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**ELECTRONIC COMMERCE ADOPTION BARRIERS OF SMMEs IN  
TOURISM**

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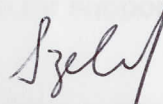
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## STATEMENT OF OWN WORK

"I declare that **Electronic Commerce Adoption Barriers of SMMEs on Tourism** is my own work, that it has not been submitted before for any degree or assessment in any other University or Technikon, and that all the sources I have used or quoted have been indicated and acknowledged by means of complete references."



SIBONGISENI DAKELA

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## ABSTRACT CONTENTS

The main objective of this research project was to explore organisational electronic commerce (e-commerce) adoption barriers experienced by SMMEs (Small Medium Micro Enterprises). In order for an SMME to become an e-business enterprise, a brick-and-mortar business model should be transformed into an e-business model. An SMME may start-up as an e-business without any transformation. Barriers to e-commerce adoption in this research need to be identified. The research study should provide guidelines for SMMEs to use and pro-actively avoid possible barriers before and during the adoption process of e-business.

The methodology used in this research study is qualitative to provide opportunities for in-depth exploration of viewpoints in the early stages of the adoption process. This facilitates a better understanding of the problem and in identifying phenomena, attitudes and influences targeting tourism-related companies in South Africa. Case study research is particularly suited when *why and how* questions have to be explored, especially in business and management fields. In the research study the question that is asked is *how* does management in e-commerce SMMEs in the tourism sector deal with identified barriers. Personal interviews were conducted providing a tool to investigate a wide range of aspects. Interviews afford opportunities to observe individuals and groups in action and to learn facts, opinions, and beliefs, which may vary within an SMME.

If e-commerce adoption organizational barriers exist within an SMME, these barriers could be overcome *early on* in the adoption process accepting the fact that organisational changes may be required. The researcher recommends further research in areas of other electronic commerce barriers that were not covered by this research.

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## **CHAPTER 1**

### **THE INTRODUCTORY CHAPTER TO THE STUDY**

In this chapter, the background of the research problem is discussed and the research problem is stated. The research question is articulated and the significance of the research is explained. The objectives of the research study are listed and the delineation of the study elaborated upon. An overview of the dissertation chapters together with the justification of the structure of the thesis chapters concludes this chapter.

#### **1.1 Background to the adoption of e-commerce (electronic commerce)**

Airline passengers have been slow in adopting e-commerce, according to Hartley and Worthington-Smith (2003:151-152) and the volume of online travel sales in South Africa is low compared to Europe and the United States of America. However, there are exceptions; the “no frills” airline Kulula.com for example, has become popular, carried over 750 000 passengers and increased the domestic air travel market by a reported twelve percent since early 2004. It is considered to be South Africa’s largest revenue-generating business to consumer (B2C) Website where sixty five percent of Kulula.com’s bookings are done online. This percentage is high considering the low Internet adoption rate in South Africa (Hartley & Worthington-Smith, 2003:152).

##### **1.1.1 SMME business process re-engineering**

According to Raymond (2001:411), the Internet provides an e-commerce infrastructure that can be considered as a change in commercial relationships and transactions. This includes SMMEs that need to adapt or re-engineer their business processes.

Raymond (2001:411) further adds that to compete in this new electronic space, SMMEs need to be equipped and to be aware of the challenges facing them when considering trading on the World Wide Web (WWW or Web). Although estimates that Internet sales account for less than one percent of the volume of all airline ticket sales at other airlines, the case of 1time Airline, another “no-frills” airline in South Africa is dramatically changing this by claiming seventy percent of online travel transactions (www.1time.aero, 2005).

### **1.1.2 Barriers of e-commerce adoption by SMMEs**

In spite of those reported successes, the literature suggests the need to investigate the barriers of e-commerce adoption by SMMEs (small medium micro enterprises) (Stockdale & Standing, 2004; Werthner & Ricci, 2004). This study focuses on the tourism industry, especially hospitality organisations. Several barriers hinder small and medium-sized hospitality organisations (SMHOs) from taking full advantage of information technology (IT) and e-commerce (Anckar & Walden, 2001:246). Many of these organisations lack in-house IT-skills; have limited financial resources for system development or modification and training; resist change; and are located in peripheral regions, where the IT expansion has not made inroads in the same way as in urban centres. As a result of these barriers to introducing IT and the Internet, many SMHOs have not been able to fully capitalize on the advantages the Internet offers (Anckar & Walden, 2001:246).

## **1.2 Statement of the research problem**

There are a number of e-commerce entrants into the South African market for example, Kulula.com, 1time.co.za, and Kalahari.net. Craig and Jutla (2000) state that a model which describes the e-business phenomena concisely is lacking, and above all, people are not e-business savvy. SMMEs are experiencing e-commerce adoption barriers and may not have sufficient guidelines to implement and conduct e-commerce.

A possible reason could be the lack of suitable guidelines to start new electronic businesses or even transforming existing brick and mortar businesses into e-businesses. From the literature (Stockdale & Standing, 2004:305), it appears that the tourism sector is experiencing e-commerce adoption barriers, such as, a lack of resources and knowledge.

A further barrier is the lack of understanding of the realisable business benefits (Stockdale & Standing, 2004:305). According to Stockdale and Standing (2004) SMMEs experience internal and external barriers. The internal barriers are: identification of benefits, global trading, financial constraints, supply chain integration and the understanding of the e-environment (electronic environment). The external barriers include lack of understanding of SMME needs, lack of common technology standards and e-competence (electronic competence) of industry sector. This research endeavours to provide solutions to overcome these barriers.

### **1.3 Research question(s)**

What are the e-commerce organisational adoption barriers experienced by SMMEs in the tourism sector. The sub-questions are as follows:

- ❖ how does management in e-commerce SMMEs in the tourism sector deal with these identified barriers?
- ❖ identify the evidence of barriers in the literature
- ❖ assess the views about the barriers that have been stated by the identified suitable population of role players

### **1.4 Significance of the study**

The World Tourism Organisation published a report in 1997 (Castle *et al.* 2001:14), with the aim of forecasting tourism in 2020. Sub-regional prospects show Southern Africa will be the African continents' leader, predicting seven and a half percent growth per year between 1995 and 2020. It is expected that Southern Africa will reach twenty million arrivals by 2020, five times that of the 1990 level.

The South African travel and tourism industry is estimated to account for eight percent of the country's Gross Domestic Product (GDP), contributing R53.2 billion indirectly or directly and providing employment for seven percent of the formal workforce (Castle *et al.*, 2001:14). The total foreign direct expenditure in South Africa by foreign tourists in 2004 was R47.8 billion, (South African Tourism, 2005:19). While the share of visitors to each province does not vary significantly from quarter to quarter, the Western Cape appears to be attracting a larger share of visitors in the first and last quarters, which is 494 015 visitors per quarter. There was a total of 1 907 431 arrivals in South Africa during the last quarter of 2004. The Western Cape increased its share of bed nights (occupancy) by 2% in 2004 (South African Tourism, 2005:62).

The reason for selecting the tourism industry for this research study is that it appears interesting in terms of possibilities offered by e-commerce (Anckar & Walden, 2001:241). Wynne and Berthon (2001:421) share a similar opinion that tourism has certain features that make it a suitable industry for the application of e-commerce. Not only is it today one of the rare industries where business-to-consumer Internet commerce is conducted on a large scale, it is also an industry with established traditions in the information technology (IT) sector. Because of its dependence on the supply and exchange of information throughout the production and distribution chain, the tourism industry has proved particularly suitable for the adoption of IT (Anckar & Walden, 2001:241).

Trends in business processes locally and globally are influenced by factors such as SMMEs, information and communication technologies (ICT) and e-commerce. Tourism in the Western Cape is making a contribution to the economy of the country. According to South African Tourism (2005:20), tourism's contribution to the economy is characterised by three components:

a) **The tourism industry**, i.e. the expenditure by tourists on services such as accommodation, transport, recreation, etc. Expenditure on such items contributes directly to tourism.

b) **The tourism economy**, i.e. the expenditure by tourists on products such as food and other goods. Expenditure on such items contributes indirectly to tourism.

c) **Capital goods bought by tourists**, i.e. expenditure by tourists on capital goods contributes indirectly to tourism in South Africa and will in future be analysed separately.

Globally, the tourism industry has experienced an average annual growth of seven percent (Castle, Lazarus & Mitha, 2001:14). With the increased number of tourists crossing the borders from twenty five million in 1950, to six hundred and sixty four million in 1999; tourism contributes eleven percent of the gross domestic product (GDP) and accounts for eight percent of total employment.

## 1.7 Overview of chapters

Tourism is one of the largest employment sectors, with an estimated two hundred million people working in the industry (World Travel and Tourism Council (WTCC) cited by Castle *et al.*, 2001:14). In 1996 South Africa ranked number fifty in the world's top tourist destination, while in 1998 it was ranked twenty fifth (Castle *et al.*, 2001:14).

This research study supports the research objectives of the Business Informatics Faculty, Cape Peninsula University of Technology. This study is relevant due to the need to grow businesses that incorporate e-commerce, typically SMMEs in the tourism sector.

## 1.5 Objectives of the study

The objectives of this research study are to:

- ❖ explore the SMMEs in the tourism industry and aggregate the findings; (To aggregate is to collect and to combine the findings)
- ❖ develop guidelines for the benefit of the wider community

## **1.6 Delineation of the study**

In this research study, only organisational barriers (discussed in the literature review in section 2.3) will be investigated. Other barriers, such as, technical, economic, cultural, political and legal factors pertaining to barriers are mentioned (Farhoomand, Tuunainen & Yee, 2000).

The reason for focusing on the organisational barriers is to address the research question that explores the issue of management in SMMEs. The question investigates how management deals with the identified barriers. This research study focuses on SMMEs in the tourism sector in the Western Cape of South Africa.

## **1.7 Overview of chapters**

Struwig & Stead (2001:45) suggests a possible layout of chapters in a qualitative study under the following headings:

### **Chapter 1: Introduction**

Chapter 1 provides a statement of the research problem. A background to the research problem is clarified. A research question is stated. The significance of the study is explained in detail and the purposes or the objectives of the study are listed. This will lead to the delineation of the study and an overview of chapters concludes the first chapter.

### **Chapter 2: The review of information technology (IT) and e-commerce studies**

In this chapter the origin of e-commerce is explored. Information and communication technologies (ICT) play a major role in the emergence of e-commerce. Theoretical adoption models are also discussed. It appears that a lack of consensus exists from various authors with regards to defining e-commerce and e-business.



This section covers e-commerce and e-business definitions followed briefly by a discussion of e-commerce found in tourism. Implementation and adoption barriers are examined and then conceptual frameworks and models of the adoption of e-commerce are explored. A comparison of models and frameworks with regard to the barriers of the adoption of e-commerce is presented. Challenges of management in an e-commerce organisation follow. E-commerce adoption barriers in two other developing regions are also discussed. The background of SMMEs and their role is discussed. The methodological framework for this study concludes the chapter.

### **Chapter 3: Research methods**

An introduction to research design and methodology is discussed in this chapter. Qualitative research is discussed as a suitable method for this research study. Case study design and its philosophy is discussed. The aim of the pilot case study is given and the findings reported. The sampling framework to select suitable cases follows. Bias in this research study is also explored.

### **Chapter 4: Data analysis and interpretation**

The research concepts are discussed in this chapter, starting with the modes of analysis. The researcher motivates the selection of modes of analysis for this research study. The background of each SMME used in this research project is briefly presented and the findings of the cases are discussed. After conversational analysis, the cases are tabulated.

### **Chapter 5: Comparative analysis**

Chapter 5 discusses the research findings from the case studies conducted and relates these outcomes to prior theory and research with regards to e-commerce adoption barriers in the tourism sector. This chapter addresses the research questions in detail.

## **Chapter 6: Conclusions and recommendations**

Trends that impact the tourism industry are introduced in this chapter. A new, proposed framework for the e-commerce adoption barriers, based on the study of Farhoomand *et al.*, (2000) is presented and discussed.

Recommendations and guidelines are discussed based on the methodological framework (negative attitudes, lack of knowledge or expertise, resistance to change and lack of management commitment) of the research study. General guidelines (e-commerce approaches and business models, strategy and tactics, marketing and competition, managing people and processes, technologies, implementation, and evaluation) with regards to e-commerce adoption barriers are considered. The discussion, with regards to the objectives of the study being met, follows. Further research on the subject of e-commerce adoption barriers is recommended.

### **References**

An alphabetical list of all the research studies used from various authors, government gazettes, white papers, books, journal articles, magazines, Internet, relevant presentations and so forth, is included.

### **Appendices**

The supervision process is attached and other relevant documents for referral.

### **Glossary**

Words that are used frequently in the study are defined.

Struwig and Stead (2001:45) recommend two additional sections after appendices, namely instruments and relevant documents. However, the researcher combined these sections into the glossary. There were no special instruments used in the research study.

## CHAPTER 2

### THE REVIEW OF INFORMATION TECHNOLOGY (IT) AND E-COMMERCE STUDIES

In this chapter the background of e-commerce is explored. ICT plays a major role in e-commerce. Theoretical adoption models are discussed. It appears that a lack of consensus exists by various authors with regards to defining e-commerce and e-business. This section covers the scenario of e-commerce and e-business definitions followed by discussing e-commerce in tourism. Implementation and adoption barriers are examined and then conceptual frameworks and models of the adoption of e-business or e-commerce are explored. A comparison of models and frameworks with regard to the barriers of the adoption of e-commerce is presented. Challenges of management in an e-commerce organisation follow. E-commerce adoption barriers in two other developing countries are discussed. The background of SMMEs and their role is discussed. The methodological framework used for this research study concludes the chapter.

#### 2.1 ICT and e-commerce

Galloway and Mochrie (2005:34) state that ICT is categorised in a variety of forms, that is, the standalone ICT and the computer-based ICT. While the uptake of some technologies is widespread, others may be less widely used, particularly for business purposes. Therefore, just as business differences (such as industry sectors) may prompt variation of ICT uptake, so too may variation in ICTs themselves. From a research point of view this plethora of variables means that generalisations from the study of one industry, or from one ICT, are highly unreliable. This research study considers computer-based ICTs only. ICT is the technology required for information processing. In particular it deals with the use of electronic computers and computer software to convert, store, protect, process, transmit, and retrieve information.

Mitchell and Clark (1999) contend that PCs (personal computers) are used for purposes that do not require communication technology. The tendency, however, is for ICT studies used by SMMEs is to focus on Internet-based and other networked technologies. A focus on these technologies tends to lead to an emphasis on e-commerce. The development of networked technologies has transformed the capacity of SMMEs to share and transfer information. For micro-firms, the adoption of standalone ICT applications to meet specific business needs, e.g. financial planning, are used even where networked applications are not (Mitchell & Clark, 1999).

Mitchell and Clark (1999:451) claim that the three most commonly used ICT applications used by SMMEs are word-processing, financial management and producing accounts. This is supported by other empirical studies such as Lawson *et al.* (2003) and (Galloway & Mochrie, 2005). Daniel (2003: 234) cites research by Mitev and Marsh (1998) which found that business use of ICT tended to be confined to tools used to automate standard administrative functions such as accounting, budgeting, inventory control and word processing packages. He states further that the use of standalone applications for business purposes has had a significant effect on business operations, in that their use is now almost universal. He cites Pollard and Hayne (1998) who found that the use of standalone applications is often for competitive advantage (Daniel, 2003: 234).

Huggins and Izushi (2002) argue that there are many spillover effects from personal and business use of ICT. A typical example would be a micro-business owner purchasing a PC that is used initially by children within the family, and only occasionally for business purposes such as record keeping. Galloway and Mochrie (2005:34) state that independent statistical data relating to actual outcomes and benefits, in terms of ICT and e-commerce adoption, is minimal from the literature.

Much of the literature relating to e-commerce use terms interchangeably and is often unclear about the difference between the relevant technology involved and its usage. Some of the early literature on e-commerce treats the concepts of ICT and e-commerce as though they were close cognates. For instance, it has been stated that greater use of ICT and e-commerce is significantly affecting the nature of business transactions according to Galloway and Mochrie (2005). One difficulty with this approach is that ICT could refer to a wide array of technology, ranging from database programs to local area networks. A further difficulty is that the term e-commerce does not refer specifically to emergent technologies, but to a business process that requires, in part, the use of a set of relevant but highly specific technologies. The literature also tends to be insufficiently precise about how e-commerce contributes to local and regional economic development. In a considerable number of cases there is little or no connection between the usage of e-commerce and the technological content of a business. For example, there are considerable differences between the e-commerce strategies of a sports equipment retailer who sells online products and a biotechnology company that puts minimal contact information to a Web site.

## **2.2 Theoretical models of adoption**

Research into technology-based innovation has been productive (Elliot & Loebbecke, 2000:49). The authoritative assessment of innovation literature is Rogers' (1995) work and identifies the attributes of innovations as: relative advantage; compatibility; complexity; trialability; and observability. Rogers' Five-Stage Innovative Processes model is shown in Table 2-1. Stages 1 and 2 are grouped as initiation and stages 3-5 as implementation.

Rogers (1995) contends that the driver of the processes is the necessity to solve business problems; and that later stages in this model cannot be undertaken until the earlier stages have been settled.

Rogers (1995) considers aspects of organisational-level innovation. He identifies three approaches for adoption decisions at an organisational level: optional (firms can choose to adopt or reject an innovation independently of other members in a system); collective (choices are made by consensus among members of a system); and authority (choices are made by a few individuals in a system who possess power, status or technical expertise). Based on economic theory, the authors consider supply-push and demand-pull forces, which may drive innovations (Elliot & Loebbecke, 2000:49).

1	2	3	4	5
Agenda setting	Matching	Redefining/ restructuring	Clarifying	Routinizing
General problems in organization create need for innovation	Fitting problem with an innovation	Modifying innovation to fit organization and altering organizational structure	Defining relationship between organization and innovation	Innovation subsumed into organization's activities

Table 2-1: Rogers' five-stage innovative processes (Rogers, 1995)

Demand-pull is derived from the willingness of potential users to use the innovation (Elliot & Loebbecke, 2000:49). Throughout the organisation innovation literature, organisation innovativeness and rate of adoption have been the three most studied dependent variables (Shen, Hawley & Dickerson, 2004:3). Organisation innovativeness, which refers to how innovative an organisation is, was typically measured as a composite score, composed of the scores from ten to twenty innovations (Rogers, 1995:378). Rate of adoption refers to the relative speed with which an innovation is adopted by members of a social system. It is generally measured as the number of individuals who adopt a new idea in a specific period (Rogers, 1995:206).

These two concepts are closely related to each other; if organisations are more innovative, the rate of adoption of an innovation will be higher. Although organisation innovativeness is an important concept, practically it is not very useful because measures are dependent on each specific innovation as indicated by the low relationship between the measured qualities of the organisation and the organisation innovativeness. The concept of rate of adoption concerns the diffusion of certain innovations through the social system during a specific time period. It is an important measure when comparing different innovations or different social systems regarding the adoption of the same innovation, but not when testing the value of the characteristics of a specific innovation and other factors in explaining the adoption behaviour of one group of organisations within the same social system (Shen *et al.*, 2004:3).

Considering these two concepts does not directly serve the purpose of this study. Instead a new concept, e-commerce adoption level, is discussed. The adoption of e-commerce is similar to these two important innovation concepts in that they all concern the organisation's adoption behaviour (Shen *et al.*, 2004:3).

## **2.3 E-commerce and e-business**

### **2.3.1 Definitions of e-commerce and e-business**

Electronic commerce involves the undertaking of normal commercial activities that covers both intra-organisational and inter-organisational electronic messaging and information management, government, or personal activities by means of computers and telecommunication networks; a wide variety of activities are included, involving the exchange of information, data or value-based exchanges between two or more parties (Kao & Decou, 2003; Quayle, 2002; Cloete, 2002; Chester & Kaura, 1999).

SMMEs play a vital role in many economies throughout the world and the ability to adopt and utilize the Internet and e-commerce is vital to ensure

McNurlin and Sprague (2002) define e-business as the use of telecommunication networks, particularly the Internet, to conduct business transactions. Furthermore, Rayport and Sviokla (1995) states that e-business includes activities such as customer relationship management, customer profiling and the evolution of entirely new products and services. These activities are the realization of a fully-fledged virtual value chain as described by them. (2003:152).

Damanpour (2001:18) defines e-business and e-commerce as any “net” business activity that transforms internal and external relationships to create value and exploit market opportunities driven by new rules of the connected economy.

The authors (McNurlin & Sprague, 2002; Cloete, 2002; Rayport & Sviokla, 1995) mentioned above, agree on the understanding of e-business and e-commerce being two different concepts, with the exception of one author (Damanpour, 2001:18) who discusses the concepts as one definition.

## **2.4 E-commerce and tourism**

### **2.4.1 Technology and tourism**

The use of ICT has supported the tourism industry in attaining the goals of reducing operational costs and increasing their ability to generate value for their customers (Mzumbe, 2005:364). In addition, Mzumbe (2005:364) states that ICTs are enabling tourism businesses to interact with consumers, add value, personalize services, reduce costs and mainly achieve strategic competitive advantage. The rapid development of the Internet, particularly the Web has significantly changed the industry since tourism and travel are the largest online industry (Mzumbe, 2005:364).



SMMEs play a vital role in many economies throughout the world and the ability to adopt and utilize the Internet and e-commerce is vital to ensure their stability and future survival (Quayle, 2002; Stansfield & Grant, 2003). All players in the tourism sector – airlines, hotels, B&Bs (bed and breakfasts) and tour operators have found either opportunities or threats (Hartley & Worthington-Smith, 2003:152). It appears that some travel agencies (some of which are SMMEs) have transformed technology from being a chink in their armour to a new business weapon (Hartley & Worthington-Smith, 2003:152).

#### 2.4.2 Structural view of the tourism market

Tourism products require information gathering on both the consumer and supply sides - and thus entails high information search costs, as illustrated in Figure 2-1. Such informational market imperfections lead to the establishment of comparably long information and value chains.

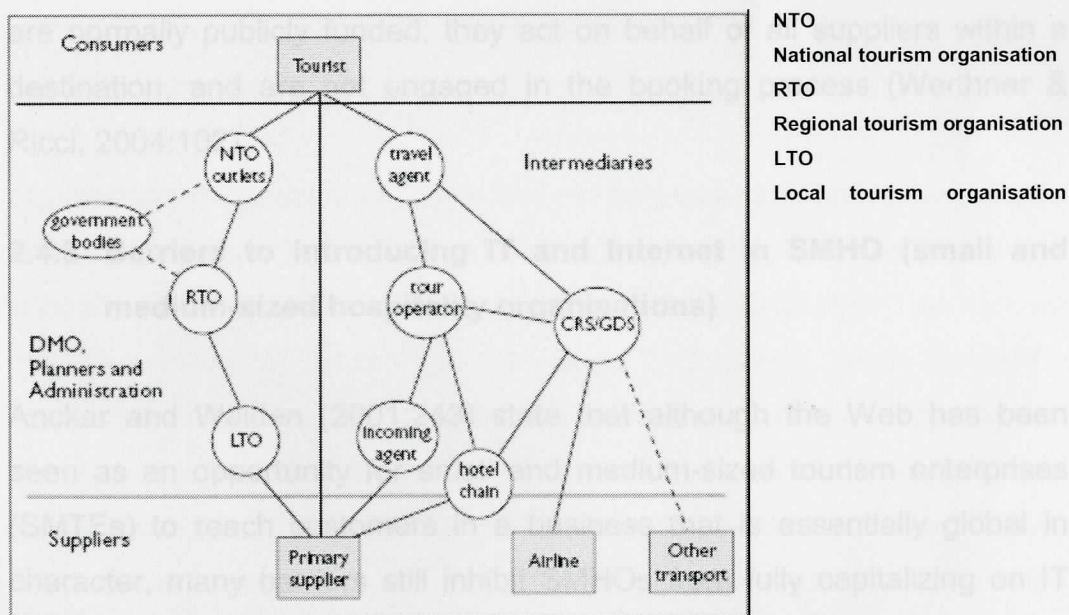


Figure 2-1: Structural view of the tourism market (Werthner & Ricci, 2004: 102-103)

Figure 2-1 differentiates between the supply and demand sides and the respective intermediaries.

The nodes indicate the relevant types of players in the field, and the links highlight the relationships as well as the information flow, with only the most relevant links shown. Suppliers such as hotels or restaurants are depicted mostly as primary suppliers of service. With respect to a functional differentiation, these companies are on the same level as the larger players. Tour operators can be seen as product aggregators, and travel agents act as information brokers, providing the final consumer with the relevant information and booking facilities.

great costs, minimizing the expenses by cutting down on essential forms of customer service is a CRS or GDS (central reservation systems or global distribution systems), stemming from the airline reservation systems developed in the 1960s, also include products such as packaged holidays, or other means of transport. Whereas the intermediaries on the right hand side can be seen as the professional connection between supply and demand (mainly based on the electronic infrastructure and functionality of CRS or GDS), the left hand side is relevant for the management, planning, and branding of a destination. These national, regional, and local tourism organisations are normally publicly funded, they act on behalf of all suppliers within a destination, and are not engaged in the booking process (Werthner & Ricci, 2004:102).

The barriers of introducing IT are likely to be higher in regions, where new

#### **2.4.3 Barriers to introducing IT and Internet in SMHO (small and medium-sized hospitality organisations)**

001:245). The barriers may also arise from technological services; for instance, broad bandwidth

Anckar and Walden (2001:243) state that although the Web has been seen as an opportunity for small and medium-sized tourism enterprises (SMTEs) to reach customers in a business that is essentially global in character, many barriers still inhibit SMHOs from fully capitalizing on IT and the Internet. They state that of these barriers, four stand out as especially important:

- ❖ Lacking financial resources;
- ❖ Lacking IT knowledge or expertise;
- ❖ Resistance to change; and
- ❖ Peripheral location.

#### **2.4.3.1 Lack of financial resources**

Developing an Internet strategy and a professional Web site may require sizable investments (Anckar & Walden, 2001:244). As a typical SMHO can usually marshal only limited investment capital from its own cash flow and from external sources, its scope for investment in Internet technology may be limited (Anckar & Walden, 2001:244). Although it can be argued that a Web presence does not necessarily involve great costs, minimizing the expenses by cutting down on essential forms of customer service is a highly questionable strategy (Anckar & Walden, 2001:244). The slow growth of business to consumer e-commerce (as compared to early optimistic predictions) has surprised and disappointed many experts as well as companies that have invested heavily in e-commerce applications. A viable reason for the reluctance of consumers to shop on the Internet lies in the fact that initial Web services have offered little – if any – added value for the customers in comparison to the traditional methods of shopping (Anckar & Walden, 2001:244).

#### **2.4.3.2 Location**

The barriers of introducing IT are likely to be higher in regions, where new technologies not always gain a foothold as rapidly and with the same intensity as in urban centres (Anckar & Walden, 2001:245). The barriers may also arise from technological services; for instance, broad bandwidth Internet connections, being more expensive as a result of the limited demand, or a technological infrastructure not being available in peripheral areas because of the great expenses involved. Hence, for many SMHOs fast Internet connections are not a matter of importance, which must be taken into consideration when planning their Internet strategies. Moreover, in peripheral regions, IT-knowledgeable workers and professional consultants may be hard to find or extremely busy. Consequently, the organisations may not be able to find system developers or workers who can operate the systems (Anckar & Walden, 2001:244).

Lack of IT knowledge or expertise and resistance to change are discussed in the methodological framework below.

## 2.5 E-commerce barriers

### 2.5.1 Organisational adoption barriers selected for the study

E-commerce adoption barriers are due to many factors and Farhoomand *et al.* (2000:39) discovered that technical, organisational, economic, cultural, political and legal factors are the main barriers. The organisational barriers in their research consist of *negative attitudes, lack of knowledge, resistance to change and lack of management commitment* and are selected for this research study.

### 2.5.2 Implementation barriers

Some significant barriers that have not been explored in the study conducted by Farhoomand *et al.* (2000:28-35) are implementation costs and operating costs. Other barriers from the same study consist of establishment of infrastructure, integration of legacy systems, availability of applications and standards, capabilities and performance of the Internet security, governmental attitudes, and interagency coordination.

It is found that a number of SMMEs are not achieving even fundamental e-commerce adoption and adoption programmes (Stockdale & Standing, 2004:305). Many programmes led by the government are not particularly successful (Stockdale & Standing, 2004:305). The major adoption barriers according to them are the lack of resources and knowledge, the skill levels of business operators, lack of trust in the IT industry, and the lack of e-commerce readiness in some industry sectors. A further barrier is the lack of recognition of the potential to improve business performance.

According to the study conducted by Barnes and Hunt (2001:130) the most significant barriers to the adoption of e-commerce are implementation costs, operating costs, lack of expertise and difficulties in providing adequate training.

Table 2-2 lists some of the many barriers to e-commerce adoption. These e-commerce adoption barriers found in the literature are ranking from the most important to the least important. The area of training and education is an important one and SMMEs have to be prepared to invest in this area.

<b>BARRIERS TO E-COMMERCE ADOPTION</b>	<b>RANKING</b> <b>(1 = most important</b> <b>19 = least important)</b>
Start-up costs (implementation)	1
Lack of staff expertise	2
Operating costs	3
Providing adequate training	4
WWW service provider products and services	5
Integration of WWW with internal applications	6
Time-consuming to adopt the WWW	7
WWW service provider performance	8
Not enough perceived benefits	9
Application software package WWW capabilities	10
Security problems associated with using WWW	11
Staff resistance	12
Lack of business partners who are WWW-capable	13
Need for re-engineering of business processes	14
Inter-connection among WWW service providers	15
Customer resistance	16
Examples	17
Difficulties with WWW document standards	18
Lack of space for computer	19

Table 2-2: Barriers to adopting Web technologies (Barnes & Hunt, 2001:130)

According to Labuschagne and Eloff (2000:154) the major concern cited by most decision-makers for e-commerce is security, or rather the lack thereof. In the study conducted by Laforet and Li (2005:376) hackers and fraud were found to be one of the main barriers to online banking adoption. For this reason, many Internet subscribers still feel uncomfortable about the idea of trading over the Internet. To them, the possible risks incurred do not justify the potential rewards. Unfortunately, their fears are not completely unfounded (Labuschagne & Eloff, 2000:154).

It is clear that the e-commerce environment is not a simple one that can be addressed easily with conventional methods (Labuschagne & Eloff, 2000:157). A balance must be maintained between the business needs and the technology requirements. A new approach to identify and address security, suited to the e-commerce environment, is required. The proactive manner in which most risk analysis methodologies are performed is not suited to e-commerce. A more dynamic approach is required where risks can be analysed online and in real-time, requiring less human intervention (Labuschagne & Eloff, 2000:157).

## **2.6 Challenges of management in an e-commerce organisation**

Critical success factors, which may be the drivers or even inductors, are discussed alongside the inhibitors of e-business. Inhibitors exist that may actually be a challenge to be overcome or that can be turned around (hundred and eighty degrees), and produce critical success factors. If the exact opposite of an inhibitor is done, then a critical success factor may be produced.

According to Javalgi, Martin and Todd (2004:568) the speed at which Internet information travels and the rate of growth of e-commerce adoption necessitates the need for organisational adaptation.

E-commerce strategies frequently concentrate on Web site design and content, search engines, e-catalogs, online sales and order entry. One of the key challenges relates to order fulfillment. Delivering services to the satisfaction of customers can demand efficient logistics. Companies have to integrate export, import and logistics applications and transaction engines that tap their global e-commerce knowledge base to help them determine taxation, pricing, regulations and compliance documentation (Javalgi *et al.*, 2004:568).

Javalgi *et al.* (2004:568) note that one of the major challenges of providing e-service is the alignment of service operation strategy with the requirements of the target market, which generally requires an easy-to-use Web interface. Determining how best to deliver e-service without sacrificing service quality is an ongoing challenge. Those organisations that successfully meet or exceed customer expectations accrue benefits. The concept of customer service offered through the Internet cannot be seen as different from traditional customer service. E-service providers must strive to satisfy and retain customers by providing a maximum level of service quality to all customers. Amazon.com, for example, has the supporting infrastructure in place to allow order fulfillment within 24 hours. Amazon's flexibility, scalability, and other e-service features have been paramount to its continued success. Organisations, through leadership and vision, must create a culture rewarding the entrepreneurial spirit necessary to deal with the speed of change on the Internet. Information and communication technologies certainly play a pivotal role in the manner in which service organisations conduct business. Those service organisations that are able to adapt and effectively use the technology tend to gain a competitive advantage in the e-services. The organisation must also be willing to demonstrate the importance and value of continued research and development, especially market research, as it pertains to doing business on an international basis, through the allocation of resources. Creating an organisational culture where speed and acceptance of change is apparent will result in increased attractiveness for foreign direct investment in developing countries (Javalgi *et al.*, 2004:568).

A posting on a corporate Web site has the potential to be accessed immediately by over 200 countries, representing about 600 million consumers (Javalgi *et al.*, 2004:569). If the language of choice on the site is English, approximately 65 percent of the online population will not understand the offer (Javalgi *et al.*, 2004:569). In order to successfully cross international boundaries, businesses must promote a cross-cultural, multilingual purchasing experience through the development of a multilingual Web site (Javalgi *et al.*, 2004:569).

According to Bègin and Boisvert (2000:23) the barriers facing an SMME in establishing itself in e-business are considered against the background of the challenges that the above transformation presents under the following headings:

- ❖ Culture of the organisation
- ❖ Scarce resources
- ❖ Environmental factors

### **2.6.1 Culture of the organisation**

Lack of familiarity with information technology can be seen as an obstacle which may be characterized as “Lack of e-savvy leadership” (Weill & Vitale 2001). The business owner’s familiarity with information systems has been seen as a significant factor in the implementation of e-business (Al-Qirim & Corbitt, 2001). In a study of e-commerce adoption in small restaurants it was found that knowledge of information technology was a significant factor in the adoption of e-commerce (Castleman & Chin, 2002).

Conservatism and resistance to change are seen as obstacles to the adoption of Internet based financial transactions (Poon & Swatman, 1999). This is characterized by concerns about security of transactions and a preference for robust, traditional methods. Moodley (2002) identifies a management level conservatism, which may account for a belief that e-commerce is irrelevant to their business.



Adding value to the business, the final stage of change, in the evolution to fully fledged e-business, places strenuous demands on the culture and leadership of the organisation as it needs vision, negotiation skills requires a strong culture of working together across areas, a culture not found in all organisations (Weill & Vitale, 2001).

### 2.6.2 Scarce resources

Mirroring through to “Adding value to business” require investment of both money and management time in new systems. This must be balanced against the needs of the existing business, a dilemma summarized as follows “Internet commerce activities consume an enormous amount of time and may actually interfere with a company’s ability to engage in its core business” (Poon & Swatman, 1999).

Investment in new information systems may be financially risky for SMMEs (Al-Qirim & Corbitt, 2001). The impact of scarce resources is particularly pertinent in the early stages of growth where SMMEs may experience “... lack of resources and fragility ...” (Poon & Swatman, 1999).

### 2.6.3 Environmental factors

Jutla *et al.* (2002) imply that the wide international reach of the Internet may itself be an obstacle to implementation in so far as it raises issues of cross border taxation and conflict of jurisdiction. Further, it may be implied from their article that absence of infrastructure can present obstacles. The researcher identifies the need for infrastructure in areas of skills, distribution, communications, government regulation, trust and financial systems.

#### **2.6.4 Challenges in practice in South Africa**

According to Scholtz (2005), the challenges that the IT or IS management of Kulula.com has to grapple with are the following:

- ❖ Understanding customer requirements
- ❖ Keeping up with requests
- ❖ Being able to react quickly
- ❖ Identifying, designing and delivering solutions in sensible time frames
- ❖ Ability to support and maintain implemented solutions
- ❖ Risk management of existing environment
- ❖ Early warning and response.

#### **2.7 E-commerce challenges in developing countries**

Developing countries need to do much more than established countries to have a basic platform to embrace e-commerce (Salman, 2004:156). Obsolete business models of the traditional industrial age, lack of basic automation in place, poor management skills, lack of e-commerce integration are in an inefficient supply chain, are all acute problems that developing countries must address. Besides, while re-engineering demands cohesive and holistic management of three vital vectors – people, process, and technology – and their alignment with corporate strategy, organisations of developing countries are lagging behind for such radical transition to embrace e-commerce. Moreover, macro level factors are acting as further hindrances for an overall unhealthy business environment. Therefore, the potential barriers of implementing e-commerce and IT in developing countries are more deep-seated than they seem to be. Addressing problems of both micro and macro levels simultaneously and cohesively, is not only crucial but also the ultimate way for survival. Any mismatch means that the world civilization is heading towards digital catastrophe (Salman, 2004:156).

## 2.7.2 Egypt

In 1997, the Egypt Internet Society established its e-commerce committee to promote education and awareness of e-commerce in Egypt. This was the start of a number of initiatives taken by the government and the private sector to promote e-commerce. It was followed by a number of seminars, a sub-committee formation in the ministries of Trade and Communications and Information Technology (Kamel & Hussein, 2002:149).

According to Kamel and Hussein (2002:150) for e-commerce to realize its targeted business and socio-economic development objectives, there are a number of challenges that need to be faced that relate to a variety of social, technical, financial and legal elements.

With respect to the social challenges, there is lack of awareness, lack of training, lack of trust, resistance to change and the language barrier. Awareness is considered to be a major deterrent and that includes customer and organisational awareness of the benefits of the Internet. While comparing mobile services in Egypt to Internet usage, it is clear that for the same amount of money the number of mobile users is increasing remarkably, which proves that affordability is not a problem behind the relatively low Internet usage. In fact Internet access is not costly and is reliable. Lack of training is also a major obstacle where people are not prepared to handle operations in a cyber environment, which creates confusion for those accustomed to traditional systems when they are introduced to innovative techniques. The lack of trust remains another challenge with respect to electronic payment systems, and doing business with people never seen or met before. Resistance to change is another factor that has more of a cultural aspect where people find it so difficult to change their work habits.

Resistance to change relates to another organisational factor that is the gap between senior managers who are usually computer illiterate and younger generations represented in middle managers and technical staff who are advocates of the technology. Then, there is the language barrier to comprehending the content of the Web, where the majority of Egyptians can only read and write Arabic while over 82 per cent of the Web sites are in English.

With respect to the technological challenges, there is still the problem of relatively weak resources with respect to the telecommunications infrastructure. This includes bandwidth cost that is almost two and a half times more expensive than the international tariff with low capacity level, which is extremely modest. This leads to long waiting time for access and downloading. There is also the problem of tele-density where, in Egypt, for every 100 people there are only seven telephone lines, which negatively affects the diffusion and use of the Internet.

With respect to financial challenges, there is a lack of electronic payment systems. For e-commerce to succeed, electronic payment systems should be available, efficient and secured. However, to date, the electronic payment system is non-existent in Egyptian banks. There are no banks that offer a secure electronic transaction (SET) system and all banks are waiting for the Central Bank of Egypt's (CBE) adoption of SET. Unfortunately, the CBE has so many reservations with respect to the subject of transacting over the Internet in general. There is also the problem of the non-existence of a credit-card community with less than 200,000 credit card holders, with only 14,700 stores in Egypt that accept dealing with these cards. Only six different banks and one credit card provider serve this country. This situation is created due to the lack of awareness of the usage and benefits of credit cards. This creates a major challenge since credit cards are the primary method of setting consumer transactions over the Internet.

There is also the issue of customs and taxation, which is another barrier for e-commerce diffusion, where the position of the Egyptian government reflects the belief that the use of information networks should not be given any preferential treatment in trading as opposed to traditional methods.

The imposition of taxation on products bought over the Internet remains a viable option, especially considering the fact that Egypt, as an economy, relies on taxes and customs duties as a dependable source of income.

With respect to the legal challenges, the non-existence of an Egyptian certification authority is a major problem. Such an authority can offer legal advice, provide safety certificates against the negative implications and dangers of e-commerce, and also help in raising the awareness of the Egyptian community on the uses and benefits of e-commerce and support, thus building a trust in this new technology. There is also a need for the development of a legal framework for e-commerce operations in Egypt since the Egyptian law has not yet adapted to the norm of the environment of trade transactions in the digital economy.

It is important to note that the above-mentioned challenges need to be dealt with strategically at the national level and through proper allocation of resources, many of which need to be transformed into opportunities that will then enable the development of a solid infrastructure of e-commerce in Egypt (Kamel & Hussein, 2002:150).

### **2.7.2 Latin America**

Business-to-business (B2B) electronic marketplaces (e-marketplaces) present an opportunity for growth to various Latin American SMMEs (Rohm, Kashyap, Brashear, & Milne, 2004:384). Latin America is one of the fastest growing online markets – overall Internet usage in the region is forecast to grow 40 percent annually between 2000 and 2004 and studies estimate that 70 percent of Latin American e-commerce would have been done through B2B exchanges by 2004 (Rohm *et al.*, 2004:374).

With the collapse of trade barriers in the region, such marketplaces enable these small firms to significantly extend their reach beyond the borders of their own countries. Trading across different cultures, economies and languages becomes a reality with the Internet. However the promise of the Internet brings with it certain difficulties as well.

Logistics (such as shipping and order tracking), legal environments, infrastructure, and financial factors remain a concern for Latin American companies. In addition, slow Internet adoption rates and competition from other firms are a distinct possibility. Against the backdrop of these difficulties lie certain advantages. Given the projections and potential of B2B e-commerce in Latin America, it becomes evident that SMMEs in the region cannot afford to miss out on the numerous opportunities that the Internet offers in terms of e-commerce (Rohm *et al.*, 2004:384).

## **2.8 The background of SMMEs and their role**

There are more than 800,000 small, medium and micro-enterprises in South Africa, absorbing about a quarter of the labour force of 15 million people. Although the statistical base of SMMEs in South Africa is still low, there can be little doubt about their relative significance. This is in addition to about 3,5 million people involved in some or other type of survivalist enterprise activities (White paper, 1995).

The small business sector is highly diverse, with structures, problems, growth potential and access to support differing widely between segments. These differences relate as much to the economic sectors - retailing, manufacturing, mining, etc. - as they relate to the stages of growth of enterprises, viz. start-up, expanding or stagnating. From a broad strategy perspective the most important distinction is between survivalist activities, micro-enterprises, small enterprises and medium-sized enterprises, with the general term "small business" and the abbreviation SMMEs widely used to contrast this sector with bigger businesses.

Due to the similarity of some of the barriers facing them, survivalist and micro-enterprises are often lumped together, whereas many support agencies feel that medium-sized enterprises need not be viewed as a category warranting particular attention (White paper, 1995).

Compared to big business in South Africa and in other countries, small businesses face a wider range of constraints and problems and are less able to address the problems on their own, even in effectively functioning market economies. The constraints relate, among others, to the legal and regulatory environment confronting SMMEs, the access to markets, finance and business premises (at affordable rentals), the acquisition of skills and managerial expertise, access to appropriate technology, the quality of the business infrastructure in poverty areas and, in some cases, the tax burden. In the South African context the constraints have been particularly hard on entrepreneurs in rural areas and on women (White paper, 1995).

Small, medium and micro enterprises (SMME) make up 98 per cent of all EMEA (Europe, Middle East and Africa) companies (Schlenker & Crocker, 2003:10). They provide employment to 66 per cent of the labour force and generate 54 per cent of the total private sector turnover (Schlenker & Crocker, 2003:10). Public organisations such as EUROSTAT distinguish between three types of small business: micro-enterprises with one to nine employees, small enterprises with 10-99 employees and medium enterprises with 100-499 employees. This distinction is strongly correlated with the firms' organisation. Small enterprises more often than not begin to behave like corporate bodies, with a corporate culture and a clear division of responsibilities. Medium sized enterprises often mirror their corporate counterparts with a distinct corporate culture and a dedicated IT function.

There are several distinctive characteristics of the SMME sector. To begin with, 70 per cent of these firms are more concerned with quality of life issues than stock value (Schlenker & Crocker, 2003:10). The primary purpose of these firms is not to maximize revenues, but to generate an income for their owners.

A second distinguishing characteristic is that the vast majority of these companies are not a source of economic growth in terms of either employment or turnover.

A third characteristic of this sector is that most firms do not possess several of the core processes (conception, manufacturing, sales, delivery, after sales service) normally associated with doing business. As a result, SMMEs are forced to collaborate with each other and with larger businesses to survive, to compete, and to produce sustainable revenues over time (Schlenker & Crocker, 2003:10).

The ability of small business to collaborate is often determined by the organisation of the firm itself. Business-to-business relationships are seen as conflicting rather than consensual, and win-lose rather than win-win situations. The vast majority of small businesses are not acting at the centre of their markets, but reacting on the periphery to client demands. For all of these reasons, such as these mentioned the business value of information technology is often limited to the basic functions of word processing, accounting and inventory management. It is important to note that innovation in information technology will not produce sustainable value for small business unless there is a corresponding evolution of the organisation itself (Schlenker & Crocker, 2003:10).

## **2.9 Conceptual frameworks of e-business & e-commerce adoption**

A number of IS and e-commerce adoption theories, models and frameworks from various authors is now be discussed.

In a study undertaken by Poon and Swatman (1999) depicted in Figure 2-2, very low levels of integration with a firm's existing systems were found. Common reasons for the lack of integration included: low volumes of structured messages arriving from the e-commerce services, lack of in-house IT development skills, few affordable turn-key solutions and lack of external pressure to encourage or assist with integration.



Poon and Swatman (1999) suggest that in the e-commerce domain there are three levels of integration.

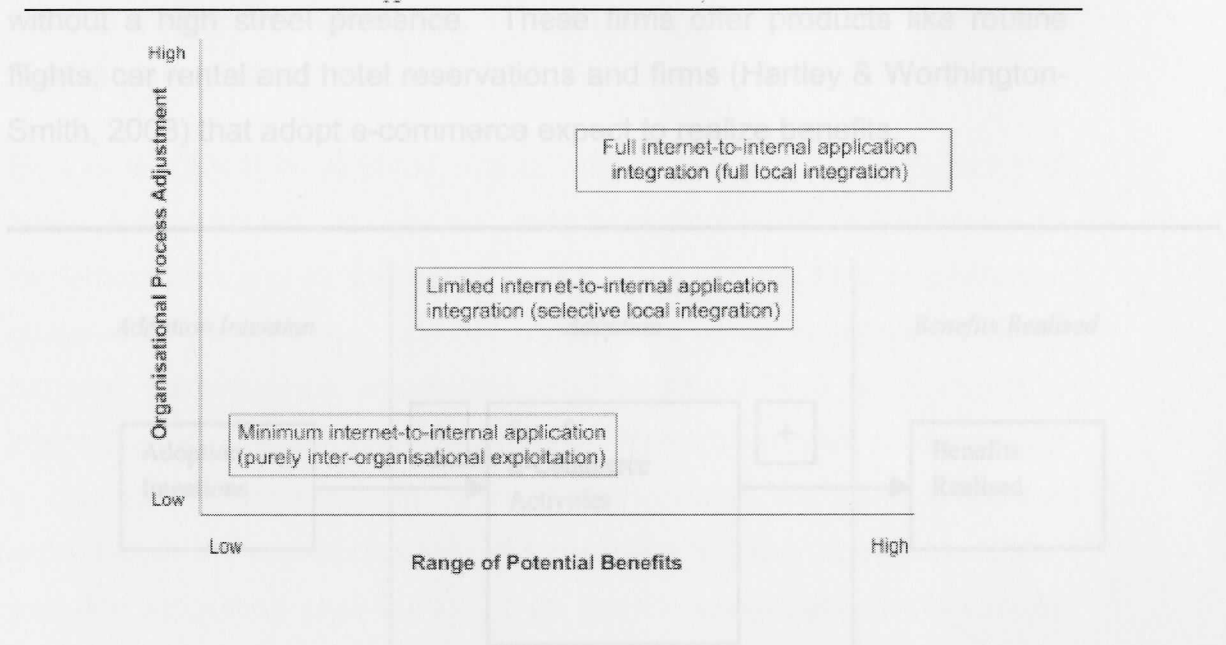


Figure 2-2 Poon and Swatman (1999) suggested model for e-commerce adoption

At the lowest level, firms develop systems that extend beyond the boundaries of their own organisation. At the intermediate level, firms undertake a limited degree of integration with their existing internal systems, and only at the highest level do they undertake complete integration.

Poon and Swatman (1999), as explored by Daniel (2003), consider the specific context of small- and medium-sized enterprises in the UK.

The next conceptual model does not include all the factors which impact on the decision to adopt e-business and its implementation as a long-term integrative business strategy (Fillis, Johansson, & Wagner 2004:184).

The framework suggested by Daniel and Wilson (2002) in Figure 2-3 postulates that intentions or drivers in a firm result in a consideration of the adoption of e-commerce. Examples are Orbitz, Travelocity and Expedia – these online-only agencies offer, for example, broad-spectrum travel without a high street presence. These firms offer products like routine flights, car rental and hotel reservations and firms (Hartley & Worthington-Smith, 2003) that adopt e-commerce expect to realize benefits.

Fillis et al. (2004) established sets of macro- and micro-level factors that

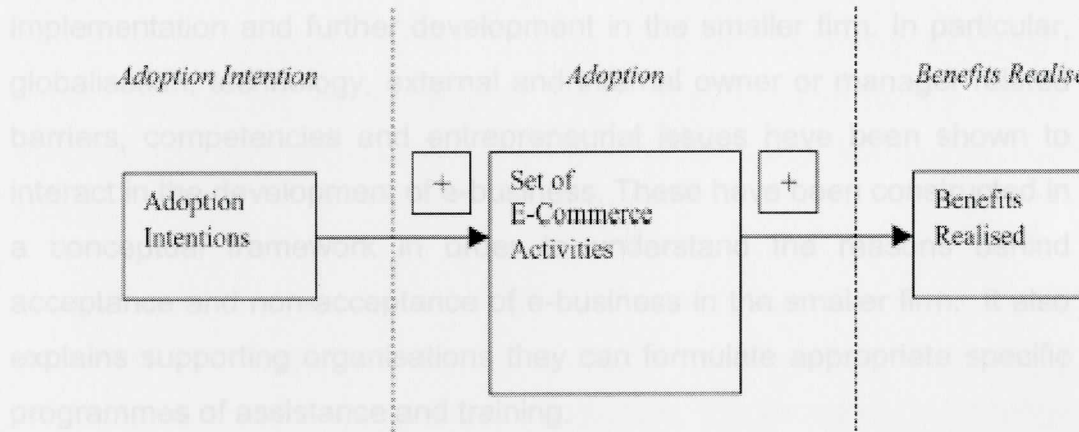


Figure 2-3: Conceptual framework for adoption of e-commerce (Daniel & Wilson, 2002)

The objectives of Daniel and Wilson’s (2002) study are primarily to:

1. Identify the reasons that are most important in the adoption of e-commerce by SMMEs (adoption intentions).
2. Identify the benefits they are realising from their e-commerce developments.
3. Determine if the areas identified as important are indeed those where benefits are being realized.

The next conceptual model does not include of all the factors which impact on the decision to adopt e-business and its implementation as a long-term integrative business strategy (Fillis, Johansson, & Wagner 2004:184).

However, it serves as a useful guide for facilitating an understanding of the reasons behind e-business development, the benefits of its adoption and potential dangers of non-adoption. In combination with the central issues identified in the literature, the model has been used to construct a set of working research propositions in order to give shape to exploratory qualitative research.

Fillis *et al.* (2004) established sets of macro- and micro-level factors that have been shown to impact the acceptance of e-business, its implementation and further development in the smaller firm. In particular, globalisation, technology, external and internal owner or manager related barriers, competencies and entrepreneurial issues have been shown to interact in the development of e-business. These have been constructed in a conceptual framework in order to understand the reasons behind acceptance and non-acceptance of e-business in the smaller firm. It also explains supporting organisations they can formulate appropriate specific programmes of assistance and training.

These programmes can then be targeted to those smaller firms already embracing an e-business philosophy in order to develop longer-term integrative business strategies. In addition, enterprise agencies can also separately target those smaller firms with an existing negative disposition towards e-business with respect to the potential merits of adoption, while also outlining the potential dangers of non-adoption. However, it must also be understood that e-business is not appropriate for all firms across all industry sectors. Specific sectoral circumstances with more traditional methods of securing business may still dominate that market.

Macro-level factors are the drivers behind technological change. Globalisation effects and the subsequent removal of a range of geographical and physical barriers act to offer new opportunities for the smaller firms in domestic and international markets. Instead of presenting an all-embracing framework, it is believed that specific industry and sectoral factors will influence the SMME in its demand for e-business. The needs of a hi-tech computer software company differ greatly from those of the craft micro enterprises. However, both will benefit in different ways from the adoption of new technology. For example, the former can trade their products virtually while the latter can save time searching for export-related information, using the time freed up to develop new products. Attitudes will vary depending on a range of firm and managerial level factors.

The second study by Dhan and Buehert (2002) was an organisational level study. The micro enterprise will have different needs than the multinational corporation: business-to-business organisations will use the Web interface differently to business-to-consumer companies. It is expected that a range of positive and negative attitudes will be found among firms of all sizes, but particularly strong differences are expected within the smaller firm because of the dominance of the single owner manager with respect to decision-making. It is predicted that groups of business, marketing, entrepreneurial and Internet competences will be identified in future exploratory qualitative research.

Fostering of cultural and philosophical change may be needed in order to increase active participation in e-business usage among those firms that initially show low levels of e-commerce interest. Targeting appropriate programmes of business support from government and other agencies can enable this cultural change. There would be companies expressing no interest whatsoever in adopting e-business orientation Fillis *et al.* (2004).

### 2.9.1 The development of the conceptual framework for the study

The five studies included in Table 2-3 are critically reviewed, each study reporting to some extent on e-commerce organisational barriers and other e-commerce barriers. This research study only focused on organisational barriers. The first study in table 2-3 was reviewed by Rotchanakitumnuai and Speece (2003) on organisational barriers in the banking sector. These are: management negative attitudes, lack of IT resources, and lack of knowledge to the users (and potential users) of e-commerce. These barriers are evident in some SMMEs in the tourism sector in the Western Province. The author acknowledges the relevance of these barriers in SMMEs.

The second study by Bègin and Boisvert (2002:24) was on organisational barriers. They state that: culture, structures and systems, technology, expertise, and resources are the organisational barriers. Bègin and Boisvert (2002) also state other barriers from individuals, which include perception, knowledge and leadership. This study is interesting, because the same barriers could be viewed as inductors. The very aspect that could be a problem could be turned around and be used for success. This study was not selected as a basis for this critical review because it did not provide substantial references.

The third study was by Chircu and Kauffman (2000:65). Their organisational barriers are vague and are discussed alongside industry barriers under valuation barriers. There were no clear e-commerce organisational barriers stipulated in this study.

The fourth study by Rao, Metts and Monge (2003) on organisational barriers discussed organisational barriers at various stages of organisational progression. They proposed an initial stage, and an adoption / implementation stage. The organisational barriers were different for each stage.

<b>E-commerce adoption conceptual models</b>		
<b>Reference</b>	<b>Theme of model / study</b>	<b>Aim of the study</b>
Poon & Swatman (1999)	<i>Suggested model for e-commerce adoption</i>	An exploratory study of small business Internet commerce issues
Daniel & Wilson (2002)	<i>Conceptual framework for adoption of e-commerce</i>	Adoption intentions and benefits realised: a study of e-commerce in SMMEs
Fillis et al. (2004:186)	<i>Conceptual model of e-business development</i>	Factors impacting on e-business adoption and development in the smaller firm
<b>E-commerce adoption conceptual studies</b>		
Rotchanakitumnuai & Speece (2003)	Organisational barriers in the banking sector	Barriers to Internet banking adoption: a qualitative study among corporate customers in Thailand
Bégin & Boisvert (2002)	They state that: culture, structures and systems, technology, expertise, and resources are the organisational barriers.	The internal factors that can make or break e-commerce implementation
Chircu & Kauffman (2000)	Their organisational barriers are vague and are discussed alongside industry barriers under valuation barriers.	Limits to value in electronic-related it investment
Rao, Metts & Monge (2003)	Rao <i>et al.</i> (2003) discussed organisational barriers at various stages of organisational progression	Electronic commerce development in small and medium sized enterprises: a stage model and its implications
Farhoomand, Tuunainen and Yee (2000)	The paper comprises of organisational barriers and other (technical, economic, political, cultural and legal) barriers. The organisational barriers consist of <i>negative attitudes, lack of knowledge, resistance to change and lack of management commitment.</i>	Barriers to global electronic commerce: a cross-country study of Hong Kong

Table 2-3: Summary of the e-commerce adoption conceptual models and studies

Authors (Farhoomand *et al.*, 2000; Bègin & Boisvert, 2002) do not agree with Rao *et al.* (2003) with regards to having the adoption and implementation stage as the same stage and express the view that the adoption stage precedes the implementation stage. Rao *et al.* (2003) referred to: technological resistance within the organisation and expertise, acceptance of growth by managers, financial investment, and development of telecommunication infrastructure as initial organisational barriers. They further stated that: development of B2B interfaces, cultural or language issues are classified as organisational barriers at the adoption and implementation stage.

The fifth study reviewed was by Farhoomand, Tuunainen and Yee (2000). This is a framework of organisational barriers reported in a paper titled 'Barriers to Global Electronic Commerce: A Cross-Country Study of Hong Kong and Finland'. The paper comprises of organisational barriers and other (technical, economic, political, cultural and legal) barriers. The organisational barriers consist of *negative attitudes, lack of knowledge, resistance to change and lack of management commitment*. The most significant barriers that have not been mentioned in the study conducted by Farhoomand *et al.* (2000) are implementation costs and operating costs, based on a study conducted by Barnes and Hunt (2001:130). Other barriers consist of establishment of infrastructure, integration of legacy systems, availability of applications and standards, capabilities and performance of the Internet security, governmental attitudes, and interagency coordination. This study was selected for this review as it also focused more on smaller organisations.

All the studies, with the exception of Chircu and Kauffman (2000) proposed: lack of knowledge or expertise and lack of management commitment as common organisational barriers. Lack of IT resources or financial investment was reported by Rotchanakitumnuai and Speece (2003), Rao *et al.* (2003) and Bègin and Boisvert (2002:24). Culture or language issues, were common to Rao *et al.* (2003) and to Bègin and Boisvert (2002:24). This is graphically illustrated in Figure 2-4.

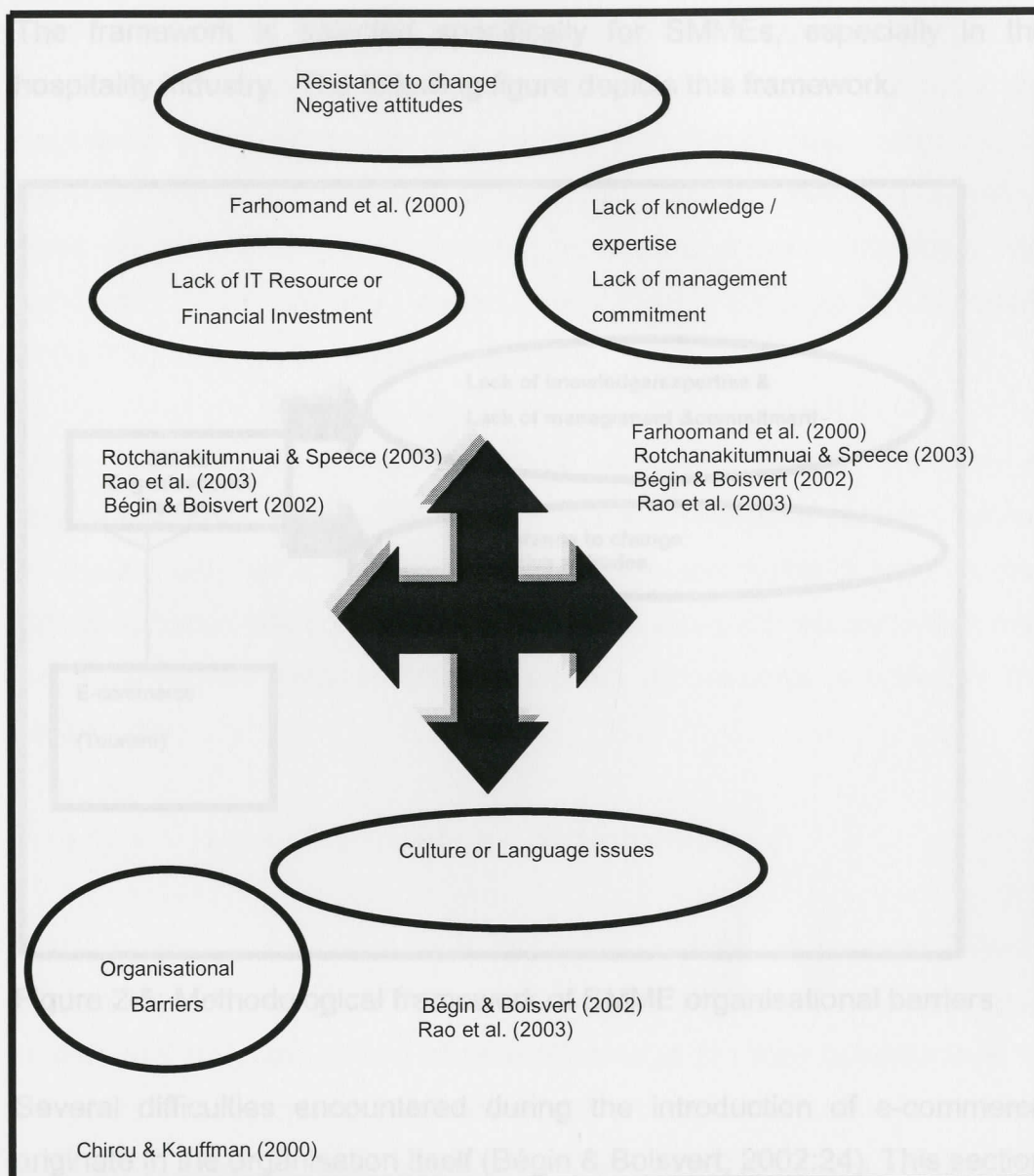


Figure 2-4: Illustration of studies with regard to organisational barriers (Warden & Tunzelana, 2004)

## 2.10 Methodological Framework

The methodological framework selected for this research is adapted from Farhoomand et al. (2000:31-32). Methodological framework is the focus theme of the research. Only the barriers selected for the study will be investigated further. The reason for selecting the four organizational barriers to be the methodological framework is because they were the overlapping (common) organisational barriers in the studies illustrated in Figure 2-4. The organisational barriers are mentioned in section 2.5.1.



The framework is selected specifically for SMMEs, especially in the hospitality industry. The following figure depicts this framework.

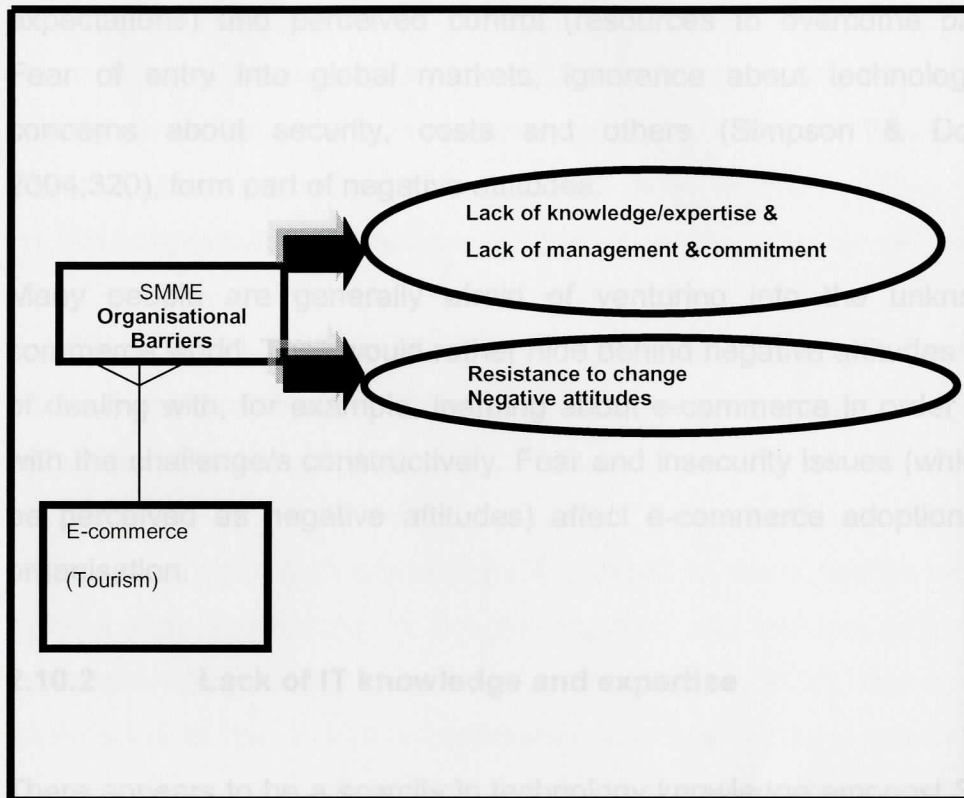


Figure 2-5: Methodological framework of SMME organisational barriers

Several difficulties encountered during the introduction of e-commerce originate in the organisation itself (Bègin & Boisvert, 2002:24). This section discusses various aspects of the selected framework from the reviewed studies.

### 2.10.1 Negative attitudes

Negative attitudes generate many reasons for not committing to e-commerce (Farhoomand *et al.*, 2000). The attitudes of small organisations are also influential in the diffusion of e-commerce. Some people have an attitude of perceiving that if they use e-commerce and experience problems, it could cause them to have financial loss that could potentially land the organisation in financial trouble (Rotchanakitumnuai & Speece, 2003).

Barnes and Hunt (2001:124) iterate that executive decisions to adopt IT to help their firm compete is a function of attitude (perceived positive and negative consequences for the organisation), subjective norm (social expectations) and perceived control (resources to overcome barriers). Fear of entry into global markets, ignorance about technology, and concerns about security, costs and others (Simpson & Docherty, 2004:320), form part of negative attitudes.

Many people are generally afraid of venturing into the unknown e-commerce world. They would rather hide behind negative attitudes instead of dealing with, for example, learning about e-commerce in order to deal with the challenge/s constructively. Fear and insecurity issues (which may be perceived as negative attitudes) affect e-commerce adoption in the organisation.

### **2.10.2 Lack of IT knowledge and expertise**

There appears to be a scarcity in technology knowledge amongst SMMEs (Simpson & Docherty, 2004:326). SMTEs' illiteracy in IT essentially means that they are unable to take advantage of many opportunities for efficiency improvements and enterprise promotion (Anckar & Walden, 2001:245). Proprietors of SMHOs tend to lack the expertise in selecting, installing, and operating computerized systems. They therefore tend to fear that they will lose part of their control, should they allow external IT experts to undertake these jobs for them. However, this is certainly not always the case. Owner managers may have a sympathetic attitude towards technology, seeking IT enabled changes, but due to their limited knowledge they may be unable to develop or use the technological tools they feel the organisation would need (Anckar & Walden, 2001:245).

The IT revolution has implications for management, which means that the guesthouse manager of the future, for example, must be familiar and comfortable with technology and should be able to identify and exploit its potential.

With an increasing number of computer literate travelers, consumer expectations could force the introduction of IT in SMHOs to satisfy their needs and they will fail to attract consumers Anckar & Walden (2001:245).

According to Anckar and Walden (2001:245) introducing IT and proper Web services, especially in accommodation, would most likely result in many business processes being altered, even radically. This not only implies organisational challenges, but also incurring great costs by SMHOs. One of the problems with making effective use of technology in the hospitality industry is the lack of appropriate training. Typically in SMHOs, the entrepreneurs tend to view training more as a cost than an investment (Anckar & Walden, 2001:245).

Problems of poor Web site design ill-adapted to users' requirements are inadequately referenced in search engines and bloated with useless information originating due to a company's lack of expertise and experience in the use of e-commerce. The Internet is a relatively new distribution channel and expertise is scarce. Learning often takes place by trial and error. The absence of solid expertise can prove to be an inhibitor to the development of e-commerce activities (Bègin & Boisvert, 2002:24). Farhoomand *et al.* (2000) believe that the problem is not with systems, but with insufficient training of personnel. Many company executives are of the opinion that only teenagers without credible buying power are using the Internet. General lack of education and understanding of ICT is often the source of excuses for not committing to e-commerce. Computer literacy among SMMEs is generally low; they usually do not have access to expertise to solve complex telecommunications issues. This lack of expertise and knowledge about the new technologies among SMMEs in turn slows down the growth of e-commerce among larger companies due to their business reliance on SMMEs.

### **2.10.3 Resistance to change**

Resistance to change would be acute in restructuring an organisation in developing countries. Sources of individual resistance would include habit, sense of security, economic factors and fear of the unknown. In addition, organisations themselves are conservative inherently and oppose change (Salman, 2004).

In general, people act in keeping with their perception of anticipated consequences following a new situation or change in their habitual work. If they perceive a threat to their current situation, they will have reactions of opposition and resistance. Therefore, when employees are afraid of losing their jobs because a number of tasks previously performed will be automated due to utilizing the Internet, or carried out by customers themselves, they will show little enthusiasm for implementing e-commerce (Bègin & Boisvert, 2002:24). Anckar & Walden (2001:245) agree with Bègin and Boisvert (2002:24) that closely related to the issue of lacking IT knowledge is the barrier arising from a resistance to change at management and / or worker level. Some of the reasons why managers (and workers) might resist technological change are: firstly, they may resent change especially if there is no consultation; secondly as Bègin and Boisvert (2002:24) state, they may be anxious about their job and they may be worried about appearing incompetent. The staff is much more likely to welcome new working procedures if they have been consulted and are actively involved in the introduction and application thereof (Anckar & Walden, 2001:245).

### **2.10.4 Lack of management commitment**

Farhoomand *et al.* (2000) believe that lack of top management commitment is still a considerable barrier to the development of electronic trading in many organisations. An organisation that plans to adopt an electronic trading system has to manage aspects of integrating the new technology during the implementation process.

Many organisations in developing countries would stand flustered in front of a massive change management challenge to enter the information age. Another challenge is to integrate all business activities to harness the blessings of the Internet era (Salman, 2004). Adjusting the labour force may be socially or politically problematic for a business, including managing the acceptance of workers to take training in a computerised technology. Problems may also arise as a result of inefficiencies in corporate information systems analysis and design or from a lack of top-management support. An important barrier to e-commerce adoption appears to be the unwillingness of managers to be responsible for technological change (Simpson & Docherty, 2004:320).

### 3.1 Introduction to research design and methodology

The level of commitment among the organisations toward e-commerce varies considerably. Inter-organisational clashes are to be expected, as there is always a communication conflict between businesses and ICT practitioners. In many organisations lack of top management commitment is still a considerable barrier to the development of electronic trading. Smaller firms tend to lack management-level initiatives for electronic commerce. Consequently they tend to direct their scarce resources to areas more familiar to them. Quite often the top management of the organisation are interested, even enthusiastic, about new possibilities the Internet offers, but a conservative IT department might be slow to react to embark on such a development.

## 2.11 Conclusion

The methodological framework mentioned in section 2-10 has been tested in a pilot study conducted by the researcher. The manner in which the pilot study was conducted is discussed in more detail in Chapter 3.

## **CHAPTER 3**

### **RESEARCH METHODS**

The research design and methodology is covered in this chapter. Qualitative research is investigated as a suitable method for this research study. Case study design and its philosophy is also discussed. The aim of a pilot case study is discussed as well as the findings of a pilot case study reported. The sampling framework follows this. Bias in research is also considered and put into perspective.

#### **3.1 Introduction to research design and methodology**

The approach used in this research study is qualitative to provide opportunities for in-depth exploration of viewpoints by SMME managers in the early stages of the adoption process. According to Myers (1997) qualitative methods were developed in the social sciences to enable researchers to study social and cultural phenomena. He states that examples of qualitative methods are action research, case study research and ethnography. This allows the researcher to gain a better understanding of problems and identifying attitudes and influences (Clarke & Doherty, 2004:60-61). Qualitative data sources include observation and participation observation (fieldwork), interviews and questionnaires, documents and texts, as well as the researcher's impressions and reactions (Myers, 1997). Neuman (2000:417) agrees with Myers (1997) that qualitative data are in the form of text, written words, phrases, or symbols describing or representing people, actions, and events in social life. The motivation for doing qualitative research as opposed to quantitative research is based on the ability to conduct in-depth interviews with respondents to obtain a deeper understanding of the phenomena under investigation. Qualitative research methods are designed to assist researchers to understand people and the social and cultural contexts within which they live (Myers, 1997).

The case study methodology is a way of establishing valid and reliable information or findings that add to the accumulated knowledge of the processes by which business and many other organisations function (Lubbe, 2003). Case study research is a research strategy for the social scientist in the same sense as experiments are a research strategy for the natural scientist. Yin (1994) defines a case study as an empirical inquiry that investigates a contemporary phenomenon within its real life context, when the boundaries between phenomenon and the context are not clearly evident, and where multiple source of evidence are used. The methodology used in this study is a case study targeting tourism-related companies.

Case study research is particularly suited when *why and how* questions have to be dealt with, especially in business and management fields (Yin, 1994:13). Personal interviews were conducted providing a tool to investigate a wide range of aspects. Interviews afford the researcher with opportunities to observe individuals and groups in action and to learn facts, opinions, and beliefs, in the real world where SMME operate. Finally, Clarke and Doherty (2004:60-61) consider a case study being ideally suited for studying e-business solutions, to overcome some of the e-commerce barriers.

This research study focuses on how SMMEs cope with e-commerce adoption and associated barriers therefore case study research, requiring triangulation, will be best suited for this research study. Thus unstructured interviews were conducted from selected SMMEs in the tourism industry, Web searches were made, trade journals, brochures and articles were consulted as well as interviewing of some tourists. Some of the SMMEs used in this research study were from the rural areas and no meaningful information could be obtained by sending them a questionnaire. Therefore to support this research study's goal (how the SMMEs operate their businesses and why they would consider adopting e-commerce), required personal contact and in-depth interviews.

## 3.2 Pilot case study

Although the approach followed in this research study was to use case studies for the collection of evidence, the researcher needed more insight into the operations of previously disadvantaged individuals (PDIs) and it was decided that a pilot case study would be ideal to understand the environment before formulating the design process.

### 3.2.1 The aim of the pilot case study

Before the sample size and the sector of the SMMEs could be selected, it was decided to conduct a pilot study. The pilot case study conducted was to determine; firstly, if the selected framework (mentioned in section 2.5) would be suitable for this type of research targeting SMMEs; secondly, it was to determine if the proposed questions to be used in the case study interviews are not ambiguous. The pilot research study investigates e-commerce adoption barriers by SMMEs in the tourism industry. Some of these SMMEs consisted of one or two employees and operate in rural areas in the Western Province.

According to Remenyi *et al.* (2000:174), a pilot case study could be used as a testing ground for both substantive and methodological issues, and it can assist the researcher to develop more relevant lines of questioning. Lessons learnt from the research design and field procedures are additional benefits of a pilot case study if such uncertainties exist. The main aim of conducting the pilot study was to gain more insight into the field procedures and to verify the suitability of a methodological framework (see Figure 2-5 that is discussed in 2.10) for the main study.



### 3.2.2 Conducting the pilot case study and focus group

Bryman (2004:348) defines the focus group method as a form of group

The pilot case study was based on three local businesses in the Western Cape of South Africa. These were: Software Colors (a company that offers computerised business solution), DMO (Destination Marketing Organisation) and Tiscover AG. These three organisations collaborate on a project that empowers SMMEs in the Tourism sector by encouraging SMMEs to adopt e-commerce. Software Colors provides services to enable users to realise the benefits of online marketing. In cooperation with DMO, they facilitate ICT (Information and Communication Technologies) and e-business training sessions for SMMEs. DMO invested in the Tiscover system as a mechanism to market the Western Province via the Internet. Tiscover is the largest online destination-marketing organisation in Europe and provides online sales systems for accommodation providers. In 2003, Tiscover had 57 million online visits (225 million Web page views). The DTI (Department of Trade and Industry) plans to join this cooperative to fund e-business projects specifically focusing on SMMEs.

The focus group was conducted and attended by seven PDI participants.

Unstructured interviews were conducted with the owners, representatives, marketing managers and marketing directors of SMMEs who own B&Bs in the Western Province. Her observed and recorded the proceedings.

The cases were selected on the basis of them agreeing to adopt e-commerce in their businesses in the future. These organisations were all small (5-50 employees) or micro (1-4 employees) organisations (Williams & Warden 2003). lack of knowledge and expertise, resistance to change and lack of management commitment. The next section highlights the

During the pilot case study, in dealing with PDIs, the researcher identified the need to understand the way the PDIs viewed e-commerce adoption and the impact it could have on their businesses. It was then decided to conduct a focus group in conjunction with Software Colors and DMO. The aim was to involve the owners, directors, and managers of the PDIs from the tourism sector.

### 3.2.3.1 Negative attitudes

Bryman (2004:346) defines the focus group method as a form of group interview in which: there are several participants (in addition to the moderator or facilitator); there is emphasis placed on the questioning of a particular fairly tightly defined topic and the accent is upon interaction within the group and the joint construction of meaning. The aim of the focus group – the focused interview – was that the PDIs who were known to have had a certain experience could be interviewed in a relatively unstructured way about their experience. Time amongst other facts with regards to focus groups, Bryman (2004:348) affirms that:

- ❖ The technique allows the researcher to develop an understanding of why people feel the way they do.

- ❖ In focus groups participants are able to bring to the fore issues in relation to a topic that they deem to be important and significant.

- ❖ The focus group offers the researcher the opportunity to study the ways in which individuals collectively make sense of a phenomenon and construct meaning around it.

The focus group was conducted and attended by seven PDI participants. There were two facilitators from Software Colors and the head of DMO also gave an introductory address with regards to the role of ICT and e-commerce. The researcher observed and recorded the proceedings.

### 3.2.3 Conclusion of the pilot case study

The conclusion of the pilot case study is reported under four headings: *negative attitudes, lack of knowledge and expertise, resistance to change and lack of management commitment*. The next section highlights the findings, generally, from the pilot study. The next section highlights the general findings from the pilot case study.

### **3.2.3.1 Negative attitudes**

The majority of the responses indicated neutral attitudes. The interviewees from the various organisations are not certain of most e-commerce aspects. Some respondents admitted lack of knowledge in ICT and e-commerce developments. This in itself presents major barriers. Only twenty percent of the respondents did not have fears and insecurities with regards to e-commerce adoption. Another twenty percent indicated fears and insecurities and sixty percent were neutral or were not certain how to respond.

### **3.2.3.2 Lack of knowledge and expertise**

Of the respondents interviewed, only twenty percent agreed that they and their companies are well informed about ICT and e-commerce in general. Forty percent were neutral and another forty percent admitted that they lacked the expertise and sufficient knowledge for e-commerce initiatives. The forty percent that admitted to lack of knowledge suggested that there be more workshops and personal training sessions from computer literacy to e-commerce literacy, which DMO and Software Colors have already initiated. Other neutral respondents agreed that personal training and education was necessary.

### **3.2.3.3 Resistance to change**

The findings to this aspect in the pilot case study differs from the general literature review, due to the fact that all the organisations interviewed were in the adoption stage of e-commerce. The majority of the respondents were open to e-commerce initiatives.

#### **3.2.3.4 Lack of management commitment**

The findings to this aspect in the pilot case study differs from the general literature review, due to the fact that all the organisations interviewed are being trained to adopt and implement e-commerce. The majority of managers in each organisation are open to considering e-commerce initiatives.

#### **3.2.3.5 Summary of the pilot case study**

The pilot study was used as a testing ground for both substantive and methodological issues, and it assisted the researcher to develop more relevant lines of questioning and therefore the objectives of the pilot study were met. It was then concluded that the selected framework (discussed in section 2.10) is suitable for this type of research targeting SMMEs. When conducting case study research it is of great importance to consider the issue of bias in research (Lubbe, 2003) and is dealt with in the following section.

### **3.3 Sampling framework**

The case study consists of four e-commerce SMMEs used in the pilot study and an additional three SMMEs in the tourism sector. The interviewees were selected on the basis of agreeing to adopt e-commerce in their businesses in future. These organisations were all small (5-50 employees) or micro (1-4 employees) organisations (Williams & Warden, 2003). Two cases were PDIs.

The researcher was able to interview the majority of the SMMEs in the seven cases selected, because they were available for basic ICT and e-commerce training at the MTN Sciencentre in Canal Walk, Cape Town, South Africa. The SMMEs interviewed had adoption intentions.

They were going to learn how to create e-commerce Websites for their guesthouses or B&Bs with the support of Software Colours and Destination Marketing Organisation (DMO).

Convenience sampling was used for this study. A convenience sample is one that is simply available to the researcher by virtue of its accessibility (Bryman, 2004:100). Bryman (2004:100) emphasizes that it also ought to be recognized that convenience sampling probably plays a more prominent role than generally viewed. He states that, certainly in the field of organisation studies it has been noted that convenience samples are very common and indeed are more prominent than samples based on probability sampling.

It was therefore decided to select the remaining three SMMEs from the rural areas. A list of possible names were obtained from DMO as they are in contact with many SMMEs in the tourism industry in South Africa. After a number of attempts to find suitable SMMEs, three were found to be willing to participate.

### **3.4 Bias in research**

According to Lubbe (2003), with regards to the issue of bias, it is naive to assert that any form of research, or perhaps human activity generally, is without bias. Even in the physical and life sciences the researchers' bias is reflected in the subject researched, the experiments chosen, as well as the way the experiment is conducted. Thus bias cannot be reduced but should be recognized and its implications acknowledged and accepted. Sub-conscious bias on the part of the researcher is a problem. Lubbe (2003) further warns that with regard to research findings, it is important that these are honestly presented and not produced in such a way as to simply support the opinions or prejudices of the researcher.

Sometimes, if not frequently, personal bias is so subtle that the researcher is not even aware of it. In fact, some would argue that a researcher should not attempt to compensate for this bias, but should simply state clearly the possible biases involved and allow the readers to compensate for them (Lubbe, 2003).

### **3.5 Conclusion**

Selecting a qualitative method afforded the researcher the opportunity to gain in-depth knowledge, and the evidence collected assisted in concentrating on the research questions. The pilot case study was found to be valuable as it cleared the uncertainties that the researcher had with regards to the interview questions. The focus group afforded the researcher the opportunity to get very close to the research subjects and how the PDIs perceived the issues around e-commerce. In addition the researcher realised that in a focus group, it is sometimes difficult to get full participation and therefore special attention needs to be given to this shortcoming.

The selection of case studies was found to be acceptable and afforded in-depth evidence to be explored by the researcher in this research study.

These modes of analysis will be used for this research study and are hermeneutics, semiotics, and approaches which focus on narrative and metaphor.

## CHAPTER 4

### DATA ANALYSIS AND INTERPRETATION

The research concepts are discussed in this chapter, starting with the modes of analysis. The researcher motivates the selection of modes of analysis for this research study. The background of each SMME used in this research project is briefly presented and the findings of the cases are discussed. After conversational analysis, the cases are tabulated.

#### 4.1 Modes of analysis

Myers (1997) states that although a clear distinction between data gathering and data analysis is commonly made in quantitative research, such a distinction is problematic for many qualitative researchers. For example, from a hermeneutic perspective it is assumed that the researcher's presuppositions affect the gathering of the data - the questions posed to informants largely determine what is going to be learned. It is more accurate to speak of modes of analysis rather than data analysis in qualitative research, because the analysis affects the data and the data affects analysis. These modes of analysis are different approaches to gathering, analyzing and interpreting qualitative data. The common thread is that all qualitative modes of analysis are concerned primarily with textual analysis (whether verbal or written) (Myers, 1997).

Three modes of analysis will be used for this research study and are: hermeneutics, semiotics, and approaches which focus on narrative and metaphor.

#### 4.1.1 Hermeneutics metaphor

Hermeneutics can be treated as both an underlying philosophy and a specific mode of analysis (Myers, 1997). As a philosophical approach to human understanding, it provides the philosophical grounding for interpretivism. As a mode of analysis, it suggests a way of understanding textual data. The following discussion is concerned with using hermeneutics as a specific mode of analysis.

Hermeneutics is primarily concerned with the *meaning* of text or text-analogue (an example of a text-analogue is an organisation, which the researcher comes to understand through oral or written text). The basic question in hermeneutics is: what is the meaning of this text? symbolism in indigenous cultures, oral narrative, narrative and metaphor in

#### 4.1.2 Semiotics aphor and medicine, metaphor and psychiatry etc.

Semiotics can be treated as both an underlying philosophy and a specific mode of analysis, similarly to hermeneutics. According to Myers (1997), one form of semiotics is content analysis. Another form of semiotics is conversation analysis. Bryman (2004:365) defines conversation analysis as; “the fine-grained analysis of talk as it occurs in interaction in naturally occurring situations”. The interview is recorded and transcribed so that the detailed analyses can be carried out. These analyses are concerned with uncovering the underlying structures of the conversation in interaction and such with the achievement of order through interaction (Bryman, 2004:365). types and conversation analysis has been selected for this research study.

Semiotics is primarily concerned with the meaning of signs and symbols in language. The essential idea is that words or signs can be assigned to primary conceptual categories, and these categories represent important aspects of the theory to be tested. The importance of an idea is revealed in the frequency with which it appears in the text. is kind of data. Bryman

(2004:190) confirms that content analysis can be applied to a wide variety of different kinds of unstructured information.



### 4.1.3 Narrative and metaphor

Narrative is defined by the Concise Oxford English Dictionary as a "tale, story, recital of facts, especially story told in the first person." There are many kinds of narrative, from oral narrative through to historical narrative. Metaphor is the application of a name or descriptive term or phrase to an object or action to which it is not literally applicable (e.g. a window in Windows 95).

Narrative and metaphor have long been key terms in literary discussion and analysis. In recent years there has been increasing recognition of the role they play in all types of thinking and social practice. Scholars in many disciplines have looked at areas such as metaphor and symbolism in indigenous cultures, oral narrative, narrative and metaphor in organisations, metaphor and medicine, metaphor and psychiatry etc.

In IS the focus has mostly been on understanding language, communication and meaning among systems developers and organisational members (Myers, 1997).

### 4.1.4 Motivation for selecting modes of analysis

As discussed in Chapter 3, in-depth interviews and multiple sources of evidence were used in this research study and any of the above modes of analysis could be adopted for the analysis; however a combination of content analysis and conversation analysis has been selected for this research study.

The researcher used content analysis for this research study to analyze the data, because it is a transparent research method (Bryman, 2004:195). The researcher has conducted unstructured interviews, making content analysis a highly flexible method to analyze this kind of data. Bryman (2004:196) confirms that content analysis can be applied to a wide variety of different kinds of unstructured information.

Content analysis allows information to be generated about social groups that are difficult to access. This ties in well with the research design of this research study, due to convenience sampling and the fact that the researcher could generate information about the previously disadvantaged individuals. It does allow a certain amount of longitudinal analysis with relative ease (Bryman, 2004:196).

Bryman (2004:190) suggests that a coding schedule may be used for content analysis, but further states that the coding schedule should be piloted. The coding schedule is a form onto which all the data relating to an item being coded will be entered (Bryman, 2004:190). The researcher created a similar schedule for this research study and the schedule was used in the pilot study. According to Neuman (2000:418) qualitative researchers examine patterns of similarities and differences across cases and try to come to terms with their diversity. The researcher examined the patterns and presented these in the comparative format in Table 4-1.

The names of the guesthouses and the B&Bs were used with permission from the owner managers.

## **4.2 Cases: a comparative format**

### **4.2.1 Casa Valencia**

Casa Valencia is situated at West Beach in Cape Town. It is in one of the most spectacular settings in Cape Town with breathtaking views of Table Mountain and Lions Head. It is situated above the pristine beaches of Blouberg. Casa Valencia offers visitors ICT services, exceptional comfort, hospitality, and tranquility within its elegant, contemporary surroundings.

The owner managers of Thando's Guest House are indifferent whether Casa Valencia is a family-owned and run guesthouse in a quiet street, just five minutes from the beach. Named after the owners' mother, the guesthouse offers deluxe bed and breakfast accommodation. All the spacious bedrooms are en-suite and open onto the terrace, which offers spectacular views of Table Mountain and Cape Town. Their luxury double is the perfect honeymoon hideaway, with views of Table Mountain even from the bathroom. Their luxury suite also has amazing views of Table Mountain and, with its two separate bedrooms, can easily accommodate a family, friends traveling together in a group or any small group.

The guesthouse's four-star facilities include TV, DVD and broadband in each bedroom. There is a stylish, relaxing living room and a comfortable TV/games room with a library of DVDs and CDs. Outside, the guesthouse has a swimming pool set in a lovely, tropical garden. There are two managers running the guesthouse and there are four employees in total. All of them have access to the Internet, but none of them have expertise in e-commerce. The owner managers of Casa Valencia disagree that fears and insecurity affect the business. They agree that inexperience affects the adoption of e-commerce in the business. They have two managers in the business and the managers are not open to e-commerce adoption. They agree that the disinterest of executives affects e-commerce adoption in the business.

#### **4.2.2 Thando's Guest House**

Thando's guesthouse is situated in Nico Malan Road in King Williams Town. There are two owner managers running the guesthouse. They have between five and fifty employees. The organisation has one computer, which has no firewall. The computer has virus protection software. None of the managers know what e-commerce is and their employees have no expertise in e-commerce.

The owner managers of Thando's Guest House are indifferent whether fears and insecurity affect the business. They agree that inexperience affects the adoption of e-commerce in the business. They agree that there is nonexistent expertise in e-commerce and that affects e-commerce adoption. There are no other managers other than the owners in the business. They are planning to be involved in e-commerce and are about to install Internet access. They disagree that disinterest of executives affect e-commerce adoption in the business. They disagree that bureaucracy affects e-commerce adoption. They disagree that hierarchical and rigid structures and systems affect e-commerce adoption.

#### **4.2.3 Luke's Leisure Guest House**

Luke's Leisure guesthouse is situated at Amatola View in Bisho. There is one owner manager running the guesthouse. The staff consists of between one and four employees. The business has one computer that has no firewall. The computer also has no virus protection software. None of the owner managers are open to e-commerce and their employees have no expertise in e-commerce. They are neutral about whether fears and insecurity affect the business. They strongly agree that inexperience affects the adoption of e-commerce in the business. They strongly agree that there is nonexistent expertise in e-commerce and that affects e-commerce adoption. There are no other managers other than the owners in the business who are planning to be involved in e-commerce. They are about to install Internet access. They strongly disagree that disinterest of executives affect e-commerce adoption in the business. They disagree that bureaucracy affects e-commerce adoption. They disagree that Hierarchical and rigid structures and systems affect e-commerce adoption.

1. Rental – it is a small to medium accommodation in a form of a hut, with a thatched roof.

#### 4.2.4 Randrivier Bed and Breakfast

Randrivier is an idyllic thatched roof guest establishment near Robertson, a town renowned for its tranquility and the excellent wines produced in the region. With enough space in the rondavels<sup>1</sup> and double room to sleep up to 6 persons, it can accommodate larger groups with the same comfort as couples wanting to get away for the weekend. Whatever one's getaway requirements, Randrivier is sure to accommodate you in style and comfort.

Yalefontein

The owner managers of Randrivier disagree that fears and insecurity affect the business. They disagree that inexperience affects the adoption of e-commerce in the business. They also disagree that there is nonexistent expertise in e-commerce and that affects e-commerce adoption. They have one manager in the business and the manager is open to e-commerce adoption. They disagree that disinterest of executives affect e-commerce adoption in the business. They disagree that bureaucracy affects e-commerce adoption. They disagree that hierarchical and rigid structures and systems affect e-commerce adoption. They disagree that disinterest of executives affect e-commerce adoption in the organisation. They disagree that bureaucracy affects e-commerce adoption. They disagree that hierarchical and rigid structures and systems affect e-commerce adoption in the organisation.

#### 4.2.5 Paradeisos

Paradeisos is situated one hour and fifteen minutes from Cape Town. One will find the lovely white beaches of Paradise Beach near the town of Langebaan. From this tranquil seafront home one can experience all the activities offered by the West Coast for example Dolphin, Bird and Whale watching. One may also experience the wild flowers during season.

1 Rondavel – it is a small to medium accommodation in a form of a hut, with a thatched roof.

Guests can also enjoy water sports such as windsurfing, kite surfing, boat cruises and fishing. Other activities include golf, mini golf, casino, horse riding, hiking gym, tennis, squash and quad bikes. Other attractions worth visiting are the West coast national Park, Fossil Park, Saldanha Nature Reserve and small West Coast towns like Paternoster (this town was featured in the movie Forgiveness), Saldanha Bay, Laaiplek an Ysterfontein.

The ground floor of this holiday home is a private self-catering unit only ten meters from the high water mark. The unit has three bedrooms and can accommodate eight people. The home is ideal for families and parents and children will enjoy the lovely safe beach of Paradeisos.

The owner managers of Paradeisos agree that fears and insecurity affect the business. They also agree that inexperience affects the adoption of e-commerce in the business. They disagree that there is nonexistent expertise in e-commerce. There is one owner manager in the business and not interested in e-commerce adoption and neutral with regards to whether disinterest of executives affects e-commerce adoption in the business. They are indifferent as to whether bureaucracy affects e-commerce adoption. They disagree that Hierarchical and rigid structures and systems affect e-commerce adoption.

#### **4.2.6 Grietjiesdrif**

Grietjiesdrif is at Rawsonville in the Western Cape. There is one owner manager running Grietjiesdrif. There are ten beds, five double rooms, one multiple-bed room, one apartment and one twin room.

The owner manager of Grietjiesdrif is indifferent whether fears and insecurity affect the business. He agrees that inexperience affects the adoption of e-commerce in the business and agrees that there is nonexistent expertise in e-commerce. There are no other managers other than the owner in the business. He agrees that the disinterest of executives affects e-commerce adoption in the business.

#### **4.2.7 Point Guest Lodge**

Point Guest lodge is in the Western Cape. There is one owner manager running the lodge. He is indifferent as to whether fears and insecurity affect the business. He agrees that inexperience affects the adoption of e-commerce in the business. He has two managers in the business and one manager is open to e-commerce adoption while the other manager is not. He is neutral with regards to whether the disinterest of executives affects e-commerce adoption in the business. He is indifferent as to whether bureaucracy affects e-commerce adoption.

When follow-up interviews were planned, the telephone numbers that the researcher obtained from the owner manager no longer exist. The e-mail address obtained from the owner manager was the last option for the researcher to use for follow-up interviews and discussions. The researcher sent an e-mail to Point guest lodge and there has not been a reply to date (28 March 2006).

#### **4.3.8 Summary of cases**

Table 4-1 illustrates the responses from the respondents with regards to the methodological framework: negative attitudes, lack of knowledge, resistance to change and lack of management commitment.

SMMEs	Methodological framework from literature (Farhoomand <i>et al.</i> , 2000:31)			
Bed & Breakfast / Guest House	Negative attitudes	Lack of knowledge	Resistance to change	Lack of management commitment
Casa Valencia	Fears and insecurities are not experienced.	They admit to lack of expertise.	They admit that they resist the change to adopt e-commerce.	They experience lack of management commitment.
Thando's Guest House	Indifferent	They agree to lack of expertise.	They embrace change.	They disagree to lack of management commitment.
Luke's Leisure Guest House	Indifferent	They strongly agree to lack of expertise.	They embrace change.	They strongly disagree to lack of management commitment.
Randrivier B&B	Fears and insecurities are not experienced.	They have ICT knowledge.	They embrace change.	They disagree to lack of management commitment.
Paradeisos	Agree that they have insecurities with regards to e-commerce adoption.	They agree to lack of expertise.	They admit that they resist the change to adopt e-commerce.	They disagree to lack of management commitment.
Grietjiesdrif	Indifferent	They admit to lack of expertise.	Indifferent	They experience lack of management commitment.
Point Guest Lodge	Indifferent	They agree to lack of expertise.	1 manager – agree; 1 other – disagree	Indifferent

Table 4-1: Cases – a comparative format



## CHAPTER 5

### COMPARATIVE ANALYSIS

This chapter discusses the research findings from the case studies conducted and relates these outcomes to literature with regards to e-commerce adoption barriers in the tourism sector. The research questions are discussed and compared to the research findings.

#### 5.1 Discussion of the research question

The research question for this research study is as follows:  
What are the e-commerce organisational adoption barriers experienced by SMMEs in the tourism sector and how does management in e-commerce SMMEs in the tourism sector deal with these identified barriers?

From the literature, it is evident that the e-commerce organisational adoption barriers experienced by SMMEs in the tourism sector are negative attitudes, lack of knowledge, resistance to change and lack of management commitment (Farhoomand *et al.*, 2000).

Managers in SMMEs have been characterized as having reservations about the adoption and use of information systems, arising from their limited human and financial resources, low IS knowledge and skills, and their lack of managerial time (Daniel, 2003:234). It was found in this research study that, regarding the seven case studies, most managers are open to e-commerce adoption. Six owner managers from the SMMEs in this research study were interviewed at an 'Introduction to ICT and e-commerce adoption' course that was arranged by Software Colors and DMO. These were: Grietjiesdrif, Point Guest Lodge, two owner managers from Randrivier and another two owner managers from Paradeisos. A majority of the owner managers had e-commerce adoption intentions. Some of the managers are not sure about how to deal with the identified barriers.

### 5.1.3 Analysis of resistance to change

Some managers think that collaboration as SMMEs could minimize some of the barriers, while others think that courses arranged by Software Colors and DMO, for example, would assist them in dealing with e-commerce adoption barriers. Some owner managers expressed that more workshop and education would be of great help, while a number of other owner managers suggest that using media, for example, television and magazines would raise the e-commerce awareness to SMMEs.

#### 5.1.1 Analysis of negative attitudes

A number of authors (Bègin & Boisvert, 2002; Farhoomand *et al.* 2000; Simpson & Docherty, 2004) agree that negative attitudes are experienced as e-commerce organisational adoption barriers by SMMEs in the tourism sector. Four SMMEs (Thando's Guest House, Luke's Leisure Guest House, Grietjiesdrif and Point Guest Lodge) were indifferent about negative attitudes, while two SMMEs (Casa Valencia and Randrivier B&B) disagreed that they have negative attitudes. One SMME (Paradeisos) admitted having negative attitudes towards e-commerce adoption in the organisation.

#### 5.1.2 Analysis of lack of knowledge and expertise

Very little knowledge or experience is shared by management and employees (Schlenker & Crocker, 2003:10). A substantial number of authors (Anckar & Walden, 2001; Barnes & Hunt, 2001; Bègin & Boisvert, 2002; Daniel, 2003; Farhoomand *et al.* 2000; Fillis *et al.*, 2004; Ramsey *et al.*, 2003; Simpson & Docherty, 2004) concur that lack of knowledge and expertise is prevalent in many SMMEs in the tourism sector, whether they are considering adopting e-commerce or not. All the SMMEs interviewed agreed or strongly agreed that a lack of knowledge and expertise in the area of ICT and e-commerce exists.

### **5.1.3 Analysis of resistance to change**

Various authors (Anckar & Walden, 2001; Barnes & Hunt, 2001; Bègin & Boisvert, 2002; Farhoomand *et al.* 2000; Simpson & Docherty, 2004) agree with regards to resistance to change as one of the barriers of e-commerce adoption in tourism organisations. Four owner managers (One owner manager from Thando's Guest House, another one from Luke's Guest House, another one from Randrivier and lastly another one from Point Guest Lodge) disagree to resistance to change as a barrier, whereas three owner managers agree (One owner manager from Point Guest Lodge, another one from Paradeisos and lastly another one from Casa Valencia) to resistance to change as a barrier. One owner manager from Grietjiesdrif was indifferent. It is important to remember that five of the SMMEs interviewed were selected because they had e-commerce adoption intentions.

### **5.1.4 Analysis of lack of management commitment**

Many SMMEs are characterised by rigid hierarchical forms of leadership and information flows from top to bottom (Schlenker & Crocker, 2003:10). Decisions are often based on the owner's intuition rather than on the basis of market research by the organisation (Schlenker & Crocker, 2003:10). Several authors (Bègin & Boisvert, 2002; Farhoomand *et al.* 2000; Fillis *et al.*, 2003; Simpson & Docherty, 2004) are of the opinion that lack of management commitment is one of the organisational barriers to e-commerce adoption. Four organisations (Thando's Guest House, Luke's Leisure Guest House, Randrivier B&B, Paradeisos) disagree or strongly disagree, whereas two organisations (Casa Valencia and Grietjiesdrif) agree that a lack of management commitment exists. Point Guest Lodge was indifferent. From the research study interviews, five of the organisations interviewed were selected because they had e-commerce adoption intentions, so it is highly unlikely that the majority of the respondents would lack management commitment to e-commerce adoption.

## 5.2 Conclusion

The Internet is changing the business models of SMMEs in the developing world, especially in South Africa, despite the fact that there are several constraints in attaining higher levels of e-business, such as the ability to make online transactions and integrate all business processes electronically. SMMEs in the developing world have already started the electronic commerce journey (Mzumbe, 2005:370). The seven cases that have been interviewed have great examples of the SMMEs in the tourism sector that have started their journey in e-commerce adoption. Although there are a number of barriers to e-commerce adoption, Chapter 6 offers some guidelines to reduce or eradicate the e-commerce adoption barriers.

evaluation) with regards to e-commerce adoption barriers are considered. The discussion with regards to the objectives of the study being met follows. Trends that impact on the tourism industry are introduced in this chapter. Further research in the subject of e-commerce adoption barriers is recommended.

### 6.1 A new proposed framework for the study

The methodological framework was used as a base in Figure 2-5 and adapted to form a new framework depicted in Figure 6-1 using the information gained from the studies and subsequent analysis discussed in Chapter 5.

An entity diagram illustrates the framework. A Person / an employee (or a potential user of e-commerce) adopts the usage of e-commerce in the tourism sector. The Person / employee has a certain Attitude. This Attitude may be negative and / or pose a resistance to change. The adoption of e-commerce by the person / employee is part of the SMME organisation's business process. This proposed framework should provide guidelines for SMMEs to use and pro-actively avoid possible barriers before and during the adoption process of e-commerce.

## CHAPTER 6

### CONCLUSIONS AND RECOMMENDATIONS

A new framework for the e-commerce adoption barriers, based on the study of Farhoomand *et al.*, (2000) is proposed and discussed. Recommendations and guidelines are discussed based on the methodological framework (negative attitudes, lack of knowledge or expertise, resistance to change and lack of management commitment) of the research study. General guidelines (e-commerce approaches and business models, strategy and tactics, marketing and competition, managing people and processes, technologies, implementation, and evaluation) with regards to e-commerce adoption barriers are considered. The discussion with regards to the objectives of the study being met follows. Trends that impact on the tourism industry are introduced in this chapter. Further research in the subject of e-commerce adoption barriers is recommended.

#### 6.1 A new proposed framework for the study

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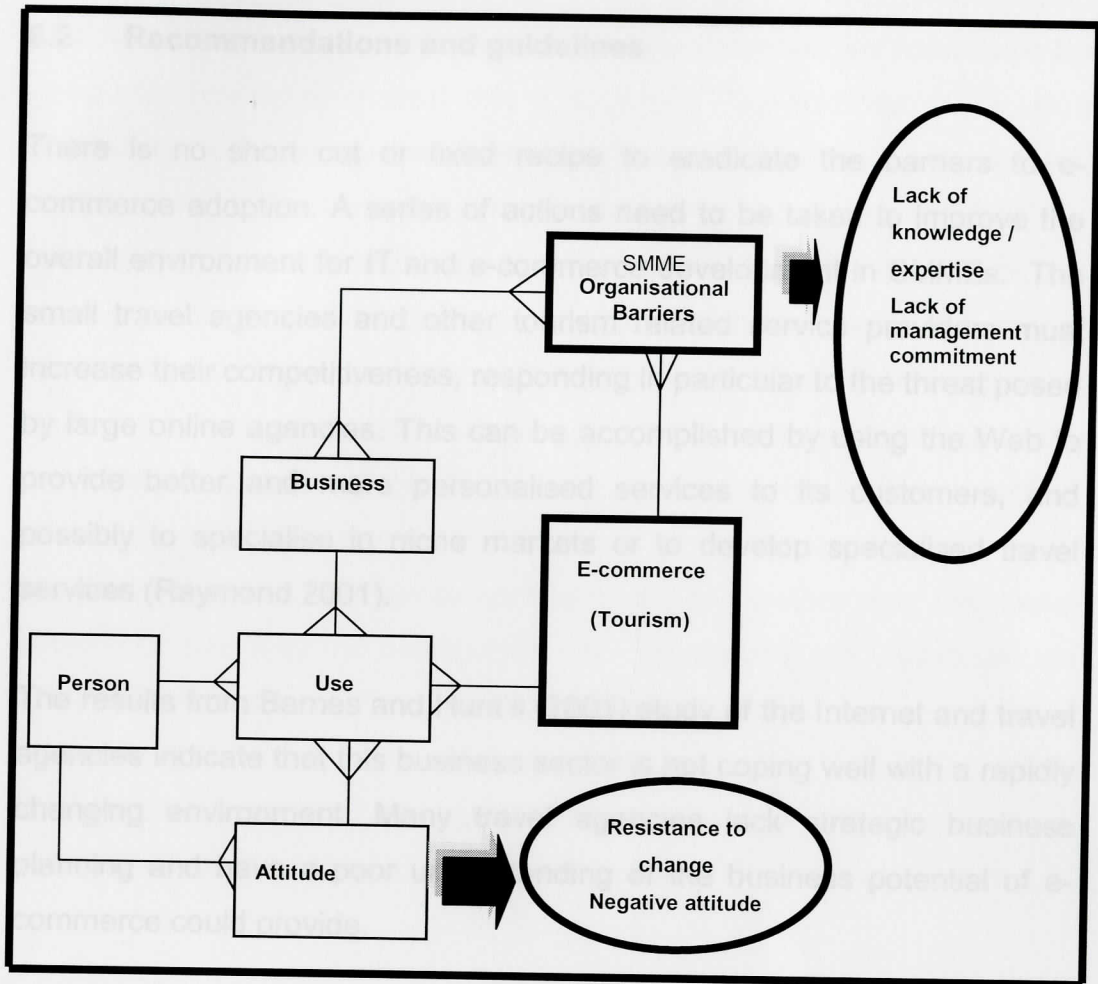


Figure 6-1: A new proposed framework for this research study

### 6.1.1 Trends presented by e-commerce

In the light of the trends observed in the industry and the opportunities presented by e-commerce to business, it is likely that the growth of the Internet as a catalyst in the tourism industry will have the following impacts; firstly, the physical activities surrounding the tourist experience will not fundamentally change (Wynne & Berthon, 2001:427). Technology may be harnessed to improve the experience, reduce costs and improve efficiencies and service. Those firms that concentrate on providing good service and demonstrate expert management of the tourist experience will be the most successful. This is particularly true in Africa. Secondly, it is likely that all virtual activities will move to the new channel (Wynne & Berthon, 2001:427).

## 6.2 Recommendations and guidelines

There is no short cut or fixed recipe to eradicate the barriers to e-commerce adoption. A series of actions need to be taken to improve the overall environment for IT and e-commerce development in SMMEs. The small travel agencies and other tourism related service providers must increase their competitiveness, responding in particular to the threat posed by large online agencies. This can be accomplished by using the Web to provide better and more personalised services to its customers, and possibly to specialise in niche markets or to develop specialised travel services (Raymond 2001).

The results from Barnes and Hunt's (2001) study of the Internet and travel agencies indicate that this business sector is not coping well with a rapidly changing environment. Many travel agencies lack strategic business planning and have a poor understanding of the business potential of e-commerce could provide.

Similarly to the case of barriers and benefits of e-commerce adoption, barriers and inductors to deployment of e-commerce are specific to each company and its specific business context. Several avenues exist to eliminate barriers, such as outsourcing, use of external consultants, training, restructuring, communication and recruitment.

Furthermore, benefits must be preserved, and actions must be taken to ensure that they continue to facilitate the adoption of e-commerce. Introduction of incentive rewards leading to improvement of online activities, involvement of senior management in the e-commerce project, and creation of a climate of co-operation are a few of the elements that may reinforce positive attitudes toward changes created by e-commerce.

Lee and Lin (2005:161) state that with the rapid growth in electronic commerce, businesses are attempting to gain competitive advantage by using e-commerce to interact with customers. They continue, stating that businesses with the most experience and success in using e-commerce are beginning to realize that the key determinants of success or failure are not merely Web site presence and low prices but also the electronic service quality (e-service quality). Quayle (2002) identifies the potential need for embracing e-business proficiency in order to secure the long-term wellbeing of an organization. Developing SMME e-commerce expertise is essential to sustaining (and, in some cases, achieving) competitive advantage. SMMEs appear to be aware of the basic elements of e-commerce. The challenge is getting them to realise that the same elements are also a prerequisite for developing an organisation's competitive advantage (Fillis *et al.* 2004).

The recommendations and guidelines of the four organisational e-commerce adoption barriers will be discussed in the next sections: 6.2.1, 6.2.2, 6.2.3 and 6.2.4.

### **6.2.1 Recommendations to reduce negative attitudes**

Employees may be concerned that the adoption of e-commerce would leave them unemployed. This is a valid concern in a large organisation, however, according to the findings of this research study, this should not be the case in SMMEs. It is advisable for employees to have more ICT skills in SMMEs. From the research results, the researcher would encourage employees who have negative attitudes towards e-commerce to renew their mindset and view e-commerce barriers as a challenge that needs to be overcome. Employees need to be willing to attend ICT and e-commerce courses so that they may understand the benefits of e-commerce. Employees with negative attitudes towards e-commerce need to understand the opportunities that e-commerce may bring to personnel that are willing to learn more about it.



The outcome of the focus group for PDIs indicated that owner managers were not too old to start learning more about ICT and e-commerce; however they were encouraged to embrace the empowerment being offered and realize the benefits that e-commerce may yield.

## **6.2.2 Recommendations to reduce lack of knowledge and expertise**

The research findings of this research study indicate that there is also a lack of knowledge from the users and the potential users of tourism online services. The Tiscover Management System, for example, minimizes the lack of knowledge and expertise by offering ICT and e-commerce aspects specifically for the needs of particular SMMEs. Training is customized and post-training support is offered. The Tiscover Management System is effective, efficient and relevant. Sometimes, people do not need to learn about the technical aspects of IT, however, they need to learn about how IT can maximize the potential of their organisation. There is no need to be bombarded with computer jargon, but they do, however, need to know what to do to make their businesses function optimally.

From this research study it is evident that ICT and e-commerce awareness programs for users and potential users of e-commerce are needed, for example, television programs that educate South Africans about issues related to ICT. Students should learn about ICT and e-commerce in the early years of tertiary education and competitions and promotions on campuses should be launched to raise the awareness of ICT and e-commerce.

SMMEs need be encouraged to conduct research, training and encourage investment to build e-commerce project specialists (Salman, 2004:154). Another recommendation is to build IT and e-commerce support cells in major cities (Salman, 2004:154); then build software technology parks in each developing country and to do so, build an international IT parks development center to conduct research and offer consultancy to developing countries.

Simpson and Docherty (2004:323) recommend that managers should determine how they could use the new technology to create new value propositions for the customer. This is viewed as an important factor for success in entering the world of e-commerce.

### **6.2.3 Recommendations to reduce resistance to change**

From the research study findings - similarly to cope with negative attitudes - employees need to renew their mindset with regards to resistance to change. The research study findings recommend that education and accurate information may reduce the resistance to change. Resistance to change in organisations needs to be addressed – that is the root cause of the resistance should be identified and employees made to understand the benefits of e-commerce adoption.

### **6.2.4 Recommendations to reduce lack of management commitment**

In SMMEs there is a different scenario to large organisations, where the owner of the business is most probably also the manager. When the SMME management understands the benefits of e-commerce, this makes it easier for them to commit to it. When there is a feasible plan and the financial issues are within the budget, the management may commit.

There is a need to fund the ICT and e-commerce initiatives, due to the fact that the initial cost of establishing e-commerce may be too high for the majority of SMMEs. When funding becomes available, the management should commit to ventures that promise progress to the organisation. Companies like Software Colors and DMO should approach the government for funding with regards to the initiatives they have started to reduce e-commerce adoption barriers in the tourism sector in SMMEs.

The SMMEs would need to be offered customized e-commerce management training and solution packages for companies of each developing country since each country is unique in the international business world, and so are its needs (Salman, 2004:154). They would have to be provided with training on timely management principles (Salman, 2004:154).

Simpson and Docherty (2004:323) recommend mentoring and network services for owner managers. They state that a notion that appears to be gaining interest among owner managers of SMMEs is that of having a network of people or a mentor to whom the owner manager can turn to for advice. Many small business owner managers often have feelings of being alone and isolated, even in firms where husband and wife partnerships are prevalent. Having a small group of mentors as advisers can be useful for bringing external experience into the firm and for providing impartial advice and an understanding of the market.

### **6.3 Other guidelines and recommendations**

Simpson and Docherty (2004:323) recommend academic approaches to successful e-commerce. These include:

- ❖ E-commerce approaches and business models
- ❖ Strategy and tactics
- ❖ Marketing and competition
- ❖ Managing people and processes
- ❖ Technologies
- ❖ Implementation
- ❖ Evaluation.

### **6.3.1 E-commerce approaches and business models**

Traditional business models are based on more tangible properties whereas the business models of the future are considered to be virtual and their properties intangible (Simpson & Docherty, 2004:323). In the past many Internet businesses rushed to the market and were disappointed to learn that simply having an Internet presence was no guarantee of successful active reading. The mistake most firms make is to think about the technology first and then decide how it is all going to work. To avoid such pitfalls, it is suggested that the firm must decide how much outside help is needed to negotiate the hybrid mix of business, technology, change processes and the position of the company and its competitors in the market place (Simpson & Docherty, 2004:323).

### **6.3.2 Strategy and tactics**

According to Simpson and Docherty (2004:323) developing a long-term strategic plan is the first step towards meeting the e-commerce challenge. This view is endorsed by the United Kingdom (UK) government who believe that a well-developed strategy is crucial to growth for most businesses and that e-commerce businesses are no exception (Simpson and Docherty, 2004:323). However, most small businesses are not able to formally define or understand their competitive strategy and that e-commerce can only intensify this problem. Simpson and Docherty (2004:323) warns owner managers that e-commerce strategies, when not managed properly can either get weaker, through constraints on the owner manager's time, or where strategies expand to fill their time, often at the expense of other business projects. The reason why so much strategic choice is now required is due to the Internet's characteristics of openness and connectivity, although paradoxically the same characteristics can also make hiding such competitive models from competitors almost impossible (Simpson & Docherty, 2004:323).

### 6.3.3 Marketing and competition

According to companies already enjoying success using the Internet, gains were only made once they had recognized that the world of e-commerce presents harder marketing challenges. While Timmers<sup>1</sup> (1999) suggests that we can make use of the marketing theory and business economics that exists today, Cunningham<sup>2</sup> (2000) is not so certain, believing that conventional marketing strategies do not work every time. In addition, SMMEs have problems with both implementing and understanding marketing (Simpson & Docherty, 2004:323).

### 6.3.4 Managing people and processes

The Internet is an agent of change and it impacts on people and work processes (Simpson & Docherty, 2004:323). They see Internet start up firms as the epitome of change, free of the restrictive practices of more traditional business models and suggest that e-commerce organisations consider at issues such as the internal culture and how much change the firm can handle. For others, e-commerce is about taking advantage of the technology to transform business processes where disintermediation (cutting out the middleman) and re-intermediation (the firm becomes the middleman) are competitive tools to make the value chain more efficient.

### 6.3.5 Technologies

Simpson and Docherty (2004:324) state that firms should not become obsessed with the technology alone but that there should be a sound business case for using it preferably, with a technology plan incorporated into the business plan.

1 Timmers, P. 1999. *Electronic commerce: strategies and models for business-to-business trading*. Chichester: John Wiley.

2 Cunningham, M. 2000. *Smart things to know about e-commerce*. Oxford: Capstone Publishing Limited.

### **6.3.6 Implementation**

Simpson and Docherty (2004:324) emphasize that whatever strategy is selected, the important thing is to ensure that its implementation is thorough, determined and well funded.

### **6.3.7 Evaluation**

No business can exist in a vacuum especially Internet businesses and that through the development of partnerships (from the basic buyer or seller relationship through to more complex suppliers/logistics partnerships) can the foundations for commercial success be laid (Simpson & Docherty, 2004:324). Damanpour (2001:26) agrees that collaboration emphasizes partnership with the trading community and identifies the potential most valuable partners. The organisation succeeds when management develops dynamic and just-in-time collaborations attitude and responsiveness. Flexibility becomes a factor that organisations need to develop custom solutions, and increase global competition. It is considered that it may be unrealistic for any company to have all the resources needed to provide value to its target market and state that a firm should be sensible about what its capabilities are and more importantly where they are deficient, for only then will they be able to identify where partnership help is needed.

## **6.4 Concluding remarks**

The objectives of this research study were to:

- ❖ identify the evidence of barriers in the literature
- ❖ assess the views about the barriers that have been stated by the identified suitable population of role players
- ❖ explore the SMMEs in the tourism industry and aggregate the findings
- ❖ develop guidelines for the benefit of the wider community.

All the objectives of this study were accomplished. The organisational e-commerce adoption barriers are: *negative attitudes, lack of knowledge or expertise, resistance to change and lack of management commitment*. There is ample evidence from various authors (Farhoomand *et al.*, 2000; Rao *et al.*, 2003) that barriers to e-commerce adoption in SMMEs are apparent. Several authors (Anckar & Walden, 2001; Chircu & Kauffman, 2000; Simpson & Docherty, 2004) concur about the views of the barriers in SMMEs in the hospitality industry. Seven guesthouses and B&Bs were investigated and findings were aggregated. Guidelines and recommendations were furnished for the benefit of the wider community. Other guidelines were recommended that included: e-commerce approaches and business models, strategy and tactics, marketing and competition, managing people and processes, technologies, implementation, and evaluation.

Bágn, L. & Boverst, H. 2002. The Internal factors that can make or break

## **6.5 Recommendations for further research**

The review of existing literature to understand potential and useful organisational barriers was critically discussed in the five e-commerce research studies. Organisational barriers in SMMEs, in the adoption phase, were selected from all the studies. A preliminary enquiry was conducted and the information gathered was compared to the literature that has been reviewed. Conclusions have been drawn based on the study. The objectives of this study have been carried out. Further research in this study is vital. Other types of barriers (implementation, technological, security, economic, cultural, political, legal and so forth) may be explored. Future research based on this research study may include enquiring about the progress of those organisations that have been trained for e-commerce adoption (and later on implementation). This phase of the study may inspect the perceived organisational barriers understood at the start, before implementation. After the training sessions the perceptions of the SMMEs may be determined. More guidelines to minimize (and possibly overcome) organisational barriers in SMMEs may be pursued and recommended.

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E-business (Electronic Business) can refer to two main categories

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Business-to-employee: Intranet-based applications extend to a

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business partners

Wynne, C. & Berthon, P. 2001. The impact of the Internet on the distribution value chain: the case of the South African tourism industry. *International Marketing Review*, 18(4):420-431.

electronic business - It is a sub-set of electronic business and covers both

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Information Technology (IT) or Information and Communications Technology (ICT) is the technology required for information processing. In particular it deals with the use of electronic computers and computer software to convert, store, protect, process, transmit, and retrieve information.

SMME (Small Medium Micro Enterprise)<sup>1</sup> refers to the number of employees and / or turnover of businesses in a number of sectors.

Tourism - The World Tourism Organisation (WTO) defines tourism as the activities of persons travelling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business and other purposes.

<sup>1</sup> South African Small Business Amendment Act, Notice 28 of 2003. *Government Gazette*, 26(3282)2-10, November 20

## GLOSSARY

**E-business (Electronic Business)** can be divided into three categories mapping directly into the three strategic roles of Information Technology (IT) – inward, outward, and across:

- ❖ Business-to-employee: Intranet-based applications internal to a firm
- ❖ Business-to-consumer: Internet-based applications for a firm's customers
- ❖ Business-to-business: Extranet-based applications for a firm's business partners

**E-commerce (Electronic Commerce)** is defined as any interaction between an organisation and its trading community undertaken in an electronic manner. It is a sub-set of electronic business and covers both intra and inter-organisational electronic messaging and information management (Chesher & Kaura, 1999).

**Information Technology (IT) or Information and Communication(s) Technology (ICT)** is the technology required for information processing. In particular it deals with the use of electronic computers and computer software to convert, store, protect, process, transmit, and retrieve information.

**SMME (Small Medium Micro Enterprise)**<sup>1</sup> refers to the number of employees and / or turnover of businesses in a number of sectors.

**Tourism** – The World Tourism Organisation (WTO) defines tourism as the activities of persons travelling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business and other purposes.

<sup>1</sup> South Africa. 2003. National Small Business Amendment Act. Notice 26 of 2003. *Government Gazette*, 461(1732):2-10, November 26.



**Appendix A: A letter to SMMEs**

Title:

Person(s):

Interviewer:

Cape Peninsula University of Technology  
P O Box 652  
Cape Town  
8000  
21 September 2005

1. What is the name of the guesthouse?

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2. Discuss the history of the guesthouse.

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3. What is your role at the guesthouse?

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4. How many employees are there?

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5. How many employees have Internet access?

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6. What do you think e-commerce is?

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7. What do you think are the issues that have an impact on the

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Dear Sir / Madam

I am a post-graduate student in Information Technology at CPUT, Cape Peninsula University of Technology. I hereby ask for permission to conduct interviews and collect data in your organisation. I have conducted some research with regards to your organisation at the MTN Sciencentre at Canal Walk on the 23 July 2004. Software Colors and Destination Marketing Organisation (DMO) facilitated the research opportunity.

My supervisor is Mr. Stuart Warden. Please, feel free to contact him if you have any questions in this regard.

His contact details are as follows:

E-mail address: wardens@cput.ac.za

Telephone (work): 021 469 1010

Mobile: 082 8867 060

Thank you for your most favourable response in this regard.

Yours sincerely  
Ms Sibongiseni Dakela



## Appendix B: Interview questions

Date:

Time:

Person(s):

Interviewer: Sibongiseni Dakela

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1. What is the name of the guesthouse?
2. Discuss the history of the guesthouse.
3. What is your role at the guesthouse?
4. How many employees are there?
5. How many computers do you have?
6. How many employees have Internet access?
7. What do you think e-commerce is?
8. What do you think are the issues that have an impact to the company's stance on e-commerce?
9. Does any employee have expertise in the area of ICT (Information and Communication Technologies)?
10. What are the ICT skills (e.g. computer literacy, MS office, Internet usage, etc.) and ICT equipment including quantities (e.g. 3 computers, equipment to dial-up: 2 network cables, 2 printers, etc.) that your organisation has?
11. Does any employee have expertise in the area of e-commerce?
12. Would you like to be involved in e-commerce as an organisation?
13. Would other managers like the organisation to be involved in e-commerce?
14. According to literature (Farhoomand et al., 2000), negative attitudes affect e-commerce adoption negatively. Is this the case in your organisation? Why?
15. What are the best means of educating and heightening awareness about the business potentials of e-commerce?
16. What plans does the company have in place to maintain its reputation and to ensure continued growth of e-commerce?