e-commerce on the continent.
Huang and Benyoucef (2013)	It is paramount for online companies to implement relevant social commerce design features into their platforms.

Toesland (2014)	The economic stability of a country as well as the development of its infrastructure play a critical role in the adoption of e-commerce.
White, Afolayan and Plant (2014)	A country's supply chain management can pose a challenge on the adoption of e-commerce.
Lee and Coughlin (2015)	Cognitive barriers have an important role to play in the success of e-commerce during the early stages of its adoption.
Shakur and Ellis-Chadwick (2015)	The quality of an e-tailer's operations needs to develop as the scale of its e-commerce operations grow in order for the value of e-commerce to be realised.
Zamberi, Bakar, Rahim, Mohamed, Zaki and Anwar (2015)	The adoption of e-commerce is impacted by management's level of knowledge and experience in the field.

Generally, frameworks have been defined in many ways, including a conceptual tool or model, a framework and a structural template. However, these definitions explain frameworks without providing an explicit definition or concept. Furthermore, the present definitions only partially overlap, the result of which is numerous possible interpretations and confusion. Nonetheless, the most prevalent definitions of frameworks explain three phenomena: (1) e-business and the use of information technology in companies; (2) strategic matters, including competitive advantage, value creation and organisational performance; and (3) innovation and technology innovation (Zott, Amit and Massa 2011). According to Magretta (cited in Mutsembi 2015: 3), frameworks are defined as:

‘Stories that explain how enterprises work. A good framework answers Peter Drucker’s age old questions: Who is the customer? And what does the customer value? It also answers the fundamental questions every manager must ask: How do we make money in this business? What is the underlying economic logic that explains how we can deliver value to customers at an appropriate cost?’ (Magretta 2002: 4).

In the context of e-commerce, Kshetri (2007:445) described a framework as “a description of a company’s intention to create and capture value by linking new technological environments to business strategies”.

4. LITERATURE REVIEW

4.1 Infrastructural barriers

Access to ICT infrastructure can facilitate access to markets by breaking down barriers related to distance (Wresch & Fraser 2011). In order to effectively adopt ICT, however, basic infrastructural requirements (Kyobe 2011) such as energy, software and hardware vendors, affordable bandwidth and a constant supply of electricity, must all be readily available for communities to integrate services on the web (Awa *et al*. 2015). In developed countries, the rapid growth of e-commerce is attributed to readily available infrastructure (Kshetri 2007), however because information and telecommunications infrastructure is inadequate in developing countries, the growth and participation of organisations in developing countries is limited both internationally and domestically (Hashim 2012).

Telecommunications infrastructure is needed to connect numerous regions and parties within a country and across borders. Without adequate basic infrastructure, there is a possibility that the potential benefits offered by e-commerce can turn to disadvantages (Lawrence & Tar 2010). In Nigeria, insufficient energy supplies as well as the use of old and outdated technological infrastructure has resulted in poor service delivery, an under-developed state of Internet Service Providers (ISPs) and a lack of fixed lines for consumers (Awa *et al*. 2015). In the developed world, company websites are protected by secure servers which safeguard their assets against internal and external threats and vulnerabilities (Bloomfield 2013). In many developing countries, a lack of Internet security has the potential to present economic challenges, however (Solaymani, Sohaili & Yazdinejad 2012). In West Africa and Anglophone West Africa, there is a serious lack of secure Internet servers per one million people. This severely hampers trust in online transactions, consequently reducing the desire for, and actual adoption of, B2C e-commerce (Wresch & Fraser 2011).

The availability of broadband technologies is a key component in ICT development, adoption and use (Lawrence & Tar 2010). The opportunities for broadband growth effects are stronger in developing countries than in developed countries, as developing countries are “technology followers benefiting from lower costs and technological leapfrogging” (Yamakawa, Cadillo & Tornero 2012). In Africa, small, low-income Internet markets have been unable to attract sufficient investment in infrastructural technologies, however. When combined with a lack of competition, the result is bandwidth costs that can cost up to 100 times more than in developed countries (World Trade Organisation, 2013). Even in more stable countries such as Angola and Kenya that have managed to build substantial broadband backbones, engineers are still uncertain how to extend cheap, dependable Internet services to rural areas (Cottrell 2013).

Economics plays a major role in the adoption of new technology; high costs associated with the Internet limit the number of users. Kyobe (2011) highlighted two critical challenges faced by developing countries. First, raising funds for technology investment, and second, the need to make sure that developing countries benefit from these investments. These two challenges are major constraints to the development and use of ICT in developing countries. Lawrence and Tar (2010) suggested that the priority for most developing countries should be to put in place the necessary infrastructure, a competitive environment, and a regulatory framework to promote affordable Internet access.

4.2 Socio-economic barriers

The socio-economic conditions in developing countries have been recognised as a major hurdle to the adoption of e-commerce. The prominent indicators for the condition of a country are the gross domestic product (GDP) and income per capita (Lawrence 2012:152). Generally, richer countries are first to adopt new technologies, and do so extensively. These countries have the financial means, the human capability and the infrastructure to invest in these technologies (Hanson & Narula 2012). Technology infrastructure, which e-commerce is heavily reliant on, is expensive for many developing countries, and with unfavourable economic conditions, many developing countries are unlikely to partake in e-commerce (Pires, Stanton & Salavrakos 2010). While the initial and continuing costs of accessing the Internet have generally declined, they are still a major barrier in developing countries. As a result, constant costs present a challenge in terms of entry to markets which hampers the use of the Internet. Consequently, this impacts the development of e-commerce business practices within and beyond the borders of a country (Olatokun & Kebonye 2010).

The cost of accessing the Internet has a direct impact on the frequency that consumers use (Wessels & Drennan 2010); in many developing countries, monthly Internet access charges are still very high (Lawrence & Tar 2010). The presence of the digital divide, which refers to the disparities between groups and societies that can adopt ICTs and e-business practices and those that cannot (Alyoubi 2015), means that a large group of people in rural areas cannot afford the Internet (van Deursen & van Dijk 2010). Though there has been exponential growth in the use of mobile internet in Africa, the numbers are still quite low compared to the population across the continent.

A poor educational system in developing countries is recognised as a barrier of e-commerce adoption (Kumar 2013). Technological knowledge, which is fundamental for the development and effective use of e-commerce related activities, may not be available in countries where populations are poorly educated (Spring 2015). Due to a lack of necessary IT education, the potential value of computers and the Internet as mechanisms of participating in e-commerce is not appreciated in developing countries (Weerakkody, El-Haddadeh & Al-Shafi 2011). According to Tan (2012), the use of ICT depends on a manager's ability to manage the organisation, as well as the owner's level of education. To adopt e-commerce business practices, high levels of educational attainment are essential. To improve the economic growth of a country, it is important that the educational requirements and human capital resources that the country needs are attained within the country, rather than from outside (Apulu 2012).

E-payments are fundamental for e-commerce, and as e-commerce becomes a major part of business operations (Fang *et al*. 2014). E-payment systems have a number of favourable characteristics, such as scalability, security, reliability, convenience, efficiency and privacy (Hanzaee & Alinejad 2012). Forms of online payments are rapidly evolving, increasing the methods through which consumers can pay for online transactions.

While online payment systems have their advantages, they come with a number of conditions. In comparison to brick-and-mortar retailers, often-online retailers are not willing to process a transaction without payment. In addition, in order to be effective, e-payment systems must be free of security breaches. Security is a significant factor for the success of e-payments, especially as the current e-commerce environment becomes more globalised (Halaweh 2011). While developed countries such as France, the United States and the United Kingdom have made headway in e-payment systems (Angelakopoulos & Mihiotis 2010), Africa's inadequate payment systems present a major barrier in e-commerce growth (Hubbard 2015). Furthermore, the security concerns of customers remain a key impediment to expanding e-commerce services and business. Probably the biggest drawback is the reluctance of customers to provide information about their credit cards online (World Trade Organisation 2013).

In order for e-commerce to be successful it relies on a dependable (Wresch & Fraser 2011) and efficient delivery service and transportation infrastructure (Lawrence & Tar 2010). Wresch and Fraser (2011) defined dependable delivery services as post services or other delivery services. When the right products or services are delivered to the right consumer at the right time, it results in consumer trust (Colla & Lapoule 2012). In Africa, dependable delivery services have been a problem for a long time. Companies in Africa generally outsource most of their distribution tasks, which results in increased operational costs (The African Exponent 2015), limited customer relationships and decreased knowledge of customer buying behaviour (Hattingh, Russo & Sun-Basorun 2013). While courier services are available, they can be very expensive (Al Ghamdi, Alfarraj & Bahaddad 2014).

To adopt e-commerce, businesses need to have distribution and delivery channels with the capability of meeting customer demands. One of the most essential exemplifiers of e-commerce is speed. Overnight deliveries, just-in-time processing and operations that are available around the clock, are some of the distribution methods needed for fast and precisely timed economic activities in e-commerce (Lawrence & Tar 2010). Major obstacles, which hamper the growth of e-commerce in developing countries, include inefficient distribution channels, an unmanageable delivery system and the absence of good transport and postal systems. More importantly, the incentives for the private sector to innovate and invest in new technologies are determined by the effectiveness of the distribution and delivery systems in a country (Zaied 2012).

4.3 Socio-cultural barriers

The cultural and social characteristics of many developing countries and the concepts linked with e-commerce present major obstacles to its adoption and diffusion. The distance between consumers and companies, as well as a lack of real-time visual and oral interaction, often create an e-commerce adoption barrier for companies in developing countries (Lawrence & Tar 2010). Argawal and Wu (2015) suggested that as the informal institutional distance between the consumer and company increases, so the ability for the company to interpret signals from the local environment decreases. “Being embedded in local interactions, historical and cultural nuances, and identity-specific artefacts, differences in norms, values, and beliefs are difficult to detect and manage” (Argawal & Wu 2015: 208).

People will keep away from situations where they sense vulnerability and uncertainty. The adoption of new technology poses a degree of risk, and in countries where a high level of UA exists, people are more risk averse and thus there is a slow diffusion rate of e-commerce (Kyobe 2011).

The shift to online trading tests many of the basic assumptions of trust (Cheshire 2011).Confidence, which is a dimension of trust, as well as trust, is crucial requirements to secure an online transaction (Liao, Liu & Chen 2011). According to Ferro, Padin, Svensson and Payan (2016), trust is so crucial to relational exchange that it is the foundation of the strategic partnership between the buyer and the seller. The online retailer's reputation plays a significant role in the level of confidence that customers have in them (Chang, Cheung & Tang 2013), while the brand name, endorsement from trusted third parties and previous interactions online and/or offline also develop customer confidence (Wang, Wang & Liu 2016).

Well-known South African brick-and-mortar brands, such as Woolworths and Mr Price, have had the opportunity to transfer their in-store customers to their websites, allowing them to be industry leaders (Durrant 2015). Others, such as Takealot.com, a South African-based online retailer, have over the years engaged in aggressive marketing campaigns that have resulted in significant returns in the form of brand awareness. In comparison, smaller websites with low budgets that lack in content and user experience (UX) has failed to retain customers (Durrant 2015). When customers have low levels of confidence in an e-tailer, they hesitate to make an online purchase. In order to increase confidence, customers also look to the abilities of the retailer, including the skills and competencies that the e-retailer espouses in electronic transactions (Lim, Heng, Ng & Cheah 2016). Trust has become an increasingly important aspect of web design (Li & Yeh 2010), especially across cultures. As such, it is important to understand how to build trust and loyalty for diverse cultures. Trust is also an important element in the process of conducting global business (Lawrence & Tar 2010).

Where opportunism is rife, trust is difficult to build, especially in a relatively new area like e-commerce, which is not a face-to-face medium (Lee 2015). In South Africa, Durrant (2015) suggested that customers want to know what they are getting; they want to have the ability to touch and try items before making a payment, especially as the underlying concern is that a return may be impossible. However, in cases where company websites offer a quick dissemination of information, an exchange of complementary assets, and a culture of norms and trust, these companies can find themselves in a favourable market governance position, where they are structurally and relationally embedded (Van Slyke, Lou, Belanger & Sridhar 2010).

Nonetheless, in some developing countries where shopping is considered a pastime, the thought of purchasing goods that one cannot see or touch, from a seller who is far away may take time to become the norm. This is especially true for consumers who are used to personal interactions and who negotiate deals when purchasing goods (Leahy 2011). The lack of face-to-face contact as a barrier for e-commerce adoption reflects consumers in developing countries who prefer to interact with their merchants directly. There is a belief that less contact with consumers could mean a reduced understanding of customer needs for businesses. This is largely due to the idea that consumers may not always be able to leave comments, criticisms and requests for new products as they engage with a website (Aldiri, Hobbs & Qahwaji 2010:16).

A major contributor to the success of doing business online is the quality and sometimes quantity of personal relationships (Lawrence & Tar 2010). In any industry, customer loyalty is crucial in building a competitive advantage. When a customer's attitude towards an e-tailer is favourable, electronic loyalty (e-loyalty) is established which results in repeat purchases (Pratminingsih, Lipuringtyas & Rimenta 2013). Customisation plays a critical role in e-loyalty. Customisation is "the ability of an e-tailer to tailor products, services, and the transactional environment to individual customers" (Arya & Srivastava 2014:305). Other methods used by e-tailers to enhance customer e-loyalty and customer retention include contact, interactivity, care, community features, a website's ease of use, wide product variety and creativity in the user interface design (Wang, Cavusoglu & Deng 2016).

4.4 Institutional environment

In order for the sustainable growth of e-commerce to take place, the institutional environment needs to be in favour of the online trading system. A supportive institutional environment enables the development of trust online and allows for security of online transactions between companies, customers and public authorities (UNCTAD 2015). Government policies and regulations can provide incentives or disincentives for businesses to invest in a specific country. According to Argawal and Wu (2015), these conditions can be caused by the location factor. When government policies are favourable, it attracts businesses. This then creates a critical mass of buyers and sellers to accelerate growth. Most developing countries do not have policies that monitor the provision of Internet services

(Lawrence & Tar 2010), and as such, many legal issues are left unresolved (Abbad *et al*. 2011). Due to these limitations, in most cases there is insufficient critical mass for e-commerce to be a profitable operation (Turban, King, Lee, Liang & Turban 2015: 27).

Awa *et al*. (2015) also viewed it as necessary for governments to have transparent policies that foster socio-economic development. Governments are expected to openly create frameworks that will allow the private sector to develop in terms of encouraging the growth and sustainability of businesses, especially in the adoption of ICT. Some economies in Africa such as Botswana and South Africa have seen value in this, and through e-commerce solutions have prepared their financial environments and regulated their competitive environments for readiness of businesses. However, in other African countries like Nigeria, policies have barely been implemented objectively, even though these policies have been well thought out and carefully formulated (Uzor 2013).

A country's legal framework also plays a crucial role in its economic growth (Agarwal & Wu 2015), as the legal system of a country influences the breadth and depth at which e-commerce is adopted. This is especially true for developing and newly industrialised countries (Zhu & Thatcher 2010). Legal environments that are stable, secure and predictable decrease uncertainty and promote trust and confidence in online marketplaces (Li & Xie 2012). One of the major concerns for many companies wishing to conduct business in developing markets is the protection of their Internet Protocol (IP) rights. In cases where opportunism and uncertainty are a high risk, businesses will generally start their globalisation activities in markets where there are fewer regulatory threats and similar legal frameworks. Furthermore, research conducted by the UNCTAD indicates that in economies where electronic transaction (e-transaction), consumer protection, privacy and cybercrime are not legally supported, consumer confidence in e-commerce is decreased. As such, developing countries need to formulate cyber laws that elaborate on a legal framework for Internet transactions (Argawal & Wu 2015:207). Lawrence and Tar (2010) maintained that in many developing countries, there are neither government policies on Internet provision or on the future of e-commerce, nor any comprehensive information policy. The lack of information policies in developing countries suggests that many governments are not involved in the provision of the Internet.

4.5 Cognitive barriers

Cognitive issues play an important role in the early stages of e-commerce adoption (Fang *et al*. 2014); a lack of awareness is among the critical factors that contribute to cognitive barriers (Almarabeh & AbuAli 2010). Other factors include a lack of knowledge, an absence of the local language, a lack of English language skills, and poor managerial perceptions (Edwin & Peter 2014). Research indicates that investments in human capital are especially important for the advancement of e-commerce in emerging economies, as these allow them to "catch up" to developed economies, even though the rate of economic growth diminishes as the economies get richer (Hanna 2016).

5. RESEARCH METHODOLOGY

This study used the interpretivism research philosophy for two reasons. First, it will allow the researcher to understand the natural environment of the research participants from their point of view. In this case, Saunders, Lewis & Thornhill (2007) maintain that it is imperative to the interpretivist approach for researchers to adopt an empathetic stance. Second, it could not be assumed that others would interpret what would be observed from the participants in the same way. The fact that business situations depend on unique circumstances and individuals suggests that what is observed cannot be generalised (Saunders *et al*. 2007).

5.1 Research approach

This research made use of the inductive research approach as it is commonly used in qualitative studies when a theory to inform the research process does not exist. This is advantageous in that it minimises the potential for a one-sided or biased approach during the data collection process (Bryman & Bell 2012).

5.2 The qualitative approach

In the qualitative approach, the researcher is restricted from imposing their own view of social phenomena on the participant. The aim of this is to gather the participant's own understanding of the topic under investigation (Banister, Bunn, Burman & Daniels 2011). In this case, it becomes important for the researcher to develop a research methodology framed by the participant and not by their own ideas. In order to achieve this, Feilzer (2010) suggests conducting interviews where the researcher can ask open-ended questions. These will also allow for more questions to be asked during the interviewing process.

5.3 Time horizon

Cross-sectional studies are conducted once-off (Schindler & Cooper 2008), and are used in instances where a study is focused on a specific phenomenon at a certain time. This study's interest is this e-commerce phenomenon in Africa in the now, thus cross- sectional research is most appropriate.

5.4 Study site

This single case study was conducted at Company Z's head office which is located in Cape Town's central business district in the Western Cape, South Africa. This study site was chosen because it is where Company Z's offices are located.

5.5 Target population & Sampling

The target population of this study included a total number of 64 employees at Company Z. The population is based in Company Z's head office in Cape Town, in the Western Cape Province of South Africa. In this study, the sample was 12 middle and top management employees at Company Z's head office. The sample subjects represented the heads and deputy heads of each of the company's six departments. Purposive sampling was used to target only the top and middle managers because they are in a decision-making position, and as such, have the knowledge and expertise to answer the questions which were asked during the interview process. Subordinates and lower-level employees of Company Z did not form part of the study because they are not strategists. Instead, they drive the organisation's goals based on management's directions.

5.6 Data Collection Approach

This study followed the qualitative research approach, the objective was to gather reasons for choices made, and understand why they are made.

5.6.1 Data collection instruments

This study, applied a qualitative approach with qualitative data, which can be acquired through interviews, as was the case in this study. Semi-structured interviews are generally the only source of information for the qualitative research. Furthermore, semi-structured interviews are usually scheduled in advance during a pre-determined time and place. They are made up of open-ended questions, with additional questions emerging during the interview. Furthermore, semi-structured questions can be held between either an individual or a group and are often conducted. For this study, semi-structured, individual interviews were administered. In addition to the abovementioned, this data collection process gave the researcher the opportunity to deeply investigate the social matters of the study (DiCicco & Crabtree 2006). Structured interviews use questionnaires, which contain a set of standardised questions, while semi-structured interviews use a list of questions, and themes that may be covered based on the progress of the discussion (Lewis, Saunders, Saunders, & Thornhill 2009).

5.7 Data analysis

Qualitative data will be analysed using thematic analysis, which is a form of content analysis. The data were processed using the NVIVO programme. Using the NVIVO programme, the researcher reviewed and reduced the research data by identifying and noting down the relevant concepts, textual phrases and quotes by the participants, which were related to the major elements of the research objectives. The textual phrases of each participant were laid out under each participant's name, coded according to relevant themes, grouped according to each concept, and presented in a tabular format. The textual phrases were then analysed, and key concepts, themes and patterns were identified. Interpretations were made and the results were presented.

6. PRESENTATION OF RESULTS

6.1 Infrastructural barriers

6.1.1 Internet security

The participants revealed two main challenges that occur when Internet security measures are not implemented, the first of which was a "lack of trust" that the customer has in performing online transactions. The second is the difficulty businesses experience when conducting their operations. Regarding barriers to overcoming a lack of Internet security, the participants revealed the importance of online companies putting measures in place that ensure that their websites cannot be hacked.

6.1.2 Broadband connectivity and high access costs

Participants confirmed that Internet accessibility, as well as the speed, quality and the cost of the Internet, are barriers that prevent e-commerce adoption. The participants suggested that for e-commerce companies to overcome broadband inefficiencies, it is important that they focus on optimising their web pages. The majority of the participants reflected on the advantage that the growth of “mobile penetration” has brought about in terms of mitigating barriers to broadband connectivity.

6.2 Socio-economic barriers

This section aims to show the socio-economic barriers of e-commerce adoption that are present in Africa, and the strategies that Company Z has used to overcome them. The results show that e-commerce adoption and diffusion in developing countries are an expensive practice for e-commerce companies operating in African markets. The majority of the participants suggested that compared to international markets, African markets have “slow e-commerce growth” and “small and underdeveloped markets”, which create barriers for organisations in developing countries that attempt to enter African markets. One of the participants was quoted saying, “If you look at countries such as Nigeria, Ethiopia, Rwanda and Ghana, retail in these countries is relatively new, especially in the brick-and-mortar format, and the infrastructure and supply chain elements are unable to support a mature environment.”

Furthermore, the participants cited country-specific challenges that also present barriers to entry, as well as the “economic disparity” between rich and poor people in African countries, which presents challenges to e-commerce diffusion in African e-tail industries. Notwithstanding the above, the participants suggested that a “growing market” and a “developing middle class” mean that e-commerce companies in developing countries will in the long-term need to expand to other markets if they are to succeed.

6.2.1 Educational system

Majority of the participants felt that it was not necessary for every employee employed in the online retail space to have IT knowledge and experience. According to the participants, the reason for this is that an employee’s technological know-how largely depends on the department in which the employee works, and whether the employee holds a management or lower-level position. However, the participants did suggest that there is a “lack of (the) appropriate skills” needed to support the growth of the e-commerce industry. This often results in e-commerce companies turning to international markets for candidates with the calibre of talent required in the industry.

6.2.2 Logistics

Poor logistics is a major barrier in developing countries. A majority of the participants indicated that efficient logistics systems are beneficial for e-commerce adoption, however they suggested that in many African countries, logistical networks are not well set up. A responded was quoted stating the following, "Whilst other e-commerce companies in countries like Nigeria, Kenya and other middle African countries are doing well, the logistical networks in these countries are not well set up."

Many of the participants also stressed the need for developing countries to have functioning courier and postal services if firms are to adopt e-commerce. The majority of the participants also cited the importance of e-commerce companies having the ability to exercise control over the courier services that they work with in order to provide a seamless experience for the customer, and in that way, they can reduce the risk of losing customers. Company Z works with internal and external couriers and it is important for the e-tailer to maintain a relationship with each of its courier services who are the last engagement with the customer and have been entrusted to deliver products to customers in time. The participants also indicated that couriers are the face of the brand. In addition, the participants suggested that it is essential to offer a seamless experience, both on- and offline. Currently, Company Z is faced with the challenge of "controlling the last mile".

6.2.3 Product returns

The results suggested that for e-commerce adoption to occur, an efficient logistics system is also important for product returns. The majority of the participants cited "retaining the customer's trust" as the reason behind needing an efficient logistics system. Many of the participants indicated that to maintain trust with customers, a seamless experience needs to be provided. At Company Z, the participants revealed that before product returns are processed, the customer needs to log a return using the account they have on the website and provide a reason for the return. A courier is then sent to the customer's address to pick up the parcel, which is returned to the warehouse. After performing a quality check on the product to ensure that there are no defects, the customer has to wait a few days before their money reflects in their account. This process impacts on the customer experience, a theme, which was also popular among the participants. Regarding product returns from Namibia, a prevalent theme among the participants was the poor experience that customers in Namibia encountered as the e-tailer experienced difficulties when customers wanted to return goods. In addition, the participants suggested that high shipping costs are a challenge for e-commerce companies operating in emerging markets. The participants cited high costs incurred by Company Z when it shipped orders to Namibia, and it was also expensive for Namibian customers to return products back to Company Z.

6.2.4 Method of payment

A lack of confidence in e-payments still exists among many online shoppers. One of the respondents said, “People would rather deposit money than to add their credit card details online.” These managers commented that there is a “lack of education” on the customer’s part regarding the convenience and safety of shopping online.

The participants revealed that credit card payments are the most commonly used method of online payment among customers who shop on Company Z’s website. A few of the participants suggested that South Africa is still behind in making credit card payments. They felt Africa struggles with credit card fraud, and many people thought that they needed a credit card or another form of payment method to shop online – both an educational and trust barrier.

Another frequently used method of payment is the debit card and the third is an Electronic Funds Transfer. The e-tailer also offers Snapscan, which many of the participants said was not used by many customers. In an attempt to mitigate against the lack of comfort which many online shoppers experience when making payments, the participants mentioned that payment-on-delivery is an alternative payment method available at Company Z.

6.3 Socio-cultural barriers

Results on the socio-cultural barriers present in the African market are presented in this section. Cultural differences are the factors that need consideration in an e-commerce company’s business strategy; the participants indicated the importance of businesses keeping things local because of local differences. A respondent even said, “A Nigerian customer will not necessarily purchase what a South African customer will.” From a business strategy perspective, the inclusion of cultural factors is revealed as being especially important for Spree (2016), which operates in South Africa where the market is demographically diverse.

However, a number of participants suggested that for e-tailers operating in small e-commerce markets such as South Africa, it is generally difficult to focus heavily on cultural differences. Of the four participants who held this view, one participant highlighted the importance of e-commerce companies focusing on building their brand. One participant said, “I think that as a business operating in such a small market, it is more important to focus on building your brand and brand identity than worrying about differences in culture.”

Whilst it may be a challenge for Company Z to include cultural differences in its business strategy, the participants maintained that the e-tailer focuses on localising international trends. Organisations always have to localise the trend to keep it in line with the South African market. We also have international brands that are available on our website that infuse international styles with the local market.

6.3.1 Trust

Top management; believe that trust in online shopping is crucial. A few of the participants revealed the importance of "instilling trust in customers". They also revealed that online shoppers are still hesitant to make online payments because of a lack of trust in the payment system. In an effort to help minimise the barriers to online payments, the participants described how Company Z offers alternative payment methods, including payment-on-delivery and EFT. Top management, who suggested that there is a benefit, which results from being part of a "trusted company", highlighted another important element of building trust. Respondents felt it really helps that they were part of Company X group, which was already a hugely trusted brand.

6.3.2 Lack of personal interaction

Management believe in the importance of working with local people and understanding the local market when it comes to mitigating barriers related to interaction between the customer and the e-tailer. However, one of the participants argued that personal interaction is more important when it comes to the touch and feel of the garment a customer intends on purchasing. The ability to have a partner in a foreign country who knows and understands the local market helps with understanding the culture, politics and the government set-up in the country. A few of the participants maintained that in order to overcome this barrier, it is beneficial for e-tailers to adapt their communication efforts to meet the customers' needs. Another participant suggested that Company Z is looking for ways to reach its large customer base.

6.3.3 Quality of personal relationships

It is important for e-commerce companies to include personalisation in their business strategies; however a few participants cited the "difficulty e-commerce companies are faced with in trying to meet each customer's needs".

The participants suggested personalisation in terms of fulfilling customers' experiences, and added two methods for overcoming barriers to personalisation. The participants in middle management maintained that knowing the products that appeal to customers is an important method for e-commerce companies to meet each customer's needs. In contrast, top management suggested that maintaining a daily line of communication with the customer is important for personalisation.

6.4 Institutional environment

The section aims to illustrate how the institutional factors present in a country affect e-commerce adoption.

6.4.1 Government policies and regulations

For e-commerce companies operating in South Africa, there are no specific governmental policies or laws that directly impact e-commerce or retail business operations. The laws that do exist, such as the Protection of Personal Information Act, protect both the e-commerce company and the consumer Investors play a crucial role in the "growth, sustainability and success" of e-commerce companies, and that any company that does not have the support of investors cannot survive.

However, despite the aforementioned, a few of the participants revealed the crucial role that a supportive government would in reducing customers' lack of trust in online shopping, as well as the impact that it would have on South Africa's economic growth.

Company Z operations in Namibia, a few of the participants suggested that government policies in the country were unfavourable in sustaining an e-commerce business. Many of the participants added that shipping goods through the Namibian border was a challenge for Company Z. In Namibia they said the risk was compounded by the fact that there was a government involved who wanted to ensure that import and export duties were adhered to. Therefore, our experience was not what we wanted it to be, and we could not get it to the standard that we wanted it to be.

6.5 Cognitive barriers

In this section, the cognitive barriers present in Africa will be revealed, as well as the strategies, which Company Z has used to overcome these barriers.

6.5.1 Integrating the local language

Table 4.13 shows that half of the participants indicate that English is the universal language on the Internet in many countries, including South Africa where Company Z operates. The participants further revealed that it was easier for the e-tailer to establish a presence in Namibia because that country has a similar demographic to South Africa.

Should a business wish to expand its operations into markets where English is not the language of commerce; the participants recommended the following local principles: Participant's said, Any serious e-commerce business needs to follow local principles and if the main language is not English, one would need to translate everything to the local language, and therefore hire local native speaking staff.

7. DISCUSSION OF RESULTS

This study conducted an intensive interrogation analysis on the barriers of e-commerce adoption that led to findings related to the infrastructural, socio-economic and cognitive conditions that are pre-requisites for the adoption of e-commerce. Socio-cultural, institutional policies and a country's legal framework and support from investors were found to be important factors for the growth, sustainability and success of e-commerce. The study found the following conditions discussed herein to be essential for the adoption of e-commerce.

7.1 Infrastructural barriers

The ability for e-commerce businesses to access ICT infrastructure can facilitate access to markets by breaking down barriers of distance (Wresch & Fraser 2011). In his study on the challenges of internationalisation faced by SMEs, Hashim (2012) suggested that the ability for organisations in developing countries to participate in international and domestic e-commerce practices is limited because of inadequate information and communications infrastructure.

7.1.1 Internet security ensures business operations

In this research, it was revealed that the infrastructure that supports Internet adoption activities is vital for e-commerce adoption in organisations in developing countries. Awa *et al*. (2015) indicated that when infrastructural facilities are available, they enable communities to integrate online services. This study's findings support this argument by revealing that when Internet infrastructure is available, businesses can conduct online operations. In addition to enabling business operations, the availability of Internet security allows e-commerce companies to put measures in place that ensure that their websites are protected from internal and external threats. Online companies like Spree (2016) generally have large amounts of information stored in their databases; these companies need to put security measures in place that safeguard against any potential threats that may extract this information. Furthermore, when online companies implement security measures such as 3D Secure, the results are increased customer trust.

7.2 Socio-economic barriers

This study found that the socio-economic condition of a country plays a significant role in determining the success or failure of e-commerce adoption, which is supported by Lawrence and Tar (2010) who indicated that the socio-economic conditions in developing countries hamper the adoption of e-commerce. GDP and income per capita are major indicators of the economic condition of a country, and unfavourable economic conditions in developing countries have presented major hurdles to the adoption of e-commerce practices (Pires, Stanton & Salavrakos 2010) while also adding to high operating costs.

The presence of the digital divide in developing countries means that large groups of people living in rural areas cannot afford the Internet (van Deursen & van Dijk 2010). In fact, many of the participants revealed that not only are e-commerce companies operating in African markets faced with small and underdeveloped markets, but they also encounter slow e-commerce growth.

Murray (2012) asserted that the business strategies that have worked in international markets will not be suitable in developing countries because they are developing significantly differently in terms of infrastructure and economic growth. As such, firms that target countries such as Nigeria, Ethiopia, Rwanda and Ghana, where the brick-and-mortar retail industry is still relatively new, are unlikely to succeed, as the infrastructure and supply chain elements in these countries are unable to support a mature retail environment. It is important to note that country-specific challenges also present major barriers to entry to e-commerce adoption, and therefore what works in one country may not necessarily work in another.

7.2.1 Logistics systems

This study shows that logistics systems are fundamental for e-commerce adoption; according to certain studies, the success of e-commerce adoption has a direct correlation to dependable (Wresch & Fraser 2011) and efficient delivery service and infrastructure (Lawrence & Tar 2010) in the omni-channel distribution business. When the right products or services are delivered to the right consumer at the right time, the performance cycle increases consumer service excellence and trust (Colla & Lapoule 2012). In many African countries, logistical networks are not well set up for effective distribution and delivery channels. This impacts the ability for e-commerce companies to meet customer demands in the region (Lawrence & Tar 2010). In terms of this study, the responses suggest that inefficient distribution networks make it difficult for customer convenience to become a benefit of e-commerce. Convenience is an important aspect for winning customer trust, which allows e-commerce companies to gain from the benefits of online activities. When a proper logistics system is not in place, businesses have the propensity to lose customers.

The study also reveals that in order for e-commerce to be successfully adopted, it is important for businesses to have the ability to exercise control over their courier services. The participants suggested that couriers are the last engagement with the customer, and therefore can be considered as the face of the business. Couriers are not only entrusted with delivering products to customers on time, but they also need to contribute to providing a seamless experience to the customer. When a seamless experience is present it increases the customer's trust in the company on forward and backward logistics systems. The participants maintained that in order for e-commerce adoption to occur, an efficient logistics system is important for the forward delivery service cycle as well as the functional reverse logistics service to sustain the customer's trust. In developing countries, customers endure poor experiences when attempting to return products purchased, because they have no control over the last mile. As such, the propensity to lose the customer's trust is increased. Hattingh *et al*. (2013) asserted that when businesses outsource their distribution services, the results can be increased operational costs, limited customer relationships and a decreased knowledge of the buying habits of customers. One participant stressed the importance of a consolidated logistics system that can offer one-day deliveries to customers in order for the convenience aspect of e-commerce to be met.

7.2.2 Method of payment

The study found that e-commerce is based on the credit card, which is why online payments are fundamental for the adoption of e-commerce activities. The credit card emerged as a popular form of e-payment method among shoppers at Spree (2016), however online shoppers still lack confidence in making online payments. The World Trade Organisation (2013) maintained that the security concerns of customers are a key impediment to the expansion of e-commerce services and business. It further suggested that the reluctance of customers to provide their credit card details online is probably the greatest drawback to the expansion of e-commerce. The study finds these facts to be true as online shoppers are afraid of fraud, and prefer to deposit money than to add their credit card details online.

The participants attribute these hindrances to a lack of education on the customer's part. One participant emphasised that when banks suspect suspicious behaviour on a customer's account any money transfers are suspended, so it is the merchant who is impacted by fraudulent behaviour and not the customer. Halaweh (2011) argued that overcoming security concerns is a significant factor for the success of e-commerce payments, especially for expansion into international markets. In Africa, security concerns are still a problem and have impacted the slow uptake of online payments. This problem is further aggravated by the fact that online shoppers believe that it is fundamental to have a credit card in order to shop online. The participants commented that this is both an educational and trust barrier.

This study found that to overcome the hesitation of making online payments, it is fundamental to educate shoppers about the convenience of shopping online. It is also important to offer various forms of e-payment methods in order to instil confidence in the customer. In addition to the credit card, Spree (2016) offers its customers the option to make e-payments using EFT, instant EFT, debit card payments and SnapScan. It is important to note that the e-tailer has also introduced payment-on-delivery in order to meet the needs of South African customers who prefer to make cash payments. In addition, the company has 3D secure displayed on its website. This additional security measure acts as an additional security layer for debit and credit card payments, and assures the customer that their credit card details are secure. The participants stated that by introducing this security measure, the company has gained the trust of some of its customers as these customers are often unwilling to add their personal information online.

7.3 Cognitive barriers

7.3.1 English: A universal language of the Internet

Operating in markets where English is the medium of communication is essential for the success of e-commerce adoption**.** Edwin and Peter (2014) indicated that not knowing a country's local language as well as English has an impact on the success of e-commerce adoption. This study further suggests that should businesses wish to expand to markets where English is not the language of choice, it is essential that they hire local native speakers in order to translate everything to the local language.

7.3.2 Understanding the core business

Whilst managers' technical skills are not fundamental to the adoption of e-commerce, their understanding of the core business is important. This study stresses that technological expertise is essential for managers working in departments such as marketing and information technology departments, as they need to have skills such as coding and website development in order to support the business. It is also fundamental for managers of a company to understand the strategic purpose of the business that drives e-commerce adoption.

A study by Coff and Kryscynski (2011) indicated that it is important for the competitive intelligence of companies for a country to create and maintain an environment that sustains the competitiveness of businesses. Competitive intelligence is defined as "a system of environmental scanning that integrates the knowledge of all organisational members and encompasses marketing, structural, strategic and other organisational elements" (Adidam, Banerjee & Shukla 2012). It plays a significant role in a company's strategic management while providing a company with an analysis and understanding of its external environment.

7.4 Conditions supporting e-commerce growth

7.4.1 Appropriate e-commerce skills

This study discovered that an employee's level of IT knowledge and experience depend on the job role of the employee. The findings also revealed that developing countries lack the essential skills needed to support the growth of the e-commerce industry.

This supports Weerakkody *et al*. (2011) argument that suggests that due to insufficient IT education in developing countries, the potential value of the Internet and computers as essential mechanisms for participating in e-commerce is not appreciated. Firms in developing countries often need to turn to international markets to employ candidates with the right set of skills and talent needed in the industry.

7.4.2 Internet accessibility, speed, quality and cost concerns

This study found that the high costs of broadband connectivity as well as the speed and quality of the Internet are e-commerce components that are affecting the growth of e-commerce in developing countries, but not necessarily its adoption. In terms of broadband connectivity, Lawrence and Tar (2010) maintained that the accessibility of broadband technologies is a vital component in ICT developments, adoption and use. In its study of e-commerce development and SMEs, the World Trade Organisation (2013) noted that in developing countries, an inability for small, low-income Internet markets to attract sufficient investment infrastructural technologies, combined with a lack of competition, has resulted in significant bandwidth costs. This study's findings reveal that Internet accessibility, its speed, quality and cost are parameters that companies cannot control. In addition, broadband connectivity allows for e-commerce adoption, but access to high speed, quality data is still an issue in emerging markets.

These are the same reasons that even stable countries such as South Africa are still so underdeveloped in terms of high bandwidth costs and the speed of the Internet. Despite this, the growth in the use of mobile technologies is slowly minimising the excuse of poor Internet capabilities.

The findings reveal that to overcome barriers associated with Internet accessibility and costs, e-commerce companies need to take advantage of the growth of mobile penetration in developing countries. In Africa, specifically, the growth in the use of smartphones has supported e-commerce activities (African Retail Development Index 2015).

The development of applications for mobiles comes in handy to counterbalance limited Internet accessibility, quality, speed, and access costs. Kordić (2014) suggested that companies in developing countries are most likely to gain major benefits from mobile technologies and other forms of ICTs, particularly because emerging markets can leapfrog a number of the stages of technological development which developed countries had to go through (Singh 2015).

7.5 Factors for growth, sustainability and success

The following section discusses the factors which the study found to support e-commerce growth, sustainability and success.

7.5.1 Socio-cultural barriers

7.5.1.1 Factoring cultural differences

Accommodating the cultural differences present in a market is important for the sustainability of e-commerce practices. Karahanna *et al*. (2013) asserted that the most important factor for e-commerce success is the consumer's propensity for e-commerce, which is determined by the readiness that the customer may or may not show towards shopping online (Alyoubi 2015). This readiness is determined by the customer's historical association with e-commerce, or lack thereof; a determinant which was also pointed out by one participant in the study.

Contrary to suggestions by the African Retail Development Index (2015), which stated that it is crucial for companies to understand a country's cultural differences before entry, this study found that it is customer demographics as well as a brand's identity that determine the success of e-commerce practices.

One participant revealed that when the company first entered the e-commerce market, one of its greatest challenges was establishing how it would expand its brand and messaging to reach South Africa's broader customer base which is demographically diverse.

The responses also show that for e-commerce companies such as Company Z that operate in small markets such as South Africa, it is generally a difficult task for these companies to focus heavily on cultural differences. The problem is further aggravated by the fact that in Africa there is no free trade, which presents a barrier to the adoption of e-commerce.

Whilst African Retail Development Index (2015) maintained that an understanding of customers' cultural backgrounds is important, it would seem that e-commerce companies operating in developing markets focus less on these differences. They are more interested in building strong brands and improving the experience that the customer has with the brand as they believe this is more important.

7.5.1.2 Customer trust

This study finds that trust in the e-commerce industry is a crucial determinant of its success. The study also discovered that organisations in developing countries are still faced with online shoppers who are hesitant to make online transactions. A major factor in understanding cultural differences, and hence e-commerce adoption, is trust (Lu *et al*. 2015). When confidence exists then trust is gained, which increases the chance of securing an online transaction (Liao *et al.* 2011). The same was revealed in the research in which the findings suggest that trust is built through a customer's level of confidence. Instilling confidence in customers is about meeting their demands, which includes factors such as responding to customer complaints, delivering products on time, offering various methods of online payments, and ensuring that reverse payments are made on time.

The study also revealed that when online companies are associated with well-established brands, it is beneficial for new players to the e-commerce market as they have the potential to gain customer confidence through such partnerships. Chang *et al.* (2013) mentioned that the brand name, endorsement and/or accreditation underwritten from trusted third parties, as well as previous interactions online and/or offline, assist in developing customer confidence. However, even if strategic partnerships are in place, the onus is still on the e-commerce company to build trust with the customer in order to maintain their confidence. The responses revealed that by its association with the Naspers group of companies as well as Company Z, the company has been able to gain customer confidence, but has also worked hard to establish the trust it has built with its customers.

7.5.1.3 Understanding the local conditions

The study finds that in order for e-tailers to succeed in other markets, it is essential that they work with the local people and that they gain an understanding of the local market. The research results reveal that while fashion and fashion trends are universal, it is generally very difficult for e-tailers to operate in other countries without the support of the local people. Leahy (2011) indicated that in developing countries where shopping is considered a pastime, it may take some time for customers to adjust to the thought of purchasing items that they cannot see or touch. The research reveals that some online customers do indeed want to have the ability to touch and feel a garment before making a purchase.

To overcome this barrier, Company Z uses various channels, including social media, to communicate with its customers. They travel to cities where they have presence to set up ambassadors. These ambassadors ensure they stay up-to-date with the latest industry trends and market-related news; a strategy, which van Slyke *et al*. (2010) suggested, is important for the successful adoption of e-commerce. When company websites offer a quick dissemination of information, an exchange of complementary assets and a culture of norms and trust, they have the potential to find themselves in a favourable market governance position.

7.5.1.4 Personalisation

Personalisation in e-commerce is beneficial for the growth and sustainability of e-commerce adoption, but it is difficult for e-commerce companies to achieve. The responses show that Spree (2016) understands that offering customers a personalised experience is vital because it retains customer loyalty towards a business. Lawrence and Tar (2010) claimed that one of the most important contributors to the success of doing online business is the quality, and sometimes even the quantity of personal relationships. A company’s ability to maintain positive relationships with its customers is vital for retaining loyalty, which results in repeat purchases (Pratminingsih *et al*. 2013). However, while it is every company’s dream to be able to offer personalised experiences, customising customers’ experiences is an expensive practice, and the fact that it can be achieved in many ways makes it even harder. In this regard, Spree (2016) ensures that it attracts and retains its customers’ attention by offering a daily line of communication. Furthermore, the e-tailer’s website is designed so that it is easy to use, as well as the manner in which it displays and sells its products. These are among the strategies that Wang *et al.* (2016) emphasised are essential for enhancing customer loyalty and retention.

7.6 The institutional environment

Argawal and Wu (2015) maintained that the incentives or disincentives for businesses to invest in various countries are provided by the government policies and regulations in place, i.e. when the location factor is favourable, businesses are attracted. The responses show that in South Africa there are no specific governmental policies or laws that have a direct impact on the adoption of e-commerce, however, because the laws that do exist protect both the company and the consumer, they allow for the sustainability of e-commerce practices and the economic development of a country. This is a factor which Argawal and Wu (2015:207) insist is fundamental in increasing consumer confidence in e-commerce. When consumers have trust in e-commerce, it has a positive impact on the creation of the critical mass needed to accelerate the growth of e-commerce. In contrast, when a country's legal environment and government policies do not provide a provision for Internet services, it creates a barrier for the private sector to grow. This was demonstrated by Spree's (2016) operations in Namibia, where the company encountered difficulties shipping goods over the border due to unfavourable government policies. This provided a disincentive for the e-tailer to conduct operations in Namibia, and as such, operations were withdrawn.

7.6.1 Support from investors

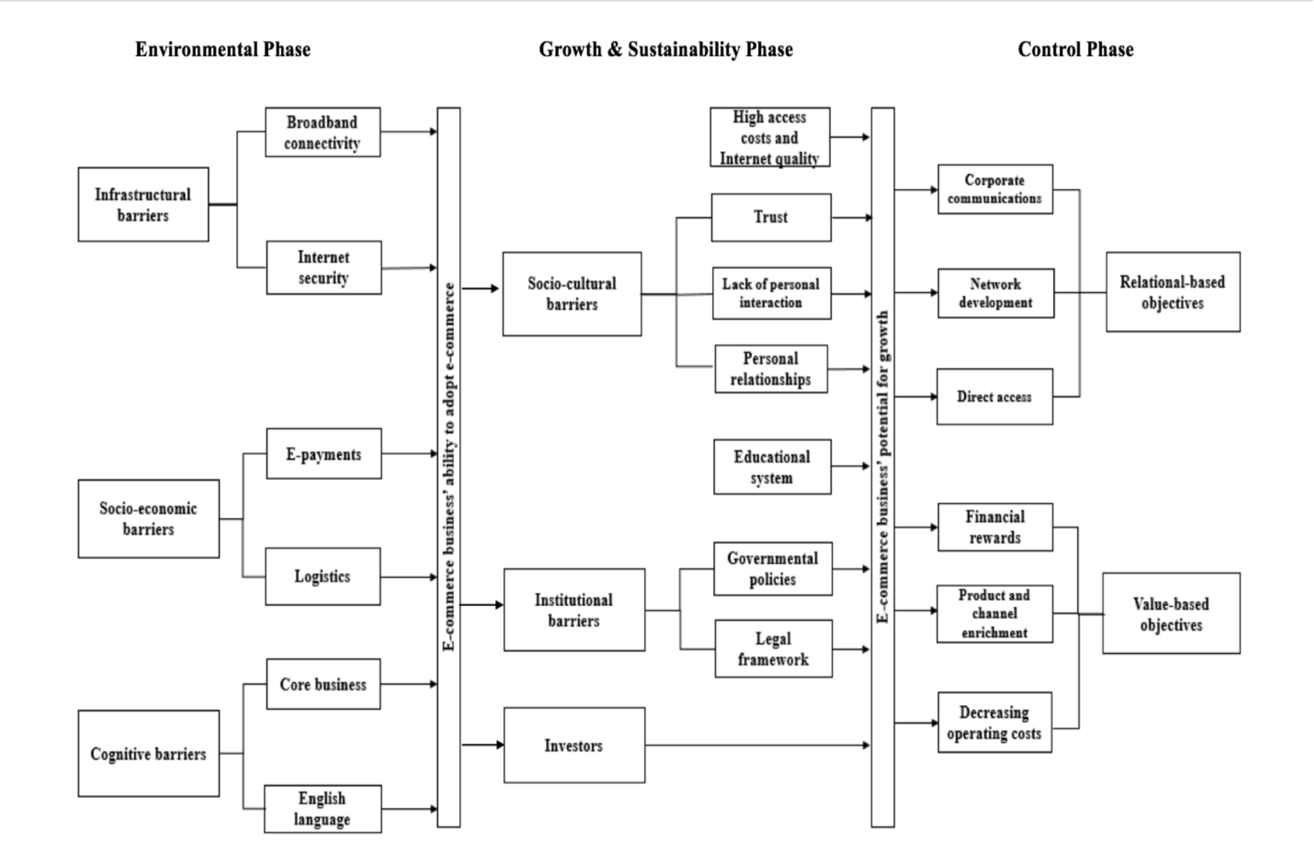
Investors are fundamental for the growth, sustainability and success of e-commerce operations, yet e-commerce is still a relatively new area of business (Cunningham and Fröschl 2013) with many uncertainties and risks that have prevented organisations in developing countries from gaining fully from its benefits (Nabareseh & Osakwe 2014). The study's responses indicate that if e-commerce businesses are to succeed, they require investors who are willing to accept some sort of trading loss, but know that they are investing towards future growth.

One participant stressed that without the support of investors, businesses in the start-up phase of their operations need to be willing to either put their personal wealth into their start-ups or have investors who can front the costs of a business' logistics and products, as well as the payment of salaries and all the costs which arise from business operations.

8. A MODEL FOR OVERCOMING BARRIERS OF E-COMMERCE ADOPTION

Based on the data collected from the 12 management employees at Company Z, this study proposes the model below for overcoming the barriers to e-commerce adoption in most African countries and implementing an appropriate e-business model. The first part of the model, illustrated as the Environmental Phase, shows the environmental factors which are fundamental for e-commerce companies to overcome in order for e-commerce adoption to take place. These are: (1) infrastructural barriers; (2) socio-economic barriers; and (3) cognitive barriers. The second part of the model, shown as the Growth and Sustainability Phase, shows the factors which companies should take into consideration for the growth and sustainability of e-commerce practices. These are: (4) institutional barriers; (5) socio-cultural barriers; and (6) support from investors. The third part of the model, illustrated as the Control Phase, shows the e-business model that could be implemented in order for a company to control these environmental barriers. See Figure 2 for modelling barriers of E-commerce.

Figure 2: Modelling Barriers of E-commerce



Source: Researcher's own

9. CONCLUSION

This study examined barriers of e-commerce that at a business level influence e-commerce adoption in developing countries. It identified various factors that need to be overcome in order for the adoption of e-commerce to be a success in developing countries. While some of the barriers identified are specific to the South African market, most are generally prevalent in other African countries. The most prominent barriers are infrastructural, socio-economic and cognitive barriers, which include factors such as broadband connectivity, Internet security, online payments, logistics, managements' understanding of the core business as well as a comprehension of the English language. In particular, the study revealed that businesses cannot operate without broadband connectivity and Internet security. While the quality, speed and cost of the Internet are factors businesses cannot control, they can partially overcome these barriers by optimising their websites. In addition, the growth of mobile penetration in Africa has meant that businesses need to focus their efforts on developing mobile applications which work well offline and do not consume large amounts of data.

Further analysis revealed that logistics play a fundamental role in the success or failure of e-commerce adoption. When logistical networks are not efficient the customer is inconvenienced, and subsequently, the customer's level of trust is impacted. The ability for e-commerce businesses to exercise control over courier services plays a vital role in this regard. Another aspect is online shoppers who are still hesitant to add their personal details online, and would rather pay cash for a product or service. For this reason, when businesses can offer online shoppers the e-payment systems they are most comfortable using, it increases the success of e-commerce adoption. Also, it is important for businesses to operate in countries where English is the medium of communication, as the English language is the language of the Internet. Lastly, for e-commerce adoption to be successful, it is important for managers to understand the core business.

Beyond the pre-requisites of e-commerce adoption, the study also revealed a number of recommended conditions that can assist businesses with supporting e-commerce operations. These include socio-cultural barriers, support from the government, a favourable legal environment and support from investors. The findings indicate that it is beneficial for e-commerce businesses to pay attention to the cultural differences that may be present in a given market and to offer a personalised customer experience. However, for businesses such as Company Z, which operate in small markets where customers are demographically diverse, it is a difficult task to meet their cultural differences and preferences. Employing local people who have an understanding of a country's local market does offer e-commerce businesses an advantage. Furthermore, it improves customer trust, which is essential for retaining customers. Another factor that contributes to customer trust is support from a country's local government and a favourable legal environment. Whilst businesses such as Company Z do not rely on government support for the successful adoption of e-commerce, when government policies and the legal framework are in support of e-commerce business operations, customer trust is increased. Notwithstanding the aforementioned, in order for e-commerce businesses to grow and be sustainable, investors play a crucial role, as e-commerce is a still a new area of business with many uncertainties and risks that have prevented many organisations in developing countries from fully benefiting from the advantages offered by the online trading system.

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