An investigation of e-commerce adoption inhibitors in the Tourism industry: A Zimbabwe National Parks Perspective

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Abstract

The purpose of the study was to investigate e-commerce adoption inhibitors within the Tourism industry in the Zimbabwe National Parks as one of the key benefits that comes with proper and effective use of e-commerce, improved availability, processing and dissemination of information. Information can be distributed, shared with various business partners across the board efficiently. The study aimed at enabling E-commerce information to be shared, accessed and disseminated at a minimum time and cost reduction in the Zimbabwe National Parks. As information accessing and processing is now done electronically, there is reduction in the degree of inefficiency caused by human error. With the ready availability of contemporary information, various business entities can make conversant decisions that will be critical to their development and ultimately sustainability. The research was undertaken by examining Zimbabwe National Parks and their sub-units. A survey, via a pretested questionnaire based on a Likert scale and in-depth interviews was used to gather data and compute it. The results indicated that the companies distance and geographical constraints have limited or hindered the development and growth of many business prospects but e-commerce has cut across the geographic boundaries of the various countries. Business networks are now possible in Zimbabwe National Parks, for vertical integration, supply chain management, and business links reduce routine transactional time and costs.

Key words: E-commerce, Adoption, Processing Dissemination, Information, National Parks, Zimbabwe

Introduction

The tourism industry in Zimbabwe has become very dependent on e-commerce and it has to keep abreast with the new technological developments. Most companies in the industry are failing to keep pace and to take advantage of the technological advances. E-commerce can be used to market the country to the global market attracting more international tourists, generating foreign currency which contributes to economic development. It can also bring about a total revolution in tourism community development through the use of devices and technology in marketing the country as a safe tourist destination (Milne et al, 2004).

Currently, research into the factors on e-commerce adoption in the tourism sector is limited (MacGregor et al, 2006), particularly in the Zimbabwean context. Thus, the aim of this research is to provide a better understanding of e-commerce adoption behaviour in Zimbabwe tourism industry, which has proved to be a vital part in the economic revival of Zimbabwe, and design an adoption and utilization framework for the Zimbabwe National Parks. The tourism industry is a sector that is largely service-based, and the e-commerce can serve as a unique tool for
the National Parks to enhance their services, which could well determine growth and business performance (Chirikuutsi, 2010). The various National Parks have still not set up online systems regardless of the acquired hardware components, revealing underutilisation of resources. In a snap survey done by the researcher, the Zimbabwe National Parks are entirely dependent on Zimbabwe Parks and Wildlife Management authority (ZimParks, 2010) for all their online services and marketing. The centralized online marketing and information delivery service of the National Parks is however not very effective especially when targeting foreign tourists. Much effort has been devoted to studying the pre-adoption stage of e-commerce and ICT, and very little attention has been paid to the post adoption issues of e-commerce (Zhu et al, 2005). The literature indicates that relevant studies were not conducted on Zimbabwean companies (Austin, 2005). In order to fully realize the barriers to the adoption and utilization of e-commerce in the National Parks this research study was conducted.

Literature Review

E-commerce defined

E-commerce (electronic commerce) describes the process of buying, selling, transferring, or exchanging products, services, or information via computer networks, including the internet. E-commerce can take several forms depending on the degree of transformation from physical to digital involved (Hardcastle, 2011). The degree of transformation can relate to the product or service that the organisation is rendering or supplying, to the process that is being undertaken either by the organization or the customer, and the delivery agent. The product or service, process and delivery agent can be digital or physical. Traditionally all three dimensions are physical. In the case that all the three dimensions are digital, pure e-commerce and all other combinations that include a mix of digital and physical dimensions are considered e-commerce (but not pure e-commerce). If there is at least one digital dimension, the situation partial is e-commerce (Chaffey et al, 2006). For example, buying a car from Japan online is partial e-commerce, because the car is physically delivered by a shipper. However, buying an e-book from amazon.com is pure e-commerce as the product being bought is digital, and the process of buying is digital on the Amazon website. E-commerce draws on technologies such as mobile commerce, electronic funds transfer, supply chain management, Internet marketing, online transaction processing, electronic data interchange, inventory management systems, and automated data collection systems (Ngai and Wat, 2001). These can be incorporated into different businesses in line with the operations of the particular business concerned such as service business performance in service marketing. However, according to (Dave Chaffey et al, 2006), e-commerce involves more than merely conducting electronic transactions; it also encompasses a wide range of associated activities, such as after-sales support and even logistics.

Tourism Industry and e-commerce

The contemporary information society has made Tourism a highly information-intensive industry as ICT and e-commerce have a potential impact on tourism business. The role of e-commerce in the tourism industry cannot be underestimated and it is crucial driving force in the current information driven society (Shanker, 2008). The role of e-commerce is to market the destination as a safe and preferable one to the international tourists. New global markets and international partnerships can be accessed, resulting in new business models that add customer value and increase profitability, as well as more effective segmentation, targeting, and positioning strategies (Akehurst, 2009). Subsequently, online travel bookings and associated travel services are recognized as one of the most successful e-commerce implementations, with estimates of sales of $73.4 billion in 2006 (Turban et al, 2008). It is evident that e-commerce is an essential prerequisite for successful organizations in the emerging, globally networked, internet-empowered business environment, especially for the tourism industry (Law et al, 2009).
E-commerce adoption inhibitors

Infrastructural inhibitors

In developing countries, Zimbabwe, Zambia and Mozambique, a number of barriers impede the adoption of e-commerce and poor infrastructure is one of the major inhibitors to e-commerce adoption (Lawrence et al, 2010). Lawrence et al, (2010) stated that access to technology (computers, connectivity, and gateway to internet), limited bandwidth, which reduces the capacity to handle audio and graphic data are the most pressing infrastructure limitation. Most developing countries have got a challenge of poor communications infrastructure, most of which are analogue and can only transmit voice, and unreliable electricity supply (Humphrey et al., 2003) which hinders progress in the development of technology doing business over the internet. Humphrey et al., (2003) argues that the internet connection in most developing countries is unreliable because of the poor telephone communications and the erratic power supply and therefore the majority of them are not ready for e-commerce, because of their lack of network infrastructure especially among individual users and entrepreneurs. Successful implementation of e-commerce relies to a large extent on telecommunication infrastructures that connect various regions and parties within a country and across countries.

Socio-cultural inhibitors

Most cultures in developing countries do not support e-commerce and the conditions are not ripe because of lack of confidence in technology and funding as well as a poor online culture (Efendioglu et al, 2004). The social and cultural characteristics of most developing counties and the concepts associated with online transaction pose a much greater challenge and act as a major barrier to adoption of e-commerce. Even though online transaction that are precursors to e-commerce, such as catalogue and telephone sales, have existed in developed countries and have been used by the public for an extended time period (Efendioglu et al, 2004), such systems are new and fresh approaches in developing countries and is not suitable to the culture and way of doing business. Lawrence et al, (2010) points out that the question of trust is even more prominent in the virtual world than it is in the real world. The geographical separation of buyers and sellers, often coupled with lack of real-time visual or oral interaction, creates a barrier to e-commerce adoption in developing countries including inter alia Zimbabwe, Swaziland, Namibia and Lesotho.

Socio-economic inhibitors

Economic condition in developing countries is widely recognized as a major hindrance for e-commerce adoption (Lawrence et al, 2010). Since e-commerce relies on some technology infrastructures which are relatively expensive for many developing countries and they have unfavourable economic condition they are not likely to be involved in e-commerce. The poor state of the education systems in most developing countries is seen as barrier to e-commerce adoption (Lawrence et al, 2010). Lack of ICT skills and business skills are impediments to effective adoption of e-commerce. The lack of appropriate IT education is perceived to be a reason why the potential value of computers and the internet as a means to participate in e-commerce is not appreciated (Lawrence et al, 2010). The need for effective and reliable payment systems is also crucial in the development of e-commerce. Few people in developing countries have credit cards, most banking sectors in developing countries lack a national clearing system and potential customers are suspicious of being cheated (Efendioglu et al, 2004).

Political and governmental inhibitors

Government initiatives are important in the adoption of e-commerce and other ICT in general. They can be in terms of promotion of ICT usage, education and the establishment of adequate
regulatory framework for e-commerce (Efendioglu et al, 2004). Competition, both for telephone access as well as among ISPs is a key area where government policy can make a difference in access and adoption of e-commerce. Efendioglu et al, (2004) argues that it is very crucial in developing countries Governments to ensure open and competitive telecommunication markets that offer a range of interoperable technology options and network services (particularly broadband) of appropriate quality and price, so that users can choose among various technologies and services for high-speed internet access. Other issues that are seen as barriers to e-commerce adoption are free trade, the monopoly which national governments exercise over national telecommunications, import duties on IT equipment like hardware and software (Lawrence et al, 2010). The elimination of controls and deregulation of telecommunication systems is necessary before a free flow of information and an expanded use of ICT is possible.

Materials and Methods

The questions contained in the created assessment method were subject to the choices of respondents, thus indicating that the research was more subjective than objective in nature. Collis and Hussey, (2003) describe, subjective and interpretive research as forming part of the phenomenologist research paradigm. The population is defined as the group of interest to the researcher and it is upon this group that the researcher generated the results of the study (Fraenkel and Wallen, 1996). The population includes all individuals whom the researcher is interested in obtaining information and making inferences. Fraenkel and Wallen (1996) further states that the population can be in two categories namely: the target and the accessible populations. The target population is the actual population to which the researcher would really like to generate. However, this population is rarely available, and the population to which the researcher is able to generate is the accessible population (Fraenkel and Wallen, 1996).

Study sites

In this study, the population included four National Parks in Zimbabwe, which are Hwange, Matobo, Victoria Falls and Nyanga National Park respectively and travel tours which are Pathfinder, Nyati Travel and tours, Rock Shade tours and Premier Travel and Tours. For these parks, the research subjects were Area managers and Information services manager staff in National Parks. Each National Park provided two respondents in the above mentioned categories, which made the study population to be twenty four respondents.

Ethical considerations

The study was approved by the Research Board of Midlands State University, Zimbabwe. Informed consent was obtained from all the National Parks and respondents who participated in the study.

Sample size

The purpose of a sample is to approximate the measurement of the whole population well enough, within acceptable limits. A sample is a small part of anything designed to show the style, quality and nature of the whole (Ferber 1974). Brink (1996) defines a sample as a selection taken from a larger group (the "population") and recommends 10% of the sample size so that the researcher can examine a targeted and standard measure of group. It is therefore the group that the researcher selected for participation in the study. According to Travers (2001), for an in depth qualitative study the number of cases between four - ten is acceptable. In the case of this research with a total of twelve National Parks, four parks were used to collect data the area managers for each were part of the sample units and two employees per each park to make them all twelve. For the tourists, a total of sixty were taken as the sample from four different Travel Tours companies.
Data collection

A triangulation method was used in this study by adopting two different research techniques to collect the primary data, namely interviews and questionnaires. The questionnaires were structured with closed and open-ended questions. Closed questions required the respondents to select an answer from given alternatives while open-ended questions which elicited the respondents to give their own views. The researcher administered in depth structured questionnaires to tourists from travel tours where a certain number of specific closed and open-ended questions were asked. Face to face interviews were conducted to area management complemented the questionnaire and facilitated quick access to data. The reason for conducting qualitative interviews as Kinner and Taylor (1991) emphasise, is to raise the value of information and create a foundation for deeper and more widespread knowledge about a subject.

Data analysis

The questionnaire assessment was divided into three sections, that of area management, that of IT staff and the section on users of the services. Descriptive statistical analysis was used to interpret data. Forcese and Richer (1973) argued that descriptive statistics is commonly used because it is the basis for more advanced techniques. Ary, Jacobs and Razavieh (1990) argued that descriptive statistical procedures enable people to organize, summarize and describe their observations. Frequency Distribution was used whereby data was organized in tabular form. Bar charts and pie charts were also used to present the data graphically.

Results

Three different questionnaires were administered by the researcher to a respective target group and the statistics of the distribution of the different questionnaires and the respective response rate are outlined in Table 4.1 below. Ten interviews were conducted, four with managers resulting in a response rate of 100% and six with other officials resulting in a response rate of 75%. The average response rate (combining questionnaire and interviews) is 87%. The response rate was not 100% because some of the employees for the National Parks were busy with their work and kept on postponing the time to fill in the questionnaire. The questionnaires that were administered to the Travel and tours for the tourists were followed up but the management had misplaced some of them and due to time constraints, the researcher had to work with the ones collected.

<table>
<thead>
<tr>
<th></th>
<th>Questionnaires Dispatched</th>
<th>Questionnaires returned</th>
<th>Response rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hwange National Park</td>
<td>3</td>
<td>3</td>
<td>100</td>
</tr>
<tr>
<td>Matobo National Park</td>
<td>3</td>
<td>2</td>
<td>66.7</td>
</tr>
<tr>
<td>Nyanga National Park</td>
<td>3</td>
<td>3</td>
<td>100</td>
</tr>
<tr>
<td>Victoria Falls National Park</td>
<td>3</td>
<td>2</td>
<td>66.7</td>
</tr>
<tr>
<td>Pathfinder</td>
<td>15</td>
<td>13</td>
<td>86.7</td>
</tr>
<tr>
<td>Nyathi Travel and Tours</td>
<td>15</td>
<td>10</td>
<td>66.7</td>
</tr>
<tr>
<td>Rock Shade Tours</td>
<td>15</td>
<td>8</td>
<td>53.3</td>
</tr>
<tr>
<td>Premier Travel and Tours</td>
<td>15</td>
<td>11</td>
<td>73.3</td>
</tr>
<tr>
<td>Total</td>
<td>72</td>
<td>54</td>
<td>76.4</td>
</tr>
</tbody>
</table>

Table 4.1 Research instruments response rate
Sex distribution of respondents

In order to establish the demographics in the National Parks, the sex of respondents was studied. The results are shown if Figure 4.3 below.

Figure 4.3: Parks officials’ respondents

The respondents who are males are many (80%) and females make up the minority (20%). Thus males make up the most number of officials in National Parks.

Level of education

The highest level of education attained by the parks officials is summarised in Figure 4.4 below.
Results reveal that most respondents have a professional qualification with 10% at certificate level, 40% at diploma level and 50% at degree level. This implies that the majority of respondents have professional qualifications at least at the diploma level and so might have knowledge and appreciation of e-commerce.

E-commerce knowledge

The responses of respondents on their knowledge of e-commerce are shown below in Figure 4.5.

The majority of the respondents know about e-commerce 40% agreeing and 20% strongly agreeing that they have knowledge. Only small fractions 10% do not know completely. This means that most of the officials at the National Parks have knowledge about e-commerce.

Responses from National Parks management

The research results that were obtained from National Parks management are outlined below.

Are there e-commerce activities at the organisation?

The respondents were asked if there are any e-commerce activities that they are doing at their organisation, and the responses were distributed as shown in table 4.2 below
50% of the managers indicated that there are no e-commerce activities that are being done at their parks with 25% disagreeing strongly. 25% were not sure, which is Nyanga National Park as it has a website and some online services that it renders.

**Is adequate infrastructure for e-commerce implementation?**

The respondents were asked if there is adequate infrastructure for e-commerce implementation at their organisation and the responses were as follows:

The response was 25% agree as respondent from Nyanga agreed that his organisation had adequate infrastructure to run e-commerce activities, and respondents from Hwange, Matobo and Victoria Falls disagreed that their organisations had adequate infrastructure, making the response to be 75% disagree.

**Organisation has got enough funds to invest in e-commerce adoption.**

The respondents were asked if their organisation has got enough funds to invest in e-commerce adoption and utilisation and the responses were as follows:

The response was 25% neutral as the respondent from Nyanga was neutral, meaning that they were not sure if they had enough money to invest. The respondents from Hwange and Victoria Falls disagreed, which made the response to be 75% disagree.

**E-commerce is a valuable marketing tool**

Respondents were asked if e-commerce is a valuable marketing tool and the responses were as follows:

The response was 75% strongly agree and 25% agree making it 100% that all the respondents agree. This means that the management of the National Parks view e-commerce as a valuable marketing tool.

**Organisation ready for the adoption of e-commerce**

The management were asked if their organisations were ready for the adoption of e-commerce and the responses as follows:

The respondent from Nyanga indicated that his organisation was ready for e-commerce and the response was 25% agree. From Matobo and Victoria Falls the response was 50% disagree whilst from Hwange it was 25% neutral, that is they were not sure if they are ready for e-commerce or not. Statistics show that National Parks are not yet ready for e-commerce.

**Responses from National Parks officials**

The research results that were obtained from National Parks officials are outlined below.

**Have the necessary skills for e-commerce activities**
The employees were asked if they have the necessary skills for e-commerce activities and the responses were distributed as shown in figure 4.10 below.

![Figure 4.10: I have necessary skills for e-commerce activities](image)

33% of employees agreed that they had the necessary skills needed to run e-commerce activities and 16.7% were not sure if they have necessary skills needed with about 50% disagreeing that they have necessary skills needed. Statistics indicate that most of the employees at National Parks do not have the necessary skills that are needed to run the various e-commerce activities.

**E-commerce implementation will make work easier**

Respondents were asked if successful e-commerce implementation will make their work easier, and the responses were as follows:

50% of the officials agreed that the implementation of e-commerce will make their work easier with about 16% agreeing strongly. The other 16% are not sure of the issue. This shows that e-commerce adoption has a positive effect on the work of the park officials.

**Implementation of e-commerce improves communication with tourists**

The respondents were asked if successful implementation of e-commerce improves communication with customers and the response distributions are shown in Figure 4.12 Below.

![Figure 4.12: E-commerce improves communication with customers](image)
Research results reveal that ecommerce improves communication with tourists as 50% agreed with 17% strongly. Only 33% are not sure.

Responses from Tourists

The research results that the researcher obtained from the tourists questionnaire are outlined below.

Happy with the level of online services offered by National Parks

The tourists were asked if they were happy with the level of online services offered by National Parks. The results are outlined as shown below in Figure 4.13.

![Figure 4.13: I am happy with online services offered by National Parks](image)

Tourists indicated that they are not happy with online services offered by National Parks. This means that the National Parks have to improve on their online services to cater for and serve their customers.

Prefer online booking and payment

The tourists were asked if they prefer online booking and payment, and the distribution of responses are shown in figure 4.14 below.

![Figure 4.14: I prefer online booking and payment](image)

A high percentage of tourists agreed that they prefer online booking and payment whilst about 18% are not sure if they want it. They indicated that if National Parks were to implement ecommerce, it will be to their advantage. Only a small portion indicated that they do not want online booking and payment.

Proposed Conceptual Model
Deducing from the literature of the study as well as the empirical results, the researchers of this paper have proposed a conceptual model which will serve as a spring-board for future research studies to be conducted. Figure 4.15 shows the conceptual model.

Figure 4.15: The conceptual model

Hypotheses development

\(H_1: \) Infrastructural inhibitors have a positive impact on e-commerce adoption

\(H_2: \) Socio-cultural inhibitors have a positive impact on e-commerce adoption

\(H_3: \) Socio-economic inhibitors have a positive impact on e-commerce adoption

\(H_4: \) Political inhibitors have a positive impact on e-commerce adoption

Discussion

E-commerce is a strategic tool for development of all business entities today which different companies and organisations would want to engage in. The results presented empirical data on the holistic view of e-commerce in relation to National Parks in Zimbabwe. The results was categorised into three standpoints namely: inhibitors to adoption, motivators to implementation and readiness to adoption viewpoint. The results also focused on the current state of knowledge and appreciation of e-commerce by the National Parks.
Inhibiting factors to e-commerce adoption by National Parks

In the four National Parks that were researched on, there is barely any e-commerce that is being practised. Taking it from the basics, the parks have hardly any systems and the necessary infrastructure in place to engage in it. Only one National Park, Nyanga National Park, hosts its own website and the site is more of an information site as there are only a few e-commerce activities supported on the site. One of the major challenges faced by the parks is the issue of finance. There are no enough funds to invest in e-commerce projects as most of their funds are being channelled to other projects that in their perspective, are of prime importance. In the interviews done with the management, some of them would mention that the money has more pressing issues to attend to and therefore no extra to cater for e-commerce projects. The other factor contributing is the need for skilled personnel at the parks. Most of the employees at the various parks do not have the necessary skills to set up and run the various systems that support e-commerce. The results from the questionnaires and interviews to employees show that most of them just have the knowledge but not skills. It is also to note that the parks do not have a standalone IT department that is responsible for all their IT services. The parks have to hire external labour for even the basic IT services required. This could be the centre for research and development for such projects.

Readiness of National Parks to adopt e-commerce

It is a point to note that e-commerce is known and appreciated by the National Parks in Zimbabwe. Both the management and staff showed a considerable amount of knowledge on the subject of e-commerce. The National Parks are not ready yet for e-commerce as the officials and the management of the parks are indicating, from the responses of the questionnaires and the interviews conducted. The officials have the willingness to support e-commerce adoption projects and are to the realisation that they are lagging behind technology. They also have the edge for presence on the global market to target more international tourists, but they are not prioritising investing in e-commerce adoption projects. This shows that the parks are not ready yet for e-commerce as they are still having other projects to prioritise at the expense of e-commerce, in spite of the advantages of e-commerce. From the other angle, looking at the requirements for successful implementation of e-commerce, the parks are falling short of IT support. They do not have adequate IT infrastructure which forms the basis of e-commerce implementation, for example at Hwange National Park there is not internet facility, and they have to drive to a hotel nearby to get internet access. They also do not have the necessary skills to set up and run the systems to support e-commerce activities. This proves that they are not ready yet technically ready for e-commerce adoption. There is need to acquire the preliminaries first and training before appreciation.

Motivating factors to e-commerce adoption

The traditional way of doing business is slowly being phased out with the creeping in of modern means like doing business online. The tourists that were studied showed preference to online methods of payment and reservations. This pushes the parks to translate into e-commerce as their customers would need such services. Engaging into e-commerce will also mean customer satisfaction on information needs and services such as e-commerce transactions as the employees indicated. One of the greatest concerns of the management is the presence of the park on the global market and the ability to reach international tourists. The need for online marketing and advertising of the park and its services stimulates the need for e-commerce. To add to that, the tourists mentioned that they are not happy with the level of online services rendered by the National Parks, this also shows that the need is not being met. The work of the employees that deal directly with the tourists is made easy by the incorporation of e-commerce. For example, activities like booking can be managed easily and efficiently. Other activities like communication with the tourists both local and international can also be enhanced. Most staff indicated that the successful implementation of e-commerce will lighten their work, and make it more interesting.
Conclusion

A further study is recommended in this area to improve the e-commerce adoption strategy that the researcher developed to develop and adoption framework. This adoption strategy is again specifically for Zimbabwe National Parks, further researches can be done to develop adoption strategies that are globally applicable. Since in this research only an adoption strategy was developed, further research can be done to improve it to and adoption and utilisation strategy.

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