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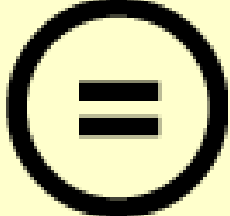
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**E-COMMERCE IN THE TRAVEL AND TOURISM
INDUSTRY IN SUB-SAHARAN AFRICA**

By

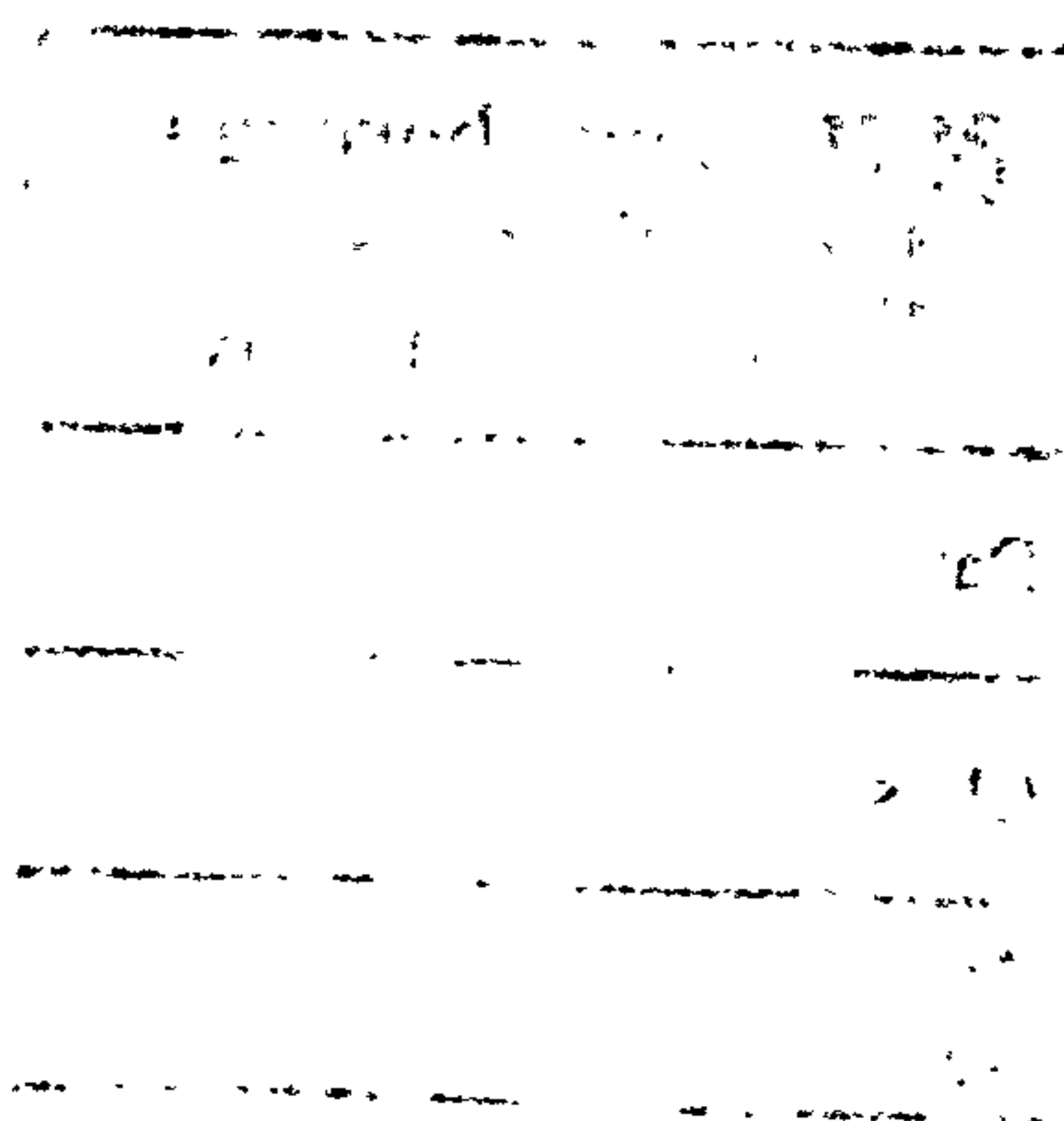
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A Doctoral Thesis

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Loughborough University

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For my mother Rachel Laiza Maswera

Abstract

The e-commerce revolution in business can help African countries expand their tourism industry. Africa, with its great wealth in wildlife and unique resorts, can benefit from the ever increasing user population of the Internet, particularly in the USA and Western Europe where most of the tourists to Africa come from (Internet World Stats, 2004). E-commerce which runs on the backbone of the Internet can help the African tourism industry break into international tourism, thus increasing the flows of the much needed foreign currency.

As there was little empirical data on the e-commerce activities in the African tourism industry the researcher first and foremost examined a large number of websites in order to paint a picture of the nature and extent of the e-commerce activities in four African countries. For comparison, websites of tourism organisations from USA and Western Europe were also examined. The surveys revealed that few of the African organisations are embracing e-commerce and that although some websites were comparable to those of their western counterparts the majority had room for considerable improvement.

After examining the websites another survey was carried out to find the current progress of e-commerce adoption and usage from the perspective of the African tourism organisations. Analysis of the data collected showed that e-commerce adoption among the tourism organisations was slow.

This led to more surveys being carried out to find the barriers to e-commerce among tourism organisations with information-only websites and those whose websites had limited interactive facilities. These surveys revealed that tourism organisations with information-only websites faced more barriers than those with websites which had limited interactive features. They also revealed that the most common barriers were technological and security and legal barriers.

The ultimate survey involved finding out from tourism organisations with fully-fledged e-commerce websites how they overcame the e-commerce barriers.

The methods used by these organisations to overcome e-commerce barriers together with recommendations made in the surveys carried out earlier were used to formulate recommendations and guidelines for those organisations intending to adopt and e-commerce. The recommendations and guidelines were tested and results showed that they are helpful and easy to follow.

Keywords: E-commerce, Tourism, Adoption, Africa, Barriers, Overcome, Recommendations, Guidelines

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CHAPTER 1 – INTRODUCTION

Chapter Preface

This chapter looks at the current state of the tourism industry in sub-Saharan Africa and its importance to the countries which were used in this research project. It also looks at e-commerce adoption and usage by the various sectors in Africa and how e-commerce and the travel and tourism industry complement each other. It also considers the challenges Africa is facing in adoption of e-commerce and how e-commerce can be used improve customer service and increase revenue.

1.1.Introduction

Travel and Tourism is the world's largest industry and creator of jobs across national and regional economies and governments are showing increasing interest in tourism as a source of growth and diversification (Christie and Crompton, 2001). With the exponential growth of the Internet the African tourism organisations have an opportunity to improve their relative position on the international travel and tourism market. The Internet enables the tourism organisations to make product information and facilities to carry out online transactions available to a very large number of potential customers worldwide. The advent of the Internet-based electronic commerce (e-commerce) will present to the tourism organisations in Africa opportunities to expand their customer base, showcase their tourism products and services and, in the process, create new business opportunities.

The world is now entering the era of the Internet economy which has led to the emergence of the global marketplace and e-commerce has been confirmed as a reality rather than just a simple promise. For the least developed countries this is more of a challenge rather than a promise. In particular, Africa lags behind other continents in terms of infrastructure needed for the adoption, usage and growth of e-commerce. These barriers have stood in the way for many African entrepreneurs in the travel and tourism industry who have acknowledged the potential of e-commerce and are willing to implement this technology. The challenge for Africa

is to overcome these barriers to e-commerce adoption and development using the available resources. This is the problem this PhD project will address for the travel and tourism industry.

1.2. Tourism and its Importance for Sub-Saharan Africa

Tourism is now regarded as the pinnacle for most African economies (Gauci et al, 2002; Dieke, 2000). This is because the other two main sectors of African economies have not been performing well, with agriculture being affected by persistent droughts and mining by fluctuating mineral prices. This has resulted in some African economies which are heavily dependant on these becoming very fragile. On the other hand, the services sector, tourism being a prime example, given its expected dynamic growth worldwide could be the answer to the troubled economies in Africa. Sub-Saharan Africa is very rich in wildlife, exotic flora and fauna and might as well take advantage of these to boost the tourism sector. Despite all these advantages, the market share of international tourist arrivals of sub-Sahara Africa stands at only 2.7% compared to 18.3% in Western Europe and 11.1% in North America (World Tourism Organisation, 2005). Within Africa itself, the southern and eastern regions, on which this research is focused, receives 30.8% and 23.1% of the tourists coming to Africa every year respectively. The above figures clearly show that Africa is still very far from unlocking its tourism potential.

According to Christie and Crompton (2001) tourism is significant to 25 African countries, four of which are surveyed in this research project. Although African countries have a small share of the international tourism market, tourism makes a significant contribution to the economies of their countries. In Kenya, receipts from tourism accounts for 5% of the Gross National Product (GNP) while in Zimbabwe its 3% and in South Africa, the top tourist destination in sub-Saharan Africa, the tourism receipts account for 1.6% of GNP in its already diversified economy (Christie and Crompton, 2001). Increasing the market, or least maintain the current growth rate within this sector, will guarantee most of the African countries a steady flow of the much needed foreign currency as well as contributing significantly to the Gross Domestic Product (GDP). Africa still remains at the periphery of the

trade flows in this sector which has potential to contribute economic, environmental and socially sustainable development. Africa should look for a solution which would enable it to either increase or maintain the international tourist flow. The solution could come in the form of new technologies whose use could lead to better and cheaper services to the customers.

Political and social unrest in some regions have contributed significantly to the recent slump of the tourism sector in most African countries and, as these issues are being addressed, this research project examines how Internet-based solutions can help improve the tourist flow into Africa and its impact on this very important sector of African economies. One of the most significant advantages of purchasing on the Internet is that it can be done at any moment in time: the web, unlike the physical stores, is open 24 hours a day. This means that anyone in any part of the world can do some purchasing at any time of the day, even if there is a time difference between the physical locations. Airlines, hotels, travel agencies and tour operators can, therefore, communicate with the potential customers around the clock.

The developing countries, especially those in Africa, have been using their natural resources and geographical endowments to attract the tourists but the following are some of the circumstances which are working against their efforts to develop a strong tourism export sector:

- A generally weaker bargaining position towards international tour operators
- Long distances and less than acute or no competition result in high air fares
- Global distribution systems (GDSs) and computer reservation systems (CRSs) owned by large international tourism organisations
- Increasing competition within the global tourism market (United Nations, 2000)

One of the ways in which Africa can expand its tourism industry is through e-commerce. E-commerce, as it is popularly known, is the carrying out of transactions over the Internet. The adoption of e-commerce technology will enable

some of the tourism organisations in Africa to reinvent themselves as ‘infomediaries’ and this will help establish themselves as credible brands with positive customer recognition (United Nations, 2000). An infomediary is a website that provides specialised information on behalf of producers of goods and services. Any e-commerce website which provides product/service information and facilities to carry out online transactions can be classified as an infomediary. The potential of e-commerce to generate more revenue for a business entity is no longer an issue of debate. A survey carried out by Anite Travel Systems (2000a) revealed that most of the consumers believe that the Internet will become the dominant technology for booking travel and they are already using existing facilities from the World Wide Web (WWW). Stewart (2002) noted that companies that do not embrace the Internet in the next few years will be left behind. Africa would definitely not want to lag behind in a sector it should be able to dominate because of its great wealth of wildlife, forests, flora and fauna, birds and unique tourist resorts.

Several definitions of electronic commerce have been devised and for the purposes of this study the author is going to adopt the definition of e-commerce by Tassabehji (2003):

“Electronic commerce is where business transactions take place via telecommunication networks, especially the Internet”

The transactions are not restricted to those that involve payments and exchange of goods and services. For this study the author will adopt the definition of transaction by Hawkins and Verhoest (2002):

“A transaction is any exchange between participants in a market that is directly related to the acquisition of goods and services irrespective of whether these goods or services are finally acquired”

Some transactions involve product and service delivery and the direct exchange of money, but many others are exploratory and involve the acquisition of market information (advertising), personal enquiries, etc. An example is whereby a tourist

can request information (product or non-product) through the website of a tourist organisation.

Avalon Gateway (1998) outlined the following as some of the benefits that can be derived by adopting e-commerce:

- It is effective, due to the speed of communication
- A business entity can compete internationally without setting up offices in other countries
- One can link with other business entities, for example, a car rental company and a hotel
- There is marked improvement in customer service
- The Internet is another way of getting new customers
- Businesses can also learn through the Internet about consumers
- The Web is essential to business growth.

It should be noted that the current e-commerce models were designed and developed for organisations in the developed world whose environment is completely different from the one in Africa and other developing regions. Lessons could be drawn from the implementation of globalisation where assumptions were made about Africa and other developing countries and where the winners were the wealthier nations from the developed world. This means that Africa needs its own e-commerce model.

1.3. E-Commerce and Tourism

E-commerce and tourism compliment each other very well. The tourism industry is an information intensive industry in which e-commerce is already playing a significant role by allowing information to flow through the Internet on a worldwide basis with virtually no entry barriers. With an estimated world total population of 813 million users (Internet World Stats, 2004), the Internet is one of the ways African countries can use to reach its target market in Europe and America and promote its ailing tourism industry which has been severely damaged by the political and economic situations in the once most popular tourist

destinations. Despite its capacity to reach every corner of the world, the Internet also provides an unprecedented level of connectivity and the ability to communicate efficiently and effectively at modest cost.

Tourism is not only information-based business but the product is a 'confidence good' and it is therefore not possible to comprehensively assess the product in advance (Werthner and Ricci, 2004). The quality of the tourism product is actually determined after consumption. The decision to purchase tourism products is based on the information provided by the respective organisations through newspapers, television, and of late, the Internet. The Internet is having a major impact as a source of information for tourism and will help increase the confidence inspired in the customer directly through the amount and quality of information it provides. The Internet and its interactivity enable customers to find information quickly and precisely on any travel product/service or destination that is of interest to them.

The Internet is forging ways to satisfy customer needs since it allows 'informationisation' of the entire value chain which will result in the following strategies:

- **Value extraction:** This includes strategies which result in increased efficiency and reduction in costs, for example process automation
- **Value capture:** Customer information captured can be used for marketing purposes.
- **Value addition:** This strategy involves combining products and services to provide more attractive products.
- **Value creation:** The focus of this strategy is use of its links with other organisations and tourists in service definition and destination planning. (Werthner and Ricci, 2004)

E-commerce does not only occur on the Internet but on any other telecommunications network. However, the Internet is driving today's e-commerce. The only practical means by which most tourist organisations in sub-Saharan

Africa are able to adopt e-commerce is via the Internet, so this research project has focussed on the e-commerce which occurs on the Internet.

Elias (1999) showed that most consumers opt to book a trip online rather than use a travel agent for the following reasons:

- **Convenience:** The Internet is open 24 hours a day, seven days a week (24/7) and accessible from the comfort of their homes
- **Self-service:** Eliminating a human agent allows prospective travellers to access very large amounts of information at their own pace.
- **Interface quality:** As a channel for communicating information about flights, using a web browser's graphical user interface is superior to transcribing information from a human agent on the telephone.
- **Prices:** The Internet is useful for comparison-shopping. The prospective traveller is able to visit different websites to compare prices being offered for similar travel or holiday packages.

In addition to the above, the following results from a report from the United Nations (2000) also look encouraging:

- Hotel reservations is the largest category of Internet transactions
- About 53% of all travellers in the USA use the Internet for shopping

One of the main purposes of e-commerce is the creation and maintenance of web-based relations. This where Electronic Customer Relationship Management (eCRM) is utilised. ECRM can be defined as the use of information technology to capture, store, manipulate and distribute information about customers (Piccoli et al, 2002). The following are some of the main goals of eCRM:

- To provide customer service
- To simplify marketing and sales processes
- To discover new customers
- To increase customer revenues (Deck, 2001)

All the above-mentioned goals are very important but it is the last two which are more important to the tourist organisations in Africa. With the competition in the tourism industry getting more intense, worldwide tourist organisations need to focus on strategies and technologies that can help retain customers and increase revenue. One of the ways in which African countries could improve the volume of tourists' traffic to their tourist resorts is by catering for consumer preferences (Christie and Crompton, 2001), but to do this organisations must first of all know their customers through the adoption and usage of customer relationship management. The whole of Africa only attracts a mere 4% of the world total tourist population despite its great wealth in wildlife, flora and fauna and its unique tourist resorts. Research has shown that a 5% increase in customer retention results in a 25% to 95% increase in profits (Prewitt, 2002). This underlines the importance of customer loyalty, which arises from trust gained over many transactions. If the African countries could just manage to increase customer retention it would mean that they would be guaranteed an increase in their revenue from tourism, which constitutes 2.54% of the world total, compared to the European Union (EU), one of Africa's tourism markets, which receives about 35.3%.

In a survey carried out by KPMG (1999), it was found that over 80% of the companies from the travel and tourism industry sees eCRM as central to the success of their business and that CRM and the Internet are now their two biggest priorities. Consumers worldwide are more educated and demanding than ever before and therefore, for the African countries to survive in this highly competitive sector, they need to adopt and use eCRM to cater for consumer wants, needs, preferences and behaviour. Africa offers tourism products and services which are not available anywhere else in the world and an effective and efficient eCRM will enable it to successfully market its unique products in the emerging global electronic marketplace.

More research has been carried out on the impact of e-commerce on the tourism industry in Western Europe and America (Werthner and Ricci, 2004; Marcussen, 2005; Anite Travel Systems, 2000a; Anite Travel Systems, 2000b; Accenture, 2002; Marcussen, 2003; Paulo, 2000) whereas the little that has been carried for

African e-commerce did not look at tourism (Moodley, 2003; Barnard and Wesson, 2004; Pather et al, 2003; Molla and Licker, 2004). It might therefore be concluded that researchers are not yet convinced that there are a significant number of e-commerce activities occurring on the African continent. One of the first surveys of this research (Maswera and Dawson, 2003a) showed otherwise and that research now needs to be directed towards the impact of e-commerce on African economies, and on the tourism industry in particular. A further study by the author (Maswera and Dawson, 2003b) found that there are a considerable number of web-based CRM activities occurring, but this study did not address the issue of how tourist organisations in the selected four African countries are consolidating the online CRM activities with those taking place offline. There are e-commerce activities taking place on websites but the overall volume of e-commerce in Africa is still small, possibly growing at slower rate than the global e-commerce. According to the United Nations Economic Commission for Africa (UNECA, 2001), there are several African e-commerce ventures currently in operation and their existence proves that well informed African entrepreneurs can be successful.

1.4. E-Commerce in Sub-Saharan Africa

Different views have been given about the status and developments in e-commerce within Africa as a whole. Adoption and usage of e-commerce in the developed world has produced tremendous results with revenues in the travel and tourism industry set to increase dramatically (Werthner and Ricci, 2004). However, the big question is will it deliver in Africa? With the proliferation of the Internet any organisation of any size, in any country can implement e-commerce systems but they can only prosper in an environment with sufficient infrastructure. For e-commerce to be effective it would need the right information, infrastructure and support systems and it is also dependent on the following major areas (Turban et al, 2002):

- **People:** Consumers, employees
- **Public Policy:** Legal and other policy issues

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- **Marketing and advertisement:** Traditional and new marketing and advertising strategies
 - **Business partners:** The other organisations with which e-commerce occurs
 - **Support services:** For example market research, content creation, payments, logistics etc

The above mentioned components essential for e-commerce which is at different levels of development in different countries even within Africa itself. Sub-Saharan Africa is lagging behind in one of the most important components of the e-commerce environment, namely the telecommunication infrastructure. This is the mechanism to enable transactions to occur with remote users/organisations. Even within the four countries being studied, developments towards e-commerce adoption are at different levels as well. Of the four countries being studied, only South Africa is working towards the establishing of a comprehensive national e-commerce policy (James and Miller, 2004) It would be foolhardy to conclude that the current e-commerce will work for Africa in its entirety, considering the level of development of the infrastructure needed for e-commerce to prosper. For e-commerce to be successful solutions which would take into account the difficulties being experienced need to be devised. Some of the infrastructure problems can be avoided as most of the tourists to sub-Saharan Africa come from the USA and Europe. The liberalisation of the ICT industries in Africa has opened up opportunities for Internet Service Providers (ISPs) who have introduced technologies, such as wireless Internet access, which could be used to avoid telecommunication problems.

It was very difficult, prior to this research project, to assess the status of e-commerce activities in Africa, as there is little research on which to base any conclusions. Various studies have been conducted on e-commerce in Africa. Studies by Mullin Consulting (2001), UNECA (2001), Lunsche (2000), Esselaar and Miller (2001), and the United Nations (2000) have mainly focused on the obstacles to e-commerce in Africa and some of the major issues that will be affected as a result of the development of e-commerce. The following are some of

the reported obstacles to e-commerce in Africa (Esselaar and Miller, 2001; Shemi and Magembe, 2003):

- **Telecommunications infrastructure:** Without adequate telecommunication facilities there would be limited access to the Internet. Africa has just 2% of the world's telephones and less than 0.1% of the world's total Internet users, with the telecommunication and internet access costs also being high, standing at US\$704 (about £437) per annum (Lunsche, 2001). This has been attributed to the respective governments' unwillingness to let go of the monopoly grip they have on the telecommunication infrastructure.
- **E-commerce policy:** There is an absence of a legal and policy environment by the government for the facilitation of e-commerce.
- **Human capacity:** There is a lack of qualified and experienced personnel to operate in the e-commerce environment.
- **Corruption:** Government departments in most African countries are still infested with corrupt civil servants.
- **Civil unrest:** Foreign investors have been driven away by social and political unrest in some African countries.
- **Political will:** Some African governments are yet to recognise the potential benefits of e-commerce on their fragile economies.

The international donor organisations have tried through several programmes to bridge the digital divide between developed and developing countries and between different social groups within developing countries. Organisations such as the United Nations Development Programme (UNDP), The World Bank and The World Economic Forum, and international donor agencies such as the US Aid for International Development (USAID), The Department for International Development (DFID) and The Swedish International Development Aid (SIDA) are carrying out the so-called e-readiness assessments throughout Africa to gauge each country's preparedness to embrace e-commerce (Bridges, 2002). One of the projects which were carried out in all the four countries being studied was called Knowledge Assessment Matrix which was conducted by the World Bank. They used 61 metrics to measure variables of economics, governance, education and

human resources, information and communications technology to determine the country's preparedness for the information economy (Bridges, 2002).

Some e-commerce activities in Africa were reported by Tregurtha and Vink (2002) and Kinyanjui and McCormick (2002) who carried out studies which targeted the small to medium enterprises (SMEs) in Kenya and South Africa. This is one sector which is regarded as the most critical to most developing countries and could lead to revival of economies and then to economic growth. In most European Union states the SMEs make up 99% of the enterprises and they generate substantial share of GDP (Stansfield and Grant, 2003). SMEs are the biggest source of low cost employment and help in regional and local development. With the e-commerce levelling the 'playing field' with big businesses (Limthongchai and Speece, 2003) and given the importance of SMEs in any economy, it will be useful to understand the main factors that drive SMEs to e-commerce adoption.

Some countries are better positioned than others to achieve rapid expansion of e-commerce for the same amount of resources invested (Panagariya, 1999) and South Africa can easily achieve, if not surpass, the predicted e-commerce revenue because of the following (Lunshe, 2000):

- It is one of the few countries in Africa working towards an e-commerce policy
- It has the best telecommunications infrastructure in Africa. South Africa accounts for 70% of Internet access in Africa.
- South Africa produces 28% of the continent's Gross Net Product (GNP)

The UNECA (2001) when accessing the status of e-commerce in Africa identified the following African and International e-commerce markets:

1. The African marketplace

This market is confined to the continent is and is made up of the following niche markets:

- **Local and regional Business-to-Consumer (B2C) e-commerce markets**

Most of the local and regional e-commerce consumer markets are constrained by the limitations in terms of connectivity, high costs of Internet access, willingness to buy through the Internet, use of credit cards and access to other means of electronic payment. As a result many local and regional markets are not able to support viable e-commerce ventures.

- **Local and regional Business-to-Business (B2B) e-commerce markets**

Although the business-to-business market is the fastest growing e-commerce market in North America, in Africa it has been constrained by the same limitations as the consumer market. In addition, e-commerce organisations do not have price or quality advantage over non-Internet based local merchants.

- **Local Teleservices market**

Teleservices can be defined briefly as communication services used to improve access to information and government services or simply as a service which can be executed from a remote location using web-based technologies (Li, 2002). Most of the call centres available in Africa are based in South Africa and that means that there is no current viable market for Internet based call centres for the local or regional market. The main reason for this is that at the moment there is very little real economic integration within Africa.

- **Business-to-Government (B2G) e-commerce markets**

Business-to-government which encompasses government procurement could play a significant role in supporting the development of electronic payment systems. At the moment this market is almost non-existent as there is currently no e-commerce government procurement mechanism and most of the private and public organisations lag behind in the use of Internet-based technologies as productivity tools.

2. The International e-commerce market

The ability of the Internet to reach every corner of the earth has made e-commerce a truly global business. Organisations in Africa can now focus on specific international markets in which they could take advantage of the proliferation of the Internet to have the competitive edge over their western counterparts. The following are some of the international e-commerce markets identified by UNECA (2001):

- **International B2B e-commerce market**

African business-to-business e-commerce has failed to break into the global marketplace which has since been dominated by North America and the Europe Union. The main reason for this has been the volume and prices of the physical products due to the inadequacies of the delivery systems. As a result Africa has achieved more success in delivering teleservices rather than physical goods to business clients overseas.

- **Business-to-Diaspora e-commerce market**

This market targets specific groups of African living and working abroad, in particular North America and Western Europe because this group of people tends to have the income, connectivity and the credit cards necessary to make online transactions.

- **B2G and Institutional Market**

There are quite a number of international non-governmental organisations with bases in Africa who have set up web-based procurement programs. If African businesses can reinvent themselves as electronic entrepreneurs and participate initially as subcontractors then significant e-commerce opportunities could open up for African organisations.

- **International B2C e-commerce market**

Just like in B2B African organisations have failed to break into B2C market for physical goods because of lack of cheap, fast and secure delivery services. African organisations can, however, break into e-commerce consumer markets for services through tourism, where 30 African countries have the potential to develop flourishing tourism industries (Christie and Crompton, 2001). On

average the travel and tourism sector is expected to grow faster than any other economic sector in the world (Werthner and Ricci, 2004).

Panagariya (1999) went a step further in his research, presenting a list of the policies governments in developing countries need to be put in place so that organisations from different sectors can adopt and effectively use e-commerce some of which are:

- Liberalise imports of the relevant hardware and software products for e-commerce
- Allow private Internet service providers
- Pass legislation related to electronic facilitation issues, among them recognition of electronic signatures
- Ensure access to communication networks and markets for electronically tradable goods in foreign countries

Most of the work published on e-commerce in Africa is in the form of reports with no evidence of thorough research work being carried out to back up the points. The published research also focuses mainly on obstacles to e-commerce and the Africa's preparedness to adopt and use e-commerce. Researchers should appreciate the steps that have been taken by African governments to liberalise the Information and Communication Technology and Financial Services industries, thus slowly making the environment more conducive for e-commerce activities. The United Nations Conference on Trade and Development, exposed the myth that e-commerce is not viable in least developed countries by carrying out a survey that discovered wealth of opportunities and potential available for enterprises, even in the most disadvantaged countries (Li, 2002)

1.5. Challenges and Prospects in Adoption of E-Commerce in Sub-Saharan Africa

In order for organisations to adopt e-commerce there has to be a product, which cannot only be bought and sold electronically, but one which is competitive in the global marketplace as well. One product that Africa can sell using e-commerce is tourism. The tourism industry can be a valuable tool for spurring economic growth and development, especially in East and Southern Africa, where there is huge potential to create a thriving tourism sector (Simpson, 2001).

There has always been the cultural, infrastructure, regulatory, linguistic and economic barriers to e-commerce adoption and probably will be for some time. Despite these impediments, organisations in the Third World have continued to adopt and use e-commerce. One of the main challenges for tourist organisations in sub-Saharan Africa, once dubbed 'the technology desert' (Odedra et al, 1993), is to try and overcome these barriers so that all businesses, including the big, multi-billion dollar multinationals and the smaller family-run businesses are able to embrace e-commerce.

During surveys carried out by the author (Maswera and Dawson, 2003a, 2003b) it was observed that most of the tourism organisations, particularly the travel agencies and tour operators, fall in the category of SMEs. E-commerce amplifies the ability of SMEs to access new markets across the globe, enabling activities that might not otherwise be supported by the local market. However the SMEs within the tourism industry are facing more stringent impediments to the adoption of e-commerce partly because of the scale and the affordability of the Internet-based technologies. In addition, most of the e-commerce systems are configured for large firms which do not fit well with small locally-based tourism firms (Kim, 2004). With Africa lagging behind other continents in terms of infrastructure needed for e-commerce adoption (Shemi and Magembe, 2003), it faces an even bigger challenge to find ways of promoting e-commerce and providing affordable e-commerce solutions which can provide SMEs within the tourism industry access to marketing, banking,

training and information on business opportunities. The SMEs in Africa, particularly within the fast-growing global tourism industry, have the potential to contribute to economic growth, social cohesion, and employment as well as regional and local development.

There are high levels of anxiety over privacy and security issues in particular over the way the Internet-based technologies are eroding people's privacy in North America and the EU. In a survey carried out by Miller (2000) showed that South Africans are not really concerned about invasion of their privacy, possibly because they do not understand the implications caused by the Internet revolution. South Africa has achieved the most success in the whole of Africa as far as e-commerce is concerned (Shemi and Magembe, 2003). With the stringent regulations on privacy particularly in the EU, the African organisations face an uphill challenge to inculcate a culture among organisations of respecting people's privacy if they are to make any inroads in the international B2C e-commerce website. The respective governments will need to put in place a regulatory framework which not only covers privacy issues, but regulates all the e-commerce operations.

According to Yao (2004) the emergence of the Internet has led to the rapid growth of e-commerce, and this had an effect on the nature of business. Its potential to generate more revenue is something the tourism industry in Africa, in particular south of the Sahara, desperately needs. In the year 2003, 64 million Americans used the Internet to look for tourist destination information as well as schedules and fares, while in Europe, online travel sales increased by 44% to over US \$14 billion (Werthner and Ricci, 2004). The Gartner Group, a research and analysis company found that travel e-commerce revenue increased from US\$ 5 billion in 1999 to US \$30 billion in 2001, a six-fold expansion in two years (Oz, 2002). To add to this, developing nations are among the major international tourism destinations, which generate sales of US \$131 billion (Li, 2002). This has shown that the online transactions are continuously increasing and African countries need to exploit e-commerce and maximise its economic benefits.

This PhD project discusses the challenges and prospects for the adoption, usage and growth of e-commerce within the travel and tourism industry in sub-Saharan Africa and makes recommendations on how the e-commerce environment in Africa can be improved to speed up e-commerce activity on the continent. There is very little empirical data about e-commerce activities in Africa (Molla and Licker, 2004), let alone the tourism industry. The only way therefore to approach this was to carry out a survey to establish the nature and extent of e-commerce activities in the selected countries by examining various websites from these countries. Through the literature of experts in web design, usability heuristics were devised which the author used to evaluate different aspects of e-commerce. The aim of this exercise was to identify the e-commerce services that are being offered on websites of the various tourist organisations. Websites of different organisations from the travel and tourism industry were accessed looking out for the e-commerce components. The aim of this exploratory survey was to assess the level of e-commerce development of the websites of African tourism organisations. This exercise took about 18 months to complete before online questionnaires were set up to elicit more information about the organisations websites. The purpose of this exercise was to determine the barriers to e-commerce adoption in order to devise ways to overcome these barriers. This research project represents one of the few quality studies to be carried out for a particular sector in Africa, south of the Sahara.

1.6. The Four African Countries Studied

The countries studied are South Africa, Kenya, Zimbabwe and Uganda. South Africa occupies the southern tip of the African continent and has well developed infrastructure which combines with a vibrant emerging market economy. Kenya lies along the eastern coast of Africa and is the regional hub for trade and finance in East Africa. Zimbabwe is a landlocked country which is situated in southern Africa between the Limpopo and Zambezi rivers. Uganda is located in eastern Africa to the west of Kenya and agriculture is the most important sector of its economy. These four countries firstly, are some of the most popular tourist destinations Africa, south of the Sahara and secondly, they have been chosen because they have

a similar type of tourism which is the safari type. Safari has been successful in these countries because of the boundless wilderness, the exotic resorts and the rich and diverse wildlife which has been the attraction for adventure seekers from all over the world.

1.7. Aims and Objectives of the PhD

The main aims of this PhD are to:

- a. Assess the current status and potential impact of e-commerce in the tourist industry in sub-Saharan Africa.
- b. Determine the barriers to e-commerce adoption and usage in sub-Saharan Africa
- c. Determine guidelines for the tourist organisations based in sub-Sahara Africa to overcome the impediments to e-commerce adoption and usage under the conditions available.

The objectives of this PhD are:

1. Study the available published literature to find what is and isn't known and in the public domain about the state of e-commerce in the chosen four countries and elsewhere in the developing world.
2. Examine the state of websites in sub-Saharan Africa by:
 - a. Determine from published literature what website features constitute desirable components of an e-commerce site.
 - b. Select sample websites of tourist organisations in the four countries to study by searching the web, using advertising literature from government agencies and visiting tourism exhibitions.
 - c. Survey the selected African websites to determine the use of the desirable e-commerce features to establish the current take up of current e-commerce practice.
 - d. Select and study sample websites of Western tourist organisations to act as a baseline in which to compare the progress of the African sites.

3. Determine the usability and accessibility of websites of the African organisations:
 - a. Examine the websites for usability and accessibility using online evaluating tools
 - b. Find out the severity of the usability and accessibility errors of the websites recorded by the evaluation tools
4. Examine the current state of ICT and Internet adoption among the tourism organisations based in sub-Saharan Africa
 - a. Survey the selected organisations to determine the use of ICT and Internet for business operations
 - b. Find out from the organisations the current status of e-commerce adoption
5. Determine what barriers exist for the adoption of e-commerce in Sub-Saharan Africa by:
 - a. Identifying organisations with advanced e-commerce activity, moderate e-commerce activity and with little e-commerce activity.
 - b. Sending questionnaires to each of these organisations to determine their e-commerce plans and the problems they perceive for e-commerce adoption (and in the case of advanced e-commerce organisations, how they overcame the problems encountered).
6. From the knowledge gained in 1 to 3, produce recommendations and guidelines for tourism organisations to enhance their e-commerce activities and, hopefully, as a result, fulfil their full business potential.
7. Test these findings and recommendations by:
 - a. Publishing the findings and guidelines in refereed conference proceedings and academic journals.
 - b. Seeking the opinions of the findings and recommendations from experts in the tourism industry in Africa and elsewhere.

1.8. Thesis Layout

1.8.1. Chapter 2 Literature Review

This chapter looks at the previous research studies carried out and how they have contributed to area of e-commerce in Africa. It looks at the following areas: drivers and inhibitors to e-commerce, web usability and accessibility, inter-organisational frameworks, change management and attitudes towards e-commerce adoption and usage.

1.8.2. Chapter 3 Research Methodology

This chapter looks at the research methodology which was employed in this research project to investigate the research questions. First of all the research philosophy was analysed before looking at sampling procedure and the data processing methods used.

1.8.3. Chapter 4 The Surveys For Measuring The Effectiveness Of E-Commerce Websites

In this chapter the methods used to evaluate the effectiveness of the websites are described. The research described in this chapter is also reported in the following papers : “An Evaluation of the Use of the Internet to Promote Tourism in Four African Countries” which was presented at the Software Quality Management conference in April 2003, “An Evaluation of the Use of the Internet for Customer Relationship Management by the Travel and Tourism Industry in Four African Countries” presented at the BIKE conference in June 2003, “Analysing traffic rankings of websites of tourist organisations in four African countries” presented at IRMA conference in May 2004, “Assessing the levels of knowledge transfer within e-commerce websites of tourist organisations in Africa” which was presented at the European Conference of Knowledge Management in September 2005, “On-Site Internet Promotional Techniques of the Travel and Tourism Industry in South Africa, Kenya, Zimbabwe and Uganda” which was presented at the International Association for Development of the Information Society in June 2005.

1.8.4. Chapter 5 Analysing the Website Effectiveness of African Tourism Organisations

In this chapter the data collected from the surveys whose methods are discussed in Chapter 4 is analysed. This chapter gives an insight of the current level of e-commerce activities taking place on websites of tourism organisations based in the four African countries. This is the starting point for this research project as there is no literature on the current status of e-commerce in this sector in sub-Saharan Africa and is key for mapping the research direction.

1.8.5 Chapter 6 Website Content Accessibility and Usability Issues

The research discussed in this chapter is also reported in the following papers: “Website Accessibility and Usability of Tourist Organisations in Four African Countries” which was presented at the Software Quality Management conference in April 2004, and “Analysis Of Usability And Accessibility Errors Of E-Commerce Websites Of Tourist Organisations In Four African Countries” which was presented at the ENTER Conference in January 2005. As the websites acts as an interface between the customers and the organisations it becomes essential to measure how usable and accessible the websites are. This chapter shows how the websites measure in terms of accessibility and usability through automated tools and heuristic evaluation.

1.8.6. Chapter 7 ICT, Internet and E-Commerce Adoption in the Four African countries

In this chapter attention is focussed on how the tourism organisations in South Africa, Kenya, Zimbabwe and Uganda are taking advantage of the advancements in Internet technology and e-commerce to promote tourism. The research discussed in this chapter is also reported in the paper “ICT, Internet and E-Commerce Adoption in South Africa, Kenya, Zimbabwe and Uganda” which was presented at the Software Quality Management conference in March, 2005. This chapter shows the e-commerce adoption and usage from the organisations’ perspective and the plans organisations have in place for enhancement of e-commerce activities.

1.8.7. Chapter 8 – E-Commerce Barriers for the African Tourism Organisations

In this chapter results of the survey carried out to determine the barriers and inhibitors to e-commerce adoption are presented for the tourist organisations in the four African countries. This chapter shows the importance tourist organisations from the African countries attach to each of the category of barriers and inhibitors.

1.8.8. Chapter 9 – Means of Overcoming E-Commerce Barriers used by the African Tourism Organisations

This chapter presents some of the ways by which tourism organisations from the four African countries overcame some of the e-commerce barriers/inhibitors they were facing.

1.8.9. Chapter 10 – Formulating the Recommendations and Guidelines for the African Tourism Organisations

This chapter outlines how the recommendations and guidelines for tourism organisations on how they can overcome the barriers to fully adopt e-commerce were formulated.

1.8.10. Chapter 11 Summary, Conclusions and Recommendations for Further Work

In this chapter a summary of the whole thesis, relating to the aims and objectives set out in Section 1.7 is provided.

1.8.11. Appendix 1 – List of Publications

In Appendix 1 gives a list of all the publications by the author to date

1.8.12 Appendix 2 - Questionnaire to Evaluate E-Commerce Adoption

Appendix 2 contains a copy of the questionnaire used to evaluate e-commerce adoption and usage by African tourist organisations whose results are presented in Chapter 7.

1.8.13. Appendix 3 - Questionnaire for Organisations with Level 1 Websites

Appendix 3 contains a copy of the questionnaire administered to tourism organisations with information-only websites (Level 1). The results of this survey are presented in Chapter 8.

1.8.14. Appendix 4 – Questionnaire for Organisations with Level 2 Websites

Appendix 4 contains a copy of the questionnaire administered to tourism organisations with websites which have limited interactive facilities (Level 2). The results of this survey are presented in Chapter 8.

1.8.15. Appendix 5 – Questionnaire for Organisations with Level 3 Websites

Appendix 5 contains a copy of the questionnaire which was administered to tourism organisations with fully-fledged e-commerce websites (Level 3) to find out the methods they used to overcome e-commerce barriers. The results of the survey are presented in Chapter 9.

1.8.16. Appendix 6 – E-Commerce Barriers for Organisations with Level 1 Websites

Appendix 6 contains data, in more detail on e-commerce barriers faced by tourism organisations with Level 1 websites

1.8.17. Appendix 7 – E-Commerce Barriers for Organisations with Level 2 Websites

Appendix 7 contains data, in more detail on e-commerce barriers faced by tourism organisations with Level 2 websites

1.8.18. Appendix 8 - Methods Used to Overcome Barriers to E-Commerce by the African Tourism Organisations

Appendix 8 contains data on e-commerce barriers with Level 3 websites and methods used to overcome them.

1.8.19. Appendix 9 - Recommendation and Guideline Document

Appendix 9 contains a copy of the 'Recommendation and Guidelines' Document.

1.18.20. Appendix 10 - Recommendations for Adopting E-Commerce in the Tourism Industry of Sub-Saharan Africa

Appendix 10 contains a copy of the simplified version of the document 'Recommendation and Guidelines'

1.18.21. Appendix 11 – Recommendations for Smaller Organisations in the Tourism Industry of Sub-Saharan Africa

Appendix 11 contains a copy of the document 'Recommendations for Smaller Organisations in the Tourism Industry of Sub-Saharan Africa'

1.18.22. Appendix 12 – Recommendations for National Governments in Sub-Saharan Africa

Appendix 12 contains a copy of the document 'Recommendations for National Governments in Sub-Saharan Africa'

1.18.23 Appendix 13 – Recommendations for National Universities in Sub-Saharan Africa

Appendix 13 contains a copy of the document 'Recommendations for National Universities in Sub-Saharan Africa'

1.18.24. Appendix 14 – Some of the Comments on Recommendations and Guidelines

Appendix 14 contains copies of some of the e-mail messages from the tourism organisations and experts on e-commerce based in Sub-Saharan Africa containing comments on recommendations and guidelines

CHAPTER 2 – LITERATURE REVIEW

Chapter Preface

This chapter presents an analysis of the existing literature on e-commerce particularly in developing countries and the tourism sector. First of all the chapter looks at e-commerce benefits in the travel and tourism industry and the other challenges e-commerce organisations are facing today which include change management, inter-organisational links, measuring e-commerce performance and trust and security issues in e-commerce. The chapter then looks at the main research areas which are ICT, Internet and e-commerce adoption and receptivity in sub-Saharan Africa, the current status of e-commerce websites, e-commerce barriers and overcoming the e-commerce inhibitors and impediments.

2.1. Introduction

Today the Internet provides, at modest cost, an unprecedented level of connectivity and the ability to communicate efficiently and effectively directly with customers. According to Yao (2004), the emergence of the Internet has led to the rapid growth of electronic commerce (e-commerce), and this had an effect on the nature of business. With an estimated 813 million users in the world (Internet World Stats, 2004), the Internet is a means for African countries to reach their target market in Europe and America and promote its tourism industries, whose potential is underdeveloped and underutilised (Naudé and Saayman, 2005).

E-commerce is not only about transactional activities but retention of customers as well. Research has shown that a 5% increase in customer retention results in a 25% to 95% increase in profits (Prewitt, 2002). This can be achieved through e-commerce customer relationship management, which is defined, by Schoder and Madeja (2004) as an application, which relies on Internet-based interaction of companies with their customers. This relationship between customer retention and profits underlines the importance of customer loyalty, which arises from trust gained over many transactions. If the African countries could manage to increase

customer retention it would mean that they would be guaranteed an increase in their revenue from tourism, which, in 2003, constituted 2.5% of the world total, compared to the European tourism's 50.7%. (WTO, 2004)

Georgiou and Stefaneas (2002) concluded that the Internet is expected to level the playing field of organisations as the digital market place redefines how companies conduct business and enables any organisation to enter the e-commerce market. It makes it easier for smaller, mainly family-run businesses, to set up e-commerce websites as it requires less human resources and technology. As such, tourist organisations in Africa of any magnitude could penetrate the highly competitive tourism market in the USA and Western Europe by adopting and using e-commerce.

2.2. Benefits of E-Commerce in the Travel and Tourism Industry

The benefits of e-commerce in the travel and tourism industry are now well established. Studies carried out have shown that e-commerce has not only changed the way business is conducted but has tremendously increased revenue of organisations, particularly the travel and tourism industry (Werthner & Ricci, 2004; Marcussen, 2005; Anite Travel Systems, 2000a; Anite Travel Systems, 2000b; Accenture, 2002; Marcussen, 2003; Paulo, 2000). This section verifies the benefits of e-commerce for the travel and tourism industry and in doing so provides a motivation for the authors' research.

Two studies by Marcussen, (2003; 2005) were carried out to find out how the online travel market is distributed in Europe and the USA respectively. These studies showed that the online travel and tourism industry is still dominated by the USA earning around US \$27 billion in 2002 while UK was the biggest earner in Europe, expected to earn the same amount as the USA in 2005. In these studies, Marcussen (2003 and 2005) collected the data from the major online players such as airlines and hotels as well as from publicly available secondary resources. Anite Travel Systems (2000b) concluded that the travel and tourism industry's confidence

in the potential of e-commerce in the UK is matched by a corresponding appetite amongst consumers to book travel online. These organisations represent the online travel and tourism market of the US and Europe. The United Nations (2000), in its report on e-commerce and tourism, acknowledged that developing countries, because of their natural and geographical endowments, can achieve remarkable growth. Studies will need to be carried out to find out how the online travel and tourism in Africa, known for its wildlife, exotic fauna and flora, is benefiting or expected to benefit financially by adopting e-commerce in this sector.

A study by Anite Travel Systems (2000a) focused on how tour operators in the UK can benefit by adopting and using e-commerce. The results from this study showed that they could greatly reduce their overheads, eliminate commissions and cut marketing and fulfilment costs. Anite Travel Systems (2000a) acknowledged in its conclusion that although these savings might be realised as result of e-commerce adoption, the livelihoods of existing established players is threatened by new entrants as the e-commerce systems mature. Travel agencies and tour operators in the tourism industry in sub-Saharan Africa could benefit by adopting technologies which would enable them to reduce costs whilst at the same time put themselves in a position to increase their revenue.

Accenture (2002) took a different direction to focus on how organisations in the travel and tourism industry can work together for the benefit of the customer, a move away from the traditional transaction-centric e-commerce. With the emerging Internet technologies reshaping the customer interaction, various organisations in the online travel market should endeavour to work together to meet customer travel needs. An example would be airlines, hotels and car rental companies working together to come up with an electronic customer relationship management (eCRM) platform to create online profitable booking systems which meet the customers' needs and preferences. VacationCoach (2002) carried out a study to determine what travel agencies and tour operators can do to ensure an effective online customer decision support to increase sales of complex travel products in an economical and scalable way. Safari tours which are often carried out in South Africa, Kenya,

Zimbabwe and Uganda are very complex travel products and usually cover more than one of these four countries. It must be concluded from these studies, therefore, that attention should also be focused on finding out how e-commerce will enable the travel agencies and tour operators to work together whilst at the same time not only being independent but remain competitors as well. Travel agencies and tour operators in sub-Saharan Africa could also use web-based CRM techniques, such as knowledge personalisation, to help customers make well-informed decisions when purchasing safari tours in order to increase customer loyalty. The studies show that eCRM is very important for the rapidly changing and complex e-commerce market and the highly competitive tourism industry as it could help the flow of information between organisations, helping their employees better understand the ever changing and increasing needs, wants and preferences of their customers. From a tourism organisation's value perspective, fulfilling customer needs will lead to the increase in revenue and complete customer satisfaction will result in the organisation achieving even greater e-commerce success.

2.3. Knowledge Transfer in E-Commerce Systems

According to Paprzycki et al (2002), knowledge, and in particular knowledge management is becoming more important for e-commerce systems for the following reasons:

- There is fierce competition in the e-commerce industry and anyone with a slight competitive advantage will potentially gain a large market share. As the competition increases in the travel and tourism sector most organisations are now moving away from transaction centric systems, where the main focus is efficiently processing transactions, to customer centric systems, which carry out meaningful conversations with customers, address their concerns and then efficiently process their transaction (Accenture, 2002). If African organisations are to compete with the organisations of USA and western Europe, who have dominated the online travel industry, they need to invest more in knowledge acquisition. With the emergence of the global marketplace an organisation's capacity to create and sustain competitive

advantages lies in what it knows, not what it owns (Johannessen & Olsen, 2003).

- As the Internet and e-commerce targets a global market space and is not constrained by geographical barriers, it must deal with a very broad spectrum of knowledge. Tourist organisations need to accommodate the different needs and preferences of international customers through knowledge sharing.
- Internet customers are characterised by a different attitude to buying, with expectations that e-commerce sites will provide all the information they need. Today's customer is more demanding than before so, to keep up with the ever increasing demands, organisations need to employ an effective eCRM which gathers the necessary information to adapt their products and services to meet the demand.
- A wide range of information is available on the Internet for those who know where to find it. For a tourist organisation to be able to provide up-to-date information specific to a customer's needs, it must be able to access this information and channel it to the customer. A customer who uses a wheelchair, for example, may need to know about access to a building, facilities on the ground floor and availability of an elevator. Providing information in a context relevant to the customer is a means of turning information into knowledge.
- The Internet enables the supply of extended information not directly linked with a product. In the tourism and travel industry this could involve providing information which a traveller may need to make a decision whether to embark on a particular trip. This includes information about immigration and customs procedures, health and safety issues and the latest weather forecast.
- E-commerce organisations can have many thousands of customers and data can be collected from each one. However, customers can usually be categorised into different types which often need to be treated differently. By collecting information from its customers the company can build its

knowledge of the needs for different customer types which can enable it to personalise its website content even for new customers.

This management of knowledge through e-commerce is essential for African organisations to remain competitive as the global reach of the Internet means that tourist organisations based in Western Europe and the USA can attract tourists away from Africa and can even compete to handle the tourist trade within Africa itself. Research is needed to find out if the tourism organisations from sub-Saharan African countries are taking advantage of the Internet to collect and process information to become knowledge so that they can emerge as winners on the international tourism market. In this thesis one of the aims of the author is to discover whether there is any exchange of knowledge between the organisations and the customers in an effort to improve customer service which, according to Garvey (2000), has been largely ignored. The effective sharing of ideas, knowledge, or experience between tourist organisations and their customers will encourage customers' understanding of contextual knowledge and foster collaboration and trust. The aim is to discover if African tourist organisations are taking advantage of this ability to find, interrogate and exchange knowledge as it is fundamental for business-to-business and business-to-consumer e-commerce.

Knowledge, and in particular knowledge management, has received the attention of many academics and practitioners (du Plessis & Boon, 2004; Pyo, 2005; Wickramasinghe & Mills, 2002; Hall & Graham, 2004; Chua, 2004; Hustad, 2004; du Toit, 2003; Reid & Slazinski, 2003; Lueg, 2003; Biggam, 2003; Benetti et al, 2003, Scott, 2003; Johannessen & Olsen, 2003, Holsapple and Jones (2004)). Studies by Scott (2003), Bennetti et al (2003), Wickramasinghe & Mills (2002), Johannessen & Olsen (2003), Holsapple & Jones (2004) and Biggam (2003) have recognised the importance of knowledge management in e-commerce in today's global market place and how the two can be beneficially integrated. They have emphasised that knowledge management can help e-commerce organisations achieve a competitive advantage.

Knowledge management is wide subject involving technical, social, organisational and environmental aspects. To keep this study within a manageable scope, therefore, this thesis focuses on one aspect of knowledge management, that of knowledge sharing. Hustad (2004) and Reid and Slazinski (2003) carried out studies on knowledge transfer by focusing on how knowledge can be transferred between multinational organisations and project team members. This thesis examines knowledge transfer between organisations and customers.

The proliferation of network access has led to the growth of virtual communities who are connected by computer networks. These are generally known as online communities. Lueg (2003) and Hall & Graham (2004) have looked at how people can be urged to collaborate in order to generate knowledge and to share this knowledge and information within their organisations. These two studies have mainly focused on social and cultural aspects of knowledge transfer and have ignored the role of information technology. To complement these studies of social and cultural aspects, research is needed to examine an important, technical medium for knowledge sharing, namely the website.

Pyo (2005) and Ruhanen and Cooper (2004) have carried out studies on how knowledge can be used to support the tourism industry. Although these studies have shown how applying a knowledge management framework can increase competitiveness in this sector, they have not tried to establish how the various tourist organisations can acquire the knowledge and how that knowledge can be disseminated. The author's study reported in this thesis examines the facilities for knowledge sharing within the websites of the different organisations. Frechtling (2004) carried out a survey to assess the transfer of knowledge from 13 tourism, hospitality and related academic journals to managers, researchers and other practitioners in the US tourism and hospitality industries. However, Frechtling's (2004) study concentrates specifically on e-commerce websites as the medium for knowledge transfer.

There have not been many studies carried out for e-commerce organisations based in Africa. The few studies carried out (du Plessis & Boon, 2004; du Toit, 2003) focus on the impact of knowledge management on customer relationship management and the business environment in general and how knowledge management can increase competitiveness in the manufacturing sector in South Africa. These empirical surveys did not look at other sectors of the economy and, again, did not seek to establish the methods of collecting and transmission of the knowledge. This establishes a need for a survey to be carried out to look at the tourism sector in sub-Saharan Africa. This research, therefore, includes a survey of Kenya, Zimbabwe, Uganda and South Africa, examining the technological imperatives of knowledge transfer between tourist organisations from the four African countries and their customers, most of whom are international (Naudé and Saayman, 2005), and how this knowledge is acquired and disseminated.

2.4. Internet-Based Promotional Techniques

The Internet presents an opportunity for the tourism organisations in the four African countries to promote their products and services to potential customers worldwide as well as establish their e-commerce presence. In this thesis the researcher will establish the nature and extent of promotional activities taking place on the websites of the tourism organisations from sub-Saharan Africa

Several studies have focused on user behaviour and perceptions in the electronic market place without focusing on a specific industry (Pather et al, 2003; Lightner & Eastman, 2002; Lowengart & Tractinsky, 2001; Wang et al, 2001; Subramony, 2002). Lightner and Eastman (2002) argued that websites would have more impact if graphics and pictures are complimented by detailed verbal descriptions. The research carried out by Wang et al (2001) provided an instrument to measure customer satisfaction with e-commerce website information. Lowengart and Tractinsky (2001) analysed the probability of buying products from a particular online store given a set of alternative vendors. Pather et al (2003) proposed a model for measurement theories that incorporate both user satisfaction and service quality

concepts. The research reported in this thesis is focused on the e-commerce websites of tourism organisations. E-commerce is in its early stages in Africa so, before consumer behaviour can be studied, the websites for organisations intending to go online must be examined to determine if the tools for implementing marketing strategies are in place.

Some studies carried out for organisations based in Africa, particularly the southern and eastern regions, have explored the usability of e-commerce websites, with most of the research focusing on South African websites (Singh and Kotzé (2002); Barnard and Wesson, 2003; Barnard and Wesson (2004)). Singh and Kotzé (2002) concluded that South African website designers should not use the same models and frameworks used in developing countries but rather develop their own, applicable in the South Africa context. Barnard and Wesson (2004) used a heuristic evaluation of websites which helped in identifying website usability guidelines. These usability guidelines were then later used to produce a trust model for e-commerce in South Africa. Matevera and Kadyamatimba (2003) carried out a study which examined the technical aspects of an electronic market framework. The product of the study by Matevera and Kadyamatimba (2003) was a conceptual framework which integrates all the e-market subsystems into a single seamless framework.

In the electronic global marketplace the website provides direct contact between the organisation and the user (Kiang and Chi, 2001). Setting up an eye-catching website which is highly usable will not guarantee a successful Internet presence as there are many other websites in existence, with some offering the same products and services. A survey therefore needs to be carried out to examine the nature of the promotional techniques which are being employed by the tourism organisations to attract new customers and retain the old ones. The overall goal of this survey will be to provide an insight into the development and implementation of marketing strategies being used by the travel and tourism industry to achieve e-commerce success. E-commerce has been a huge success in Western Europe and comparing the promotional techniques of the organisations in the four African countries to

their western counterparts will help establish areas where the African organisations need to improve.

2.5. Change Management

Change management helps make change in a planned and managed fashion and also provides procedures to safeguard existing services and safely introduce new services. With the proliferation of the Internet and the digital media, change management becomes a very important process in implementing technologies that can change long-established business processes. For e-commerce adoption and usage to be successful in the tourism in Africa the various organisations must ensure that all parties affected by the e-commerce-induced change are aware of, and understand the impact of the impending change, which is the main goal of change management. This thesis shows how change and its management are affecting the adoption and usage of e-commerce systems.

2.5.1. Change Management in E-Commerce

The shift to an information society is largely related to the adoption of information technology and this has transformed and is transforming the way business is conducted (Keil et al, 2001). Interest in e-commerce is higher in the developed world where the technologies are by now widely available and where business and computer skills are ubiquitous. Licker (2000) concludes that the situation is remarkably different in the developing world, and especially so in Africa, where there are numerous barriers such as high costs, limited resource infrastructure, inconsistent or unsure regulatory environments, and potential political, cultural and social limitations.

Storey et al (2000) and Barnes et al (2003) carried out studies to find out the impact of e-business and e-commerce on organisations. The study by Storey et al sought to find out how firms in the e-commerce market can be classified in order to determine the mechanisms each industry class has for dealing with impact of

e-commerce and the related Internet technologies. It was concluded by Storey et al that the managers of the different firms need to quickly assess where the industry is headed for them to be able to cope with the quickly changing e-commerce. Barnes et al's study focused on the impact of e-business on operations of different firms. The analysis of the results from their study shows that a new thinking in operations strategy is required to match that at the corporate level.

Another business process most likely to be affected by the adoption and usage of e-commerce is payment. In the developing world, and especially so in Africa, most of the economies are almost entirely cash based, whereas credit cards are taken for granted in the developed world (Esselaar and Miller, 2002). The financial institutions, mainly banks, become very important integrated partners within the business transaction processes between organisations (B2B) or between organisations and prospective travellers and tourists (B2C). With the adoption of e-commerce, new processes can be introduced and these include the provision of such services as monitoring of an order, delivery progress, product problems (for example returns policy, reservation cancellation) and also making frequently asked questions (FAQs) available online concerning the business and its products and/or services. This is increasingly becoming popular with the airlines and hotels where a customer, after making an online reservation, is provided with a reservation reference number, which he or she can use to either make amendments to the reservation or cancel it. With the introduction of such facilities, tourism organisations will need to also change the way they had been handling amendments and cancellation of reservations.

There has been a reasonable amount of work carried out on the models and methodologies for implementing change management, which is of reasonable quality backed up with research evidence. However the research does not look at how the actual business processes have been affected by e-commerce-enabled change and possibly the new processes that have replaced them. With the adoption and usage of e-commerce the tourism organisations will need to tailor their existing systems and/or operations to be able to accommodate online payment.

2.5.2. Change Management in E-Commerce in the Travel and Tourism Industry

As more and more organisations embrace e-commerce, it becomes necessary for these organisations to revise their working procedures, especially the way they are handling transactions. Also, with the prospects of B2B transactions occurring in the tourism industry among the African organisations as e-commerce matures, any change in business processes by an organisation might have some ripple effects, forcing related organisations to revise their business processes so that they become compatible. This section examines literature on the management of these business changes.

Katz (2000), the United Nations (2000) and Elias (1999) examine how the adoption and usage of e-commerce by organisations in the travel and tourism industry has affected the role played by travel agencies and to some extent tour operators. Customers used to have all their travel arrangements handled by travel agencies but now they can communicate with airlines, hotels and the tourist resorts directly via the websites. Travel agencies also used to provide information and give advice to prospective travellers but now this role has been taken over by travel information networks rapidly increasing on the World Wide Web (WWW). As Katz (2000) states *“Given the IT craze, the major challenge that lies ahead for travel agents is to identify how they can continue to add value to the customers.....However, one way in which to overcome this obstacle is through innovation”*.

The various studies carried out examine the new role being played by travel agencies but fail to examine what the travel agencies are doing to survive in this highly competitive Internet economy, as e-commerce enables potential tourists, and travellers to deal directly with hotels, airlines and other tourist organisations. Although finding out how travel agencies and tour operators have adapted is a very important issue, which needs to be addressed, it will not be looked at in this research project because of time constraints. The literature examined did not look at the role played by change management in e-commerce adoption in the tourism

industry, that is, whether or not the manner in which change is being managed among the African tourism organisations has contributed to the rate at which e-commerce is being adopted today.

2.5.3. Change Management and Personnel Management

Change management does not only bring along with it new processes but new personnel as well. Grant (1999) revealed that the Internet economy created jobs for 1.2 million and concluded in his studies that Internet workers were 65% more productive than their non-Internet counterparts. With new jobs being created with the advent of the Internet economy, there might be a need to retrain some personnel so that they could effectively handle the new processes. A study by Niederman and Hu (2003) explored the employees that should make up e-commerce staffing and also presented a model of the particular skill set needed for staffing an e-commerce team. Niederman and Hu (2003) then concluded that research should now focus its attention on the characteristics of the e-commerce workers, the design of e-commerce jobs, and the overall character of the e-commerce workforce. The models devised by Niederman and Hu (2003) could be used as a starting point for the African countries in an effort to establish skills needed for employees in working in e-commerce environments of the tourism industry in these countries. Anewalt (2003) used interdisciplinary exercises involving undergraduate computer science and business studies students to help them better understand e-commerce systems. The aim of this exercise was to provide interdisciplinary team experience to the students which they would use after they graduate. While this will be a long to medium term solution, the countries used in this study will need an immediate solution to deal with the impact e-commerce has on their personnel.

The successful implementation of an e-commerce system relies on web programmers but its long-term success depends mainly on dedicated management. As travel and tourism organisations in the African countries being studied prepare to embrace or are already using e-commerce solutions, they need the support of management who make most of the important decisions. Management would only

support a project of such nature if they were to see it as an investment not just expenditure (Kardaras and Karakostas, 2001). For this reason a number of studies have been carried out to understand the role played by management and their perceptions of ICT-induced business transformation (Wu, 2003; Benamati and Lederer, 2000; Nance, 1996; Keil et al, 2001). Studies of African organisations should not only look at how management is coping with business transformation caused by adoption of e-commerce in the travel and tourism industry but also the general attitudes of management towards e-commerce.

The work examined did not look at how change and its management is affecting existing personnel and whether this has any impact on the adoption and usage of e-commerce. With new jobs being created as a result of the advent of the Internet economy studies are needed to look at how the training needs have been, are being or could be addressed by various organisations. However an examination of the jobs created with the adoption of e-commerce is beyond the scope of this thesis.

2.6. Security and Trust-Related Issues in E-Commerce

Evidence from surveys carried shows that travel arrangements made online is on the increase and is expected to continue to rise in the future (Werthner & Ricci, 2004; Marcussen, 2005; Anite Travel Systems,2000a; Anite Travel Systems, 2000b; Accenture, 2002; Marcussen, 2003; Paulo, 2000). This is mainly because of the advantages offered by the availability of e-commerce facilities 24 hours a day, 7 days a week. Carrying out financial transactions always means giving out personal details including credit card and other bank details. This aspect of an e-commerce transaction concerns a number of consumers as they are not sure whether this data will be safe, as it can be easily be abused if it falls in the wrong hands. This could be serious deterrent for customers to make any purchase online. This why trust in e-commerce is so important as, in a virtual environment, the degree of uncertainty about economic transactions is higher than in traditional settings (Grabner-Kräuter and Kaluscha, 2003). This section, therefore, examines published literature to

establish what aspects of security need to be studied in the author's research for successful e-commerce utilisation by tourist organisations in sub-Saharan Africa.

2.6.1 Trust in E-Commerce

Trust can mean different things to different people. A definition from Brown and Muchira (2004) describes trust as expectation of anonymity, the expectation of fairness and control over personal data, and the expectation of confidentiality. Of the five dimensions of trust as defined by Tan and Sutherland (2004) the most important are interpersonal trust, overall intention to trust and online purchase behaviour. In interpersonal trust it is the assessment by the consumer in regards to trustworthiness of the electronic vendor. The overall intention or the willingness of the consumer to make a transaction depend on the vendor, whilst online purchase behaviour looks at the actions by the consumer as a result of their intention to trust the vendor as well as other factors such as price and product availability. These latter two dimensions of trust are very important because without them customers will be reluctant to carry out the transactions to completion. There has been no research work carried out so far on how interpersonal trust and the overall intention to trust have affected e-commerce adoption in the tourism industry in sub-Saharan Africa.

One of the few studies on trust in e-commerce to come out of Africa was done by Singh and Kotzé (2002). The empirical study by Singh and Kotzé (2002) proposes a trust model for e-commerce in South Africa, based on guidelines that were identified as being significant for e-commerce in South Africa. Analysis of these results showed that the application of the guidelines together with proposed trust model can greatly improve the usability and level of customer trust in e-commerce in South Africa. This marks the starting point of research in trust related issues in e-commerce in South Africa and important lessons could have been learned from this research had the proposed model been evaluated to determine its applicability in the different sectors of the e-commerce industry.

2.6.2. Privacy in E-Commerce

Of all the trust issues, privacy seems to stand out. Research has shown that more people would embrace e-commerce if they had better assurances about their privacy (Gupta and Sharma, 2002; Belanger et al, 2002; Kim and Benbasat, 2003; Grabner-Kräuter and Kaluscha, 2003; Kaplan and Nieschwietz, 2003; Shankar et al, 2002; Bryant and Colledge, 2002; Brown and Muchira, 2004; Gauzente, 2004; Smith and Shao, 2003; Egger, 2000; Cheung and Lee, 2002). These studies focused on different aspects of trust with Belanger et al (2002), Grabner-Kräuter and Kaluscha (2003), Gupta and Sharma (2002), Brown and Muchira (2004), Bryant and Colledge (2002), Cheung and Lee (2002), Gauzente (2004), Smith and Shao (2003) and Gauzente (2004) examining the privacy concerns of consumers and how these could affect purchase behaviour. Kim and Benbasat (2003), Kaplan and Nieschwietz (2003), Shankar et al (2002) and Egger (2000) evaluated models of trust and also determined their applicability to Internet stores.

Other studies have targeted specific industries like the ones carried out by Yousafzai et al (2003), Kim and Prabhakar (2004), Brown et al (2005), O'Connor (2005), and Bieger et al (2005) which looked at trust issues in the banking and tourism industries. Yousafzai et al (2003) proposed a conceptual model of trust in electronic banking which had two main antecedents that influence customers' trust which are perceived security and perceived privacy. Kim and Prabhakar (2004) also proposed a conceptual model which suggests that initial trust in e-banking and trust in the bank are the major determinants of adoption behaviour. O'Connor (2005) carried out a study comparing the different approaches to online privacy protection in different countries. He concluded that, although companies were using the three major approaches to protect personal data, which are self regulation, legislative protection and third party certification, in practice the desire to make profits seems to override the companies' guarantees on the use of personal data.

Baumer et al (2004) compared Internet privacy laws between the US and the European Union (EU). The investigation by Baumer et al showed that the EU has

stricter privacy laws than the US where the majority of the international tourists to Africa come from. Brown et al (2005) looked at the effects of unauthorised use of secondary data, invasion of privacy and errors on prior purchase of travel products via the Internet and future purchase probability. The analysis of the results of the study by Brown et al showed that although consumers are concerned by this aspect of Internet usage most of them are not deterred from making the actual purchase. Bieger et al (2005) investigated how ICT could be used to overcome any trust issues within the Switzerland holiday-home market.

Although these studies produced very important results on how trust issues can impact online purchases they do not focus on specific industries like the online travel and tourism sector. This lack of a specific focus is very important because, unlike other products, tourist packages are regarded as “confidence goods” (Werthner and Ricci, 2004) where a consumer is not able to assess the quality of the product before purchasing it. Lessons from the research studies examined are not deemed totally irrelevant but just lack the depth a specific focus will provide. Despite evidence of e-commerce activities taking place in sub-Saharan Africa, none of the research work looked at so far has examined the privacy laws in this region.

2.7. Security Issues in E-commerce

Security will always be one of the primary concerns of organisations who are planning to go online or those who have already adopted and are using e-commerce. With the Internet and its use growing at exponential rates, so are the chances of experiencing a security breach on computer systems. This thesis examines how the security issues have impacted on the e-commerce adoption among tourism organisations from selected African countries.

Security is where Internet stores need to assure visitors to websites that the personal data they enter is secure. Ensuring secure transactions will help increase consumers’ trust of e-commerce and decrease privacy concerns (Luo, 2002). Oosthuizen (1998) and Furnell (2004) examined the security issues related to

e-commerce and their impact on online retail sales. Results from both studies showed that there will always be e-commerce threats to customers and the onus is on Internet stores to use appropriate technologies to reduce risk and to make sure that customers are always aware of the genuine risks. Claesssens et al (2002) carried out a study to evaluate the current security systems used in Internet and mobile banking. It was concluded in this research that security systems for electronic banking should always provide data confidentiality and data integrity of communications between bank and client, and authentication of the client and transactions.

Most of the research work examined in this section focused on the technologies and methods for countering security threats and did not look at the impact the security-related issues have on either consumer behaviour or e-commerce usage and adoption by various organisations. The research studies did not look at the security mechanisms e-commerce organisations in developing countries have in place to ensure secure transactions

2.8. Inter-Organisational E-Commerce Activities

Tourism is generally regarded as a complex product that includes a consumer-customised itinerary of, for example, accommodation, travel, car rental, recreational activities and so forth. As few organisations will encompass such a wide range of activity, this indicates the need for good B2B relations in this highly competitive sector. In tourism, the Internet opens new channels through which developing country enterprises can participate in the supply and distribution of tourism products. Schemes such as regional co-operation and affiliation with major players are available to enterprises, including SMEs (United Nations, 2001). Companies that are active in the tourist market require a network of communication for reasons of competition, satisfaction of the source markets and optimisation of the co-operative structures (Fingar et al, 2000). These networks might be the answer to Africa's inability to withstand the international challenge within the tourism sector. The network will integrate and facilitate interoperability of existing

technologies, especially the Internet, to innovate the workflow of other companies and branches (Bönke and Krömker, 1998). This section examines the importance of business-to-business (B2B) e-commerce for the tourism industry in general and for Africa in particular. The objective of this section is to determine what aspects of B2B research are required for the author's research.

Tourist organisations that are taking the path towards becoming a fully digital, customer driven business realise that no e-commerce application can survive in a vacuum and organisations in the travel and tourism industry should focus on inter-enterprise architectures. This will lead to the inter-organisational relationships and workflows, which become apparent in commercial transactions, in which goods and services are exchanged from one organisation to another. According to Nouwens and Bouwmen (1995) all inter-organisational relationships are characterised by autonomy and interdependency, self-interest and team spirit, competition and co-operation. This is already in existence in the travel and tourism industry. Fruhling and Digman (2000) then concluded that B2B relationships should be seen as being designed as "complimentors" rather than "competitors" and this would make the tourism product even more satisfying and valuable. Lee (2001) carried out a survey to assess business value of B2B e-commerce and the analysis of the results showed that firms are unlikely to achieve significant benefits with basic B2B e-commerce but could gain by adopting collaborative B2B e-commerce.

Koch (2002), Sherer and Adams (2001), Van der Aalst (2002), Lenz and Oherweiss (2001) and Hengst and Sol (2002) used models and conceptual frameworks to design workflows across multiple companies and then assess the impact of e-commerce on inter-organisational co-ordination and relationships. Van der Aalst and Weske (2001) used the Public-to-Private (P2P) approach based on the notion of inheritance to model inter-organisational workflows. The objective of these inter-organisational information systems is efficient processing of transactions, such as transmitting bills, and payments using the Internet (Turban et al, 2002). Ibrahim (2004) proposed a theoretical model that uses multiple theoretical perspectives to analyse how inter-organisational systems can support

inter-organisational relationships. These studies examined such issues as integrating transaction costs, market opportunities, information sharing, co-operation, process assignment and so forth. This would be helpful in the four African countries being studied in this thesis, as some tour packages will see tourists go to most if not all the countries.

Studies by Pare (2001 and 2002), Humphrey (2002) and Humphrey et al (2003) examined the impact of B2B e-commerce applications in developing countries. They share the view that B2B e-commerce might help the developing nations to break into the international market, which has been dominated by Western Europe, Japan and North America. These studies analysed issues such as how B2B might reduce transaction costs, global markets and search costs. The industries studied, include the horticulture and garments industries, but not the tourism industry. This suggests that inter-organisation collaboration in e-commerce in the tourism industry could be a worthwhile line of research.

Missikoff et al (2003) looked at the efforts of a European Union project called Harmonise, whose main aim is to bring standards, which would enable the exchange of information in the tourism industry. The study examined the three fundamentals of the Harmonise project, which are interoperability, ontologies and mediators. Technologies, which could be used to tackle the inter-operability problem, were presented in this study, as was an ontology-mediated integration process based on a framework for data integration. It is also possible that some organisations will be using e-commerce applications whilst some will still be using the traditional manual pen and paper data processing method as evidenced by a study carried out in Mauritius by Kardaras and Karakostas (2001), which showed that only 9% of the sample used e-commerce to support customers.

Studies similar to the one carried out by Missikoff et al (2003) were also done by Kaefer and Bendoly (2004), Medjahed et al (2003), Choi and Whinston (2000). Kaefer and Bendoly (2004) investigated the impact of two organisational constraints, technological compatibility and operational capacity on the success of

B2B. The study by Kaefer and Bendoly (2004) showed that the aforementioned constraints had an impact on the success of B2B e-commerce activities. With the emergence of B2B the need for interoperability extends to the entire commercial process and as a result Choi and Whinston (2000) examined the interoperability and requirements to maximise benefits of B2B e-commerce. Medjahed et al (2003) examined the main techniques, systems, products, and standards for B2B interactions and proposed a set of criteria for assessing the different B2B interaction techniques, standards, and products.

A report by Morrison (2001) revealed that there was a mismatch in cultural approaches between public and the small businesses sector in the tourism industry of Victoria, Australia. According to Accenture (2002), since the backbone of the travel industry's growth has been its complex distribution network of suppliers and intermediaries ranging from small family-run operations to multi-million dollar multi-national companies, there is need to find out the differences across tourism organisations, firm sizes, geographical regions in their e-commerce adoption and usage.

Most of the work published showed evidence of thorough research as evidenced by the resulting models and conceptual frameworks. These models and conceptual frameworks were then used to design inter-organisational workflows. The models were for specific industries none of which was tourism. The tourism sector by its nature covers several geographical regions where the conditions are different and is also made up of organisations of different sizes, from the billion-dollar, multi-national companies to the small, family-run organisation. The literature examined looked at the inter-organisational workflows but did not look at the differences in the regions and companies in their e-commerce adoption and usage with the view of producing an inter-organisational workflow suitable for organisation of any size and from any geographical region. None of the literature focused on forms of e-commerce relations that presently occur among the tourism organisations in sub-Saharan Africa and to what extent this co-operation between

these organisations occur. The literature did not look at the willingness of the tourism organisations to co-operate in the future.

2.9. Measuring E-Commerce Performance

As more and more companies adopt and use e-commerce systems there will be changes in the way companies relate to their customers and compete against one another. Online travel is one of the fastest growing segments on the Internet (Burgess et al, 2004) and therefore it is of value to gather statistics that measure the level, growth and composition of e-commerce in this sector. E-commerce adoption and usage in the USA and Europe has led to a dramatic increase in revenue but there are no guarantees that they would achieve the same results elsewhere in the world. According to Srivihok (1999) the evaluation of e-commerce is critical for the successful employment of future e-commerce systems.

The Office for National Statistics (ONS) carried out surveys of about 9,000 UK companies, 7,000 households and about a 100 Internet Service Providers (ISPs) in an effort to measure e-commerce and its associated activities (Rowlatt, 2001). The surveys included business surveys and general inquiries about Internet usage by various businesses, household surveys to provide breakdowns of Internet access by a range of household characteristics and also a survey to measure the ICT sector which supplies e-commerce hardware, software and expertise. A similar survey was carried out by US Census Bureau but it measured e-commerce readiness, looked at issues related to the state of e-commerce application and e-commerce impact (Atrostic, 1999). The surveys by the ONS and the US Census Bureau were just general inquiries about individuals and type of companies using the Internet, providing some information on their use for sales and purchases but this information did not show the e-commerce success in the different sectors.

Since the website is the primary contact between the customer and an e-commerce company, most studies have devised mechanisms to measure e-commerce performance through their websites. Studies by Wang et al (2001), Molla and

Licker (2001), Barnes and Vidgen (2002), Lightner (2004), Pather et al (2003), Palmer and Lindemann (2003), Wen et al (2003) and Yarden (1997) used models and conceptual frameworks to evaluate the success of e-commerce systems by examining websites. All the models for website evaluation looked at the most important aspects of e-commerce performance which are user satisfaction, website performance, content quality, return on investment and customer service, but no one model could measure all aspects. This would mean using a number of models in isolation to measure the same website and then combine the results to come up with the measure of the e-commerce performance. Jackson (2004) used the Key Performance Indicators (KPI) to measure e-commerce performance. KPI are quantifiable website measurements that reflect whether the company is successfully meeting or falling short of the websites' business goals. This could prove to be difficult as the way each one of them does the evaluation is different.

Kiang and Chi (2001) designed a framework that could help determine the potential benefits of e-commerce. E-commerce benefits were reviewed along three channel functions, communication, transaction and distribution, and factors that impact the use of the online marketing approach. Although such a model could be useful in convincing organisations to adopt and use e-commerce, it is too generic and it is not known whether it will be applicable to the tourism organisations based in sub-Saharan Africa. Important lessons could have been learned had this conceptual model been targeted to African tourism organisations by way of knowing its impact on the adoption and usage of e-commerce in this region.

Assessment of e-commerce performance has also been carried out by analysing the technical quality of the e-commerce solution (Gautam and SeShadri, 2002; Vallamsetty et al 2003, Nakamura et al, 1999; Kalidindi and Zekauskas, 1999). In such studies the researchers measured the e-commerce performance by looking at Internet servers (front-end and back-end), transmission speeds, network configuration/performance etc. Although the technical quality of the e-commerce hardware is very important it cannot be used on its own to determine the quality of e-commerce performance as much more is dependent on the website itself.

Tourist organisations from sub-Saharan Africa will benefit from the evaluation of the e-commerce systems in operation as it will help them determine the best ways to maximise e-commerce benefits within the current economic, political and social environment. The literature examined in this section did not look at how e-commerce organisations within tourism industry are performing despite the importance of the industry to African economies. A significant number of studies looked at models which could be used to measure performance of e-commerce systems but none of them were specifically designed for the tourism industry. The other models used the technical metrics for computer networks to measure the performance of an e-commerce system but the most important component of an e-commerce organisation is the website. None of the literature examined in this section looked at measuring the performance of tourism e-commerce organisations through their websites.

2.10. ICT and Internet Adoption in Sub-Saharan Africa

Information and Communications Technology (ICT) with its computing power has helped many business sectors gain the competitive edge needed in today's global marketplace. A study by Gunasekaran et al (2001) revealed that for organisations to remain competitive they must invest in ICT if they are to survive in the long term. At the same time the Internet has led to the rapid growth of e-commerce.

Studies carried out so far have shown that although there has been some progress made in the adoption and usage of the Internet in the sub-Saharan Africa, more still needs to be done before the countries from this region can compete with their western counterparts (Bridges, 2002; Odedra et al, 1993; World Telecommunication Development (WTD), 2003). A study by Bakry (2003) looked at how to develop standard e-readiness assessment policies, which could provide unified measures that ease evaluations, support analysis and comparisons, and help in diagnosing problems and coming up with solutions.

A number of studies have examined ICT adoption and perspectives in South Africa and how ICT can bridge the digital divide in that country (Marshall, 2001; Martindale, 2002; Goodman, 1994; Averweg et al, 2004) while Barendse (2004) showed how the introduction regulatory initiatives has led to the increase in ICT adoption in South Africa. Oyebisi and Agboola (2003) analysed how the environment influences the growth of the IT industry in Nigeria and Obijiofor (1998) discussed whether Africa will achieve the same benefits as the Western countries with adoption and usage of ICT. De Boer and Walbeek (1999) studied the information gap between industrialised countries and developing countries in order to formulate recommendation policy which could speed up ICT adoption in developing countries. A study by Ngulube (2004) showed that ICT can be used by sub-Saharan Africa to ensure long term access to records and archives which is a valuable part of its cultural heritage. Although these studies have highlighted the importance of ICT today and given an insight of the current status of ICT in some countries in sub-Saharan Africa they do not show how ICT diffusion is taking place in different sectors of the economy. Moreover, many changes have taken place since Goodman's study in the mid 1990s, therefore a survey will need to be carried out to determine the status of ICT adoption within the tourism industry in sub-Saharan Africa.

The Internet and the World Wide Web (WWW) provide the electronic infrastructure for e-commerce. It is therefore important to find out whether the tourism organisations in the four African countries are taking advantage of the liberalised ICT policies to adopt and use the Internet. Statistics on telecommunication infrastructure such as telephone density, the cost of setting up facilities for Internet access and number of the Internet Service Providers in a given country, have been used to give an insight into the current status of Internet diffusion in sub-Saharan Africa (Mbarika et al 2002; Oyelaran-Oyeyinka and Lal, 2005). Cooke and Kroeze (2004) examined how Internet adoption would impact on organisational culture within the South African IT industry. Although this helps organisations deal with changes induced by Internet adoption in IT industry, it does not show the level of Internet adoption in this or any other industry. Wiig (2003)

highlighted how the developing countries' tourism industry could benefit from Internet adoption and usage but again this study falls short by failing to provide actual data to back up the points raised. A similar study was carried out by Lam et al (2004) but it focused on Internet diffusion in Vietnam by analysing the Internet subscription rate.

A significant number of research studies carried out focused on the adoption of ICT in South African organisations. Although these studies present a good picture on ICT adoption in that country there is very little on adoption of ICT in other African countries. None of the studies examined looked at the ICT adoption in the tourism industry which is the pinnacle of most African economies. The statistics on telecommunications infrastructure used to measure Internet adoption like the number of ISPs or telephone density do not help in keeping track of Internet adoption within specific organisations in Africa. These statistics only provide status of the telecommunication infrastructures in the various country but nothing on what is happening within organisations and in this case from the tourism industry in sub-Saharan Africa.

2.11. E-Commerce Adoption in Sub-Saharan Africa

Adoption and usage of e-commerce in the developed world has produced tremendous results with revenues in the travel and tourism industry set to increase dramatically (Anite Travel Systems, 2000a; Paulo, 2000; Accenture, 2002; Werthner and Ricci, 2004). E-commerce through the travel and tourism industry could help increase the in-flows of the much needed foreign currency into these four countries.

The e-commerce adoption models described in the work by Weill and Vitale (2001), Grandon and Pearson (2004), Eastin (2002), Tiessen et al (2001) can not be considered to be adopted for use in sub-Saharan Africa in their entirety as they were developed for organisations operating in a different environment. They will

need to be fine-tuned to suit the political and economic environment in sub-Saharan Africa.

Evidence from the literature surveyed shows that most of the research work on e-commerce in Africa is concentrated in the Republic of South Africa (Moodley, 2003; Barnard and Wesson, 2004; Pather et al, 2003; Moodley, 2002, Molla and Licker, 2004). As a result, it has been difficult to tell what the e-commerce adoption is like in the other parts of sub-Saharan Africa.

Quality research with data to back up the conclusions has been carried out in South Africa. Barnard and Wesson (2004) carried out a study to find out the importance of trust in e-commerce in the South African context whereas Pather et al (2003) created a conceptual model for measuring e-commerce in South Africa. The study by Moodley (2003) examined the potential of e-commerce in enhancing competitiveness of the South African apparel sector while Molla and Licker (2004) surveyed 150 South African companies to determine the maturation stage of e-commerce in that country. Additionally, some studies have been carried out, which targeted specific industries, namely the horticultural industry in South Africa, the garments industry in Kenya (Tregurtha and Vink, 2002; Kinyanjui and McCormick, 2002). The main aim of the studies by Tregurtha and Vink (2002) and Kinyanjui and McCormick (2002) was to build an empirical basis for examining whether business-to-business (B2B) e-commerce enables firms in developing countries to overcome the problems they face in trading on the international market, while Moodley (2002) looked at how e-commerce can help South African wooden furniture producers break into the international market. The other research study on African countries outside South Africa was by Kardaras and Karakostas (2001), who examined the management practices, applications, problems and technological situation in Mauritius with respect to e-commerce. Although these studies provided evidence of e-commerce activities taking place they still do not present a clear picture of either the current progress of e-commerce adoption in general or in a particular industry such as tourism.

It is the author's observation when examining African websites, that most of the travel agencies and tour operators are small family run companies which can be classified as small and medium enterprises (SMEs). According to Stansfield and Grant (2003) SMEs play a vital role within economies worldwide and their ability to successfully adopt and utilise the Internet and, in particular, e-commerce is of great importance in ensuring their stability and future survival. Payne (2000) designed guidelines which could help SMEs in developing countries prepare for and use e-commerce. The guidelines designed by Payne were generic and serve as tips to be considered when designing and implementing an e-readiness initiative for SMEs in developing countries.

Research studies carried out in the far East in Hong Kong, Malaysia, Thailand, Taiwan and Singapore give a clearer picture on the current progress of e-commerce adoption in some sectors in that region. For example, Kendall et al (2001) carried out a study to find out how e-commerce has been received by the SMEs while Teo and Ranganathan (2004) looked at business-to-business adoption in Singapore. The studies by Lau et al (2001) and Yeung et al (2003) focused on e-commerce adoption in Hong Kong by the financial market and SMEs respectively. Rotchanakitumnuai and Speece (2004) examined the perceived benefits and barriers of the Internet in Thailand among corporate banking customers to see how they affect adoption of Internet banking. A research study by Sohail and Shanmugham (2003) examined the current status of e-commerce in the banking industry in Malaysia. Studies by Lu and Lu (2002) and Ma et al (2003) presented the current status of e-commerce adoption and usage within the travel and tourism industry in China while Martinsons (2002) profiled Chinese companies who had achieved e-commerce success. A clear picture of the current status of e-commerce adoption and usage in the Taiwanese tourism and travel industry was provided in studies carried out by Tsai et al (2005) and Wu (2004).

None of the research work looked at the e-commerce activities in the tourism industry in Africa despite being one of the biggest foreign currency earners in this region. A number of studies looked at B2B e-commerce within SMEs but because

of time constraints this research project will focus on B2C e-commerce within the tourism industry. Most of the studies looking at B2B e-commerce focused mainly of SMEs but the tourism industry is made up of organisations of various sizes, from multi-national multi-billion dollar organisations to the small family-run businesses. Some research work has been carried out to assess the e-commerce adoption within organisations from the Far East. Clearly, similar studies need to be carried for sub-Saharan Africa to find not only the current progress of e-commerce adoption in this region but the receptivity of the tourism organisations to e-commerce adoption.

2.12. Current State of E-Commerce Websites of Organisations in the Travel and Tourism Industry

According to Albuquerque and Belchior (2002) websites of most e-commerce organisations are failing to satisfy customers in several aspects and these flaws can eventually lead to the collapse of these companies in this electronic marketplace. Therefore, tourist organisations from the four African countries must make sure that their websites meet the demands of their more knowledgeable and more demanding customers worldwide. This means that factors that affect customer behaviour, product perception, shopping experience, and customer service must be given consideration when designing an e-commerce website (Rohn, 1998).

Rohn (1998) emphasised that e-commerce websites are not just like any other website as they should reflect the same value-to-price trade-offs that the company has built its business on. In order for the e-commerce websites to achieve this functionality they should have the following capabilities (Jhingran, 2000):

- *User Management* – access control for business-to-business (B2B) e-commerce, customer authentication and profile management for business-to consumer (B2C) e-commerce
- *Content Management* - content aggregation for e-marketplaces and distribution hubs
- *Merchandising* - advertising, promotion, and organization of the sales of a particular product.

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- *Price negotiations* - trying to move away from the fixed price model. Contract-based pricing is gaining popularity as well
 - *Order Fulfilment*- processes involved in fulfilling customer orders
 - *Payment Processing* - includes payment options available
 - *Services and Support* - includes tracking, amending bookings and any other after sales service.

Most of the studies carried out looked at how websites of companies from various sectors intending to go online are meeting the demands and expectations of their customers. González and Palacios (2004) used the Web Assessment Index (WAI) to evaluate e-commerce websites of some of the largest firms in Spain in which companies from the tourism industry had highest scores, meaning that they are implementing more effective web policies. In the study by Young and Benamati (2000), it was found out that over one third of public websites were transactional with the rest focusing on publishing product information and financial details about the organisation and Awad (2000) explored the current status of e-commerce websites in the banking industry. The importance of human-interface design in e-commerce websites was the main highlight of the studies carried out by Kubilus (2000) and Nah and Davis (2002), while Gehrke and Turban (1999) and Ozer (2005) looked at components that could make an e-commerce website attract and retain customers. Using laddering interviews, Subramony (2002) elicited data concerning website attributes, their consequences and use end-values while Becker (2002) used a conceptual framework to uncover design and technological issues that might hinder US localised websites from becoming international websites.

Websites of organisations from sub-Saharan Africa have received attention from academics and researchers such as Singh and Kotze (2002), and Barnard and Wesson (2003). The study by Singh and Kotze (2002) sought to establish the human-computer interaction principles for the development of web based applications in the South Africa context to create usability guidelines for e-commerce websites. Analysis of their results showed that guidelines customised to suit the South African environment can improve usability and level of customer

trust. Barnard and Wesson (2003) carried out an empirical investigation to determine if there are any usability problems on websites of three South African companies. However, these surveys lacked the depth to determine the level of e-commerce activities on these websites. From their surveys it was concluded that although some usability problems were encountered on these websites, they scored well against similar international websites.

Some studies have been directed towards websites of companies from the travel and tourism industries. Chu (2001) examined the websites of airline/travel companies based in Hong Kong to find out if they meet the users' needs and expectations. The analysis of the results from the survey by Chu (2001) showed that users expected websites to be informative as well as interactive and attractive. Jeong et al (2003) carried out a survey to find how information satisfaction and purchase-related behavioural intentions can be potential consequences of website quality within the lodging industry. Also in the hotel industry, Schegg et al (2002) examined how hotels and lodges used web-based marketing tools and found out that most websites provided static information with few transactional facilities. Although these studies provided an insight into the nature and current status of websites in the tourism industry none of them focused on those facilities which are directly relevant to a purchase decision.

A significant number of the studies examined in this section provided an insight of e-commerce activities taking place elsewhere in the world, including the Far East, but none of them looked at websites of tourism organisations from the least-developed countries including sub-Saharan Africa. The majority of these studies were just too generic and so were the models used for assessment of websites. Similar studies need to be carried to examine websites of organisations from the tourism and travel industry in sub-Saharan Africa whose political, economic and social environment differs from those where most of the studies were carried out.

2.13. Website Content Accessibility and Usability Issues

The website of a tourist organisation which is already or intends to go online becomes a very important extension of the organisation as it portrays the image of the organisation. A website which is difficult to use and interact with will not portray a good image for the organisation and will force customers to carry out their on-line transactions elsewhere (Barnes and Vidgen, 2002). This was reiterated by Lightner and Eastman (2002) who concluded that a useful and satisfying website is necessary for online success.

Although a number of websites are created by professional web designers, an enormous number of smaller sites are built by people with little design experience resulting in their usability and accessibility being substandard (Ivory, 2003). It is, therefore, important for organisations aiming for online success to carry out regular evaluations on the usability and accessibility of their websites as perceived by their customers and in the context of the industry (Barnes and Vidgen, 2002). Not only have today's users become more knowledgeable, but they are also more demanding, so regular evaluation of their websites could help them keep abreast with the customers' ever-changing demands.

The main focus of usability are the six main attributes which are utility, learnability, efficiency, retainability, errors and satisfaction (eLab, 2006). In short, usability focuses mainly on user-friendliness of websites. On the other hand the most important component in web accessibility is addressing issues relevant to individuals with disabilities and the elderly (Foley and Regan, 2003; eLab, 2006; Danino, 2002). Countries like the USA have gone to the extent of regulating accessibility for information on the web through the Telecommunications (1996) and Rehabilitation (1998) Acts (Zaphiris and Zacharia, 2001). The World Wide Web (WWW) Consortium (W3C), a standards-setting consortium for the WWW, compiled its own guidelines for accessibility for information on the web (W3C, 2005) known as the Web Content Accessibility Guidelines (WCGA).

The limitations of traditional methods of evaluating websites which were highlighted in a study by Brajnik (2000) led to the devising of automated methods of evaluating websites. Ivory and Chevalier (2002) defines an automated evaluation tool as software that automates the collection on interface usage data or the identification and the resolution of potential problems. The difference between the automated tools and the traditional methods of evaluation is that, while in the latter the actual website is examined, the automated tools look at the Hyper Text Manipulation Language (HTML) code, and server and other log file data. Comparisons of the various automated evaluation tools have been made in terms of the tests they cover and how they are carried out (Forbes, 2002; Brajnik, 2000; Ivory and Chevalier, 2002; Diaper and Worman, 2003; Scholtz et al, 1998).

Web testing is the automatic process by which a website is tested against usability and accessibility principles and is based on guidelines that can be implemented in a program and run automatically (Usablenet, 2003). In most studies (Ross, 2002; Zaphiris and Zacharia, 2001; Ma and Zaphiris, 2003; Corbin and Zincir-Heywood, 2002; Zaphiris and Ellis, 2001), the online tools *Bobby* and *LIFT* have been used to measure the content usability and accessibility of websites. *Bobby* is an evaluation tool, which helps identify aspects that fail to comply with the Web Content Accessibility Guidelines (WCAG) and the US Government's Section 508. *Bobby* is mechanistic in nature. It identifies whether tags are present and code is properly formatted but does not indicate whether the code is meaningful. *LIFT* from Usablenet (Usablenet, 2004) is website testing software that also tests and monitors websites for compliance with WCAG and US Section 508 accessibility and usability guidelines. It differs from *Bobby* as its emphasis is on usability rather than accessibility. Although this is faster than the manual method and is able to check hundreds of pages against a large number of guidelines, it sometimes identifies defects which do not exist and some aspects for determining a website's usability and accessibility remain subjective needing human (manual) examination as well.

Hackett et al (2004) used statistical models to determine the effects that technology has on accessibility for persons with disabilities over time. A list of top 500

websites was obtained from www.alexa.com and analysed to determine the differences using Analysis of Variance and Tukey's Honestly Significant Difference (HSD) test. The results from the survey showed that the websites have become more complex and this has led to the increase in accessibility barriers. This approach in its current form will not be applicable to websites of companies who want to go online as creating appealing and interactive websites have made them more complex. Chariton and Choi (2002) examined how the current usability guidelines are inadequate for airline travel agency e-commerce websites. In their conclusion Chariton and Choi (2002) emphasised the need to have usability guidelines for e-commerce sites from a particular industry.

The literature has shown that research studies have been carried out to measure website usability and accessibility for websites, most of which are based in Europe and the US. None of them expanded the same studies to websites of companies based in Africa. Most of them looked at websites from various sectors with only one looking at websites of travel agencies but this focused only on usability guidelines. One of the few such studies carried out on African websites focused on usability guidelines rather than determine whether the websites are usable and accessible.

2.14. Barriers to E-Commerce Adoption and Usage

There have been different reasons why organisations are using or have decided to use e-commerce and also why some organisations up to now have not embraced e-commerce. Since successful adoption and usage of e-commerce is very much dependent on the environment the drivers and inhibitors are diverse within different countries and also within specific industries. It is the aim of this thesis to understand the barriers and how and why they may inhibit the adoption and usage e-commerce in sub-Saharan Africa.

The benefits of adopting and using e-commerce are enormous which means that for one reason or the other not every organisation is able to do so. The inhibitors and

barriers to e-commerce adoption and usage need to be determined and the potential impacts established so that management can gather the resources needed to overcome these barriers. Studies by Rose et al (1999), Oxley and Yeung (2001), Thorbjornsen and Descamps (1997) and Nath et al (1998) analysed the general impediments to e-commerce adoption and usage. Some of the barriers identified in these studies included security, costs, legal issues, training and maintenance, lack of skilled personnel and uncertainty and lack of information.

Recent studies have focused on barriers to e-commerce adoption amongst SMEs (Love et al, 2001; Stansfield and Grant, 2003; Chau, 2001; Tucker and Lafferty, 2004). One of the possible reasons why researchers and academics are focusing on SMEs is that because of their size, the nature of their business and capacity, the rate of e-commerce uptake is rather low amongst these organisations. Tucker and Lafferty (2004) carried out a case study to identify challenges faced by an SME based in the UK in the implementation of e-commerce systems. Love et al (2001) carried out an empirical analysis to identify barriers in the construction industry. The research study by Stansfield and Grant (2003) looked at barriers to the take-up of e-commerce among SMEs in Scotland and Chau (2001) analysed the global barriers to e-commerce adoption amongst the same organisations. All these studies acknowledged that e-commerce adoption within SMEs has been very slow due to a variety of reasons. Most of the tourism organisations within sub-Saharan Africa, travel agencies and tour operators in particular, are classified as SMEs and therefore similar studies need to be carried out to find out the reasons for the slow uptake of e-commerce in sub-Saharan Africa.

Several studies have also been conducted to analyse the constraints on e-commerce in the Far Eastern countries such as China and Malaysia. In their studies Chen and Ning (2002) and Jones et al (2004) analysed e-commerce barriers in China. Although e-commerce uptake has risen recently it has only been concentrated in the major cities of China (Jones et al, 2004). Analysis of the data collected by Chen and Ning showed that China needs to improve the technical, financial and regulatory infrastructure in order to sustain the growth of e-commerce. Another

study on e-commerce barriers in a far-eastern country was by Mukti (2000) who examined the e-commerce barriers of 50 companies in Malaysia. The only study from Africa was carried out by Moodley (2003) who analysed the constraints on e-business faced by companies in the South African apparel sector. Moodley proposed policies which could enable the garment industry in South Africa to adopt e-commerce so that they could compete with other companies on the international market. Although these studies show patterns and trends in the barriers of e-commerce adoption in less developed countries, similar studies need to be expanded to other sectors of the African economies.

Studies by Heung (2003) and O'Connor and Frew (2004) are two of the few which focused on barriers to e-commerce adoption and usage in the travel and tourism industry. O'Connor and Frew (2004) did not directly look at barriers to e-commerce, but rather, at factors to be considered when adopting hotel electronic channels of distribution. Heung's study looked at barriers to implementing e-commerce among travel agencies in Hong Kong. The study by Heung identified five barriers which are management support, technical issues, knowledge of e-commerce, partners' participation and security. This study looked at one segment of the travel and tourism industry which is the travel agencies, but more lessons could be learned if similar studies are carried out in other sections of the tourism industries.

Studies by Mullin Consulting (2001), UNECA (2001), Lunsche (2000), Esselar and Miller (2001), and Shemi and Magembe (2003) have mainly focused on the obstacles to e-commerce across the whole of Africa. Most of the work was in the form of consultation reports and therefore did not include the data to back up the points raised. In addition these consultation reports did not focus on any particular sector but concentrated mainly on the e-commerce environment. The United Nations (2000) published a report discussing the challenges faced by tourism organisations in developing countries in the development of e-commerce. The report by the United Nations focused mainly on the e-commerce environment and the role of the tourism-promotion organisations in the development of e-commerce,

leaving out the other players in the tourism sector like the airlines, national parks, game reserves, travel agencies and tour operators. One thing that could be learned from the reports and studies examined in this section is that governments in developing countries need to play their role by making the environment conducive for e-commerce development. Research needs to be carried out to find out what obstacles, internal and external, are being faced by all the tourism organisations. In this thesis the e-commerce barriers are divided into five main categories which are organisational, financial, technological, behavioural and security and legal. This classification will help determine which barriers are more prevalent and also how these barriers can be overcome.

2.15. Overcoming the E-Commerce Barriers

Research has shown that e-commerce significantly increases revenue, productivity and profitability of a company (Werthner & Ricci, 2004; Marcussen, 2005; Anite Travel Systems, 2000a; Anite Travel Systems, 2000b; Accenture, 2002; Marcussen, 2003; Paulo, 2000). The growth of the Internet has been another driver for e-commerce adoption and usage as companies, especially in the travel and tourism industry, can reach customers worldwide. The Internet opened up avenues for companies of all sizes including those from developing countries. In the process companies intending to go online have come across impediments which have hindered their progress to e-commerce adoption and usage. The review of literature in the last section has shown that the smaller companies and those from developing countries are among some of the organisations which are still facing e-commerce constraints. Companies which are committed to business online have to find ways of overcoming the constraints on e-commerce adoption and usage.

Research on companies from developing countries seems to suggest that they have overcome most of the barriers to implementing e-commerce. Research on how to overcome e-commerce barriers is one area which has not received the attention of researchers and academics. Howells (2000) looked at how governments could remove all the barriers to e-commerce in the EU and to make the Internet faster and

cheaper than anywhere else. The discussion by Howells mainly focuses on what EU governments could do to make telecommunication operators move towards low-cost calls like they have in the US. Thibodeau (2001) analysed how a US Congressional subcommittee examined the e-commerce barriers. One major limitation of this report is that they did not look at how to overcome specific e-commerce barriers faced by companies but rather focused on overcoming barriers using the political structures within the USA and the EU. In the opinion of the author the work was not of high quality and the points were not backed up by thorough research. It comprised of newspaper articles in which they were merely reporting discussions by subcommittees of the various governments and did not provide any empirical data on the e-commerce issues raised. This thesis looks at how tourist organisations from sub-Saharan region can overcome the e-commerce barriers considering the current political, economic climate in this region. Although the political structures can play a pivotal role in overcoming e-commerce constraints, this thesis examines home-grown solutions to overcome these impediments.

Lack of knowledge of e-commerce technologies and techniques is probably the root of all deterrents of organisations to e-commerce adoption (Nambisan and Wang, 1999). For the tourism organisations from sub-Saharan Africa to successfully implement e-commerce systems they need to be provided with the appropriate knowledge that would enable to do so. According to Nambisan and Wang (1999) there are three broad categories of barriers which could be associated with web-based technology like e-commerce which are:

Technology-related knowledge barriers – This involves knowledge regarding the appropriate hardware and software infrastructure, technological specifications, security and standards in relation to an organisation's business context, making choosing the most appropriate technology from a wide range a difficult task.

Project-related knowledge barriers - This relates to knowledge about human and financial resource requirements for Web-based application development, development process, project management as well as functional participation.

Application-related knowledge barriers – This is about lack of knowledge regarding specific business objectives that will be served by e-commerce. This makes it difficult to make a business case for adopting e-commerce, and to know how to integrate the e-commerce systems with existing IT systems and how the Internet-based technology will impact on the organisational structure.

One thing that could be learned from the study by Nambisan and Wang (1999) is that all the organisational barriers to e-commerce adoption can be traced back to knowledge. This thesis not only looks at organisational barriers but also looks at how financial, technological, behavioural and security and legal barriers can be overcome by the tourism organisations from sub-Saharan Africa.

2.16. Summary

This chapter has examined published research work on areas related to e-commerce development. There has been the lack of quality research work to provide empirical data on e-commerce activities in Africa and in particular the tourism industry. Perhaps this shows how unfocused the research is at the moment in sub-Saharan Africa, where the leading nation in e-commerce research has been South Africa. Not surprisingly most of the literature on e-commerce research for African organisations was carried out by South Africans and was for South African organisations. Donor organisations like the United Nations, USAID, SIDA and the UK's Department for International Development have come to the aid of the least-developed nations by funding and carrying out surveys to assess the countries' potential for e-commerce development. Most of the work was in the form of consultation reports and focused mainly on the e-commerce environment of the developing countries, for example, the economic, social and political situation in Africa. Lessons that could be learned from the work by donor agencies is the role to be played by the various governments to ensure successful e-commerce development and growth. This thesis provides empirical data on e-commerce activities in the tourism industry by not only looking at the external e-commerce environment but the internal one as well.

Although the literature covered in this chapter is very important for this PhD, it lacked focus. Most of it was just too generic and, as a result, not much could be learned from it but it did provide direction for further research. In the main areas of research such as eCRM, change management, inter-organisational e-commerce activities, security and trust related issues no research has been carried that focuses on African organisations in the travel and tourism industry. The products and services from the travel and tourism industry are different from those of other industries. Some research was carried out on South African organisations in the apparel sector and provided some indication of the possible challenges and prospects that could be faced by the tourism organisations in the four African countries used for this thesis.

The main focal point of this thesis is the websites of the various tourism organisations as they represent the main medium for communication and transactions between business organisations and its customers. Therefore, in this thesis the e-commerce performance was measured through websites, unlike other studies which used conceptual frameworks and models involving the use of either customers or the organisations' personnel to measure e-commerce performance.

While the surveys carried out by the donor organisations have focused mostly on constraints of ICT adoption, much has happened since with most governments liberalising the ICT industry enabling foreign players to join this market. This has made ICT products more affordable and as a result this thesis examines what the organisations in this highly competitive tourism industry are doing to take advantage of the liberalisation of the ICT industry to adopt and use the technology. Whereas, in other research studies, statistics on telecommunication infrastructure were used to determine the Internet diffusion in Africa, this thesis will attempt to learn from the organisations themselves the nature and extent of Internet and adoption usage. This approach enabled the author to determine how the various organisations are adopting and using e-commerce.

This thesis examines the impediments to e-commerce adoption which are being faced by tourism organisations from sub-Saharan Africa whose economic, political and social environments are different from those of other regions. This thesis determines ways by which the African tourism organisations can overcome the barriers to e-commerce adoption and growth using the available resources. This issue has not received the attention of the academics and researchers.

During the literature review the researcher came across various generic conceptual models and frameworks for e-commerce development and assessment. This thesis does not attempt to test the applicability of these models and frameworks to tourism organisations as it would require closer contact with the organisations concerned and that was not possible within the scope of this thesis. Because of the time constraints, the scope of this thesis is also restricted to business to customer (B2C) e-commerce. B2B e-commerce is very important for tourism organisations, so it is suggested that a separate in-depth research survey is needed to investigate ways to promote inter-organisational activities within sub-Saharan Africa and between African organisations and their counterparts from the other parts of the world.

CHAPTER 3 – RESEARCH METHODOLOGY

Chapter Preface

This chapter aims to provide a comprehensive description of the research approaches available for an information systems-related project. The most appropriate research methodology which will yield information needed to explain and understand the phenomena being studied is then selected, based on considerations of the research aims and objectives set in Chapter 1. The chapter covers the following sections: research philosophy, research strategy, research design, data collection methods, questionnaire design, prototyping questionnaires and the administration of questionnaires.

3.1. Introduction

E-commerce activities extend across the business operations of categories of organisations and individuals, whether undertaken for profit or just as a service to some community. The e-commerce industry is made of companies with wildly differing economic measurements and projections. This is particularly so with organisations within the travel and tourism industry in Africa and elsewhere in the world, ranging from small family-run businesses to large multinational companies. This implies that the research aims of this thesis require a research methodology that can accommodate companies of all sizes, operating under different political, economic and social environments.

The data for this research was gathered partly by examining the existing websites of tourist organisations in sub-Saharan Africa. This research project also examines how organisations can overcome the barriers of e-commerce and so adopt it for the benefit of the organisations themselves and the surrounding communities. A lack of published data on e-commerce implementation in Africa meant that much of the data had to be obtained directly from the individual organisations.

The main aim of this chapter is, therefore, to provide a comprehensive description of the research methodology employed to obtain the data for this study. The research methodology was designed in order to produce results that not only provide an insight into the e-commerce activities in sub-Saharan Africa, but will also point to practical solutions which would enable the tourism industry to sustain the ailing economies of African countries and other developing nations with similar conditions.

3.2. Research Philosophy

Crossan (2003) identifies the following three reasons why philosophical perspectives are important for research methodology:

- It can help clarify the overall research strategy to be used.
- Knowledge of research philosophy can help researchers to evaluate different methodologies and methods and avoid using the wrong ones.
- It may help the researchers to be creative and innovative in either selection or adaptation of methods that were previously outside their experience.

According to Myers (1997) the most important philosophical assumptions are those which relate to the underlying *epistemology*, which can be defined as that which refers to assumptions about knowledge and how it can be obtained. In other words, an epistemological issue concerns the question of what is (or should be) regarded as acceptable knowledge in a particular discipline. The methodological differences most commonly used focus on the differences between quantitative and qualitative research. Cresswell (2002) defined the two approaches to research as follows:

- *In quantitative research, the investigator uses postpositivist claims for developing knowledge and uses strategies of inquiry such as experiments and surveys, and collects data on predetermined instruments that produce statistical data*

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- *Qualitative research develops knowledge using constructivist claims and uses strategies of inquiry such as narratives, phenomenologies, ethnographies, grounded theory studies, or case studies.*

Qualitative research is generally associated with the philosophical traditions of *interpretivism*, while quantitative research is usually allied with the *positivism* philosophy. In qualitative research there is no attempt to assign frequencies and rare phenomena receive the same attention as the more frequent phenomena. The main disadvantage of qualitative research is that the findings can not be extended to wider domains with the same certainty as that of quantitative analyses. Quantitative analysis is statistically reliable and produces generalisable results. Analysis of data in quantitative research is not as rich as qualitative analysis which provides a complete and detailed description of the findings. Both qualitative and quantitative approaches could be used to acquire the information needed to understand the nature of e-commerce activities in the four African countries surveyed in this research, so a mixed method approach is employed. With the mixed method approach, both quantitative and qualitative data is collected sequentially. According to Pinsonneault and Kraemer (1998), a single-method approach ‘narrows the perspectives from which the phenomena are studied and limits possibilities for gaining understanding’.

3.2.1. Positivist Philosophy

Positivists believe that reality is separate from the individual who observes it. It is assumed that the reality is objectively given and can be described by measurable properties which are independent of the researcher. In much more simpler terms, positivists believe that knowledge which is developed is based on the observation or experience within the real world. A good example is a scientific theory whose predictions can either be accepted or discarded if not supported by empirical tests. This means that, despite the amount of work put in or its appeal, a scientific theory can only be accepted after it has been put to the test. At the core of positivism is the attempt to differentiate between real scientific theories and myths. For example,

Sarker and Lee (1998) successfully used the positivist approach to test a theory about IT-enabled business process redesign.

The ideas associated with positivism have been developed and challenged, stated, re-examined and re-stated over time. After being tested, a scientific theory is never verified because it can never be shown to be true, as some future observation may yet contradict it. Positivism philosophy distinguishes between falsification as a principle, where one negating observation is all that is needed to challenge a theory, and its application in the real world through methodology. It should be noted that the negating observations could be erroneous, so more than one observation needs to be carried out before one can falsify a theory. Sarker and Lee (1998) used the positivist approach to show that the technology-oriented theory of business process redesign is wrong.

Positivism stresses the importance of induction and verification, and the establishing of a particular manner, for example laws of obtaining facts about the real world (Crossan, 2003; Conford and Smithson, 1996). The aim is to establish laws to obtain knowledge, getting rid of scientific knowledge derived or developed from speculative and subjective viewpoints by using formal methods such as mathematical models.

Generally it can be concluded that positivism is more suited to mathematical and physical sciences. Positivist philosophy has been challenged by the social scientists as the exploration and examination of human behaviour are beyond the scope of positivism. Debate is continuing on the appropriateness of the positivist approach to methods of science when human concerns and behaviour are the subject of study (Conford and Smithson, 1996)

3.2.2. Interpretivist Philosophy

Interpretivism is a term used to describe a contrasting epistemology to positivism. Interpretivists share the view that the subject matter of social sciences is fundamentally different from that of natural sciences, i.e. the study of social sciences requires a research procedure which distinguishes human behaviour from natural sciences. Unlike the positivists, the interpretivists believe that reality and the individual who observes it can not be separated, i.e. people's perceptions of the world are inextricably connected to their everyday experiences (Webber, 2004). The lack of observer-independent reality means that interpretivism needs to follow a research procedure whose aim is to understand situations and give plausible and acceptable accounts of them (Stahl, 2005)

Myers (1997) describes interpretive studies as an attempt to understand phenomena through the meanings that people assign to them and the interpretivist approach in information systems research is designed for developing an understanding of the context of information systems, and the process whereby information systems influence or is influenced by context. According to Pather and Remenyi (2004), the interpretivist deliberately sets out to subjectively understand the human constructs, often through active involvement and observation, making understanding rather than prediction the main role of the interpretivist.

Interpretivist philosophy recognises that the knowledge people develop reflects on particular goals, culture and experience. Pather and Remenyi (2004) reiterate that the interpretive research methods adopt the position that people's knowledge of reality is a social construction from human factors. With the help of participation observation, the researcher enters the everyday social world in order to understand the socially constructed meanings, and then reconstructs these meanings in a social scientific language. For example, Avgerou and Walsham (2000) devised a broadly interpretive approach that focuses on diverse cultures, socio-economic conditions, and the experiences and perceptions of the subjects involved rather than use some scientific framework of hypothesis testing (Smith, 2005).

3.2.3. Selection of Research Approach

Information systems research, of which e-commerce is part, has been criticised for the fundamental gap between theory and practice mainly because of the methodological inadequacy of the dominant positivist approach to research (Breu and Peppard, 2001). Most of the studies have shown that information systems research is currently dominated by positivist research methodologies (Arnott and Pervan, 2005; Stahl, 2005; Jain, 2004; Stahl, 2003). Although the studies that have used the anti-positivist research methodologies have been deemed low quality because of lack of scientific credence, they have managed to produce practically relevant knowledge.

In a study by Khazanchi and Munkvold (2000), the arguments presented have four implications for information systems researchers, one of which was the emphasis on adopting scientific principles and practices for conducting an inquiry into information systems phenomena. As the debate continues as to whether to classify information systems as either a science or another discipline, some authors have called for the use of a well balanced mix of methodologies (Arnott and Pervan, 2005; Howcroft and Trauth, 2005; Breu and Peppard, 2001). Given the complex nature of information systems research it would not be practical to decide on a particular methodology as the best suited to a particular problem, but instead more consideration should be given to the research problem

Consideration should now be given to the development of diffusion of information technologies throughout organisations and society as well as the relationship between information systems and the organisations and societies in which they are embedded (Howcroft and Trauth, 2005). For new areas such as e-commerce, researchers should adopt an orientation that is not overly technological but one which is somehow in between and gives consideration to social dimensions and interactions between the social and the technological (Sarker and Lee, 1998). In this context a positivist research methodology does not seem appropriate for this purpose. This PhD research project examines the e-commerce adoption and usage

in sub-Saharan Africa and how e-commerce can assist the economies of the countries that were studied. Interpretive research involves the studying of the social action. The research approach which can achieve the best results for such an examination is the interpretivist. The interpretivist research methodologies are best suited for this kind of research as they do not predefine dependent and independent variables, but usually focus on the full rational thought as the situation emerges (Myers, 1997).

3.3. Research Approach

3.3.1 Idiographic Research

According to Sekaran (1992), research can be carried out either to solve an existing problem within a particular environment or just to add or contribute to the general body of knowledge in a particular area which is of interest to the researcher. This research looks at how to overcome constraints faced by tourist organisations in four African countries and, at the same time, provide an insight into the current e-commerce activities taking place. With most research studies in e-commerce focussing on developed countries, attention of researchers now needs to be drawn to e-commerce issues in developing countries and in particular Africa, south of the Sahara.

As there is little known about e-commerce in sub-Saharan Africa, exploratory studies need to be carried out to find out what is the general picture of e-commerce in the tourism industries. The best research style for this research project is the idiographic research whose aim is to understand a phenomenon in its own, particular context (Cornford and Smithson, 1996). The idiographic studies of the ICT, Internet and e-commerce adoption will help in the understanding of the diffusion process of these technologies in the four African countries. Results of the analysis of the empirical data from these studies could then be used to map research directions for e-commerce in sub-Saharan Africa.

As e-commerce performs differently in different environments, idiographic research is ideal as it is concerned with uniqueness of certain situations. Studies have been carried out to find out the impact of e-commerce in the developed and upcoming countries in the Far East (Kendall et al, 2001; Teo and Ranganathan, 2004; Lau et al, 2001; Yeung et al, 2003; Rotchanakitumnuai and Speece, 2004; Sohail and Shanmugham, 2003; Lu and Lu, 2002; Martinsons, 2002; Tsai et al, 2005; Wu, 2004) and, since African economies operate in a different economic and political climate, it is necessary to see how e-commerce impacts the tourism industry in this region. The idiographic research will be best suited for this project as it is usually focused on analysing accounts which are based on everyday events. With the growth of the Internet, e-commerce has become part of everyday operations especially for those organisations within the travel and tourism industry who deal with customers worldwide, especially from the developed countries where there are higher rates of Internet diffusion.

3.3.2. Grounded Theory

One of the interpretivist theories that is directly relevant to e-commerce research is the grounded theory (Clarke, 2000). The grounded theory (Glaser and Strauss, 1967) can be defined as the general abstract theory of a process, action, or interaction grounded in the views of the participants (Cresswell, 2002). In other words, grounded theory was intended as a methodology for developing theory that is grounded in data which are systematically gathered and analysed (Goulding, 2002). This type of methodology is applicable to develop a theory where little is known. It is also used to provide a different viewpoint of the existing knowledge. Not much is known about e-commerce usage and adoption in Africa, south of the Sahara so a theory-building research method is required in order to develop ways by which e-commerce barriers can be overcome.

One of the basic elements of grounded theory is *concepts*. Concepts are regarded as the basic units of analysis as it is from the conceptualisation of the empirical data that the theories are developed (Strauss and Corbin, 1990). The facts, figures and

data should be analysed only as indicators of phenomena and as a result given conceptual labels. The conceptual labels will help the researcher gather the basic units of the theory by grouping facts and data which appear to resemble the same phenomena. Golicic et al (2002), in a study to look at the impact of e-commerce on supply chain relationships, generated theoretical concepts by continually questioning information obtained and making comparisons amongst the data sets. In this thesis, facts, data or events which relate to different aspects of e-commerce or related areas like websites, are continually analysed and studied in order to fully understand the theoretical concepts behind Internet and e-commerce adoption in sub-Saharan Africa. Also the research involved a large quantity of data, so the only logical way to proceed was to group this data for easier analysis and conceptualisation of theories.

The other basic element of grounded theory, as defined by Strauss and Corbin (1990), is *categories*. The categories are much more abstract than the concepts which they represent. Categorisation of data is one of the elements of abstraction which can lead to the generation of a theory (Gregor, 2002). For example, data from more than 700 pages of interview transcripts and company documents were systematically organised and coded resulting in 95 categories of meaning in a study by Golicic et al (2002). Coding is viewed as the 'central method in the transformation of data into theory' (Goede and de Villiers, 2003). Categories and relations built in a study by Lehmann (2000) led to the formulation of a substantive theory of the factors that affect the shape and the process of developing an international information system. In this research project the data collected from exploratory studies of the websites and that which is collected through questionnaires needed to be categorised. During this process the researcher looked out for any emerging theories, their definitions and their relationships.

The third basic element of the grounded theory is *propositions* which show the relationships between a category and its concepts (Strauss and Corbin, 1990). The grounded theory methodology helps researchers and academics develop conceptual theories that are made up of relationships among concepts representing different

units. In this case the researcher should be able to quickly recognise what is important in data and then give it a meaning (Sarker et al, 2001). This is usually referred to as 'theoretical sensitivity' (Strauss and Corbin, 1990). Unlike other types of research approach, grounded theory methodology does not involve hypothesis testing as this would require measured relationships. The concepts and the categories identified through iterative data analysis helped the author make recommendations and design guidelines which could help organisations overcome the e-commerce constraints.

The e-commerce environment is perceived to be highly uncertain so no assumptions were made by the researcher. With the aim of mapping out the research directions in an area with little or no empirical data, a theory discovery methodology is appropriate to develop a theoretical account of the general e-commerce activities in sub-Saharan Africa. It can be concluded that the grounded theory methodology is suitable for this research project.

3.4. Research Design

3.4.1 Surveys

Research surveys are one of the most common methods of soliciting data. For people or organisations to take part in a survey they first of all need to trust them and this is achieved by making participants in a survey understand the logic of the survey (Weisberg and Bowen, 1977). In a survey which involves a large population of participants, researchers are usually forced to carry out the survey using only a representative group. For the purpose of this study the definition of survey in Creswell (2003) will be adopted:

Surveys include cross-sectional and longitudinal studies using questionnaires or structured interviews for data collection, with the intent of generalising from a sample of population.

For this thesis, the quantitative research survey was adopted as numbers and facts are used to explain the phenomena being studied. Thomas (1996) identified the following basic operations of quantitative research survey:

- Draw up a sample of objects from a given population
- Develop and test survey measurement
- Carry out survey measurement
- Analyse the data and make conclusions about the population under study

According to Weisberg and Bowen (1997), data obtained through surveys can be grouped as follows:

- *Opinions on questions of the day* – The aim of such a survey will be to elicit what people think about issues concerning their day to day living. In this case the survey will be asking people for their opinions regarding this matter. These types of surveys are usually referred to as polls as they represent a miniature election on particular issues. Thus surveys aiming to solicit opinions of people on narrow questions are usually referred to as opinion polls.
- *Attitudes towards basic topics* – These surveys are usually used in social sciences to seek information about people's attitudes towards larger issues. This represents academic surveys which do not focus on numbers of people with specific opinions but rather they attempt to interpret the dynamics of people's attitudes. The main questions addressed by academic surveys are why people hold such an opinion or how their attitudes will change over time.
- *Facts about respondents* – Researchers using these surveys will be trying to solicit factual data about the people or organisations taking part in the survey. This information could include a person's educational background, religion, age and other personal details. For organisations this information could include the organisation's location, type and so on.

This research project uses the survey method. Little empirical data has been gathered about e-commerce activities in Africa, particularly in the tourism sector

prior to this research project. As this is an academic research project, data collected using narrow questions will be interpreted to build theories or explain behaviour. Most of the questions used in this research project seek information about organisations' and people's attitudes towards more important e-commerce issues. Examples of these questions are those related to ICT, Internet and e-commerce adoption and overcoming impediments to e-commerce adoption. This information represents the core on which theories are built for the understanding of trends and patterns in e-commerce adoption and constraints. This research also solicited factual data about the tourist organisations surveyed. The information is mainly demographic data and is used to link certain behaviour or patterns to particular regions or countries. Factual data is usually difficult to obtain (Weisberg and Bowen, 1977) as people are usually reluctant to give out any personal information, especially to someone they have never met before. The author, being sensitive to such issues, only tried to obtain basic demographic information about the tourism organisations, avoiding questions which could lead to the revelation of a company's identity. Data was therefore obtained in all three of the categories defined by Weisberg and Bowen (1977).

Sekaran (1992) distinguished between longitudinal and cross-sectional surveys. In cross-sectional studies, data are collected just once over a given period of time, whilst in longitudinal studies data are collected more than once from the same elements within a sample at more or less regular intervals. The grounded theory adopted for this project involved data collected from the same tourist organisations until there were sufficient to understand and explain the phenomena being studied. An incremental approach was used to assess the tourist organisations with the survey commencing with simple assessment techniques and then going on to use more complex ones. Although the data were collected over a period of time, these surveys do not constitute a longitudinal study as each type of data was collected only once. The surveys in this research are, therefore cross-sectional surveys.

3.4.2 Sampling Method

In order for research surveys to be effective they need to be correctly targeted, that is, directed at individuals or organisations that could provide the information needed to explain the phenomena. In order to understand the definition of sampling, the elements of sampling need to be defined which are:

- *Population* – the whole group of individuals, organisations, or any other things that are of interest to the researcher
- *Element* – a single member of the entire population
- *Population frame* – the list of elements from which the sample is selected
- *Sample* – a subset of the population intended as the representative of the whole population

The sampling process involves the drawing of individuals or entities in a population in such a way as to permit generalisation about the phenomena of interest from the sample of the population. The most critical element of sampling is choosing the sample frame in such a way that it is representative of the population from which it is drawn. Sampling is used usually where the population of interest to the researcher is too large or where the researcher has limited time, finance or human resources to be able to investigate each and every element within the whole population.

Sekaran (1992) identified two types of sampling, probability and non-probability:

Probability sampling

This is a sampling method whereby there is some probability that an element could be selected as a subject. The following are some of the better known types of sampling methods (Sekaran, 1992):

- *Simple random sampling* – With this method the researcher gives each of the elements in a population an equal chance of being selected for investigation. If for example in a population of 50 elements the researcher

can only investigate 10 this means that each element has a 10/50 chance of being selected.

- *Complex probability sampling*- This is a variant of the simple random sampling method and the following are the most common types of complex probability sampling
 - *Systematic sampling* – In this method the researcher draws every n^{th} element in a given population starting with a randomly selected element between 1 and n . For example, in a population of 2,000 elements only 50 can be investigated. This means one in every 40 elements is chosen. One could choose one element randomly from the first 40 elements on the list. If the chosen element is the 22nd it means the next element to be investigated after the first one will be number 62, the next 102 and so on.
 - *Stratified random sampling* – This procedure involves dividing the population into subgroups based on certain criteria and then the sample is drawn proportionately or disproportionately. For example the head of a company wants to investigate employees, it is then essential to group the employees first according to their job levels and then randomly select from each subgroup.
 - *Cluster sampling* – This method, which is not very popular in organisational research, involves grouping heterogeneous elements into clusters and then examining all the elements within the cluster. These clusters contain heterogeneous elements with different interests, orientation, values, philosophy drawn from different areas/sections of community to offer varying perspectives. A group of, say, 5 members could be selected to represent each of the sections under investigation.
 - *Area sampling* – In this sampling method, the total area which is of interest to the researcher is subdivided into geographical units like counties, cities/towns which are then randomly selected.
 - *Double Sampling* – This is whereby a sub-sample used to examine the matter in much more detail is drawn from the primary sample

earlier used to collect preliminary information of interest. For example members of an organisation are interviewed to obtain information and from this group a subgroup is interviewed again but this time probably with additional questions.

Non-probability sampling

In non-probability sampling it is not known if an element is to be selected as a sample subject. The following are the more common types of non-probability sampling methods (Sekaran, 1992) :

- *Convenience/Availability sampling* - With this method information is collected from elements of the population which are conveniently available to the researcher to provide the information of interest. An example will be to carry out a survey amongst people attending a special function like a seminar, conference, meeting etc. So only those who are able to attend are interviewed.
- *Purposive Sampling* - In purposive sampling the researcher targets specific elements of a given population because either they are the only ones able to provide the information or they meet criteria set by the researcher. The researcher could interview IT-skilled personnel within organisations simply because they are the only ones who can understand the technical jargon of ICT. The following are two major types of purposive sampling
 - *Judgement sampling* - This involves choosing elements of a given population whom the researcher deems are in the best position to provide the information which is of interest to the researcher. A researcher intending to find out issues affecting female employees will only interview women working within the organisation as they will be the best to provide the information needed.
 - *Quota sampling* – In quota sampling, a predetermined proportion of elements within a population are selected from different groups, on a convenience basis. This sampling method requires that the sample is representative of proportions in the population with regards to

pre-specified demographic variables, such as gender, age, ethnicity and so on.

In this research project, several non-probability sampling methods were used to ensure that the elements that were selected will provide the required information needed and that the sample is representative of the population. Other issues considered when selecting sampling methods included time, finance and human resources which were available to the researcher.

For the selection of countries judgement sampling was used. The countries selected were South Africa, Kenya, Zimbabwe and Uganda. The four countries selected for this research are well known as popular tourist destinations in Africa south of the Sahara and they have been chosen because they all have the safari type of tourism for which this region is so well known. The safari type of tourism in Africa is concentrated in Eastern and Southern Africa. Kenya and Uganda represent the Eastern region of Africa whilst South Africa and Zimbabwe represent the South.

The same sampling method was used to select the types of organisations. The researcher selected organisations that are able to provide information needed by a tourist to make a decision on whether to embark on a particular trip and then eventually make the necessary arrangements. These organisations are able to provide, through their websites, facilities which would enable a potential tourist to carry out the e-commerce transactions they so wish, such as making enquiries or online reservations and paying for the products and services. The tourist organisations selected were national airlines, national parks and game reserves, government-run and private tourism-promotion organisations hotels and lodges, travel agencies and tour operators and car rental companies.

These sampling methods were used simply because they were the only meaningful way of selecting the countries and the tourist organisations. Availability sampling was used to choose the organisations to survey. Although the other sampling methods, particularly the probability methods, are more efficient because of their

high generalisability of findings, availability sampling was adequate to enable conclusions to be drawn.

The contact details of the organisations were obtained through intensive searches on the Internet and from contacts in the four African countries. Brochures from travel and tourism exhibitions such as the World Travel Market and Business Travel were used to get the details of the tourism organisations surveyed. Other details were obtained from websites of different organisational associations such as the Association of South Africa Travel Agents, and the Kenya Association of Tour Operators. Search strings were used to find as many websites as possible relevant to tourism in the African countries, the USA and Europe. For this purpose the search engines used were Google and Excite. Google was used as it is one of the most popular search engines with about 88 different language interfaces and has at least 4 billion indexed web pages (Bradley, 2004). Excite uses concept-based indexing which tries to determine the meaning of a search string using statistical analysis and was used as it was another well known search engine.

The limitation of the availability method is that it is difficult to determine the total population of the tourism organisations represented by the survey. However, by obtaining as many companies as is possible, each of the aforementioned categories of tourism organisations was well represented and information obtained from the sample provided some fairly significant insights. The probability sampling methods could not be used as they are only applicable in situations where the total population is known and it would have taken a large amount of human and financial resources to establish the total population in the four African countries. Therefore the availability sampling method was used as it was quick, convenient and cost effective.

3.5 Data Collection Methods

A data collection method can be defined as the strategy and system used to gather data from elements drawn from the sample selected by the researcher. The choice of data collection method influences a number of factors which include survey design, response rates and the total cost of the whole process of data collection. The data collection method chosen by the researcher has some bearing on the time it would take to complete this process.

Thomas (1996) and Sekaran (1992) identified the following data collection methods:

- *Interviewing* - An interview involves a conversation between two or more people where questions are asked to obtain information from the interviewee. Interviews can be structured or unstructured. In unstructured interviewing the researcher does not have a list of planned sequence of questions to ask the respondent, while in structured interview a list of questions that will be posed is made before conducting the interview. Interviews can be conducted in person or by telephone.
- *Questionnaire* - A questionnaire is a list of preformulated, written questions to which respondents record their answers (Sekaran, 1992). Questionnaires are usually administered on paper or through computer networks in a structured or semi-structured format. Respondents can be asked to choose from a predetermined set of possible answers, or to provide free-format responses. Questionnaires can be very useful data collection tools as they can be used to gather specific, key pieces of information such the number of hotels which have adopted ICT, Internet and e-commerce. The questionnaires can be sent to respondents by mail to be answered as specified without any further assistance from the sender, or they can be personally administered where the survey is confined to a limited geographical area such as company premises. The proliferation of the

Internet and computer networks in general has had some profound influence on the research survey methodology with the introduction of web-based and online questionnaires. Online questionnaires, designed using computer packages, can be administered over computer networks whereby they are e-mailed to respondents who in turn use their own computers to respond. Web-based questionnaires are accessed by the respondents over the Internet through researchers' websites or links to other websites hosting the questionnaire.

- *Observation* - In this method of data collection, the researcher gathers data by observing people in their natural work environment or in a lab setting and then recording their actions and behaviours. The researcher could gather the data whilst being part of the organisational setting and this is usually referred to as participant observation, or the researcher could gather the data as a non-participant observer without becoming an integral part of the organisational setting.

The choice of the data collection method is a significant decision in research survey design as it has an impact on the design, quantity, and quality of the data to be collected. The choice of the data collection tool will also be influenced by the sample size and location. Although interviews and observation could provide rich data which could paint a broad picture of the e-commerce activities, they could not be employed because of the number of organisations involved and where they were located. It would have been a very costly and time-consuming exercise to try and gather data from about 600 organisations located in four different countries using interviewing and observation. The researcher therefore adopted the questionnaire as it is less time consuming and less expensive than other methods and it can also be easily administered to a large sample which is widely dispersed geographically.

3.6 Questionnaire Design

A questionnaire provides a tool for eliciting information which could be analysed to explain a social phenomenon. In order to collect the correct information and obtain a good response rate, a well formatted questionnaire with carefully formulated and selected set of questions needs to be used. In questionnaire design, the researcher needs to identify the information needs, determine whether the questionnaire is the most appropriate data collection tool, choose specific questions, structure the questionnaire, pre-test and then finally implement the questionnaire.

The questionnaires used in this research project were designed following guidelines from Conford and Smithson, (1996), Melville and Goddard (1996), Thomas (1996), Sekaran (1992), Weisberg and Bowen, (1977) and Young (1966) which are as follows:

3.6.1. Wording the Questions

The questions were direct, brief, clear and worded in such a way that the questions were concise. The questions were also checked for ambiguity to make sure that they could be competently answered. The other general rules on question wording which were applied by the researcher included avoiding:

- double questions, that is, questions hiding a dual question
- any questions involving negatives and, in particular, double negative questions
- leading questions
- slang and any fashionable language even if its associated with the population taking part in the survey
- large numbers of different tasks the respondent has to perform to answer the question
- abstract terms
- very long questions
- potentially incriminating questions

An example question showing the wording of a question and a predetermined choice of answers is given in Figure 3.1.

Has your organisation received bookings via E-mail?

Yes No Don't know

Figure 3.1 - A sample questionnaire question.

Sometimes it is difficult, if not impossible to avoid any technical jargon, especially if the research survey is ICT-related. In cases where such technical words were used a glossary was provided which contained definitions of these words using 'vocabulary of the level used in tabloid press' (Thomas, 1996).

3.6.2. Question Types

Closed-ended versus open-ended questions

Closed-ended questions are where a respondent is given a series of alternative answers from which to choose whilst open-ended questions are where the respondent answers the question in any way that comes to mind (Weisberg and Bowen, 1977). Both types of questions were used in this research, although the open-ended questions were used sparingly in all but one survey.

Examples of both types of question are given in Figure 3.2.

Example 1. Type of external connection to the Internet

- Analog modem (standard telephone line)
- Broadband
- Wireless connection
- ISDN
- xDSL
- Don't know

Example 2. How have you overcome this e-commerce barrier? (Please specify)

Figure 3.2 - Open- and Closed-Ended Questions

Example 1 in Figure 3.2 is that of a closed-ended question and example 2 is that of an open-ended question. Most of the questions in all the questionnaires were closed-ended because they are easy and quicker to answer. The response choices make the closed-ended question much clearer for the respondents. Having the respondents selecting from the same answers will make data analysis much easier, especially when using computer statistical packages. Where closed ended questions were used the author made the alternative answers exhaustive by covering all possibilities by making fairly broad suggestions that will satisfy the thesis's objectives as well as being mutually exclusive in providing for the selection of a single response. Only one out of a total of four surveys used a questionnaire

containing mostly open-ended questions because, in this case, the researcher needed to make precise judgements of each individual tourist organisation. The open-ended questions were used as the possible alternative answers were unknown. Such questions also enabled creative suggestions to be solicited and could probe for more detail on the steps which had been taken to overcome e-commerce constraints. The first surveys mainly used closed-ended questions because, at that stage of the research the task was to produce a picture of the e-commerce activities in the African countries by way of summarising the responses from all the tourist organisations.

Rated responses

Examples of questions involving a rated response are given in Figure 3.3.

1. E-business is not relevant to my organisation

1. *Much Importance*
2. *Some importance*
3. *Not important*
4. *Don't know*

2. My organisation does not have knowledge of e-commerce techniques

1. *No means to overcome it*
2. *Can find means to overcome it*
3. *Have means to overcome it*
4. *Have overcome it*
5. *Not a barrier*
6. *Don't know*

Figure 3.3 - Questions requiring a rated response

In this type of question, the responses are rated to measure the degree or intensity of the importance the tourism organisations attach to a particular e-commerce issue, especially where the question is for evaluating attitudes. Most such questions use a Likert scale (Young, 1966) to measure the importance tourist organisations attach

to certain aspects of e-commerce and to evaluate the progress towards achieving certain goals.

In the first example in Figure 3.3, the author was trying to find out how much importance is attached to the barrier to the e-commerce usage and adoption. The barriers to which more importance is attached are the ones considered to be seriously hindering e-commerce adoption with the ones with less importance considered not serious enough to stop a tourist organisation from adopting and using e-commerce. In the second example the researcher is evaluating the progress made by the tourist organisations towards eliminating e-commerce constraints. In both examples the responses reflect a clear difference and are well balanced both positively and negatively.

'Other, please specify' option

An example of an 'Other, please specify' option is given in Figure 3.4

Which areas of e-commerce advice or training do you think your organisation will need to help it start selling its products on the Internet?

<input type="checkbox"/>	E-commerce opportunities available
<input type="checkbox"/>	IT Networking/Broadband
<input type="checkbox"/>	Website architecture and design
<input type="checkbox"/>	Business software
<input type="checkbox"/>	Developing internet strategies
<input type="checkbox"/>	Information security
<input type="checkbox"/>	None
<input type="checkbox"/>	Don't know
<input type="checkbox"/>	Other(Please specify)

Figure 3.4 - An 'Other, please specify' question

The respondent can be offered a choice from a series of possible answers, but with the opportunity to enter an answer of their own under an 'Other, please specify' option. This prevents the loss of important information if by any chance an important answer alternative is omitted from the list of possible answers. This data will be analysed using narrative text.

Length of questions

According to Sekaran (1992), a question or statement in a questionnaire should not exceed twenty words, or exceed one full line in print, so most of the questions used were kept simple and short.

3.6.3. Formatting the Questionnaire

A simple but effective structure for the questionnaire was adopted. After selecting the questions a decision about the questionnaire appearance, length and the order in which the questions will appear needs to be made. A well designed questionnaire will increase the chances of getting a good response rate. Designing a questionnaire that the respondents will be motivated to complete and provide useful data at the same time is not an easy task and should be taken seriously (Cornford and Smithson,1996). In an effort to motivate potential respondents, the following features were applied:

1. Introduction

At the beginning of the questionnaire is an introduction that includes the questionnaire's purpose, identifies its source, explains how the information obtained will be used, and assures respondents confidentiality. A good introduction is essential to create a good rapport with respondents and this will in turn motivate them to respond to the questions willingly and enthusiastically (Sekaran, 1992).

2. *Question placement*

- Related questions are grouped together into sections. This arrangement would enable questions to flow naturally. The first section contains questions to elicit demographic data about the tourist organisations. The sections following the first one contain more specific technical questions. In each section there are clear instructions on how to answer the questions so that the respondent can do so without difficulty.
- The first questions are easy and interesting questions to answer which were clearly related to the questionnaire's purpose. Easy questions usually relate to those issues that do not involve much thinking, whilst the more difficult ones might demand less thinking, judgement and decision making (Sekaran, 1992). Easy questions at the beginning will make the respondents feel at ease make them more likely to answer the questions to follow. The questions seeking personal information like name and address were optional and appeared right at the end.
- An offer was made at the end to provide respondents with a copy of the report
- The layout of the questionnaire was made attractive so that the respondents would enjoy the process of completing it. The response boxes were aligned to make the questionnaire attractive and neat.
- In most questionnaires the open-ended questions were placed right at the end. These would allow the respondents to comment or add suggestions on aspects identified in the questionnaires.
- The same type of questions and response were used throughout a series of questions on a particular topic. This was done to avoid confusion by needlessly breaking the respondent's concentration by using different types of question in a particular section.
- Important questions were introduced early in the questionnaire and the less important questions towards the end.
- A bold font was used for questions and headings so that the respondents could easily distinguish between questions and answers

-
- All the questions in all questionnaires were numbered and branching was kept to a minimum. This makes it easier to identify questions for reference purposes and is helpful when analysing the data. The numbering of questions was made systematic and logical as, according Cornford and Smithson (1996), people do not respond well to ‘random walks’

3.6.4. Pretesting the Questionnaire

In addition to the careful examination of each and every question by the author, the questionnaire was tested to check how well it works before the main survey. According to Young (1966), prototyping not only provides a test of the clarity of the questions and the correctness of their interpretation by the respondents, but also presents an opportunity to discover new aspects of the problem studied which were not anticipated in the planning stage. The main purpose of prototyping of questionnaires is to discover errors which could result in low response rates. During the prototyping process the author carried out the following:

- Colleagues who were members of the Knowledge Management Research Group at Loughborough University were asked to read the questions to see if the wording and instructions are clear, and if the questionnaires would gather the information needed. Comments from the people who reviewed the questionnaires were carefully considered and some of the suggestions were incorporated to enhance the questionnaire
- Lecturers and research students who specialise in e-commerce at Loughborough University were selected to prototype the revised questionnaire. The actual data collection procedure was simulated using the same people. They were allowed to answer the questions without any help and then make suggestions at the end
- The questionnaire was tested on a small sample of subjects. The data entered by the people representing the organisations was examined to see if it will satisfy the needs of the project. The data was tabulated and analysed

to make sure that the questionnaire will provide data that can be analysed in the way that is needed.

3.7. Administration of the Questionnaire

With the help of Universities in Zimbabwe and South Africa, qualified personnel who have carried out similar surveys before were appointed to administer the questionnaire on behalf of the researcher. All the people administering the questionnaire were competent to explain issues which might not be clear to the individual respondents. The contact persons in Zimbabwe and South Africa personally administered the questionnaires which is the best way to collect data (Cornford and Smithson, 1996). A research student of Loughborough University personally administered questionnaires in Kenya during the time he had visited Kenya to collect data for his own research. The web-based version was used to collect data from the organisations the research student could not reach as he was only able to visit those organisations located in and around the capital city of Kenya, Nairobi.

For organisations in Uganda a web-based questionnaire was also used as the author was not able to establish any contacts with people resident in this East African country. This was the only practical way of getting it to the organisations in the two African countries as they are widely dispersed, but the limitation was that it could only be administered to organisations whose websites had been accessed by the author. Although web-based questionnaires are widely regarded as an inexpensive and quick way of generating high numbers of good quality responses, this is usually only possible where careful attention has been given to sampling procedures and other critical aspects of research design (Lang, 2002). The author made sure that the questionnaire was well laid out and was addressed to people, such as web masters, whose job is closely related to e-commerce activities. Most of the answers are entered by clicking on the correct button which will make it easier for the potential respondents to complete the questionnaire. The web-based questionnaire which was created using the Hypertext Mark-up Language (HTML) was connected

to a MySQL database. This means the data from these questionnaires were automatically collected into a database, whereas the data from the paper questionnaires personally administered had to be manually entered into a Microsoft Excel worksheet.

3.8. Summary

This chapter reviewed the philosophical issues of research and the research approach and strategies available. E-commerce is one of the upcoming areas which overlaps with computer science and business disciplines. As such, the interpretive approach was adopted mainly because it allows multiple interpretations of phenomena and the interpretation itself is on the author's perspective.

The idiographic research approach was adopted to enable the painting of the broad picture of the e-commerce activities taking place in the four African countries which were used in this research project. This approach was chosen as there is little empirical data about e-commerce activities in sub-Saharan Africa especially within the tourism industry. The grounded theory was also applied so that using iterative processes the researcher could gather data from the tourist organisations to understand and explain e-commerce activities and how the e-commerce constraints have hindered e-commerce adoption. The grounded theory is applicable in cases, such as this research project, where little was previously known.

The chapter then looked at surveys and why they have been chosen to solicit data from the African tourist organisations. This chapter, however, does not look at the manual surveys which involved observing large range of websites. Frameworks and tools for examining these websites are discussed in Chapters 4 and 6. In this chapter, a discussion of the various sampling methods was also presented. The choice of method of data collection is dependent on the sample size and type of research method adopted. Since the sample is quite large, the survey was adopted as a research method and the questionnaire as a data collection tool. A detailed

examination of the questionnaire design, pretesting and administration of questionnaires used in this research has also been provided.

CHAPTER 4 – THE SURVEYS FOR MEASURING EFFECTIVENESS OF E-COMMERCE WEBSITES

Chapter Preface

This chapter looks at the methods used for the evaluation of the African websites. A total of five surveys were carried out to investigate if the websites of the various tourism organisations have facilities to carry out and support any e-commerce activities. These surveys covered the following areas:

1. E-commerce adoption, which was divided into two stages.
 - a. An analysis of the African websites
 - b. For comparison, analyses of US and European websites.
2. Customer Relationship Management (CRM)
3. Web traffic
4. Internet promotional techniques
5. Knowledge transfer

This chapter presents a description of the facilities used to examine the websites which include those which enable customers to make online transactions and also those to retain or gain new customers. A web-based tool for analysing traffic, *Alexa*, is also described in this chapter.

4.1. Introduction

This research described in this chapter is also reported in the papers “An Evaluation of the Use of the Internet to Promote Tourism in Four African Countries” (Maswera and Dawson, 2003a), “An Evaluation of the Use of the Internet for Customer Relationship Management by the Travel and Tourism Industry in Four African Countries” (Maswera and Dawson, 2003b), “Internet Promotional Techniques of the Travel and Tourism Industry in South Africa, Kenya, Zimbabwe and Uganda”, (Maswera et al 2005c), “Analysing traffic rankings of websites of

tourist organisations in four African countries” , (Maswera and Dawson, 2004b) and “Assessing the levels of knowledge transfer within e-commerce websites of tourist organisations in Africa”, (Maswera et al ,2005d).

The five surveys described in this chapter were carried out because the literature review which is described in Chapter 2 showed that it is necessary to measure the effectiveness of the websites as they are the main medium of business communication and transactions between a business and its customers. The tourism organisations from sub-Saharan Africa intending to go online will need to set up websites with which they will communicate with their customers worldwide. The main aim of carrying out the surveys was to find out if the current status of the websites will be able to help organisations based in the four African countries break into international tourism market.

4.2. The Method

The research surveys are exploratory in nature. The websites which were accessed were those of the various tourism organisations which included national airlines, national parks, government-run and private tourism promotion organisations, car rental companies, travel agencies and tour operators were examined. The websites of the afore-mentioned organisations are likely to provide information a tourist needs before deciding whether to embark on the particular trip. These websites will also enable the customer to carry out the necessary transactions such as making enquiries or online reservations and paying for the products and services

Search strings were used to find as many websites as possible relevant to tourism in the African countries, USA and Europe. For this purpose the search engines used were Google and Excite. Google today is one of the most popular search engines with about 88 different language interfaces and has at least 4 billion indexed web pages (Bradley, 2004). Excite uses the concept-based indexing which tries to determine the meaning of a search string using statistical analysis. Google treats natural language questions as lists of terms and retrieves documents similar to the

original query. In addition to that Goggle uses robot indexing to add to its list of pages to visit all those linked to the page in the current process.

The sampling method which was used in all the five surveys was availability sampling. In this study the sample used was one which was available to the author. The contact details of the organisations were obtained through intensive searches on the Internet and from contacts in the four African countries. Details of tourism organisations, particularly those from Europe and USA, were also obtained from colleagues in the Knowledge Management Research Group at Loughborough University of which the author is a member. The European and US websites used in the surveys were just like the African websites were of the various tourism organisations which included national airlines, national parks, government-run and private tourism promotion organisations, car rental companies, travel agencies and tour operators. The websites of the tourism organisations in the USA and Europe were only used in those surveys where comparison with their African counterparts was needed. An African organisation is classified as defined as one which is located and operates from one of the African countries. A USA and European tourism organisation is one which is located and operates from either the USA or Europe even if it covers African tours.

To get the most out of an Internet search the researcher used search strings such as "*Major Hotels in South Africa*" and "*Travel Agencies in Germany*". Other websites were found at sites of various associations. For example, the Tourism Business Council of South Africa (TBCSA), Kenya Association of Tour Operators (KATO), and the United States Tour Operators Association (USTOA) have lists of links to websites of their members. Also brochures from travel and tourism exhibitions such as the World Travel Market and Business Travel were used to get the details of additional tourism organisations. Other details were obtained from websites of different organisational associations such as the Association of South Africa Travel Agents, and KATO.

The limitation of this method is that it is difficult to determine the total population represented by the tourism organisations surveyed. However, each of the aforementioned categories of tourism organisations (national airlines, national parks, government-run and private tourism promotion organisations, car rental companies, travel agencies and tour operators) were well represented by obtaining as many companies as possible.

There was difference in the sizes of the samples used in the different surveys. The early surveys *E-commerce adoption*, *CRM* and *Web Traffic* had fewer websites than the surveys which were carried out later during this research. This is because during the later stages of the research project the author came across websites of organisational associations, such as Tourism Business Council of South Africa, South Africa Association of Travel Agents, which provided links to different tourism organisations. Most of the links from these websites were to websites which were not used in the earlier surveys. In November 2004 the author visited the biggest tourism exhibition in the world, The World Travel Market which took place in London, UK. At this exhibition tourism organisations from all over the world are given a chance to showcase their products and services. From this tourism extravaganza the author managed to obtain contact details of new tourism organisations based in Europe and the USA and those from South Africa, Kenya, Zimbabwe and Uganda which also included the addresses of their websites. This led to the increase in the size sample during the latter stages of the research.

The surveys *E-Commerce adoption*, *Web Traffic*, *CRM* and *Internet promotional techniques* involved comparing African websites to those of tourism organisations based in the USA and Europe where e-commerce has been a success. Benchmarking is a very important standard for measuring and comparing the performance of similar systems (Jutla et al, 1999). From the benchmark it will be easier for organisations to learn from their counterparts and determine which areas to fine-tune in order to either achieve the same success or increase their chances of doing so. In the *E-Commerce adoption* and *CRM* surveys the websites of the African organisations were compared to those of tourism organisations based in

both Europe and the USA. To save time, in the *Internet promotional techniques* survey the African websites were only compared to those based in Europe because it was discovered in the *E-commerce adoption* survey that there was not much difference between the European and American websites. This did not in any way impact on the quality of the data which was obtained from the *Internet promotional techniques* survey. In the survey *Knowledge transfer* the researcher saw no need for any comparison as it simply entailed measuring the level of interactivity of the African websites.

The author then assumed the role of a customer; accessing and navigating the selected websites, taking note of the presence and absence of the features described in section 4.3. Unique features and content were also noted during data collection. The number of features found on each website were then calculated as a percentage of the total number of websites found in that category.

4.3. The List of Features Used to Evaluate Websites

4.3.1. E-Commerce Adoption Features

Jennings (2000) concluded that it is the interaction with the website and participation of the customer which would lead to their engagement and immersion in an e-commerce website. A model by Yao (2004) for measuring e-commerce adoption by insurance companies in New Zealand was used as a starting point to determine the list of features which indicate interaction and participation of customers through a website. The list of features was then modified to suit evaluation heuristics for e-commerce websites of tourist organisations.

The following is the list of features, identified through the literature review, which were sought in the survey:

- *Corporate information*

This provides general information about the company business, customers, markets and performance. In addition to transactional capabilities, e-commerce websites frequently provide company information and enable communication with the organisation (Young and Benamati, 2000).

- *Product/services information*

This includes all the information a tourist will need before deciding whether to embark on the journey. In particular:

Specific details of the product/services - This should include brief descriptions of the products and services available (Yao, 2004). The visual presentation of a product can be an important selling aspect, for example, tourists like to know that their hotel has a smart appearance both inside and out, and often the views from the hotel can be important. Example website features may be a photo gallery or a virtual tour.

Frequently Asked Questions (FAQs) - This is a collection of the most frequently asked questions by customers and provides brief answers to these questions about products and services (Yao, 2004). Although FAQs do not contain full answers to all the questions any one customer could possibly ask, they go a long way in trying to address and clarify issues of concern for most customers.

- *Interactivity*

In trying to make websites interactive, businesses should always try to provide abundant selection so as to give control to the users. Nielsen and Tahir (1998) emphasize the need to provide a mechanism for customers to narrow down their choices when there is either a large number of products or a lot of content on the website.

- *Privacy and Security*

The privacy statement is a statement about the Internet merchant's commitment to privacy whereas security statement is the e-commerce organisation's description of its security measures (Van Slyke and Bélanger, 2003). Garnik (2004) concluded that one of the major inhibitors to e-commerce is the

consumers' lack of trust, which results mainly from the fear of violation of transaction security.

- *Online reservation*

This facility should be available to obtain information and make reservations securely online (Yao, 2004) e.g. information flight schedules or availability of rooms in a hotel. Tourist organisations with on-line reservation facilities are likely to get more bookings as customers can interact with the website directly from their homes without the need to physically go to the company's offices or an intermediate agency.

- *Access to reservation details from the Web*

There should be a facility to access and then amend or cancel a reservation or simply track its progress via the website (Yao, 2004). A clearly defined cancellation policy should also be made available for online customers.

- *Online payment*

Most of the payments over the Internet are made through credit cards where the credit card details, such as credit card number and date of expiry, are transmitted over the Internet. While credit cards are the most popular form of online payment in the US this is not the case in other parts of the world, including Europe and Japan, where debit cards and bank transfers are more frequently used (Laudon and Traver, 2002). The websites should have other forms of emerging online payment systems such as digital cash, debit cards, digital credit accounts and digital cheques. This would allow the e-commerce websites to cater for the different types of online payments supported by the different countries' financial infrastructures. An on-line currency converter will enable international consumers to pay using a currency of their choice, preferable with up-to-date exchange rates for all the major currencies. This will make the use of on-line payment facilities even more convenient.

The following are the features identified after accessing and browsing websites of organisations from established tourism markets which are enjoying more e-commerce success than their African counterparts:

- *Non-product information* – This information on the website is not directly linked to the products and services on offer but helps tourists or travellers prepare for the trip. British Airways (2005) and Air France (2005) have on their websites information not directly related flights, fares and flight schedules but useful to the traveller and this includes information about accommodation, local transport at the destination, places to see, restaurants and so on.

4.3.2. CRM Features

A survey by Schoder and Madeja (2004) showed that CRM is a key factor for e-commerce success. The following CRM components which were identified during the literature review can help the tourist organisations capture the customers' preferences, needs and requirements.

- *E-mail* - Egain Communications (2002) concluded that widespread adoption of e-mail-based customer service suggests that companies have discovered that e-mails are an effective and efficient way of communicating with customers. E-mail can be used to interact with the customer as a channel for enquiries about products and services as well as registration of customers on mailing lists so they can receive free email alerts concerning news and special promotions.
- *Feedback* - This is usually done using a simple form where customers can submit comments about products and services. Through this online form, customers can report inefficiencies in service provision and monitor the progress of complaints. (Yao, 2004)
- *Contact details* - Providing the physical address and telephone numbers to contact an organisation enables it to deal directly with customers, thus eliminating any intermediaries. (Yao, 2004)

-
- *Electronic Newsletter* – This is a publication by the Internet merchant on the website of the information on updates to the website or products/services. One of the functions of the CRM is to distribute information to its loyal customers and this can be done by publishing an electronic newsletter on the website. (Tassabehji, 2003)
 - *Reciprocal links* - These are links to other websites, which, in turn provide a link back. Each link from another organisation is, essentially, a recommendation from that organisation. (Yao, 2004). Reciprocal links which are two way links agreed between two organisations have the advantage that they are free. (Chaffey et al, 2003)
 - *Promotions and special offers* – These are cash discounts offered to customers if they make a purchase via the website (Davis, 2000).
 - *Loyalty systems* – These are incentives offered online as a method for generating loyalty from customers (Davis, 2000) e.g. customers are awarded points every time they make a booking or purchase and these points when they reach a certain number can be exchanged for product/services or cash discounts.
 - *Callback services* – These are facilities available on the company website to contact a customer at a later time as specified by the customer (Chaffey et al, 2003). This is one of the main contact point between the organisations and their customers through web-based facilities to handle a variety of functions which include complaints and technical assistance (van Slyke and Bélanger, 2003)
 - *Mailing lists* – Visitors to the websites are requested to register on the website after which they will receive product or market information relevant to them through e-mail (Tassabehji, 2003)
 - *'Mail to this page' button* – This is an effective way to promote the website's content by allowing visitors to send a web page to their friends (Slocombe, 2001)
 - *Customer satisfaction surveys* – This is an online form which can be used to gather information about the customers' perceptions about a company's delivery of services by responding to a set of structured questions. This is

another form of feedback (Yao, 2004) but this one provides data that can help determine the needs and wants of customers and will enable businesses to plan for the future.

- *Free downloads* – Free downloads of digital products like ring tones, software could be used to attract traffic to a website (Palmer and Griffith, 1998; Davis, 2000).
- *Competitions and games* – These are web-based quizzes and fun games which are accessible to visitors to the websites. This a popular marketing tool used to generate traffic to a website (Lawton and Gregor, 2003)
- *Last date updated* – This is used to inform visitors to a website when the content of the page was last updated. The more up-to-date content will attract more traffic, whereas out-of-date content can undermine brand image (Davis, 2000).
- *Customised content* – This is personalised content which can be accessed by registered repeat clients (Tassabehji, 2003). This can be used to communicate effectively with the customers and organisations can as a result improve their relationships with their customers.

4.3.3. Features for Internet-Based Promotional Activities

The online techniques which this survey is going to look at are known as traffic building techniques which are defined by Chaffey et al (2000) as promotion techniques whose aim are to increase the audience of a website and are an extension to CRM. The features used in this survey are those that can be only be identified from the website only. These features are generally referred to as on-site promotional techniques. The underlying technical techniques and the offline promotion techniques are not included in this survey. Through intensive review of literature the following were identified as features on websites which could be used to promote the products and services of the organisations from the travel and tourism industry.

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- *Meta tags* – Meta tags keywords provide keywords for the search engine to associate with the web page (Slocombe, 2001)
 - *Title tags* – The keywords in the title of a web page that appears at the top of the browser window are significant on search engine listing (Chaffey et al, 2000).
 - *Electronic Newsletter* –This is a publication created by the organisation and then posted on the website (Zeff and Aronson, 1999). Customers who want to get information on the latest products/services or special events will visit the website and access this web-based publication.
 - *Frequently Asked Questions (FAQs)* are a collection of the most often asked questions by customers and provides brief answers to these questions about products and services. (Yao, 2004)
 - *Loyalty systems* – These are programs which awards points to registered customers every time they make a purchase. These points will later be converted into cash discounts whose size depends on the number of points accrued by the customers (Palmer and Griffith, 1998). Airlines have frequent flyer programs which awards points to customers every time they make a purchase and they make customers keep coming back so that they get as many points as is possible.
 - *Callback services* – This is a combination of offline and online promotion techniques. Whenever a customer can not find information they need they click on a button which will in turn trigger an e-mail message direct to the call centre. Customer advisers from the call centre will then phone the customer using the telephone number supplied through the website. (Chaffey et al, 2000).
 - *Mailing lists* – This is a list of customer e-mails generated during customer registration on websites and is used to send to the customers information on new products/services or special offers ((Palmer and Griffith, 1998; Chaffey et al, 2000).
 - *Privacy policy statement* –These are statements that discuss the privacy policy of the Internet merchant regarding the data collected and how it will be subsequently used (van Slyke and Bélanger, 2003).

-
- *Promotions and special offers*- These are cash discounts on products and services offered through websites to stimulate repeat customer patronage of the site (Palmer and Griffith, 1998; Davis, 2000).
 - *'Mail to this page' button* – same as in section 4.3.2
 - *Reciprocal links* – Organisations that have something in common, like in this case products and services, exchange links to each others websites (Oz, 2002). Having a website's link on another website will improve its ranking within website engines which use popularity as a relevant criterion (International Cyber Business Services, 2003; Yao, 2004)
 - *Electronic Postcards* – This facility will allow visitors to a website to send electronic postcards to their friends (Slocombe, 2001)
 - *Doorway pages* – These pages are designed so that they are visible only by search engine spiders so as to get a higher ranking within a web search engine for a particular keyword then directs visitors further into the website. They usually feature a logo, some text and a link that encourages visitors to enter the site (Shapiro and Lehoczky, 2003).
 - *Customer Feedback* - This is a simplified form where customers can submit comments about products and services through which customers can report inefficiencies in service provision and monitor the progress of complaints (Yao, 2004).
 - *Free downloads* – same as in section 4.3.2
 - *Competitions and games* – As defined in section 4.3.2. This creates a positive feeling among visitors and also rewards the people who choose to visit the website.
 - *Last date updated* – same as in section 4.3.2
 - *Customer accounts* – These are facilities which enable customers to create their personal online accounts which includes their profiles (Yao, 2004). Customer profiles created can then be used to personalise content and make recommendations to customers (Zeff and Aronson, 1999).
 - *Customised content* – These are personalised pages which display contents according to the needs of the customer (Chaffey et al, 2003). Providing customers with only the information they need will lead to the improvement in

customer service as this allows organisations to communicate effectively with their customers and treat each customer as an individual (Lawrence et al, 2003)

- *Customer satisfaction surveys* – Same as in section 4.3.2

The following features for Internet promotional techniques were identified from websites of other tourism organisations:

- *Information/brochure request* – Thomson (2006) one of the largest travel agencies in the UK have an online form customers can fill in to request a brochure or some other specific information about their reservations (Thomson, 2006)
- *'Book mark this page' button* – Hilton Amsterdam (2006) have on their home page this button so that users can save it for future access.

4.3.4. Knowledge Transfer Website Groupings

The websites were first of all grouped according to their level of development given by the number and type of e commerce facilities present, as follows:

- *Level 1*

These websites contain mainly information features, both product and non-product, providing sufficient information for the potential tourist to know about the organisation and its products and services, but little else.

- *Level 2*

These websites provide the information of level 1 and also have facilities to carry out limited online transactions. The online facilities include making reservations, submitting enquiries and customer feedback.

- *Level 3*

These websites provide fully-fledged e-commerce facilities. They have facilities to make reservations in real time and allow customers to pay online. These websites also have interactive facilities for web-based eCRM.

By grouping the websites into three different development levels, the author aimed to determine at which level knowledge transfer is successfully being achieved in the four African countries.

4.3.5 Knowledge Transfer Facilities

The process of knowledge transfer on websites can be conceptualised into the following steps: collection of knowledge, dissemination of the knowledge and application of knowledge. The facilities for knowledge transfer are thus grouped according to the three steps as follows:

Knowledge acquisition

The following allow knowledge acquisition through customer interaction as it is difficult to know customers preferences and needs if the interaction is limited:

- *Customer profiling* – This involves capturing the demographics of existing and potential customers’ and enables e-commerce organisations to know individual customer attitudes, evolving interests and needs (van Slyke and Bélanger, 2003).
- *Customer surveys* - These can be used to get feedback and other information from customers (Davis, 2000). Surveys can be used to track the trends and changes in patterns of customer behaviour and tastes. They can help organisations determine which new products to offer.
- *Interactive chat* - This enables tourist organisations and their customers to participate in a real-time conversation and provides possibilities for identifying and satisfying user needs and preferences (Davis, 2000). This could be seen as the ideal replacement for the traditional interpersonal modes which have disappeared with the growth e-commerce.

The following knowledge acquisition facilities were identified after browsing websites of established and more successful tourism organisations

- *Electronic guestbook/Reviews* – This is a simple form for customers to submit comments about products and services. On the Thomson (Thomson,

2006) website is an online form through which customers can submit reviews on accommodation or on a specific tourist resort. Customers can use this facility to narrate their experiences obtained during their travels.

Knowledge distribution

All these facilities for knowledge distribution were identified after the literature review:

- *Electronic newsletters* – This is a section on the website through which Internet merchants pass on vital information to their customers (Zeff and Aronson, 1999; Yao, 2004). The newsletter allows website visitors to know about new products, services or any special events taking place which might of interest to potential tourists.
- *Bulletin boards* – These are special areas on the Internet for people to post messages for anyone to read. They could be used by customers to share their travel experiences. Bulletin boards create a forum that facilitates contact between the person seeking knowledge and those who may have access to specific knowledge (Hustad, 2004). The electronic guestbook can serve this purpose if it is accessible to the public.

Knowledge application

Knowledge acquired and the rules embedded within the e-commerce systems can be used to tailor services according to the different needs of customers and were identified after the extensive review of the literature.

- *Recommendation engine* - Recommendation engines are CRM decision support applications that offer a new level of personalisation through customised travel recommendations. Basically this facility helps a customer make a decision which is the best fit for that individual person. The information this interactive tool uses to help make decisions is gathered at the knowledge acquisition stage and could include past purchases and customer records. The combination of in-depth customer profiling, the knowledge acquired and the rules embedded in this tool provides an

accurate, interactive, and automated customer service, resulting in high quality customer education (VacationCoach Inc, 2002).

- *Loyalty systems* – Customer profiling together with records of customer transactions can be used to reward customers in the form of cash discounts to repeat clients. It also enables the organisations to calculate the value of their loyal customers (Zeff and Aronson, 1999). In this case both the customer and the organisation benefit, thus creating a symbiotic relationship
- *Customised content* - This is personalised content which can be accessed by registered repeat clients. The content and services displayed on the websites is tailored to individuals based on knowledge about their preferences, needs and behaviour. Personalisation systems must be able to provide a method of identifying the customer as well as a method for delivering the appropriate content to the user (Chaffey et al, 2003)

4.3.6 Analysing Web Traffic



Figure 4.1 The *Alexa* Toolbar

Alexa is an Internet software tool used to generate traffic rankings of websites by recording and analysing the web usage of *Alexa* toolbar users. The main limitation of this tool is that it only records traffic information of *Alexa* users but nevertheless it provides that vital information on the traffic to websites of the African organisations. On being downloaded the *Alexa* toolbar is automatically plugged onto the web browser. The traffic information of a website is then generated and

displayed automatically as shown in Figure 4.1. The traffic information for each and every website is recorded.

Alexa (2005) produces the following website information:

- *Traffic Rank* - These are the number of users and page views, which have occurred for the past three months. The number of visitors and page views are calculated on a daily basis and the traffic rank is calculated by finding the geometric mean of the two quantities. The traffic rank of a website reflects both the number of users who visit that website as well as the number of pages on the website viewed by the visitors. Traffic is calculated for sites, which are defined at domain level only.
- *Website reach* – This measures the number of users and is the percentage of all Internet users who visit a given site. If a website has a reach of 28%, this means that in a random sample of one million users, 280,000 will have visited that site. *Alexa's* one-week and three-month average reach are measures of daily reach, averaged over a specified period of time.
- *Page Views* – This measures the number of pages viewed by *Alexa* Toolbar users. If a user views the same page several times on the same day it is only counted once. The page-views-per-user numbers are the average numbers of unique pages viewed per user per day by the users visiting the website. Page views per million indicates what fraction of all the page views by toolbar users go to a particular site
- *Pages Visited* – *Alexa* can also identify which specific pages most *Alexa* toolbar users visit on a particular site.

Figure 4.2 shows an example of how the *Alexa* toolbar is automatically plugged into a web browser as a website is accessed and then loaded.

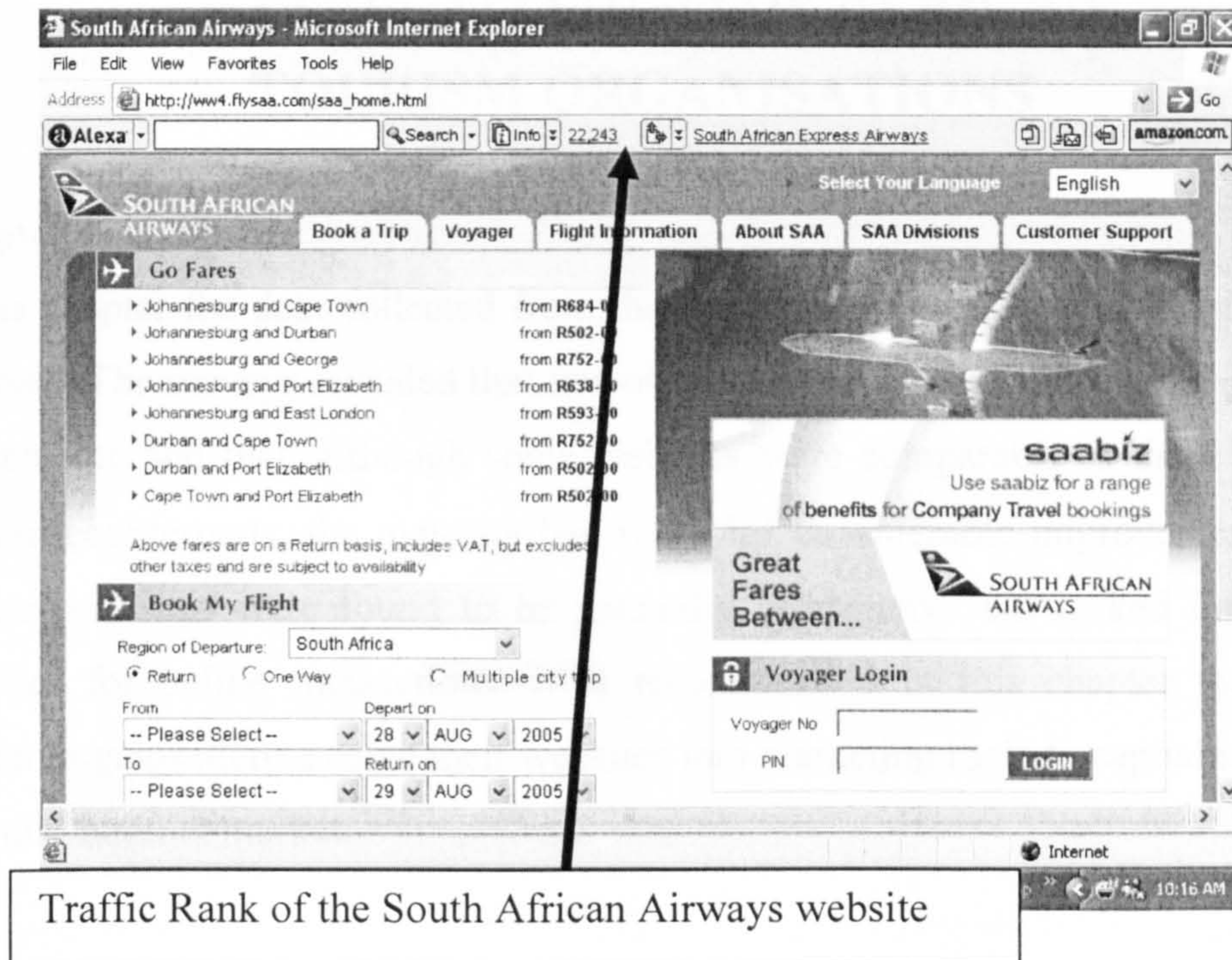


Figure 4.2 South African Airways website with *Alexa* Toolbar

4.4. Chapter Summary

The first part of this chapter looked at how the researcher searched for and accessed the websites of the tourism organisations from the four African countries. As availability sampling was used, the author worked with websites which could be found at that time the survey was carried out, so the sample sizes differed with each new survey. The features for measuring the effectiveness were described and how and where they were obtained from. Some of the features were used in different surveys and in each case this chapter provided their context for each survey. In some cases the websites of African tourism organisations were compared to those from established online travel markets and justification for doing so was provided in this chapter. The web-based tool Alexa which is used for analysing web traffic was described. The author looked at the information produced by this online tool which was used to analyse the web traffic of the websites of the African tourism organisations.

CHAPTER 5 – ANALYSING WEBSITE EFFECTIVENESS OF AFRICAN TOURISM ORGANISATIONS

Chapter Preface

In this chapter the data collected from the five surveys discussed in chapter 4 are analysed. The surveys revealed that few of the African organisations are embracing e-commerce and that, although some websites were comparable to those of their western counterparts, the majority had room for considerable improvements. The African websites were found to be generally informative but lacked interactive facilities for online transactions. It is recommended in this chapter that these African organisations evolve their websites into marketing tools to capitalise on the potential Internet market.

5.1 Introduction

This chapter presents the results of the surveys described in chapter 4. These surveys were carried out over a period of about 18 months. As discussed in chapter 4, the main aim of these surveys was to paint a clear picture on the nature and extent of e-commerce activities of the tourism organisations based in South Africa, Kenya, Zimbabwe and Uganda.

5.2. Measuring E-Commerce Websites of African Tourism Organisations for Customer Shopping Experience

In this survey the African websites were benchmarked to those of tourist organisations based in USA and Western Europe. This was done to highlight the gaps between the websites of organisations in the African countries and those of the established travel and tourism markets in their e-commerce adoption. For example, the low presence of an e-commerce feature may not be a cause of concern if the benchmark information also shows a low presence. On the other hand, a relatively

high presence among the African websites of, for example 45%, maybe a cause of concern if the benchmark value shows much higher presence, for example 95%.

The research survey is exploratory in nature. A total of 553 websites of national airlines, national parks, government-run and private tourism promotion organisations, car rental companies, travel agencies and tour operators were examined, 373 in Africa and 180 in the USA and Western Europe.

This survey was divided into two stages. During the first stage websites were evaluated to find the nature and extent of e-commerce adoption by tourism organisations from South Africa, Kenya, Zimbabwe and Uganda. In the second stage websites of tourism organisations from USA and Western Europe were analysed to provide a benchmark for their African counterparts.

The respective governments of the four African countries have implemented policies which could make the environment conducive for e-commerce activities. Therefore this study tries to establish if the tourist organisations have responded accordingly. Marshall (2000) indicated that most of the research on e-commerce focuses mainly on the USA with few studies being carried out on industries outside this country. Therefore, there is a need for studies to be carried out on specific industries in Africa, where little quality research on e-commerce activities has been carried out so far.

5.2.1. National Airlines, National Parks and Tourism-Promotion Organisations

Table 5.1 shows the analysis of the features found on 14 websites of national airlines, national parks, and state-run and private tourism-promotion organisations in Africa compared with 30 corresponding sites from the USA and Western Europe. The websites of Uganda national airlines and Zimbabwe national parks could not be found. The most popular category of features for all the tourist organisations was Customer Relationship Management (CRM) with two features,

email and contact details being present on all websites. Another CRM feature very popular among the USA and Western European organisations, but not so with the ones based in Africa, is the loyalty systems. All the airlines from the USA and Western Europe have *frequent flyer programs* which are designed for repeat clients who are awarded points or miles every time they make a transaction, whilst Africa had only one organisation with this facility.

Table 5.1 Features present on websites of National Airlines, National Parks and Tourism-Promotion Organisations

Feature	%	Feature	%	Feature	%	Feature	%	Feature	%	Feature	%
Corporate Information		Product Information		Non-product information		CRM		Reservation		Payment	
Company Overview	71 (68)	Product Description	86 (64)	Weather/Climate	64 (52)	Contact Details	100 (100)	Checking availability	14 (80)	Credit Cards	14 (76)
CEO Message	9 (0)	Rates/Fares	43 (96)	How to get there	50 (56)	E-mail Address	100 (100)	Making online reservations	29 (84)	Debit cards	7 (76)
Financial Reports	14 (0)	Photo Gallery	64 (44)	Local Transport Information	14 (52)	Feedback	29 (0)	Tracking reservations	0.5 (52)	Electronic Cash	0 (0)
News	64 (80)	Virtual Tours	7 (0)	Other places to see	29 (56)	Reciprocal links	29 (80)	Cancelling reservations	14 (52)	Virtual Credit cards	0 (0)
Employment	7 (36)	Interactivity-Winnowing	14 (40)	Accommodation	64 (56)	Promotions and special offers	21 (92)	Cancellation Policy	7 (52)	Currency Converter	7 (7)
Investor and Community relations	21 (0.1)	FAQs	14 (32)	Security/safety	21 (20)	Electronic newsletter	73 (83)	Amending reservations	7 (48)		
		Privacy and security	21 (64)	Immigration	36 (20)	Loyalty Systems	7 (48)	Creating customer accounts	14 (60)		
				Customs	21 (12)	Call-back services	0 (0)				
				Other	55 (60)	Mailing Lists	13 (50)				
						'Mail-to-friend' button	13 (3)				
						Customer surveys	0 (3)				
						Free downloads	0 (0)				
						Competition/games	0 (10)				
						Customised content	7 (17)				

Sample size: South Africa – 4, Kenya – 4, Zimbabwe – 3, Uganda – 3, USA and Western Europe - 30

Legend: upper numbers represent % percentages for South Africa, Kenya, Zimbabwe and Uganda
lower numbers (in brackets) represent percentages for USA and Western Europe

Tourist organisations from both the African countries and those of the USA and Western Europe focused on providing information with the three information categories (corporate, product and non-product information) usually present, with at least two thirds of web sites having some features in each of these categories.

These information categories were more common because this category is dominated by tourism-promotion organisations whose mission is to sell tourism products. For the Western European organisations and those from USA the most popular features were rates, reservations and payment which are the most closely associated with e-commerce with at least three quarters of the organisations having these features present on their websites. The 'Other' feature in the non-product information includes other information about health issues and content in other languages. Unsurprisingly, the other language feature was particularly popular among tourist organisations from non-English speaking countries in Europe.

5.2.2 Hotels and Lodges

Table 5.2 Features present on websites of Hotels and Lodges

Feature	%	Feature	%	Feature	%	Feature	%	Feature	%	Feature	%
Corporate Information		Product Information		Non-product information		CRM		Reservation		Payment	
Company Overview	35 (74)	Product Description	64 (100)	Weather/Climate	15 (9)	Contact Details	92 (100)	Checking availability	31 (85)	Credit Cards	31 (85)
CEO Message	3 (12)	Rates/Fares	68 (100)	How to get there	29 (12)	E-mail Address	92 (100)	Making online reservations	72 (97)	Debit cards	0 (85)
Financial Reports	3 (0)	Photo Gallery	64 (47)	Local Transport Information	2 (12)	Feedback	23 (9)	Tracking reservations	12 (41)	Electronic Cash	0 (0)
News	40 (62)	Virtual Tours	10 (15)	Other places to see	20 (12)	Reciprocal links	6 (29)	Cancelling reservations	18 (44)	Virtual Credit cards	0 (0)
Employment	11 (32)	Interactivity-Winning	8 (32)	Security/safety	0 (9)	Promotions and special offers	33 (76)	Cancellation Policy	18 (44)	Currency Converter	16 (26)
Investor and Community relations	5 (9)	FAQs	8 (12)	Immigration	36 (0)	Electronic newsletter	53 (46)	Amending reservations	15 (41)		
		Privacy and security	11 (82)	Customs	1 (0)	Loyalty Systems	3 (45)	Creating customer accounts	14 (44)		
				Other	22 (0)	Call-back services	0 (0)				
						Mailing Lists	13 (41)				
						'Mail-to-friend' button	9 (13)				
						Customer surveys	1 (0)				
						Free downloads	2 (0)				
						Competition/games	6 (0)				
						Customised content	2 (50)				

Sample size: South Africa – 61, Kenya – 39, Zimbabwe – 11, Uganda – 11, USA and Western Europe-56

Legend: upper numbers represent percentages for South Africa, Kenya, Zimbabwe and Uganda
lower numbers (in brackets) represent percentages for USA and Western Europe

A total of 122 websites of hotels and accommodation lodges in the four African countries and 56 from the USA and Western Europe were accessed and examined for features expected to be found on an e-commerce website (Table 5.2). The CRM category was the most popular category of features for both the African and Western websites because of the high number of websites with contact details and e-mail addresses present. Two thirds of the African organisations' websites have several features in the product information category, whereas all the websites of hotels in the USA and Western Europe websites have a minimum of the product descriptions and the rates. Unlike the airlines, however, the corporate and non-product information were not as common. Significantly, online reservation is used more widely in the hotel industry. However, less than a third of hotels had facilities for online payment amongst African hotels and lodges whereas 97% of similar websites from the USA and Western Europe had this facility. Although most of the websites collect personal data through online reservation forms, only 11% of the African websites, compared to 82% from the USA and Western Europe, have privacy and security statements present on their websites.

5.2.3 Car Rental Companies

Of the 62 websites analysed in Table 5.3, 24 are from South Africa and 38 are from the USA and Western Europe. The websites of car rental companies from the other three African countries could not be found. It is still possible to rent a car in these countries through the Internet by accessing websites of international companies such as Hertz and Avis. Although CRM is a popular category with most sites featuring email and contact information, the product information category is also very common with high numbers giving information on rates, product descriptions, and a photo gallery. Like the hotel industry, the reservation category is significant with three quarters of African websites offering some form of reservation facility, but again only a third of African websites allowed payment online whereas four in every five websites had this feature for car rental companies from the USA and Western Europe. Surprisingly, none of the African websites featured any information on safety or security, yet information on where it is safe or unsafe to travel in these countries can be of critical importance.

Table 5.3 Features present on websites of Car Rental Companies

Feature	%	Feature	%	Feature	%	Feature	%	Feature	%	Feature	%
Corporate Information		Product Information		Non-product information		CRM		Reservation		Payment	
Company Overview	33 (63)	Product Description	80 (100)	Weather/Climate	17 (13)	Contact Details	96 (100)	Checking availability	4 (50)	Credit Cards	33 (80)
CEO Message	0 (0)	Rates/Fares	88 (100)	How to get there	17 (19)	E-mail Address	96 (100)	Making online reservations	75 (100)	Debit cards	0 (80)
Financial Reports	0 (0)	Photo Gallery	80 (100)	Local Transport Information	8 (0)	Feedback	17 (5)	Tracking reservations	0 (19)	Electronic Cash	0 (0)
News	13 (31)	Virtual Tours	0 (0)	Other places to see	8 (0)	Reciprocal links	21 (25)	Cancelling reservations	4 (38)	Virtual Credit cards	0 (0)
Employment	0 (25)	Interactivity-Winning	13 (38)	Accommodation	21 (38)	Promotions and special offers	38 (81)	Cancellation Policy	0 (38)	Currency Converter	17 (19)
Investor and Community relations	0 (0)	FAQs	8 (13)	Security/safety	0 (0)	Electronic newsletter	9 (21)	Amending reservations	0 (19)		
		Privacy and security	8 (73)	Immigration	17 (0)	Loyalty Systems	13 (18)	Creating customer accounts	4 (44)		
				Customs	17 (0)	Call-back services	0 (0)				
				Other	25 (0)	Mailing Lists	13 (24)				
						'Mail-to-friend' button	9 (0)				
						Customer surveys	0 (3)				
						Free downloads	0 (0)				
						Competition/games	0 (5)				
						Customised content	4 (18)				

Sample size: South Africa – 24, Kenya – 0, Zimbabwe – 0, Uganda – 0, USA and Western Europe - 38

Legend: upper numbers represent percentages for South Africa, Kenya, Zimbabwe and Uganda
lower numbers (in brackets) represent percentages for USA and Western Europe

5.2.4 Travel Agencies and Tour Operators

The travel agencies' and tour operators' category provided the bulk (50%) of the websites used in this survey (see table 5.4). A brief product description was found to be the most common e-commerce feature as it was present on 92% of the websites with only 18 companies failing to make any reference to their products and services. All the websites of companies from the USA and Western Europe had this feature. The e-mail address and contact details features made the CRM category the most popular for all the websites. With most of the travel agencies and tour operators from Africa being small family businesses, it is perhaps not surprising that corporate information was not as common as in websites of organisations based in the USA and Western Europe, with less than a third having a

company overview and with few websites giving any other information. The 'Other' feature in non-product information includes information on health issues and options for displaying the web content in different languages. The two categories, which provide features for carrying out online transactions, reservations and payment, were the least popular in Africa with less than a third of websites offering any reservation facility and only 11% offering online payment. These were more common on USA and Western European websites, with almost three quarters of the websites having this feature.

Table 5.4 Features present on websites of Travel Agencies and Tour Operators

Feature	%	Feature	%	Feature	%	Feature	%	Feature	%	Feature	%
Corporate Information		Product Information		Non-product information		CRM		Reservation		Payment	
Company Overview	30 (50)	Product Description	92 (100)	Weather/Climate	12 (34)	Contact Details	90 (100)	Checking availability	1 (25)	Credit Cards	11 (72)
CEO Message	0 (0)	Rates/Fares	41 (100)	How to get there	19 (88)	E-mail Address	89 (100)	Making online reservations	29 (78)	Debit cards	0 (72)
Financial Reports	0 (0)	Photo Gallery	46 (53)	Local Transport Information	15 (63)	Feedback	8 (6)	Tracking reservations	0.5 (26)	Electronic Cash	0 (0)
News	12 (38)	Virtual Tours	0.5 (0)	Other places to see	12 (88)	Reciprocal links	7 (25)	Cancelling reservations	2 (21)	Virtual Credit cards	0 (0)
Employment	2 (25)	Interactivity-Winning	13 (36)	Accommodation	32 (81)	Promotions and special offers	13 (29)	Cancellation Policy	9 (21)	Currency Converter	16 (13)
Investor and Community relations	2 (0)	FAQs	7 (25)	Security/safety	7 (9)	Electronic newsletter	17 (40)	Amending reservations	0 (19)		
		Privacy and security	3 (71)	Immigration	11 (22)	Loyalty Systems	0 (16)	Creating customer accounts	0 (31)		
				Customs	6 (16)	Call-back services	0 (0)				
				Other	22 (0)	Mailing Lists	4 (36)				
						'Mail-to-friend' button	2 (12)				
						Customer surveys	1 (0)				
						Free downloads	2 (10)				
						Competition/games	0 (7)				
						Customised content	0 (7)				

Sample size: South Africa – 72, Kenya – 55, Zimbabwe – 51, Uganda – 35, USA and Western Europe - 56

Legend: upper numbers represent percentages for South Africa, Kenya, Zimbabwe and Uganda
lower numbers (in brackets) represent percentages for USA and Western Europe

5.3. Internet Promotional Techniques of the Travel and Tourism Industry in South Africa, Kenya, Zimbabwe and Uganda

This section reports research that examines the nature of the promotional techniques which are being employed by the tourism organisations to attract new customers as well as retain the old ones. The overall goal of this study is to provide an insight into the development and implementation of marketing strategies being used by the travel and tourism industry to achieve e-commerce success. E-commerce has been a huge success in Western Europe and comparing the promotional techniques of the organisations in the four African countries to their western counterparts will help establish areas where the African organisations need to improve.

The main objectives of the survey, therefore, are to:

- establish which Internet promotional techniques are being employed today
- find the nature of the promotional techniques being used and also which are the most prevalent
- compare the techniques employed by the African organisations to their European Union(EU) counterparts

Empirical evidence provided by this survey was obtained from the evaluation of a total of 602 websites of national airlines, national parks, government-run and private tourism promotion organisations, car rental companies, travel agencies and tour operators. These websites in this survey include all those used in the survey described in Section 5.2. Of the 602 websites 421 were of tourist organisations from the four African countries, and 181 websites of the tourism organisations based in the top ten tourist destinations in Europe. These countries are Spain, France, Italy, Germany, The United Kingdom, Austria, Turkey, Greece, The Netherlands and Switzerland.

The online techniques which this study examines are known as traffic building techniques which are defined by Chaffey et al (2000) as promotion techniques

whose aim is to increase the audience of a website. The features used in this study are those that can be only be identified from the website. These features are generally referred to as on-site promotional techniques. The underlying technical techniques and the offline promotion techniques are not included in this survey.

5.3.1 The Findings for Online Promotional Techniques on African Websites

Table 5.5 Analysis of promotional techniques on African websites

Organisation Feature	Airlines, National Parks and Tourism- Promotion	Hotels and Lodges	Car rental Companies	Travel Agencies and Tour Operators
Meta Tags	3 (20%)	55 (45%)	15 (65%)	132 (50%)
Title Tags	10 (66%)	118 (96%)	20 (87%)	261 (100%)
E-Newsletter	11 (73%)	53 (43%)	2 (9%)	44 (17%)
Frequently Asked Questions (FAQs)	3 (20%)	13 (10%)	1 (4%)	22 (8%)
Loyalty Systems	0	4 (3%)	3 (13%)	0
Callback services	0	0	0	0
Mailing Lists	2 (13%)	16 (13%)	3 (13%)	10 (4%)
Privacy policy	3 (20%)	11 (9%)	4 (17%)	10 (4%)
Promotions and specials	5 (33%)	42 (34%)	1 (52%)	39 (15%)
'Mail to a friend' button	2 (13%)	4 (3%)	2 (9%)	6 (2%)
Reciprocal links	6 (40%)	11 (9%)	7 (30%)	26 (10%)
E-Postcards	0	5 (4%)	0 0	3 (1%)
Doorway pages	3 (20%)	17 (13%)	1 (4%)	13 (5%)
Customer Feedback	6 (40%)	25 (20%)	6 (26%)	31 (12%)
Customer surveys	0	1 (1%)	0	2 (1%)
Information request	2 (13%)	8 (7%)	0	11 (4%)
Free downloads	0	2 (2%)	0	6 (2%)
Competitions / games	0	7 (6%)	0	0
Last date updated	0	1 (1%)	0	1 (0.4%)
Customised content	0	3 (2%)	1 (4%)	0
Customer accounts	1 (7%)	3 (2%)	2 (9%)	0
Bookmark -page button	1 (7%)	3 (2%)	1 (4%)	3 (1%)
Other	7 (47%)	22 (18%)	3 (13%)	14 (5%)

Sample size: South Africa-217, Kenya-90, Zimbabwe-68, Uganda-46

The most common promotional features on websites of the African organisations were the title tags which were identified on 87%, and meta tags which were on 45% of all the websites (see Table 5.5). Other popular promotional techniques are the e-newsletter (35%), promotions and special offers (34%), and customer feedback (25%). The 'last date updated' feature could not be found on any of the websites. The other least common promotional techniques were callback services which were

on less than 1% and customer surveys (1.5%). The 'Other' technique includes features like online currency converter and employment opportunities.

5.3.2 The Findings for Online Promotional Techniques on European Websites

Table 5.6 Analysis of promotional techniques on websites of European organisations

Organisation Feature	Airlines and Tourism- Promotion	Hotels and Lodges	Car rental Companies	Travel Agencies and Tour Operators
Meta Tags	30 (100%)	56 (100%)	38 (100%)	56 (97%)
Title Tags	30 (100%)	56 (100%)	38 (100%)	58 (100%)
E-Newsletter	25 (83%)	26 (46%)	8 (21%)	23 (40%)
Frequently Asked Questions (FAQs)	10 (33%)	11 (20%)	12 (32%)	13 (22%)
Loyalty Systems	11 (37%)	25 (45%)	7 (18%)	9 (16%)
Callback services	0	2 (3%)	0	0
Mailing Lists	15 (50%)	23 (41%)	9 (24%)	21 (36%)
Privacy policy	16 (53%)	25 (45%)	17 (45%)	14 (24%)
Promotions and specials	20 (67%)	38 (68%)	27 (71%)	38 (66%)
'Mail to a friend' button	1 (3%)	7 (13%)	0	7 (12%)
Reciprocal links	22 (73%)	10 (18%)	8 (21%)	22 (38%)
E-Postcards	2 (7%)	5 (9%)	0	3 (5%)
Doorway pages	4 (13%)	10 (18%)	3 (8%)	5 (9%)
Customer Feedback	4 (13%)	7 (13%)	6 (16%)	7 (12%)
Customer surveys	1 (3%)	0	1 (3%)	0
Information request	6 (20%)	11 (20%)	2 (5%)	21 (36%)
Free downloads	0	0	0	6 (10%)
Competitions/games	3 (10%)	0	2 (5%)	4 (7%)
Last date updated	0	0	0	0
Frames	0	0	0	1 (2%)
Customer accounts	14 (47%)	28 (50%)	14 (37%)	16 (28%)
Bookmark -page button	6 (20%)	7 (13%)	8 (21%)	7 (12%)
Customised content	5 (17%)	10 (18%)	3 (8%)	4 (7%)
Other	19 (63%)	26 (46%)	6 (16%)	17 (29%)

Sample size: Spain-20, France-21, Italy-23, Germany-22, United Kingdom-25, Austria-16, Greece-14, Turkey-12, Netherlands-15, Switzerland-13

Just as with the African websites, the most common European promotional technique was the title tag which was found on all of the examined websites and the meta tags which were present on all but 2 websites (see Table 5.6). The other promotional techniques which were popular include promotions and special offers (67%), the e-newsletter (47%), customer accounts (40%), mailing lists and reciprocal links which were both found on 38% of the 181 websites. Loyalty systems and creating customer accounts were very popular particularly among

airlines where they were present on more than three quarters of the airline websites. Loyalty systems, known on most airline websites as *frequent flyer programs*, are designed for repeat clients who are awarded points or miles every time they make a transaction. As with African websites, no website had information on when the last update of the content took place. The callback services and the customer surveys were both found on only two websites. The 'Other' component includes free services like online currency converter, interactive weather update facility and pages with information on employment opportunities and classified advertisements.

5.4. Assessing the Levels of Knowledge Transfer within E-Commerce Websites of Tourist Organisations in Sub-Saharan Africa

The management of knowledge through e-commerce is essential for African organisations to remain competitive as the global reach of the Internet means that tourist organisations based in Western Europe and the USA can attract tourists away from Africa and can even compete to handle the tourist trade within Africa itself. Knowledge management is wide subject involving technical, social, organisational and environmental aspects. To keep the study within a manageable scope, therefore, this survey focuses on one aspect of knowledge management, that of knowledge sharing. Hustad (2004) and Reid and Slazinski (2003) carried out studies on knowledge transfer by focusing on how knowledge can be transferred between multinational organisations and project team members. This section examines knowledge transfer between organisations and customers.

The main aim of this survey is to investigate how tourist organisations based in South Africa, Kenya, Zimbabwe and Uganda acquire, disseminate and apply knowledge through their websites. Interactivity is the key to put information into context to become knowledge.

Empirical evidence acquired by this survey was obtained from the evaluation of a total of 554 websites of national airlines, national parks, government-run and

private tourism promotion organisations, car rental companies, travel agencies and tour operators.

5.4.1. The Findings for Level 1 - Information-Only Websites

There were 161 organisations at this level, representing 29% of all the organisations surveyed. At this level, the website represents a facility for information to be transferred from the organisation to the customer. There is no facility for the customer to transfer any information or knowledge back to the organisation other than sending a message to a contact address given on the site. Even in the direction of organisation to customer the transfer is really only that of information rather than knowledge as there is no means to tailor the information to the customers own context.

5.4.2. The Findings for Level 2 – Websites with Limited Interactive Facilities

The closest facility to a knowledge transfer is the electronic newsletter available on a few sites (about one in every eight). The more descriptive form of a newsletter does give some knowledge as the readers can pick up elements of context from the descriptions which they can then relate to themselves. The information available through the newsletters varied from information on new or planned products and services to information about major events taking place at the tourist destinations which might be of interest to potential tourists.

This level had the most organisations within it, 368 organisations represent two thirds of the total surveyed. The percentages in Table 5.7 are calculated as a percentage of the organisations in this category of tourist organisations. The survey showed that about one in every twelve of these organisations acquired knowledge through an electronic guest books. Although there was some customer profiling, it is not included in Table 1 as the depth of the information entered by customers would be insufficient to study and analyse customer behaviour. About a quarter of the 368 organisations from this category used the electronic newsletter to disseminate information and knowledge to customers. Evidence from the results

obtained from the survey showed that there is little application of knowledge obtained from the customer with only four organisations providing facilities to make recommendations to the customers.

Table 5.7 Analysis of Knowledge Transfer Facilities on Level 2 Websites

Organisations	National Organisations	Hotels and Lodges	Travel agencies and Tour operators	Car rental companies
Features				
<i>Knowledge acquisition</i>				
Customer Profiling	-	-	-	-
Electronic Guestbook	2 (50%)	25 (25%)	12 (6%)	7 (13%)
Customer Surveys	-	1 (1%)	2 (1%)	-
Interactive Chat	-	-	-	-
<i>Knowledge distribution</i>				
Electronic Newsletters	4 (100%)	42 (42%)	49 (23%)	4 (8%)
Bulletin Board	-	-	-	-
<i>Knowledge application</i>				
Recommendation Engine	1 (25%)	-	3 (1%)	-
Loyalty Programmes	-	-	-	-
Customised Content	-	-	-	-

Sample size: South Africa - 226, Kenya - 89, Zimbabwe - 32, Uganda - 21

5.4.3. The Findings for Level 3 – Fully-Fledged E-Commerce Websites

Table 5.8 Analysis of Knowledge Transfer Features of Fully-Fledged E-commerce Website

Organisations	National Organisations	Hotels and Lodges	Travel agencies and Tour operators	Car rental companies
Features				
<i>Knowledge acquisition</i>				
Customer Profiling	2 (100%)	4 (36%)	-	4 (80%)
Electronic Guestbook	-	1 (9%)	2 (29%)	-
Customer Surveys	-	1 (9%)	2 (29%)	-
Interactive Chat	-	-	-	-
<i>Knowledge distribution</i>				
Electronic Newsletters	2 (100%)	8 (72%)	2 (29%)	2 (40%)
Bulletin Board	-	-	-	-
<i>Knowledge application</i>				
Recommendation Engine	2 (100%)	6 (55%)	-	-
Loyalty Programmes	1 (50%)	4 (36%)	-	2 (40%)
Customised Content	-	3 (27%)	-	1 (20%)

Sample size: South Africa - 23, Kenya - 2, Zimbabwe - 0, Uganda - 0

Of the organisations surveyed, only 25 had fully-fledged e-commerce websites (see Table 5.8), with none of these in Zimbabwe or Uganda. About two thirds of organisations from this category had at least one of the knowledge acquisition

features of customer profiling, electronic guestbook and customer surveys. None of the organisations had facilities for interactive chatting or links to bulletin boards. Similarly, nearly two thirds of the websites had the knowledge distribution feature of an electronic newsletter, but none had access to bulletin boards where customers can find information about tourism-related topics. At least three websites from the hotels and lodges category had all the facilities that used knowledge acquired through customer interaction for the benefit of the customer through recommendations and loyalty programmes. However, not one website from the travel and tour operators' category had any of the knowledge application facilities.

5.5. Analysing Traffic Rankings of Websites of Tourist Organisations in the Four African Countries

As part of their eCRM activities, tourist organisations should try to find out not only whether their websites are generating the right amount of traffic (Internet users) but also whether they are attracting the right users and whether the users are getting what they require. This can be achieved by analysing website traffic. An analysis of the web traffic information of websites of tourist organisations from South Africa, Kenya, Zimbabwe and Uganda was carried out using the Internet tool *Alexa*. The main purpose of this survey was to find out how websites of tourist organisations from these four countries are ranked according to the amount of traffic out of a possible 36 million websites on the Internet.

The main aims of this survey are to find out:

- a) how websites of tourist organisations are ranked by traffic
- b) the number of pages visited per website
- c) which pages Internet users visit within the websites

This information would help organisations know if their websites are attracting the amount of traffic from which they can generate substantial amounts of revenue. This information would be used to justify the existence of a website. The web traffic information generated by *Alexa* would help organisations find if the users are visiting the most important pages of tourist organisations, which contain

product information, or those which contain facilities to carry out e-commerce transactions.

A total of 268 websites which belonged to national airlines, national parks, tourism-promotion organisations, hotels and lodges, travel agencies and tour operators and car rental companies based in the four African countries were downloaded and their web traffic information recorded.

5.5.1. National Airlines, National Parks and Tourism-Promotion Organisations

Table 5.9 Analysis of websites of National Airlines, National Parks and Tourism Promotion Organisations

Feature Organisation	Rank	Reach per million users		Page Views		Number of other sites linked to it
		1 week average	3 months average	1 week average	3 months average	
<i>National Airlines</i>						
South Africa	19,169	42	40	9.5	9.4	1,320
Kenya	213,380	6	3.75	6.7	5.8	287
Zimbabwe	888,380	1.5	0.6	3.0	4.5	284
Uganda	-	-	-	-	-	-
<i>National Parks</i>						
South Africa	163,438	3	4.6	1.5	7.9	408
Kenya	1,216,193	-	0.35	-	5.0	128
Zimbabwe	-	-	-	-	-	-
Uganda	-	-	-	-	-	36
<i>Tourism Promotion Organisations</i>						
South Africa	2,876,213	-	0.1	-	2.0	122
Kenya	307,170	3	2.05	7.0	8.0	157
Zimbabwe	1,317,124	-	0.3	-	4.6	24
Uganda	474,151	1	1.2	6.0	6.4	308

Table 5.9 shows the web traffic information of websites of national airlines, national parks and government-run tourism-promotion organisations. The Uganda national airlines and the Zimbabwe national parks' websites could not be found through normal search methods. The highest ranked national airline website was that of South Africa standing at 19,169. The South African Airline website does not attract as much traffic as the more illustrious ones such as the British Airways ranked 1,196 or American Airlines (901) but, on the other hand, it certainly does better than the Indian airline (35,488). The website for the Uganda national parks website was found but did not attract enough website traffic for it to be ranked.

Alexa requires a minimum level of traffic for a website in order to generate its site ranking and other statistics. From this group of websites *Alexa* was only able to generate the statistics for the pages most visited for the South African airline. Only two pages from the website are frequently visited and they are both content pages.

5.5.2. Hotels and Lodges

Table 5.10 Web Traffic Information of Websites of Hotels and Lodges

Feature Country	Number of websites	Average rank	Average reach per million users		Average Page views		Average Links of other websites
			1 week average	3 months average	1 week average	3 months average	
South Africa	31	1680060	153.11	47.33	5.13	4.81	204.11
Kenya	18	2047093	309.5	77.55	5.18	5.78	21.30
Zimbabwe	8	1683855	193.89		6.6		32
Uganda	2	1833976	560	284.28	5.9	5.1	594.6

Sample size: South Africa -45, Kenya -27, Zimbabwe -8, Uganda -6.

A total of 86 websites of hotel and lodges from the four African countries were accessed with South Africa providing the majority (45) (see Table 5.10). South Africa had 14 (16%) websites which had insufficient traffic for information to be generated, Kenya had 7 (0.8%) such websites, Zimbabwe had zero and Uganda, 2 (0.02%). Uganda had the highest average reach, page view and links because, of the 6 websites that were found, one was of an international hotel whose traffic ranking was 1407 and it had 2,936 links from other websites to it. Websites of 2 Uganda hotels and another 2 from Kenya were hosted by other organisations and, since *Alexa* computes for websites at domain level only, the information provided was not for the hotel website. Websites of three international hotels, two of which are found in all the four African countries, had information generated on which specific pages most users visit. Most of the users visit the pages, which contain product information, promotional activities and those with the e-mail address on.

5.5.3. Travel Agencies and Tour Operators

A total of 164 websites of travel agencies and tour operators were accessed and measured for web traffic information (see Table 5.11). This is where some of the lowest ranked websites by traffic are found. This is because many of them are small family-run business entities. A total of 71 (43%) websites could not be ranked by traffic because it was insufficient, with South Africa providing 27 (16%) of these websites, Kenya 18 (11%), Zimbabwe 21 (13%) and Uganda 5 (0.3%). Zimbabwe had 15 out of its 36 websites hosted by other organisations and Uganda had 13 out of 20. Not a single website for a travel agency or tour operator from Zimbabwe had sufficient web traffic for information to be generated by the *Alexa* Internet tool.

Table 5.11 Web Traffic Information of Websites of Travel Agencies and Tour Operators

Feature Country	Number of websites	Average rank	Average reach per million users		Average Page views		Average Links of other websites
			1 week average	3 months average	1 week average	3 months average	
South Africa	33	1845333	5.65	1.88	3.47	4.14	29.68
Kenya	28	2351493	34.9	6.8	4.58	5.8	21.93
Zimbabwe	0	-	-	-	-	-	84.25
Uganda	2	2120729	1	1.2	1	3.9	10.33

Sample size: South Africa -60, Kenya -48, Zimbabwe -36, Uganda -20.

5.5.4. Car Rental Companies

Car rental companies provided 9 websites and all from the same country, South Africa. Websites of car rental companies from the other three countries could not be found. The highest rank from this group was 332,246 with a three months reach average of 2.05 per million users and the website belonged to an international company. The lowest rank was 4,354,043 with a three months reach average of about 0.05 per million users and had only 10 other websites linked to it. *Alexa* could only provide information on specific pages visited of only 3 websites. The information generated showed that most people visit the content pages although on one website 10% of the users visit the page with online booking.

5.6. Conclusions

Evidence from all the surveys shows that most African tourism organisations are at the initial stages of adopting and using e-commerce. Yet, tourism is one of the most competitive sectors in the global market place and the Internet provides facilities to reach huge numbers of customers worldwide. The websites from tourist organisations based in South Africa, Kenya, Zimbabwe and Uganda showed that these organisations, as in other sectors, are slowly progressing towards embracing of the Internet and e-commerce but they still have a lot to do to catch up with their western counterparts.

Most of the websites (42%) were from South African organisations in the survey *E-commerce adoption*, of which about 6% were international websites comparable to those of organisations from the USA and Western Europe, making South Africa the clear leader of the four nations studied for adoption and usage of e-commerce. This shows that South Africa is now beginning to break into the global marketplace which has long been dominated by the USA and Western Europe.

The website of a tourist destination must contain information about that destination which includes how to get there (air travel), getting around (local transport information), places to stay (hotel accommodation), and things to do (places to see, dining, shopping, shows and events). The survey *E-commerce adoption* revealed that the majority of the African websites provided adequate information, with most featuring product descriptions, photo galleries and rates or fares. However, most of the African organisations did not provide adequate non-product information relevant to a tourist, such as the weather, immigration procedures, customs and health concerns, yet these are of great interest to the typical tourist. In particular, these findings also show that the travel and tourism industry from the four African countries has failed to take advantage of the Internet to dispel any rumours or clarify issues concerning security and safety of tourists, yet these issues have led to a slump in tourist flow into these countries.

A fully-fledged e-commerce website should have facilities to enable online transactions to take place. This is the main area where the websites of the tourism organisations from the four African countries are lagging behind. According to the survey *E-commerce adoption* most of the websites (46%) had facilities to make online reservations compared to 90% in the US and Western Europe. The real-time reservation facility, which allows customers to check for availability first and make the reservations when availability is confirmed, was present on only 43 websites. This figure represents only a quarter of African sites with reservation facilities, whilst almost two thirds of the corresponding USA and European websites offer this facility. The remaining sites only allowed booking forms to be submitted with the response to the customer being sent via e-mail using an address the customer must supply. As for online payment, only 15% of the African websites allowed online payment by credit card and only one website allowed customers to pay by debit card, which shows that few organisations are taking advantage of online transactions. This is far less than the number of websites in the USA and Western Europe with more than three quarters offering online payment by both credit card and debit card. The tourist organisations will only obtain the full benefits of e-commerce being enjoyed by their western counterparts once they have provided facilities for online transactions on their websites.

CRM is a very important component of e-commerce, which is used to cater for customer needs, wants and preferences. Apart from providing email and contact addresses, the survey *CRM* revealed that few African organisations provide adequate facilities to retain customer loyalty. For example, only 14% of the websites had a feedback feature (an electronic guest-book) present, yet a simple form for customers to submit comments about the organisations' products and services is easy to implement. Only 21% of African websites had the promotions and special offers feature, of which 40 were hotel websites. Links on other websites will lead not only to the establishment of web-based marketplaces but also the so-called one-stop shops for tourists. Merely 8% of the African tourist organisations had links to other tourist organisations offering complimentary services. The results show that the organisations from the USA and Western

Europe are using more or less the same techniques for CRM as their African counterparts but have gone a step further by having features for creating a long lasting relationship with customers based on loyalty and trust. They are also using features such as interactive facilities to create customer accounts, loyalty systems, customised content for repeat clients, privacy policy statements and mailing lists to not only gain new customers but also to retain loyalty from existing customers. If the four African countries wish to see an increase in tourist flow into their respective regions then they should make an effort to employ CRM strategies and technologies in order to reach their potential in the tourism industry.

Analysis of data collected in the survey *Website traffic* showed that the websites of airlines seem to be attracting more traffic than any other group of tourist organisations that were examined, with the South African Airlines providing the highest ranked website by traffic. The hotels and lodges are also doing well thanks to the international hotels whose websites are in the top 2,000. Although they provided the bulk of the websites, travel agencies and tour operators seem to be attracting the least amount of traffic. In this group a total of 99 websites could not have its traffic information generated either because they could not attract sufficient traffic or their website is being hosted by other organisations. The car rental companies provided the least number of websites mainly because websites of car rental from the three African countries could not be found. It can be concluded from the findings of this survey that most of the websites, with the least number of links of other websites to them, had a lower ranking for website traffic. The South African airline had 1,326 other sites linking to it and a rank of 19,169, while the Zimbabwe national airline had only 284 sites and a rank of 888,380. The travel agencies and tour operators group, where most have a ranking over 1 million, had the number of other sites that link to them starting from zero to a couple of hundreds. An international travel agency which specialises in student and youth travel, is ranked 30,418 and has 602 other sites linked to it. The Internet tool *Alexa* could not generate information on the specific pages visited on most websites, except for a few, most of which were for international organisations. Although the number of pages visited in general was satisfactory, this information was not

helpful as it does not relate to specific pages. This information could have been helpful if the traffic for individual pages was known. A limitation of the *Alexa* analysis tool described in Section 4.4 is that it does not give the total number of website users as it analyses traffic for *Alexa* toolbar users only. While the number of *Alexa* users is clearly very large there is no way of being sure that the users are a representative sample of all users who access the sites of interest.

Evidence from the survey *Internet promotional techniques* shows that tourist organisations from Europe used more online techniques to promote their websites than their African counterparts. Each European website had, on average, at least five features for promoting products and services while almost half of the African websites had only one or two features present. The two features found on most of the African websites were title and meta tags. Most of the examined features found on websites of tourism organisations from the four African countries would enable Internet users to easily find their websites and hence make users aware of the presence of the organisations. European organisations, like their African counterparts, had features for increasing traffic but went a step further by having features for creating a long lasting relationship with customers based on loyalty and trust. Besides meta tags, title tags, promotions and special offers, the European tourism organisations had features such as interactive facilities to create customer accounts, loyalty systems, privacy policies and mailing lists to not only gain new customers but also to retain loyalty from existing customers.

The Internet today enables new data collection strategies which can generate volumes of useful data, but only a few organisations from the information-intensive tourism industry in the four African countries are taking full advantage. The analysis of the results from the survey *Knowledge transfer* clearly show that there is little knowledge acquisition taking place on the websites of the tourism organisations surveyed. Managing customer relationships within social interactions for knowledge creation is increasingly becoming a critical area within e-commerce (Romano & Fjermestad, 2003). To enable eCRM to take place, some form of interactivity is needed to obtain information about the customer. The organisations

whose websites have some interactivity are the ones who provide facilities for web-based knowledge acquisition. With no facilities for customer interaction on information-only websites no knowledge acquisition can take place on these websites. Knowledge transfer requires a high level of interactivity to allow users to place the information provided into their own context. Knowledge generated is useful only when it is disseminated to people who can use it. Although there has been little knowledge acquisition taking place there were more websites with facilities that could be used for knowledge and information distribution. Most of the websites, which included the level one sites, had, at least, the electronic newsletter feature to distribute knowledge and information, though this is a limited feature for knowledge transfer as it requires the customers to extract the context information themselves. The reason the electronic newsletter seems to be the most common method of distribution is probably that it needs very little programming effort to set up on a website. However, this simplicity also means that there are no barriers to additional organisations providing this feature, so they should be encouraged to do so.

The knowledge acquired should be applied whenever the customer accesses the e-commerce system. The number of websites with systems or tools that use knowledge acquired increased with the level of interactivity within websites. There were no level one websites with facilities which applied knowledge, and only four out of 368 level 2 websites. Only in the 25 fully-fledged e-commerce websites was there any significant number using the acquired knowledge to make recommendations to customers or to provide customer loyalty schemes with more than three quarters of websites in that category doing so.

All the five surveys have identified the potential that the Internet and e-commerce can provide for the four African countries' tourism industry. This chapter has also shown that so far the African organisations are lagging behind their western counterparts in the e-commerce features they provide on their websites and in terms of website promotional techniques. The analysis of the results has also shown that only limited knowledge transfer can take place without customer interaction on the

websites of the tourism organisations from the four African countries. For an e-commerce system to succeed within the emerging global marketplace it must be able to properly transfer knowledge, whether it is generated within the system or derived from external environments. The increased competition within the tourism industry, the exponential growth of the Internet and the size and distribution of target markets are some of the reasons why knowledge transfer is so important in e-commerce systems today. Organisations from the four African countries should turn the once uncharted territories of the Internet and e-commerce into an opportunity to reach their full potential as tourism countries in order to remain competitive on the international tourism market.

CHAPTER 6 – WEBSITE CONTENT ACCESSIBILITY AND USABILITY ISSUES

Chapter Preface

This chapter generated the papers “Website Accessibility and Usability of Tourist Organisations in Four African Countries” (Maswera and Dawson, 2004a), “Analysis of Usability and Accessibility Errors of E-Commerce Websites of Tourist Organisations in Four African Countries” (Maswera et al, 2005a).

The first of the two surveys discussed in this chapter was carried out to determine the accessibility and usability of websites of tourism organisations from the four African countries and also to find out if there was any co-relationship between content accessibility and usability. In the second survey accessibility and usability errors were analysed in an effort to find out if they will in any way affect the e-commerce operations on the websites. In this second survey the websites of the African organisations were compared with those of tourism organisations in Europe to find out how well they are doing against well established tourism markets. The chapter concludes that the African web sites were comparable with their European counterparts in terms of their *Bobby* and *LIFT* rating and that there is only a weak relationship between content accessibility and overall site usability

6.1. Introduction

The use of the Internet for e-commerce is expanding across all sectors of the world’s economy. Making a website accessible and usable achieves many business benefits in addition to complying with legal requirements and increasing the reach to people with disabilities. Web accessibility and usability have become very familiar considerations within website design and development. Since the website is now the main public interface for many organisations, it becomes essential to make sure that the websites meet the acceptable accessibility and usability standards. In this chapter the websites are measured against web accessibility and usability guidelines which were designed by the World Wide Web Consortium

(W3C) Web Accessibility Initiative (WAI), known as the Web Content Accessibility Guidelines (WCAG).

Content is one of the two important features of websites from the tourist organisations but, according to Sullivan and Matson (2000), about 95% of all websites are inaccessible to users with disabilities. The other important component of a website is the inclusion of facilities to carry out online transactions. Accessibility of information on websites is well regulated in the USA and the UK, where a significant amount of the tourists to Africa come from (Naudé and Saayman, 2005). Different disabilities have different requirements for accessibility, but all these requirements are incorporated within the W3C guidelines. In this chapter two surveys to find out if the websites of African organisations meet these requirements are described.

The first survey focused on conformance of the websites from the tourism organisations to W3C guidelines. A second survey was carried to find out the nature and severity of the web usability and content accessibility errors recorded in the first survey. A proactive approach will enable the tourist organisations to detect hidden problems before they surface so avoiding any potential disruptions to the e-commerce activities on their websites. This is necessary if they are to compete with tourist organisations in the European Union, which happens to be the biggest tourist market for most African countries (Naudé and Saayman, 2005).

A wide range of web evaluations methods have been proposed but not all of these are still being used today. Ivory and Hearst (2001) divided the traditional evaluation methods into the following three broad categories:

- **Testing** – User interactions are observed as they perform tasks with a given website
- **Inspection** – A set of criteria are used to evaluate a website
- **Inquiry** – Feedback on the website is obtained through interviews

However the above-mentioned methods had the following shortcomings:

- Websites are updated and redesigned frequently which will make the evaluation exercise costly.
- Developers and investigators do not have control over the technologies that users employ. (Hahn and Kauffman, 2001)

The above-mentioned limitations have prompted researchers to devise automated methods of website evaluation and maintenance processes (Brajnik, 2000), some of which are discussed in this chapter. Automated evaluation tools have the following advantages over the traditional methods of website evaluation (Ivory and Hearst, 2001):

- Reducing the cost of evaluation
- Increasing consistency of the errors uncovered
- Predicting time and error costs across an entire design
- Reducing the need for evaluation expertise among individual evaluators
- Increasing the coverage of evaluated features
- Enabling comparisons between alternative designs
- Incorporating evaluation within the design phase

6.2. Accessibility versus Usability

For the purposes of this study the following definitions of usability and accessibility are adopted:

“Website usability is the way websites are designed so that they are easier to use, not be confusing to load and present information quickly, can be simple, clean and easily navigated and contain helpful devices” - eLAB, (2006).

“Accessibility is when anyone using any kind of web browsing technology, must be able to visit any site and get a full and complete understanding of the information, as well as have the full and complete ability to interact with the site if that is necessary” – Zaphiris and Ellis (2001)

Accessibility is the ability to access information or technology and is usually associated with people with disabilities. Usability applies to actual ability to use the technology or information effectively. Website usability focuses on the quality of user experience when interacting with the website. In the definition of usability, it is not specified who the end users are, whereas in accessibility the primary users are people with disabilities with all other users being relegated to secondary beneficiaries. The main goal of website usability is better experiences for the user in terms of efficiency, effectiveness and satisfaction whereas in accessibility it is the removal of constraints to access based on disability, technical or environmental limitations.

6.3. Usability and Accessibility Tools

There are as many as 30 automated evaluation tools listed on the WAI website (Moliner, 2004) but in this PhD it was decided to use *Bobby* and *LIFT* because they were readily available and free of charge. These two online tools were used successfully to carry out similar surveys by Ross (2002), Zaphiris and Zacharia, (2001), Ma and Zaphiris, (2003), Corbin and Zincir-Heywood, (2002), Zaphiris and Ellis (2001).

The online tool *Bobby* was used to measure the content accessibility of websites. *Bobby* is an evaluation tool, which helps identify aspects that fail to comply with the Web Content Accessibility Guidelines (WCAG) and the USA Government's Section 508. *Bobby* is mechanistic in nature as it identifies whether tags are present and code is properly formatted but does not indicate whether the code is meaningful. Web pages that are *Bobby* compliant can be publicly badged, although compliance without intelligent, careful, human collaboration with these tools does not guarantee genuine improvements in accessibility. It produces a report, which consists of the following sections:

- *Priority 1 Errors* – These errors seriously affect the page's accessibility by people with disabilities. A Bobby approved rating is only granted to a site with no *Priority 1* errors (Conformance Level A for the WCAG).

- *Priority 2 Errors* – These problems are not as vital as *Priority 1*. However, an absence of these errors and relevant User Checks are necessary to meet the preferred minimum conformance level of an accessible website (Conformance Level AA for the WCAG).
- *Priority 3 Errors* – These are third-tier access errors. An absence of these errors and all the User Checks is required for the website to meet Conformance Level AAA for the WCAG.
- *User Checks* – This section contains errors that could not be fully detected automatically and needs further manual examination.

LIFT from Usablenet (Usablenet, 2004) is website testing software that also tests and monitors websites for compliance with WCAG and USA Section 508 accessibility and usability guidelines, but differs from *Bobby* as its emphasis is on usability rather than accessibility. In some cases *LIFT* provides support for repairing the HTML code for images, tables, and forms. However, although this evaluation tool can process some JavaScript code, it usually cannot follow links that are coded only in JavaScript. *LIFT* generates a detailed report, which contains the following:

- **Status-** each reported issue is categorised as either ‘failed’, ‘pending’ or ‘information’
 - An issue categorised as ‘failed’ represents violation of a guideline.
 - An issue categorised as ‘pending’ is a warning that an inspection needs to be carried out manually in order to determine if a guideline has been violated.
 - An ‘information’ issue is simply information collected from a website and presented in the report. This could include statistical information such as the total number of images in a website.
- **Test name** - the name of the procedure that processes the HTML of a page.
- **Priority** – each test carried out has a corresponding priority level.
 - 1 – violations of these tests are significant
 - 2 – violations of these tests are major issues
 - 3 – violations of these tests are minor issues

4 – they yield only information issues

- **Guideline** – principle specified in the accessibility/usability guidelines e.g. Section 508 or W3C
- **Issues** – the result from a test carried out on a page or site. Total issues is the aggregate of all the issues i.e. failed, pending and information

6.4. Website Content Accessibility and Usability of Tourist Organisations in the Four African Countries

The number of people with disabilities is expected to increase significantly in the next decade as the world's population is rapidly growing older and the number of Internet users of old age also increases exponentially (Zaphiris and Ellis, 2001). The survey described in this section was carried out to investigate how the websites of African tourism organisations are ranked in terms of accessibility and usability. This survey also tried to find out if there was any relationship between content accessibility and usability. Unlike the second survey discussed in this chapter the websites examined in the first survey were not compared to any other websites as the main purpose was just to find out how the African websites measure against the WCAG. Once this evaluation was complete, the second survey compared the African websites with those of organisations from established online travel markets.

The main objectives of this first survey were to find out:

- How websites of tourist organisations in South Africa, Kenya, Zimbabwe and Uganda are rated in terms of accessibility and usability
- Whether the results of accessibility and usability evaluations of these websites are related

6.4.1. The Method

Empirical evidence was gathered from 264 websites using the automated tools *Bobby* and *LIFT*. The method used for selecting and accessing websites is described in Chapter 4. Uniform Resource Locators (URLs) of the websites were submitted to these two evaluation tools which then generate reports showing the results of the tests they carried out. The free online version of *Bobby* only tests one page at a time so only the URL of the home page was submitted while *LIFT*, which is also free from the Usablenet website, tests the first five pages. These two evaluation tools measure accessibility and usability by examining the HTML code. Using a classification similar to that used by Sullivan and Matson (2000) and Ross (2003) the websites were rated as follows:

Accessibility:

- High-accessibility sites (*Tier 1*) – sites with no errors of priority 1
- Medium-accessibility sites (*Tier 2*) – sites with at most one error of priority 1
- Low-accessibility sites (*Tier 3*) – sites with two or more priority 1 errors

Usability:

- Highly Usable sites (*Tier 1*) – sites with no fatal errors
- Most Usable sites (*Tier 2*) – sites with one major error
- Partly Usable (*Tier 3*) – sites with two major errors
- Least Usable (*Tier 4*) – sites with three or more major errors

6.4.2. National Airlines, National Parks and Tourism-Promotion Organisations

Tables 6.1 and 6.2 show the results from the accessibility and usability tests carried out by the automated tools *Bobby* and *LIFT* respectively. A total of 10 websites from this category were found and accessed. The Uganda National Airlines and the Zimbabwe National Parks' websites could not be found. From this category only

two websites were rated as high accessibility sites with more than half (6) of the web sites being medium accessibility sites and the remaining two being the inaccessible sites.

Only one site, the Zimbabwe Tourism Promotion Organisation, was found to be highly usable with no failed *Priority 1* tests, and two out of the ten websites were rated as least usable with four failed *Priority 1* tests. The Zimbabwe Tourism Authority was both a high accessibility and a highly usable site, while the websites of the Zimbabwe national airline and Kenya Tourist Board were rated as inaccessible and least usable sites.

Table 6.1 Accessibility rating of websites of National Airlines, National Parks and Tourism Promotion Organisations

Accessibility		
Tier1	Tier2	Tier3
1. South African Airways 2. Zimbabwe Tourism Authority	1. Kenya Airways 2. SA National Parks 3. Kenya Wildlife Service 4. Uganda Wildlife Authority 5. South Africa Tourism 6. Uganda Tourist Board	1. Air Zimbabwe 2. Kenya Tourist Board

Table 6.2 Usability rating of websites of National Airlines, National Parks and Tourism Promotion Organisations

Usability			
Tier1	Tier2	Tier3	Tier4
Zimbabwe Tourism Authority	1. Kenya Airways 2. South Africa National Parks 3. Uganda Wildlife Authority 4. South Africa Tourism	South African Airways	1. Air Zimbabwe 2. Kenya tourist Board

6.4.3. Hotels and Lodges

A total of 87 websites of Hotels and Lodges from the four African countries were accessed and measured for content accessibility and usability (see Tables 6.3 and 6.4). The majority of the websites were found to be medium-accessibility. A total of 61 (70%) websites were found to be partly usable. Only eight (9%) of websites (all from South Africa and Kenya) were rated as highly accessible while only one website of a South African hotel was rated as most usable. Of the 87 websites, only

14 (16%) were ranked in the same tier on both usability and accessibility with 18 (21%) being rated low in both usability and accessibility but not being necessarily in the same tier. Only one website was rated in *Tier 1* on both accessibility and usability

Table 6.3 Accessibility rating of Hotel websites

	Accessibility		
	Tier1	Tier2	Tier3
South Africa	5(9.6%)	35(67.3%)	12(23.1%)
Kenya	3(14.3%)	14(66.7%)	4(19%)
Zimbabwe	0(0%)	6(85.7%)	1(14.3%)
Uganda	0(0%)	3(42.9%)	4(57.1%)

Sample size: South Africa -52, Kenya-21, Zimbabwe-7, Uganda-7

Table 6.4 Usability rating of Hotel websites

	Usability			
	Tier1	Tier2	Tier3	Tier4
South Africa	1(1.9%)	9(17.3%)	42(42.3%)	20(38.5%)
Kenya	0(0%)	1(4.8%)	13(61.9%)	7(33.3%)
Zimbabwe	0(0%)	0(0%)	4(57.1%)	3(42.9%)
Uganda	0(0%)	1(14.3%)	2(28.6%)	4(57.1%)

Sample size: South Africa – 52, Kenya – 21, Zimbabwe – 7, Uganda – 7

6.4.4. Travel Agencies and Tour Operators

This category contributed the largest number (167) of websites used in this survey (see Tables 6.5 and 6.6). A total of 90 (54%) sites were rated as medium accessibility where one major error was diagnosed. In the usability rating, 57 (34%) of websites were found to be least useable after having failed three or more priority 1 tests with South Africa having the majority (26). About 49 (29%) websites ranked in the same tier on both accessibility and usability with 19 (11%) being ranked low in both usability and accessibility. Only 3 (2%) websites were ranked in *Tier 1* on accessibility with no major errors detected by both *Bobby* and *LIFT*.

Table 6.5 Accessibility rating of websites of Travel Agencies and Tour Operators

	Accessibility		
	Tier1	Tier2	Tier3
South Africa	7(13.2%)	28(52.8%)	18(33%)
Kenya	6(12.2%)	28(57.1%)	15(30.6%)
Zimbabwe	2(4.5%)	24(54.5%)	18(41%)
Uganda	3(16.7%)	10(55.6%)	5(27.7%)

Sample size: South Africa – 53, Kenya – 49, Zimbabwe – 44, Uganda - 18

Table 6.6 Usability rating of websites of Travel Agencies and Tour Operators

	Usability			
	Tier1	Tier2	Tier3	Tier4
South Africa	0(0%)	14(26.4%)	13(24.5%)	26(49.1%)
Kenya	4(8.2%)	19(38.8%)	13(26.5%)	13(26.5%)
Zimbabwe	0(0%)	16(36.4%)	14(31.8%)	14(31.8%)
Uganda	1(5.6%)	6(33.3%)	7(38.9%)	4(22.2%)

Sample size: South Africa – 53, Kenya – 49, Zimbabwe – 44, Uganda - 18

6.5. Analysis of Usability and Accessibility Errors

This section examines the survey which sought to establish the nature and extent of errors in e-commerce websites as diagnosed by the two automated evaluation tools, and how the websites of tourist organisations from South Africa, Kenya, Zimbabwe and Uganda compared with those based in Europe. The websites were compared with those from Europe to find out if there were any errors peculiar to websites of African organisations and to establish the severity of these errors.

The main objectives of this survey were to find out:

- how websites of tourist organisations in the four African countries compared with their European counterparts in terms of usability and accessibility errors
- the nature and extent of usability and accessibility errors
- the severity of the errors
- the most prevalent errors

This survey was intended to provide information, which could help web designers as follows:

- An important part of the continuing work of the web accessibility initiative is developing education and outreach materials to help achieve a better understanding of the complimentary aspects of an effective accessibility solution, and to help the organisations find the resources that they would need in order to help make web sites and web applications accessible to all people (Brewer, 2004). Analysing the nature and severity of results could help determine not only the resources but also the direction for improving website accessibility and usability.
- Some severe errors like increased utilisation of detailed graphics and multimedia features could lead to some users being unable to access a large percentage of information. This study aimed to find out the extent of such problems.
- Information about the severity of errors could help determine whether the errors can easily be fixed. Additionally, the understanding of the nature of the errors can help web designers prioritise correction of errors.
- The findings from this survey can help organisations eliminate usability and accessibility issues as potential online barriers for customers with access challenges.
- The organisations could also, depending on the frequency and severity of the errors, put into place their own accessibility and usability regulations or guidelines. This is necessary because the web provides an increasing proportion of the services that in many developed societies are necessary for full economic, cultural and political participation (Fairweather *et al*, 2002).

6.5.1. The Method

A total of 264 African and 53 European websites of national airlines, national parks, tourism promotion organisations, hotels and lodges and travel agencies and tour operators from South Africa, Zimbabwe, Kenya, Uganda and the European Union were used in this survey. As the four African countries offer the same type

of tourism, predominately safari, and were the most popular destinations offering this type of tourism which is based on nature and wildlife (Naudé and Saayman, 2004), it was assumed that these tourism organisations would be of most interest to a tourist intending to visit these countries. The websites from similar tourism and travel organisations in Europe were selected so that the websites from the African countries could be compared. Details on how the African and European websites were selected are described in Chapter 4.

The free online version of *Bobby* only tests one page at a time, as in the first survey, only the URL of the home page was submitted while *LIFT*, tests the first five pages. *Bobby* does not give the full extent of the accessibility problem as only one page is assessed so only gives the researchers just a sample of the nature of errors to be found on the website. The reports for each website by the two evaluation tools were analysed and the errors were grouped according to usability-related properties by Brajnik (2000) and Ma and Zaphiris (2003):

1. *Consistency* of presentation and controls

- *underline*: Mixing underlined text with underlined links should be avoided
- *link label*: Different links pointing to the same resource should have the same label
- *email label*: Labels associated with a given email address should be consistent
- *colour consistency*: Colours used for background/foreground/links should be consistent among pages
- *background consistency*: Background images should be consistently used
- *navigation bar consistency*: Links included in navigation bars should be consistent among pages

2. *Navigation* – navigation schemes should be provided to show users where they are in the context of the site’s hierarchy

- *frame title*: All frames should have a title and text that facilitates frame identification and navigation
- *link to home*: Each page should contain a link to the home page to ensure that the user has control over the web page all the time
- *logical path*: Each page should contain links to each intermediate page in the path connecting the page to the home page
- *self-referential pages*: Pages should not contain links to themselves
- *local links validity*: Links that are local to the website should point to existing resources
- *image coding*: Images should have an explicit width and height
- *recycled graphics*: Images used in the website should be shared (so that browsers can cache them)
- *explicit mailto addresses*: Labels of “mailto:” links should contain the actual email address
- *missing page title*: Pages should have a title
- *table headers*: Tables should have headers and summaries

3. *Robustness* - how well the website handles technology utilised by users which had not been foreseen by web designers

- *objects*: Pages should be usable when scripts, applets, or other programmatic objects are turned off or not supported, or equivalent information should be provided on an alternative accessible page.
- *assistive technology*: An appropriate method should be used to facilitate the easy tracking of page content that provides users of assistive technology the option to skip repetitive navigation links
- *link targets*: The use of the attribute “_blank” target in frames should be avoided; correct targets should be used for links leaving the frames
- *HTML validity*: Only standard HTML code should be used

4. Flexibility - providing alternatives for multimedia presentations

- *image ALT*: Images should have alternative textual descriptions
- *other media ALT*: Videos, audios, applets and other objects should have alternative textual descriptions
- *image map links*: Links embedded in images should be available also in textual format
- *tables/frames/font resizing*: Relative sizes should be used

6.5.2. National Airlines, National Parks and Tourism-Promotion Organisations

Table 6.7 Accessibility and Usability Errors of National Airlines, National Parks and Tourism-Promotion Organisations

Errors Organisation	Bobby						LIFT			
	P1		P2		P3		Fail	Pend	Issues	
	Err	UC	Err	UC	Err	UC	P1	P1	Pend	Tot
National Airlines										
SA Airways	1	7	2	13	3	12	3	11	170	363
Air Zim	2	14	6	18	4	11	4	16	303	434
Ken Airways	1	9	4	15	3	10	1	10	18	22
BA	1	10	4	15	3	10	4	14	729	945
Air France	1	6	4	13	2	12	2	12	104	105
KLM	0	5	3	14	1	9	3	11	38	68
Iberia	0	4	1	8	1	8	0	9		
National Parks										
SA NP	1	4	1	9	1	8	1	8	208	252
Ken Wildlife	1	12	4	15	3	13	1	13	232	332
Ug Wildlife	1	7	3	13	2	13	1	13	270	382
Tourism Promotion										
SA Tourism	1	13	5	19	3	13	4	16	356	429
Ken Tourism	2	14	5	17	3	12	5	17	378	588
Zim Tourism	0	4	1	11	1	8	0	5	6	6
Ug Tourism	1	13	5	18	3	14	3	16	183	221
Br Tourism	1	9	5	14	3	10	4	12	490	872
Ger tourism	2	14	6	19	3	12	5	17	2293	419
Cz Tourism	1	8	5	14	3	14	1	7	206	224
Fr Tourism	1	6	2	14	3	14	2	12	502	793

South Africa- 3, Kenya – 3, Zimbabwe – 2, Uganda – 2, Europe-8

Legend: *UC*-User Checks, *Err*-Errors, *Pend* – Pending, *Tot*-Total, *P1*- Priority1, *P2* –Priority2, *P3* –Priority3, *SA*-South Africa, *Zim* – Zimbabwe, *Ug* – Uganda, *Ken* – Kenya, *Ger*- Germany, *Fr*- French, *Cz* – Czech, *Br* – British, *BA*-British Airways, *NP*-National Parks

Table 6.7 shows the results from the accessibility and usability tests carried out by the automated tools *Bobby* and *LIFT* respectively. This category contributed the least number of websites with 10 being of African tourism organisations and 8 of tourism organisations based in Europe. As in the previous survey, the Uganda National Airlines and the Zimbabwe National Parks' websites could not be found. The websites with the most major errors were those of Zimbabwe National Airline, the Kenya Tourist Board, the British Tourist Authority, and Germany Tourism. The website for Germany Tourism had 676 instances of one the two major errors recorded by Bobby. Only two websites had no major errors detected by both tools and these were the Zimbabwe Tourism Authority and the Spanish Airline, Iberia. Most of the errors recorded by Bobby for all organisations were of priority 3 with an average of four errors compared to an average of one error for priority 1 and two errors for priority 2.

6.5.3. Hotels and Lodges

A total of 87 websites of Hotels and Lodges from the four African countries and 20 from Europe were accessed and measured for content accessibility and usability (See Table 6.8). Although the European websites had a lower average number of errors in some categories, they had a much higher average number of instances of all the errors recorded. For example, the results from tests done by *LIFT* showed websites of hotels in Europe had an average of 586 issues compared to the highest of 384 among the four African countries. Most of the priority 1 errors encountered by *Bobby* and *LIFT* were missing alternatives to auditory and visual content or missing alternative presentation to dynamic content. The only priority 2 error encountered by *LIFT* was missing labels for frames, whilst *Bobby* recorded errors to do with link text, form control, device-dependent event handlers, and absolute units in markup language attribute values. No priority 3 errors were detected by *LIFT*, but *Bobby* recorded errors on the primary language of the website, errors on tables and missing provisions to enable older browsers to work with new technologies.

Table 6.8 Accessibility and Usability Errors of Hotels and Lodges

Err Cou	Bobby						LIFT				
	P1		P2		P3		Failed		Pending	Issues	
	Err	UC	Err	UC	Err	UC	P1	P2	P1	Pend	Tot
SA	1.17	7.56	2.63	13.0	2.59	10.4	2.31	1	11.115	255.1	343
Zim	1.14	7.71	3	13.6	2.57	12.4	2.71		13.429	285	354.
Ken	1.25	9.58	3	13	2.9	11.1	2.25		12.3	283.9	213.
Ug	1.4	8.6	3.4	15.4	3.2	11.4	2.6		12	297	384
Eur	1.1	8.6	4.3	15.5	3.1	11.7	2.2		11.3	429.3	586

Sample size: Sample size: South Africa – 52, Kenya – 21, Zimbabwe – 7, Uganda – 7, Eur – 20

Legend: *UC*-User Checks, *Err*-Errors, *Pend* - Pending, *Tot*-Total, *P1*- Priority1, *P2* -Priority2, *P3* -Priority3, *SA*-South Africa, *Zim* – Zimbabwe, *Ug* – Uganda, *Ken* – Kenya, *Eur* – Europe, *Cou*-Country

6.5.4. Travel Agencies and Tour Operators

The Travel Agencies and Tour Operators’ category contributed the largest number (192) of websites used in this survey (see Table 6.9). In this category only 7 out of a possible 192 websites had no major errors recorded by both *Bobby* and *LIFT* with Europe contributing 4 websites to this total of 7. The same errors as in the Hotels category were recorded but there were fewer instances of the errors. As in other categories, websites from both regions had a higher average of priority 1 errors recorded by *LIFT* than *Bobby*.

Table 6.9 Accessibility and Usability Errors of Travel Agencies and Tour Operators

Err Cou	Bobby						LIFT				
	P1		P2		P3		Failed		Pending	Issues	
	Err	UC	Err	UC	Err	UC	P1	P2	P1	Pend	Tot
SA	1.0	7.3	2.64	13.2	2.57	11	2.3	1	11.4	253	338
Zim	1.2	7.25	2.67	13.1	2.67	10.6	1.9		9.92	138	191
Ken	1	8.75	2.82	13.5	2.69	11.4	1.7	1	9.59	177.8	248
Ug	0.8	7	2.77	12.6	2.23	10.1	1.5	1	10	233	330
Eur	0.9	8.25	2.5	13	2.75	10.5	2.8		12.9	315	428

Sample size: South Africa – 53, Kenya – 49, Zimbabwe – 44, Uganda – 18, Europe – 25

Legend: *UC*-User Checks, *Err*-Errors, *Pend* – Pending, *Tot*-Total, *P1*- Priority1, *P2* -Priority2, *P3* -Priority3, *SA*-South Africa, *Zim* – Zimbabwe, *Ug* – Uganda, *Ken* – Kenya, *Eur* – Europe, *Cou*-Country

6.5. Conclusion

There is a weak relationship between content accessibility and usability as only 63 (24%) websites were rated in the same tier on both accessibility and usability. About 58 (22%) websites were rated in one tier in one variable and then on the immediately adjacent tier on the other variable. These results do not show any substantive relationship between content accessibility and overall site usability.

According to the first survey, there is little difference between the number of accessibility and usability errors found in websites of tourist organisations from the four African countries and their European counterparts, but there were more instances of the same errors in websites of organisations from Europe. It can be assumed that websites of organisations from Europe had more instances of the same errors mainly because they are more complex and use technologies which, according to guidelines by the Worldwide Consortium (W3C), hinder accessibility and usability by people with disabilities. A typical example is the websites for Germany Tourism and Ritz Carlton hotels, which had considerable visual and auditory content, and as a result, had more instances of the same error than other websites. While accessibility guidelines are important to ensure that websites are accessible by all, it could be argued that they are at the same time imposing restrictions on the creativity of web designers. Regan (2004) thinks otherwise and concluded that the perception among web designers that accessibility represents a restriction on creativity is false but he believes there are too few examples to illustrate his point to persuade designers.

South Africa had 30 websites out of 108 rated low in accessibility and 45 (42%) rated low in usability while Kenya provided only four inaccessible and four least usable websites. South Africa contributed most of the websites used in this survey and as such also had the biggest number of web sites which were rated low on accessibility and yet still had only one out of the five in Tier 1 on usability. While the guidelines for content accessibility and usability are readily available to web designers in the four African countries, they are not taking advantage of these

guidelines to make websites accessible and usable by everyone. This could mean that some of the web designers from these countries are not aware of these guidelines or, perhaps, some might not see any advantage to following these guidelines and hence choose to design websites without referring to them. This implies there is a need for better training for web designers from sub-Saharan Africa on both methods and advantages of providing accessible and useable websites.

Travel Agencies and Tour Operators had a lower average number of major errors than the other two categories. Travel agencies and Tour Operators based in the African countries provided 18 of the 26 websites rated in *Tier 1* on accessibility and 56 of the 93 rated low in usability. Organisations from this category are small, mostly family-run businesses, whose websites are mainly designed by non-professionals, thus they are relatively simple in nature and do not use a lot of audio and visual content or other modern technologies which are said to hinder accessibility and usability by people with disabilities. It can be concluded that there appears to be a conflict between accessibility and design, which supports the assertion that accessibility imposes some restrictions on design.

Analysis of the data collected in the second survey shows that the most common error recorded was missing alternatives to audio and visual content with more than 92% of all the websites having this error. The second most common major error (67% of all websites) was missing alternative solutions for dynamic content, for example scripts, which might not be handled by a different browser being used. Basically, most of the errors were missing alternative solutions that would make websites accessible to everybody including the elderly and people with disabilities. Providing alternatives may take extra work but it is, at least, technically possible and reasonably straight forward to do so. This implies that Regan (2004) is right that the requirement to make websites accessible need not restrict creativity of web designers, providing they can provide alternatives to their more visual or audible creations.

It was discussed earlier that the lack of sophisticated visual and audible facilities in many African websites means that these sites can compare favourably with their European counterparts for accessibility and usability. There is clearly a danger, therefore, that if extra e-commerce facilities are built into these websites of the four African countries as advocated in the previous chapter, the web designers from sub-Saharan Africa will make the same mistakes as in Europe and make the sites less accessible. However, this danger is also an opportunity if the African web designers can embrace the need for accessibility and usability now they could build in the new facilities without damaging the accessibility.

Although the errors recorded by the two automated tools hinder accessibility for people with disabilities and the elderly, they will not affect the great majority of e-commerce users who include business and leisure travellers. However, it will nevertheless lead to a loss of some customers who would find the websites inaccessible and unusable. Studies by Nielsen (2001) have shown that e-commerce websites that are highly usable can lead to increase in e-commerce sales by 79% but this is unlikely to happen if a section of the population, such as the elderly and people with disabilities, find them difficult to use.

The nature of the errors identified by the two automated tools have shown that software being used to test for web accessibility can only indicate if a site is inaccessible by testing the absence of required attributes. Although the tools will still be able to play the primary role in testing websites for accessibility and usability they need to be complemented by heuristics which can test for conciseness, memorability, meaningfulness and insight.

While the two tools used in the two surveys have some limitations they do represent a good starting point to enable designers to ensure their websites follow best practice on usability and accessibility issues. The author recommends that tourism organisations from sub-Saharan African countries follow the content accessibility and usability guidelines so that they could be able to capture that market which is not being catered for on other websites. While legislation in the

four African countries may eventually follow to enforce compliance, there is no need to wait until this happens, as there are sound business reasons to progress on a voluntary basis. The African countries could go a step ahead and modify the existing guidelines to suit their respective economic, cultural and political environments. They will also need to provide better education and training on the methods and advantages of making websites more accessible and usable. According to NUA Internet Surveys (2003), 20% of the European seniors have Internet access, so readdressing accessibility and usability issues could give the organisations from the four African countries that competitive edge they need to compete with Western organisations.

CHAPTER 7- ICT, THE INTERNET AND E-COMMERCE ADOPTION IN THE FOUR AFRICAN COUNTRIES

Chapter Preface

This chapter generated the paper “ICT, Internet and E-Commerce Adoption in South Africa, Kenya, Zimbabwe and Uganda” (Maswera et al 2005b). Tourism can be a valuable tool for spurring economic growth and development especially in East and Southern Africa where there is huge potential to create a thriving tourism sector (Simpson, 2001). Information and Communications Technology (ICT) and, more recently, the Internet and e-commerce have made fundamental changes to the way business is being conducted today and could help unlock this potential. This chapter describes a survey to find out if the region once dubbed the ‘technology desert’ (Odedra et al, 1993) has overcome its political and economic problems to break the digital divide.

The primary data was collected from 336 tourism organisations from South Africa, Kenya, Zimbabwe and Uganda. The survey described in this chapter revealed that organisations are taking advantage of the policies introduced by their respective governments to adopt and use ICT and the Internet. However, e-commerce adoption is slow among the tourism organisations with most of the websites being generally informative but with very few interactive features. This chapter recommends that organisations’ websites incorporate features which would enable and encourage customers to carry out online transactions thus increasing the number of tourists

7.1. Introduction

The review of literature in Chapter 2 has revealed that Information and Communications Technology (ICT) with its computing power has helped many business sectors gain the competitive edge needed in today’s global marketplace. Business organisations should pay attention to ICT adoption and usage as it can be used to improve significantly the quality of service delivery, something which is

being increasingly demanded by international customers. ICT can not only help improve the quality of products and services but has also helped reduce transaction and distribution costs (Nath et al, 1998). This chapter describes a survey carried out to find out if the tourism organisations are adopting ICT to improve customer service.

The main barrier for the development of the tourism in sub-Saharan Africa has been insufficient marketing and the ignorance of potential tourists (Simpson, 2001). The Internet can be used as a source of information as well as a marketing tool and as a result could help overcome the perception that Africa is a continent wracked by conflict, famine and disease (Simpson, 2001). Analysis of literature has also revealed that adoption and usage of the Internet and e-commerce in the developed world has produced tremendous results with revenues in the travel and tourism industry set to increase dramatically (Anite Travel Systems, 2000a; Paulo, 2000; Accenture, 2002; Werthner and Ricci, 2004). The survey described in this chapter seeks to find out if the tourism organisations are adopting Internet and e-commerce which could help promote the tourism sector and increase the in-flows of the much needed foreign currency into these four countries.

It is very difficult to know the current status of e-commerce activities in Africa, as there has been little prior research on this subject. This chapter reports on a survey carried out to find out if tourism organisations in the four countries are experiencing growth in ICT usage and Internet adoption and how these technologies are being used. Emerging Internet technologies have been and still continue to be adopted in North America and Europe and this is likely to continue in the future (Ma et al, 2003). As North America and Europe are the biggest tourism market for Africa and are also competitors in this highly competitive sector, it is useful to identify the current status of ICT, Internet and e-commerce adoption in sub-Saharan Africa. This study also establishes the importance tourist organisations attach to ICT, Internet and e-commerce.

The surveys described in Chapters 4 through to 6 involved analysing a large number of websites in order to assess the nature and extent of e-commerce activities amongst the tourism organisations based in the four African countries. This survey involves eliciting information on e-commerce activities directly from the organisations. The information obtained from the tourism organisations together with that collected from the websites is used to determine areas of e-commerce the African tourism organisations need to improve so that they can break into the more lucrative international tourism market.

The main objective of the survey was to determine:

1. the current status of ICT, Internet and e-commerce adoption in South Africa, Kenya, Zimbabwe and Uganda.
2. if there has been any growth in the use of ICT and Internet technologies
3. if the tourist organisations are receptive to ICT and Internet-based technologies
4. attitudes of the tourism organisations towards e-commerce adoption.
5. areas of e-commerce African tourism organisations need to improve

The governments of the four African countries have done their part by taking steps towards liberalising the economy and now it is up to the various organisations to take advantage of this so that they remain competitive with the emergence of globalisation.

7.2. The Method

7.2.1. Sampling Method

The primary data was collected from 336 tourism organisations which include national airlines, national parks and game reserves, government-run and private tourism promotion organisations, hotels and lodges, car rental companies and travel agencies and tour operators. Details of how the contact details of the tourism organisations were obtained are described in Chapter 4.

7.2.2. The Data Collection Tool

As the tourist organisations were geographically widely dispersed in the four different countries, a questionnaire was used to collect the data. Two versions were used: an online version accessible through the Internet and a printed version for organisations without Internet access. With the online version a link accompanied by a message explaining the purpose of the survey was e-mailed to the various organisations in the four African countries. The e-mail was directed to either the person in charge of ICT or the e-commerce activities within the organisation. The printed version was personally administered by the author at the World Tourism Market in November 2004 to organisations who, for various reasons, could not respond to the online version. At this event, tourism organisations from all over the world gather to showcase their products and services to businesses and the general public.

The questionnaire was made up of the following broad sections:

- *Demographic information about the tourist organisations* - The aim of this section was to gather geographical information about the organisations. Information about where the organisations are located helps in the analysis of the adoption trends and patterns in the different countries and regions.
- *Information about ICT usage* - This section gathered information on how the tourist organisations use ICT in their day-to-day business operations. This information is used to see if the organisations are making an effort to improve service delivery with the help of ICT. In this section there were four options for each Internet use available for the organisations to select which were “Uses”, “Plans to use in the next year”, “Plans to use after next year” and “No plans to use”. Selecting “Uses” means that the organisation is using ICT for that particular function. “Plans to use in the next year” and “Plans to use after next year” are used to gauge the importance they attach the ICT application in their day to day business operations. Choosing the first option means that the organisation attaches more importance to that

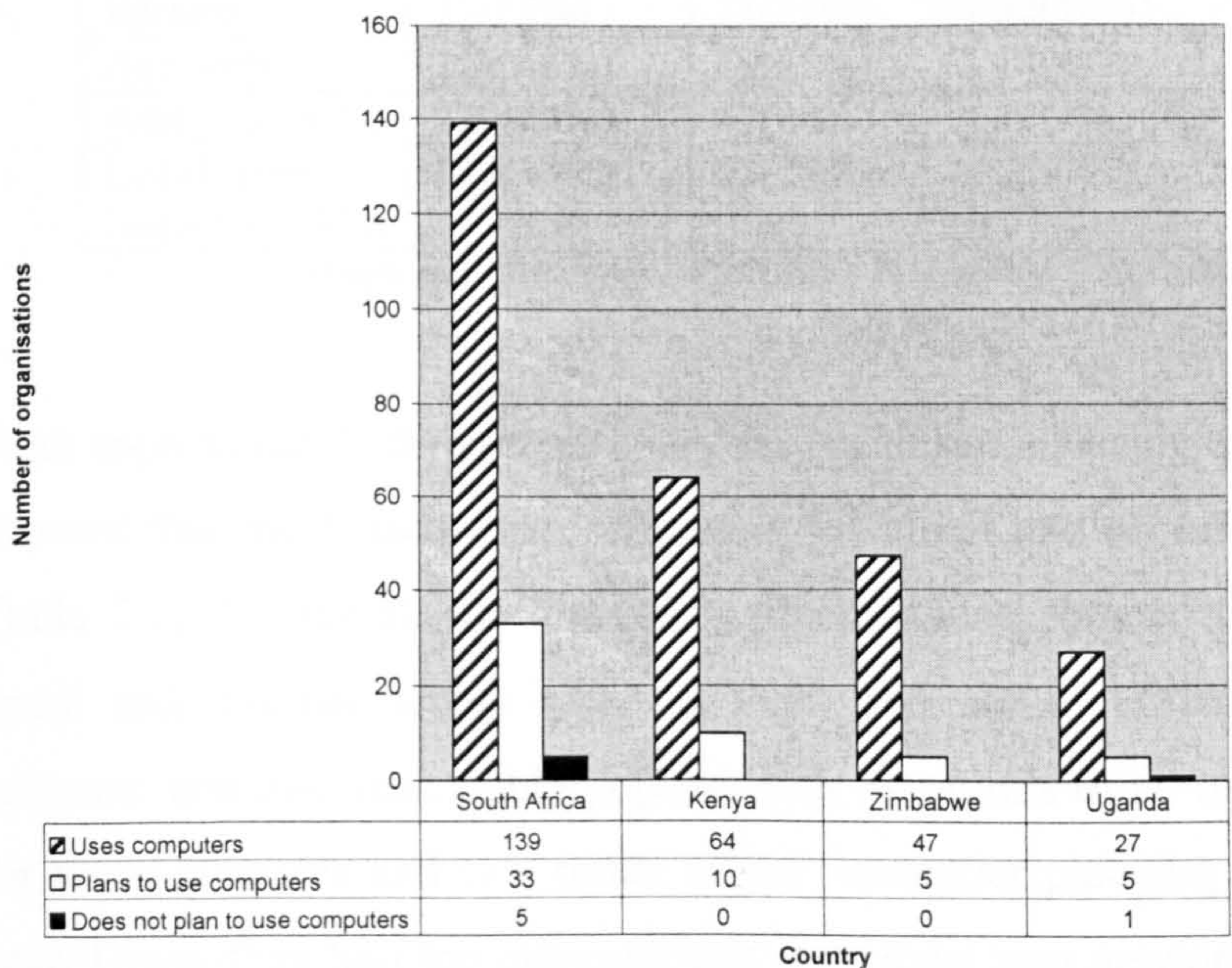
application and with the latter less importance is attached to this application. If the organisation selects “No plans to use” it means that very little importance if not none, is attached to the ICT application.

- *Information to assess Internet usage* - This section collected information concerning Internet access and how it is being used amongst the different organisations. Analysis of this information helps establish whether the arrival of the Internet has influenced the operations within the tourism sectors of the countries in this survey.
- *Information to determine the extent of E-commerce adoption* - The aim of this section is to elicit from the tourist organisations information about e-commerce adoption and usage. In this section there were three options for the respondent “Provides”, “No plans to provide” and “Plans to provide”.

A copy of the questionnaire is in Appendix 2.

7.3. The Results

7.3.1. ICT Adoption



Sample size: South Africa – 177; Kenya – 74; Zimbabwe – 52; Uganda – 33

Figure 7.1: Analysis of ICT Usage and Adoption

The survey results presented in Figure 7.1 show that a total of 277 out of 336 organisations are currently using ICT in their business operations, about half of which are based in South Africa. Of the tourism organisations not using computers, almost all are planning to implement the technology in the near future apart from six who do not have any plans at all. Most of the organisations not using ICT are located in the rural areas. This is, perhaps, unsurprising, indicating a trend for new technology to be first centred in the larger organisations based in the cities and the diffusion to the rest of the area spreading from there.

7.3.2. Uses of ICT

Table 7.1: Analysis of the uses of ICT

Application	Uses	Plans to use in the next year	Plans to use after next year	No plans to use
E-mail	260(77%)	65(19%)	2 (0.5%)	0
Internet	251(75%)	66(20%)	2(0.5%)	0
Intranet	75(22%)	71(21%)	32(10%)	92(27%)
Accounts	229(68%)	69(21%)	14(4%)	0
Administration	230(68%)	67(20%)	12(4%)	0
Local Area Network(LAN)	145(43%)	93(28%)	22(7%)	0

Sample size: South Africa – 177; Kenya – 74; Zimbabwe – 52; Uganda – 33

With approximately five out of every six organisations using computers, the survey showed that most used their computers for email and access to the Internet (see Table 7.1). Nearly all the remaining organisations planned to use computers for email and Internet access within a year. The use of IT for administration and accounts was also reasonably popular with two thirds of all organisations using IT for these purposes and two thirds of the remainder planning to do so in the next year. Fewer than half the organisations used local area networks though half of the remainder did intend to do so in the next year. This relatively low uptake of local area networks may simply be a reflection of the size of some of the organisations, some of which were small family run businesses. Interestingly, the use of intranets

was only half that of local area networks with a quarter of all organisations stating that they had no plans to ever use an intranet. This perhaps indicates that many organisations have not yet adopted the net as part of their information systems culture within the organisation.

7.3.3. Internet Uses

Table 7.2: Analysis of Internet Usage

Use	Number/%
Information Search	222 (88%)
Market Monitoring	202 (80%)
Obtaining After-Sales Support	128 (51%)
Banking and Financial Services	100 (40%)
Training and Education	127 (51%)
Downloading Digital Products	103(41%)

Sample size: South Africa – 177; Kenya – 74; Zimbabwe – 52; Uganda – 33

The Internet usage figures presented in Table 7.2 were calculated as a percentage of organisations that have indicated they were using the Internet. The two most popular activities among the organisations that are already using the Internet were information searching and market monitoring to find the availability and prices of new products on the market. About half of these users went as far as downloading digital products such as software and music from the Internet. Banking and financial services were not as common amongst the tourist organisations as this industry in the four African countries does not support Internet banking. Tourism organisations from the four African countries using this service will probably be dealing with financial institutions from the West.

7.3.4. Websites Hosting

Table 7.3 shows the website-hosting options of the tourism organisations and was calculated as a percentage of all the organisations that took part in the survey. Almost two thirds of the organisations indicated that they had a website or a homepage hosted by an Internet Service Provider (ISP). Nearly all the remainder

are planning to have a website, with more than half (55%) of these planning to have them hosted by an ISP. This shows that tourist organisations in sub-Saharan Africa have understood the need to use the web for marketing though many have not yet acted on this realisation. Only four organisations, which are all located in the rural areas, indicated that they had no current plans to develop their own websites or homepages.

Table 7.3: Analysis of website-hosting options

Option	Number(%)
Host own website	113(34%)
Plan to host own website	56 (17%)
Hosted by Internet Service Provider(ISP)	92(27%)
Planning to have website hosted by ISP	68(20%)
Not planning to have a website	4 (1%)

Sample size: South Africa – 177; Kenya – 74; Zimbabwe – 52; Uganda – 33

7.3.5. Website Facilities and E-Commerce Provision

The website figures in Table 7.4 were calculated as a percentage of the organisations that have established websites. Two categories were used namely, information features and interactive services.

The most common information features on the websites were the general overview of products and services which was present on almost all (99.5%) the websites accessed. The other popular features were information about the company and a list/catalogue of products/services. In the information features category, one of the least popular features was the private policy statement with only about a half of the organisations with websites saying this feature is on their websites. On the other hand about a third of the organisations have indicated that they plan to have the privacy policy statement on their websites within the next year. Product information in foreign languages (34%) was the other information feature which was not very common amongst the tourist organisations with websites. The ‘Other information’ feature includes information about immigration procedures, weather/climate, customs and health.

In the interactive services category the most common features were on-line enquiries and online booking. There was evidence that full adoption of e-commerce is not widespread with less than a third of the organisations with websites indicating that payment can be made online. However, almost half of the respondents are planning to have the online payment facility by the end of the year 2005. Only one in eight provide customised content for repeat clients although over half of the remainder plan to do so within a year. The other least popular interactive feature was tracking/amending of bookings which only one in six organisations with websites provided, though again, two thirds of the remainder planned to have these facilities within a year. The “other interactive services” which organisations provided was usually the currency converter.

Table 7.4: Analysis of website facilities and e-commerce provision

Feature	Provides	No plans to provide	Plans to provide
Information features			
Information about the company	195(95%)	7 (3%)	0
Information about the product	204(99.5%)	0	0
List of available products/services	172(84%)	9(4%)	15(7%)
Privacy policy statement	104(51%)	28(14%)	72(35%)
Product information in foreign languages	70(34%)	45(22%)	88(43%)
Other information	67(33%)	5(2%)	10(5%)
Interactive services			
Online enquiries	185(90%)	5(2%)	12(6%)
On-line booking	161(79%)	12(6%)	30(15%)
On-line payment	60(29%)	43(21%)	98(48%)
Customer feedback	104(51%)	25(12%)	67(33%)
Tracking/amending bookings	31(15%)	47(23%)	113(55%)
Customised content or services for repeat clients	25(12%)	72(35%)	102(50%)
Other interactive services	32(16%)	0	12(6%)

Sample size: South Africa – 177; Kenya – 74; Zimbabwe – 52; Uganda – 33

7.4. Conclusion

This survey revealed that significant progress has been made by the four African countries in the adoption and usage of ICT as most of the tourism organisations which took part in the survey are using computers for their business operations. While every effort was made to obtain a representative sample of organisations in the four African countries, it is possible that as the Internet was used as one of the means for finding organisations, there could be a bias towards more IT literate and Internet aware organisations. Nevertheless, the results clearly show that most of the organisations are making an effort to take advantage of the opportunities available for the use of ICT, not only for development of the tourism industry but also for economic growth. ICT adoption by most tourist organisations would help remove the digital divide manifesting between the African countries and the West where most of the tourists come from. Computer networking, which could enable users to share resources and communicate effectively, is not as popular as other ICT uses such as accounting and administration. This, however, may be due to some of the organisations being very small family run organisations which may not have more than one computer.

Most of the organisations are taking advantage to promote tourism with almost two thirds of the organisations having a website. Through their websites the tourist organisations can improve the marketing of the tourist products and dispel any negative perceptions to potential tourists which have been the major obstacles to the development of the tourism industry in sub-Saharan Africa.

Any bias towards IT literate and Internet aware organisations resulting from the sampling methods should not significantly affect the relative numbers of organisations adopting the various website facilities within the population of the sample which already provided their own websites. The results show that not as much progress has been made in e-commerce adoption and usage. The most common features found on the websites are non-interactive items of information such as product information and a company overview. Although there is a significant number of websites with features for on-line booking, the organisations

are still a long way from fully adopting and using e-commerce as only 33 (16%) of these websites have the on-line payment feature. It can be concluded, however, that most of the organisations appreciate the benefits of e-commerce to the tourism industry as over two thirds of organisations not using this online payment feature are planning to do so within the next year. This trend is repeated for nearly all information and interactive features, in that most organisations claim they are planning to provide these features in the next year if they do not already provide it. This is generally encouraging as it shows that these organisations have recognised the need for the websites to have these facilities to provide a better service and compete in the global market. However, these good intentions will not necessarily turn into immediate action so there must be some doubt about the provision of these facilities forecast, by these results, to be in place during 2006. For this reason the figures for the current provision of features are more significant. One of the more concerning results on the current provision is that with more than three quarters of all websites collecting data from potential customers only 29% have indicated that they have the privacy policy statement. The absence of this feature on websites will not encourage any purchasing as there is no assurance from the organisations that the customers' data will not be abused.

Electronic Customer Relationship Management (ECRM) which caters for customer needs, wants and preferences is a very important component of e-commerce. The results from the survey show that organisations are currently doing little to retain their customers. Only one half of the websites have the facility to capture comments about the company's products and services and only one in eight websites have customised services for repeat clients. However, the fact that 102 organisations claimed that they will be providing this feature in the immediate future shows that the organisations are aware of the importance of retaining customers and attracting new ones.

Although significant progress has been made in the adoption and usage of ICT and the Internet in general, from the analysis of the results from the survey, the following is recommended.

- More organisations need to set up their own websites through which they can communicate efficiently and effectively directly with customers worldwide.
- Those organisations which have already set up their own websites to provide information need to evolve them into marketing tools. Good intentions must be turned into good practice by incorporating interactive services which would enable customers to make on-line transactions.
- Other interactive services should be provided to give effective customer relationship management and maintain customer loyalty.

The results obtained from the survey described in this chapter are not in any way different from the results of the surveys discussed in chapters 4 and 5. The survey reported in this chapter revealed that the organisations' websites lack eCRM features and facilities which would enable customers to carry out online transactions. The main difference between these surveys is that the one described in this chapter enabled the researcher to find out from the tourism organisations if they are aware of the importance of these features.

A follow-up survey described in chapter 8 was carried out to discover inhibitors to e-commerce among these organisations as the results show that most organisations are still at the planning stage for incorporating e-commerce features on their websites.

The research reported in this chapter has shown that the four African countries have made significant inroads in the adoption and usage of ICT and the Internet. However, it has also shown that many of these organisations are not taking advantage of these technologies to fully embrace e-commerce. The other positive aspect shown by this survey is that the tourist organisations are aware of the capabilities and potential of e-commerce and are planning to fully embrace e-commerce if and when they manage to overcome the barriers and inhibitors to e-commerce implementation. As tourism is regarded as the most lucrative foreign

exchange earner and a means of attracting foreign investment in sub-Saharan Africa, it is recommended that organisations follow the suggestions made in this chapter to remain competitive in the tourism industry which will then help revive the ailing national economies.

CHAPTER 8 – E-COMMERCE BARRIERS FOR THE AFRICAN TOURISM ORGANISATIONS

Chapter Preface

Although e-commerce adoption and usage continues to grow there are many constraints that may slow down the expansion of this Internet-based technology. There are both technical and organisational barriers whilst some barriers are in the perceptions of individuals. Different countries worldwide are at different stages of e-commerce development and as such the issues that are relevant to one country may not be relevant to another. Similarly the issues that are relevant to the type of industry or organisation may also differ (Tassabehji, 2003). This chapter examines the e-commerce constraints faced by tourism organisations based in the four African countries.

Two surveys were carried out to find the nature and extent of the e-commerce barriers to e-commerce adoption among the tourism organisations based in the four African countries. The first survey sought to examine the nature of the e-commerce barriers among organisations with information-only websites whilst the second survey focused on organisations with limited interactive facilities. Results of the analysis of the data collected in the two surveys show that the technological and security and legal barriers were the most common among the tourism organisations from the four African countries.

8.1. Introduction

E-commerce is revolutionising the way business is being conducted today and there remain numerous predictions that it will continue to grow. Love et al (2001) suggested that e-commerce will double over a five year period and will then represent 1% of all world trade. Jarvis (1999) concluded that the number of e-commerce transactions carried out between organisations and between

organisations and individuals is projected to grow by over 400%. With this level of growth it will be necessary to develop and effectively manage an infrastructure to support the authenticity and confidentiality of sensitive data being transmitted over the Internet. Any e-commerce system without such facilities will lead to a great lack of public confidence, which will pose a serious constraint to full-scale e-commerce (Udo, 2001)

Although e-commerce, with the help of the growth of the Internet, is also growing exponentially, there are constraints which are holding back some organisations. Barriers to e-commerce vary from organisation to organisation as from country to country. Different countries and organisations are at different stages of development of e-commerce so issues relevant to one organisation or country may not be so relevant to any other. In the tourism and travel industry the large multi-million dollar organisations who have different needs and infrastructure to the small family-run businesses.

It is the aim of this chapter to discuss the barriers to e-commerce adoption and usage the African tourism organisations are experiencing when confronted with the need to implement e-commerce so that they could break into the more lucrative international tourism market.

8.2. The Method Used

8.2.1. Sampling Method

Empirical evidence acquired by this survey was obtained from the evaluation of a total of 554 websites of national airlines, national parks, government-run and private tourism promotion organisations, car rental companies, travel agencies and tour operators from South Africa, Kenya, Zimbabwe and Kenya. Details on how the websites of the tourism organisations were obtained are discussed in Chapter 4.

To be able to fully understand the barriers to e-commerce adoption for the various organisations the websites used in this survey were categorised according to their level of e-commerce development just as was done in the survey, *Knowledge Transfer* which is described in Chapter 4. They were 161 information-only websites which were Level 1 and 268 websites with limited interactive features at Level 2.

8.2.2. The Instruments Used

The printed and web-based versions were used to collect data from the tourism organisations in South Africa, Kenya, Zimbabwe and Uganda using the same method described in Chapter 7, Section 7.2.2. One questionnaire was used to collect data from the organisations with information-only websites and the second was used to collect data from organisations with websites which have limited interactive facilities.

8.2.3. Questionnaire for Organisations with Information-Only Websites (Level 1)

The questionnaire administered to organisations with information-only websites (see Appendix 3) was made of the following four main sections:

- The first section collected general demographic data about the organisation which included the type of organisation, the country where it is based and the geographical setting in which it is located. This information helped the author draw up patterns and trends of e-commerce barriers according to their geographical setting in the four African countries
- The second section, which is the smallest, gathered data about the type of connection organisations used to gain Internet access. This information helped determine if there was any link between the types of connection and e-commerce barriers.
- The third section, the largest of all, collected data about e-commerce constraints faced by the various organisations. The e-commerce barriers were put into the following categories: organisational, financial,

technological, behavioural and security and legal. There were four options for each of the barriers for the respondent to select which were 'Much importance', 'Some importance', 'Not important' and 'Don't know'.

- From the last section the organisations selected areas on which they would like to receive some training. The organisations could select more than one area of training.

8.2.4. Questionnaire for Organisations with Websites with Limited Interactive Features (Level 2)

The first two sections of the questionnaire administered to organisations with websites which have limited interactive features (see Appendix 4) are similar to those of the questionnaire for organisations with information-only websites. The third section used the same sub-sections as in the questionnaire for organisations with information-only websites, but the options for each barrier were different. Since the websites of these organisations were more advanced in terms of e-commerce development, the options mainly focused on the barriers the organisations have managed to overcome and those they are unable to solve. The questions required the responding organisations to attach their perceived level of importance to each of these potential barriers. In the fourth section the tourism organisations were asked to identify areas of training that could help them overcome the barriers to e-commerce.

8.3. Determining the Barriers to E-Commerce Adoption and Usage

The questions to determine the barriers to e-commerce adoption and usage among the tourism organisations from sub-Saharan Africa were derived from literature review and through brain storming sessions which involved the author and three lecturers from the Computer Science Department at Loughborough, Ray Dawson, Janet Edwards and Tom Jackson. As stated in Chapter 2, the barriers were divided into the categories of organisational, financial, technological, and behavioural and

security and legal barriers to find out which barriers are most common. This made it easier to work out ways and priorities to overcome the barriers.

The following sub-sections describe the questions used to determine the barriers to e-commerce adoption among the tourism organisations from South Africa, Kenya, Zimbabwe and Uganda.

8.3.1. Organisational Barriers

These are the e-commerce barriers which relate to issues related to the organisational structure and culture (Tassabehji, 2003). The aim of questions in this category was to find out if the organisational structure, culture and lack of management expertise hamper the e-commerce adoption and usage among the African tourism organisations.

The following are the questions which were derived from the literature:

- My organisation can not quantify financially the impact of e-commerce (Chau, 2001)
- My organisation does not have a strategic plan for e-commerce (van Slyke and Bélanger, 2003)
- Lack of staff training (Nath et al, 1998; Mukti, 2000)
- My company is reluctant to change how it operates (Van Slyke and Bélanger, 2003)
- Too few IT-skilled personnel (Van Slyke and Bélanger, 2003)

The following questions were obtained through brainstorming sessions which took place between the researcher and the above-named lecturers from Loughborough University:

- E-commerce not relevant to my organisation
- Product not applicable for e-commerce
- Indirect or hidden costs
- My organisation does not have knowledge of e-commerce techniques

-
- My organisation does not want to form collaborative partnerships
 - Logistical problems
 - Company is too small
 - Time it takes to implement changes
 - No incentives as few competitors online

8.3.2. Financial Barriers

The aim of these questions is to find out how the financial resources of the tourism organisations influence e-commerce adoption and usage.

The following questions were derived from the literature review:

- Cost of implementing and maintaining the e-commerce system (Chau, 2001; Mann, 2000; Walczuch et al, 2000; Jones et al, 2004; Moodley, 2003; Chen and Ning, 2002; Mukti, 2000)
- Investment risk (Love et al, 2001)
- May lead to loss in productivity (Van Slyke and Bélanger, 2003)
- Advantages of e-commerce are outweighed by costs (Van Slyke and Bélanger, 2003)

The following questions were derived after brainstorming between the researcher and the Loughborough lecturers:

- Cost of staff training
- Market uncertainty
- Few customers are online
- Fear of stronger competition on the Internet

8.3.3. Technological Barriers

E-commerce embraces a complex mixture of different technologies, infrastructures and products. E-commerce relies on a variety of technologies, which are rapidly

developing (Mann, 2000). In this category the author examines technological issues which need to be addressed in order to have a smooth e-commerce adoption.

The questions listed below were obtained after the extensive literature review:

- Existing financial systems currently do not support online payment (Van Slyke and Bélanger, 2003)
- My organisation does not have required IT infrastructure (Oxley and Yeung, 2001)
- Technology too complicated (Tassabehji, 2003)
- National telecommunications too slow and unstable (Chen and Ming, 2002; Van Slyke and Bélanger, 2003)
- Lack of external support to maintain an e-commerce system (Chau, 2001)

The questions listed below were formulated after brainstorming session between the researcher and the three lecturers from Loughborough University

- Fear of choosing an e-commerce solution that is incompatible with existing systems
- New versions of software introduced too often

8.3.4. Behavioural Barriers

Questions in this category seek to determine if the attitudes towards e-commerce and reactions to e-commerce adoption and usage has anything to do with the current adoption rates among the African tourism organisations.

All the questions in this category were obtained after the extensive review of literature:

- Existing personnel reluctant to use an e-commerce system (Van Slyke and Bélanger, 2003)
- Lack of management support (Kardaras and Karakostas, 2001; Morrison ,2001)
- Trained staff leaving (Van Slyke and Bélanger, 2003)
- Existing personnel reluctant to learn e-commerce techniques (Van Slyke and Bélanger, 2003)

8.3.5. Security and Legal Barriers

In this age of the Internet, technology is invading the privacy of individuals and organisations like never before. The literature review revealed that security and privacy are the two major concerns for any computerised environment which includes business, governments, individuals and particularly e-commerce. In this category the questions seek to determine which barriers need to be overcome to make e-commerce systems secure and reliable.

The questions listed below were obtained after review of the related literature:

- Potential theft of business information (Udo, 2001; Oxley and Yeung, 2001; Van Slyke and Bélanger, 2003)
- Viruses and bugs (van Slyke and Bélanger, 2003)
- No mechanism to guarantee customers secure transactions (van Slyke and Bélanger, 2003)
- No legal system to regulate e-commerce operations (Chen and Ning, 2002)

-
- Reliability of e-commerce systems (van Slyke and Bélanger, 2003)
 - Security problem concerning payment (Udo, 2001; Oxley and Yeung, 2001; Van Slyke and Bélanger, 2003)

The following questions were formulated during the brainstorming session involving the author and the previously-named Loughborough University lecturers:

- My organisation does not trust e-commerce technology
- Customers do not trust e-commerce technology

8.4. Calculating the Ratings of the Barriers

An overall rating for each of the barriers was calculated in order to find out the level of importance or attitudes of the organisations towards each of the e-commerce barriers. This information helps determine which barriers to focus on when deriving ways to overcome them. In order to calculate the ratings a Likert scale technique was used to calculate mean scaled score for each and every question on the questionnaires which were made up of closed questions. All the options selected by the organisations were weighted and the 'direction of the weighting was determined by the favourableness or unfavourableness of the statement' (Young, 1966). The ratings were then calculated by finding the mean scaled scores for each e-commerce barrier and then ranked from biggest to smallest.

A criticism of this method is that it assumes that the Likert scale is linear, and that an averaged value therefore has some meaning. While this is in general a valid criticism, the aim of this research is only to get an indicator of relative importance of the different barriers and means for overcoming them, so for this purpose the averaging of Likert scales was considered to be sufficiently accurate. A further limitation of this method is that the overall ratings for any particular barrier will be influenced by that category with the largest number of organisations, in this case the travel agencies and tour operators. However, this problem will still allow a

useful indication of relative importance and priority to be obtained so it is considered valid for this research purpose.

8.4.1 Calculating the Importance Rating

The importance rating is calculated to find the level of importance which is attached by the African tourism organisations with Level 1 websites to the e-commerce barriers. First of all the options to measure level of importance were assigned weights as follows:

- Much Importance – 3
- Some importance – 2
- Not Important – 1

Since the focus is importance the higher the level of importance attached the higher the weighting.

The mean scaled score is then calculated for each barrier for each category of tourism organisations using the formula in Equation 8.1.

$$\bar{x} = \frac{x_3 \times 3 + x_2 \times 2 + x_1 \times 1}{N}$$

Where :

x_3 - the number of organisations that have chosen the option 'Much Importance' within a category of organisations

x_2 - the number of organisations that have chosen the option 'Some Importance' within a category of organisations

x_1 - the number of organisations that have chosen the option 'Not Important' within a category of organisations

N - total number of organisations within a category of organisations

1,2,3 - Weightings of the options selected

Equation 8.1: Calculating the importance rating

8.4.2. Calculating the Problem Rating

The problem rating is calculated to find out which of the barriers is still a problem to the tourism organisations with Level 2 websites. Again the options selected by the tourism organisations are weighted as follows:

- Not a problem for us - 0
- Was a problem but we have solved it already- 1
- Is a problem but we know we can solve it-2
- Is a problem that we are unable to solve this time-3

Since it's the problem rating that is being measured the weighting will favour those options which indicate that the problem still exists.

The problem rating is then calculated using the formula in Equation 8.2

$$\bar{x} = \frac{x_0 \times 0 + x_1 \times 1 + x_2 \times 2 + x_3 \times 3}{N}$$

Where:

x_0 - the number of tourism organisations that have selected the option 'Not a problem for us' within a category of organisations

x_1 - the number of tourism organisations that have selected the option 'Was a problem but we have solved it' within a category of organisations

x_2 - the number of tourism organisations that have selected the option 'Is a problem but we know we can solve it' within a category of organisations

x_3 - the number of tourism organisations that have selected the option 'Is a problem that we are unable to solve this time' within a category of organisations

N - total number of organisations within a category of organisations

0,1,2,3 – Weightings of the options selected

Equation 8.2: Calculating the problem rating

8.4.3. Calculating the Attitude Rating

The attitude rating was calculated to find the attitude of the various tourism organisations with Level 2 websites towards selected e-commerce barriers. The options to determine the attitude of the organisations were weighted as follows:

- True – 2
- Probably True - 1
- Don't know - 0
- Probably false – (-1)
- False - (-2)

The weight direction was formulated in such a way that there is an agreement rating for each question given by the sign with the value giving a degree of certainty.

The formula in Equation 8.3 was used to calculate the attitude rating.

$$\bar{x} = \frac{x_2 \times 2 + x_1 \times 1 + x_0 \times 0 + x_{-1} \times (-1) + x_{-2} \times (-2)}{N}$$

Where:

x_2 - the number of organisations that selected the option 'True' within a category of organisations

x_1 - the number of organisations that selected the option 'False' within a category of organisations

x_0 - the number of organisations that selected the option 'Don't know' within a category of organisations

x_{-1} - the number of organisations that selected the option 'Probably False' within a category of organisations

x_{-2} - the number of organisations that selected the option 'False' within a category of organisations

N - the total number organisations within a category of organisations

2,1,0,-1,-2 - Weightings of the options selected

Equation 8.3: Calculating the attitude rating

8.5. Analysing E-Commerce Barriers of Organisations with Level 1 Websites

8.5.1. General Information – Location of Organisation

A total of 122 organisations with Level 1 websites which include airlines, hotels and lodges, travel agencies and tour operators and car rental companies responded to this survey giving a response rate of about 75% (see Figure 8.1). South Africa and Kenya provided about two thirds of the organisations, with Zimbabwe and Uganda organisations accounting for the remainder. Of the four types of tourism organisations travel agencies and tour operators had most organisations in this survey and almost half of these organisations were South African. The car rental companies had the least number of organisations with only five, and all of them were South African. Of the ten national organisations which took part in this survey none were South African.

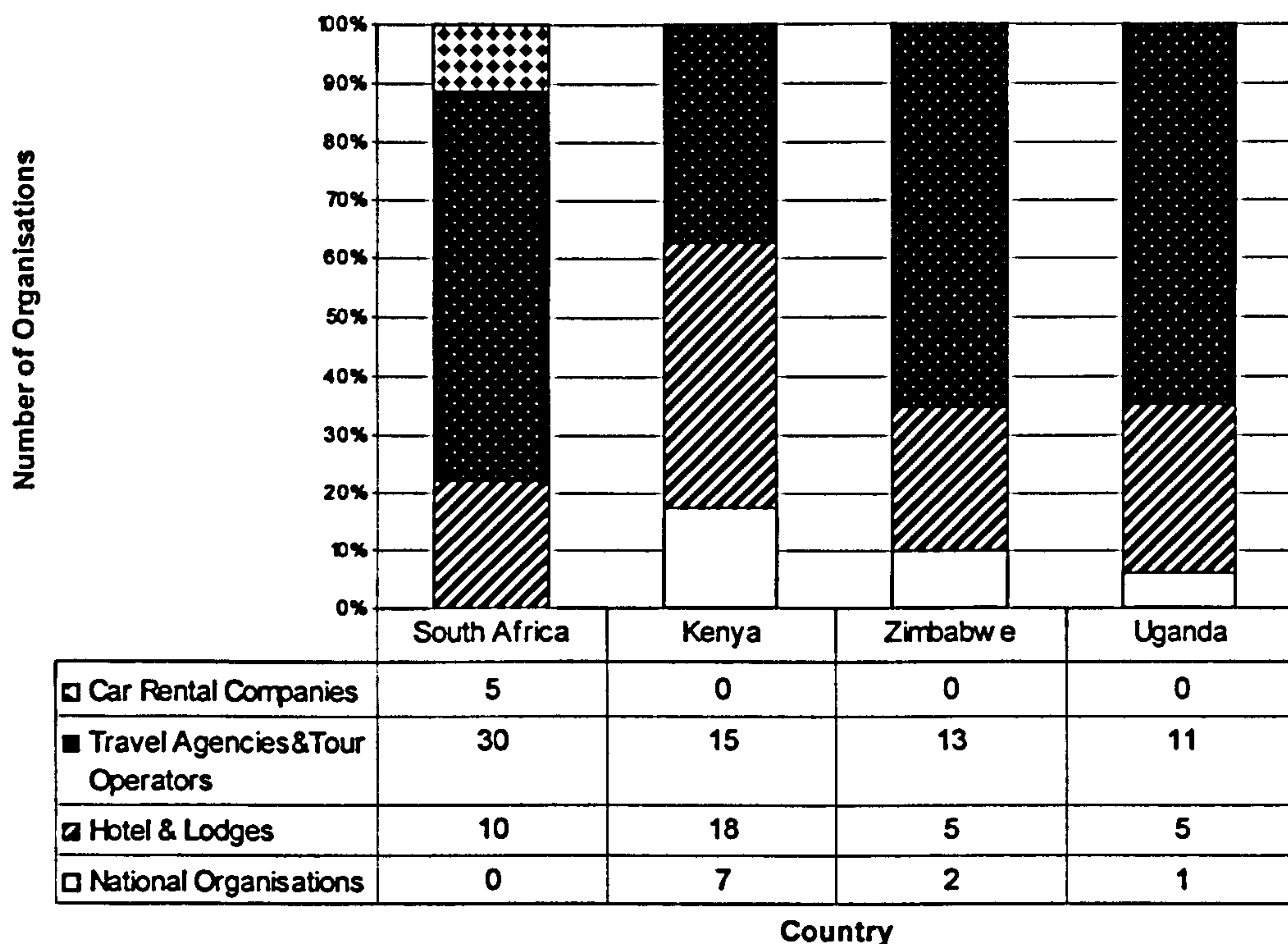


Figure 8.1: Analysis of distribution the tourism organisations with Level 1 websites by country

8.5.2. General Information – Rural/urban Setting of the Organisations

Figure 8.2 shows the different areas in which the tourist organisations are set up in the four African countries. Four in every five of the 122 tourism organisations are located in the urban areas with the remainder located in the semi-urban areas. Of all the organisations located in the semi-urban areas about three quarters are tour operators. Most of the hotel and lodges (87%), national organisations (90%) and all of the car rental companies are located in urban areas. None of the organisations which took part in this survey are located in either the semi-rural or rural areas.

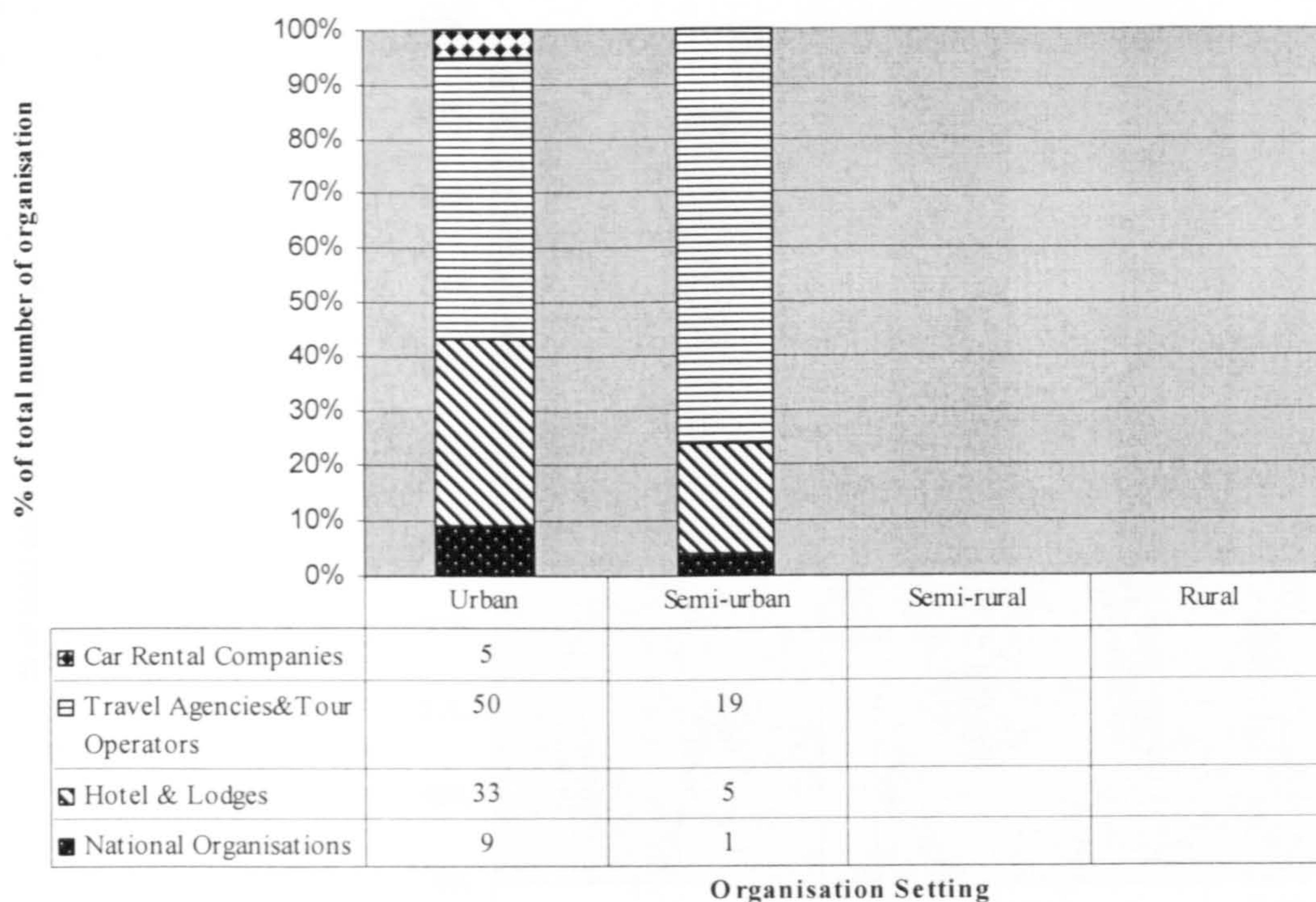


Figure 8.2 Analysis of the rural/urban settings of the tourism organisations

8.5.3. External Connection to the Internet

The results of the analysis of the external Internet connection used by the various organisations are presented in Figure 8.3. The most popular type of external connection among these tourism organisations is the standard telephone line with about half indicating they use this technology to connect to the Internet. About 62%

of the organisations that connect to the Internet through the telephone line are either travel agencies or tour operators. The second most popular type of external connection to the Internet was broadband (44%) whilst the wireless, Integrated Services Digital Network (ISDN), Digital Subscriber Line (xDSL) were each used by one in seventeen organisations. Seven organisations indicated that they do not know which type of external connection to the Internet they are using. About a fifth of all the tourism organisations had more than one type of external connection to the Internet.

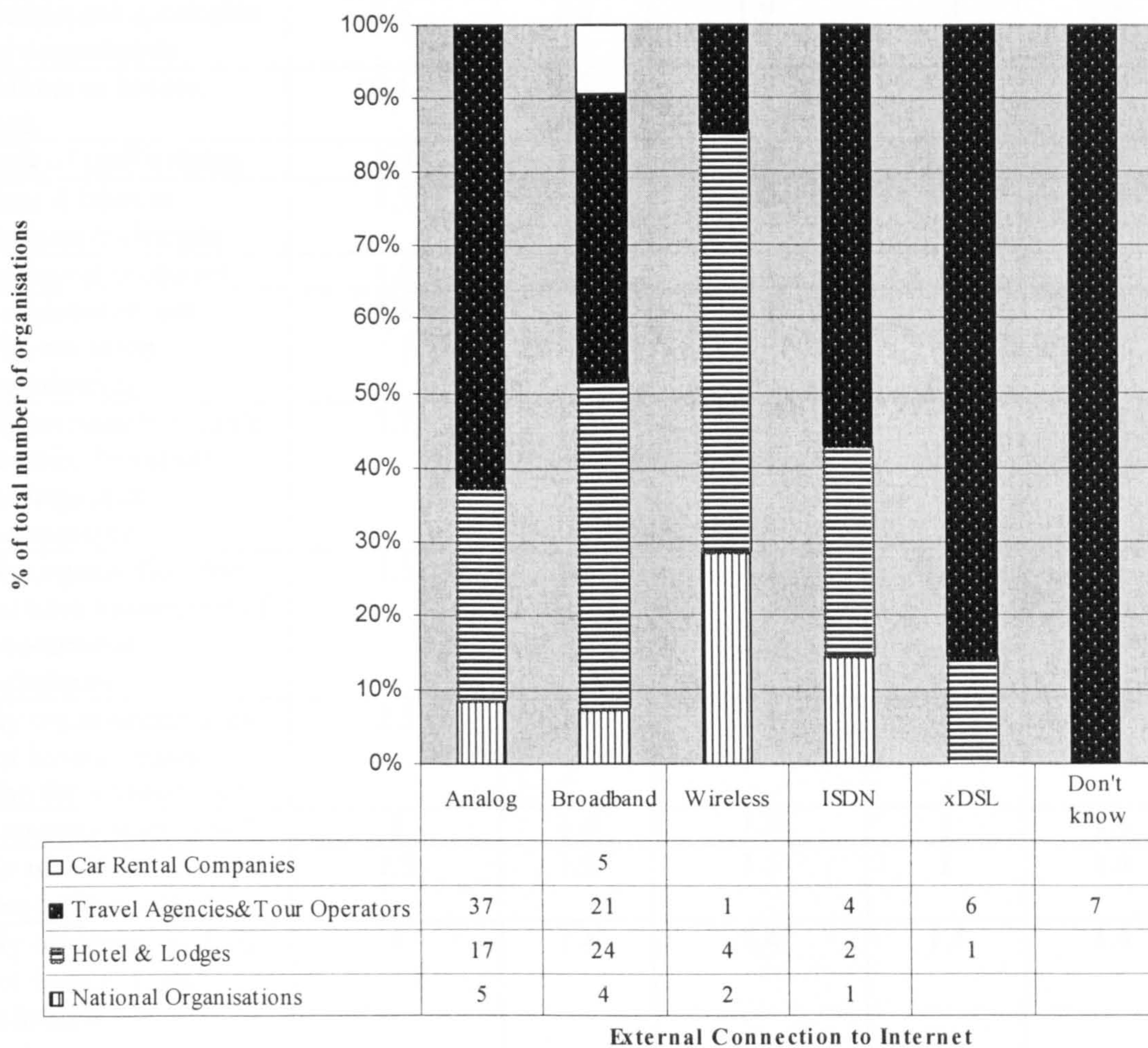


Figure 8.3 Types of external connections to the Internet

8.5.4 Analysing Organisational Barriers of Tourism Organisations with Level 1 Websites

Table 8.1: Analysis of the organisational barriers to e-commerce amongst African tourism organisations with Level 1 websites

Type of organisation Barrier	National Organisations	Hotels & Lodges	Travel Agencies & Tour Operators	Car Rental Companies	Overall Importance Rating
My company is reluctant to change how it operates	1.6	1.9	2.1	1.5	2
Too few IT-skilled personnel	1.8	1.9	2.0	1.5	1.9
Product not applicable for e-commerce	1.6	1.6	1.9	1.8	1.8
Indirect or hidden costs	2.1	1.5	1.9	1.3	1.8
Lack of staff training	1.4	1.9	1.9	1.5	1.8
Time it takes to implement changes	1.7	1.8	1.9	1.2	1.8
Logistical problems	1.6	1.8	1.8	1	1.8
E-commerce not relevant to my organisation	1.8	1.6	1.8	1.8	1.7
My organisation can't quantify financially the impact of e-commerce	1.7	1.7	1.7	1.2	1.7
My organisation does not have knowledge of e-commerce techniques	1.5	1.6	1.7	1.8	1.7
My organisation does not have a strategic plan for e-commerce	2.3	1.9	1.5	2	1.7
Company is too small	1	1.4	1.8	1	1.5
No incentives as few competitors online	1.3	1.3	1.5	1	1.4
My organisation does not want to form collaborative partnerships	1	1.4	1.4	1.4	1.4

Sample size: South Africa - 45; Kenya -40; Zimbabwe -20; Uganda - 17

The reluctance of organisations to change the way they conduct business is the organisational barrier which was regarded as one of the major constraints of e-commerce adoption and usage among tourism organisations with Level 1 websites (see table 8.1). With an importance rating of 1.9 'Too few IT-skilled

personnel' is the next important organisational barrier. Two organisational barriers 'No incentives as few competitors online' and 'My organisation does not want to form collaborative partnerships' were regarded as the least important with an overall importance rating of 1.4. The barrier 'Company is too small' had an overall importance rating of 1.5 but the Travel Agencies and Tour Operators gave it a rating of 1.8. This is mainly because this category of tourism organisations is dominated by small family-run businesses a factor which could have influenced the overall importance rating for this organisational barrier. More detailed results broken down by organisation type are in Appendix 6.

Table 8.1 lists the organisational barriers in descending order of overall importance rating as allocated by the organisations responding to the survey.

8.5.5. Analysing Financial Barriers of Tourism Organisations with Level 1 Websites

Table 8.2: Analysis of the financial barriers to e-commerce amongst African tourism organisations with Level 1 websites

Type of organisation Barrier	National Organisations	Hotels & Lodges	Travel Agencies & Tour Operators	Car Rental Companies	Overall Importance Rating
Cost of implementing and maintaining the e-commerce system	2.4	1.8	2.1	1.6	2.0
Investment risk	2.0	2.0	2.0	1.3	2.0
Cost of staff training	2.0	1.8	2.0	1.6	1.9
Advantages of e-commerce are outweighed by costs	1.6	1.8	1.9	1.8	1.8
Market uncertainty	1.2	1.3	1.3	1.3	1.3
Few customers are online	1.2	1.3	1.3	1.2	1.3
Fear of stronger competition on the Internet	1.0	1.2	1.3	1.3	1.3
May lead to loss in productivity	1.3	1.4	1.2	1.3	1.3

Sample size: South Africa - 45; Kenya -40; Zimbabwe -20; Uganda - 17

Two financial barriers 'Cost of implementing and maintaining the e-commerce system' and 'Investment risk' had the highest overall importance rating of 2 whilst 'Cost of training staff' was regarded as the next most important barrier with an overall rating of 1.9. The National Organisations recorded the highest importance

rating of 2.4 for the barrier 'Cost of implementing and maintaining the e-commerce system'. Since most of the organisations from this category are state-run, the respective governments might be finding it hard to finance such projects. Four financial barriers had the lowest overall importance rating of 1.3 (See Table 8.2). More detailed results broken down by organisation type are in Appendix 6.

8.5.6. Analysing Technological Barriers of Tourism Organisations with Level 1 Websites

Table 8.3: Analysis of the technological barriers to e-commerce amongst African tourism organisations with Level 1 websites

Type of organisation Barrier	National Organisations	Hotels & Lodges	Travel Agencies & Tour Operators	Car Rental Companies	Overall Importance Rating
Lack of external support to maintain an e-commerce system	2.6	2.2	2.3	2.0	2.3
Existing financial systems currently do not support online payment	2.6	2.1	2.2	1.2	2.2
New versions of software introduced too often	1.7	2	2.2	1.5	2.1
Fear of choosing an e-commerce solution that is incompatible with existing systems	2.2	2.0	2.1	1.6	2.1
National telecommunications too slow and unstable	1.9	2.0	1.8	1.4	1.9
Technology too complicated	1.7	1.8	1.8	1.4	1.8
My organisation does not have required IT infrastructure	2.0	1.7	1.7	1.3	1.7

Sample size: South Africa - 45; Kenya -40; Zimbabwe -20; Uganda - 17

Table 8.3 shows the level of importance which has been attached to the technological barriers by the various tourism organisations from the four African countries. The National Organisations had an importance rating of 2.6 for the barriers 'Lack of external support to maintain an e-commerce system' and 'Existing financial systems currently do not support online payment' although the overall ratings for the two financial barriers were 2.3 and 2.2 respectively. The Hotels and Lodges have importance ratings of 2 or more for 5 of the 7 technological barriers

whilst the National Organisations and the Travel Agencies and Tour Operators have four each. On the other hand the Car Rental Companies had only one financial barrier with an importance rating of 2 or more. More detailed results broken down by organisation type are in Appendix 6.

8.5.7. Analysing Behavioural Barriers of Tourism Organisations with Level 1 Websites

Table 8.4: Analysis of the behavioural barriers to e-commerce amongst African tourism organisations with Level 1 websites

Type of organisation Barrier	National Organisations	Hotels & Lodges	Travel Agencies & Tour Operators	Car Rental Companies	Overall Importance Rating
Lack of management support	1.7	1.9	2.2	1.8	2.1
Trained staff leaving	1.9	2.0	2.1	1.6	2.0
Existing personnel reluctant to learn e-commerce techniques	1.9	1.8	2	1.5	1.9
Existing personnel reluctant to use an e-commerce system	1.8	1.7	1.9	1.5	1.8

Sample size: South Africa - 45; Kenya -40; Zimbabwe -20; Uganda - 17

‘Lack of management support’ had the highest overall importance rating of 2.1 among the behavioural barriers with the Travel Agencies and Tour Operators recording the highest rating of 2.2 among the four categories of tourism organisations for this barrier. The Travel Agencies and Tour Operators had the highest importance rating for the remaining three behavioural barriers (see Table 8.4). The barrier ‘Existing personnel reluctant to use an e-commerce system’ was the only behavioural barrier where all the four categories of the tourism organisations recorded importance ratings of less than 2. It also made it the behavioural barrier which was regarded as the least important with an overall importance rating of 1.8. More detailed results broken down by organisation type are in Appendix 6.

8.5.8. Analysing Security and Legal Barriers of Tourism Organisations with Level 1 Websites

Table 8.5: Analysis of the security and legal barriers to e-commerce amongst African tourism organisations with Level 1 websites

Type of organisation Barrier	National Organisations	Hotels & Lodges	Travel Agencies & Tour Operators	Car Rental Companies	Overall Importance Rating
Security problem concerning payment	2.6	2.7	2.6	2.6	2.6
Reliability of e-commerce systems	2.6	2.4	2.6	2.2	2.5
No mechanism to guarantee customers secure transactions	2.2	2.5	2.5	2.5	2.5
Potential theft of business information	2	2.6	2.5	2.2	2.4
Viruses and bugs	2.1	2.0	2.4	2.0	2.2
No legal system to regulate e-commerce operations	2.7	1.9	2.3	1.8	2.2
Customers do not trust e-commerce technology	2.0	2.2	2.2	2.0	2.2
My organisation does not trust e-commerce technology	1.8	1.7	2.3	1.8	2.0

Sample size: South Africa - 45; Kenya -40; Zimbabwe -20; Uganda - 17

All the eight security and legal barriers had an overall importance rating of 2 or more with the barrier ‘Security problem concerning payment’ having the highest overall rating of 2.6 (see Table 8.5). Two barriers ‘Reliability of e-commerce systems’ and ‘No mechanism to guarantee customers secure transactions’ were attached the second highest level of importance at 2.5 by tourism organisations with Level 1 websites. The barrier which was regarded as the least important is ‘My organisation does not trust e-commerce’ has an overall importance rating of 2. The Travel Agencies and Tour Operators was the only category which attached to all security and legal barriers importance ratings of 2 or more. The Hotels and Lodges had the highest importance rating of 2.7 for the barrier ‘Security problem concerning payment’ as well as the lowest importance rating of 1.7 for the barrier ‘My organisation does not trust e-commerce’. More detailed results broken down by organisation type are in Appendix 6.

8.5.9. Analysing the Top Ten Barriers of Tourism Organisations with Level 1 Websites

Table 8.6: Analysis of the top ten barriers of tourism organisations with Level 1 websites

Type of organisation Barrier	National Organisations	Hotels & Lodges	Travel Agencies & Tour Operators	Car Rental Companies	Overall Importance Rating
Security problem concerning payment	2.6	2.7	2.6	2.6	2.6
Reliability of e-commerce systems	2.6	2.4	2.6	2.2	2.5
No mechanism to guarantee customers secure transactions	2.2	2.5	2.5	2.5	2.5
Potential theft of business information	2	2.6	2.5	2.2	2.4
Lack of external support to maintain an e-commerce system	2.6	2.2	2.3	2.0	2.3
Viruses and bugs	2.1	2.0	2.4	2.0	2.2
No legal system to regulate e-commerce operations	2.7	1.9	2.3	1.8	2.2
Customers do not trust e-commerce technology	2.0	2.2	2.2	2.0	2.2
Existing financial systems currently do not support online payment	2.6	2.1	2.2	1.2	2.2
New versions of software introduced too often	1.7	2	2.2	1.5	2.1

Sample size: South Africa - 45; Kenya -40; Zimbabwe -20; Uganda - 17

Table 8.6 shows the ten barriers which were perceived as the most important by the African tourism organisations and are ranked according to the overall importance rating. Of the ten barriers to e-commerce adoption and usage regarded as most important by the African tourism organisations, seven of them are security and legal barriers and the remaining three are technological barriers.

8.5.10. Areas of Training for Tourism Organisations with Level 1 Websites

Table 8.7: Analysis of the areas of training as requested by African tourism organisations with Level 1 websites

Organisation	National Organisations	Hotels and Lodges	Travel Agencies and Tour Operators	Car Rental Companies	Total Number of Organisations
Information Security	8	32	51	3	94
Website Architecture and Design	8	29	44	3	84
E-Commerce Opportunities Available	8	15	29	0	52
Business Software	3	11	29	1	44
Developing Internet Strategies	5	13	26	0	44
IT Networking	2	12	16	0	30
Don't know	2	0	3	0	5
None	0	0	1	2	3

Sample size: South Africa - 45; Kenya -40; Zimbabwe -20; Uganda - 1

Of the five areas of training presented to the tourism organisations with Level 1 websites the most popular were website architecture and design and information security (see Table 8.7). More than two thirds of all organisations half of which were travel agencies and tour operators chose website architecture and design as one of the areas they would like to receive training in. As almost eight in every ten organisations selected information security, this is by far the most popular. The least popular area of training is 'IT Networking' which was selected by less than a quarter of the 122 organisations that took part in this survey. Only three organisations felt that they did not require any training at all while five organisations were not sure of the kind of training they needed. The training in information security might help the tourism organisations overcome the barrier 'Potential theft of business information' whilst 'Website Architecture and Design' training might help the African organisations develop reliable e-commerce systems. Training in business software and IT networking will help the African

organisations overcome some technological barriers whilst learning how to develop Internet strategies and receiving more information on e-commerce opportunities available will help them understand the impact of e-commerce on the tourism industry.

8.6. Analysing E-Commerce Barriers of Tourism Organisations with Level 2 Websites

8.6.1. General Information – Location of Organisation

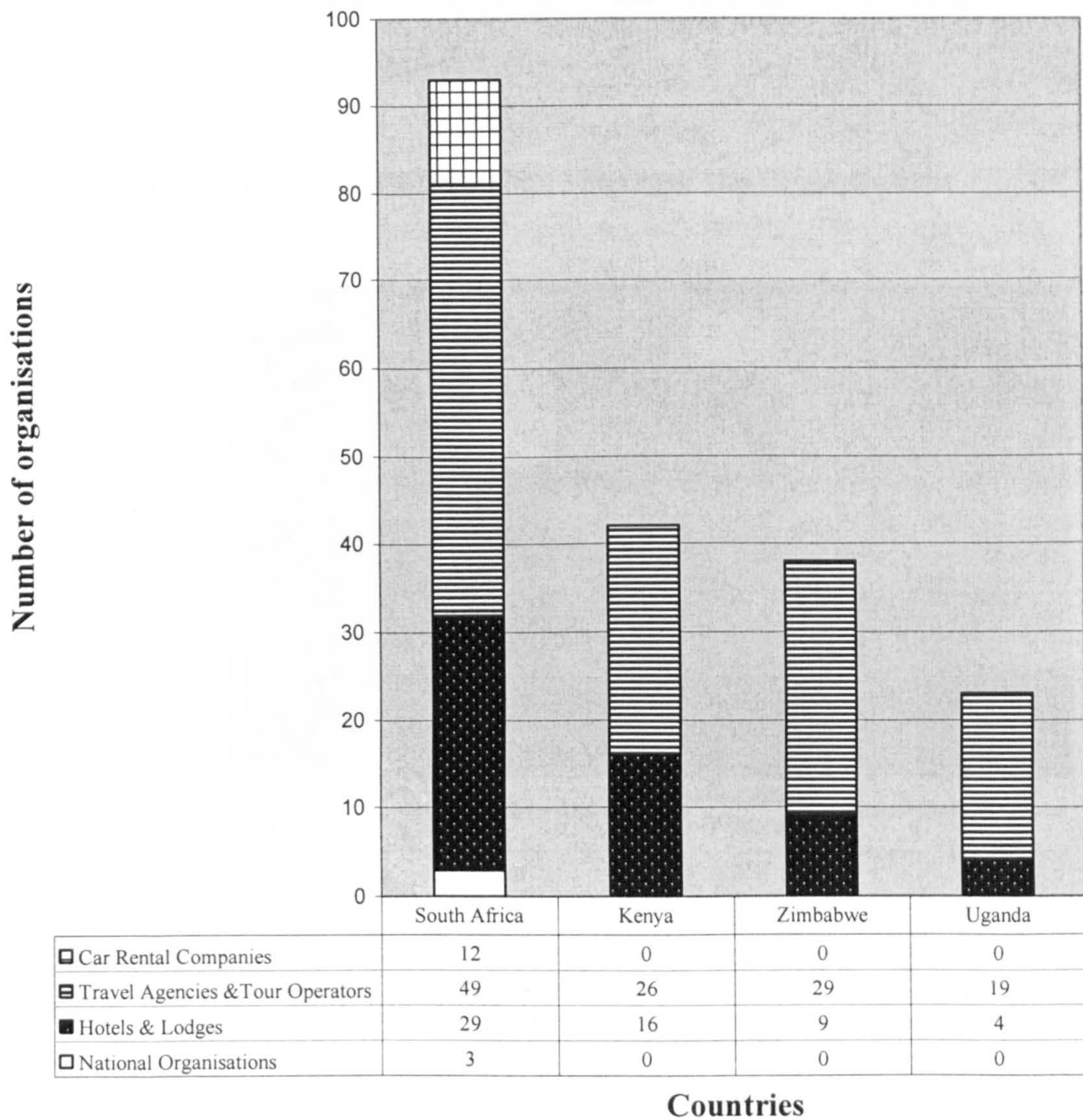


Figure 8.4: Analysis of distribution the tourism organisations with Level 2 websites by country

A total of 196 out of the selected 368 organisations with Level 2 websites took part in this survey and almost half of these were based in South Africa (see Figure 8.4). The other tourism organisations were from Kenya (21%), Zimbabwe (19%) and Uganda (12%). All the three national organisations and twelve car rental are based in South Africa leaving Kenya, Uganda and Zimbabwe with no representatives in these two categories. As in the first survey described in section 8.5 the travel agencies and tour operators' category provided the bulk of the tourism organisations with almost two thirds of the total. The national organisations which included national parks, airlines and tourism-promotion organisations had the least number of organisations with only three out of the 196 respondents being in this category.

8.6.2. General Information – Rural/Urban Setting of the Organisations

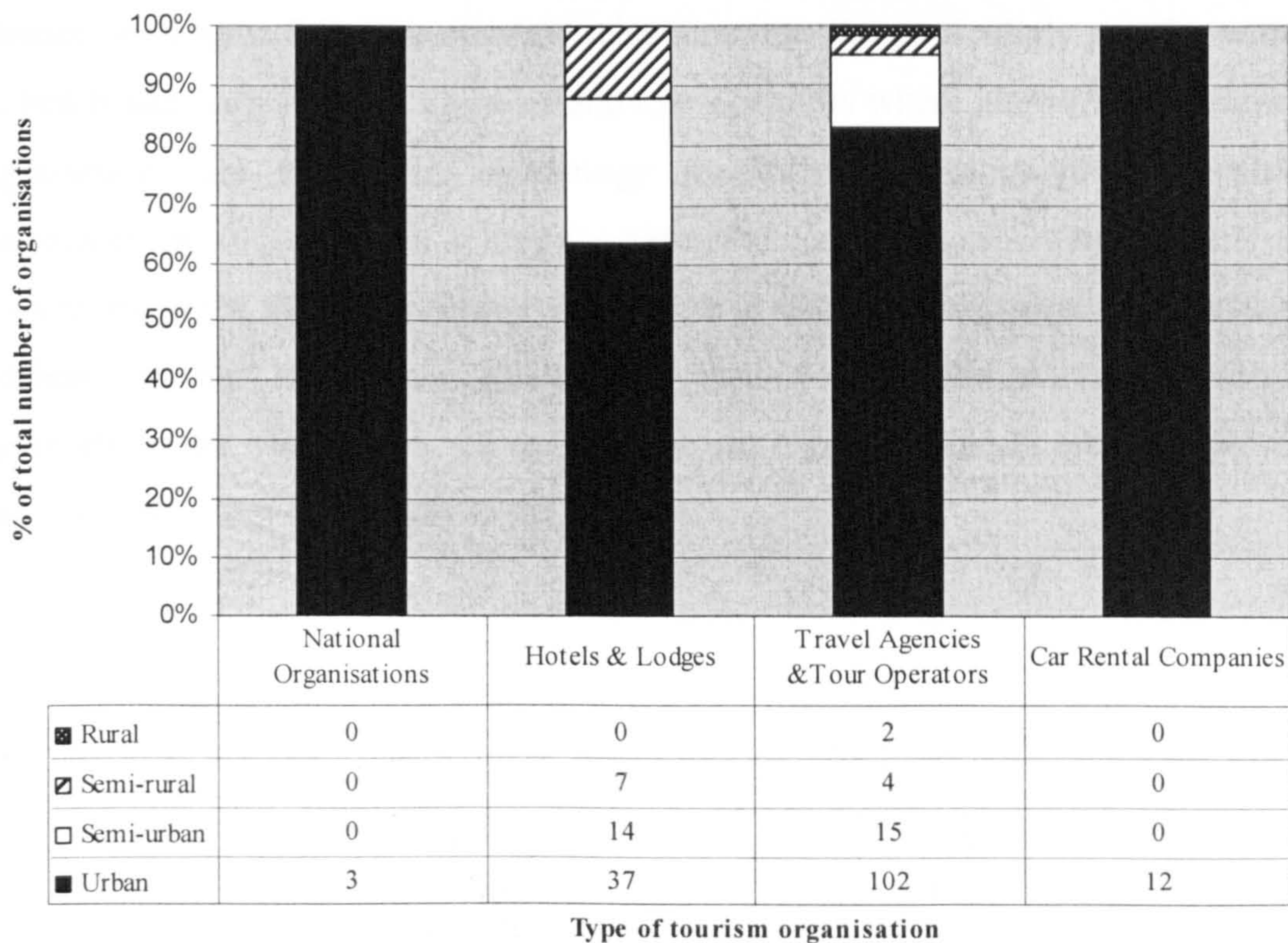


Figure 8.5: Analysis of the rural/urban settings of the organisations with Level 2 websites

Figure 8.5 shows the different geographical areas where the tourism organisations that took part in this survey are located. More than three quarters of all the 196 tourism organisations surveyed are located in the urban areas while one in every seven is located in the semi-urban areas. About 6% of all the organisations are located in the semi-rural areas while only two organisations, both of which are in the travel agencies and tour operators category, are located in the rural areas. In the first survey described in section 8.5 there were no tourism organisations from either the semi-rural or rural areas among the respondents whereas in the second survey there are eleven tourism organisations based in the semi-rural areas and two in the rural areas.

8.6.3. External Connection to the Internet

More than half of all the tourism organisations from the four African countries use the standard telephone line to connect to the Internet while about 46% had broadband making them the most popular types of external connection to the Internet (see Figure 8.6). The standard telephone line was particularly popular with the hotels and lodges, travel agencies and tour operators where almost half of these organisations are using this technology for Internet connection. Broadband connection was more popular among the car rental companies where three quarters of them are using this technology. About one in every six organisations is using wireless Internet connection whilst less than 4% of the African tourism organisations are using xDSL. Of the 196 tourism organisations, 32 are using more than one technology to connect to the Internet.

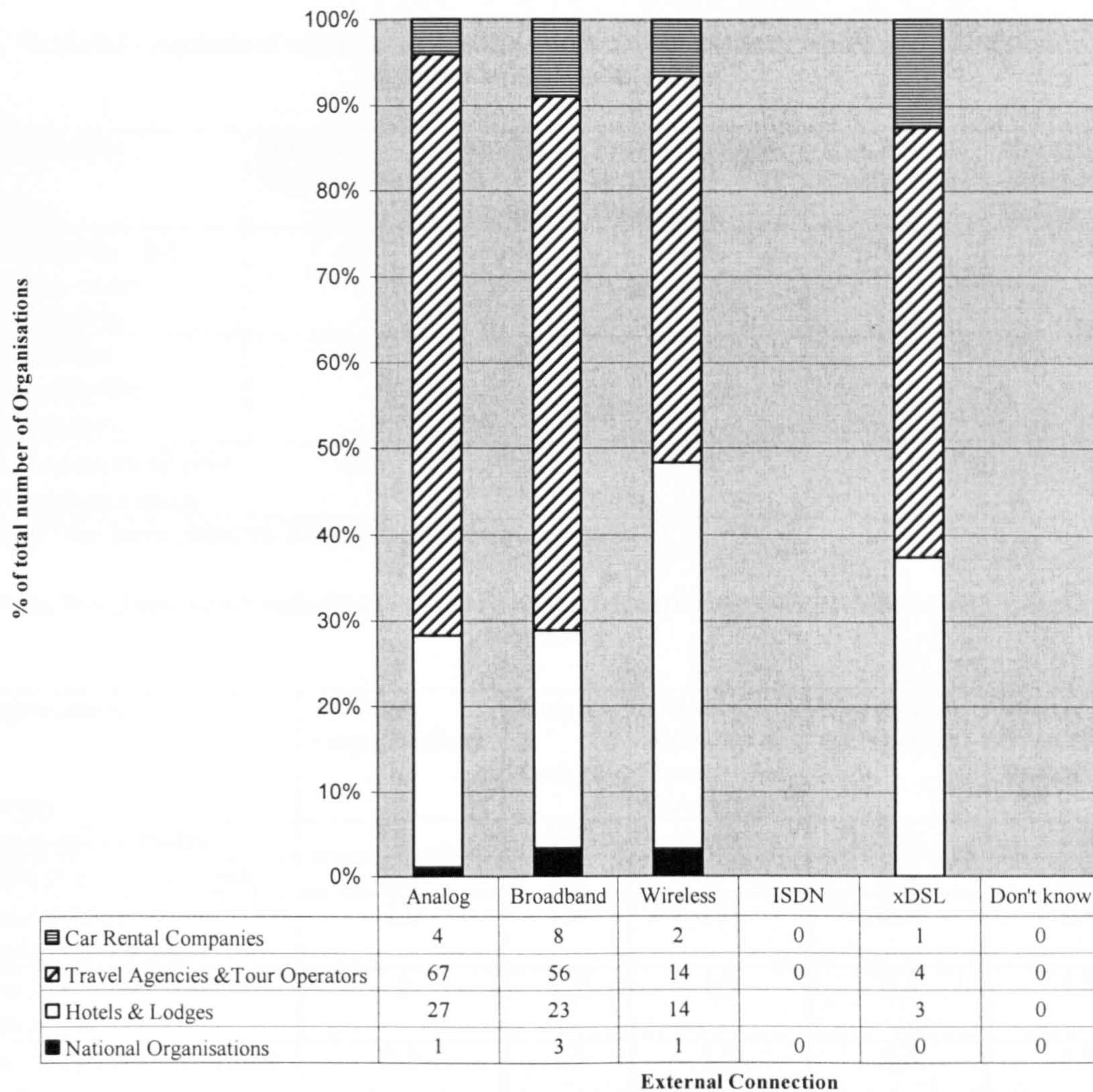


Figure 8.6: Types of external connection to the Internet used by African tourism organisations with Level 2 websites

8.6.4. Analysing Organisational Barriers of Tourism Organisations with Level 2 Websites

Table 8.8 shows the attitudes of the tourism organisations towards three potential barriers. Unlike in other categories, a few travel agencies believe that e-commerce is not relevant to them and that the tourism product is not applicable for the e-commerce market and as a result, an attitude rating of -1.9 is recorded. The national organisations category was the only one where all the organisations believe that the statement ‘No incentives as few competitors online’ is false. More detailed results broken down by organisation type are in Appendix 6.

Table 8.8: Analysis of attitudes of African tourism organisations with Level 2 websites towards e-commerce adoption

Organisation Barrier	National Organisations	Hotels & Lodges	Travel Agencies & Tour Operators	Car Rental Companies	Overall Attitude Rating
E-commerce not relevant to my organisation	-2	-2	-1.9	-2	-1.9
Product not applicable for e-commerce	-2	-2	-1.9	-2	-1.9
No incentives as few competitors online	-2	-1.7	-1.9	-1.8	-1.6

Sample Size: South Africa 93; Kenya-42; Zimbabwe-38; Uganda-23

Table 8.9: Analysis of organisational barriers of African tourism organisations with Level 2 websites

Organisation Barrier	National Organisations	Hotels & Lodges	Travel Agencies & Tour Operators	Car Rental Companies	Overall Problem Rating
Logistical problems	2	1.5	1.9	1.3	1.8
Indirect or hidden costs	0.3	1.7	1.7	0.4	1.6
Time it takes to implement changes	1.0	1.4	1.4	0.2	1.4
Too few IT-skilled personnel	0	1.2	1.3	0.5	1.2
My company is reluctant to change how it operates	0.3	1.3	1.3	0.6	1.2
Lack of staff training	1.0	1.2	1.2	0.7	1.2
My organisation does not have a strategic plan for e-commerce	0.5	0.8	1.4	0.4	1.1
My organisation does not have knowledge of e-commerce techniques	0.3	0.9	1.1	0.7	1
Company is too small	0	0.3	0.9	0.2	0.7
My organisation can't quantify financially the impact of e-commerce	0	0.4	0.5	0.4	0.6
Too few IT skilled personnel nationally	0	0.4	0.5	0.4	0.5
My organisation does not want to form collaborative partnerships	0	0.1	0.3	0	0.2

Sample Size: South Africa 93; Kenya-42; Zimbabwe-38; Uganda-23

Logistical problems induced by e-commerce adoption are the most problematic barrier with a problem rating of 1.8 followed by the barrier 'Indirect or hidden costs' with a problem rating of 1.6. Reluctance of organisations to form collaborative partnerships had the lowest problem rating 0.2 making it the most unproblematic organisational barrier to e-commerce adoption among organisations with Level 2 websites. There were four organisational barriers with problem ratings which are below one (see Table 8.9). For each of these four organisational barriers the national organisations had a problem rating of 0 meaning that all the three national organisations said that these barriers are no longer a problem for them.

8.6.5. Analysing Financial Barriers of Tourism Organisations with Level 2 Websites

Almost seven in every ten organisations indicated that the statement 'Advantages of e-commerce are outweighed by costs' is false while about 16%, most of which were travel agencies and tour operators, said that it could be false. This resulted in the overall attitude rating increasing to -1.5. This shows that some travel agencies and tour operators are not yet convinced that they would enjoy the benefits of e-commerce adoption and usage.

Table 8.10 : Analysis of financial barriers to e-commerce adoption of African tourism organisations with Level 2 websites

Organisation	National Organisations	Hotels & Lodges	Travel Agencies & Tour Operators	Car Rental Companies	Overall Problem Rating
Investment risk	0	1.4	1.8	0.9	1.6
Cost of staff training	0.3	0.9	1.3	0.6	1.1
Cost of implementing and maintaining e-commerce system	0	0.9	1.2	0.3	1.1
Few customers are online	0	0.3	0.5	0.2	0.4
Market uncertainty	0	0.3	0.4	0.7	0.4
May lead to loss in productivity	0	0.6	0.4	0.3	0.4
Fear of stronger competition on the Internet	0	0.1	0.3	0	0.2

Sample Size: South Africa 93; Kenya-42; Zimbabwe-38; Uganda-23

The results in table 8.10 show that most of the travel agencies and tour operators are not yet ready to invest in fully-fledged e-commerce as they recorded the highest problem rating for the barrier 'Investment risk'. On the other hand the national organisations had a problem rating of 0 for this barrier and five other financial barriers. Unlike national organisations with Level 1 websites, it seems the national organisations with Level 2 websites have enough financial resources to fund e-commerce projects. More detailed results broken down by organisation type are in Appendix 7.

8.6.6. Analysing Technological Barriers of Tourism Organisations with Level 2 Websites

Table 8.11: Analysis of the technological barriers to e-commerce adoption of the African tourism organisations with Level 2 websites

Organisation	National Organisations	Hotels & Lodges	Travel Agencies & Tour Operators	Car Rental Companies	Overall Problem Rating
Existing financial systems currently do not support online payment	1.7	2.0	2.3	1.7	2.1
Lack of external support to maintain an e-commerce system	3	1.8	2.0	1.7	1.9
Fear of choosing an e-commerce solution that is incompatible with existing systems	2	1.5	1.9	1.1	1.7
Technology too complicated	1.7	1.5	1.8	1.2	1.7
National telecommunications too slow and unstable	0	1.7	1.8	0.9	1.7
New versions of software introduced too often	2.3	1.5	1.6	1.3	1.6
My organisation does not have required IT infrastructure	1.7	1.3	1.3	1.3	1.3

Sample Size: South Africa 93; Kenya-42; Zimbabwe-38; Uganda-23

The existing financial systems' inability to support online payment and lack of technical support for e-commerce systems are the two most problematic e-commerce barriers for tourism organisations with Level 2 websites, with overall problem ratings of 2.1 and 1.9 respectively (see Table 8.11). Lack of appropriate ICT infrastructure was the e-commerce barrier most of the African organisations say was the least problematic. Of the four categories of organisations it seems the travel agencies and tour operators and national organisations are finding technological barriers a bit more problematic in general with average problem ratings of 1.8 compared to car rental companies who have an average problem rating of 1.3. More detailed results broken down by organisation type are in Appendix 7.

8.6.7. Analysing Behavioural Barriers of Tourism Organisations with Level 2 Websites

Table 8.12: Analysis of behavioural barriers to e-commerce adoption of the African tourism organisations with Level 2 websites

Organisation	National Organisations	Hotels & Lodges	Travel Agencies & Tour Operators	Car Rental Companies	Overall Problem Rating
Trained staff leaving	0.7	1.2	1.5	0.7	1.4
Lack of management support	0.3	0.6	1.4	0.5	1.1
Existing personnel reluctant to use an e-commerce system	0.3	0.9	1.2	0.8	1.1
Existing personnel reluctant to learn e-commerce techniques	0.3	0.9	1.1	0.8	1.0

Sample Size: South Africa 93; Kenya-42; Zimbabwe-38; Uganda-23

Travel agencies and tour operators seem to be failing to stop trained e-commerce staff from leaving as they have the highest problem rating of 1.5 for this barrier. For the remaining three behavioural barriers the travel agencies and tour operators have the highest problem ratings ranging from 1.1 to 1.4 whereas the national

organisations had lowest rating of 0.3 for all the three barriers. It looks like the management and other members of staff within national organisations have positive attitudes towards e-commerce adoption and usage as they recorded the lowest problem ratings of 0.3 for all the other barriers except for 'Trained staff leaving'. More detailed results broken down by organisation type are in Appendix 7.

8.6.8. Analysing Security and Legal Barriers of Tourism Organisations with Level 2 Websites

Table 8.13: Analysis of security and legal barriers to e-commerce adoption of the African tourism organisations with Level 2 websites

Organisation	National Organisations	Hotels & Lodges	Travel Agencies & Tour Operators	Car Rental Companies	Overall Problem Rating
Security problem concerning payment	2.7	2.2	2.4	1.7	2.3
No legal system to regulate e-commerce operations	2.7	2.1	2.4	1.1	2.2
Potential theft of business information	2.5	2.0	2.3	1.9	2.2
Reliability of e-commerce systems	2.7	2.0	2.3	1.8	2.2
No mechanism to guarantee customers secure transactions	2.7	1.9	2.3	1.6	2.1
My organisation does not trust e-commerce technology	1.7	1.2	1.4	0.9	1.3
Viruses and bugs	2.3	1.2	1.2	1.1	1.2
Customers do not trust e-commerce technology	1.5	1.0	1.0	0.8	1.0

Sample Size: South Africa 93; Kenya-42; Zimbabwe-38; Uganda-23

The national organisations had the highest problem ratings for all the eight security and legal barriers followed by the travel agencies and tour operators who had the second highest ratings for all the eight barriers (see Table 8.13). The barrier most of the tourism organisations rated as problematic is 'Security problem concerning payment' with an overall problem rating of 2.3 followed by three barriers 'No legal system to regulate e-commerce operations', 'Reliability of e-commerce systems' and 'Potential theft of business information' which all had ratings of 2.2. Although

the barrier 'Viruses and bugs' had a low overall problem rating of 1.2 the national organisations had a 2.3 rating for this barrier. More detailed results broken down by organisation type are in Appendix 7.

8.6.9. Analysing Other E-Commerce Barriers Identified by Tourism Organisations with Level 2 Websites

In addition to the barriers identified by the researcher four more barriers were identified by the African tourism organisations and are presented in Table 8.14. It is not surprising that all the barriers identified by the tourism organisations had a problem rating of 3 because they were identified by the organisations themselves so it means that they are yet to be solved. Of the four categories of tourism organisations the national organisations did not identify any other barriers to e-commerce adoption and usage. More detailed results broken down by organisation type are in Appendix 7.

Table 8.14: Analysis of e-commerce barriers identified by the African tourism organisations with Level 2 websites

Organisation	National Organisations	Hotels & Lodges	Travel Agencies & Tour Operators	Car Rental Companies	Overall Problem Rating
Lack of Government support	0	3	3	3	3
Lack of E-commerce Management Skills	0	3	3	3	3
Lack of Technical Implementation Skills	0	3	3	3	3
Lack of exposure of services to customers	0	3	3	3	3

Sample Size: South Africa 93; Kenya-42; Zimbabwe-38; Uganda-23

8.6.10. Analysing the Most Common Barriers of Tourism Organisations with Level 2 Websites

Table 8.15: Analysis of the ten most common barriers of tourism organisations with Level 2 websites

Organisation	National Organisations	Hotels & Lodges	Travel Agencies & Tour Operators	Car Rental Companies	Overall Problem Rating
Security problem concerning payment	2.7	2.2	2.4	1.7	2.3
No legal system to regulate e-commerce operations	2.7	2.1	2.4	1.1	2.2
Potential theft of business information	2.5	2.0	2.3	1.9	2.2
Reliability of e-commerce systems	2.7	2.0	2.3	1.8	2.2
No mechanism to guarantee customers secure transactions	2.7	1.9	2.3	1.6	2.1
Existing financial systems currently do not support online payment	1.7	2.0	2.3	1.7	2.1
Lack of external support to maintain an e-commerce system	3	1.8	2.0	1.7	1.9
Logistical problems	2	1.5	1.9	1.3	1.8
Fear of choosing an e-commerce solution that is incompatible with existing systems	2	1.5	1.9	1.1	1.7
Technology too complicated	1.7	1.5	1.8	1.2	1.7

Sample Size: South Africa 93; Kenya-42; Zimbabwe-38; Uganda-23

Table 8.15 shows the ten most common barriers as perceived by the African tourism organisations with Level 2 websites. Of the ten most common barriers five of them are security and legal barriers, four were technological barriers whilst the remaining one is an organisational barrier.

8.6.11. Areas of Training Identified by Tourism Organisations with Level 2 Websites

Table 8.16: Areas of training as requested by African tourism organisations with Level 2 websites

Organisation	National Organisations	Hotels and Lodges	Travel Agencies and Tour Operators	Car Rental Companies	Total Number of Organisations
Training					
Information Security	3	37	93	7	140
E-Commerce Opportunities Available	2	25	63	4	94
Developing Internet Strategies	3	20	58	3	84
None	0	23	22	4	49
Business Software	1	11	23	2	37
Website Architecture and Design	2	5	10	2	19
IT Networking	0	0	1	0	1
Don't know	0	0	0	0	0

Sample Size: South Africa 93; Kenya-42; Zimbabwe-38; Uganda-23

Just like in the first survey described in section 8.5 the most common area of training requested by the African tourism organisations is 'Information Security' with seven in every ten organisations selecting it (see Table 8.16). Of the 140 organisations that selected 'Information security' two thirds were travel agencies and tour operators whilst about a quarter were hotels and lodges. The second most common area of training need was 'E-commerce opportunities available' with almost half of all the 196 organisations selecting this option. The least common area of training is 'IT Networking' with only one organisation selecting this option. The other area of training which is not generally required among the organisations is 'Website architecture and design' with less than a tenth of all the tourism organisations from the four African countries selecting this option. Exactly a quarter of the African tourism organisations said they did not want to receive training in any of the listed areas. Since the areas of training requested by the tourism organisations with Level 2 websites are the same as those requested by

those with Level 1 websites, the barriers this training would help to overcome are the same as those described in section 8.5.

8.7. Conclusion

South Africa provided the bulk of websites, 45 (37%) in the first survey and 93 (47%) in the second. Kenya provided about a third of all websites in the first survey and again a third in the second survey. Zimbabwe and Uganda contributed a combined third of websites in the first survey and only a quarter in the second. This clearly shows that among the four countries South Africa is leading the development and growth of e-commerce. About four in every five organisations with information-only websites and more than three quarters of organisations with websites with limited online facilities are located in the urban areas. It can safely be concluded that adoption and usage of e-commerce among the four African countries is concentrated in the urban areas. Although the standard telephone line is still the dominant technology used for connection to Internet there is an indication that some organisations are moving from this technology by adopting more powerful technologies. About a third of organisations with Level 1 websites and a third of organisations with Level 2 websites are using the standard telephone and a second more advanced technology for Internet connection.

Of the fourteen organisational barriers about eleven had an overall importance rating of 1.7 or more which means that the majority of the tourism organisations with Level 1 websites think that the organisational barriers are important. The travel agencies and tour operators seem to be affected more by the organisational barriers than any other category having recorded the highest importance rating for eleven of the fourteen organisational barriers. For tourism organisations with Level 1 websites the barriers considered more important are 'My company is reluctant to change how it operates' with an overall importance barrier of 2 followed by 'Too few IT-skilled personnel' (1.9) and 'Product not applicable for e-commerce', 'Indirect hidden costs' which are all on 1.8. The tourism organisations with Level 2 websites had an average overall problem rating of only 1 meaning that most of the organisations have managed to overcome the organisational barriers. The barriers

which are still a problem to these organisations include logistical problems introduced by e-commerce adoption which had an overall problem rating of 1.8, followed by 'Indirect or hidden costs' with a rating of 1.6. The rest of the organisational barriers for organisations with Level 2 websites had problem ratings ranging from 0.2 to 1.4. It seems the tourism organisations with Level 1 websites need to understand the impact of e-commerce before they can evolve their websites from Level 1 to Level 2.

The barriers 'Investment risk,' 'Cost of staff training, and Cost of implementing and maintaining e-commerce system' were all rated by the tourism organisations with Level 1 websites and those with Level 2 websites as the three most common barriers. The overall ratings for the top three barriers range from 1.9 to 2 meaning that most of the tourism organisations with Level 1 websites regard them as important. On the other hand most of the organisations with Level 2 websites have managed to solve these financial barriers with problem ratings ranging between 1.1 and 1.6. Again the organisations which seem to be affected more are the travel agencies and tour operators who have recorded the highest ratings for both organisations with Level 1 and Level 2 websites. Travel agencies and tour operators, most of which are small family-run businesses, do not have the same financial resources as bigger players in the tourism industry to meet all the costs involved with implementing and maintaining e-commerce systems. This fear is not justified because e-commerce continues to grow elsewhere in the world because of the ability of the Internet to provide a high level of connectivity at modest cost.

Unlike the organisational and the financial barriers, the technological barriers seem to be a problem for most of the African tourism organisations with Level 1 as well as those with Level 2 websites. For most of the tourism organisations with Level 1 websites, all the technological barriers had importance rating of 1.7 or more, meaning that all these barriers are regarded as important. The tourism organisations with Level 2 websites had five out of seven barriers with problem ratings of 1.7 or more. Lack of technical support to maintain e-commerce systems and the financial systems inability to support online payment were two of the most

common barriers for tourism organisations with Level 1 websites and those with Level 2 websites. Of the four categories of tourism organisations, the car rental companies seem to be less affected by the technological barriers as they had the lowest ratings for both Level 1 and Level 2. On the other hand the national organisations seem to be struggling with these technological hurdles as they recorded the highest ratings for four out of seven barriers for both Level 1 and 2.

The personnel and management within organisations with Level 2 websites seem to have reacted more positively than those from organisations with Level 1 websites. The highest rating for organisations with Level 2 websites for any behavioural problem is 1.4 which was recorded for the barrier 'Trained staff leaving', whilst the other three problems had overall ratings ranging from 1.0 to 1.1. On the other hand the barrier which had the highest importance rating for organisations with Level 1 websites is 'Lack of management support' which had an overall importance rating of 2.1, whilst the other problems had overall importance ratings ranging from 1.8 to 2.0. Employees and management of travel agencies and tour operators with Level 1 and those with Level 2 websites are less convinced from their particular perspectives that the changes brought about by e-commerce adoption are worthwhile as they recorded the highest importance and problem ratings for all the behavioural barriers.

Security and legal barriers seem to affect all the four types of tourism organisations with Level 1 websites and those with Level 2 websites. The most common barrier for organisations with Level 1 websites is 'Security problem concerning payment' with an overall importance rating of 2.6 followed by 'Reliability of e-commerce systems', and 'No mechanism to guarantee customers secure transactions', both with overall ratings of 2.5. Lack of security in online payment systems was again the most common barrier among organisations with Level 2 websites followed by 'No legal system to regulate e-commerce', 'Potential theft of business information' and 'Reliability of e-commerce systems' which all had overall problem rating of 2.2. With the appropriate support and the right knowledge on e-commerce security more organisations will be able to evolve their websites into fully-fledged

e-commerce websites, however, this is clearly seen as a major difficulty by the organisations surveyed.

Analysis of the data on barriers identified by the tourism organisations show that some organisations feel the government is not doing enough to support organisations adopting e-commerce technologies. These results also showed that, although some organisations might have the capacity and knowledge to adopt and use e-commerce, they need to sharpen their management skills before they are finally ready to use these Internet-based technologies.

Among the ten most common barriers to e-commerce for tourism organisations with Level 1 websites seven of them were security and legal barriers whilst the rest were technological barriers. This means these are the barriers which most organisations with Level 1 perceive as the major impediments to e-commerce adoption and usage. The tourism organisations with Level 2 have for the ten most common barriers to e-commerce, five security and legal barriers, four technological and one organisational. Although there is more diversity among the barriers of organisations with Level 2 websites the most common still are the security and legal barriers. The areas of training requested by both organisations with Level 1 and Level 2 websites will help overcome three of the ten most common barriers, 'Potential theft of business information', 'Reliable e-commerce systems' and 'Technology too complicated', but this survey shows there are other areas of training needed to help the tourism organisations overcome the rest of the important barriers.

The two questionnaires described in this chapter showed that organisations with Level 1 websites face more barriers than those with Level 2 websites. The organisations with Level 1 websites will need to overcome the barriers they have control over first before they can progress to the next level. They will need to recognise the impact of e-commerce on their organisations and be able to ingrain e-commerce technology into their business. The organisations with Level 2 websites on the other hand have managed to adapt their organisational structures to

include e-commerce technology but they will need to overcome the technological hurdles and make their websites more secure before they can be evolved into fully-fledged e-commerce websites. The barriers facing organisations with Level 2 websites are not of a type that these organisations would have any real control over. They will, therefore, need to make the first step towards overcoming these barriers by working out ways of getting round them. The next chapter discusses some of the solutions which have been implemented successfully to overcome barriers to e-commerce including those barriers that organisations had little or no control over.

CHAPTER 9 – MEANS OF OVERCOMING BARRIERS TO E-COMMERCE USED BY THE AFRICAN TOURISM ORGANISATIONS

Chapter Preface

Chapter 8 looked at the most common barriers to e-commerce encountered by tourism organisations from the four African countries. In that chapter it was concluded that, although all the barriers are important, the technological together with the security and legal barriers posed a real threat to e-commerce development and growth in sub-Saharan Africa. This chapter examines ways by which the various tourism organisations have overcome all the barriers to set up fully fledged e-commerce websites.

A survey was carried out among tourism organisations with fully fledged e-commerce websites to learn how they managed to overcome these barriers. The idea was to come up with home-grown solutions to overcome e-commerce barriers within Africa, rather than prescribing one which was designed for organisations operating from regions with different economic, political and social environments. The survey showed that most of the organisations managed to get round most of the barriers to e-commerce including those they had little control over.

9.1. Introduction

E-commerce, worldwide is growing faster than any other industry and yet amounts to less than 3% of retail sales and is expected to be less than 10% by the year 2008 (Umesh et al, 2005). This shows that many more organisations are yet to establish themselves in the e-commerce market and are not doing so for one reason or another. Tourism organisations in sub-Saharan Africa will need to adopt and use e-commerce if they are to serve the global markets efficiently and effectively. Although e-commerce adoption presents the Africa tourism organisations with opportunities on the international market as well as at home and regionally, the

majority still face impediments to e-commerce development and growth. It is, therefore, the main aim of this thesis to work out ways by which the tourism organisations can overcome these barriers.

The main objective of this research, therefore, is to find out how the African tourism organisations with fully-fledged e-commerce websites have managed to overcome the e-commerce barriers being faced by their counterparts to get where they are today. This research will also seek to find out how the organisations plan to overcome those barriers to e-commerce adoption which still exists.

9.2. The Survey

9.2.1 Sampling Method

The primary data was collected from 17 out of a possible 25 tourism organisations giving a response rate of 68%. These tourism organisations include national airlines, hotels and lodges and travel agencies and tour operators. These are the organisations which had fully-fledged e-commerce websites. Of the 17 organisations which responded, 15 were South African and 2 were from Kenya. No Zimbabwean or Ugandan tourism organisation which had fully-fledged e-commerce system could be found. The author wanted to learn from these organisations how they managed to overcome the barriers to implement fully-fledged e-commerce websites. In Chapter 8, Level 1 and 2 websites were described, and in this chapter the focus will be on the fully-fledged e-commerce websites which will be referred to as Level 3 websites. The method used to obtain the websites is described in Chapter 4.

9.2.2. The Instrument Used

As the tourist organisations were geographically widely dispersed in the two different countries, a questionnaire was used to collect the data. As there were relatively few organisations with fully-ledged e-commerce websites a direct

approach of a personal contact was used. The printed version was personally administered by a contact in South Africa. However, as it was not cost effective for the questionnaire to be personally administered to just two Kenyan organisations it was decided to send it to the tourism organisations as an e-mail attachment. The questionnaire was also sent as an e-mail attachment to those organisations which the contact person in South Africa could not reach. The e-mail was directed to the person in charge of either the ICT or the e-commerce activities within the organisation.

The questionnaire administered to organisations with fully-fledged e-commerce websites (see Appendix 5) consisted of the following four main sections:

1. The first section collected general demographic data about the organisation which include the type of organisation, the country where it is based and the geographical setting in which it is located. This information helped the author draw up patterns and trends of e-commerce barriers in the four African countries.
2. The second section, which is the smallest, gathered data about the type of connection organisations used to gain Internet access. This information helped determine if there was any link between the type of connection and any particular type of e-commerce barrier.
3. The third section collected data about e-commerce constraints faced by the various organisations. The e-commerce barriers were put into the following categories: organisational, financial, technological, and behavioural and security and legal. For each barrier there were the following three options 'Was never a problem', 'Problem now solved' and 'Problem still exists'. If an organisation selected either of the first two options, then they were asked to briefly outline how they managed to overcome the barrier. If they select the last of the three options then they were asked to outline how they intend to overcome the constraint.
4. From the last section the tourism organisations selected areas on which they would like to receive some training. The organisations could select more than one area of training.

9.2.3. Determining Ways to Overcome the E-Commerce Barriers

The survey of organisations with fully-fledged e-commerce websites took place after the returns from the organisations with information-only websites and those with limited interactive facilities. This enabled some of the questions regarding potential barriers to e-commerce to be eliminated on the grounds that any barrier that was not considered important by those organisations, who had not yet implemented a full e-commerce system, was not likely to be a problem for organisations that had already passed the implementation stage. In addition, some questions were obviously irrelevant. For example, it is clear that an organisation that had already decided to implement an e-commerce system, would not then say that e-commerce was not relevant to their organisation or that the product offered was not suitable for e-commerce.

From the organisational barriers, the following questions were omitted because they were not relevant to organisations who had already decided to implement a full e-commerce system:

- E-commerce not relevant to my organisation
- Product not applicable for e-commerce
- No incentives as few competitors online

The following organisational barriers were dropped because the majority of organisations previously surveyed felt that they were not a problem:

- My organisation can't quantify financially the impact of e-commerce
- My company is reluctant to change how it operates
- Company is too small
- My organisation does not want to form collaborative partnerships

The following question was removed from the financial barriers category because it was not relevant:

- Advantages of e-commerce are outweighed by costs

In the same category the following questions were removed because most of the organisations previously surveyed indicated that they were not a problem:

- Market uncertainty
- Fear of stronger competition on the Internet
- May lead to loss in productivity
- Few customers are online

9.3. The Findings

9.3.1. General – Location and Type of Organisations

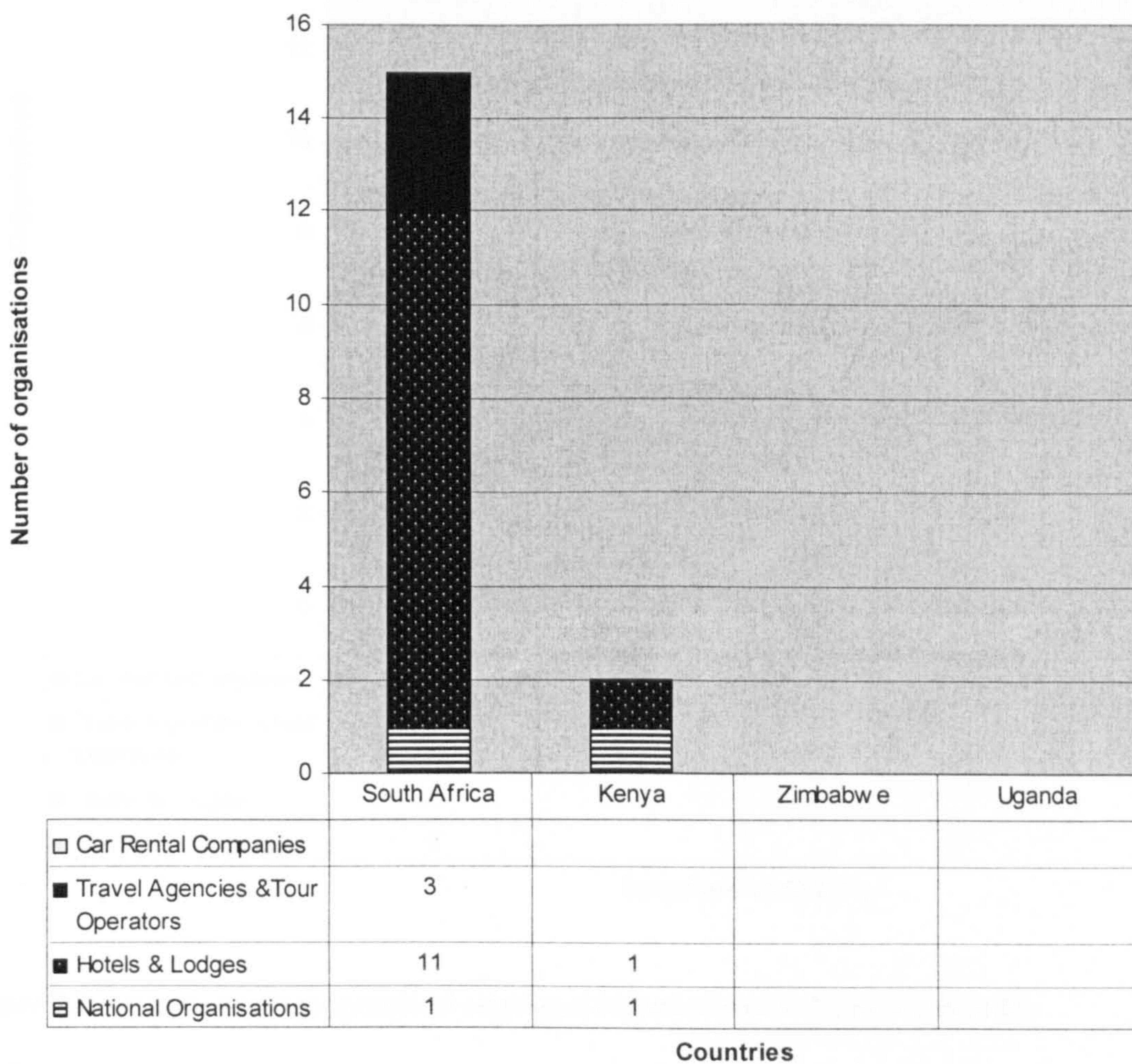


Figure 9.1: Location of the African Tourism Organisations with Level 3 websites

A total of 17 tourism organisations took part in the survey (see Figure 9.1). Of these organisations about seven in every ten is a hotel or lodge whilst slightly less than a fifth are travel agencies and tour operators. The rest of the tourism organisations are national organisations which make up about a tenth of all the organisations. None of the 5 identified car rental companies with fully-fledged e-commerce websites responded to the survey.

9.4.2. General – Rural/Urban Settings of the Tourism Organisations

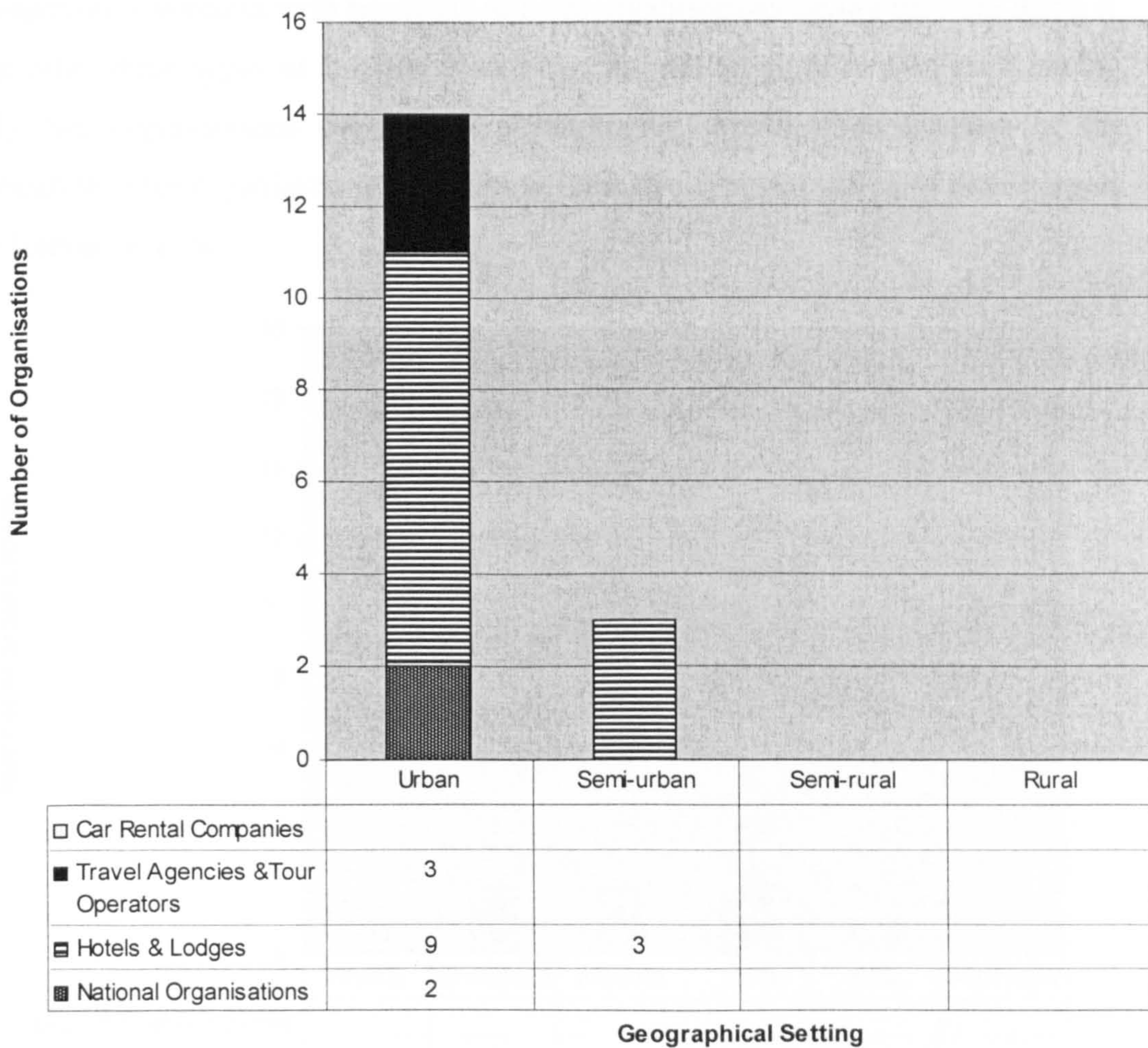


Figure 9.2: Analysis of the geographical settings of organisations with Level 3 websites

In Figure 9.2 the data about the geographical settings of the African tourism organisations are analysed. More than four fifths of all the tourism organisations are located in the urban areas. All of the national organisations, travel agencies and

tour operators and three quarters of all hotels are located in the urban areas. The remaining 17% of the tourism organisations, all of which are hotels, are located in the semi-urban areas. There are no organisations which are located in the semi-rural or rural areas.

9.4.3. General – External Connection to Internet

Of the five types of Internet connections identified by the researcher, broadband connection is the most popular with all the 17 tourism organisations making use of this technology (see Figure 9.3). The second most popular type of Internet connection is wireless with six of the tourism organisations saying they are using it. The other three types of Internet connection are not as popular with each having only two organisations using these technologies. About three quarters of the African tourism organisations are using at least two types of different technologies for Internet access.

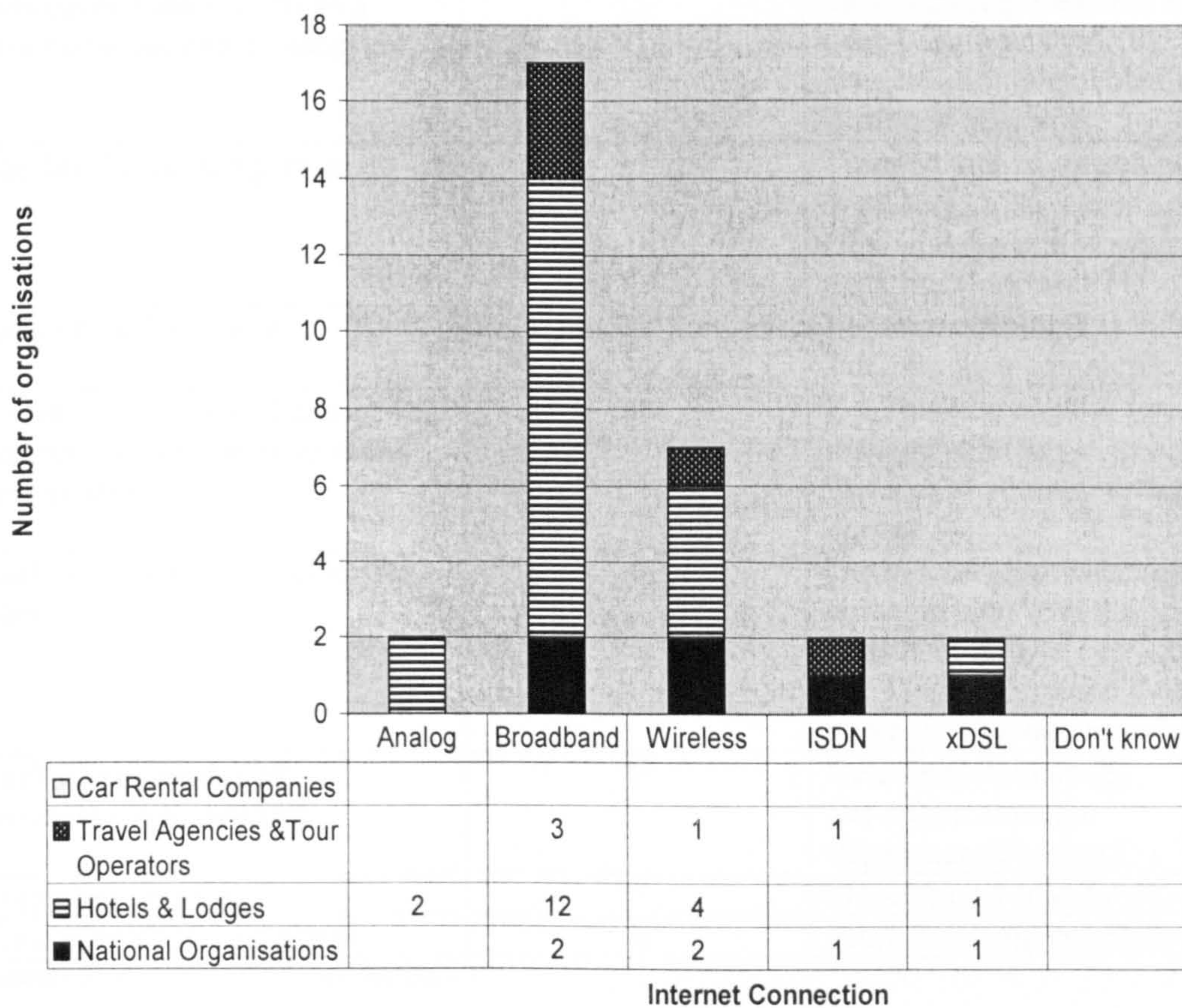


Figure 9.3: Analysis of external connections to Internet used by tourism organisations with Level 3 websites

9.4.4. Organisational Barriers to E-Commerce

Table 9.1 presents analysis of the organisational e-commerce barriers the tourism organisations with fully-fledged websites have managed to solve and the methods they have used to overcome them. In terms of proportion of organisations that still faced the organisational barriers there seem to be little difference between the types of tourism organisations. A large proportion of the travel agents and tour operators are finding lack of knowledge on e-commerce techniques, the indirect costs and the change to business operations to be a problem. This is usually expected of smaller organisations.

Table 9.1: Analysing methods to overcome organisational barriers

Barrier	Number experiencing this barrier	Methods already used to overcome this barrier
Indirect or hidden costs as a result of e-commerce adoption	13	Thorough requirements analysis (9) Cost-benefit analysis(8) Developed/implemented e-commerce system in stages(4)
Too few IT-skilled personnel	11	Training and education programmes in place(11) Human Resource strategy(7) Rotating workforce (1)
Lack of Staff training	11	In-house training(11) Training by e-commerce vendors(6)
E-commerce-induced changes to business operations within the organisation	9*	E-commerce courses for management(5) Developed strategy to deal with change (4)
Lack of E-commerce strategic plan	8	Developed corporate e-commerce strategic plan with the help of consultants(7) Developed corporate e-commerce strategic plan on our own(5)
Lack of knowledge of e-commerce techniques	8*	Courses/Seminars (6) Set up e-commerce department/division (1)
Logistical problems	7	Developed e-logistics(6)
Time it takes to implement	4	Project management techniques(2)

Sample Size: South Africa – 15; Kenya – 2

* - indicates that this barrier is still outstanding for some tourism organisations

Again, not surprisingly, the smaller organisations like the travel agencies and tour operators relied mainly on external expertise like the consultants and the e-commerce vendors to overcome the organisational barriers. Only one organisation, which is yet to overcome the barrier 'E-commerce-induced changes to business operations within the organisation', said it would change the management structure to adapt to e-commerce induced changes. The tourism organisation which still does not have an e-commerce strategic plan said it is in the process of developing a functional strategic plan and a business strategic plan. More detailed results broken down by organisation type are in Appendix 8

9.4.5. Financial Barriers to E-Commerce

Table 9.2: Analysing methods to overcome the financial barriers

Barrier	Number experiencing this barrier	Methods already used to overcome this barrier
Investment risk	13	Return on Investments(10) Investment Risk Analysis(7) Cost-Benefit Analysis(2)
Cost of Implementing and maintaining e-commerce system	9	Bank Loan(8)
Cost of staff training and education	4	Separate budget for training(5)

Sample Size: South Africa – 15; Kenya – 2

The barriers involving costs and investment risks are, unsurprisingly, more likely to be a problem for smaller organisations like travel agencies and tour operators (see Table 9.2). None of the African tourism organisations said that they are still facing any financial barriers.

Getting a bank loan together with calculating return on investments and investment risk analysis were the most popular methods of overcoming financial barriers to e-commerce adoption and usage among the African tourism organisation. It seems the tourism organisations decided to invest in e-commerce systems after analysis of return on investments and investment risk showed that it is a worthwhile investment. The methods used to overcome the financial barriers constitute standard business methods which show the need for the organisations to have

qualified business managers if they are to successfully venture into e-commerce. More detailed results broken down by organisation type are in Appendix 8.

9.4.6. Technological Barriers to E-Commerce

Table 9.3: Analysing the methods for overcoming the technological barriers

Barrier	Number experiencing this barrier	Methods used to overcome
Technology too complicated	12	Set up e-commerce department/division(12) Courses/Seminars(5) Subscribe to e-commerce magazines and journals(1) Updates from e-commerce vendors(1)
Lack of external support to maintain an e-commerce system	12*	Set up e-commerce department/division(12) Receive technical support online or by phone(7)
Fear of choosing an e-commerce solution that is incompatible with existing systems	11	Set up e-commerce department/division(8) Got help from consultants(5) Middleware(1)
Existing financial systems currently do not support online payment	11*	Outsourced payment processing(6) Prepayment system(6) Sought help from International banks(2)
New versions of software introduced too often	10*	Set up e-commerce department/division(6) Updated by vendors regularly(6) Subscribe to journals/magazines(3) Seminars by vendors(1) Updates from vendors' websites(1)
National Telecommunications too slow and unstable	9*	Upgraded Internet connection(8) Second Internet connection(3)
My organisation does not have the required IT infrastructure	8	Upgraded ICT infrastructure(5)

Sample Size: South Africa – 15; Kenya – 2

*- indicates that this barrier is still outstanding for some tourism organisations

Most of the tourism organisations especially the travel agencies and tour operators found the technological barriers to be a problem (see Table 9.3). It is not surprising as these organisations would not have the same technical resources to draw on as the bigger tourism organisations. However, methods for overcoming the barriers did not significantly vary for the different organisation types. Four organisations still to overcome the barrier 'Existing financial systems currently do not support online payment', whilst two organisations are still to solve problems concerning the national telecommunications.

Setting up an e-commerce division or department or appointing an e-commerce manager is the most popular method for overcoming technological barriers. This method was used to overcome four of the technological barriers which are 'Lack of external support to maintain an e-commerce system', 'Fear of choosing an e-commerce solution that is incompatible with existing systems', 'Technology too complicated' and 'New versions of software introduced too often'. Most of the methods employed to overcome the technological barriers showed strategic thinking by the African tourism organisations, examples being setting up an e-commerce division and to outsource receiving payments. Using the phone and the Internet are the only practical ways by which the African tourism organisations can receive technical support as it not widely available in the remote areas. Although most of the tourism organisations have devised means to overcome problems concerning national communications there is still some work to be done at a national government level to improve the situation across the whole economy. More detailed results broken down by organisation type are in Appendix 8.

9.4.7. Behavioural Barriers to E-Commerce

The most common behavioural barrier that the organisations have already overcome is 'Trained staff leaving' (see Table 9.4) with almost three in every five tourism organisations saying they have already solved this problem and it exists worldwide (van Slyke and Belanger, 2003). Losing trained staff is always a problem in areas where there is a shortage of staff as staff will have many

opportunities to be tempted away. This speculation is confirmed by the fact that half the organisations with this problem have had to raise salaries to keep their trained staff.

To overcome the barrier 'Lack of management support' four of the five organisations that overcame this barrier said their solution to this problem was to involve management in all aspects of e-commerce project management, whilst one hotel solved this problem by sending their management to e-commerce-experience-sharing seminars. A tourism organisation needs full management commitment and involvement in the e-commerce venture. This shows that good human resource management is necessary in Africa, like it is elsewhere, for smooth e-commerce adoption and usage. More detailed results broken down by organisation type are in Appendix 8.

Table 9.4: Analysing methods for overcoming the behavioural barriers

Barrier	Number experiencing this barrier	Methods used to overcome
Trained staff leaving	10	Revised salaries of key staff(5) Staff need to be committed before being sent for training(3) Trained more people than is required by organisation(1)
Existing personnel reluctant to use an e-commerce system	6	Assured staff of their jobs(2) Explained importance and advantages of e-commerce adoption(2) Seminars/Courses(2) Personnel have to use e-commerce systems(1)
Existing personnel reluctant to learn e-commerce techniques	5	Assured staff of their jobs(2) Seminars/Courses(2) Explained importance and advantages of e-commerce adoption(1) Personnel have to learn how to use e-commerce systems(1)
Lack of management support	5	Involve management in all aspects of e-commerce project management(4) Experience-sharing seminars(1)

Sample Size: South Africa – 15; Kenya – 2

9.4.8. Security and Legal Barriers to E-Commerce

Of the five categories of e-commerce barriers, the security and legal barriers had the largest proportion of organisations that are yet to solve these problems (see Table 9.5). The least common problem is 'No legal system to regulate e-commerce operations' as about three quarters of all the African tourism organisations said it was never a problem. However, the remainder said they found it a problem that they were not yet able to solve. This shows that while national organisations have put some of the needed legislation in place there is either more to be done in this respect or there is a need for greater awareness of the legislation that exists. In either case this is an issue for the national governments. The reliability aspect is also a serious problem with organisations seemingly lacking in confidence that their finances will be properly handled by the technology. Most organisations also regard this as a worry for their customers.

Analysis of the methods used to overcome security and legal barriers show that organisations are aware of the problems but they are also aware that the software technology exists to overcome these problems. The use of SSLs and other technologies which enhance privacy and security shows the need for technical competence, suggesting a need for well trained and qualified technical staff. Most of the security problems concerning payment could be reduced or eliminated by outsourcing the online payment mechanisms to a reputable and reliable company. The disaster recovery plan to ensure availability of services 24/7, again, is a management issue and shows the need of competent managers in place. More detailed results broken down by organisation type are in Appendix 8.

Table 9.5: Analysing methods used to overcome security and legal barriers

Barrier	Number experiencing this barrier	Methods used to overcome
Viruses and bugs	12	Anti-virus software (13) -regularly updated(8) -with live updates(3) Virus alerts through e-mail(2)
No mechanism to guarantee customers secure transactions	12*	Privacy and security statements on website(12) Trust Seal(4) Security Payment Link(3) Cancellation Policy
Customers do not trust e-commerce technology	12	Privacy and security statements on website(12) Promotional campaigns(8) Cancellation Policy(5) Trust seal(4)
Potential theft of business information	10*	Firewall(11) Encryption(8) Anti-spyware(7) User Accounts(6) Proxy server(3) Digital certificates(2) Digital Signatures(1) Audit Logs(1) Entrapment server(1)
Security problem concerning payment	10*	User accounts(7) Encryption(5) SET(5) Digital Signatures(4) SSL(4)
Reliability of e-commerce systems	10*	Disaster Recovery Plan(7) Additional Internet connection or line(3) Dedicated network management team(2)
My organisation does not trust e-commerce technology	6	Trial Versions(1) Ran dual systems(1) E-commerce seminars for management(1)

Sample Size: South Africa – 15; Kenya – 2

*- indicates that this barrier is still outstanding for some tourism organisations

9.4.9. General – Training Requirements

Table 9.6 shows the analysis of the areas related to e-commerce and the Internet in which the African tourism organisations believe they need some training. The most popular area of training is ‘Information security’ which was selected by more than half of the African tourism organisations. Slightly more than a third of the tourism organisations want to know more about developing Internet strategies whilst another third want to learn more about e-commerce opportunities available. The least popular area of training is ‘IT Networking’ which was selected by only one organisation. About one in every three organisations said that they did not require any training.

Table 9.6: Analysing areas of training requested by organisations with Level 3 websites

Organisation Training	National Organisations	Hotels and Lodges	Travel Agencies and Tour Operators	Car Rental Companies	Total Number of Organisations
Information Security	1	6	3	-	10
Developing Internet Strategies	1	3	2	-	6
E-Commerce Opportunities Available	-	3	2	-	5
None	1	4	-	-	5
Business Software	-	3	-	-	3
Website Architecture and Design	-	1	1	-	2
IT Networking	-	-	1	-	1
Don't know	-	-	-	-	0

Sample Size: South Africa – 15; Kenya – 2

9.5. Conclusions

The bulk of the websites were from South African organisations confirming that this country is the leading nation in e-commerce usage and adoption amongst the four countries studied. Twelve of the 17 organisations were either hotels or lodges showing that this is the leading industry in e-commerce adoption in the tourism sector. With four fifths of the tourism organisations from the African countries being located in the urban areas, this shows that e-commerce development is still concentrated in the urban areas where the telecommunications infrastructure is more modern and more reliable. This is confirmed by the fact that all the organisations who took part in this survey, most of whom are located in the urban areas, have broadband Internet connection. The only two tourism organisations which used the standard telephone line for Internet connection were located in the semi-rural areas.

Results of the analysis of the organisational barriers showed that in general tourism organisations have managed to overcome the organisational barriers. None of the tourism organisations are still to solve the organisational barriers and this shows that the organisations managed to overcome barriers they have total control over. These are the barriers the organisations which intend to adopt and use e-commerce must overcome or else 'they would find themselves being swallowed up or simply destroyed by their more forward thinking competitors' (van Slyke and Belanger, 2003). For most of the organisational barriers the tourism organisations used their own resources to overcome them except in developing corporate e-commerce strategies and staff training, where they required some external expertise. Adopting e-commerce technologies requires massive change for most organisations and most of the African organisations did this by either developing a strategy to deal with change or by fine-tuning managerial expertise through e-commerce courses for management. It can be safely concluded that the African organisations managed to gain an understanding of the impact of e-commerce by carrying out thorough investigations of e-commerce requirements in relation to their organisation's business context as well as cost-benefit analysis of e-commerce adoption.

E-commerce technology is very dynamic and it is advisable for organisations intending to adopt e-commerce to proceed with a clear strategic plan, otherwise the organisations will never accomplish anything of substance with respect to e-commerce (van Slyke and Belanger, 2003). In general these are standard management techniques which are neither unique to e-commerce or to Africa. It shows that for African e-commerce to develop, highly competent, well trained managers are needed.

Most of the organisations did not have problems getting the financial resources required for implementing and maintaining e-commerce systems or for staff training and education. To overcome the financial barriers most of the African organisations calculated their return on investments before they acquired the resources from financial institutions. Although the benefits of e-commerce adoption is no longer an issue of debate, the tourism organisations wanted to be convinced that they would get their money's worth if they adopt e-commerce. This just shows that although financial resources are available for some organisations, e-commerce projects for most African organisations are just too big for them to invest in without being worried about the risk involved. Once again, the need for careful investment requires the use of risk analysis and financial planning techniques that are the realm of the competent, well trained manager.

Of the seven technological barriers identified, only one barrier concerning ICT infrastructure was never a problem for the tourism organisations from the two African countries. This was probably as a result of efforts by African governments to liberalise the ICT industry making way for cheaper and more affordable ICT. Most of the tourism organisations created their own expertise by setting up e-commerce divisions or departments to overcome most of the technological barriers. The tourism organisations in some cases, relied on external sources but usually settled for cheaper solutions like e-commerce vendors websites, journals or receiving technical support online or by phone rather than have it onsite. There is one technological barrier which is still a problem to the African tourism organisations and that is the lack of a modern online payment infrastructure.

Although the tourism organisations have little control over this barrier, most have made an effort to find ways to get round this problem by either outsourcing these services or having in place temporary alternative measures like prepayment systems which, in most cases, seem to be working well as the African organisations continue to receive and make payments online.

There seem to be no resistance to e-commerce-induced change among the employees of most tourism organisations as three quarters of the tourism organisations said they never had any such problems. Change usually involves learning new techniques and processes and most of the employees seemed happy with these changes. Most of the tourism organisations also received support from management who are usually the key decision makers within any organisation. The barrier which was a problem to organisations is retaining key ICT personnel. Many ICT-skilled personnel leave sub-Saharan Africa for the developed countries where there are better working conditions and higher salaries. Half the organisations with this problem had resorted to paying their key employees more to retain them. For those tourism organisations that faced resistance to change, they either assured the employees of their jobs or had the affected personnel learn new skills through seminars and courses. Most of the organisations managed to get support from management by making them part of the e-commerce project. These methods show the value of expertise in good human resource management in these organisations. South Africa has one of the biggest economies in Africa so it not surprising that most of the organisations based there overcame the barrier 'Trained staff leaving' by improving the working conditions and salaries for ICT skilled staff.

Most of the organisations still faced many security and legal barriers with 61% saying they were a problem they had to overcome and a further 28% said they are yet to overcome at least one of the identified security and legal barriers. While most organisations thought the legal system to regulate e-commerce operations was adequate as they have an e-commerce policy as an act of parliament, some organisations still regarded this regulation to be insufficient. This is a problem for national governments who must either improve the legislation or make

organisations better aware of the legal regulation that already exists. The bulk of the 17 African tourism organisations have managed to protect their e-commerce systems from any security threats by employing technologies such as proxy servers, anti-virus software with live updates, SET, SSL, and data encryption. One opportunity that organisations concerned with security and confidence issues should explore is the outsourcing of payments. This simple step could overcome many of the security problems encountered.

The areas of training wanted by most of the tourism organisations fall into two areas, technical and managerial. The technical concern is first and foremost that of security of e-commerce systems. In the managerial area the organisations wanted to learn more about developing strategies and the e-commerce opportunities available. However, the analysis of the results of this survey suggests that all areas of management are needed to a high standard for e-commerce success. This means that standard management training in financial, strategic planning and human resource management are all necessary as well as specific training on e-commerce. More training in these areas will be able to provide the much needed knowledge the tourism organisations require to overcome these barriers to e-commerce implementation.

The survey described in this chapter has shown that it is feasible for a tourism organisation based in the two countries surveyed to overcome the barriers to e-commerce adoption and set up a fully fledged e-commerce system. Although no survey results were available from Zimbabwe or Uganda, the author has been unable to determine any significant differences between the environment in these countries and that of the two countries surveyed, with the possible exception that the stronger financial position of South Africa may mean there is better national infrastructure and support available. While this may make progress into e-commerce harder in Kenya, Uganda and Zimbabwe the methods used to overcome the barriers to e-commerce used by the organisations in this survey are also available in these three countries. It is believed, therefore, that the findings of the analysis in this chapter are applicable to all the southern African countries.

This survey has also shown that the tourism organisations can use their own initiative to break the barriers rather than waiting for the government and other supporting organisations to act. An investigation by the researcher revealed that Cyberplex Africa which is based in Zimbabwe and South Africa (Cyberplex, 2006) and Microsoft Africa with offices across Africa including South Africa and Kenya (Microsoft, 2006) provide e-commerce solutions and technical support, and yet a number of organisations said they could not adopt e-commerce because of the lack of such products and services. It can therefore be concluded there is a strong relationship between overcoming barriers and knowledge. By providing the relevant knowledge more tourism organisations from the four African countries can set up fully-fledged e-commerce websites and thus break into the more lucrative international tourism market.

It is therefore recommend that the tourism organisations from the four African countries and all of sub-Saharan Africa carry out thorough investigations and consult their counterparts in the tourism and other related industries to overcome whatever hurdles they face in adopting and using e-commerce. The national governments of these African countries need to make e-commerce a national issue and make its operating environment conducive for e-commerce development and growth. The recommendations and guidelines for overcoming the e-commerce barriers are discussed in more detail in Chapter 10. The tourism industry is very important for the economies of these countries and breaking into the lucrative international tourism market will ensure more foreign currency flows which most African countries desperately need.

CHAPTER 10 – FORMULATING THE RECOMMENDATIONS AND GUIDELINES FOR THE AFRICAN TOURISM ORGANISATIONS

Chapter Preface

In this chapter the author describes how the recommendations and guidelines for the tourism organisations from sub-Saharan Africa were formulated. The author does not only describe how there were formulated but also how they were derived. These recommendations and guidelines are meant to help the African tourism organisations evolve their websites into fully-fledged e-commerce systems and they also outline what the national governments and other supporting industries need to do to make the environment conducive for e-commerce development and growth. The result of this exercise was a recommendations and guidelines document suitable for distribution to any tourism organisation in sub-Saharan Africa that is involved in e-commerce or is considering becoming involved in e-commerce.

The recommendations and guidelines document was circulated to the tourism organisations in sub-Saharan Africa. The document was also circulated to experts in the areas of e-commerce and tourism who are based in Africa and government officials responsible for promotion of tourism in the African countries. The main aim of this exercise was to get opinions of the tourism organisations, experts and government officials on the usefulness of the document. The analysis of the comments showed that the recommendations and guidelines are a welcome development for the tourism industry in sub-Saharan Africa which will help the tourism organisations overcome the barriers to adopt and use e-commerce.

10.1. Introduction

One of the main objectives of this research study was to develop recommendations and guidelines for the tourism organisations who intend to adopt and use e-commerce systems. These recommendations and guidelines were designed to make the tourism organisations more competitive and be able attract new customers as well as retain the existing ones. They will also enable organisations with websites which have not evolved into fully-fledged e-commerce systems to do so and so be able to penetrate the international tourism market. The recommendations and guidelines are, as a result, divided into two broad categories: those which focus on the e-commerce websites and those that look at how the tourism organisations can overcome the barriers to e-commerce.

10.2. Formulating Recommendations and Guidelines for E-commerce Websites

The Internet is now being used for commercial activities by many organisations of different sizes worldwide. According to Udo and Marquis (2002), business organisations have accepted and adopted e-commerce technology at a faster rate than any other technology in the history of mankind. As commercial transactions are carried out on websites using Internet technology, the website becomes one of the most important components of an organisation intending to achieve e-commerce success. For a website to be able to achieve its objectives, it must be able to provide a satisfactory purchasing experience as well as customer satisfaction. The following sections provide the details on how the recommendations and guidelines for the specific e-commerce features were derived.

10.2.1. E-commerce Features

The recommendations and guidelines for e-commerce features were designed to help the tourism organisations from sub-Saharan Africa evolve their websites into those which provide a purchasing experience to customers worldwide. Websites which provide a purchasing experience have facilities which would enable the customers to make reservations in real time as well make payments on the website. The guidelines were derived from Chapter 4, Section 4.3 where the researcher examined features of fully-fledged e-commerce websites. The recommendations were formulated after the author carried out the survey which involved examining the websites of the various tourism organisations in an effort to determine the nature and extent of e-commerce activities in sub-Saharan Africa. The method used in this survey is described in Chapter 4, Section 4.3.1 and the analysis of the results is presented in Chapter 5, Section 5.2.

10.2.2. Electronic Customer Relationship Management (eCRM)

The review of the relevant literature, which is described in Chapter 2, showed that eCRM, which is an extension of e-commerce, is very important as it helps organisations gain new customers and retain old ones. ECRM entails companies gathering data and information about their customers' needs, wants and preferences, to bring together e-commerce transactions and the traditional customer service. The recommendations and guidelines will help the tourism organisations to encourage their customers to keep re-visiting their websites. The guidelines for evolving websites to employ e-commerce features are described in detail in Chapters 4 and 5

10.2.3. Web-Based Promotional Techniques

The tourism organisations from sub-Saharan Africa need to take advantage of the growing Internet user population to market its products and services. The review of literature discussed in Chapter 2 has revealed that the travel and tourism industry needs to develop and implement marketing strategies to achieve e-commerce success. The guidelines for incorporation of web-based facilities were derived from Chapter 4, Section 4.3.3 which described the method used to examine the nature and extent of the promotional activities taking place on the websites of tourism organisations based in the four African countries. The recommendations were derived after analysing the data obtained through the survey.

10.2.4. Offline Promotional Techniques

In section 10.2.3 the author described the recommendations and guidelines for incorporating web-based promotional techniques. In addition to these, the tourism organisations need to employ offline promotional techniques. These are activities organisations can use to make Internet users aware of the existence of their websites through different media. The following are some of the ways by which the tourism organisations can promote their websites which are not Internet-based and these were derived from review of the relevant literature:

- Wide exposure of the website's uniform resource locator (URL) by displaying the website URLs on billboards, newspaper and television advertisements, cars and busses, and souvenirs such as t-shirts, caps, umbrellas and bags (Davis, 2000; Chaffey et al, 2003; Slocombe, 2001; Zeff and Aronson, 1999)
- The tourism organisations can have the URL of their websites included on all the press releases, newspaper and magazine advertising, and other publications (Davis, 2000; Zeff and Aronson, 1999)

10.2.5. Knowledge Transfer Facilities

The fierce competition within the e-commerce industry makes knowledge important for e-commerce organisations as each organisation's capacity to create and sustain competitive advantages lies in what it knows, not what it owns (Johannessen & Olsen, 2003). The recommendations and guidelines to employ knowledge transfer facilities were designed for tourism organisations based in the four African countries to take advantage of the Internet which generates large volumes to acquire, maintain, exchange and access knowledge to improve their competitiveness. The facilities which would enable the African tourism organisations to acquire, distribute and apply knowledge are described in Chapter 4, Section 4.3.4 and the recommendations were derived after analysing data obtained from a survey to examine knowledge transfer facilities on African websites.

10.2.6. Increasing Traffic to Websites

Sections 10.2.2 and 10.2.3 describe how the recommendations and guidelines were derived for incorporating facilities on websites to keep customers visiting the websites. This section discusses the recommendations and guidelines which will help the tourism organisations set up their websites in such a way that they attract more traffic. Although increasing traffic on websites is an extension of eCRM, the facilities recommended in this case are not visible on the websites but are underlying beneath the websites. The recommendations and guidelines were derived after analysing traffic data gathered for some websites of African tourism organisations. Analysis of the traffic data obtained through a survey described in Chapter 4, Section 4.3.5 showed that the African websites were not attracting sufficient traffic. These findings then led to the formulation of recommendations and guidelines that would help the African tourism organisations to improve traffic to their websites.

10.3. Web Content Accessibility and Usability

A successful e-commerce website should not only have the appropriate facilities to carry out transactions online but should be accessible and usable by all people, including those with disabilities. The recommendations for providing websites which are usable and accessible were derived from analysis of data gathered in three surveys. In two of these surveys, discussed in Chapter 6, online tools were used to measure accessibility and usability of websites. In the third, a list of heuristics were used to measure the usability of the websites and this research is reported in the paper 'An Evaluation of the Use of the Internet to Promote Tourism in Four African Countries' which was presented at the Software Quality Management Conference in May 2003 in Glasgow, Scotland. The heuristics were used to measure some aspects of web usability and accessibility which could not be measured by the online tools. Some of these aspects which could not be measured by the online tools include visual appeal, interactivity and download times. These recommendations and guidelines will enable the websites of the tourism organisations from the four African countries to be more accessible and usable so that they could be able to capture that market which is not being catered for on other websites.

10.4. Overcoming the Barriers to E-Commerce

These recommendations and guidelines were formulated to help the tourism overcome the barriers to e-commerce. First of all the barriers were classified as follows:

- Organisational barriers
- Financial barriers
- Technological barriers
- Behavioural barriers
- Security and legal barriers

Secondly the importance rating and the problem rating of the barriers were measured to determine the most problematic barriers to e-commerce. These surveys are described in more detail in Chapter 8. A questionnaire was administered to organisations which have already adopted e-commerce to find out how they overcame these barriers which are still a problem to other African tourism organisations. The tourism organisations which have already adopted e-commerce were asked to list for each of these problematic barriers the methods they used to overcome them. This survey is described in Chapter 9. The methods used by the organisations formed the basis for the formulation of the recommendations and guidelines for overcoming the barriers to e-commerce which are still being faced by the majority of tourism organisations in the four African countries.

In addition to the recommendations and guidelines for the tourism organisations, the author also formulated recommendations and guidelines for supporting organisations and the national governments of the African countries. These recommendations will help the national governments and the supporting industries make the environment for e-commerce development and growth more conducive by providing the tourism organisations with the necessary infrastructure and support services. Analysis of the methods used to overcome the barriers to e-commerce revealed that the African tourism organisations will need help from national organisations and other supporting industries to overcome them.

The barriers where the tourism organisations will need the help and support of national governments to overcome them include:

- Too few IT-skilled personnel within the organisation
- Too few IT skilled personnel nationally
- My organisation does not have the required IT infrastructure
- National Telecommunications too slow and unstable
- No legal system to regulate e-commerce operations

The barriers where the tourism will need the help of supporting industries like finance and ICT to overcome them include:

- Too few IT-skilled personnel within the organisation
- Too few IT skilled personnel nationally
- Existing financial systems currently do not support online payment
- Lack of external support to maintain an e-commerce system

Recommendations and guidelines were then formulated so that the national governments and supporting industries can help the tourism organisations based in the four African countries overcome the above-listed barriers. These are listed in the next two sub-sections.

10.4.1. Recommendations for the National Government Organisations in Sub-Saharan Africa

- Make e-commerce adoption and usage a national issue as its success will mean increased foreign currency flows from the international tourism market. There is a need to educate, co-ordinate and motivate the various sectors of the economy to adopt and use e-commerce technologies and techniques.
- Spear-head the formulation of a legal framework to regulate e-commerce operations. The lack of a comprehensive legal system within the e-commerce environment will result in most of the customers not carrying out the transactions to completion because of the concerns about contract enforcement, intellectual property protection, liability, jurisdiction, privacy and security.
- Work effectively with various partners to provide basic reliable Internet connectivity across the whole economy (the government owns and manages the national infrastructure in the four countries, including the telecommunication systems).
- Liberalise the ICT industry through national ICT policies to make it possible to provide affordable computers and Internet access.

- Recognise that e-commerce depends on liberalised communications market and should make sure that there are no constraints on private sector investment so that there are equal opportunities for access.
- Devise a regional e-commerce strategy to encourage countries within the region to cooperate in specific initiatives, plans or standards in e-commerce development and research projects.
- Encourage the setting up of training facilities and resources for the essential management and technical skills required for e-commerce.

10.4.2. Recommendations to Supporting Industries

- For e-commerce to prosper it will need the support of a strong and efficient financial services infrastructure so as not to lose potential sales through putting procedural barriers in the customer's way. Financial institutions need to implement financial systems to support online payment by customers from all over the world with the introduction of Internet banking.
- The most popular method of payment online is by credit card and unfortunately credit card usage is still very low within sub-Saharan Africa. The financial institutions need to promote and encourage the usage of credit cards among businesses and private customers which is the principal method of settling e-commerce transactions.
- Organisations which provide external technical support to e-commerce organisations should make their products and services known to various organisations through online and offline promotional techniques. The features for online techniques are discussed in more detail in Chapter 4 whilst some of the off-line promotional techniques are discussed in section 10.2.4
- Universities from the four African countries should incorporate into their various programmes e-commerce courses. This would help create a huge ICT-skilled manpower base conversant with e-commerce technologies and capable of dealing with the challenges of the emerging electronic marketplace.

- Researchers from universities and research institutions in sub-Saharan Africa should use the research described in this thesis as a platform to launch projects to examine other e-commerce issues in an effort to come up with solutions unique to the African environment.

10.5. Areas of Training

In the surveys described in Chapters 8 and 9 the tourism organisations were asked to identify the areas of training they would like to receive which could help them in overcoming the barriers to e-commerce. The following are the areas of training requested by the African tourism organisations in order of their popularity:

- Information Security
- IT Networking
- Developing Internet Strategies
- Business Software
- Website Architecture and Design
- E-Commerce Opportunities Available

Analysis of the results in Chapter 8 showed that the areas of training were not adequate to help the tourism organisations from the four African countries overcome the e-commerce barriers. As a result the author suggests areas of training which would help the organisations overcome the most important barriers to e-commerce.

The following are some of the courses which could help the tourism organisations overcome the barriers that were not covered in the requested areas of training:

- *Building e-commerce applications* – This covers the technical aspects of e-commerce development. It could help overcome the following barriers: ‘Reliability of e-commerce systems’, ‘Technology too complicated’, ‘New versions of software introduced too often’, ‘Lack of external support to maintain an e-commerce system’

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- *E-commerce website security* – These e-commerce courses examine the various technologies which can make a website more secure. They could help overcome the security and legal barriers such as ‘Potential theft of business information’, ‘No mechanism to guarantee customers secure transactions’, ‘Security problem concerning payment’
 - *Basic Electronic Transactions* – These courses will examine all the aspects of online payment which include authorisation, payment methods, credit card validation, integrating an e-commerce system with other business systems, Secure Electronic Transactions (SET). They could be used to overcome the barriers ‘Security problem concerning payment’, ‘No mechanism to guarantee customers secure transactions’, Fear of choosing an e-commerce solution that is incompatible with existing systems’
 - *E-commerce system administration* – This course looks at how to install, maintain and configure an e-commerce system. The course would help overcome the barriers ‘Reliability of e-commerce systems’ and ‘Lack of external support to maintain an e-commerce system’

The following managerial training requirements were derived after analysing the methods needed by the tourism organisations to overcome the barriers to e-commerce in Chapter 9:

- *Financial investment and planning* - These courses will teach essential management techniques of cost-benefit analysis, return on investment, risk analysis, through life costing and preparing a business case. These basic management techniques are not unique to e-business planning and benefit could be obtained from any management course covering these techniques. These courses would help overcome the barriers of ‘Indirect or hidden costs’, ‘Cost of implementing and maintaining e-commerce system’, ‘Investment risk’ and ‘Advantages of e-commerce are outweighed by costs’
- *Management of change* - These courses will teach essential management techniques such as business modelling, logistics and business process re-engineering. Again, these are basic management techniques that are not unique to e-commerce and they will help overcome the following barriers:

‘My organisation does not have a strategic plan for e-commerce’, ‘My company is reluctant to change how it operates’, ‘Logistical problems’, ‘Company is too small’ and ‘Time it takes to implement changes’

- *Human resource management* - These courses would cover techniques to introduce new cultures and working practices and means of training and retaining essential personnel. These are further basic management techniques that are not unique to e-commerce and will help overcome the barriers of ‘Too few IT-skilled personnel’, ‘Lack of staff training’, ‘Existing personnel reluctant to use an e-commerce system’, ‘Existing personnel reluctant to learn e-commerce techniques’ and ‘Trained staff leaving’

10.6. The Recommendation and Guidelines Document

The recommendations and guidelines were then compiled into a document. This document was then sent to the tourism organisations that took part in the research project, to national government officials and to experts in the areas of e-commerce and tourism from the four African countries. The aim of this exercise was to find out the opinions of the above-mentioned individuals and organisations on the content of the document. This would help determine whether the recommendations and guidelines will work for all the tourism organisations based in the four African countries and other sub-Saharan African countries. A copy of the recommendation and guidelines document is given in Appendix 9.

10.7. Testing the Recommendations and Guidelines

The recommendations and guidelines needed to be tested to find out if they will indeed help the tourism organisations overcome the barriers to e-commerce. This would then enable the organisations to implement fully-fledged e-commerce systems and then break into the lucrative international tourism market. This will mark the beginning of African tourism organisations’ journey to realising their tourism potential.

10.7.1. Circulating the Recommendations and Guidelines

The 'Recommendations and Guidelines Document' was sent as an e-mail attachment to 554 tourism organisations based in South Africa, Kenya, Zimbabwe and Uganda. These organisations were also invited to submit their comments to the author. The tourism organisations from the four African countries are the same ones which were used in the surveys described in Chapter 8 and 9. The method used to find the websites and details of these organisations is described in Chapter 4. This use of e-mail was preferred to other methods of circulating the document, such as postal mailing, because it was cheaper, faster and readily available in most organisations (Tassabehji, 2003). The author used open questions which are more flexible as they allow the respondents to comment on any other issue of their choice relating to the document (Weisberg and Bowen, 1977). These tourism organisations were asked to comment on two aspects of the document which are usefulness and ease of use.

This 'Recommendations and Guidelines Document' was also sent to 96 tourism organisations in other African countries to which tourism is significant, these countries being Namibia, Tanzania, Mauritius, Seychelles, Zambia and Botswana (Christie and Crompton, 2001). The websites and contact details of the tourism organisations were found using the same method described in Chapter 4. The aim was to find if the document formulated on the basis of data collected in South Africa, Kenya, Zimbabwe and Uganda will work in other African countries offering the same type of tourism.

The same document was sent to 12 experts in the areas of e-commerce and the tourism industry based in sub-Saharan Africa and 15 Government officials from the same African countries to seek their opinion of this document. The experts were identified during a brainstorming session which involved the author and three lecturers from the Computer Science Department at Loughborough, Ray Dawson, Janet Edwards and Tom Jackson whilst the contact details of the government officials were obtained from websites of government departments which are

directly responsible for the promotion of the tourism industry. This was done to obtain the widest range of parties who the author believed would have an interest in the document and its contents.

10.7.2. The Findings

At the time of writing this PhD thesis, 24 replies had been received of which 20 were from South Africa, Kenya, Zimbabwe and Uganda and the rest from the other African countries listed in 10.7.1. Of these, 20 (80%) came from the tourism organisations whilst the remaining four were received from the experts and government officials. The majority (80%) of the responses indicated that the 'Recommendations and Guidelines Document' was very useful for the African tourism organisations and that it was very easy to use. The rest of the respondents indicated that for some reason or the other could not have a look at the document. Some of the reasons included lack of time (2), length of the document (2), not being well versed with e-commerce issues (1) and the fear of downloading attachments (1) from unverified sources.

Professor Paul Licker a well renowned researcher and Associate Editor of the *Journal of Information Technology Cases and Applications and Research* who has worked in and visited no fewer than 5 African countries said of the recommendations and guidelines "*They are at the very least a lot more specific and implementable than what is coming out of civil services in Africa these days*". This just shows that recommendations and guidelines are very practical and detailed. This was as a result of the approach employed by the author whereby the methods and technologies for overcoming barriers to e-commerce were derived from more successful African tourism organisations rather prescribe solutions derived in other environments.

Johan Venter of the Tourism Business Council of South Africa (TBCSA), an umbrella body representing the business sector in the tourism industry and whose members include South African Airways and Avis Car Rental (TBCSA, 2006)

indicated that the Recommendations and Guidelines document “.....*addresses all the issues*”. Barbara Bridge who runs a South African tour operator (Connect South Africa, 2006), pointed out that the document was “.....*informative and well researched*”. This shows that the recommendations and guidelines covers all aspects of e-commerce adoption and will be useful to tourism organisations of all sizes.

By the time this thesis was being written only 4 (20%) responses had been received from tourism organisations based in the other African countries and all of them indicated that the document was useful and easy to use. This indicates that the recommendations and guidelines will not only work in the African countries from which they were derived but in other African countries with the same environments.

Some examples of the messages received from people reviewing the ‘Recommendations and Guidelines Document’ are given in Appendix 14.

10.8. Conclusion

The recommendations and guidelines were extracted from surveys described in different chapters throughout the PhD and then successfully compiled into a document entitled ‘The Recommendations and Guidelines Document’ (see Appendix 9). This document contains recommendations and guidelines which could help the tourism organisations evolve their into fully-fledged e-commerce websites which are both usable and accessible. The document contains methods the tourism organisations from the four African countries can use to overcome the barriers to e-commerce. The document also contains recommendations and guidelines directed towards national governments and supporting industries like finance and ICT so that they provide the necessary infrastructure and products and services to ensure smooth implementation of the e-commerce technologies.

The analysis of all the comments from the practitioners and the academics received at the time of writing the PhD thesis shows that the recommendations and guidelines discussed in the 'Recommendations and Guidelines Document' will provide the foundation from which the African tourism organisations will be able to overcome the hurdles and be able to set up fully-fledged e-commerce websites. Some of the respondents felt that the 'Recommendations and Guidelines Document' was too long therefore a simplified version was produced (see Appendix 10). From the original recommendations document (see Appendix 9) recommendations were devised for specific players in the e-commerce adoption in sub-Saharan Africa. These are recommendations for smaller organisations (see Appendix 11), recommendations for national governments (see Appendix 12) and recommendations for the national universities (see Appendix 13) The fully-fledged e-commerce websites will enable the tourism organisations to reach international customers that they could not reach with the traditional systems, which should then lead to an important increase in foreign currency flows into these countries.

CHAPTER 11 – SUMMARY, CONCLUSIONS AND RECOMMENDATIONS FOR FURTHER WORK

Chapter Preface

In this chapter the whole thesis is summarised in tandem with the aims and objectives which were set in Chapter 1. This chapter also discusses the conclusions made and recommendations for further work.

11.1. The Aims and Objectives Re-Visited

The main aim of this research project has been to explore the constraints to e-commerce adoption and usage being faced by the tourism organisations from South Africa, Kenya, Zimbabwe and Uganda, these countries being representative of countries in sub-Saharan Africa where tourism contributes a significant proportion of the economy. The research project aimed to examine solutions which have been used to overcome the barriers to e-commerce adoption and usage and find out if they can be used by other tourism organisations to overcome the same barriers.

The thesis looked at the ICT, Internet and e-commerce adoption by the African tourism organisations as well as the barriers they face towards e-commerce development. The main aims of the thesis as stated in Chapter 1 are as follows:

- a. Assess the current status and potential impact of e-commerce in the tourist industry in sub-Saharan Africa.
- b. Determine the barriers to e-commerce adoption and usage in sub-Saharan Africa
- c. Determine guidelines for the tourist organisations based in sub-Saharan Africa to overcome the impediments to e-commerce adoption and usage under the conditions available.

From the above aims the following specific objectives were identified:

1. Study the available published literature to find what is and is not known and in the public domain about the state of e-commerce in the chosen four countries and elsewhere in the developing world.
2. Examine the state of websites in sub-Saharan Africa by:
 - a. Determining from published literature what website features constitute desirable components of an e-commerce site.
 - b. Selecting sample websites of tourist organisations in the four countries to study by searching the web, using advertising literature from government agencies and visiting tourism exhibitions.
 - c. Surveying the selected African websites to determine the use of the desirable e-commerce features to establish the current take up of current e-commerce practice.
 - d. Selecting and studying sample websites of Western tourist organisations to act as a baseline in which to compare the progress of the African sites as described in Section 4.2, Chapter 4.
3. Determine the usability and accessibility of websites of the African organisations by:
 - a. Examining the websites for usability and accessibility using online evaluating tools
 - b. Determining the severity of the usability and accessibility errors of the websites recorded by the evaluation tools
4. Determine the current state of ICT and Internet adoption among the tourism organisations based in sub-Saharan Africa by:
 - a. Surveying the selected organisations to determine the use of ICT and Internet for business operations
 - b. Finding out from the organisations the current status of e-commerce adoption
5. Determine what barriers exist for the adoption of e-commerce in sub-Saharan Africa by:
 - a. Identifying organisations with advanced e-commerce activity, moderate e-commerce activity and with little e-commerce activity.

- b. Sending questionnaires to each of these organisations to determine their e-commerce plans and the problems they perceive for e-commerce adoption (and in the case of advanced e-commerce organisations, how they overcame the problems encountered).
6. From the knowledge gained in 1 to 5, produce recommendations and guidelines for tourism organisations to enhance their e-commerce activities and, as a result, fulfil their full business potential.
7. Test these findings and recommendations by:
 - a. Publishing the findings and guidelines in refereed conference proceedings and academic journals.
 - b. Seeking the opinions of the findings and recommendations from experts in the tourism industry in Africa and elsewhere.

11.2 Achieving the Objectives

11.2.1 Objective 1: Finding What Can Be Known From Published Literature

The review of literature has revealed that very little is known about the e-commerce activities in the four African countries investigated in this study. The published research so far does not focus on the tourism industry with most of it being carried out by South Africans for organisations based in that country. The majority of the literature was mainly in the form of reports by non-governmental organisations that were trying to prescribe ways of bridging the digital divide between the African countries and the developed world. They were looking at how prepared the African countries were for the information economy. These reports did not contribute much to this research project as they mainly focused on the countries' infrastructure and what needs to be done to make it conducive for the information economy.

It was found that the literature which described surveys producing empirical evidence looked at either e-commerce in general or other sectors of the economy. Unfortunately, again this literature made very little contribution to this research project as most of it was not focused on the tourism industry.

A few published papers gave an idea of what the status of e-commerce was like in the other sectors of some of the African economies. The literature showed that there are some e-commerce activities taking place in southern Africa with South Africa seeming to be the leading nation in e-commerce development and growth. These publications showed that the respective African governments must make an effort to make the environment conducive to enable seamless e-commerce adoption and usage.

This first objective was achieved as it was discovered that the literature had little information on the subject of this research project. There were some publications on e-commerce in southern Africa, but nothing specifically on the tourism industry, despite its importance to the region. The main conclusion that follows from achieving this objective is that the author's thesis and published papers will fill a significant gap in the available published research.

11.2.2. Objective 2: Determining The Current State Of Websites Of Tourism Organisations In Sub-Saharan Africa

This objective marked the starting point into the investigations of e-commerce activities in the selected African countries. As there was no literature on e-commerce activities in the tourism industry in sub-Saharan Africa, the websites of the various tourism organisations were examined to find out if they provide the necessary content and facilities for the potential tourists to carry out transactions. An extensive review of literature, plus an evaluation of websites of established organisations was carried out to derive the metrics to measure the websites' effectiveness. The surveys carried out to measure the websites effectiveness covered areas such as the purchasing experience, electronic Customer Relationship Management (eCRM), promotional techniques employed, websites traffic analysis and their ability to transfer knowledge.

The first and most important study was carried out to find out if the organisations' websites provided the necessary content and facilities which will enable the customers to carry out online transactions. The study concerning eCRM activities sought to determine the websites' ability to gather, process and store customer information in order to determine the customers' wants, needs and preferences as customers are now more demanding than before (Fickel, 1999). The websites were also examined to find out if they employed any tools or techniques to promote their products and services. An extension to this study was the analysis of the volume of website traffic by using an online tool. Although the online tool had some limitations, it gave an idea of the amount of traffic to the tourism organisations' websites.

With the tourism industry being information intensive, as well as the strong competition in this sector, the competitive advantage of the organisations in this sector lies in what it knows. Therefore a study was carried out to find out if the tourism organisations have the tools on their websites to acquire, distribute and apply knowledge.

The surveys carried out revealed that the tourism organisations from the four African countries will need to evolve their websites into marketing tools as most of them only displayed information without any user interactivity. Although in all the surveys the researcher used only those websites that could be found, the objective was achieved as a general picture could be painted about the current status of e-commerce websites and how well they provide a satisfactory purchasing experience for customer.

11.2.3. Objective 3: Determining the Usability and Accessibility of E-Commerce Websites

After examining the current status of the websites the next step was to find out if the websites are accessible and usable according to the Web Accessibility Initiative's Web Content Accessibility Guidelines. In some countries, like the USA and the UK, there is legislation to encourage websites to be accessible and usable to everyone including the old and disabled. It is therefore necessary to find out if the sub-Saharan African websites meet these standards as most of their tourists come from these two countries. Two online evaluating tools were used to measure usability and accessibility of the websites. Although these tools were free and provided limited services they managed to provide information on the websites' accessibility and usability. Another survey was carried out to determine the severity of the website accessibility and usability errors. The main aim of this survey was try to find out if the errors recorded will hinder e-commerce transactions, especially for customers with access challenges, and determine the resources and direction for improving website accessibility and usability.

The surveys showed that the websites usability and accessibility was comparable to that of more established organisations in the tourism industries of developed countries and that the errors recorded by the online tools will not hinder any e-commerce activities taking place. The objective of determining the accessibility and usability of the tourist organisation's websites in sub-Saharan Africa was therefore achieved, and in this case it was determined that the African websites did not lag behind their counterparts from the developed countries.

11.2.4 Objective 4: Determining ICT, Internet and E-Commerce Adoption within the Tourism Industry

The first surveys carried out focused on websites of the tourism organisations, whereas the survey on ICT, Internet and e-commerce adoption was the first of several which focused on the organisations themselves. This involved making contact with the organisations concerned, whereas previously the surveys of websites could be carried out without the organisations even being aware the survey was being conducted. Since most of the African countries have liberalised the ICT industry, the main aim of this survey was to find out from the organisations what steps they have taken to adopt ICT, the Internet and e-commerce.

Questionnaires were sent to the tourism organisations to elicit data on the status of ICT, Internet and e-commerce adoption. The main objective of this survey was to establish whether the tourism organisations recognised the power of ICT and the Internet and the benefits they can get as result of e-commerce adoption. The study revealed that the majority of the tourism organisations based in sub-Saharan Africa were receptive to ICT and Internet-based technology and have a positive attitude towards e-commerce adoption. Most of the tourism organisations lacked facilities that will encourage customers to carry out online transactions. Therefore this objective was achieved.

11.2.5 Objective 5: Determining the Barriers to E-Commerce among the African Tourism Organisations

This objective is a follow up to the previous one where the researcher was trying to establish the impediments the tourism organisations are facing in trying to set up fully-fledged e-commerce systems. From the previous questionnaire the researcher discovered that the tourism organisations from the four African countries were at different levels of e-commerce development. Therefore, to be able to fully understand the impediments to e-commerce development in the different organisations, the websites were put into the following three broad categories:

- Level 1 - Consisting mainly of information-only websites
- Level 2 - Made up of websites with limited interactive facilities to carry out e-commerce transactions
- Level 3 - Consisting of fully-fledged e-commerce websites with features to carry out online reservations in real time, pay online and include CRM.

The barriers themselves were divided into five broad categories namely organisational, financial, technological, behavioural and security-and-legal barriers. This would enable the researcher to trace the source of each barrier and devise ways by which these barriers can be overcome.

The analysis of the barriers focused on the first two groups of websites which are Level 1 and 2. Two different questionnaires were sent to these organisations. The questionnaire sent to organisations with Level 1 websites aimed to elicit information about the importance that these organisations attach to each of the barriers. Level 1 websites face more barriers than organisations from the other two groups. The information obtained from the questionnaire helped the researcher determine which barriers to focus more attention on. The questionnaire sent to organisations with Level 2 websites sought to elicit information about the barriers they have managed to overcome and if they have the knowledge or resources to tackle the unsolved problems to move to the next level, which uses a fully-fledged e-commerce system.

The third questionnaire was sent to organisations that had level 3 websites to determine how these organisations had managed to overcome the barriers to implement fully-fledged e-commerce websites with the available resources in the current environment. The research study aimed to find the home-grown solutions to overcoming barriers rather than general solutions that may have been devised in a different e-commerce environment. The survey presented solutions used by the tourism organisations in South Africa and Kenya to overcome the barriers to adopt

and use e-commerce technologies. Unfortunately, in survey the organisations which took part were from just two of the four countries.

This 5th objective was successfully achieved as the questionnaires to the Level 1 and 2 organisations identified the barriers to e-commerce development as perceived by the organisations themselves. The questionnaire to the Level 3 sites then gave an insight into how these barriers could be overcome. Although this last questionnaire was only used in two of the four countries studied, there were no additional barriers detected in the other two countries and none of the solutions identified for overcoming the barriers were such that they would not equally apply to other countries in the region. Therefore it is concluded that this 5th objective was also successfully achieved.

11.2.6 Objective 6: Producing Recommendations and Guidelines for Tourism Organisations in Sub-Saharan Africa

Using the findings from all the surveys carried out, recommendations and guidelines for organisations intending to achieve online success were produced. The recommendations cover all aspects of e-commerce starting from the designing of e-commerce websites to how the tourism organisations can overcome the barriers to adopt seamless e-commerce systems.

The guidelines incorporate the research findings from most of the chapters of the thesis. The need for e-commerce development established in the literature review is followed by a list of features that are not as common in sub-Saharan African tourism websites as they are in their counterparts in developed countries. These guidelines showed what features the African tourist organisations needed to incorporate in their websites to compete on the international market. The guidelines then warn the organisations of the potential barriers they will encounter when moving towards implementing a fully-fledged e-commerce system and gives suggestions for overcoming those barriers based on the practical experience of tourist organisations from the region that have already done so. The guidelines also

give recommendations for any readers from supporting organisations, such as the financial institutions, and for the national governments to give advice on how they can support tourism businesses in their move into e-commerce.

As this research led to the comprehensive set of recommendations for tourism organisations in sub-Saharan Africa and, in addition, was able to make extra recommendations for supporting organisations and national governments, it must be concluded that Objective 6, to produce such guidelines has been achieved.

11.2.7 Objective 7: Testing the Findings and Recommendations

It is essential to test the findings and find out if the recommendations will work. The findings and recommendations from the surveys described in this thesis were presented at international academic conferences namely Software Quality Management, IBM's Business Innovation in the Knowledge Economy, the Information Resources Management Association conference, the International Federation for Information Technology and Tourism conference, the European Conference on Knowledge Management, and the conference of the International Association for Development of the Information Society where experts gave constructive opinions on the findings and recommendations. A paper has also been accepted for publication in the Electronic Journal of Knowledge Management. Two further papers submitted to the Information Systems Journal, and the Journal of Information Technology and Tourism have been submitted and, at the time of writing this thesis, are currently being refereed. This objective has been achieved in part as the thesis has led to the production of nine conference papers and one journal paper with the possibility of more to follow. The list of papers presented at these conferences and published in refereed conference journals can be found in Appendix 1. The author will continue to publish other findings of the thesis including those about e-commerce barriers and how to overcome them and the perceived value of the 'Recommendations and Guidelines Document' produced.

The guidelines derived in this research and given in Appendix 9 were also circulated by email to those organisations who had returned questionnaires and tourism organisations based in other African countries to whom tourism is significant. Most of the responses received at the time of writing this thesis indicated that the guidelines were easy to follow and helpful. Although an ideal end to this research project would be to report on the actual progress of a tourism country in sub-Saharan Africa that follows the guidelines, the time taken for this would be beyond the scope of this PhD project. The feedback from the practitioners in the region and the expert publication reviewers' comments are, therefore, the best test that is available. This positive result therefore indicates that this final objective, and indeed the aims of the whole research project have been achieved.

11.3. Recommendations for Further Work

The findings of the thesis have certainly opened doors for more research work to be carried out in the area of e-commerce adoption and usage in the tourism industry in sub-Saharan Africa. This thesis is one of the few studies carried in this area with empirical evidence to back up the points made. Such studies as the one described in this thesis have already been carried out in developed and upcoming nations in the Far East and their research has now reached new levels. The further work discussed below will enable the research in sub-Saharan Africa to reach the same heights which have been achieved in similar areas of the developed countries and the Far East.

- The guidelines derived in this research project need to be tested in practice so a useful extension to this research would be to monitor tourist organisations who attempt to follow the recommendations given. This would inevitably give further insights into the problems encountered and possible solutions tried. This would allow the recommendations to be extended and refined. The publication of case studies concerning the implementation of the recommendations would also act as a useful

knowledge source for other companies attempting to implement fully-fledged e-commerce systems.

- A follow-up study needs to be carried out to examine the nature non-product information on websites of the tourism organisations in sub-Saharan Africa. This includes information about immigration and customs procedures, health, safety and security issues. The aim of this exercise will be trying to establish whether the websites contain the necessary information about the destination which is generally needed by the potential tourist before they embark on a trip
- More work needs to be carried out to quantify, in financial terms, the impact of e-commerce on the tourism industry as well as the economy as whole. Such studies have been carried out to find out how much each of the e-commerce markets is worth in monetary terms. Further studies will need to be carried out to find out how the African economies and organisations will benefit financially from the adoption of e-commerce. There is no doubt that organisations who adopt e-commerce will benefit, but the question which needs to be answered by these studies is “by how much?”
- This research study has focused mainly on business-to-consumer (B2C) e-commerce which is taking place between the organisations from sub-Saharan Africa and consumers from the international market, mainly Western Europe and North America. However business-to-business (B2B) e-commerce can take place between tourism organisations from the region or between African organisations and those from Europe and North America. The tourism industry by nature enables different tourism organisations to complement each other’s services and this can be enhanced by adopting B2B e-commerce. Further studies will need to be carried out to find out how the already existing inter-organisational links between the different tourism organisations can be enhanced by adopting B2B e-commerce.

- Customer satisfaction is not only measured by examining features of websites but also by finding out the customers' perceptions of the e-commerce services offered by the organisations. Rather than measuring e-commerce success by focusing on system aspects and the web presence of companies, studies can be carried out to measure the satisfaction of users of these systems directly. This will entail contacting customers from the tourism market concerning their perceptions of the e-commerce systems of the African organisations.
- E-commerce has changed the way business is conducted around the world. As more and more e-commerce technologies are developed, it is important to find out how cultural diversity affects the business organisations that are already part of the global marketplace. Studies will also need to be carried out to understand effects and implications of cultural differences on e-commerce across nations. This is important for African tourism organisations as most of their customers come from Western Europe and North America.
- Studies will also need to be carried out on how e-commerce operations can be enhanced in domestic and regional markets. The main focus in this thesis has been on international customers in the four African countries, but there also exists domestic and regional tourism markets.
- In order for organisations to be competitive in the global electronic marketplace there is a need for high quality knowledge from within and outside the organisation. Studies will need to be carried out to find out if the African tourism organisations are capturing, storing and leveraging what their customers, competitors and employees know.

11.4. Overall Conclusion

Tourism is one of the biggest foreign currency earners in sub-Saharan African countries. Academics and researchers have not yet carried out research on how tourism organisations from this region can break into the lucrative international tourism by market using Internet-based technologies and e-commerce. The electronic global marketplace is not only growing but changing, with new technologies still being developed. It is now time the organisations from sub-Saharan Africa to embrace e-commerce technology or else they will lag behind and be 'swallowed' by tourism organisations from other regions where these technologies are already playing a major role.

This thesis has shown that there are some e-commerce activities taking place in sub-Saharan Africa and that the tourism organisations based in this region have a positive attitude towards e-commerce technologies. Despite all these positives, most of the tourism organisations have been very slow to embrace e-commerce. Some tourism organisations have managed to set up websites comparable to those of organisations from the established markets in Western Europe and North America in terms of appeal, usability and accessibility, but most websites are simply being used to showcase their products and services and not as marketing tools.

The thesis has also proved that the tourism organisations can break the barriers to e-commerce adoption and usage using the available resources under the current economic, political and social conditions. It also been shown that organisations are able to get round those barriers they have little or no control over. This will be a major breakthrough for a lot of tourism organisations from a region once dubbed the 'technological desert' (Odedra et al, 1993) which have been, up to now, dependant on expertise from the developed countries to provide technological solutions. These home-grown solutions can be extended to other sectors of the economies of the African countries and this should change the face of these economies for the better.

It is the author's opinion that the findings from this study make a very significant contribution to the understanding of the level of e-commerce activities in sub-Saharan Africa and how to overcome the barriers to e-commerce adoption with only limited resources available. Therefore this research has been successful and will prove valuable to academics and practitioners whose interests lie in e-commerce in the tourism industry in sub-Saharan Africa.

**APPENDIX 1–
LIST OF PUBLICATIONS**

LIST OF PUBLICATIONS

The research surveys described in the PhD thesis generated the following publications:

Conference Papers

- Maswera, T.D. and Dawson, R.J., "An Evaluation of the Use of the Internet to Promote Tourism in Four African Countries" , *Proceedings of Software Quality Management XI : Process Improvement and Project Management Issues* , 1(1), Gray, E., King, G., Ross, M. and Staples, G. (eds), The British Computer Society, Software Quality Management (SQM XI) , Glasgow, UK, April 2003, pp. 325-341, ISBN: 1-902505-53-0 .
- Maswera, T.D. and Dawson, R.J., "An Evaluation of the Use of the Internet to Adopt Customer Relationship Management by Tourist Organisations in Four African Countries" , *Business Innovation in the Knowledge Economy - Abstracts from the IBM & Stratford-Upon-Avon Conference*, Abbot, J., Martin, L., Palmer, R., Stone, M. and Wright L.T. (eds), De Montfort University, Leicester, UK, Warwick & Stratford-Upon-Avon, UK, June 2003, pp. 39-40, ISBN: 1857213563.
- Maswera, T.D. and Dawson, R.J., "Website Accessibility and Usability" , *New Approaches to Software Quality* , Edgar-Nevil, D., Ross, M. and Staples, G. (eds), British Computer Society, Software Quality Management , Canterbury, April 2004, pp. 367-376, ISBN: 1-902505-56-5 .
- Maswera, T.D. and Dawson, R.J., "Analysing Traffic Rankings of Websites of Tourist Organisations in Four African Countries" , *Innovations Through Information Technology* , Khosrow-Pour, M. (ed.), Idea Group, IRMA , New Orleans, USA, May 2004, pp. 414-417, ISBN: 1-59140-261-1 .

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- Maswera, T.D., Dawson, R.J. and Edwards, J., "Analysis of Usability and Accessibility Errors of E-Commerce Websites of Tourist Organisations in Four African Countries", *Proceedings of Information and Communication Technologies in Tourism 2005*, Springer-Verlag, ENTER 2005, Innsbruck, Austria, January 2005, pp. 531-542, ISBN: 3-211-24148-5.
 - Maswera, T.D., Dawson, R.J. and Edwards, J., "ICT, Internet and E-Commerce Adoption in South Africa, Kenya, Zimbabwe and Uganda" , *Proceedings of Software Quality Management XIII : Current Issues in Software Quality* , Bennets, P., Ross M. and Staples G. (eds), BCS, SQM2005 , Cheltenham, UK, March 2005, pp. 101-114, ISBN: 1-902505-67-0 .
 - Maswera, T.D., Dawson, R.J. and Edwards, J., "Web Services Adoption of the Travel and Tourism Industry in South Africa, Kenya, Zimbabwe and Uganda" , *Proceedings of the Information Resources Management Association Conference: Managing Modern Organisations with IT* , Mehdi Khosrow-Pour, M. (ed.), Idea Group Publishing, Information Resources Management Association (IRMA 2005) , St. Diego, Ca, USA, May 2005, pp. 916-918, ISBN: 1591408229 .
 - Maswera, T.D., Dawson, R.J. and Edwards, J., "Internet Promotional Techniques of the Travel and Tourism Industry in South Africa, Kenya, Zimbabwe and Uganda", *Proceedings of the IADIS International Conference e-Society 2005*, Isaias, P., Kommers and McPherson, M. (eds), Iadis, e-Society 2005 , Qawra, Malta, June 2005, :pp. 591-595, ISBN: .
 - Maswera, T.D., Dawson, R.J. and Edwards, J., "Assessing the Levels of Knowledge Transfer within e-Commerce Websites of Tourist Organisations in Africa" , *Proceedings of the 6th European Conference on Knowledge Management* , 1(1), Remenyi, D. (ed.), Conferences Limited, ECKM 2005 , Limerick, September 2005, pp. 293-300, ISBN: 1-905305-06-0 .

Journal Papers

- Maswera, T.D., Dawson, R.J. and Edwards, J., "Assessing the Levels of Knowledge Transfer within E-Commerce Websites of Tourist Organisations in Africa" , *The Electronic Journal of Knowledge Management* , 4(1) , January 2006, pp. 59-66, ISSN: 1479-4411 , [WWW] Available from: www.ejkm.com.

**APPENDIX 2 –
QUESTIONNAIRE TO EVALUATE E-COMMERCE
ADOPTION**

E-COMMERCE SURVEY



Computer Science Department

Purpose of study

The purpose of this survey is to assess the potential impact of e-commerce in the tourism industry in South Africa, Kenya, Zimbabwe, and Uganda with a view to designing an e-commerce model for the tourism industry in Africa so that the potential of e-commerce can be maximised. The results of this survey would be used to design a framework to help tourist organisations in Africa maximise the benefits of e-commerce under the current environment.

If your organisation has a computer department or anyone in charge of your computers or computer system, they will be able to answer most of the questions, which mainly involve ticking on the appropriate box. Since most of the questions are about information technology they unavoidably include some jargon most of which are defined in the glossary right at the end of the questionnaire.

The information you have provided will be treated as strictly confidential and will only be used for analysis in this survey.

Thank you in advance for participating in this survey. The results from this survey will be analysed and presented in a report. A copy of this report will be available free to all those that take part in the survey.

Unless otherwise indicated please answer each question by ticking in the appropriate box

Please see the glossary at the end of the questionnaire for definition of terms

Section 1: General Information about your Organisation and Computer Systems

1.1 What type is your organisation?

- Airline Hotel/Lodge National Park Travel Agency/Tour Operator
 Tourism Promotion _____ Other(Please Specify)

1.2 In which country is it located?

- South Africa Kenya Zimbabwe Uganda

1.3 In which setting is your organisation located?

- Urban Semi-urban Semi-rural Rural

1.4 Does your organisation use computers or plan to use computers in the next year?

- Uses Computers now Plans to use computers Does not use or plan to use

IF YOUR ORGANISATION DOES NOT USE OR PLAN TO USE COMPUTERS IN THE NEXT YEAR THEN SKIP TO THE END OF THE QUESTIONNAIRE

1.5 Does your organisation use or plan to use computers in the following areas

	<u>Use</u>	<u>Plans to use in the next year</u>	<u>Plans to use after next year</u>	<u>No plans to use</u>
E-mail	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Internet/WWW	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Intranet(internal network of own business use)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Accounts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other Administration	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Local area network/Wide area network	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2.1 For what purpose does your organisation use the Internet as a consumer of Internet services?

Information search	<input type="checkbox"/>
Market monitoring(eg finding out what new products, and prices are available)	<input type="checkbox"/>
Obtaining after sales services provided by an organisation where you have purchased products	<input type="checkbox"/>
Banking and financial services	<input type="checkbox"/>
Training and education	<input type="checkbox"/>
Downloading digital products such as music or software	<input type="checkbox"/>

2.2 Does your organisation have or plan to have a website or homepage?

- Yes, the web page is currently hosted by our own organisation
- Yes, a web page is planned to be hosted by our own organisation
- Yes, a web page is currently hosted by an internet service provider
- Yes, a web page is planned to be hosted by an internet service provider
- No, my organisation does not have or plan to have a web page in the next year

IF IT DOES NOT HAVE A WEBSITE SKIP TO THE END OF THE QUESTIONNAIRE

2.3 Does your organisation's website offer the following information?

	<u>Yes</u>	<u>No</u>	<u>Plans to use in the next year</u>
information about the company	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
information about products/services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
a list/catalogue of available products and/or services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
private policy statement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
product/service information in foreign languages	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other information (Please specify)	<input type="text"/>		

2.4 Does your organisation's website offer the interactive services?

	<u>Yes</u>	<u>No</u>	<u>Plans to use in the next year</u>
on-line enquiries	□	□	□
on-line booking or ordering of products	□	□	□
on-line payments (electronic commerce)	□	□	□
a facility to allow customer feedback	□	□	□
tracking/amending bookings	□	□	□
customised service for repeat clients	□	□	□
Other interactive services (Please specify)	□		

Section 3 - E-commerce via e-mail

3.1 Has your organisation received bookings via E-mail?

Yes No Don't know

3.2. Has your organisation made sales via E-mail?

Yes No Don't know

3.3 Has your organisation received any enquiries via E-mail?

Yes No Don't know

If you have any questions, comments, suggestions, e-mail T.D.Maswera@lboro.ac.uk, telephone +44-[0]1509-228230, fax +44-[0]1509-222681

If you would like a copy of the report please enter your name and the address where you want it sent in the space provided below:

Name	
Address	
E-mail Address	

THANK YOU VERY MUCH FOR COMPLETING THIS QUESTIONNAIRE.

GLOSSARY

Digital Products or Services	Goods/services that can be ordered and delivered directly to a computer over the Internet, e.g. music, games, online newspapers etc
Electronic Commerce(e-commerce)	Transactions conducted over computer-mediated networks. The goods and services may be ordered over these networks, but payment and delivery can be done off-line. Orders received via telephone, facsimile and other non-interactive methods are not counted as electronic commerce
Electronic Mail(e-mail)	Electronic transmission of messages, including text and attachments, from one computer to another located within or outside of the organisation
Home page	The main web page for a business, organisation, person or simply the main page out of a collection of web pages
Intranet	A private network inside a company or organization, which uses software like that used on the Internet, but is for internal use only, and is not accessible to the public. Companies use Intranets to manage projects, provide employee information, distribute data and information, etc
Interactive services	A communication system that allows nearly instantaneous two-way conversations with the help of a computer. Home shopping, viewer-participation game shows, distance learning and e-mail on computer networks are examples.
Internet	A worldwide system of computer networks in which any one computer can get information from/or talk to any other connected computer using the Transmission Control Protocol (TCP)/ Internet Protocol (IP).
Internet Service Provider(ISP)	A company that provides access to the Internet.
Internet Protocol(IP)	Internet Protocol is a standardized method of transporting information across the Internet in packets of data
Local Area Network(LAN)	A group of computers and other devices in a relatively limited area that are connected by a communications link, which enables any device to interact with any other device on the network
Online enquiries	Making enquiries using computers or other devices which are actively connected to a computer system or making enquiries while logged on to a network

Online booking or ordering	Making a booking or ordering a product/services using computers or other devices which are actively connected to a computer system or making a booking or ordering while logged on to a computer network
Online payment	Making payments using computers or other devices which are actively connected to a computer system or making payments while logged on to a computer network
Transmission Control Protocol(TCP)	A connection-based Internet protocol that is responsible for packaging data into packets for transmission over the network by the IP protocol. TCP provides a reliable flow control mechanism for data in a network.
Website	A group of web pages that collectively represent a company, or individual on the World Wide Web (WWW). A group of web pages that have been developed together to present information on specific subjects is also a web site.
Wide Area Network(WAN)	WANs are networks that span the distance between buildings, cities and even countries.

THE END

**APPENDIX 3 –
QUESTIONNAIRE FOR ORGANISATIONS WITH
LEVEL 1 WEBSITES**

E-COMMERCE SURVEY



Computer Science Department

Purpose of study

Electronic commerce (e-commerce) is generally known as the carrying out of transactions such as making reservations and payment over the Internet. The purpose of this survey is to analyse the barriers and inhibitors to the implementation of e-commerce systems for tourist organisations. The results of this survey will be used to design a framework to help tourist organisations in Africa maximise the benefits of e-commerce in the current environment.

If your organisation has a computer department or anyone in charge of your computers or computer system, they will be able to answer most of the questions, which mainly involve ticking an appropriate box. Since most of the questions are about information technology they unavoidably include some jargon most of which are defined in the glossary at the end of the questionnaire.

The information you have provided will be treated as **strictly confidential** and will only be used for analysis in this survey.

Thank you in advance for participating in this survey. The results from this survey will be analysed and presented in a report. A copy of this report will be available free to all those that take part in the survey if a name and address is supplied.

Unless otherwise indicated, please answer each question by ticking the appropriate box

Please see the glossary at the end of the questionnaire for definition of terms

Section 1: General Information about your Organisation and Computers Systems

1.1 What type is your organisation?

- Airline Hotel/Lodge National Park Travel Agency/Tour Operator
 Tourism Promotion Other(Please Specify)

1.2 In which country is it located?

- South Africa Kenya Zimbabwe Uganda

1.3 In which setting is your organisation located?

- Urban Semi-urban Semi-rural Rural

Section 2: Type of external connection to the internet

- Analog modem (standard telephone line)
 Broadband
 Wireless connection
 ISDN
 xDSL

Don't know

Section 3: Barriers to e-commerce

Please indicate if any of the following barriers to e-commerce are relevant in your situation and the importance you attach to these barriers

3.1 Organisational barriers to e-commerce

	Much importance	Some importance	Not important	Don't know
E-business is not relevant to my organisation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Product not applicable for e-commerce	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Indirect or hidden costs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My organisation can not quantify financially the impact of e-commerce	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My organisation does not have a strategic plan for e-commerce	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My organisation does not have knowledge of e-commerce techniques	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Too few IT skilled personnel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My organisation does not want to form collaborative partnerships	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
No incentives as few competitors are online	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Company is too small	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My company is reluctant to change how it operates	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lack of staff training	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Time it takes to implement changes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Logistical Problems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3.2 Financial barriers to e-commerce

	Much importance	Some importance	Not important	Don't know
Cost of implementing and maintaining an e-commerce system	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Investment risk	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cost of staff training and education	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Market uncertainty	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Few customers are on-line	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
May lead to loss in productivity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fear of stronger competition on the Internet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Advantages of e-commerce are outweighed by the costs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3.3 Technological barriers to e-commerce

	Much importance	Some importance	Not important	Don't know
Fear of choosing an e-commerce solution that is incompatible with existing systems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Existing financial systems currently do not support online payment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My organisation does not have the required IT infrastructure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Technology too complicated	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
National telecommunications too slow and unstable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lack of external support to maintain an e-commerce system	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
New versions of software introduced too often	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3.4. Behavioural barriers to e-commerce

	Much importance	Some importance	Not important	Don't know
Existing personnel reluctant to use an e-commerce system	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Existing personnel reluctant to learn e-commerce techniques	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Trained staff leaving	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lack of management support	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3.5. Security and Legal barriers to e-commerce

	Much importance	Some importance	Not important	Don't know
Potential theft of business information	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Viruses and bugs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Security problems concerning payment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
No legal system to regulate e-commerce operations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reliability of e-commerce systems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
No mechanism to guarantee customers secure transactions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My organisation does not trust e-commerce technology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Customers do not trust e-commerce technology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3.6. Other barriers, please specify

	Much importance	Some importance	Not important	Don't know
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. Sources of advice

Which areas of e-commerce advice or training do you think your organisation will need to help it start selling its products on the Internet?

- | | |
|--------------------------|------------------------------------|
| <input type="checkbox"/> | E-commerce opportunities available |
| <input type="checkbox"/> | IT Networking/Broadband |
| <input type="checkbox"/> | Website architecture and design |
| <input type="checkbox"/> | Business software |
| <input type="checkbox"/> | Developing internet strategies |
| <input type="checkbox"/> | Information security |
| <input type="checkbox"/> | None |
| <input type="checkbox"/> | Don't know |
| <input type="checkbox"/> | Other(Please specify) |

5. Name and address (optional)

Please supply a contact name and address if you wish to receive the report on the findings of this research. This information will not be used for any other purpose and will not be passed on to any third party.

Name:

Address:

Glossary

Term	Definition
Electronic Commerce	Conducting business communications and transactions over networks and through computers. It also includes buying and selling over the Internet
Dial-up modem	Utilises standard telephone lines to connect computers to the Internet
Integrated Services Digital Network(ISDN)	Digital telephone scheme that allows a user to connect to the Internet over standard phone lines at speed higher than that of an ordinary modem(56K)
Digital Subscriber Line(xDSL)	Technology enabling simultaneous two way transmission of voice and high-speed data over ordinary telephone lines
Broadband	Transmission facility having a bandwidth sufficient to carry multiple voice, video or data channels simultaneously and uses coaxial cables to connect computers to Internet
Virus	A parasitic program written intentionally to enter computers and networks without the users' permission or knowledge and wreck havoc on them
Bug	A programming error that causes a program to work poorly, produce incorrect results or crash
Business software	Computer application programs designed to help run a business e.g. marketing, personnel, accounting, finance
Information Technology(IT) Networking	Linking computers and other devices such as printers into a network for the purpose of sharing resources
Website Architecture	The art and science of creating good websites
Information security	The protection of unauthorised access to or modification of information whether in storage, processing or transit and against the denial of service to authorised users or the provision of service to unauthorised users, including those measures necessary to detect, document and counter such threats

**APPENDIX 4 –
QUESTIONNAIRE FOR ORGANISATIONS WITH LEVEL
2 WEBSITES**

E-COMMERCE RESEARCH SURVEY



Computer Science Department

Purpose of study

Electronic commerce (e-commerce) is generally known as the carrying out of transactions such as making reservations and payment over the Internet. The purpose of this survey is to analyse the barriers and inhibitors to the implementation of e-commerce systems for tourist organisations. The results of this survey would be used to design a framework to help tourist organisations in Africa maximise the benefits of e-commerce under the current environment.

If your organisation has a computer department or anyone in charge of your computers or computer system, they will be able to answer most of the questions which mainly involve clicking on the appropriate button or box. Since most of the questions are about information technology they unavoidably include some jargon most of which are defined in the glossary right at the end of the questionnaire.

The information you have provided will be treated as **strictly confidential** and will only be used for analysis in this survey.

Thank you in advance for participating in this survey. The results from this survey will be analysed and presented in a report. A copy of this report will be available free to all those that take part in the survey if a name and address is supplied.

Unless otherwise indicated please answer each question by clicking on the appropriate button/box

After completing the questionnaire click on the button "SUBMIT" at the end of questionnaire to submit it

Please see the glossary at the end of the questionnaire for definition of terms

Section 1 General Information about your Organisation and Computer Systems

1.1 What type is your organisation?

Airline
 Hotel/Lodge
 National Park
 Travel Agency/Tour Operator
 Tourism
 Promotion
 Other(Please specify)

1.2 In which country is it located?

South Africa Kenya Zimbabwe Uganda

1.3 In which setting is your organisation located ?

Urban Semi-urban Semi-rural Rural

Section 2: Type of external connection to the Internet

- Dial-up modem (standard telephone line)
- Broadband
- Wireless connection
- ISDN
- xDSL
- Don't know

Section 3: Barriers to e-commerce

Please indicate if any of the following barriers to e-commerce are relevant in your situation and how they have affected the adoption of e-commerce within your organisation

3.1. Organisational barriers to e-commerce

	True	Probably true	Probably false	False	Don't know
E-commerce is not relevant to my organisation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Product not applicable for e-commerce	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
No incentives as few competitors are online	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Not a problem for us	Don't know if it is a problem	Was a problem but we have solved it already	Is a problem but we know we can solve it	Is a problem that we are unable to solve at this time
My organisation believes there are indirect or hidden costs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My organisation can not quantify financially the impact of e-commerce	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My organisation does not have a strategic plan for e-commerce	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My organisation does not have knowledge of e-commerce techniques	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Too few IT-skilled personnel in my organisation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Too few IT-skilled personnel nationally					
My organisation does not want to form collaborative partnerships	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My organisation is too small	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My organisation is reluctant to change how it operates	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lack of staff training	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Time it takes to implement changes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Logistical problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3.2. Financial barriers to e-commerce

	Not a problem for us	Don't know if it is a problem	Was a problem but we have solved it already	Is a problem but we know we can solve it	Is a problem that we are unable to solve at this time
Cost of implementing and maintaining an e-commerce system	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Investment risk	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cost of staff training and education	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Market uncertainty	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Few customers are on-line	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
May lead to a loss in productivity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fear of stronger competition on the Internet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	True	Probably true	Probably false	False	Don't know
Advantages of e-commerce are outweighed by the costs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3.3. Technological barriers to e-commerce

	Not a problem for us	Don't know if it is a problem	Was a problem but we have solved it already	Is a problem but we know we can solve it	Is a problem that we are unable to solve at this time
Fear of choosing an e-commerce solution that is incompatible with existing system	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Existing financial infrastructure currently does not support online payment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My organisation does not have the required IT infrastructure	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Technology too complicated	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
National telecommunications too slow and unstable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lack of external support to maintain an e-commerce system	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
New versions of software are introduced too often	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3.4. Behavioural barriers to e-commerce

	Not a problem for us	Don't know if it is a problem	Was a problem but we have solved it already	Is a problem but we know we can solve it	Is a problem that we are unable to solve at this time
Existing personnel are reluctant to use an e-commerce system	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Existing personnel are reluctant to learn e-commerce techniques	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Trained staff leaving	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lack of management support	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3.5. Security and legal barriers to e-commerce

	Not a problem for us	Don't know if it is a problem	Was a problem but we have solved it already	Is a problem but we know we can solve it	Is a problem that we are unable to solve at this time
Potential theft of business information	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Viruses and bugs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Security problems concerning payment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
No legal system to regulate e-commerce operations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reliability of e-commerce systems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
No mechanism to guarantee customers secure transactions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My organisation does not trust e-commerce technology	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Our customers do not trust e-commerce technology	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3.6. Other barriers, please specify

	Is a problem for others but not for us	May be a problem for us	Was a problem but we have solved it already	Is a problem but we know we can solve it	Is a problem that we are unable to solve at this time
<input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Section 4: Sources of advice

Which areas of e-commerce advice or training do you think your organisation will need to help it start selling its products on the Internet?

- E-commerce opportunities available
- IT networking/Broadband
- Website architecture and design
- Business software
- Developing internet strategies
- Information security
- None
- Don't know

Other (Please specify) 1. 2. 3. 4.

Section 5: Name and address(Optional)

Please supply a contact name and postal address or e-mail address if you wish to receive the report on the findings of this research project. This information will not be used for any other purpose and will not be passed on to any third party.

Name:

Address:

E-mail :

To submit the questionnaire please click:

THANK YOU VERY MUCH FOR COMPLETING THIS QUESTIONNAIRE.

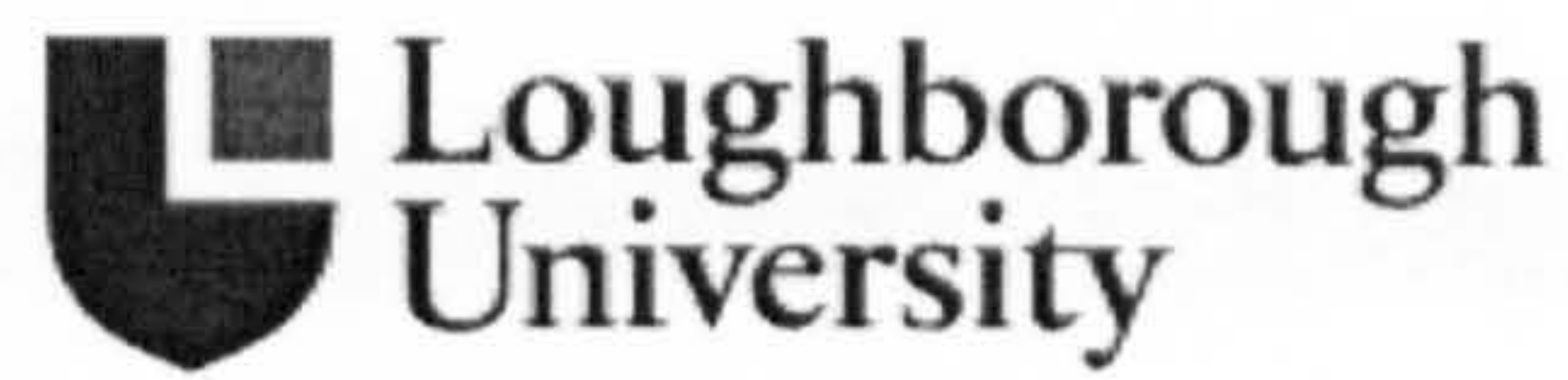
GLOSSARY

Term	Definition
Electronic Commerce	Conducting business communications and transactions over networks and through computers. It also includes buying and selling over the Internet.
Dial-up modem	Utilises standard telephone lines to connect computers to the Internet
Integrated Services Digital Network(ISDN)	Digital telephone scheme that allows a user to connect to the Internet over standard phone lines at speed higher than that of an ordinary modem(56K)
Digital Subscriber Line(xDSL)	Technology enabling simultaneous two way transmission of voice and high-speed data over ordinary telephone lines
Broadband	Transmission facility having a bandwidth sufficient to carry multiple voice, video or data channels simultaneously and uses coaxial cables to connect computers to Internet
Virus	A parasitic program written intentionally to enter computers and networks without the users' permission or knowledge and wreck havoc on them
Bug	A programming error that causes a program to work poorly, produce incorrect results or crash
Business software	Computer application programs designed to help run a business
Information Technology(IT) Networking	Linking computers and other devices such as printers into a network for the purpose of sharing resources
Website Architecture	The art and science of creating good websites
Information security	The protection of unauthorised access to or modification of information whether in storage, processing or transit and against the denial of service to authorised users or the provision of service to unauthorised users, including those measures necessary to detect, document and counter such threats

THE END

**APPENDIX 5 –
QUESTIONNAIRE FOR ORGANISATIONS WITH
LEVEL 3 WEBSITES**

E-COMMERCE SURVEY



Computer Science Department

Purpose of study

Electronic commerce (e-commerce) is generally known as the carrying out of transactions such as making reservations and payment over the Internet. The purpose of this survey is to analyse the barriers and inhibitors to the implementation of e-commerce systems for tourist organisations and how your organisation has successfully overcome them to become fully-fledged e-commerce companies. The results of this survey will be used to design a framework to help tourist organisations in Africa maximise the benefits of e-commerce in the current environment.

If your organisation has a computer department or anyone in charge of your computers or computer system, they will be able to answer most of the questions, which mainly involve ticking an appropriate box. Since most of the questions are about information technology they unavoidably include some jargon most of which are defined in the glossary at the end of the questionnaire.

The information you have provided will be treated as **strictly confidential** and will only be used for analysis in this survey.

Thank you in advance for participating in this survey. The results from this survey will be analysed and presented in a report. A copy of this report will be available free to all those that take part in the survey if a name and address is supplied.

Unless otherwise indicated, please answer each question by ticking the appropriate box

Section 1: General Information about your Organisation and Computer Systems

1.1 What type is your organisation?

<input type="checkbox"/> Airline	<input type="checkbox"/> Hotel/Lodge	<input type="checkbox"/> National Park	<input type="checkbox"/> Travel Agency/Tour Operator
<input type="checkbox"/> Tourism Promotion	<input type="text"/>		Other(Please Specify)

1.2 In which country is it located?

<input type="checkbox"/> South Africa	<input type="checkbox"/> Kenya	<input type="checkbox"/> Zimbabwe	<input type="checkbox"/> Uganda
---------------------------------------	--------------------------------	-----------------------------------	---------------------------------

1.3 In which setting is your organisation located?

<input type="checkbox"/> Urban	<input type="checkbox"/> Semi-urban	<input type="checkbox"/> Semi-rural	<input type="checkbox"/> Rural
--------------------------------	-------------------------------------	-------------------------------------	--------------------------------

Section 2: Type of external connection to the Internet

- Analog modem (standard telephone line)
- Broadband
- Wireless connection
- ISDN
- xDSL
- Don't know

Section 3: E-commerce barriers

Please indicate whether the following were at some point barriers to e-commerce adoption and usage and how your organisation overcame them

3.1 Organisational barriers

3.1.1. Indirect or hidden costs as a result of e-commerce adoption by your organisation

- Was never a problem Problem is now solved Problem still exists

How we overcame/are trying to overcome this problem (Please specify)

3.1.2. Lack of e-commerce strategic plan

- Was never a problem Problem is now solved Problem still exists

How we overcame/are trying to overcome this problem (Please specify)

3.1.2. Lack of knowledge of e-commerce techniques

Was never a problem Problem is now solved Problem still exists

How we overcame/are trying to overcome this problem (Please specify)

3.1.3. Too few IT-skilled personnel

Was never a problem Problem is now solved Problem still exists

How we overcame/are trying to overcome this problem (Please specify)

3.1.3. E-commerce-induced changes to business operations within the organisation

Was never a problem Problem is now solved Problem still exists
 Was never a problem Problem is now solved Problem still exists

How we overcame/are trying to overcome this problem (Please specify)

3.1.4 Lack of staff training

Was never a problem Problem is now solved Problem still exists

How we overcame/are trying to overcome this problem (Please specify)

3.1.5. Time it takes to implement e-commerce solution

Was never a problem Problem is now solved Problem still exists

How we overcame/are trying to overcome this problem (Please specify)

3.1.6. Logistical problems

Was never a problem Problem is now solved Problem still exists

How we overcame/are trying to overcome this problem (Please specify)

3.2. Financial barriers to e-commerce

3.2.1. Cost of implementing and maintaining an e-commerce system

Was never a problem Problem is now solved Problem still exists

How we overcame/are trying to overcome this problem (Please specify)

3.2.2. Investment risk

Was never a problem Problem is now solved Problem still exists

How we overcame/are trying to overcome this problem (Please specify)

3.2.3. Cost of staff training and education

Was never a problem Problem is now solved Problem still exists

How we overcame/are trying to overcome this problem (Please specify)

3.3. Technological barriers to e-commerce

3.3.1. Fear of choosing an e-commerce solution that is incompatible with existing systems.

Was never a problem Problem is now solved Problem still exists

How we overcame/are trying to overcome this problem (Please specify)

3.3.2. Existing financial systems currently do not support online payment

Was never a problem Problem is now solved Problem still exists

How we overcame/are trying to overcome this problem (Please specify)

3.3.3. My organisation does not have the required IT infrastructure

Was never a problem Problem is now solved Problem still exists

How we overcame/are trying to overcome this problem (Please specify)

3.3.4. Technology too complicated

Was never a problem Problem is now solved Problem still exists

How we overcame/are trying to overcome this problem (Please specify)

3.3.5. National telecommunications too slow and unstable

Was never a problem Problem is now solved Problem still exists

How we overcame/are trying to overcome this problem (Please specify)

3.3.6. Lack of external support to maintain an e-commerce system

Was never a problem Problem is now solved Problem still exists

How we overcame/are trying to overcome this problem (Please specify)

3.3.7. New versions of software introduced too often

Was never a problem Problem is now solved Problem still exists

How we overcame/are trying to overcome this problem (Please specify)

3.4. Behavioural barriers to e-commerce

3.4.1. Existing personnel reluctant to use an e-commerce system

Was never a problem Problem is now solved Problem still exists

How we overcame/are trying to overcome this problem (Please specify)

3.4.2. Existing personnel reluctant to learn e-commerce techniques

Was never a problem Problem is now solved Problem still exists

How we overcame/are trying to overcome this problem (Please specify)

3.4.3. Trained staff leaving

- Was never a problem Problem is now solved Problem still exists

How we overcame/are trying to overcome this problem (Please specify)

3.4.4. Lack of management support

- Was never a problem Problem is now solved Problem still exists

How we overcame/are trying to overcome this problem (Please specify)

3.5. Security and Legal barriers to e-commerce

3.5.1. Potential theft of business information

- Was never a problem Problem is now solved Problem still exists

How we overcame/are trying to overcome this problem (Please specify)

3.5.2. Viruses and Bugs

Was never a problem Problem is now solved Problem still exists

How we overcame/are trying to overcome this problem (Please specify)

3.5.3. Security problems concerning payment

Was never a problem Problem is now solved Problem still exists

How we overcame/are trying to overcome this problem (Please specify)

3.5.4. No legal system to regulate e-commerce operations

Was never a problem Problem is now solved Problem still exists

How we overcame/are trying to overcome this problem (Please specify)

3.5.5. Reliability of e-commerce systems

Was never a problem Problem is now solved Problem still exists

How we overcame/are trying to overcome this problem (Please specify)

3.5.6. No mechanism to guarantee customers secure transactions

Was never a problem Problem is now solved Problem still exists

How we overcame/are trying to overcome this problem (Please specify)

3.5.7. My organisation does not trust e-commerce technology

Was never a problem Problem is now solved Problem still exists

How we overcame/are trying to overcome this problem (Please specify)

--

3.5.8. Customers do not trust e-commerce technology

- Was never a problem
 Problem is now solved
 Problem still exists

How we overcame/are trying to overcome this problem (Please specify)

4. Areas of Assistance

Which areas of e-commerce advice or training did your organisation receive prior to implementing the ecommerce system within your organisation?

<input type="checkbox"/>	E-commerce opportunities available
<input type="checkbox"/>	IT Networking/Broadband
<input type="checkbox"/>	Website architecture and design
<input type="checkbox"/>	Developing Internet strategies
<input type="checkbox"/>	Information security
<input type="checkbox"/>	None
<input type="checkbox"/>	Don't know
<input type="checkbox"/>	Other (Please specify)

5. Name and address (optional)

Please supply a contact name and address if you wish to receive the report on the findings of this research. This information will not be used for any other purpose and will not be passed to any third party.

Name: _____

Address: _____

**APPENDIX 6 –
E-COMMERCE BARRIERS FOR ORGANISATIONS
WITH LEVEL 1 WEBSITES**

E-COMMERCE BARRIERS OF TOURISM ORGANISATIONS WITH LEVEL 1 WEBSITES

This section presents data in more detail of the e-commerce barriers being faced by the African tourism organisations with Level 1 websites.

- Table VI.1 presents the analysis of organisational barriers to e-commerce of the African tourism organisations with Level 1 websites.
- Table VI.2 shows data in more detail of financial barriers being faced by the African tourism organisations with Level 1 websites
- Table VI.3 shows the data in more detail of the technological barriers to e-commerce of the African tourism organisations with Level 1 websites
- Table VI.4 presents the analysis of the data of behavioural barriers to e-commerce of the African tourism organisations with Level 1 websites
- Table VI.5 shows the analysis of the security and legal barriers to e-commerce amongst African tourism organisations with Level 1 websites

Organisational barriers to e-commerce

Table VI.1: Analysis of the organisational barriers to e-commerce amongst African tourism organisations with Level 1 websites

Type of organisation Rating Barrier	National Organisations			Hotels & Lodges			Travel Agencies & Tour Operators			Car Rental Companies		
	MI	SI	NI	MI	SI	NI	MI	SI	NI	MI	SI	NI
E-commerce not relevant to my organisation	2 20%	4 40%	4 40%	5 13%	10 26%	21 55%	16 23%	21 30%	30 43%	2 40%	0 -	3 60%
Product not applicable for e-commerce	2 20%	3 30%	4 40%	7 18%	7 18%	23 61%	20 29%	18 26%	29 42%	2 40%	0 -	3 60%
Indirect or hidden costs	3 30%	5 50%	2 20%	4 11%	8 21%	18 47%	13 19%	23 33%	17 25%	0 -	1 20%	2 40%
My organisation can't quantify financially the impact of e-commerce	5 50%	2 20%	3 30%	7 18%	18 47%	12 32%	31 45%	22 32%	12 17%	2 40%	1 20%	2 40%
My organisation does not have a strategic plan for e-commerce	3 30%	3 30%	1 10%	6 16%	11 29%	10 26%	7 10%	11 16%	28 41%	2 40%	1 10%	2 40%
My organisation does not have knowledge of e-commerce techniques	0 -	5 50%	5 50%	7 18%	8 21%	21 55%	14 20%	17 25%	31 45%	2 40%	0 -	3 60%
Too few IT-skilled personnel	3 30%	2 20%	5 50%	11 29%	11 29%	16 42%	15 22%	37 54%	16 23%	1 20%	0 -	3 60%
My organisation does not want to form collaborative partnerships	0 -	0 -	10 100%	4 11%	7 18%	26 68%	6 9%	9 13%	38 55%	1 20%	0 -	4 80%
No incentives as few competitors online	0 -	2 20%	6 60%	2 5%	6 16%	28 74%	5 7%	20 29%	35 51%	0 -	0 -	4 80%
Company is too small	0 -	0 -	10 100%	4 11%	5 13%	27 71%	15 22%	22 32%	32 46%	0 -	0 -	5 100%
My company is reluctant to change how it operates	1 10%	4 40%	5 50%	7 18%	18 47%	9 24%	26 38%	22 32%	18 26%	0 -	2 40%	2 40%
Lack of staff training	1 10%	2 20%	7 70%	7 18%	17 45%	10 26%	9 13%	42 61%	17 25%	0 -	2 40%	2 40%
Time it takes to implement changes	1 10%	2 20%	3 30%	6 16%	17 45%	12 32%	13 19%	33 48%	21 30%	0 -	1 20%	4 80%
Logistical problems	1 10%	3 30%	4 40%	6 16%	15 39%	13 34%	11 16%	32 46%	24 35%	0 -	0 -	5 100%
Average	2 20%	3 30%	5 50%	6 16%	11 29%	18 47%	14 20%	24 35%	25 36%	1 20%	1 20%	3 60%

Sample size: South Africa - 45; Kenya -40; Zimbabwe -20; Uganda - 17

Legend: MI-Much Importance, SI-Some Importance, NI-Not Important

Financial barriers to e-commerce

Table VI.2: Analysis of the financial barriers to e-commerce amongst African tourism organisations with Level 1 websites

Type of organisation	National Organisations			Hotels & Lodges			Travel Agencies & Tour Operators			Car Rental Companies		
Rating	MI	SI	NI	MI	SI	NI	MI	SI	NI	MI	SI	NI
Barrier												
Cost of implementing and maintaining e-commerce system	5 50%	4 40%	1 10%	8 21%	16 42%	14 37%	21 30%	30 43%	16 23%	1 20%	1 20%	3 60%
Investment risk	1 10%	4 40%	1 10%	10 26%	15 39%	11 29%	15 22%	35 51%	13 19%	0	1 20%	2 40%
Cost of staff training	2 20%	5 50%	2 20%	7 18%	16 42%	15 39%	21 30%	26 38%	20 29%	1 20%	1 20%	3 60%
Market uncertainty	1 10%	4 40%	5 50%	9 24%	6 16%	10 26%	16 23%	30 43%	13 19%	0	1 20%	3 60%
Few customers are online	0 -	4 40%	6 60%	5 13%	11 29%	20 53%	7 10%	13 19%	35 51%	0	1 20%	4 80%
May lead to loss in productivity	1 10%	2 20%	3 30%	2 5%	8 21%	10 26%	8 12%	23 33%	19 28%	0	2 40%	2 40%
Fear of stronger competition on the Internet	2 20%	3 30%	5 50%	3 8%	4 11%	15 39%	7 10%	21 30%	37 54%	0	1 20%	2 40%
Advantages of e-commerce are outweighed by costs	1 10%	3 30%	4 40%	4 11%	14 37%	9 24%	10 14%	30 43%	18 26%	1 20%	1 20%	2 40%
Average	2 20%	4 40%	3 30%	6 16%	11 29%	13 34%	13 19%	26 38%	21 30%	0.4 8%	1 20%	3 60%

Sample size: South Africa - 45; Kenya -40; Zimbabwe -20; Uganda - 17

Legend: MI-Much Importance, SI-Some Importance, NI-Not Important

Technological barriers to e-commerce

Table VI.1: Analysis of the technological barriers to e-commerce amongst African tourism organisations with Level 1 websites

Type of organisation Barrier	National Organisations			Hotels & Lodges			Travel Agencies & Tour Operators			Car Rental Companies		
	Rating MI	SI	NI	MI	SI	NI	MI	SI	NI	MI	SI	NI
Fear of choosing an e-commerce solution that is incompatible with existing systems	4 40%	4 40%	2 20%	11 29%	17 45%	10 26%	18 26%	22 32%	12 17%	0 -	3 60%	2 40%
Existing financial systems currently do not support online payment	7 70%	2 20%	1 10%	20 53%	2 5%	15 39%	30 43%	23 33%	16 23%	0 -	1 20%	4 80%
My organisation does not have required IT infrastructure	3 30%	4 40%	3 30%	6 16%	13 34%	19 50%	16 23%	19 28%	34 49%	1 20%	1 20%	3 60%
Technology too complicated	1 10%	5 50%	4 40%	8 21%	14 37%	15 39%	12 17%	21 30%	25 36%	0 -	2 40%	3 60%
National telecommunications too slow and unstable	2 20%	5 50%	3 30%	12 32%	13 34%	13 34%	17 25%	23 33%	29 42%	0 -	2 40%	3 60%
Lack of external support to maintain an e-commerce system	7 70%	2 20%	1 10%	16 42%	13 34%	7 18%	31 45%	20 29%	14 20%	2 40%	1 20%	2 40%
New versions of software introduced too often	1 10%	4 40%	4 40%	9 24%	20 53%	8 21%	26 38%	20 29%	13 19%	0 -	2 40%	2 40%
Average	4 40%	3 30%	3 30%	12 32%	13 34%	12 32%	21 30%	21 30%	20 29%	0 -	2 40%	3 60%

Sample size: South Africa - 45; Kenya -40; Zimbabwe -20; Uganda - 17

Legend: MI-Much Importance, SI-Some Importance, NI-Not Important

Behavioural barriers to e-commerce

Table VI.2: Analysis of the behavioural barriers to e-commerce amongst African tourism organisations with Level 1 websites

Type of organisation	National Organisations			Hotels & Lodges			Travel Agencies & Tour Operators			Car Rental Companies		
Barrier	MI	SI	NI	MI	SI	NI	MI	SI	NI	MI	SI	NI
Existing personnel reluctant to use an e-commerce system	2 20%	2 20%	4 40%	9 24%	6 16%	18 47%	23 33%	18 26%	27 39%	0 -	2 40%	2 40%
Existing personnel reluctant to learn e-commerce techniques	3 30%	1 10%	4 40%	9 24%	4 11%	15 39%	21 30%	23 33%	22 32%	0 -	1 20%	1 20%
Trained staff leaving	2 20%	5 50%	3 30%	7 18%	18 47%	7 18%	23 33%	32 46%	13 19%	0 -	3 60%	2 40%
Lack of management support	1 10%	5 50%	4 40%	10 26%	11 29%	12 32%	29 42%	24 35%	14 20%	1 20%	1 20%	2 40%
Average	2 20%	3 30%	4 40%	9 24%	10 26%	13 34%	24 35%	24 35%	19 28%	0.25 5%	2 40%	2 40%

Sample size: South Africa - 45; Kenya -40; Zimbabwe -20; Uganda - 17

Legend: MI-Much Importance, SI-Some Importance, NI-Not Important

Security and Legal barriers to e-commerce

Table VI.3: Analysis of the security and legal barriers to e-commerce amongst African tourism organisations with Level 1 websites

Type of organisation Barrier	National Organisations			Hotels & Lodges			Travel Agencies & Tour Operators			Car Rental Companies		
	Rating MI	SI	NI	MI	SI	NI	MI	SI	NI	MI	SI	NI
Potential theft of business information	3 30%	3 30%	3 30%	23 61%	9 24%	3 8%	34 49%	28 41%	4 6%	2 40%	2 40%	1 20%
Viruses and bugs	4 40%	2 20%	3 30%	10 26%	18 47%	9 24%	22 32%	25 36%	4 6%	2 40%	1 20%	2 40%
Security problem concerning payment	6 60%	4 40%	0 -	26 68%	10 26%	1 3%	42 61%	25 36%	2 3%	3 60%	2 40%	0 -
No legal system to regulate e-commerce operations	7 70%	3 30%	0 -	7 18%	18 47%	10 26%	23 33%	24 35%	5 7%	1 20%	2 40%	2 40%
Reliability of e-commerce systems	6 60%	4 40%	0 -	21 55%	12 32%	5 13%	44 64%	20 29%	5 7%	2 40%	2 40%	1 20%
No mechanism to guarantee customers secure transactions	4 40%	4 40%	2 20%	21 55%	13 34%	2 5%	36 52%	28 41%	4 6%	2 40%	2 40%	0 -
My organisation does not trust e-commerce technology	2 20%	2 20%	4 40%	7 18%	11 29%	20 53%	34 49%	17 25%	15 22%	1 20%	1 20%	2 40%
Customers do not trust e-commerce technology	3 30%	1 10%	3 30%	13 34%	10 26%	8 21%	23 33%	16 23%	12 17%	1 20%	1 20%	1 20%
Average	4 40%	3 30%	2 20%	16 42%	13 34%	7 18%	32 46%	23 33%	6 9%	2 40%	2 40%	1 20%

Sample size: South Africa - 45; Kenya -40; Zimbabwe -20; Uganda - 17

Legend: MI-Much Importance, SI-Some Importance, NI-Not Important

**APPENDIX 7 –
E-COMMERCE BARRIERS FOR ORGANISATIONS
WITH LEVEL 2 WEBSITES**

E-COMMERCE BARRIERS OF ORGANISATIONS WITH LEVEL 2 WEBSITES

This section presents tables and figures which show data on e-commerce barriers of the African organisations from the travel and tourism industry.

The tables and figures are as follows:

- Table VII.1 shows analysis of the attitudes of the African tourism organisations towards e-commerce adoption
- Table VII.2 presents data on the organisational barriers to e-commerce being faced by the tourism organisations from the four African countries
- Figure VII.1 shows the results of the analysis of what the African tourism organisations think about the statement ‘Advantages of e-commerce are outweighed by costs’
- Table VII.3 presents the analysis of financial barriers to e-commerce adoption of the African tourism organisations with Level 2 websites
- Table VII.4 shows data on the technological barriers to e-commerce adoption of the African tourism organisations with Level 2 websites
- Table VII.5 shows the analysis of the behavioural barriers to e-commerce adoption of African tourism organisations with Level 2 websites
- The results of the analysis of the eight security and legal barriers identified are presented in Table VII.6.
- In addition to the barriers identified by the researcher four more barriers were identified by the African tourism organisations and are presented in Table VII.7.

Organisational barriers to e-commerce

Table VII.1: Analysis of attitudes of African tourism organisations with Level 2 websites towards e-commerce adoption

Organisation Barrier	National Organisations				Hotels & Lodges				Travel Agencies & Tour Operators				Car Rental Companies						
	T	PT	PF	F	D	T	PT	PF	F	D	T	PT	PF	F	D				
E-commerce not relevant to my organisation	0	0	0	3	0	0	0	0	58	0	0	0	0	116	7	0	0	12	0
Product not applicable for e-commerce	0	0	0	3	0	0	0	0	58	0	0	0	0	109	3	0	0	12	0
No incentives as few competitors online	0	0	0	3	0	0	0	9	44	5	0	0	26	78	19	0	3	9	0
Average	0	0	0	3	0	0	0	3	53	2	0	0	12	101	10	0	1	11	0
	-	-	-	100%	-	-	-	5%	92%	3%	-	-	10%	82%	8%	-	8%	92%	-

Legend: T-True; PT-Probably true; PF-Probably False; F- False; D- Don't know

Sample Size: South Africa 93; Kenya 42; Zimbabwe-38; Uganda-23

Table VII.2: Analysis of organisational barriers of African tourism organisations with Level 2 websites

Organisation	National Organisations					Hotels & Lodges					Travel Agencies & Tour Operators					Car Rental Companies				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Barrier	Rating																			
Indirect or hidden costs	2	0	1	0	0	22	22	12	2	0	38%	38%	21%	3%	-	51	42	21	5	4
My organisation can't quantify financially the impact of e-commerce	2	0	1	0	0	19	14	19	6	0	33%	24%	33%	10%	-	47	20	35	4	4
My organisation does not have a strategic plan for e-commerce	1	1	1	0	0	18	26	11	3	0	31%	45%	19%	5%	-	40	41	29	7	6
My organisation does not have knowledge of e-commerce techniques	1	1	1	0	0	20	8	26	4	0	34%	14%	45%	7%	-	44	3	49	23	4
Too few IT-skilled personnel	1	2	0	0	0	10	6	23	18	1	17%	10%	40%	31%	2%	29	6	37	39	12
Too few IT skilled personnel nationally	1	2	0	0	0	8	23	7	8	12	14%	40%	12%	14%	21%	25	40	8	21	29
My organisation does not want to form collaborative partnerships	1	2	0	0	0	38	18	2	0	0	66%	31%	3%	-	69	43	4	5	4	2
Company is too small	3	0	0	0	0	34	12	8	4	0	59%	21%	14%	7%	-	35	19	33	27	9
My company is reluctant to change how it operates	2	0	1	0	0	13	7	30	8	0	22%	12%	52%	14%	-	18	15	64	19	7
Lack of staff training	0	0	2	0	0	14	13	25	6	0	24%	22%	43%	10%	-	28	24	38	26	7
Time it takes to implement changes	0	2	1	0	0	19	27	6	6	0	33%	47%	10%	10%	-	38	59	9	10	7
Logistical problems	0	1	1	0	1	7	6	18	19	8	12%	10%	31%	33%	3%	15	11	17	43	37
Average	1.3	0.8	0.8	0	0.08	19	15	16	7	2	33%	26%	28%	12%	3%	37	27	29	20	11
	43%	27%	27%	-	3%	33%	26%	28%	12%	3%	33%	22%	24%	9%	42%	25%	33%	4	3	5

Legend: 1 – Not a problem for us; 2- Don't know if it's a problem; 3- Was a problem but we have solved it already; 4- Is a problem but we know we can solve it; 5- Is a problem that we are unable to solve this time

Sample Size: South Africa 93; Kenya-42; Zimbabwe-38; Uganda-23

Financial barriers to e-commerce

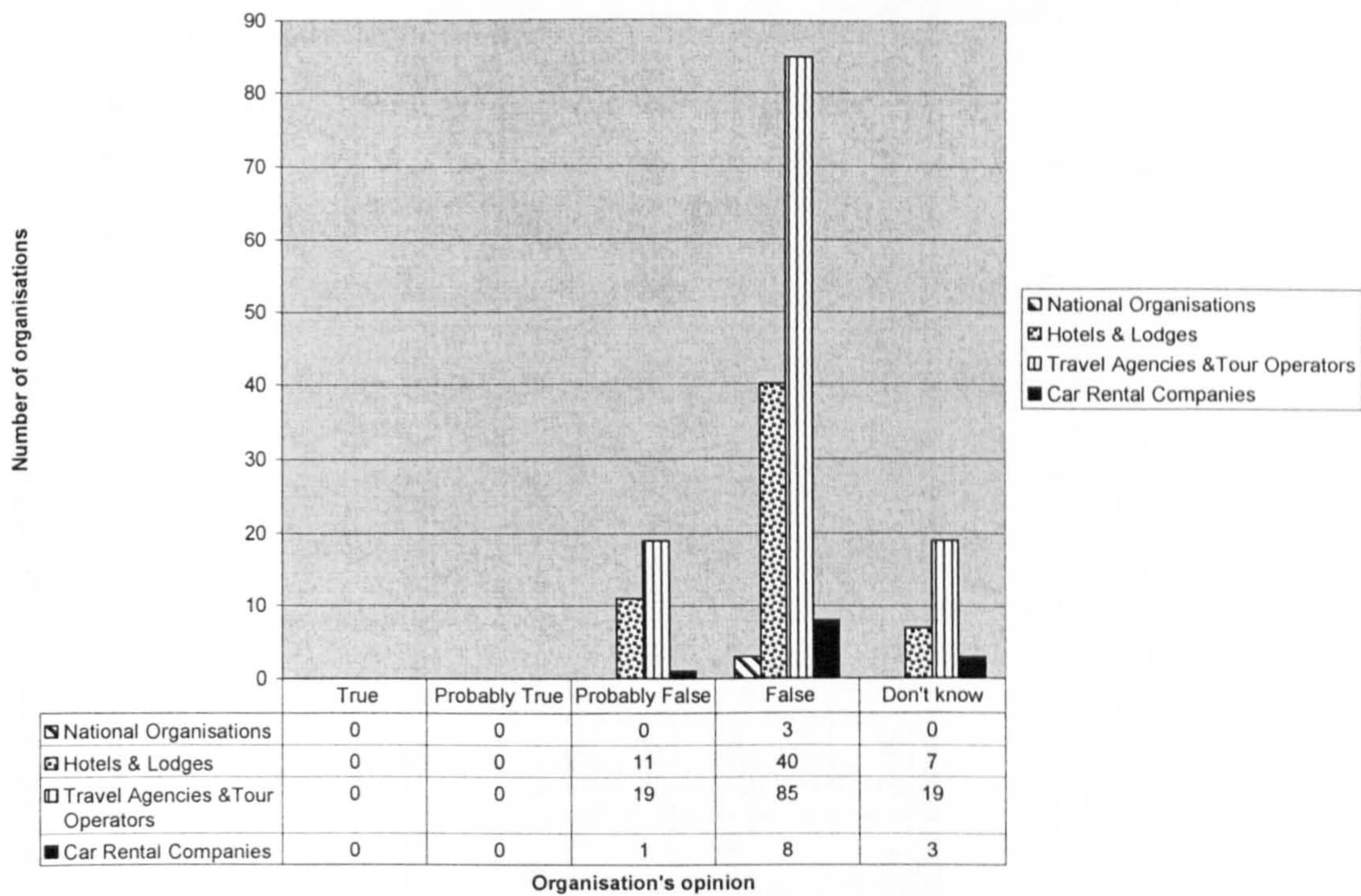


Figure VII.1: Tourism organisations opinions of the statement 'Advantages of e-commerce are outweighed by costs'

Technological barriers to e-commerce

Table VII.4: Analysis of the technological barriers to e-commerce adoption of the African tourism organisations with Level 2 websites

Organisation	National Organisations					Hotels & Lodges					Travel Agencies & Tour Operators					Car Rental Companies					
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	
Barrier	Rating																				
Fear of choosing an e-commerce solution that is incompatible with existing systems	0	0	0	3	0	12	15	8	13	10	11	31	17	33	31	3	3	25%	2	1	8%
Existing financial systems currently do not support online payment	0	-	-	100%	-	21%	26%	14%	22%	17%	9%	25%	14%	27%	25%	25%	25%	17%	6	2	17%
My organisation does not have required IT infrastructure	0	0	1	2	0	10	2	6	16	24	12	7	14	21	69	2	0	17%	6	2	17%
Technology too complicated	0	-	1	2	0	19%	3%	40%	26%	12%	24	1	54	23	21	4	0	25%	3	2	17%
National telecommunications too slow and unstable	2	1	0	0	0	26%	9%	7%	26%	33%	28	14	12	19	50	5	4	33%	2	1	8%
Lack of external support to maintain an e-commerce system	0	0	0	0	3	11	2	8	19	18	18	7	11	45	42	4	0	33%	4	4	33%
New versions of software introduced too often	0	0	0	2	1	21%	28%	14%	17%	21%	17	37	21	25	23	4	0	25%	3	2	17%
Average	0.3	0.1	0.4	1.3	0.6	12%	7%	10%	15%	24%	19	15	20	28	40	4	1	17%	3	2	17%
	10%	3%	13%	43%	20%	21%	12%	17%	26%	24%	15%	12%	16%	23%	33%	33%	8%	17%	2	2	17%

Legend: 1 – Not a problem for us; 2- Don't know if it's a problem; 3- Was a problem but we have solved it already; 4- Is a problem but we know we can solve it; 5- Is a problem that we are unable to solve this time

Sample Size: South Africa 93; Kenya 42; Zimbabwe 38; Uganda 23

Behavioural barriers to e-commerce

Table VII.5: Analysis of behavioural barriers to e-commerce adoption of the African tourism organisations with Level 2 websites

Organisation Barrier	National Organisations					Hotels & Lodges					Travel Agencies & Tour Operators					Car Rental Companies				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Existing personnel reluctant to use an e-commerce system	67%	0	1	0	0	23	3	17	10	5	40	8	33	26	16	5	0	4	3	0
Existing personnel reluctant to learn e-commerce techniques	67%	0	1	0	0	21	4	19	10	4	38	10	37	24	14	6	0	3	3	0
Trained staff leaving	33%	0	2	0	0	13	8	18	13	6	21	18	26	38	20	5	1	4	2	0
Lack of management support	100%	0	0	0	0	33	7	12	5	1	43	14	40	8	18	7	1	3	1	0
Average	67%	0	1	0	0	23	6	17	10	4	36	13	34	24	17	6	0.5	3.5	2	0
			33%	-	-	40%	10%	29%	17%	7%	29%	11%	28%	20%	14%	50%	4%	29%	17%	-
			33%	-	-	40%	17%	29%	17%	9%	33%	7%	27%	21%	13%	42%	-	33%	25%	-
			67%	-	-	36%	33%	33%	17%	7%	31%	8%	30%	20%	11%	50%	-	25%	25%	-
			67%	-	-	36%	33%	33%	17%	7%	31%	8%	30%	20%	11%	50%	-	25%	25%	-
			67%	-	-	36%	33%	33%	17%	7%	31%	8%	30%	20%	11%	50%	-	25%	25%	-
			67%	-	-	36%	33%	33%	17%	7%	31%	8%	30%	20%	11%	50%	-	25%	25%	-
			67%	-	-	36%	33%	33%	17%	7%	31%	8%	30%	20%	11%	50%	-	25%	25%	-
			67%	-	-	36%	33%	33%	17%	7%	31%	8%	30%	20%	11%	50%	-	25%	25%	-
			67%	-	-	36%	33%	33%	17%	7%	31%	8%	30%	20%	11%	50%	-	25%	25%	-
			67%	-	-	36%	33%	33%	17%	7%	31%	8%	30%	20%	11%	50%	-	25%	25%	-
			67%	-	-	36%	33%	33%	17%	7%	31%	8%	30%	20%	11%	50%	-	25%	25%	-
			67%	-	-	36%	33%	33%	17%	7%	31%	8%	30%	20%	11%	50%	-	25%	25%	-
			67%	-	-	36%	33%	33%	17%	7%	31%	8%	30%	20%	11%	50%	-	25%	25%	-
			67%	-	-	36%	33%	33%	17%	7%	31%	8%	30%	20%	11%	50%	-	25%	25%	-
			67%	-	-	36%	33%	33%	17%	7%	31%	8%	30%	20%	11%	50%	-	25%	25%	-
			67%	-	-	36%	33%	33%	17%	7%	31%	8%	30%	20%	11%	50%	-	25%	25%	-
			67%	-	-	36%	33%	33%	17%	7%	31%	8%	30%	20%	11%	50%	-	25%	25%	-
			67%	-	-	36%	33%	33%	17%	7%	31%	8%	30%	20%	11%	50%	-	25%	25%	-
			67%	-	-	36%	33%	33%	17%	7%	31%	8%	30%	20%	11%	50%	-	25%	25%	-
			67%	-	-	36%	33%	33%	17%	7%	31%	8%	30%	20%	11%	50%	-	25%	25%	-
			67%	-	-	36%	33%	33%	17%	7%	31%	8%	30%	20%	11%	50%	-	25%	25%	-
			67%	-	-	36%	33%	33%	17%	7%	31%	8%	30%	20%	11%	50%	-	25%	25%	-
			67%	-	-	36%	33%	33%	17%	7%	31%	8%	30%	20%	11%	50%	-	25%	25%	-
			67%	-	-	36%	33%	33%	17%	7%	31%	8%	30%	20%	11%	50%	-	25%	25%	-
			67%	-	-	36%	33%	33%	17%	7%	31%	8%	30%	20%	11%	50%	-	25%	25%	-
			67%	-	-	36%	33%	33%	17%	7%	31%	8%	30%	20%	11%	50%	-	25%	25%	-
			67%	-	-	36%	33%	33%	17%	7%	31%	8%	30%	20%	11%	50%	-	25%	25%	-
			67%	-	-	36%	33%	33%	17%	7%	31%	8%	30%	20%	11%	50%	-	25%	25%	-
			67%	-	-	36%	33%	33%	17%	7%	31%	8%	30%	20%	11%	50%	-	25%	25%	-
			67%	-	-	36%	33%	33%	17%	7%	31%	8%	30%	20%	11%	50%	-	25%	25%	-
			67%	-	-	36%	33%	33%	17%	7%	31%	8%	30%	20%	11%	50%	-	25%	25%	-
			67%	-	-	36%	33%	33%	17%	7%	31%	8%	30%	20%	11%	50%	-	25%	25%	-
			67%	-	-	36%	33%	33%	17%	7%	31%	8%	30%	20%	11%	50%	-	25%	25%	-
			67%	-	-	36%	33%	33%	17%	7%	31%	8%	30%	20%	11%	50%	-	25%	25%	-
			67%	-	-	36%	33%	33%	17%	7%	31%	8%	30%	20%	11%	50%	-	25%	25%	-
			67%	-	-	36%	33%	33%	17%	7%	31%	8%	30%	20%	11%	50%	-	25%	25%	-
			67%	-	-	36%	33%	33%	17%	7%	31%	8%	30%	20%	11%	50%	-	25%	25%	-
			67%	-	-	36%	33%	33%	17%	7%	31%	8%	30%	20%	11%	50%	-	25%	25%	-
			67%	-	-	36%	33%	33%	17%	7%	31%	8%	30%	20%	11%	50%	-	25%	25%	-
			67%	-	-	36%	33%	33%	17%	7%	31%	8%	30%	20%	11%	50%	-	25%	25%	-
			67%	-	-	36%	33%	33%	17%	7%	31%	8%	30%	20%	11%	50%	-	25%	25%	-
			67%	-	-	36%	33%	33%	17%	7%	31%	8%	30%	20%	11%	50%	-	25%	25%	-
			67%	-	-	36%	33%	33%	17%	7%	31%	8%	30%	20%	11%	50%	-	25%	25%	-
			67%	-	-	36%	33%	33%	17%	7%	31%	8%	30%	20%	11%	50%	-	25%	25%	-
			67%	-	-	36%	33%	33%	17%	7%	31%	8%	30%	20%	11%	50%	-	25%	25%	-
			67%	-	-	36%	33%	33%	17%	7%	31%	8%	30%	20%	11%	50%	-	25%	25%	-
			67%	-	-	36%	33%	33%	17%	7%	31%	8%	30%	20%	11%	50%	-	25%	25%	-
			67%	-	-	36%	33%	33%	17%	7%	31%	8%	30%	20%	11%	50%	-	25%	25%	-
			67%	-	-	36%	33%	33%	17%	7%	31%	8%	30%	20%	11%	50%	-	25%	25%	-
			67%	-	-	36%	33%	33%	17%	7%	31%	8%	30%	20%	11%	50%	-	25%	25%	-
			67%	-	-	36%	33%	33%	17%	7%	31%	8%	30%	20%	11%	50%	-	25%	25%	-
			67%	-	-	36%	33%	33%	17%	7%	31%	8%	30%	20%	11%	50%	-	25%	25%	-
			67%	-	-	36%	33%	33%	17%	7%	31%	8%	30%	20%	11%	50%	-	25%	25%	-
			67%	-	-	36%	33%	33%	17%	7%	31%	8%	30%	20%	11%	50%	-	25%	25%	-
			67%	-	-	36%	33%	33%	17%	7%	31%	8%	30%	20%	11%	50%	-	25%	25%	-
			67%	-	-	36%	33%	33%	17%	7%	31%	8%	30%	20%	11%	50%	-	25%	25%	-
			67%	-	-	36%	33%	33%	17%	7%	31%	8%	30%	20%	11%	50%	-	25%	25%	-
			67%	-	-	36%	33%	33%	17%	7%	31%	8%	30%	20%	11%	50%	-	25%	25%	-
			67%	-	-	36%	33%	33%	17%	7%	31%	8%	30%	20%	11%	50%	-	25%	25%	-
			67%	-	-	36%	33%	33%	17%	7%	31%	8%	30%	20%	11%	50%	-	25%	25%	-
			67%	-	-	36%	33%	33%	17%	7%	31%	8%	30%	20%	11%	50%	-	25%	25%	-
			67%	-	-	36%	33%	33%	17%	7%	31%	8%	30%	20%	11%	50%	-	25%	25%	-
			67%	-	-	36%	33%	33%	17%	7%	31%	8%	30%	20%	11%	50%	-	25%	25%	-
			67%	-	-	36%	33%	33%	17%	7%	31%	8%	30%	20%	11%	50%	-	25%	25%	-
			67%	-	-	36%	33%	33%	17%	7%	31%	8%	30%	20%	11%	50%	-	25%	25%	-
			67%	-	-	36%	33%	33%	17%	7%	31%	8%	30%	20%	11%	50%	-	25%	25%	-
			67%	-	-	36%	33%	33%	17%	7%	31%	8%	30%	20%	11%	50%	-	25%	25%	-
			67%	-	-	36%	33%	33%	17%	7%	31%	8%	30%	20%	11%	50%	-	25%	25%	-
			67%	-	-	36%	33%	33%	17%	7%	31%	8%	30%	20%	11%	50%	-	25%	25%	-
			67%	-	-	36%	33%	33%	17%	7%	31%	8%	30%	20%	11%	50%	-	25%	25%	-
			67%	-	-	36%	33%	33%	17%	7%	31%	8%	30%	20%	11%	50%	-	25%	25%	-
			67%	-																

Security and Legal barriers to e-commerce

Table VII.6: Analysis of security and legal barriers to e-commerce adoption of the African tourism organisations with Level 2 websites

Organisation Barrier	National Organisations					Hotels & Lodges					Travel Agencies & Tour Operators					Car Rental Companies				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Potential theft of business information	0	1	0	1	1	5	15	7	15	16	7	20	7	37	52	1	5	1	3	2
Viruses and bugs	0	0	0	2	1	14	6	21	12	5	29	11	44	28	11	4	0	4	3	1
Security problem concerning payment	0	0	0	1	2	5	4	5	20	24	8	6	5	37	67	3	0	1	5	3
No legal system to regulate e-commerce operations	0	0	0	1	2	9	13	3	9	24	12	12	5	18	76	6	0	1	3	2
Reliability of e-commerce systems	0	0	0	1	2	8	1	3	27	19	9	5	4	42	63	2	0	1	6	3
No mechanism to guarantee customers secure transactions	0	0	0	1	2	9	4	3	24	18	12	8	4	41	58	3	0	1	6	2
My organisation does not trust e-commerce technology	1	0	0	1	1	15	4	16	18	5	25	14	33	37	14	4	2	4	1	1
Customers do not trust e-commerce technology	0	1	1	1	0	10	34	6	5	3	31	67	3	14	8	3	7	1	0	1
Average	0	0.3	0.3	1.1	1.3	9	10	8	16	14	17	18	13	32	44	3	2	2	3	2
	-	10%	10%	37%	43%	16%	17%	14%	28%	22%	14%	15%	11%	26%	36%	25%	17%	17%	25%	17%

Legend: 1 – Not a problem for us; 2- Don't know if it's a problem; 3- Was a problem but we have solved it already; 4- Is a problem but we know we can solve it; 5- Is a problem that we are unable to solve this time

Sample Size: South Africa 93; Kenya 42; Zimbabwe 38; Uganda 23

Other barriers to e-commerce

Table VII.7: Analysis of other barriers to e-commerce adoption of the African tourism organisations with Level 2 websites

Organisation Rating Barrier	National Organisations					Hotels & Lodges					Travel Agencies & Tour Operators					Car Rental Companies									
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5					
Lack of Government support	0	0	0	0	0	0	0	0	0	8	0	0	0	0	18	0	0	0	0	1	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	14%	-	-	-	-	31%	-	-	-	-	8%					
Lack of E-commerce Management Skills	0	0	0	0	0	0	0	0	0	11	0	0	0	0	11	0	0	0	0	3	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	19%	-	-	-	-	19%	-	-	-	-	25%					
Lack of Technical Implementation Skills	0	0	0	0	0	0	0	0	0	4	0	0	0	0	12	0	0	0	0	1	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	7%	-	-	-	-	21%	-	-	-	-	8%					
Lack of exposure of services to customers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12%	-	-	-	-	-					
Average	0	0	0	0	0	0	0	0	0	8	0	0	0	0	12	0	0	0	0	2	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	14%	-	-	-	-	10%	-	-	-	-	17%					

Legend: 1 – Not a problem for us; 2- Don't know if it's a problem; 3- Was a problem but we have solved it already; 4- Is a problem but we know we can solve it; 5- Is a problem that we are unable to solve this time

Sample Size: South Africa 93; Kenya-42; Zimbabwe-38; Uganda-23

**APPENDIX 8 –
METHODS USED TO OVERCOME BARRIERS TO
E-COMMERCE BY THE AFRICAN TOURISM
ORGANISATIONS**

METHODS USED TO OVERCOME THE BARRIERS TO E-COMMERCE

The following tables show data in more detail on the methods and technologies used by the African tourism organisations to break the barriers to e-commerce adoption:

- Table VIII.1 presents data on the organisations who have managed to overcome the organisational barriers and those who are yet to overcome these barriers
- Table VIII.2 shows the analysis of the methods and technologies used to overcome the organisational barriers
- Table VIII.3 presents data on the tourism organisations who have overcome the financial barriers and those who are yet to overcome them
- Analysis VIII.4 of methods used to overcome financial barriers to e-commerce barriers is presented in Table
- Table VIII.5 shows data on the tourism organisations that have overcome the technological barriers to e-commerce and those that have not
- Table VIII.6 shows data on the methods and technologies used to overcome the technological barriers to e-commerce
- Table VIII.7 presents the tourism organisations that have overcome the behavioural barriers
- Analysis of the methods used to overcome the behavioural barriers is presented in Table VIII.8
- Table VIII.9 shows the data on tourism organisations that have overcome the security and legal barriers
- Analysis of the methods and barriers used to overcome the security and legal barriers is shown in Table VIII.10

Organisational barriers to e-commerce

Table VIII.1: Analysis of organisational barriers to e-commerce

Barrier	Option		Was never a problem				Problem now solved				Problem still exists			
	Organisation		NO	HL	TATO	CRC	NO	HL	TATO	CRC	NO	HL	TATO	CRC
Indirect or hidden costs as a result of e-commerce adoption			1 (50%)	3 (25%)	-	-	1 (50%)	9 (75%)	3 (100%)	-	-	-	-	-
Lack of E-commerce strategic plan			2 (100%)	5 (42%)	2 (67%)	-		7 (33%)	1 (33%)	-	-	-	-	-
Lack of knowledge of e-commerce techniques			2 (100%)	7 (58%)	-	-		5 (42%)	3 (100%)	-	-	-	-	-
Too few IT-skilled personnel			1 (50%)	4 (33%)	1 (33%)	-	1 (50%)	8 (67%)	2 (67%)	-	-	-	-	-
E-commerce-induced changes to business operations within the organisation			2 (100%)	5 (50%)	-	-		6 (50%)	3 (100%)	-	1 (8%)	-	-	-
Lack of Staff training			1 (50%)	4 (33%)	1 (33%)	-	1 (50%)	8 (67%)	2 (67%)	-	-	-	-	-
Time it takes to implement			1 (50%)	9 (75%)	3 (100%)	-	1 (50%)	3 (25%)		-	-	-	-	-
Logistical problems			1 (50%)	7 (58%)	1 (33%)	-	1 (50%)	5 (42%)	1 (33%)	-	-	1 (33%)	-	-

Sample Size: South Africa – 15; Kenya - 2

Legend: NO- National Organisations; HL-Hotel and Lodges; TATO- Travel Agencies and Tour Operators

Table VIII.2: Analysis of ways to overcome organisational barriers

Barrier	Option Organisation	How we overcame barrier			How we are trying to overcome barrier		
		NO	HL	TATO	NO	HL	TATO
Indirect or hidden costs as a result of e-commerce adoption		Cost benefit analysis(1) Thorough requirements analysis(1)	Thorough requirements analysis (5) Developed/implemented e-commerce system in stages(4) Cost-benefit analysis(5)	Thorough requirements analysis (3) Cost-benefit analysis (2)			
Lack of E-commerce strategic plan		Developed a corporate e-commerce strategic plan(1)	Developed corporate e-commerce strategic plan on our own(4) Developed corporate e-commerce strategic plan with the help of consultants(6)	Developed corporate e-commerce strategic plan with the help of consultants (1)		Develop functional strategic plan and business units strategic plan(1)	
Lack of knowledge of e-commerce techniques			Set up e-commerce department/division (1) Courses/Seminars(4)	Courses/Seminars (2)			
Too few IT-skilled personnel		Training and education programmes(1) Human resource strategy(1)	Training and education programmes in place(8) Human Resource strategy(4) Rotating workforce (1)	Training and education programmes in place(2) Human Resource strategy (2)			
E-commerce induced change			Developed strategy to deal with change(2) E-commerce courses for management(5)	Developed strategy to deal with change (2)		To change management structures to adapt to changes(1)	
Lack of Staff training		In-house training(10)	In-house training(8) Training by e-commerce vendors(6) Project management techniques(2)	In-house training(2)			
Time it takes to implement							
Logistical problems		Developed e-logistics(1)	Developed e-logistics(4)	Developed e-logistics (1)			

Sample Size: South Africa – 15; Kenya - 2

Legend: NO- National Organisations; HL-Hotel and Lodges; TATO- Travel Agencies and Tour Operators

Financial barriers to e-commerce

Table VIII.3: Analysis of financial barriers to e-commerce

Barrier	Option	Was never a problem			Problem now solved			Problem still exists					
		NO	HL	TATO	CRC	NO	HL	TATO	CRC	NO	HL	TATO	CRC
Cost of Implementing and maintaining e-commerce system	1	2 (100%)	6 (50%)	-	-	6 (50%)	3 (100%)	-	-	-	-	-	-
	2	1 (50%)	3 (25%)	-	-	9 (75%)	3 (100%)	-	-	-	-	-	-
Investment risk	1	1 (50%)	3 (25%)	-	1 (50%)	9 (75%)	3 (100%)	-	-	-	-	-	-
	2	2 (100%)	9 (75%)	2 (67%)	-	3 (25%)	1 (33%)	-	-	-	-	-	-

Sample Size: South Africa - 15; Kenya - 2

Legend: NO- National Organisations; HL-Hotel and Lodges; TATO- Travel Agencies and Tour Operators

Table VIII.4: Analysis of ways to overcome financial barriers

Barrier	Option	How we overcame the barrier		
		NO	HL	TATO
Cost of Implementing and maintaining	1	-	Bank Loan(5)	Bank loan (3)
	2	Return on Investments(1)	Return on Investments(8) Investment Risk Analysis(5) Cost-Benefit Analysis(1)	Return on Investments(1) Investment Risk Analysis(2) Cost-Benefit Analysis(1)
Cost of staff training and education	1	-	Separate budget for training(4)	Separate budget for training(1)
	2	-	-	-

Sample Size: South Africa - 15; Kenya - 2

Legend: NO- National Organisations; HL-Hotel and Lodges; TATO- Travel Agencies and Tour Operators

Technological barriers to e-commerce

Table VIII.5: Analysis of technological barriers to e-commerce adoption

Barrier	Option	Was never a problem			Problem now solved			Problem still exists				
		NO	HL	TATO	CRC	NO	HL	TATO	NO	HL	TATO	CRC
Fear of choosing an e-commerce solution that is incompatible with existing systems	Organisation	1 (50%)	5 (42%)	-	-	1 (50%)	7 (58%)	3 (100%)	-	-	-	-
	Existing financial systems currently do not support online payment	1 (50%)	1 (8%)	-	-	1 (50%)	7 (58%)	3 (100%)	-	4 (33%)	-	-
My organisation does not have the required IT infrastructure	Technology too complicated	2 (100%)	6 (50%)	1 (33%)	-	6 (50%)	2 (67%)	2 (67%)	-	-	-	-
	National Telecommunications too slow and unstable	1 (50%)	4 (33%)	-	-	1 (50%)	8 (67%)	3 (100%)	-	-	-	-
Lack of external support to maintain an e-commerce system	Existing financial systems currently do not support online payment	1 (50%)	4 (33%)	1 (33%)	-	1 (50%)	6 (50%)	2 (67%)	-	2 (17%)	-	-
	Technology too complicated	1 (50%)	2 (17%)	-	-	1 (50%)	8 (67%)	3 (100%)	-	-	-	-
New versions of software introduced too often	Existing financial systems currently do not support online payment	1 (50%)	4 (33%)	-	-	1 (50%)	6 (50%)	3 (100%)	-	1 (50%)	-	-
	Technology too complicated	1 (50%)	4 (33%)	-	-	1 (50%)	6 (50%)	3 (100%)	-	1 (50%)	-	-

Sample Size: South Africa – 15; Kenya - 2

Legend: NO- National Organisations; HL-Hotel and Lodges; TATO- Travel Agencies and Tour Operators

Table VIII.6: Analysis of ways to overcome technological barriers

Barrier	Option	How we overcame			How we are trying		
		NO	HL	TATO	NO	HL	TATO
Fear of choosing an e-commerce solution that is incompatible with existing systems	Organisation	Set up e-commerce division(1)	<ul style="list-style-type: none"> Set up e-commerce department/division(6) Got help from consultants(3) Middleware(1) 	<ul style="list-style-type: none"> Set up e-commerce department/division(1) Got help from consultants(2) 			
		Outsourced payment processing(1)	<ul style="list-style-type: none"> Outsourced payment processing(4) Prepayment system(4) Sought help from International banks(2) 	<ul style="list-style-type: none"> Outsourced payment processing(1) Prepayment system(2) 		Outsource payment processing(1) To seek help from banks(3)	Outsource payment processing(2)
My organisation does not have the required IT infrastructure			Upgraded ICT infrastructure(5)	Upgraded ICT infrastructure(2)			
Technology too complicated	Set up e-commerce department/division(1)		<ul style="list-style-type: none"> Set up e-commerce department/division(8) Courses/Seminars(3) Updates from e-commerce vendors(1) Subscribe to e-commerce magazines and journals(1) 	<ul style="list-style-type: none"> Set up e-commerce department/division(3) Courses/Seminars(2) 			
			<ul style="list-style-type: none"> Upgraded Internet connection(6) Second Internet connection(3) 	Upgraded Internet connection(2)			
National Telecommunications too slow and unstable							
Lack of external support to maintain an e-commerce system	Set up e-commerce department/division(2)		<ul style="list-style-type: none"> Set up e-commerce department/division(8) Receive technical support online or by phone(3) 	<ul style="list-style-type: none"> Set up e-commerce department/division(2) Receive technical support online or by phone(3) 			
		<ul style="list-style-type: none"> Receive technical support online or by phone(1) 					
New versions of software introduced too often	Set up e-commerce division(10)		<ul style="list-style-type: none"> Set up e-commerce department/division(4) Updated by vendors regularly(4) Updates from vendors' websites(1) Subscribe to journals/magazines(3) 	<ul style="list-style-type: none"> Seminars by vendors(1) Updated by vendors regularly by e-mail(1) Set up e-commerce department/division(1) 			
		<ul style="list-style-type: none"> Updates from vendors of e-commerce systems(1) 					

Sample Size: South Africa – 15; Kenya - 2
 Legend: NO- National Organisations; HL-Hotel and Lodges; TATO- Travel Agencies and Tour Operators

Behavioural barriers to e-commerce barriers

Table VIII.7: Analysing behavioural barriers to e-commerce adoption

Barrier	Option		Was never a problem				Problem now solved				Problem still exists			
	NO	HL	TATO	CRC	NO	HL	TATO	CRC	NO	HL	TATO	CRC		
Existing personnel reluctant to use an e-commerce system	2 (100%)	7	2 (67%)	-	-	5	-	1 (33%)	-	-	-	-		
Existing personnel reluctant to learn e-commerce techniques	2 (100%)	8 (67%)	2 (67%)	-	-	4 (33%)	-	1 (33%)	-	-	-	-		
Trained staff leaving	1 (50%)	3 (33%)	2 (67%)	-	1	8 (67%)	-	1 (33%)	-	-	-	-		
Lack of management support	2 (100%)	8 (67%)	2 (67%)	-	-	4 (33%)	-	1 (33%)	-	-	-	-		

Sample Size: South Africa – 15; Kenya - 2

Legend: NO- National Organisations; HL-Hotel and Lodges; TATO- Travel Agencies and Tour Operators

Table VIII.8: Analysis of ways to overcome behavioural barriers to e-commerce adoption

Barrier	Option		How we overcame		TATO
	NO	HL	NO	HL	
Existing personnel reluctant to use an e-commerce system				Assured staff of their jobs(2) Explained importance and advantages of e-commerce adoption(2) Seminars/Courses(2)	Personnel have to use e-commerce systems(1)
Existing personnel reluctant to learn e-commerce techniques				Assured staff of their jobs(2) Explained importance and advantages of e-commerce adoption(1) Seminars/Courses(2)	Personnel have to learn how to use e-commerce systems(1)
Trained staff leaving	Revised salaries of key staff(1)			Revised salaries of key staff(3) Staff need to be committed before being sent for training(3) Trained more people than is required by organisation(1)	Revised salaries of key staff(1)
Lack of management support				Involve management in all aspects of e-commerce project management(3) Experience-sharing seminars(1)	Involve management in all aspects of e-commerce project management(1)

Sample Size: South Africa – 15; Kenya - 2

Legend: NO- National Organisations; HL-Hotel and Lodges; TATO- Travel Agencies and Tour Operators

Security and legal barriers to e-commerce

Table VIII.9: Analysis of security and legal barriers to e-commerce adoption and usage

Barrier	Option Organisation	Was never a problem				Problem now solved				Problem still exists			
		NO	HL	TATO	CRC	NO	HL	TATO	CRC	NO	HL	TATO	CRC
Potential theft of business information		1 (50%)	3 (25%)	-	-	1 (50%)	6 (50%)	3 (100%)	-	-	-	-	-
Viruses and bugs		1 (50%)	4 (33%)	-	-	1 (50%)	8 (67%)	3 (100%)	-	-	-	-	-
Security problem concerning payment			1 (8%)	-	-	1 (50%)	7 (58%)	2 (67%)	-	4 (33%)	1 (33%)	-	-
No legal system to regulate e-commerce operations		1 (50%)	9 (75%)	3 (100%)	-	-	-	-	-	1 (50%)	3 (25%)	-	-
Reliability of e-commerce systems		-	-	-	-	2 (100%)	7 (58%)	1 (33%)	-	-	5 (42%)	2 (67%)	-
No mechanism to guarantee customers secure transactions		-	-	-	-	2 (100%)	7 (58%)	3 (100%)	-	-	5 (42%)	-	-
My organisation does not trust e-commerce technology		2 (100%)	9 (75%)	-	-	-	3 (25%)	3 (100%)	-	-	-	-	-
Customers do not trust e-commerce technology		-	5 (42%)	-	-	2 (100%)	7 (58%)	3 (100%)	-	-	-	-	-

Sample Size: South Africa – 15; Kenya - 2

Legend: NO- National Organisations; HL-Hotel and Lodges; TATO- Travel Agencies and Tour Operators

Table VIII.10: Analysis of solutions to security and legal constraints to e-commerce adoption and usage

Barrier	Option Organisation	How we overcame			How we are trying		
		NO	HL	TATO	NO	HL	TATO
Potential theft of business information	User accounts (2) Firewall(2) Audit Logs(1) Encryption(2) Anti-spyware	Firewall(6) Digital Signatures(1) Digital certificates(2) Encryption(4)	User Accounts(4) Anti-spyware(6) Proxy server(2) Entrapment server(1)	Proxy Server(1) Firewall(3) Encryption(2)	Firewall(2) Digital Signatures(1) Encryption(1) Anti-spyware(2)	User Accounts(2) Digital Signatures(1) Encryption(1)	
Viruses and bugs	Anti-virus software(2)	Anti-virus software (8) -regularly updated(5) -with live updates(3) Virus alerts through e-mail(2)		Anti-virus software updated regularly(3)			
Security problem concerning payment	User accounts(2) SET(1) SSL(1) Encryption(2)	Digital Signatures(4) User accounts(5) Encryption(3) SET(4) SSL(2)		SSL(1)	Digital Signatures(1) Encryption(1) SET(2) SSL(2)	SET(1) Digital Signatures(1) User accounts(2)	
Reliability of e-commerce systems	Disaster Recovery Plan(1)	Disaster Recovery Plan(6) Additional Internet connection or line(3) Dedicated network management team(2)			Disaster Recovery Plan(4)	Disaster Recovery Plan(2)	
No mechanism to guarantee customers secure transactions	Trust Seal(1) Privacy and security statements on website (2) Cancellation Policy	Privacy and security statements on website(9) Trust Seal(4) Security Payment Link(3)		Privacy and security statements on website(3)	Trust seal(3) Security Payment Link(1)	Trust Seal(1) Secure Payment Link(1)	
My organisation does not trust e-commerce technology		Trial Versions(1) Ran dual systems(1) E-commerce seminars for management(1)					
Customers do not trust e-commerce technology	Promotional Campaigns Trust Seal Privacy and security statements on website (2) Cancellation Policy	Privacy and security statements on website(7) Trust seal(3) Promotional campaigns(6) Cancellation Policy(4)		Privacy and security statements on website(3) Promotional campaigns(1)	Trust seal(3)	Secure Payment Link(1) Trust Seal(1)	

Sample Size: South Africa -- 15; Kenya - 2

Legend: NO- National Organisations; HL-Hotel and Lodges; TATO- Travel Agencies and Tour Operators, SSL- Secure Socket Layer, SET- Secure Electronic Transaction

**APPENDIX 9 –
RECOMMENDATIONS AND GUIDELINES
DOCUMENT**

RECOMMENDATIONS AND GUIDELINES FOR ADOPTING FULLY-FLEDGED E-COMMERCE SYSTEMS IN THE TOURISM INDUSTRY OF SUB-SAHARAN AFRICA

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Abstract

The recommendations and guidelines described in this document explain how the tourism organisations from sub-Saharan Africa can evolve their websites into marketing tools and how they can overcome the impediments to e-commerce adoption and usage. The guidelines for e-commerce adoption are assigned priority levels depending on their contribution to e-commerce systems while the guidelines for overcoming e-commerce barriers are ranked according to the level of importance the tourism organisations attached to them. The guidelines and recommendations also explain how the other major players within the economies of these countries can make the environment conducive for e-commerce development and growth so that the tourism organisations from this region can break into the lucrative international tourism market. These recommendations and guidelines are designed for tourism organisations that intend to or are in the process of implementing e-commerce systems. They are also intended for national governments of sub-Saharan African countries and the industries providing support services to e-commerce organisations.

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Section 1 - Introduction

The tourism industry is regarded as one of the biggest sectors in the world generating an estimated 11% of the global Gross Domestic Product (GDP) and employing 200 million people and serving 700 million tourists worldwide – a figure which is expected to double by the year 2020 (Roe and Urquhart, 2001). With the other major sectors of the economy not performing well, the tourism industry has emerged as the biggest contributor of the GDP since the early 1990s in most African countries and is now viewed as the panacea of the African economies (Gauci et al, 2002; Dieke, 2000).

Despite the diverse wildlife, unique resorts and the exotic flora and fauna, Africa's tourism potential remains underutilised and undeveloped (Naudé and Saayman, 2005). Today the Internet with its growing population has technologies which provide the African merchants with an unprecedented level of connectivity and the ability to communicate efficiently and effectively directly with customers. Electronic commerce (e-commerce) which operates on the backbone of the Internet could help the African tourism organisations generate additional revenue by reaching the markets they could not using the traditional systems. Adoption and usage of e-commerce in the developed world has produced tremendous results with revenues in the travel and tourism industry set to increase dramatically (Anite Travel Systems, 2000a; Anite Travel Systems, 2000b; Paulo, 2000; Accenture, 2002; Werthner and Ricci, 2004). E-commerce could help achieve the potential of the African tourism industry thus increasing the in-flows of the much needed foreign currency into their economies.

Section 2 - The Research Underpinning this Recommendation and Guidelines Document

As there is little published information about the e-commerce activities in Africa south of the Sahara (Molla and Licker, 2004), a study was carried to find out if organisations in the tourism industry in four African countries were adopting e-commerce. This study involved examining a large number of websites of various tourism organisations from South Africa, Kenya, Zimbabwe and Uganda. These four African countries are some of the tourist destinations which are known for safari-type of tourism. The analysis of the data gathered from the surveys revealed that although the websites were comparable to those of their counterparts in the USA and Europe they need to be evolved into marketing tools for them to attract enough business for the tourism organisations to make an impact in their respective economies. A questionnaire was administered to the tourism organisations from sub-Saharan Africa to find out what efforts are being made by the tourism organisations to adopt and use e-commerce and to determine how receptive these organisations are to these Internet technologies. The results showed that many of these organisations are not taking advantage of these technologies to fully embrace e-commerce. A positive aspect shown by this study is that the tourist organisations are aware of the capabilities and potential of e-commerce, and are planning to fully embrace e-commerce if and when they manage to overcome the barriers and inhibitors to e-commerce implementation.

More studies were then carried out to discover what e-commerce barriers are being faced by African tourism organisations with simple information-only websites or websites with only limited interactive features. The e-commerce barriers were then ranked according to importance the tourism organisations attached to these barriers. A questionnaire was then sent to African tourism organisations with fully-fledged websites to find out how they managed to overcome those barriers rated as significant by the organisations which are yet to adopt e-commerce. The methods employed to overcome the barriers together with the recommendations made in the other studies were then compiled into this recommendations and guidelines

document. This research is described in more detail in the author's PhD thesis (Maswera 2006).

Section 3 - How the Recommendations and Guidelines are Organised

This document defines 14 recommendations and 14 guidelines for tourism organisations in sub-Saharan Africa.

- *Recommendations* define the suggested aims for tourism organisations to evolve their websites into marketing tools and to implement an e-commerce facility. Each recommendation includes:
 - A recommendation number
 - A recommendation statement
- *Guidelines* gives a list of possible actions tourism organisations can follow to adopt e-commerce. Each guideline includes:
 - A guideline number
 - A list of features, components or technologies which organisations can incorporate to adopt e-commerce or overcome barriers to e-commerce
 - A list of sub features when more detail is required

The features or technologies recommended for e-commerce systems are assigned priority levels depending on their contribution to e-commerce adoption. The following are the priority levels which were devised following a brainstorming session involving the researcher, Tonderai Maswera, and three expert staff from Loughborough University, Ray Dawson, Janet Edwards and Tom Jackson.

Priority 1 – These are features or technologies which enable the customers to make online reservations and payments online and are rated as *very important*.

Priority 2- These are features or technologies which are needed to improve services on e-commerce websites or improve the accessibility and accessibility of the websites and are rated as *important*.

Priority 3 – These are features or technologies which can be used to improve the appearance of the e-commerce websites and are rated as not important but *desirable*.

Section 4 - Recommendation and Guidelines for E-commerce Adoption

4.1. E-commerce Features

Recommendation 1: Evolve the website into an e-commerce tool and an international website which can be tailored for global markets such as Europe, America and Asia.

Guideline 1: Incorporate as many as possible of the following features on the website:

4.1.1. Corporate information

This provides general information about the company business, customers, markets and performance. In addition to transactional capabilities, e-commerce websites should provide company information and enable communication with the organisation [Priority 1]

4.1.2. Product and services information

This includes all the information a tourist will need before deciding whether to embark on the journey. In particular:

- a. *Specific details of the product or services* - This should include brief descriptions of the products and services available. The visual presentation of a product can be an important selling aspect, for example, tourists viewing a hotel website like to know that their hotel has a smart appearance both inside and out, and often the views from the hotel can be important. Example website features may be a photo gallery or a virtual tour. [Priority 1]

- b. *Frequently Asked Questions (FAQs)* - This is a collection of the most frequently asked questions by customers and provides brief answers to these questions about products and services. Although FAQs do not contain full answers to all the questions any one customer could possibly ask, they go a long way in trying to address and clarify issues of concern for most customers.[Priority 1]

4.1.3. Useful non-product information

This could include information about the weather or immigration procedures or any other information a tourist would need so that they are better prepared for their trip.
[Priority 2]

4.1.4. Interactivity

Your website should be interactive, to provide abundant selection so as to give control to the users. There is need to provide a mechanism for customers to narrow down their choices when there is either a large number of products or high volume of content on the website. [Priority 2]

4.1.5. Privacy and security statement

The privacy statement is a statement about the Internet merchant's commitment to privacy whereas a security statement is the e-commerce organisation's description of its security measures [Priority 1]

4.1.6. Online reservation

This facility should be available to obtain information and make reservations securely online e.g. information flight schedules or availability of rooms in a hotel. If your organisation has on-line reservation facilities, it is likely to get more bookings as customers can interact with the website directly from their homes without the need to physically go to your company's offices or an intermediate agency.
[Priority 1]

4.1.7. Access to reservation details on the Web

There should be a facility to access and then amend or cancel a reservation or simply track its progress via the website. A clearly defined cancellation policy should also be made available for online customers. [Priority 1]

4.1.8. Online payment

- a. Your website should have facilities which would enable customers to pay through the website. Most of the payments over the Internet are made through credit cards where the credit card details, such as credit card number and date of expiry, are transmitted over the Internet. [Priority 1]
- b. Your website should cater for other forms of emerging online payment systems such as digital cash, debit cards, digital credit accounts and digital cheques. This would allow the e-commerce website to cater for the different types of online payments supported by the different countries' financial infrastructures. [Priority 2]
- c. An on-line currency converter will enable international consumers to pay using a currency of their choice, preferable with up-to-date exchange rates for all the major currencies. This will make the use of on-line payment facilities even more convenient. [Priority 2]

4.2. Customer Relationship Management (CRM)

Recommendation 2: Evolve the website to employ CRM components so as to encourage customers to return. An effective electronic CRM will encourage customers to keep coming back and will create an impression consistent with the organisation's desired image.

Guideline 2: The following electronic CRM components could help capture customers' preferences, needs and requirements.

4.2.1. Electronic mail (e-mail)

E-mail can be used by the customer as a channel for enquiries about products and services. If your organisation can keep a register of customers on a mailing list, the

customers can receive free email alerts concerning news and special promotions. [Priority 1]

4.2.2. Customer feedback

This is usually done using a simple online form where customers can submit comments about products and services. Through this form, customers can report inefficiencies in service provision and monitor the progress of complaints. [Priority 2]

4.2.3. Contact details

Providing the physical address and telephone numbers to contact your organisation enables customers to deal with it directly, thus eliminating any intermediaries. [Priority 1]

4.2.4. Electronic newsletter

This is a publication by your organisation on its own website with information and updates concerning products or services. One of the functions of the CRM is to distribute information to loyal customers and this can be done by publishing an electronic newsletter on the website and, perhaps, notifying your customers of the updates using the customer email list. [Priority 2]

4.2.5. Reciprocal links

These are links to other websites, which, in turn provide a link back. Each link from another organisation is, essentially, a recommendation from that organisation. External links to the organisation's website will also help it gain a higher profile with some Internet search engines, such as Google. [Priority 2]

4.2.6. Promotions and special offers

These are cash discounts or special packages offered to customers if they make a purchase via the website. [Priority 2]

4.2.7. Loyalty systems

These are incentives offered online as a method for generating loyalty from customers e.g. customers are awarded points every time they make a booking or purchase and these points, when they reach a certain number, can be exchanged for products, services or cash discounts. [Priority 2]

4.2.8. Callback services

This is a facility for a customer to make a request using the website for the organisation to contact a customer at a later time as specified by the customer. This option of direct contact between your organisations and its customers can be used to handle a variety of functions, such as complaints or technical assistance. [Priority 2]

4.2.9. Mailing lists

Visitors to your websites can be asked to register their contact details on the website after which they will receive product or market information relevant to them through e-mail. Note that customers will be more likely to leave their contact details if your website displays an assurance that their contact addresses will be kept confidential and will not be passed to any third party organisation. [Priority 2]

4.2.10. 'Mail to this page' button

This is an effective way to promote your website's content by allowing visitors to send a copy of a web page to their friends [Priority 2]

4.2.11. Customer satisfaction surveys

This is online form which can be used to gather information about the customers' perceptions about a company's delivery of services [Priority 2]

4.2.12. Free downloads

Free downloads of digital products like ring tones could be used to attract more visitors to a website [Priority 3]

4.2.13. Competitions and games

These are web-based quizzes and fun games which are accessible to visitors to the websites. [Priority 3]

4.2.14. Last date updated

This is used to inform visitors to a website when the content of the page was last updated. More up-to-date content will attract more visitors. [Priority 2]

4.2.15. Customised content

This is personalised content which can be accessed by registered repeat clients. For example it could be used to avoid returning customers being asked for their contact and other details each time they make a reservation or purchase. [Priority 2]

4.3. Website Promotional Campaigns

Recommendation 3: The Internet can be used to promote products and services as it provides, at modest cost, an unprecedented level of connectivity and the ability to communicate efficiently and effectively directly with customers.

Guideline 3a: The following are some of the features on websites which could be used to promote the products and services of your organisation.

4.3.1. Electronic newsletter

See 4.2.4 [Priority 2]

4.3.2. Frequently Asked Questions (FAQs)

See 4.1.2 (b) [Priority 2]

4.3.3. Loyalty systems

See 4.2.7. [Priority 2]

4.3.4. Callback services

See 4.2.8. [Priority 2]

4.3.5. Privacy policy statement

See 4.1.2 (e) [Priority 2]

4.3.6. Promotions and special offers

See 4.2.6. [Priority 2]

4.3.7. Customer feedback

See 4.2.2. [Priority 2]

4.3.8. Information/brochure request

This is an online form that customers can fill in to request a brochure or some other specific information about their reservations [Priority 2]

4.3.9. Electronic postcards

This facility will allow visitors to a website to send electronic postcards to their friends [Priority 3]

Offline Promotional Campaigns

Guideline 3b: The following are two of the ways by which the tourism organisations can promote their websites which are not Internet-based:

4.3.10. Website exposure

Ensure a wide exposure of your website's uniform resource locator (URL) by having the website URL displayed on billboards, newspaper and television advertisements, cars and buses, and souvenirs such as T-shirts, caps, umbrellas and bags. [Priority 2]

4.3.11. Press releases

Include the URL of the website on all your organisation's press releases, newspaper and magazine advertising, and other publications. [Priority 2]

4.4. Knowledge Transfer Facilities

Recommendation 4: Evolve your website to produce an interactive environment that can transfer knowledge from the customer to the organisation and from the organisation to the customer. This exchange of knowledge should be used by your organisation to provide better products and services

Guideline 4a: The following features on your website would enable your organisation to gain knowledge from customer interaction with the website:

4.4.1. Customer profiling

This involves capturing the demographics of existing and potential customers, enabling your organisation to know individual customer attitudes, evolving interests and needs. [Priority 2]

4.4.2. Customer surveys

See also Section 4.2.11. These can be used to get feedback and other information from customers. Surveys can be used to track the trends and changes in patterns of customer behaviour and tastes. They can help your organisation to determine which new products to offer. [Priority 2]

4.4.3. Electronic guestbook/reviews

This is a simple form for customers to submit comments about products and services. Customers can use this facility to narrate their experiences obtained during their travels. [Priority 2]

4.4.4. Interactive chat

This enables organisations and their customers to participate in a real-time conversation and provides possibilities for identifying and satisfying user needs and preferences. This could be seen as the ideal replacement for the traditional interpersonal modes which have disappeared with the growth of e-commerce.

[Priority 3]

Guideline 4b: The following facilities can be used for customers to gain knowledge from your organisation:

4.4.5. Electronic newsletters

See 4.2.4. [Priority 2]

4.4.6. Bulletin boards

These are special areas on the Internet for people to post messages for anyone to read. They could be used by customers to share their travel experiences. Bulletin boards create a forum that facilitates contact between the person seeking knowledge and those who may have access to specific knowledge. The electronic guestbook can serve this purpose if it is accessible to the public. [Priority 2]

Guideline 4c: The following website features can utilise knowledge gained from the customer to improve the service provided:

4.4.7. Recommendation engine

Recommendation engines are CRM decision support applications that offer a new level of personalisation through customised travel recommendations. Basically this facility helps a customer make a decision which is the best fit for that individual person. The information this interactive tool uses to help make decisions is gathered at the knowledge acquisition stage and could include past purchases and customer records. The combination of in-depth customer profiling, the knowledge acquired and the rules embedded in this tool provides an accurate, interactive, and automated customer service, resulting in high quality customer education. [Priority 2]

4.4.8. Loyalty systems

See also Section 4.2.7. Customer profiling together with records of customer transactions can be used to reward customers in the form of cash discounts to repeat clients. It also enables your organisations to calculate the value of their loyal customers. In this case both the customer and the organisation benefit, thus creating a symbiotic relationship. [Priority 2]

4.4.9. Customised content

See also Section 4.2.15. This is personalised content which can be accessed by registered repeat clients. The content and services displayed on the websites is tailored to individuals based on knowledge about their preferences, needs and behaviour. Personalisation systems must be able to provide a method of identifying the customer and a method for delivering the appropriate content to the user.

[Priority 2]

4.5. Increasing Website Traffic

Recommendation 5: To generate meaningful business your organisation needs to increase traffic to the website

Guideline 5: The following are steps which your organisation can take to ensure your website attracts more visitors:

4.5.1. Web registration

Submit your website to the major search engines which most people use. Some of the major search engines that will produce 95% or more of the search engine traffic are Google, Alta Vista, Excite, Lycos, Yahoo and HotBot. [Priority 1]

4.5.2. Effective meta tags

Meta tags are the most basic information for manipulating the search engines. Some search engines will use the meta tags to index web content and give this more weight than the actual content of the page. Try to use all possible keywords that are relevant to the website, and which users can use to find the site or page. [Priority 1]

4.5.3. Effective title tag

The title web designers give to an HTML page may be used by a search engine as a title for the page in its presentation of search results. It is recommended that a short but very descriptive title be used [Priority 1]

4.5.4. Web hosting

Your organisation should aim to have its website hosted on its own servers so that they can carry out their own analysis to improve the service they provide through their websites [Priority 2]

4.5.5. Reciprocal links

See 4.2.5 [Priority 2]

4.5.6. Updating regularly

Updating your website regularly would help improve its rankings within a search engine. Submit updated websites to the search engines frequently. [Priority 2]

4.5.7. Mailing lists

See 4.2.9. [Priority 2]

4.5.8. 'Mail to this page' button

See 4.2.10 [Priority 2]

4.5.9. Last date updated

See 4.2.14. [Priority 2]

4.5.10. Customer accounts

These are facilities which enable customers to create their personal online accounts which would also include their individual profiles. The customer profiles created can then be used to personalise content and make recommendations to customers. [Priority 2]

4.5.11. Customised content

See 4.2.15. [Priority 2]

4.5.12. Customer satisfaction surveys

See 4.2.11. [Priority 2]

4.5.13. 'Book mark this page' button

These are buttons on web pages which visitors can use to save for future access. [Priority 2]

4.5.14. Doorway pages

These pages are designed so that they are visible only by search engine spiders so as to get a higher ranking within a web search engine for a particular keyword. The page then directs visitors further into the website. They usually feature a logo, some text and a link that encourages visitors to enter the site. [Priority 3]

4.5.15. Free downloads

See 4.2.12. [Priority 3]

4.5.16. Competitions and games

See 4.2.13. [Priority 3]

4.6. Web Content Accessibility

Recommendation 6: Ensure that website content is accessible and usable by all people, including those with disabilities.

Guideline 6: The following steps can make the organisation's websites accessible and usable:

4.6.1. Use qualified web designers

Ensure the web designers are properly qualified by either providing the appropriate training for existing employees or by engaging already qualified, professional web designers [Priority 2]

4.6.2. Follow web accessibility and usability guidelines

Follow the content accessibility and usability guidelines defined by World Wide Web Consortium which develops interoperable technologies to enable users with visual and other disabilities to use the website. This can lead to the capturing of a market which is not being catered for on other websites [Priority 1]

4.6.3. Ensure content cohesion

Web designers must make sure that items that either belong together or relate to same theme are put on the same page or menu for ease of finding. [Priority 3]

4.6.4. Minimise website load time

Slow response times of websites are the worst offenders against web usability. There are many other businesses offering the same products and/or services, so if the page is taking too long to load the user can just simply try another site. Load time can be greatly reduced by the following:

- a. Use large graphical images and animations sparingly or make images smaller or both [Priority 2]
- b. Make sure that the graphical image is of the right format, whether the image is cropped or not [Priority 3]
- c. A web colour palette is a set of approved colours which are available to be applied on images within Internet browsers. Use the Web palette of the image as it enables fewer colours to be used thus saving disk space. [Priority 3]

4.7 Summary of Website Features to Consider

Table IX.1 gives a summary list of website features to consider for the e-commerce website grouped into each priority level.

Table IX.1: Summary List of Website Features

Priority 1 Features - (<i>Very Important</i>)	Section
Corporate information	4.1.1
Details of the product or services	4.1.2
Frequently Asked Questions (FAQs)	4.1.2
Privacy and security statement	4.1.5
Online reservation	4.1.6
Access to reservation data	4.1.7
Pay facility through the website	4.1.8
Electronic mail	4.2.1
Customer feedback facility	4.2.2
Contact details	4.2.3
Web registration with search engines	4.5.1
Effective meta tags	4.5.2
Effective title tag	4.5.3
Conformance with accessibility and usability guidelines	4.6.2
Priority 2 Features - (<i>Important</i>)	Section
Useful non-product information	4.1.3
Interactivity	4.1.4
Facilities for online payment other than by credit card	4.1.8
An on-line currency converter	4.1.8
Electronic newsletters	4.2.4, 4.3.1 & 4.4.5
Reciprocal links to and from other websites	4.2.5 & 4.5.5
Promotions and special offers	4.2.6 & 4.3.6
Loyalty systems	4.2.7 & 4.4.8
Callback service	4.2.8 & 4.3.4
Mailing lists	4.2.9 & 4.5.7
'Mail to this page' button	4.2.10 & 4.5.8
Customer surveys	4.2.11 & 4.4.2
Last date updated	4.2.14 & 4.5.9
Customised content	4.2.15 & 4.4.9 & 4.5.11
Information/brochure request facility	4.3.8
Website exposure in non web advertising	4.3.10
URL given in press releases	4.3.11
Customer profiling	4.4.1
Electronic guestbook	4.4.3
Bulletin boards	4.4.6
Recommendation engine	4.4.7
Web hosting	4.5.4
Regular website updates	4.5.6
Customer accounts	4.5.10
'Book mark this page' button	4.5.13
Use of qualified web designers	4.6.1
Limited use of large graphical images and animations	4.6.4
Priority 3 Features - (<i>Desirable</i>)	Section
Free downloads	4.2.15
Competitions and games	4.2.16
Electronic postcards	4.3.7
Interactive chat	4.4.4
Doorway pages	4.5.14
Content cohesion	4.6.3
Use of the right graphical image format	4.6.4
Use of the Web palette of the image	4.6.4

Section 5 - Recommendations and Guidelines to Overcome the E-commerce Barriers

These recommendations and guidelines should help tourism organisations from sub-Saharan Africa overcome the obstacles to e-commerce. They also define what the national governments of the African countries and the supporting industries need to do to make sure the environment is conducive for e-commerce development.

According to the survey undertaken by the author (Maswera, 2006), the problems and barriers likely to be encountered by the tourism organisations in sub-Saharan Africa can be divided into the following categories, given in descending order of importance:

1. Security and legal barriers
2. Technological barriers
3. Organisational barriers
4. Behavioural barriers
5. Financial barriers

The remainder of this section identifies the individual barriers to full e-commerce implementation within each of the above categories and gives guidelines on how these problems can be overcome. The following sub-sections are in descending order of significance of barrier type, and within each type, in descending order of significance of the individual barriers, as revealed by the research survey undertaken by the author.

5.1. Overcoming Security and Legal Barriers

Recommendation 7: Customers' sensitive data, such as credit card details and other personal information that is entered into an e-commerce system, must be protected. For an e-commerce system to be successful it needs a high level of security.

Guideline 7: The following are some of the individual security and legal barriers to e-commerce, and potential solutions that have been shown to work by existing successful e-commerce organisations in sub-Saharan Africa:

5.1.1. Potential theft of data

To avoid potential theft of data, use the following technologies:

- a. *Firewall* - A firewall is a computer that controls access in and out of an organisation's computer network. Firewalls control data in and out of the computer network deciding what messages are allowed and which should be denied entry.
- b. *Proxy server* – This server handles all the transmissions from external networks by getting the requested information from the internal network without the external transaction actually gaining access to the internal network resources. This way information on the internal network will not be manipulated or changed directly by transactions coming from external networks such as the Internet.
- c. *Encryption* – The main purpose of encryption is to make data being transmitted between two points unreadable. This provides additional protection to sensitive data on an e-commerce system.
- d. *User Accounts* - A user identification, password or personal identification number can be used to control unauthorised access.
- e. *Anti-spyware* – Spyware is technology that gathers information about your organisation and your customers that is obtainable from your computer without your knowledge. This information is then sent to interested organisations without your organisation or customers being aware that their privacy and security is being breached. Anti-spyware is software used to get rid of spyware.
- f. *Audit logs* – These are electronic logs used to keep track of all activities within your organisation's computer network. This enables your organisation to detect any fraudulent activities.

-
- g. *Entrapment server* - This is a combination of network hardware and software which is used to attract hackers by acting like a genuine organisation's computer network and stops the hackers from connecting to the actual computer network.

5.1.2. Viruses and bugs

To effectively protect the e-commerce systems from viruses and other bugs, use:

- a. *Anti-virus software* – This software checks all the files on the computer systems periodically and gets rid of any viruses detected. The anti-virus software can also scan other applications so that it can also detect viruses embedded in e-mail attachments. The virus protection software must be updated regularly.
- b. *Internet usage policy* - To avoid infecting computer systems from external sources, there is need to have strict policies which will ensure that all files from external sources are scanned before being opened. Your organisation should also have policies covering e-mail attachments so that only attachments from persons known to the organisation are downloaded and opened.
- c. *Virus e-mail updates* – Your organisation could register with suppliers of anti-virus software so that they get updates on latest viruses and how they can be removed.

5.1.3. Security concerning payment

Enhance security concerning payment by employing the following technologies:

- a. *Secure Electronic Transaction (SET)* – This security protocol was specifically designed to ensure security of financial transactions on the Internet. SET makes use of digital certificates to authenticate the identity of the purchaser and the Internet-based merchant.
- b. *Secure Socket Layer (SSL)* – This is a protocol developed by Netscape to provide a secure connection between the sender and the receiver of information. This technology, which is one of the earliest security protocols, can be used to secure the transmission of credit card information over the Internet

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- c. *Digital Signatures* – A digital signature is a unique code attached to an electronically transmitted message or document that can be used to authenticate the identity of the sender of a document. This is one way of authenticating transactions especially those which involve payment in the electronic world.
 - d. *Digital certificates* - These are electronic files that are used to uniquely identify people and users over open networks such as the Internet. Digital certificates are issued by certification authority such as Entrust and Verisign. Digital certificates will authorize access to vital information needed to carry out a transaction, such as online payment, to completion.
 - e. *User Accounts* – See 5.1.1 (d)
 - f. *Prepayment systems* - If your organisation does not have adequate financial resources to acquire the above-mentioned online payment technologies, they can make use of prepayment systems to enable electronic bank transfers.

5.1.4. Reliability of e-commerce systems

A reliable e-commerce system is one which is fault-tolerant, enabling continuous availability of services for the customers. This could be made possible by putting in place the following:

- a. *Disaster recovery plan* – This is part of an overall contingency plan that defines actions, tasks and data required to manage the business recovery process in the event of a business interruption. If your organisation intends to go online, they need to be prepared for any eventualities to ensure continuous service.

5.1.5. Customers' fear of insecure transactions

The possibility of losing money by buying from unknown organisations can lead to customers resisting using e-commerce systems. The customers' fears can be allayed by:

- a. *Trust seals* – This is a logo of a company or organisation that you can insert onto your website to show that your organisation follows certain rules for ensuring privacy and security. These seals will reassure the customers that your organisation is carrying out legitimate transactions and that the data

they are entering is secure. Examples of such seals are Better Business Bureau Online (BBBOnline), AICPA WebTrust, Truste

- b. *Privacy and security statements* – These statements, which should be easily accessible to customers, should reassure customers of the privacy and security of their personal data by informing customers of the policies and technologies employed by your organisation to maintain privacy and security.
- c. *Security payment link* – This is a link on the website which prompts the user to click on it to go to a secure online payment form. The data is usually encrypted and is sent using a secure connection. This is another method to guarantee to the customers that their transactions will be secure.
- d. *Promotional campaigns*- Promoting your company website using online or offline techniques will not only attract customers but can also help to build consumer trust. Promotional campaigns will reassure customers that your e-commerce company is a legitimate organisation by declaring its existence in public places.
- e. *Cancellation Policy* – Your tourism organisation will be able to build customer trust by allowing customers to cancel their transactions within a reasonable time. There should a statement on the website discussing how your organisation deals with cancellations in case a customer has changed their mind.
- f. *Security payment link* – See 5.1.5 (a)

5.1.6. Organisations not trusting e-commerce technology

Since e-commerce communication and transaction is carried out using computers, some organisations might be sceptical about its ability to function the same way as the traditional systems. If your organisation's employees do not trust e-commerce technology then the following can be done to reassure them:

- a. *Trial versions*- Your organisation may be able to acquire, often free of charge, a trial version of e-commerce software. The use the trial versions for a given period of time could reassure employees and management, thus enabling the organisation to decide whether or not to proceed to a fully-fledged e-commerce system.

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- b. *Dual systems*- Your organisation could acquire an e-commerce system which they could run in parallel with the existing system. Although running two systems could be expensive, it gives your organisation access to this Internet-based technology until they are confident enough to let it run on its own.
 - c. *E-commerce seminars for management* – Members of the management team should attend e-commerce seminars/courses specifically designed for management. This could help allay fears management may have concerning use of e-commerce technology by clarifying misconceptions about the workings, risks and benefits of e-commerce.

5.2. Overcoming the Technological Barriers

Recommendation 8: Use the appropriate technology to set up a fully-fledged e-commerce system.

Guideline 8: The following can be used to overcome the technological barriers to e-commerce implementation:

5.2.1. E-commerce divisions

Set up a new e-commerce division/department with qualified technological staff whose role will be to acquire e-commerce technology that is compatible with the existing systems.

5.2.2. External expertise

Consultants can be contracted to acquire e-commerce technology for your organisation if it does not have sufficient resources or expertise to set up an e-commerce department.

5.2.3. Middleware

If the new e-commerce technology is not compatible with existing systems, middleware can be acquired which can enable your organisation to connect the two heterogeneous systems so that they work together as one.

5.2.4. Payment infrastructure

If a modern payment infrastructure is beyond the capabilities of your organisation, the payment processing can be outsourced or you could employ prepayment systems which involve all the major credit cards and electronic bank transfers.

5.2.5. International banks

Approach the international banks in their area for help on setting up online payment systems.

5.2.6. Internet connection

Invest in a high speed reliable Internet connection technology such as broadband connection for the e-commerce infrastructure.

5.2.7. E-commerce technology expertise

Ensure the technical staff has the necessary expertise and are up to date with the latest technology by sending them on courses or seminars on e-commerce technology. Visit e-commerce vendors' websites for more information on what expertise is required and what training is available.

5.2.8. E-commerce journals or magazines

Subscribe to magazines or journals on e-commerce technology to keep abreast with the latest developments in these technologies.

5.2.9. Technical support

If your tourism organisation does not have enough resources to provide internal support to maintain and run their e-commerce systems, obtain external support by phone from local companies or online from international companies.

5.3. Overcoming Organisational Barriers

Recommendation 9: Ensure the organisational structure and culture are able to deal with e-commerce-induced change.

Guideline 9: The following are the ways by which organisations can overcome the organisational barriers to e-commerce:

5.3.1. Understanding e-commerce

Before organisations can start thinking of adopting e-commerce they must, first of all, understand how this Internet-based technology is going to impact on their business. For your organisations to be able to understand how e-commerce would impact on their business you need to do the following:

- a. Carry out thorough investigations on e-commerce opportunities available by visiting websites of a range of different e-commerce vendors, and attending e-commerce experience-sharing seminars
- b. Design new business models to suit that of an Internet-based company and learn how e-commerce can impact on their businesses

5.3.2. Creating an e-commerce strategic plan

Once your organisation has understood the impact of e-commerce they will need to develop an effective plan of action. A corporate e-commerce strategy that is well planned will give the organisations enough time for implementation and for the necessary staff training. Your organisations can:

- a. Develop a corporate e-commerce strategy using the organisation's own expertise or using the services of consultants.
- b. Design an e-commerce strategic plan for each business function and each department within the organisation. This will outline a plan of action for every department and individual within the organisation and ensure that the organisation's vision and strategy is communicated at all levels.

5.3.3. Indirect or hidden costs

The indirect or hidden costs are likely to emerge only after e-commerce has been adopted. This barrier can be overcome by the following:

- a. Carry out a thorough requirements analysis for e-commerce systems
- b. Carry out a cost-benefit analysis and return-on-investment analysis
- c. Analyse the through-life costs of the whole system-life cycle
- d. Implement e-commerce systems in stages and review the costs after every stage.

5.3.4. E-commerce-induced change

Organisations that successfully embrace e-commerce must be able to deal with change quickly and effectively. You can deal with e-commerce-induced change more effectively through the following:

- a. Develop a strategy to deal with e-commerce-induced change
- b. Ensure managers are properly trained by attending e-commerce courses for management, as a lack of managerial expertise can be a barrier to effectively applying e-commerce technologies. Massive e-commerce-induced change will require considerable managerial skill.
- c. Change management structures to adapt to the changes introduced by e-commerce. New Internet-based technologies are always being developed and this trend will continue, therefore your organisation should always be ready to make the necessary business operational changes.

5.3.5. IT skills shortage

For organisations to take advantage of e-commerce they must have the required skilled personnel. A shortage of IT-skilled personnel is a perennial problem in developing countries as, once they have acquired their skills, most leave for developed countries where there are better working conditions and the salaries are much higher. Meanwhile your organisation could do the following to minimise the problem:

- a. Put a continuing training and education programme in place
- b. Create a human resource strategy so that you have the required numbers of IT-skilled personnel

- c. Improve remuneration of key e-commerce staff
- d. Rotate the workforce so that each employee within the affected departments knows how to use the e-commerce systems so that when one leaves there is always somebody who can fill the gap.

5.3.6. Logistical problems

Some safari tours have itineraries covering more than one country so tourism organisations from the region will need to work together to offer services. With the advent of e-commerce your organisations will need to develop electronic logistics (e-logistics) to replace the traditional logistics. Organisations must transform themselves to provide new standard ways of transmitting information about reservations and tickets electronically to customers and other tourism-related businesses, so that all communication is done using Internet-based technologies. E-logistics could significantly improve the efficiency and services of your organisation because the operating costs will be lowered. For example, connections of flights will be easier to make where there is electronic communication between tour operators and airlines.

5.4. Overcoming Behavioural Barriers

Recommendation 10: For adoption and usage of e-commerce to be seamless, your organisation must obtain co-operation from its employees. Some people are likely to resist any change.

Guideline 10: Try to overcome resistance from employees by the following:

5.4.1. Assure personnel of job security

Assure personnel that they will still have a job with this new technology. This will take human resource management skills to retrain and redeploy existing employees where necessary.

5.4.2. Convince employees of e-commerce value

Convince employees that e-commerce adoption is a worthwhile change by explaining to them the advantages and benefits of using and adopting this technology.

5.4.3. Send employees on courses and seminars on e-commerce techniques

Conduct internal courses and seminars or send employees to external courses to enable employees to understand e-commerce techniques and, in the process, give employees positive attitudes towards e-commerce adoption and usage.

5.4.4. Retain the skills of trained staff

To reduce the risk of key staff leaving after being trained:

- a. Ask employees for a commitment to stay before they are sent for training.
- b. Train more people than required to develop, use, run and maintain the e-commerce systems
- c. Increase the salaries of key e-commerce staff so they are competitive with other organisations (but the extra cost must be built into the business plan).

5.4.5. Generate management support

Involve top management in decision making for key issues in the e-commerce project so that they feel part of it and are committed to its success.

5.5. Overcoming the Financial Barriers

Recommendation 11: Ensure adequate finance is available to set up and run the e-commerce system

Guideline 11: The following are the ways by the organisation can overcome the financial barriers

5.5.1. Cost-benefit analysis

Carry out a cost-benefit analysis to understand how, where and when the benefits of adopting e-commerce will outweigh the costs of e-commerce systems.

5.5.2. Return on investment

Calculate the return on investment of e-commerce projects to determine how long the organisation will need to sustain losses from their e-commerce investment before the benefits outweigh the costs.

5.5.3. Investment risk analysis

Determine and document the risks that will likely have an impact on the investment in e-commerce projects and the actions that could be taken to either reduce the level of risk or reduce the impact if the risk occurs.

5.5.4. Financial resources

If financial resources are not readily available, borrow from a financial institution using the above calculations (Investment risk analysis, Return on investment, Cost-benefit analysis) to manage the financial commitment.

5.5.5. Implementing e-commerce systems in stages

Starting with a relatively inexpensive e-commerce system with basic facilities, develop it in stages whenever the money is available

Summary list of actions to overcome the barriers to e-commerce

Table IX.2 gives a summary list of the actions to be taken to overcome the barriers to e-commerce adoption and usage.

Table IX.2: Summary list of actions to overcome the barriers to e-commerce

Actions	Section
Overcoming Security and Legal Barriers	Section
Potential theft of data	5.1.1.
Viruses and bugs	5.1.2.
Security concerning payment	5.1.3.
Reliability of e-commerce systems	5.1.4.
Customers' fear of insecure transactions	5.1.5.
Organisations not trusting e-commerce technology	5.1.6.
Overcoming Technological Barriers	Section
E-commerce divisions	5.2.1.
External expertise	5.2.2.
Middleware	5.2.3.
Payment infrastructure	5.2.4.
International banks	5.2.5.
Internet connection	5.2.6.
E-commerce technology expertise	5.2.7.
E-commerce journals or magazines	5.2.8.
Technical support	5.2.9.
Overcoming Organisational Barriers	Section
Understanding e-commerce	5.3.1.
Creating an e-commerce strategic plan	5.3.2.
Indirect or hidden costs	5.3.3.
E-commerce-induced change	5.3.4.
IT skills shortage	5.3.5.
Logistical problems	5.3.6.
Overcoming Behavioural Barriers	Section
Assure personnel of job security	5.4.1.
Convince employees of e-commerce value	5.4.2.
Send employees on courses and seminars on e-commerce techniques	5.4.3.
Retain the skills of trained staff	5.4.4.
Generate management support	5.4.5.
Overcoming Financial Barriers	Section
Cost-benefit analysis	5.5.1.
Return on investment	5.5.2.
Investment risk analysis	5.5.3.
Financial resources	5.5.4.
Implementing e-commerce systems in stages	5.5.5.

Section 6 - Recommended Training to Prepare for E-Commerce Adoption

Recommendation 12: Provide training of key personnel to overcome the barriers likely to be most important, such as the security and legal barriers and the technological barriers.

Guideline 12: The following areas of technical and managerial training could help overcome the most important barriers to e-commerce adoption:

6.1 Technology Training

6.1.1. Building e-commerce applications

This covers the technical aspects of e-commerce developments. It could help overcome the following barriers: 'Reliability of e-commerce systems', 'Technology too complicated', 'New versions of software introduced too often', 'Lack of external support to maintain an e-commerce system'

6.1.2. E-commerce website security

These e-commerce courses examine the various technologies which can make a website more secure. They could help overcome the security and legal barriers such as 'Potential theft of business information', 'Customers fear of insecure transactions', 'Security problem concerning payment'

6.1.3. Electronic transactions

These courses will examine all the aspects of online payment which include authorisation, payment methods, credit card validation, integrating an e-commerce system with other business systems, Secure Electronic Transactions (SET). They could be used to overcome the barriers 'Security problem concerning payment', 'No mechanism to guarantee customers secure transactions', 'Fear of choosing an e-commerce solution that is incompatible with existing systems'

6.1.4. E-commerce system administration

This course will look at how to install, maintain and configure an e-commerce system. The course would help overcome the barriers 'Reliability of e-commerce systems' and 'Lack of external support to maintain an e-commerce system'

6.2 Management Training

6.2.1. Financial investment and planning

These courses will teach essential management techniques of cost-benefit analysis, return on investment, risk analysis, through life costing and preparing a business case. These basic management techniques are not unique to e-business planning and benefit could be obtained from any management course covering these techniques. These courses would help overcome the barriers of 'Indirect or hidden costs', 'Cost of implementing and maintaining e-commerce system', 'Investment risk' and 'Advantages of e-commerce are outweighed by costs'

6.2.2. Management of change

These courses will teach essential management techniques such as business modelling, logistics and business process re-engineering. Again, these are basic management techniques that are not unique to e-commerce and they will help overcome the following barriers: 'My organisation does not have a strategic plan for e-commerce', 'My company is reluctant to change how it operates', 'Logistical problems', 'Company is too small' and 'Time it takes to implement changes'

6.2.3. Human resource management

These courses would cover techniques to introduce new cultures and working practices and means of training and retaining essential personnel. These are further basic management techniques that are not unique to e-commerce and will help overcome the barriers of 'Too few IT-skilled personnel', 'Lack of staff training', 'Existing personnel reluctant to use an e-commerce system', 'Existing personnel reluctant to learn e-commerce techniques' and 'Trained staff leaving'

6.3 Summary List of Training Requirements

Table IX.3 gives a summary of the areas of training which could help overcome the barriers to e-commerce adoption and usage.

Table IX.3: Summary listing of training requirements

Area of Training	Section
Technology Training	Section
Building e-commerce applications	6.1.1.
E-commerce website security	6.1.2.
Electronic Transactions	6.1.3.
E-commerce system administration	6.1.4.
Management Training	Section
Financial Investment and Planning	6.2.1.
Management of Change	6.2.2.
Human Resource Management	6.2.3.

Section 7 - Recommendations and Guidelines for National Governments and Other Supporting Organisations

7.1 Recommendations and Guidelines for National Governments

Recommendation 13: National organisations need to make the environment conducive for e-commerce development and growth by providing the necessary infrastructure and encouraging private-sector investment.

Guideline 13: The following is what the national governments need to do to make the e-commerce environment conducive for development and growth. While these activities are clearly beyond the abilities of any individual organisation to carry out on its own, your organisation should take every opportunity to lobby your government to take the action recommended in these guidelines.

7.1.1. National e-commerce policy

Make e-commerce adoption and usage a national issue as its success will mean increased foreign currency flows from the international tourism market. There is a need to educate, co-ordinate and motivate the various sectors of the economy to adopt and use e-commerce technologies and techniques.

7.1.2. E-commerce legal framework

Spear-head the formulation of a legal framework to regulate e-commerce operations. The lack of a comprehensive legal system within the e-commerce environment will result in most of the customers not carrying out the transactions to completion because of the concerns about contract enforcement, intellectual property protection, liability, jurisdiction, privacy and security.

7.1.3. Internet connection

Work effectively with various partners to provide basic reliable Internet connectivity across the whole economy (the government owns and manages the national infrastructure in most African countries, including the telecommunication systems).

7.1.4. National ICT policy

Liberalise the ICT industry through national ICT policies to make it possible to provide affordable computers and Internet access.

7.1.5. Private sector investment

Recognise that e-commerce depends on liberalised communications market and make sure that there are no constraints on private sector investment so that there are equal opportunities for access of the e-commerce market.

7.1.6. Regional e-commerce strategy

Devise a regional e-commerce strategy to encourage countries within the region to cooperate in specific initiatives, plans or standards in e-commerce development and research projects.

7.1.7. E-commerce training

Encourage the setting up of training facilities and resources for the essential management and technical skills required for e-commerce.

7.2. Recommendations and Guidelines for Supporting Organisations

Recommendation 14: The supporting organisations need to make the environment conducive for e-commerce development and growth by providing the necessary products and services.

Guideline 14: The following is what the supporting organisations need to do to make the e-commerce environment conducive. Again this is beyond

the ability of any individual tourism organisations to fulfil on its own, but you should take every opportunity to encourage partner supporting organisations to follow these guidelines.

7.2.1. Online payment systems

For e-commerce to prosper, it will need the support of a strong and efficient financial services infrastructure so as not to lose potential sales through putting procedural barriers in the customers' way. Financial institutions need to implement financial systems to support online payment by customers from all over the world with the introduction of Internet banking.

7.2.2. Credit-card usage

The most popular method of payment online is by credit card and, unfortunately, credit card usage is still very low within sub-Saharan Africa. The financial institutions need to promote and encourage the usage of credit cards among businesses and private customers so that it can be used as the method for settling e-commerce transactions.

7.2.3. Technical support

Organisations which provide external technical support to e-commerce organisations should make their products and services known to various organisations through online and offline promotional techniques so that organisations entering e-commerce can take advantage of the expertise available.

7.2.4. E-commerce education

Universities in the African countries should provide e-commerce courses. This would help create the necessary ICT-skilled manpower base conversant with e-commerce technologies, who would then be capable of dealing with the challenges of the emerging electronic marketplace.

7.2.5. E-commerce research

Researchers from universities and research institutions in sub-Saharan Africa should use the research described in the author's PhD thesis (Maswera 2006) as a

platform to launch projects to examine other e-commerce issues in an effort to discover solutions unique to the African environment.

7.3 Summary List of Recommendations and Guidelines for Government and Other Support Organisations

Table IX.4 presents a summary of the recommendation and guidelines the national governments and other supporting industries need to follow to make the environment for e-commerce development and growth conducive.

Table IX.4: Summary list of Guidelines for Government and Other Support Organisations

Recommendations/Guidelines		Section
Recommendations and Guidelines for Government		Section
National e-commerce policy		7.1.1.
E-commerce legal framework		7.1.2.
Internet connection		7.1.3.
National ICT policy		7.1.4.
Private sector investment		7.1.5.
Regional e-commerce strategy		7.1.6.
E-commerce training		7.1.7.
Recommendations and Guidelines for Other Supporting Organisations		
Institution Applicable	Recommendation/Guideline	Section
Financial institutions	Online payment systems	7.2.1.
Financial institutions	Credit-card usage	7.2.2.
Technical consultancies	Technical support	7.2.3.
Universities	E-commerce education	7.2.4.
Universities	E-commerce research	7.2.5.

Section 8 - Conclusion

In general the recommendations and guidelines are meant to evolve your website from being a simple information-only website to fully-fledged e-commerce site. The recommendations and guidelines discussed in Section 4 are directed towards providing facilities and sufficient content for customers to make purchase decisions and carry out online transactions. Your organisation should convert its website into a marketing tool by employing online and offline website promotional techniques to break into the highly competitive international tourism market. It is also recommended that you attempt to be always a step ahead of other organisations in the sector with the help of knowledge transfer facilities.

There will be difficulties and barriers to e-commerce that need to be overcome. However, Section 5 identifies these barriers and gives recommendations and guidelines to overcome these barriers to be able to capture that market which is not being catered for on other websites. The recommendations and guidelines for overcoming e-commerce barriers discussed in section 5 were devised from tried and tested solutions which have been used successfully by tourism organisations in sub-Saharan Africa. As tourism is regarded as the pinnacle of the economies in sub-Saharan Africa and as there is stiff competition from Western Europe and North America, it is recommended that your organisation and all tourist organisations in Africa follow the suggestions made in this document to remain competitive.

The recommendations and guidelines described in Section 7 are meant for the national organisations and supporting industries so that they make the environment conducive for e-commerce development and growth.

The recommendations and guidelines given in this document will provide the foundation from which your organisation, being a tourism organisation in sub-Saharan Africa, will be able to overcome the hurdles and be able to set up a fully-fledged e-commerce website to fully satisfy its economic potential.

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**APPENDIX 10 –
RECOMMENDATIONS FOR ADOPTING
E-COMMERCE IN THE TOURISM INDUSTRY OF
SUB-SAHARAN AFRICA**

RECOMMENDATIONS FOR ADOPTING E-COMMERCE IN THE TOURISM INDUSTRY OF SUB-SAHARAN AFRICA

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Abstract

The recommendations described in this document explain how the tourism organisations from sub-Saharan Africa can evolve their websites into marketing tools and how they can overcome the impediments to e-commerce adoption and usage. The recommendations also explain how the other major players within the economies of these countries can make the environment conducive for e-commerce development and growth so that the tourism organisations from this region can break into the lucrative international tourism market. These recommendations are designed for tourism organisations that intend to or are in the process of implementing e-commerce systems. They are also intended for national governments of sub-Saharan African countries and the industries providing support services to e-commerce organisations.

Section 1 - The Research Underpinning this Recommendation Document

Despite the diverse wildlife, unique resorts and the exotic flora and fauna, Africa's tourism potential remains underutilised and undeveloped (Naudé and Saayman, 2005). Adoption and usage of e-commerce in the developed world has produced tremendous results with revenues in the travel and tourism industry set to increase dramatically (Werthner and Ricci, 2004). E-commerce could help achieve the potential of the African tourism industry thus increasing the in-flows of the much needed foreign currency into their economies.

As there is little published information about the e-commerce activities in Africa south of the Sahara (Molla and Licker, 2004), a study was carried to find out if organisations in the tourism industry in four African countries were adopting e-commerce. This study involved examining a large number of websites of various tourism organisations from South Africa, Kenya, Zimbabwe and Uganda. These four African countries were chosen as they are some of the tourist destinations which are known for safari-type of tourism. The analysis of the data gathered from the surveys revealed that although the websites were comparable to those of their counterparts in the USA and Europe they need to be evolved into marketing tools for them to attract enough business for the tourism organisations to make an impact in their respective economies. This research is described in more detail in the author's PhD thesis (Maswera 2006).

The results of this research are provided in a series of recommendations given in the next sections. A longer, more detailed version of this document can be found on <http://km.lboro.ac.uk/documents/TDW1.pdf>.

Section 2 - Recommendation for E-commerce Adoption

2.1. E-commerce Features

Recommendation 1: Evolve the website into an e-commerce tool and an international website which can be tailored for global markets such as Europe, America and Asia. This will involve adding features such as corporate information, information on products and services, Frequently Asked Questions (FAQs), useful non-product information such as the whether, privacy and security statements, online enquiries, online reservations, reservation tracking and online payment.

2.2. Customer Relationship Management (CRM)

Recommendation 2: Evolve the website to employ effective electronic CRM components so as to encourage customers to keep coming back and this will create an impression consistent with the organisations' desired image. CRM components that could help capture customers' preferences, needs and requirements, could include contact details, e-mail, an online feedback form, an electronic newsletter, promotions, special offers and other loyalty schemes, a callback service, and personalisation through customised content.

2.3. Website Promotional Campaigns

Recommendation 3: The Internet can be used to promote products and services as it provides, at modest cost, an unprecedented level of connectivity and the ability to communicate efficiently and effectively directly with customers. The websites should contain facilities that will attract new customers as well as retain old ones, such as an electronic newsletter, Frequently Asked Questions (FAQs), loyalty systems, callback services, a privacy policy statement, promotions and special offers, customer feedback, an information/brochure request, electronic postcards, and reciprocal links to other websites. The organisations should also employ offline techniques, such as displaying the URL on billboards, newspapers, press releases, television, tourism products, and all other advertising.

2.4. Knowledge Transfer Facilities

Recommendation 4: Evolve the website to produce an interactive environment that can transfer knowledge from the customer to the organisations and from the organisations to the customer. This exchange of knowledge should be used by the organisations to provide better products and services. For the organisations to gain knowledge from the customer, include features such as data gathering of customer transaction for customer profiling, customer surveys, an electronic guestbook, or user review facility, and possibly instant messaging facilities. With the knowledge obtained, the site can then provide loyalty systems, personalised content and a recommendation engine to help customers make decisions. For customers to gain knowledge from the organisations, include features such as electronic newsletters, bulletin boards and online tracking of orders and reservations.

2.5. Increasing Website Traffic

Recommendation 5: To generate meaningful business the organisations need to increase traffic to the website. The organisations should include on their websites facilities which can attract more visitors such as those outlined in Recommendation 3. In addition to these the organisations should also use such techniques as doorway

pages, customer accounts, effective meta and title tags, registration of websites on major search engines, hosting websites on own servers as well as updating the websites regularly.

2.6. Web Content Accessibility

Recommendation 6: Ensure that website content is accessible and usable by all people, including those with disabilities. To achieve this, the organisations need to follow the Web Content Accessibility Guidelines (World Wide Web Consortium (W3C) (2005)) when designing and developing their websites. The organisations will also need to use qualified website designers, ensure web content cohesion and minimise website load time.

Section 3 - Recommendations and Guidelines to Overcome the E-commerce Barriers

3.1. Overcoming Security and Legal Barriers

Recommendation 7: Customers' sensitive data, such as credit card details and other personal information that is entered into an e-commerce system, must be protected. For an e-commerce system to be successful it needs a high level of security. The organisations should make use of the technologies such as firewall, proxy server, encryption, user accounts, anti-spyware, audit logs, entrapment server, anti-virus software, Internet usage policy, virus e-mail updates, secure electronic transaction, secure socket layer, digital signatures, digital certificates, prepayment systems, user accounts, disaster recovery plan, trust seals, privacy and security statements, security payment link, security payment link to make the e-commerce website secure and reliable. If the organisations' employees do not trust e-commerce technology then techniques such as using trial versions of e-commerce systems or running dual systems can be used to reassure them.

3.2. Overcoming the Technological Barriers

Recommendation 8: Use the appropriate technology to set up a fully-fledged e-commerce system. For the organisations to set up e-commerce systems they need modern payment infrastructure and a high speed reliable Internet connection. To ensure the organisations use the appropriate technology they should setup e-commerce divisions, employ external technical expertise, equip their own technical staff with appropriate expertise, subscribe to e-commerce journals or magazines and approach international banks to get help setting up online payment systems.

3.3. Overcoming Organisational Barriers

Recommendation 9: Ensure the organisational structure and culture are able to deal with e-commerce-induced change. To achieve this, organisations need to understand the impact of e-commerce by carrying out thorough investigations before implementing the e-commerce-induced changes following a clearly laid out strategic plan. In order to overcome the shortage of IT-skilled personnel, organisations need training programmes as well as human strategies in place. With the advent of e-commerce organisations will need to develop electronic logistics to replace their traditional logistics.

3.4. Overcoming Behavioural Barriers

Recommendation 10: For adoption and usage of e-commerce to be seamless, the organisations must obtain co-operation from its employees. Some people are likely to resist any change. The organisations need to avoid resistance from employees by assuring personnel of job security, convince employees of e-commerce value and sending employees on courses and seminars on e-commerce techniques. To reduce the risk of key staff leaving after being trained organisations need to ask employees for commitment before they are sent for training, train more people than required and increase salaries of key e-commerce staff. To generate management support organisations need to involve top management in decision making for key issues in the e-commerce project so that they feel part of it and are committed to its success.

3.5. Overcoming the Financial Barriers

Recommendation 11: Ensure adequate finance is available to set up and run the e-commerce system. If financial resources are not readily available, organisations can borrow from a financial institution using the calculations such as investment risk analysis, return on investment, cost-benefit analysis to manage the financial commitment. The organisations could start with a relatively inexpensive e-commerce system with basic facilities, develop it in stages whenever the money is available

Section 4 - Recommended Training to Prepare for E-Commerce Adoption

Recommendation 12: Provide training of key personnel to overcome the barriers likely to be most important, such as the security and legal barriers and the technological barriers. Technical training is required in building e-commerce applications, e-commerce website security, electronic transactions and e-commerce system administration. Managerial training is needed in financial investment and planning, the management of change and human resource management.

Section 5 - Conclusion

In general the recommendations are meant to evolve the website from being a simple information-only website to fully-fledged e-commerce site. The recommendations discussed in Section 2 are directed towards providing facilities and sufficient content for customers to make purchase decisions and carry out online transactions. The organisations should convert its website into a marketing tool by employing online and offline website promotional techniques to break into the highly competitive international tourism market. It is also recommended that the organisations attempt to be always a step ahead of other tourism organisations in the sector with the help of knowledge transfer facilities.

There will be difficulties and barriers to e-commerce that need to be overcome. However, Section 3 identifies these barriers and gives recommendations and guidelines to overcome these barriers to be able to capture that market which is not being catered for on other websites. The recommendations and guidelines for

overcoming e-commerce barriers discussed in section 3 were devised from tried and tested solutions which have been used successfully by tourism organisations in sub-Saharan Africa. As tourism is regarded as the pinnacle of the economies in sub-Saharan Africa and as there is stiff competition from Western Europe and North America, it is recommended that the organisations and all tourist organisations in sub-Saharan Africa follow the suggestions made in this document to remain competitive.

National organisations and supporting industries can also contribute to the promotion of e-commerce by making the environment conducive for e-commerce development and growth. The national governments need to protect both the organisations and the customers by formulating a legal framework to regulate the e-commerce industry. The national governments also need to provide basic reliable Internet connectivity across the whole economy as well as liberalise the ICT industry. Financial institutions can help by implanting financial systems to support online payment. The ICT industries need to provide technical support services and the local universities are needed to educate and train a much larger base of ICT-skilled manpower and managers capable of directing the move into e-commerce.

The recommendations given in this document will provide the foundation from which the tourism organisations in sub-Saharan Africa, will be able to overcome the hurdles and be able to set up a fully-fledged e-commerce website to fully satisfy their economic potential.

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**APPENDIX 11 –
RECOMMENDATIONS FOR SMALLER
ORGANISATIONS IN THE TOURISM INDUSTRY OF
SUB-SAHARAN AFRICA**

RECOMMENDATIONS FOR ADOPTING E-COMMERCE BY SMALLER ORGANISATIONS IN THE TOURISM INDUSTRY OF SUB-SAHARAN AFRICA

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Abstract

The recommendations described in this document explain how the smaller tourism organisations from sub-Saharan Africa can evolve their websites into marketing tools and how they can overcome some of the impediments to e-commerce adoption and usage. These recommendations are designed for tourism organisations that intend to or are in the process of implementing e-commerce systems with limited facilities.

Section 1 - Introduction

Smaller organisations still at the initial stages of e-commerce adoption might find it difficult to evolve their websites to fully-fledged e-commerce all at once because of their size and the limited financial and human resources. Some organisations might find it much easier to implement e-commerce systems in stages, therefore the recommendations in this document are needed to explain how organisations with limited resources can evolve their information-only websites to include online facilities without committing to a full e-commerce payment system.

A longer, more detailed version of this document can be found on <http://km.lboro.ac.uk/documents/TDW1.pdf>.

Section 2 - Recommendation for E-commerce Adoption

2.1. E-commerce Features

Recommendation 1: Evolve the website into an e-commerce tool and an international website which can be tailored for global markets such as Europe, America and Asia. This will involve adding features such as corporate information, information on products and services, Frequently Asked Questions (FAQs), useful non-product information such as the weather, health, security and safety issues, privacy and security statements, online enquiries, online reservations.

2.2. Customer Relationship Management (CRM)

Recommendation 2: Evolve the website to employ effective electronic CRM components so as to encourage customers to keep coming back and this will create an impression consistent with the organisations' desired image. CRM components that could help capture customers' preferences, needs and requirements and could include contact details, e-mail, an online feedback form, an electronic newsletter, promotions and special offers.

2.3. Website Promotional Campaigns

Recommendation 3: Your website should contain facilities that will attract new customers as well as retain old ones. Examples are an electronic newsletter, FAQs, a privacy policy statement, promotions and special offers, an information/brochure request, and reciprocal links to other websites. In addition to these your organisation should also use such techniques as using effective meta and title tags, registering the website on major search engines such as Google, Yahoo as well as updating the website regularly to increase traffic to the website. Your organisation should also employ offline techniques, such as displaying the URL on billboards, newspapers, press releases, television, tourism products, and all other advertising.

2.4. Web Content Accessibility

Recommendation 4: Ensure that website content is accessible and usable by all people, including those with disabilities. To achieve this, your organisation needs to follow the Web Content Accessibility Guidelines (World Wide Web Consortium (W3C) (2005)) when designing and developing their websites. Your organisation will also need to use qualified website designers, ensure web content cohesion and minimise website load time.

Section 3 - Recommendations and Guidelines to Overcome the E-commerce Barriers

3.1. Overcoming Organisational Barriers

Recommendation 5: Ensure the organisational structure and culture are able to deal with e-commerce-induced change. To achieve this, your organisation needs to understand the impact of e-commerce by carrying out thorough investigations before implementing the e-commerce-induced changes following a clearly laid out strategic plan.

3.2. Overcoming the Financial Barriers

Recommendation 6: If financial resources are not readily available, your organisation could start with a relatively inexpensive e-commerce system with basic facilities, develop it in stages whenever the money is available

Section 4 - Conclusion

In general the recommendations are meant to evolve your website from being a simple information-only website to a website with some interactive facilities. As a smaller organisation, to evolve your website into a full e-commerce system you need to understand the impact of e-commerce on your businesses. Section 3 identifies the barriers to entering e-commerce and gives recommendations and guidelines to overcome these barriers to be able to capture that market which is not being catered for on other websites.

References

World Wide Web Consortium (W3C) (2005), <http://www.w3c.org> (visited 18/03/2005)

**APPENDIX 12 –
RECOMMENDATIONS FOR NATIONAL
GOVERNMENTS IN SUB-SAHARAN AFRICA**

RECOMMENDATIONS FOR NATIONAL GOVERNMENTS IN SUB-SAHARAN AFRICA

By Tonderai Maswera
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Abstract

The recommendations described in this document explain what the national organisations need to do to make the environment conducive for e-commerce adoption and development. For successful adoption of e-commerce in sub-Saharan Africa the national governments need to play the vital role of promoting and supporting this Internet-based technology. These recommendations are therefore intended for national governments of sub-Saharan African countries.

Section 1 – Introduction

With the other major sectors of the economy not performing well, the tourism industry has emerged as the biggest contributor of the GDP since the early 1990s in most African countries and is now viewed as the panacea of the African economies (Dieke, 2000). The travel and tourism industry can be further boosted by adopting e-commerce which has produced tremendous results with revenues set to increase dramatically in this highly competitive sector (Werthner and Ricci, 2004). E-commerce can be defined as carrying out transactions via telecommunication networks, especially the Internet.

For smooth e-commerce adoption in the travel and tourism industry, as a national government, you need to make the e-commerce environment conducive. You need to accept and facilitate electronic communications and should help the business community apply complicated and unclear business rules which come as a result of e-commerce adoption and usage. E-commerce could help achieve the potential of the African tourism industry thus increasing the in-flows of the much needed foreign currency into your economy and this document explains how you, as the national government, can make it easier for organisations to adopt this Internet-based technology.

A longer, more detailed version of this document can be found on <http://km.lboro.ac.uk/documents/TDW1.pdf>.

Section 2 – Recommendations for National Governments

Recommendation 1: National e-commerce policy

Make e-commerce adoption and usage a national issue, as its success will mean increased foreign currency flows from the international tourism market. There is a need to educate, co-ordinate and motivate the various sectors of the economy to adopt and use e-commerce technologies and techniques.

Recommendation 2: E-commerce legal framework

There is a requirement to spear-head the formulation of a legal framework to regulate e-commerce operations. The lack of a comprehensive legal system within the e-commerce environment will result in most of the customers not carrying out the

transactions to completion because of the concerns about contract enforcement, intellectual property protection, liability, jurisdiction, privacy and security.

Recommendation 3: Internet connection

Work effectively with various partners to provide basic reliable Internet connectivity across the whole economy (the government owns and manages the national infrastructure in most African countries, including the telecommunication systems).

Recommendation 4: National ICT policy

Liberalise the ICT industry through national ICT policies to make it possible to provide affordable computers and Internet access.

Recommendation 5: Web Content Accessibility and Usability

Design web content accessibility and usability guidelines/regulations. Web designers are now required by law in the USA, Canada and European Union to comply with website accessibility and usability regulations/guidelines. As a high proportion of the tourist customers come from these countries, you need to follow suit and adopt similar regulations/guidelines or design your own to suit your respective economic, cultural and political environments.

Recommendation 6: Private sector investment

Recognise that e-commerce depends on liberalised communications market and make sure that there are no constraints on private sector investment so that there are equal opportunities for access of the e-commerce market.

Recommendation 7: Regional e-commerce strategy

Devise a regional e-commerce strategy to encourage countries within the region to cooperate in specific initiatives, plans or standards in e-commerce development and research projects.

Recommendation 8: E-commerce training

Encourage the setting up of training facilities and resources for the essential management and technical skills required for e-commerce adoption and development.

Section 3 - Conclusions

The recommendations and guidelines described in this document are meant to promote e-commerce by making the environment conducive for e-commerce development and growth. You need to protect both the organisations and the customers by formulating a legal framework to regulate the e-commerce industry. As the national government you will also need to provide basic reliable Internet connectivity across the whole economy and to liberalise the ICT industry.

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**APPENDIX 13 –
RECOMMENDATIONS FOR NATIONAL
UNIVERSITIES IN SUB-SAHARAN AFRICA**

RECOMMENDATIONS FOR NATIONAL UNIVERSITIES IN SUB-SAHARAN AFRICA

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Abstract

Universities just like any other organisation have a role to play in making the environment conducive for e-commerce adoption and growth. The recommendations discussed in this document explain what the universities need to make it easier for organisations from sub-Saharan Africa to adopt and use e-commerce systems. These recommendations are therefore intended for universities in sub-Saharan Africa

Section 1- Introduction

Universities have an active role to play in the adoption and development of e-commerce technologies within the travel and tourism industry in sub-Saharan Africa. The main challenge for the universities from sub-Saharan Africa is to actively engage with the travel and tourism industry to address industry-identified needs, problems and issues to generate and apply practical knowledge that ensures e-commerce success. The universities could achieve this by setting up specialist research groups whose main aim is to carry out research projects in e-commerce technologies in collaboration with the travel and tourism sector.

Another important role of the universities in sub-Saharan Africa is the development of human skill resources through manpower training. The universities need to design programmes to create manpower which is able to design, implement and use e-commerce technologies. They should also design and conduct training seminars for company employees who are already using or intend to use e-commerce technologies.

This document makes recommendations for the universities of sub-Saharan Africa to help make the environment conducive for successful e-commerce adoption and growth. A longer, more detailed version of this document can be found on <http://km.lboro.ac.uk/documents/TDW1.pdf>.

Section 2 – Recommendations for universities

Recommendation 1: Conduct relevant research. Researchers from your university should use the research described in the author's PhD thesis (Maswera 2006) as a platform to launch projects to examine other e-commerce issues in an effort to discover solutions unique to the African environment.

Recommendation 2: Design relevant e-commerce degree programmes to produce ICT-skilled manpower who can overcome the barriers likely to be most important, such as the security and legal barriers and the technological barriers. The degree programmes should cover the following technical areas: Information Systems, Web Authoring and Design, Project Management, Web Programming, Online Database

Systems, Computer Networks and Internet Technologies, Human-Computer Interaction.

Recommendation 3: Design relevant e-commerce degree programmes to produce managers capable of directing the move into e-commerce. The degree programmes should cover the following areas: Business Marketing, Computers and Business Law, Change Management, Strategic Planning, Financial Management, Human Resource Management

Recommendation 4: Promote awareness of the latest e-commerce technologies. You can achieve this by conducting e-commerce seminars for the tourism organisations that are already using or intend to adopt and use e-commerce systems.

Recommendation 5: Promote awareness of Web Content and Accessibility Guidelines (World Wide Web Consortium (W3C) (2005)). For successful promotion of these guidelines you need to play an important part of the continuing work of the Web Accessibility Initiative of developing education and outreach materials to help the tourism organisations achieve a better understanding of the importance of these guidelines

Recommendation 6: Examine the possibility of design accessibility and usability guidelines for the African environment. To achieve this, you need to initiate research projects which will involve the government officials from the relevant departments to look at modifying the existing guidelines to suit your respective economic, cultural and political environments or even design new guidelines specifically for your respective environment

Section 3 - Conclusions

As a local university, you need to educate and train a much larger base of ICT-skilled manpower and managers capable of directing the move into e-commerce. You also need to promote awareness of the latest e-commerce technologies and the Web Content Accessibility Guidelines to ensure e-commerce success in the travel and tourism industry in sub-Saharan Africa.

The recommendations described in this document are meant to describe the role you play as a local university to make the environment conducive for e-commerce development and growth.

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APPENDIX 14-
SOME OF THE COMMENTS ON THE
RECOMMENDATIONS AND GUIDELINES

SOME OF THE COMMENTS ON THE RECOMMENDATIONS AND GUIDELINES

This appendix contains the e-mail messages with comments from the African tourism organisations and the experts on e-commerce and tourism on the recommendations and guidelines.

- Figure X.1 shows the message from Professor Paul Licker a renowned researcher in e-commerce in developing countries and Associate Editor of Journal of Information Technology Cases and Applications
- Figure X.2. contains a copy of the e-mail message from Professor Berendien Lubbe from the Department of Tourism at the University of Pretoria, South Africa
- Figure X.3 contains a copy of the e-mail message from Catherine Gachie, E-Commerce Manager at Sarova Group of Hotels Kenya
- Figure X.4. contains a copy of the e-mail message from Barbara Bridge, Connect South Africa
- Figure X.5. contains a copy of the e-mail message from Johan Vanter, Tourism Business Council, South Africa
- Figure X.6. contains a copy of the message from Hennie Prinsloo from Umkulu Adeventures, Stand, South Africa
- Figure X.7. contains an e-mail message from Dave Hackney, Tanzania

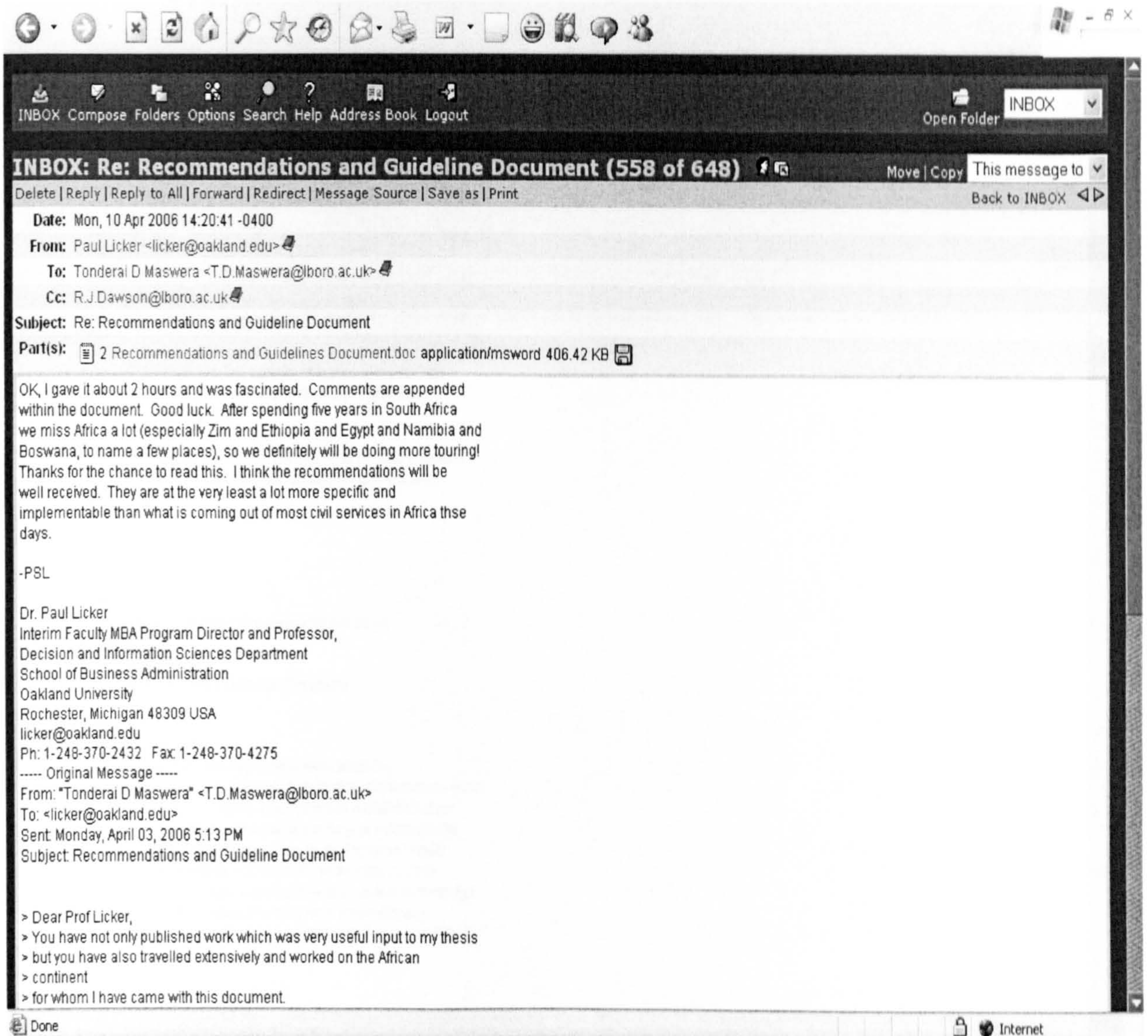


Figure X.1 E-mail message from Professor Paul Licker

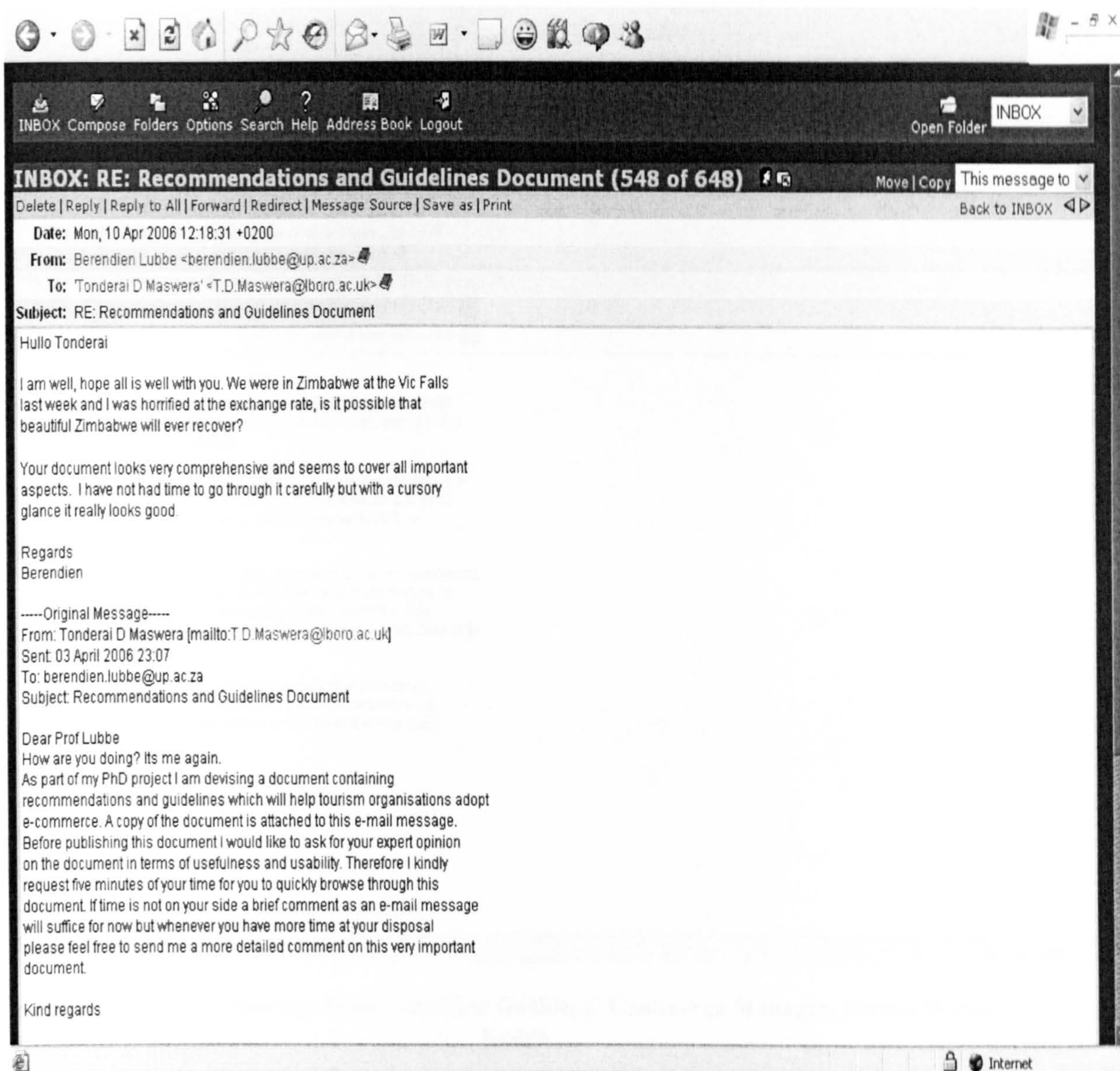


Figure X.2. E-mail message from Professor Berendien Lubbe

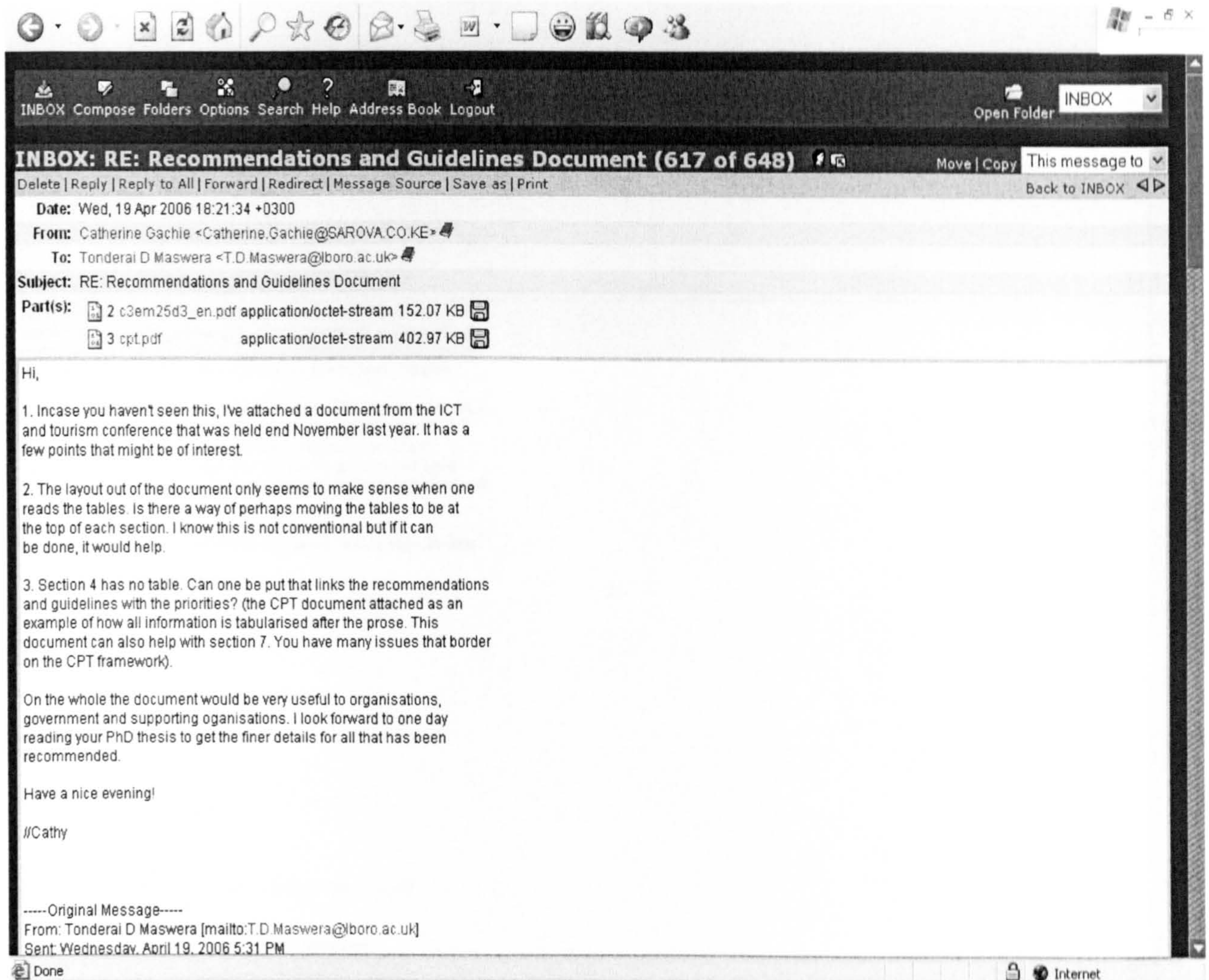


Figure X.3 E-mail message from Catherine Gachie, E-Commerce Manager, Sarova Hotels, Kenya

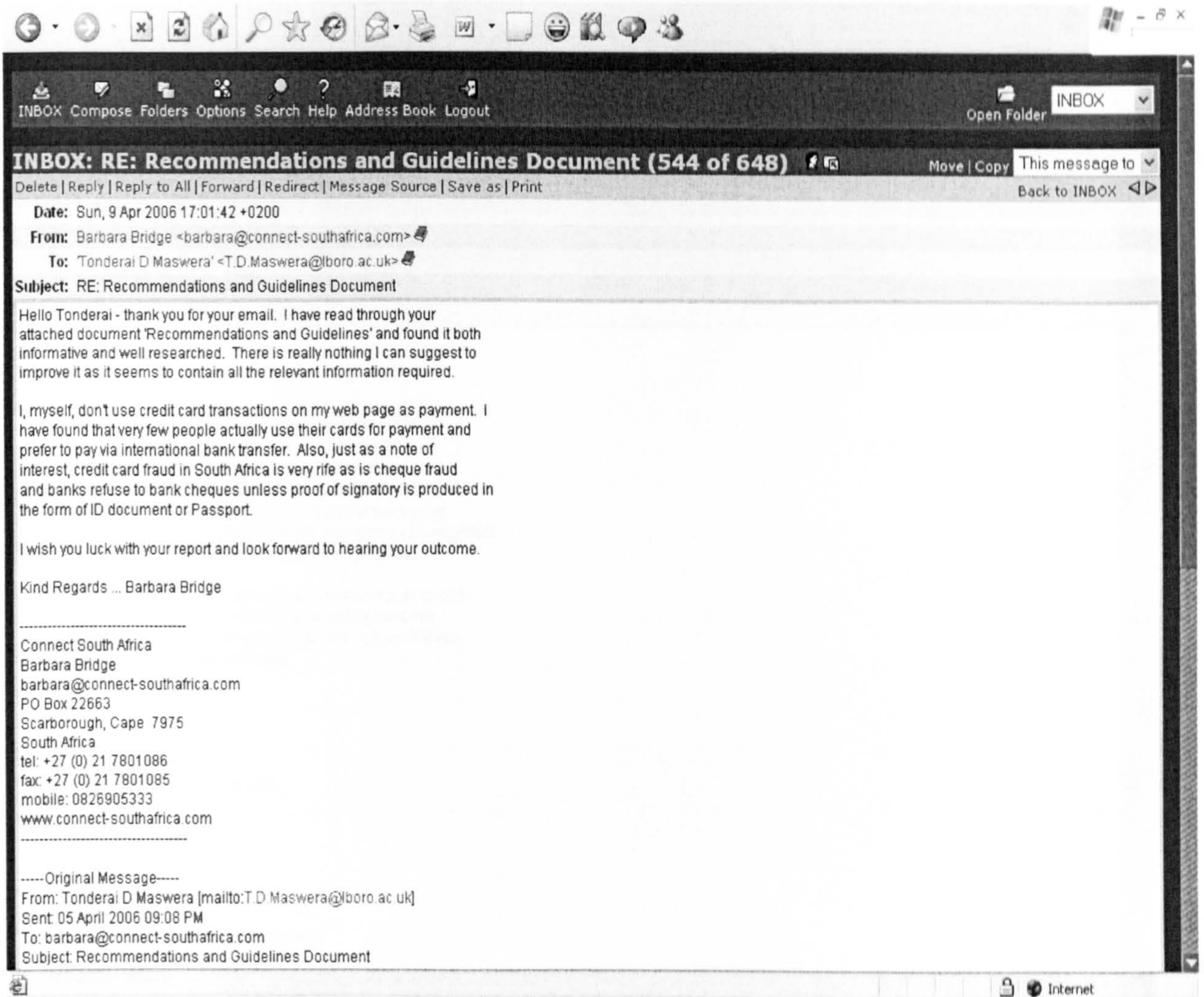


Figure X.4 E-mail message from Barbara Bridge, Connect South Africa, Cape Town, South Africa

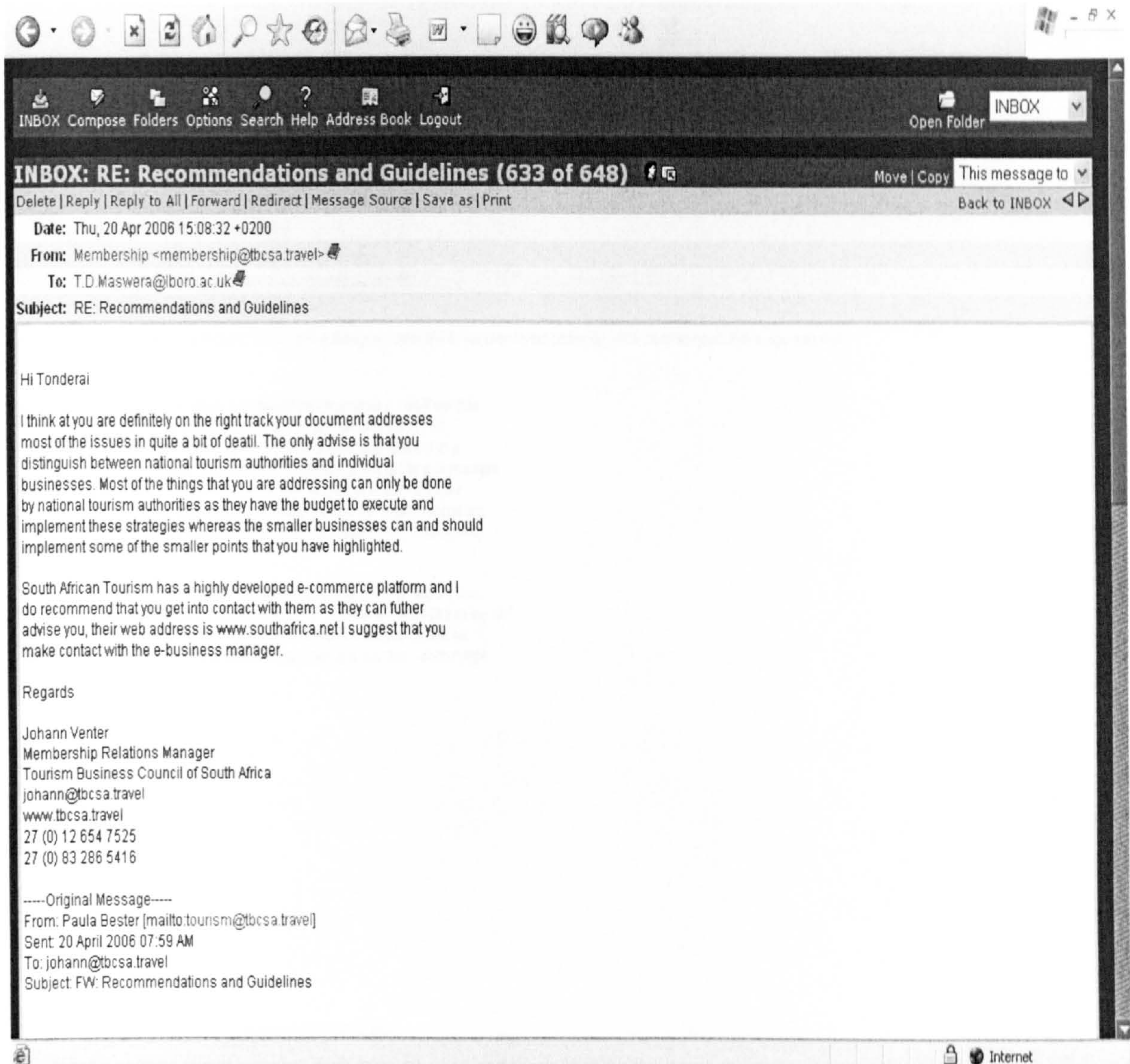


Figure X.5. E-mail message from Johan Venter, Tourism Business Council , South Africa

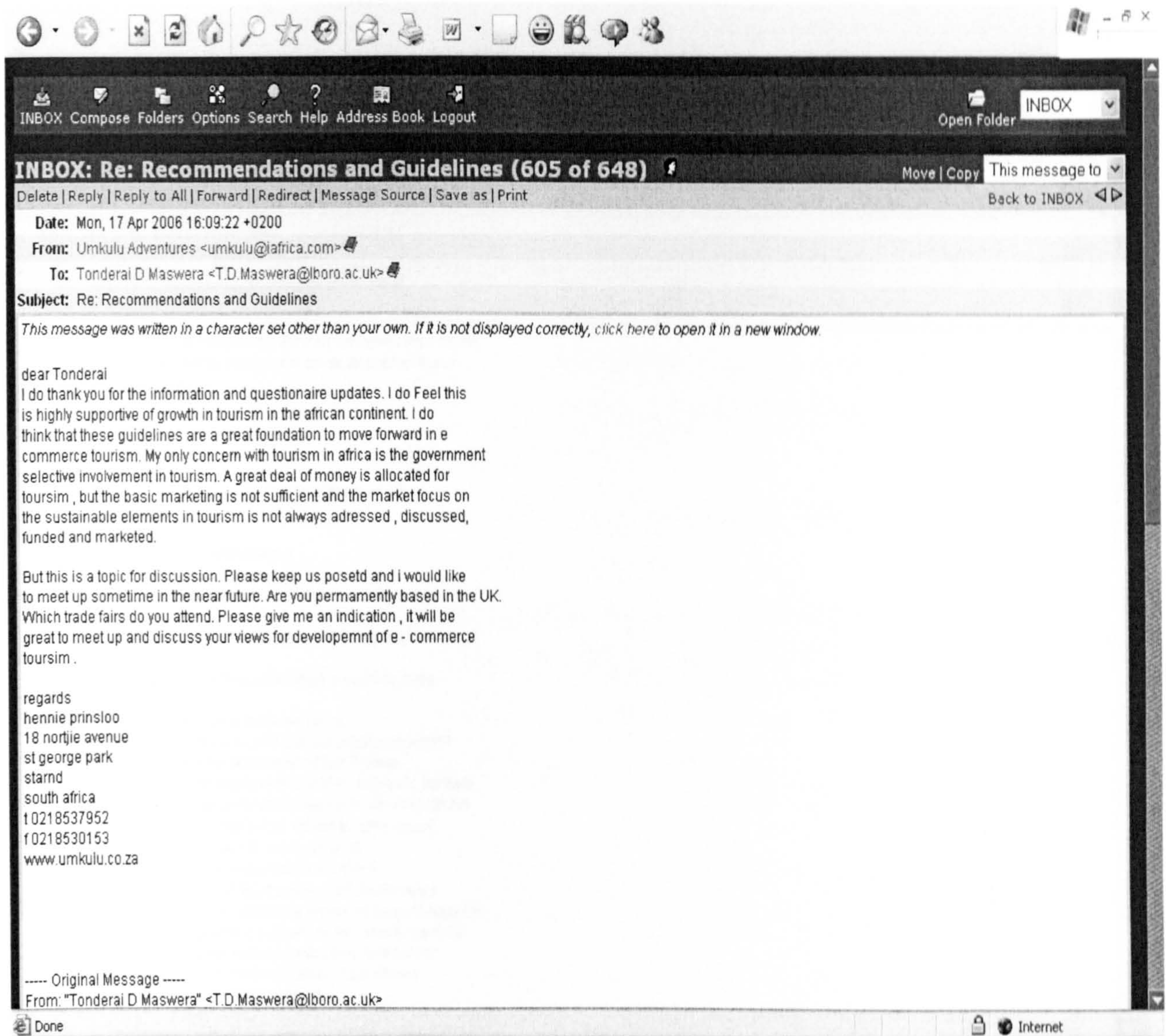


Figure X.6 E-mail message from Hennie Prinsloo, Umkulu Adventures, South Africa

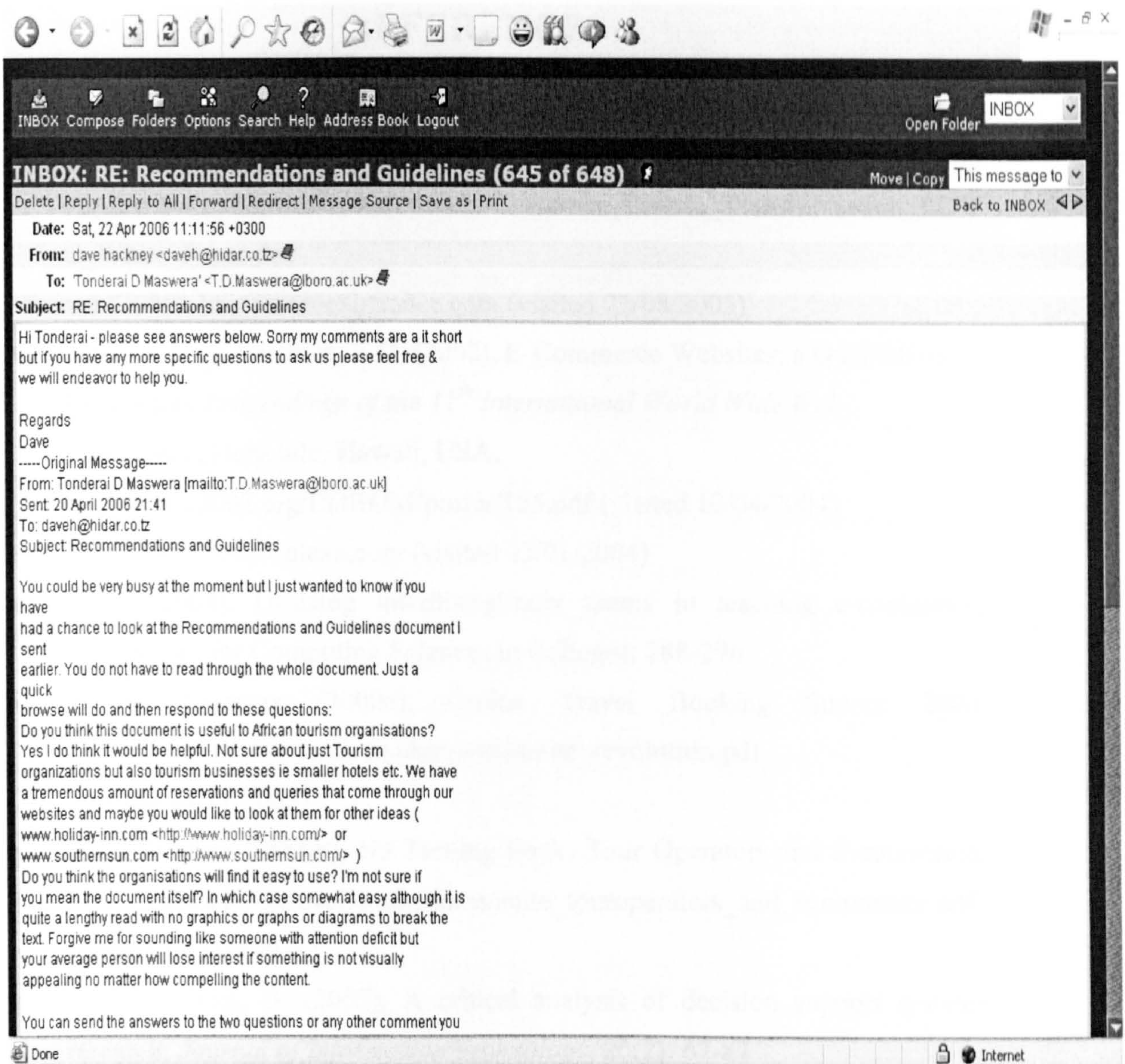


Figure X.7 E-mail message from Dave Hackney, Tanzania

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