



ADDIS ABABA UNIVERSITY

SCHOOL OF GRADUATE STUDIES

FACULTY OF INFORMATICS

DEPARTMENT OF INFORMATION SCIENCE

**EXPLORING TRENDS, CHALLENGES, AND OPPORTUNITIES IN
THE ETHIOPIAN TOURISM INFORMATION SYSTEM**

A Thesis Submitted to the Department of Information Science as a Partial
Fulfillment of the Requirements for the Degree of Masters of Science in
Information Science

By:

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DEDICATION

*To My Beloved:
Dad and Mom*

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Table of Contents

List of Tables	iii
List of Figures.....	iv
List of Appendices.....	v
List of Acronyms.....	vi
Abstract.....	viii
CHAPTER ONE	1
INTRODUCTION	1
1. 1 Background.....	1
1.2. Statement of the Problem and Justification	5
1.3. Objectives	10
1.3.1 General Objective	10
1.3.2 Specific Objectives	11
1.4. Research Methodologies.....	11
1.4.1 General Approach.....	11
1.4.2. Data Collection Methodologies and Techniques	12
1.4.3 Analysis Techniques and Procedures	16
1.5. Scope and Limitations of the Research	17
1.6. Significance of the Study	18
1.7. Organization of the Thesis	18
CHAPTER TWO.....	20
LITERATURE REVIEW	20
2.1 The Tourism Industry	20
2.2 Tourism in Ethiopia	21

2.3	Tourism Information Systems (TIS)	23
2.3.1.	Fundamental Infrastructure to TIS	30
2.3.2.	Destination Management Systems (DMSs).....	39
2.3.3.	The Destination Integrated Computer Information Reservation Management Systems (DICIRMS)	41
2.4	Challenges and Opportunities in Contemporary TIS.....	43
CHAPTER THREE.....		48
RESULTS AND DISCUSSIONS.....		48
3.1	Empirical Findings/ Results	49
3.1.1	Demographic Information	49
3.1.2	Trends in the Ethiopian TIS.....	50
3.1.3	Challenges in the Ethiopian TIS.....	56
3.1.4	TIS Opportunities in Ethiopia	66
3.2	Discussions.....	72
CHAPTER FOUR.....		79
CONCLUSIONS AND RECOMMENDATIONS.....		79
4.1	Conclusions	79
4.2	Recommendations.....	80
References		83
Appendices		88

List of Tables

Table 1: What is the purpose of the website?	51
Table 2: Who developed the website?	52
Table 3: Crosstabulation (Who developed the website? * Who maintains the website?)	53
Table 4: The most important website component	55
Table 5: Which value added service is attracting more customers?	56
Table 6: Why haven't you used or might not use the Ethiopian based websites?.....	63
Table 7: What kind of content and capabilities do you expect in the Ethiopian tourism websites?	68
Table 8: Any website that you would recommend as best practices.....	68

List of Figures

Figure 1: Integration of Tourism Information Systems	32
Figure 2: Need and Mission for Computer Reservation Systems' Services.....	34
Figure 3: Contents of Destination Integrated Computer Information Reservation Management Systems	42

List of Appendices

Appendix 1: Questionnaire for Tourism Institutions	88
Appendix 2: Questionnaire for Tourists.....	96

List of Acronyms

B2B	Business to Business
C2C	Consumer to Consumer
CRS	Computerized Reservation Systems
DIA	Daily Interpretive Analysis
DICIMS	Destination Integrated Computer Information Management System
DMO	Destination Management Organization
DMS	Destination Management Systems
ETC	Ethiopia Telecommunications Corporation
FAQ	Frequently Asked Questions
GDP	Gross Domestic Product
GDS	Global Distribution Systems
HDS	Hotel Distribution Systems
HRS	Hotel Reservation Systems
IBM	International Business Machine
ICT	Information and Communication Technology
IT	Information Technology
LDC	Least Developed Countries
PC	Personal Computer
PRSP	Poverty Reduction Strategy Paper
SEO	Search Engine Optimization
SMTE	Small and Medium Tourism Enterprises

SPSS	Statistical Product and Service Solutions
STE	Small Tourism Enterprises
TIS	Tourism Information Systems
UK	United Kingdom
UNCTAD	United Nations Conference on Trade and Development
UNWTO	United Nations World Tourism Organization
US	United States
USD	United States Dollars
USTOA	United States Tour Operators Association
WTO	World Tourism Organization
WWW	World Wide Web

Abstract

This research was conducted to explore the trends, challenges and opportunities of Tourism Information Systems (TIS) in Ethiopia with a special emphasis on tourism websites. Two surveys were conducted: while the first one dealt with tourism institutions, the second dealt with tourists. In the first case questionnaires, mainly, and interviews, to fill gaps, were employed as methods of data collection. In the second survey only questionnaires were used because of the large number of visitors. The data gathered were analyzed using the Statistical Product and Service Solutions (SPSS) and simple descriptive statistics like the mode (frequency) was used to explain the empirical findings. Tables were used for data presentation, based on which comparisons were made.

The results of the study reveal that, embarking with the then “Thirteen Months of Sunshine” manual ad sign; the Ethiopian TIS is now experiencing the opportunities presented by modern information technology such as websites. There is a promising awareness about modern information systems among the businesses, but in its infancy. Major challenges identified by the study include: gaps between businesses’ and the tourists’ perceptions about the local tourism websites, missing website components and inability to fully harness the Internet. Yet, there are some opportunities created by the Web for such tourism businesses. The study also provides some recommendations towards TIS for tourism businesses in the nation.

Keywords: Ethiopia, Tourism, Website, Information Systems

CHAPTER ONE

INTRODUCTION

1. 1 Background

Tourism is an information-intensive and information-sensitive industry (Werthner & Klein, 1999). It is evident that both the way the information is presented and the approach to tourists searching for information has a great impact on the tourists' decision and satisfaction. Tourists need well-organized information at their fingertips, anywhere and anytime, to orient themselves in a place that is entirely new for them. Touristic activities have accelerated and the number of people participating is increasing every year (ibid).

Tourist Information System (TIS) serves as a worldwide advertisement of tourist services, agencies and tourist activities. It helps attract new clients providing them all the information they need to know about traveling in a particular country and it saves money on marketing and advertising costs (Duran et al, 2004). TIS provides numerous amount of information about countries to anybody connected to the Internet. Thus, complete online information about tourist services will help to increase the number of visitors and it will promote local companies and travel agencies.

According to Cardoso & Lange (2007), current TIS contains four Information systems. These include: Computerized Reservation System (CRS), Global

Distribution System (GDS), Hotel Distribution Systems (HDS) and Websites. These are fundamental infrastructures to provide access to tourism information. A CRS is a travel supplier's own central reservation system (Inkepen, 1998) as cited by (Cardoso & Lang, 2007). It enables travel agencies to find what a customer is looking for and makes customer data storage and retrieval relatively simple as it contains information about airline schedules, availability, fares, and related services. A GDS is a super switch connecting several CRSs (ibid) commonly used by travel agencies. HDS work closely with GDSs to provide the hotel industry with automated sales and booking services.

Therefore, in order for tourism businesses to stay competitive; to retain the regular customers coming and to attract more new customers, the businesses must know how to manage new situations, go new ways and develop innovative ideas. They must also work on the quality of their services and must be able to understand the dynamic business environment.

Moreover, Duran, et al (2004) explains, the Internet is more and more emerging as some kind of travel agent. This is since, for the tourist industry, it represents a perfect platform to bring products and services to the customer in a direct way. However, Web-based tourist information systems are required not to offer online brochures only, but rather to provide both, value and service (ibid). The Internet has made it much easier for people to access information about other places. As a result, many tourism destinations currently operate World Wide Web sites to inform and attract visitors.

The purposes of these Web presentations are to evoke an awareness of the existence of the place as a tourism destination and stimulate an interest in visiting the place (Tuan, 1997) as cited by (Skadberg et al, 2005). Presenting information about a destination on a website involves conveying the inherent value of a destination through text, photographs, and sound so that the important characteristics can be readily recognized (ibid).

Virtual destinations can be created by catching people's attention. They do not have to have visual prominence in order to grab attention. Good image creation can draw attention to areas that may otherwise fail to be noticed. The Web is an excellent medium that can help stimulate people's affection for a tourism destination. It offers the opportunity to construct representations of real places as virtual worlds and share them with others (Skadberg et al, 2005). Virtual world can "raise consciousness about the natural world by giving people remote firsthand access to places on the earth" (ibid).

As detailed in AfricaPoint (2009), Ethiopia is the second largest country in Africa in terms of population size and total area with diversified culture, linguistic composition and large ethnic compositions. Ethiopia is a unique travel destination with numerous attractions that cannot be found anywhere else in the world. However, despite being an enchanting country, Ethiopia's delights remain unknown to most travelers; hence many experts consider it to be Africa's best-kept secret (ibid).

According to Firoiu & Mihalcescu (2008), governments are beginning to become strategic players in the tourism industry and most of the countries have already initiated projects in the field of electronic commerce in order to offer new competitive advantages on an international level to its service providers. Today, national bodies are beginning to understand the significant importance of the new tourist space and its side-effects on the other sectors of the economy (ibid). The Ethiopian government is also proving its commitment and willingness to develop tourism through a number of initiatives. Tourism is a featured component of Ethiopia's Poverty Reduction Strategy Paper (PRSP) that aims to combat poverty and encourage development in the country (<http://www.crwr.utexas.edu>, 2008).

Key Definitions

Travel Agent, Tour Operator and Packages are defined as follows. These definitions are given to give a clear picture of the terms to the reader.

***Travel Agents** – refer to entities qualified to sell tours, cruises, transportation, hotel accommodations, meals, transfers, sightseeing and all other elements of travel to visitors in a certain geographic area at a certain moment in time and within certain conditions. The agency acts as a broker, bringing the buyer and seller together. They do not substitute the service-providing unit, but play the role of providing information and access to the visitor and are the middlemen in the purchase of certain services (WTO, 2000).*

Tour Operator: *A tour operator is a company, whose main business is the planning, packaging, selling, marketing and promotion of multiple vacation elements, including air or surface transportation arrangements combined with land accommodations. Suppliers primarily engaged in providing accommodations, such as owners or operators of hotels, resorts and cruise lines, are not included within the revised definition of Tour Operators (USTOT, 2002).*

Package: *A pre-arranged combination of at least two of the following component services offered for sale or sold at an inclusive price: transport, accommodation, other-not ancillary to transport or accommodation (PADECO, 2001).*

Ethiopian based tourism businesses seem to have a number of problems in fully utilizing the opportunities brought about advancing and dynamic web technologies. The next section elaborates this idea and will be the core point of the discussion throughout this research report.

1.2. Statement of the Problem and Justification

With the development of Information Technologies (ITs) and the emergence of the Internet came new opportunities for the travel industry. The ease of access, abundance of information, and low transaction costs of the web have motivated the tourism industry to provide online travel services. Tourism websites are becoming increasingly popular as travelers can browse these websites at the

convenience of their workplace or homes, compare offerings from multiple websites with the click of a mouse button, and make reservations online for a variety of services such as transportation, lodging, meals, entrance fees to attractions, entertainment, and guide services (Palmer and McCole, 2000) as cited by (Lu, Deng and Wang, 2007)

Individual service providers, following the trend and responding to the new dynamics of the tourist market, are generally characterized by small and medium enterprises having severe difficulties embracing the rapid changes (Firoiu & Mihalcescu, 2008). These enterprises mostly have little technological infrastructure and financial power, and they will begin to have reduced access to world tourist markets if no solutions can be found to strengthen their strategic position in this new environment (ibid).

Firoiu & Mihalcescu (2008) further explain the fact that tourist information systems begin to be identified as one possible way to close the gap between service suppliers and the volatile demand side. New information and communication technologies are enhancing recent inter-enterprise collaboration schemes and their appropriate integration might offer new win/win-situations for every actor of the tourism industry (ibid). Each element of the tourism industry in fact is involved in a number of significant linkages that can be enhanced through electronic connections today. From a travelers' point of view, access to effective communication systems can provide reliable information on facilities and services (ibid).

Increasingly, attention has shifted to the role of the Internet and what is popularly termed eTourism in facilitating global tourism. This presents a significant opportunity to the global travel industry, now one of the largest industries worldwide, generating some US\$5.5 trillion in economic activity and accounting for 245 million jobs or 8.1% of total employment (Oxford Economic Forecasting, 2004).

In North American and Europe alone, for example, travel booked electronically increased by 25% and 35%, respectively (Hudson & Lang, 2002). On the other hand, Taiwan provides an interesting opportunity to assess tourism WebPages. From 1983 to 2001 the number of tourists increased some 44% to 2.6 million (Government of Taiwan, 2001). Foremost, among changes to travel to Taiwan and its tourism industry is the rise of eTourism, notable in the creation of a new government website, the “Taiwan Tourist Information Website” (<http://taiwan.net.tw>), “to provide a complete range of information for travelers and to reinforce marketing channels” (Gov. of Taiwan, 2003, p. 1). Today, efficient and inexpensive communications already allow travelers to stay in touch with the service provider during their entire decision making (ibid).

Firoiu & Mihalcescu (2008) emphasized that unfortunately most of the tourist institutions businesses have so far remained primarily paper-based. This situation is actually resulting in a significant risk of marketplace exclusion for participants that are not ready to implement the new market paradigms (ibid). On the other hand, poorly designed websites may suffer a 50% loss in potential

sales because users are unable to locate the information or products they want, and a loss of 40% of potential repeated visits due to initial negative experience (Cunliffe, 2000) as cited by (Lu, Deng and Wang, 2007).

Supporting this fact, preliminary investigations and early discussions with officials of the Ministry of Tourism and Culture of Ethiopia reveal that the current status of the Ethiopian TIS does not satisfy the volatile needs of their customers. And some are still tied to the traditional paper based service provision, let alone coming to the race between similar institutions of other countries on the Web but not even among themselves. Though there are still some opportunities for such small and medium tourism enterprises, as literature indicates.

This study, thus, has attempted to address the problem that why the Ethiopian web-based tourism information systems, especially tourism websites, are not up to satisfying the needs of the tourists. The tourists are hunting for information about the different tourist destination sites and packages that they need before, during or after their travel through their respective embassies, human tour guides and from a relatively more organized center like the Ministry's "Tourist Information Center" (Yaregal, Personal Communication, 2009). As a result, these tourism institutions could not be competent enough in the fast growing tourism industry and attract more customers and boost up the national tourism economy. Therefore, studying the TIS experiences of these local institutions and guiding them to a better future is compelling.

Early discussions with higher officials of the Ethiopian Ministry of Tourism and Culture also support this idea. The Ministry's "Information Center", whose primary objective is to provide information to the visitors (tourists) who come in person and who need assistance during their travel and stay in the different parts of the country, is busy serving information to these visitors through brochures, human experts and other similar media. They also believe that the websites of these local institutions do not provide more than an online ad brochure, and thus tourists are sometimes not aware of their very existence as most of them do not even appear at the top of search engine results. Some businesses are noticed of their existence by these visitors after their arrival in the country or through phone calls (Yaregal, personal communication, 2009).

Though these problems call for an immediate action, little has been studied on the TIS in the country. One of the studies made in this area identifies how Ethiopia could benefit from the emergence of the Internet in the country in the 1990s. Another study conducted suggests the incorporation of knowledge based systems to replace the small number of human tourist guides.

Therefore, this research was intended to explore the trends and challenges associated with online experiences of the businesses of the tourism industry in the country, study needs and views of tourists from abroad and potential opportunities brought about contemporary TIS to such local tourism businesses. It was also conducted with the hope that it will contribute to future research in the area.

In the effort made to study the above research problem, the research has attempted to answer the following research questions:

- ✓ What does the trend of the TIS in Ethiopia look like?
- ✓ What are the challenges the web-based TIS in Ethiopia facing?
- ✓ What does the content of the current Ethiopian web-based TIS look like?
- ✓ What opportunities can local tourism businesses gain from contemporary TIS?

In its attempt to explore the web-based TIS in Ethiopia, the research has tried to touch the different areas of TIS and studies across, as there are few studies done depicting where the problems lie in the local tourism businesses. It is with the knowledge of this fact that this research was motivated to be studied in the Ethiopian context.

1.3. Objectives

1.3.1 General Objective

The general objective of this research work was to empirically assess the web-based tourism information system practices of the Ethiopian tourism organizations focusing on studying the trends, opportunities, challenges and proposing solutions wherever deemed appropriate.

1.3.2 Specific Objectives

In order to meet the above general objective, the research tried to address the following specific objectives:

- ✓ To study the trends of the Ethiopian TIS
- ✓ To study the current TIS, in general, and Ethiopian tourism institutions TIS experience, in particular.
- ✓ To find out the challenges, including users' satisfaction, in the contemporary TIS of Ethiopia
- ✓ To evaluate the overall content of the websites of the Ethiopian TIS against the existing content guidelines in literature.
- ✓ To alert the opportunities those tourism institutions could get as a result of well designed and up-to-date TIS by studying similar countries experience and by trying to relate to the country's TIS profile.

1.4. Research Methodologies

1.4.1 General Approach

The research was conducted under two main surveys. The first survey dealt with the local tourist institutions and the second one with the customers or travelers. The two surveys fall under the two distinct research methodologies which most scholars use in the Information Systems studies: Qualitative and

Quantitative methodologies. The duration of the data collection was for one solid month; which was from mid August to mid September, 2009.

1.4.2. Data Collection Methodologies and Techniques

The first survey involves both a questionnaire and an interview. For the first survey, to sample from the existing tourism institutions (the population) and disseminate the questionnaire, an online search was conducted to locate Ethiopia-based stakeholders' websites using a search engine, Google, by giving a keyword "Ethiopia" followed by the words like "tourism", "tour operators", "travel agents", "hotels", "museums", "galleries", and "tourist destinations". The results of the search engine was refined by taking only stakeholders who appeared top on the search engine and who are institutionally based in Ethiopia, as the interest was only on local stakeholders. Only few turned up in this case. Therefore, where these organizations' websites did not appear on the search engine, other documents were consulted. For example, by screening the tourism institutions' directories; including documents from the Ethiopian Ministry of Tourism and Culture were scanned through. Other businesses those who did not have websites were also in the list. It was after the institutions' addresses were gathered that the "Convenience Sampling" method was employed to pick the samples until it was possible to contact 30 local tourism institutions in Addis Ababa.

Convenience sampling is used in exploratory research where the researcher is interested in getting an inexpensive approximation of the truth. The sample

participants are selected because they are convenient (Market Directions, n.d). Therefore, in convenience sampling, the selection of units from the population is based on easy availability and/or accessibility. The trade-off made for ease of sample obtaining is the representativeness of the sample.

The major disadvantage of this technique is that it is difficult to tell whether the information collected about the sample is the representative to the population as a whole. But the information could still provide some fairly significant insights, and be a good source of data in exploratory research (www.htm.uoguelph.ca, n.d).

Disseminating questionnaires to those institutions and visitors have got a number of advantages over other methods like interview, email and postal survey such as the following (StatPac, 2009). Questionnaires:

- are very cost effective when compared to face-to-face interviews.
- are easy to analyze. Data entry and tabulation for nearly all surveys can be easily done with many computer software packages.
- are familiar to most people. Nearly everyone has had some experience completing questionnaires and they generally do not make people apprehensive.
- reduce bias. There is uniform question presentation and no middle-man bias. The researcher's own opinions will not influence the respondent to answer questions in a certain manner. There are no verbal or visual clues to influence the respondent.

- are less intrusive than telephone or face-to-face surveys.

An interesting response rate was observed due to the following factors. First, phone calls were made to the selected institutions to ask if they would be willing to take some time and participate in filling out the questionnaire. Next, the questionnaires were taken to the institutions personally. Detailed instructions were given to the respondents and technical words were made clear to ensure clear understanding of them by the respondents. Information technology experts who were employees of the organizations were given priority to fill out the questionnaire. Where there were no such experts, either marketing managers or general managers of the respective institutions were requested to fill them out.

Questionnaires which were used in similar studies by other researchers were also modified and used in this study, for instance, (Jamnia, 2008). Some of the questions are adopted from this same research. There are also points where the same questions were offered both to the tourism institutions and the visitors in the different questionnaires to identify the perception gap between the two. This is done with the aim of pin pointing the gap that exists between the customer and the actual website offerings by those institutions.

Regarding the interview which was conducted, based on the researcher's decisions about potential information sources (key informants) from the results obtained from the questionnaires; detailed interviews were made for volunteer and cooperating institutions. Up to five institutions were contacted. This was

intended to dig deep and find out the existing facts on the challenges currently being faced by these stakeholders. The person in charge of handling the stakeholders' websites and/or managers were more important as they were closer to the fact.

The second survey was conducted by distributing only questionnaires to volunteer tourists. The researcher, along with volunteer expatriates, participated in the data collection by visiting places like hotels, museums, travel agencies and tour operators' offices. This was done with the belief that tourists come to these places to get services in one way or the other. The "Convenience Sampling" method was employed in this survey also. This was done until it was possible to get 50 responses.

The challenges of the TIS, especially the websites of the local tourism businesses were studied as per users' (tourists) views using the questionnaires. The questionnaire was developed so as to enable the tourists to rate the contents of the various items using a five-point Likert-type scale which is the common and easy to analyze type of method in such opinion polls. A Likert scale is a type of psychometric response scale often used in questionnaires, and is the most widely used scale in survey research (NationMaster.com, 2005). This has also been adopted from similar researches done in the area as mentioned above.

So as to study the trends in the Ethiopian TIS, results from the questionnaires along with the literature study were used as methods. Similar studies in the

area have also enabled the researcher to see some opportunities that these stakeholders can make use of them.

1.4.3 Analysis Techniques and Procedures

The data collected through the questionnaires were analyzed using a statistical tool called SPSS (originally standing for 'Statistical Package for Social Sciences' but now 'Statistical Product and Service Solutions'. It is possible to run on most mainframe computers and also on PCs (both IBM clones and the Apple Macintosh). This software was selected because of its simplicity, familiarity to the researcher and its powerful capabilities.

After the all the data have been entered into the SPSS, the frequencies, put as percentages, have been used to compare the results and tabulation was used for data presentation purpose.

The interview was tape recorded and notes were taken at the same time. Later review the tape and notes, occasionally writing down direct quotes that were deemed especially relevant. The tapes were kept as a record, but were not transcribed word for word.

The notes that were taken were the basis of all subsequent analysis. Hence, a standardized way was developed to treat them. Major themes were identified to categorize and present the results as per the objectives of the study. The interview data were analyzed based on the Daily Interpretive Analysis (DIA). In this case, since the answers were standardized, the level of ambiguity was low,

and it was not necessary to remember the particular context of the interview, or other things that the respondent said (Podesta, 2000).

1.5. Scope and Limitations of the Research

This research has made an effort to assess the web-based TIS of local tourism institutions with an emphasis on websites. It has tried to deal with the trends, challenges and opportunities the TIS could bring in enhancing the local tourism. The study made no attempt to study websites of institutions not based in Ethiopia, for example, who have web pages on the Ethiopian tourism destinations and other tourism packages like hotels, tour operators and travel agents as it becomes difficult to keep track of those institutions as they are located in a different places which are not easily accessible.

The study took into account views of international tourists and thus, only ideas of tourists from abroad will be part of the evaluation of the contents of local websites. The aim of the study was to enable these institutions to reach international tourists rather than the local ones.

Moreover, of the four components of TIS identified by Cardoso and Lange, (2007), this study concentrated on websites.

Limitations of the study include: inclusion of only English-speaking tourists have been included in the survey, drawbacks of convenient sampling technique, and probably small number of tourism businesses which are only confined in Addis Ababa were included.

1.6. Significance of the Study

It is evident that ways have to be studied to reach the desired goal that Ethiopia is planning to use tourism as part of the poverty reduction strategy and encourage development. Thus, studying the web-based TIS has got an international implication which would be indispensable to the tourism stakeholders based in the country. The results of the study will definitely assist these stakeholders to design their TIS based on the recommended solutions or at least observe the gaps in their information supply to their customers.

It will also contribute to the few scientific studies conducted in a local context, even to refer to when policies are designed or improved, based on the contemporary working environment which has global implications. It is only if these local institutions make use of such chances that they can win in the globalization based economy, where of course, the web has provided a platform for such small and medium enterprises.

1.7. Organization of the Thesis

This thesis report is organized in to four grand chapters. The first chapter is the introduction to the report where the background, the problem statements, the objectives and the scope of the research area have been dealt with. The next chapter, Chapter Two, contains the literature review where scientific researches done earlier have been discussed. This has been intended to give the theoretical background to the reader. Tourism in Ethiopia; tourism

websites and the amalgamation of information technology and tourism are the core points in this chapter. Chapter Three discusses the empirical findings/results in line with the objective of the study and the discussion and analysis of the findings have been presented in detail. Finally, Chapter Four aims at providing conclusions and recommendation for the whole research work. Suggestions for future research are also highlighted.

CHAPTER TWO

LITERATURE REVIEW

2.1 The Tourism Industry

Tourism sector remains a critical economic sector worldwide and one that provides significant potential for economic growth and development internationally. A growing national Travel and Tourism sector contributes to employment, raises national income, and can improve a country's balance of payments. The sector is thus an important driver of growth and prosperity and, particularly within developing countries; it can play a leading role in poverty reduction (Blanke and Chiesa). Tourism is a leading source of economic growth, foreign exchange earnings, investments, and job creation in many poor countries (UNWTO, 2007). It collectively comprises sub-industries such as airlines, airports, hotels, manufacturing, tour operations, travel agencies, credit card companies, car rental companies, convention and visitors business and other travel related services (Odularu, 2008).

Tourism represents around 35 per cent of the world's export of services and over 70 per cent in Least Developed Countries (LDCs). Tourism is one of the world's largest economic activities. Every day over USD 2 billion worldwide is generated by international tourism alone. With almost 900 million international tourist arrivals recorded in 2007, the market is predicted to expand to 1.6 billion by 2020 (UNWTO, 2007).

As information is the lifeblood of tourism, ITs provide both opportunities and challenges for the industry. Despite the uncertainty experienced in the developments of ITs in tourism, the "only constant will be change" (Buhalis, 1998).

Inevitably the tourism industry is affected by the technological revolution. Both tourism destinations and enterprises increasingly need to adopt innovative methods and to enhance their competitiveness. On the demand side, the new, sophisticated, knowledgeable and demanding consumer increasingly becomes familiar with the emergent ITs and requires flexible, specialized, accessible, interactive products and communication with principals (ibid).

2.2 Tourism in Ethiopia

Tourism started in Ethiopia in the late 1950's and early 1960's under the dynamic leadership of Ato Habte Selassie Tafesse. He is popularly known as "the man who invented tourism in Ethiopia. Back in 1961, Mr. Tafesse introduced for the first time the concept of tourism in Ethiopia, when visitors were looked upon more as curious strangers rather than a source of important income to a developing nation." Mr. Tafesse coined the phrase, "Thirteen Months of Sunshine", in referring to the Ethiopian Calendar, which in turn provoked the imaginations of visitors (Africa Travel Magazine, 2007).

In 2006, travel and tourism in Ethiopia accounted for 5.5% of the country's Gross Domestic Product (GDP) (The FDRE, Ministry of Tourism, 2007). The government is proving its commitment and willingness to develop tourism through a number of initiatives. Tourism is a featured component of Ethiopia's Poverty Reduction Strategy Paper (PRSP) that aims to combat poverty and encourage development in the country (Travel and Tourism, 2006). However, tourism is only briefly mentioned in the paper and it fails to delineate a strategic vision for its further development. Another more relevant initiative is the creation of the Ethiopian Tourism Paradigm, which acts as a ministry of tourism to promote its further development. Despite these efforts, Ethiopia has several challenges to overcome in expanding travel and tourism, the most important of which is the country's negative public image and international perception. As such, the prospects for growth in travel and tourism remain very limited, as suggested by the barely 2% increase in tourist arrivals in 2006 (ibid).

Tourism information dissemination has been very much limited to the traditional paper based, books, human experts and radio advertisements. According to information released from the Ministry of Culture and Tourism, tourism institutions, since the introduction of tourism in Ethiopia have greatly relied up on traditional methods of disseminating tourism information such as: information about the country, destination places, reservations and other travel related service provisions that the country owns. Among the traditional

paper methods used are, brochures, magazines, news papers, posted manual ads like '13 Months of Sunshine' and other similar mechanisms.

The guide book which was prepared by the Ministry has also been used very extensively. Tourist Information Centre which is managed by the Ministry has also done a lot of promotional related issues. Hotels and guest houses also promote their business by advertising their products and services through both local magazines, Ethiopian Airlines and national radio services.

Tourism institutions still seem to be tied to these traditional tourism information dissemination mechanisms which will definitely hamper their competency in the international market, as literature indicates. But, there are indications that some of the tourism institutions have started using information technologies, including, developing their own websites. The following section discusses tourism information systems, in general.

2.3 Tourism Information Systems (TIS)

Tourism information systems are systems which provide travel agencies and customers with crucial information such as flight details, accommodation, price, and the availability of services (Cardoso and Lange, 2007).

Tourist Information System serves as a worldwide advertisement of tourist services, agencies and tourist activities. It helps attract new clients providing

them all information they need to know about traveling in a particular country and it saves money on marketing and advertising costs (MicroStep_MIS, 2009).

Today, it is almost assumed that every business makes use of the Internet and the ICT (UNCTAD, 2001). Tourism is one of the most important sectors that apply ICT and the one that is most influenced by ICT employment (Wiig, 2003). In every enterprise, small or big, the Internet can contribute to the marketing of products and services and increase the effectiveness of the organization (Liikanen, 1999). Since the tourism is an industry that is fully based on information, service and reliability, each information provider (e.g. hotel, restaurant, car rental, region, travel agent) must organize their data in an easily accessible and attractive way, and keep it up-to-date (ibid).

The Internet has an advantage over any other media in its ability to permanently expose information to a global audience. The net vastly improves the marketing information streamline anytime and anyplace. Accessibility is vital in international trade and the web gives opportunity for businesses to improve service quality.

According to Gruescu et al. (2009), the web provides four tangible improvements in customer service.

1. A wider range of products for the consumers: A website can display an array of products and services

2. Quick processing of payments: Automatic processing of cyber-cash or credit card charges.
3. Faster delivery: Especially for products like online software and music distribution
4. Making available a wealth of information that can be quickly and easily accessed.

In tourism the web-based distribution systems can help satisfy the consumer needs of easy access to a wide choice of information and hassle-free reservations. Increasingly tourist satisfaction depends on the timely availability of accurate and relevant information. Improved access to information on all aspects of tourist activities has made it possible for marketers to offer personalized services at the same prices as standard packages.

ICT can influence the structure of the tourism industry by for example giving an opportunity to reduce the transaction and distribution costs (Wiig, 2003). The Internet and e-commerce may offer many possibilities to every link in the tourism supply chain (ibid). Thus, the ICT and e-commerce represent a big opportunity for every country for improving their relative positions in the international market. This especially concerns the tourism sector in developing countries that can, by the use of ICT, gain competitive advantages (Trepper, 2000 as cited in Badnjevic and Padukova, 2006).

In tourism, the Internet instantly bridged the gap between consumers and businesses enabling interactive communication and trade. The proliferation of e-commerce enabled electronic trading, both from enterprises to consumers (B2C) and perhaps more importantly between businesses (B2B). It also enabled consumer-to-consumer (C2C) services and communities to emerge providing a wide range of tourism information services online. Not only did it enable tourism businesses to increase their reach but also intensified online trading and globalised the market of all types of products and services (Beech and Chadwich, 2006).

As planners' implications of ICT, more than 93% of travellers reported they plan by themselves using online sources. Of that group, 65 million actually booked at least one travel service or product online in the past year (Tourism Industry Association of America, 2005 as cited in Kim, Park and Morrison, 2008). The Internet and mobile ICT are also useful channels for many tourists and industry sectors, not just for communication purposes, but also travel products including airline tickets, hotel accommodations and rental cars.

ICT's penetration into tourism should provide strategic tools for the networking of the industry, for adding value to products and for enabling organizations to interact with all stakeholders in a profitable way. In addition, ICTs can improve the managerial processes in order to ameliorate control and decision-making

procedures, and to support enterprises to react efficiently to environmental changes and consumer behavior trends (Beech and Chadwich, 2006).

Gruescu, et al. (2009) explains the fact that the emerging ICT developments have direct impacts on competitiveness as they determine differentiation and cost advantage. ICTs enable consumers to repackage products at their will through endless combinations. ICTs are also instrumental to cost management, especially the distribution and promotion costs. This can be done by reducing commissions to intermediaries and labor cost and relying on their web with increased efficiency (ibid).

Providing a business with higher competitiveness depends to a large extent on the permanent incorporation of technological innovations, the most outstanding of which are Internet and other forms of ICT. (Pena and Jamilena, 2009)

ICT deployment is considered even more important in businesses located in emerging areas or areas with lower economic development, areas with limited services and smaller areas. Small and emerging tourism enterprises have all these characteristics. As a result of the foregoing characteristics, such tourism businesses usually have very limited resources for the development of competitive strategies, although ICT use can allow them to: present themselves on the international market, encourage commercialization in periods of low occupancy, cease to be

dependent on intermediaries, giving them the opportunity to directly promote and distribute their services and compete on a more equal basis with large institutions. Moreover, the economic costs to the deployment of such technology are low, making it suitable for small businesses. (ibid)

The vast majority of tourism enterprises around the world can be classified as small and medium-sized enterprises. Most of these are micro enterprises (less than 5 employees) that generate a small amount of revenue and are dominated by family businesses, particularly in rural areas. In developing countries, small enterprises are the dominant form of tourism enterprises and the backbone of destinations tourism sector (Karanasios and Burgess ,2006; Cardoso and Lange, 2007).

The definition of a SMTE is:

“Small and medium tourism enterprises are businesses, which by their own definition, operate in the tourism industry and employ up to 100 employees and include sole operators not employing any staff. Specifically, micro businesses are those that employ between one and four workers, small businesses employ between five and 19 employees and medium businesses employ between 20 and 100 employees” (Breen, Bergin-Seers, Jago and Carlsen, 2005).

However, it is evident that SMTEs are increasingly marginalized from the main stream of the tourism industry, as they are unable to afford the fees charged by CRSs. In addition, their flexible and independent characters pose serious obstacles in their incorporation in the rapidly developing and rigidly standardized GDSs. As a result, the concept of DMSs (Destination Management Systems) has emerged, to assist information provision and reservations for the entire range of tourism products at specific destinations. (Buhalis, 1997)

Most of the countries that provide tourism are developed countries that have access to technology and constantly use the computerized systems of reservation and the Internet. The world networks of information and distribution –CRS- Systems of computerized reservation, GDS- systems of global distribution and the Internet play a decisive role in the sector of international tourism, because they connect the producers to the consumers of touristic products (Gruescu, 2002 as cited in Gruescu et al., 2009).

CRSs and GDSs were the most important facilitators of tourism industry changes until the arrival of the Internet, as they provided a comprehensive travel marketing and distribution system and were often called 'travel supermarkets' (Go,1992 as cited in Gruescu et al., 2009). GDSs have been used in order to facilitate and manage the drastic expansion of tourism enterprises and destinations globally. GDSs comprise the essence of the tourism industry as they connect the vast majority of the tourism suppliers

with the travel trade and tourism intermediaries. They enable immediate itinerary building and reservation confirmations (Gruescu et al., 2009).

2.3.1. Fundamental Infrastructure to TIS

As written by Cardoso and Lange (2007), the GDS, HRS, HDS and the Websites are the fundamental infrastructure for Tourism Information Systems.

But these different infrastructures should work together to provide a full dynamic package for tourists' information and aid the visitors for different kind of reservations. Of course, the infrastructures are facing integration challenges.

Dynamic packaging technology helps online travel customers to build and book vacations. It can be described as:

the ability for a customer to put together unique dynamic packages from a range of alternatives of a (vacation) trip including flights, hotels, car rentals, local tours, and tickets to theaters and sporting events, without having to be aware of the intricacy of contract rules and pricing issues (ibid).

Cardoso and Lange (2007) further explain interoperability as an issue that should be addressed whenever dynamic packaging is thought of. The different hardware platforms and operating systems and differences in the representation, encoding, model, structure and schema of data used in the

different information sources are some of the problems that hinder interoperability. Appropriate interfaces, encoding, and access protocols are also issues that need to be addressed.

Semantic integration is another issue that in order to leverage dynamic packaging applications an infrastructure needs to address (ibid). Once there is an agreement on a common data model for integration, it is necessary to reconcile the entities (instances) present in the data sources to have access to a uniform schema (ibid).

Web services refer to a set of technologies that can universally standardize the communication of applications in order to connect systems, business partners, and customers cost-effectively through the World Wide Web (ibid). Semantics provide an agreed understanding of data between and among Web services. Semantics encourage the development of interoperable systems that can help create and support new collections of Web services to better meet the demands of dynamic packaging applications (ibid).

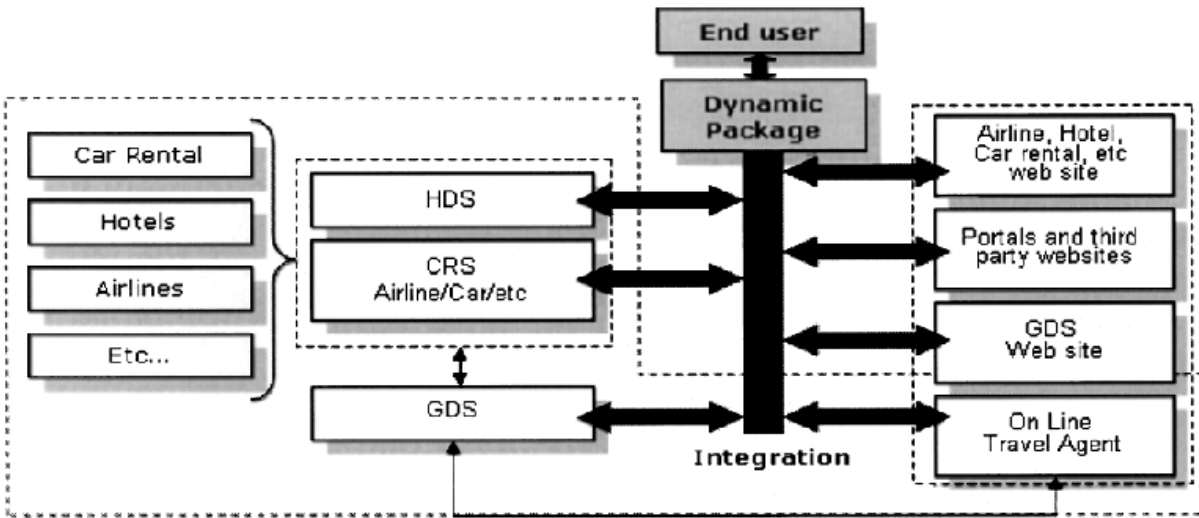


Figure 1: Integration of Tourism Information Systems (Source: Cardoso and Lange, 2007)

Figure 1 shows the integration of various TISs to support the concept of dynamic packaging. As can be seen, new communication links are established among the various participants of the distribution model to integrate tourism products.

Computerized Reservation System (CRS)

CRS is a travel supplier's own central reservation system (Inkpen, 1998 as cited in Cardoso and Lange, 2007). A CRS enables travel agencies to find what a customer is looking for and makes customer data storage and retrieval relatively simple. These systems contain information about airline schedules, availability, fares, and related services (European Travel Agents' and Tour Operators' Associations, as cited in Cardoso and Lange, 2007).

A Computer Reservations System (CRS) is a computerized system used to store and retrieve information and conduct transactions related to air travel. Originally designed and operated by airlines, CRSs were later extended for the use of travel agents (United States Department of Transportation, 2009, Buhalis, 1997).

Essentially a CRS is a database which enables a tourism organization, to manage its inventory and makes it accessible to its distribution channel partners. Buhalis (1997) further describes from the tourism demand side, CRSs satisfy consumers' needs for easy access to transparent and ease of comparing information on a wide variety of choices of destinations, holiday packages, travel, lodging and leisure services. They also demonstrate the actual prices and availability of such services while providing immediate confirmation and speedy documentation of reservations. Increasingly, tourists' satisfaction depends on the accuracy and relevance of tourism information as well as the promptness of responding to consumers' requests (ibid).

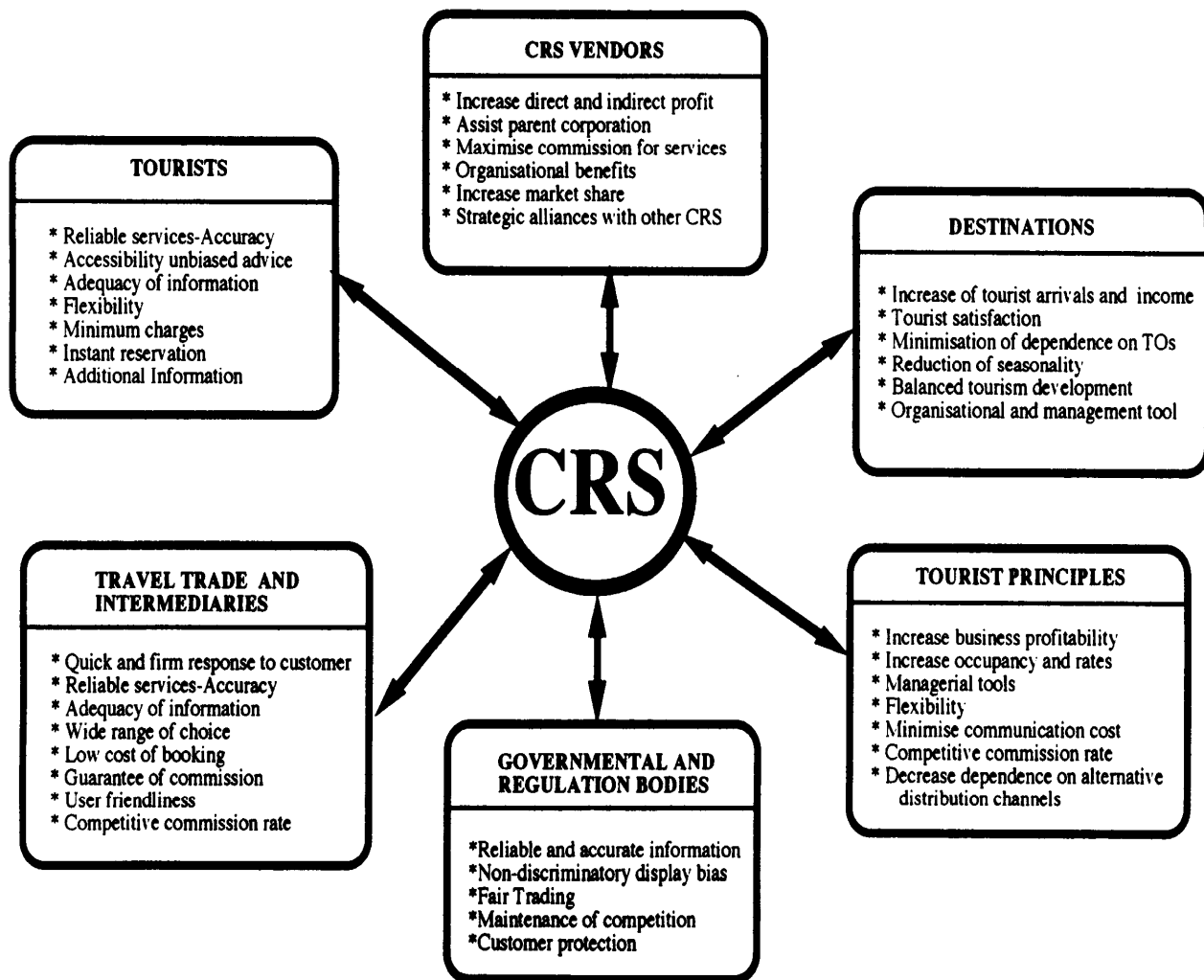


Figure 2: Need and Mission for Computer Reservation Systems' Services (Source: Buhalis, 1999)

Figure 2 (above) illustrates the complicated mission that CRSs have to accomplish for each tourism actor.

Global Distribution Systems (GDS)

A GDS is a super switch connecting several CRSs. The airline industry created the GDS concept in the 1960s (Cardoso and Lange, 2007). A GDS integrates tourism information about airlines, hotels, car rentals, cruises, and other travel products. It is used almost exclusively by travel agents. Prior to its introduction, travel agents spent a considerable amount of time manually entering reservations. The use of these systems is expensive because they charge a fee for every segment of travel sold through the system (ibid).

Among the “shelves” on which buyers search for travel services are world’s GDSs and the Internet distribution systems. These systems have become electronic supermarkets linking buyers to sellers and allowing reservations to be made quickly and easily. Nowadays, more travel is sold over the Internet than any other consumer product. The Internet is a perfect medium for selling travel as it brings a vast network of suppliers and a widely dispersed customer pool together into a centralized market place. (Das, 2002)

However, any discussion of the Internet as a distribution channel for travel needs to start with an understanding of the existing electronic distribution infrastructure, the Global Distribution System (GDS). The airline industry created the first GDS in the 1960s as a way to keep track of flight schedules,

availability, and prices. It is these original, legacy GDSs that today provide the backbone to the Internet travel distribution system. (Das, 2002)

Hotel Distribution Systems (HDS)

Hotel Distribution Systems work closely with GDSs to provide the hotel industry with automated sales and booking services. A HDS is tied into a GDS, allowing hotel bookings to be made in the same way as an airline reservation (Inkpen, 1998 as cited in Cardoso and Lange, 2007).

Recently, companies, such as the airlines, have chosen the strategy to sell tickets on their own websites to avoid using a GDS (Dombey, 1998 as cited in Cardoso and Lange). This is the simplest and cheapest strategy to sale tickets because they don't have to pay a fee to the GDS. A recent survey (O'Connor, 2003) revealed that over 95% of hotel chains had a website, with almost 90% of these providing technologies to allow customers to book directly.

Websites

Tourism websites have the responsibility of presenting and projecting destination image. Moreover, a DMO's website can also be loaded with a multitude of functionalities such as mapping, searchable lists, travel itineraries, food and lodging as well as reservation information (Choi et al., 2007)

Further, the need to continually update the underlying databases to keep information current is a intimidating task. Marketing in cyberspace results in adding a new dimension to the current range of marketing tools utilized by DMOs. Interactive features that can be fully accommodated online such as communities of interests further present themselves as wonderful opportunities and challenges (ibid).

DMOs are embracing the new online technologies. However, in meeting objectives to promote the destination, the DMO websites need to clearly define their identities and roles. Although it is important to evaluate the DMO sites; the solution to provide quality information and services should ultimately hinge upon the users — the travelling public (Choi, Lehto and O'Leary, 2007).

In order for the tourism businesses' websites to rank highly on the search engine results, the following points are usually advisable, though this varies from search engine to search engine.

Basically, the more text they include, the better. They have to make sure that all of the words that people might use in searching for a page are included somewhere. It is possible to include Meta Tags to specifically denote keywords, but not all search engines will pay attention to those (as they have been widely abused in the past) (Karel, 2001). Some search engines weigh terms more heavily if they are in TITLE or header tags. Some search engines, notably Google, rank pages based on algorithms that calculate how often they are cited.

The businesses can make their websites appear in the top results of search engines by using search engine optimization services (SEO services). SEO services mainly involve:

- SEO writing - writing articles related to certain keywords and keyword phrases
- Keyword research - getting to know various keywords related to the main keyword, the ones that attract most traffic and how to use them in context with content being created
- Generating tags - this one involves creating certain html tags so that the robots can classify your website into the relevant group that deals with the content you created
- Generating titles - having relevant titles for pages on your website
- Creating high value links - a high value link is generated when a website that has been ranked highly by a search engine points to a website with a low ranking. These links are very important to search engines as they help 'lift' the website (Mulwani, 2009).

Terms and Criteria Used in the Assessment of Tourism Websites

According to (Davidson and Yu, 2005), the following are terms and criteria are used in the assessment of tourism websites. The details of how the assessment is done are explained in detail in the methodology part of this report. The terms include: Download speed, Web graphics/images, Update frequency, Ease of

moving around WebPages, Provide other useful links, General description, Historical and cultural information, News, Emergency/useful numbers, Immigration and customs information, Business information, Currency and/or exchange rates, Maps, Car/scooter rental, Transportation booking online, Bus/train guide, Transportation maps, Suggested itineraries, Hotels and/or resorts, Budget accommodation, Connection to hotel booking online: Directed or linked to outside websites, Shopping highlights/markets, Monuments, Cultural sites, Scenic sites, Others: Specialties recommended by the website such as tea houses, specific festivals and cultural events, children's activities, martial arts, and venues, Night life, Resort activities, Nature/outdoor activities, and Cultural festivals/fairs.

2.3.2. Destination Management Systems (DMSs)

One of the latest IT developments in the tourism industry is the proliferation of destination oriented systems. Destinations are recognized as amalgams of resources, products, facilities and services comprising the 'total tourism product' or the 'travel experience'. Destination Management Systems 'combine a radically improved and rapidly evolving methodology [computing] with new or better communications [telecommunication networks] in order to satisfy a growing private sector market [in tourism]' (Archdale, Staton, Jones, 1992, p.20 as cited in Buhalis, 1997). Vlitos-Rowe (1992, p.86) as cited in (Buhalis, 1997) suggests that DMSs 'intended to provide complete and up-to-date

information on a particular destination. These complete databases ensure that smaller establishments, as opposed to international hotel chains and other land services associated with travel are included’.

DMSs emerged as a response to some major tourism demand and supply drivers. From the tourism demand point of view, they address the new ‘4Ss’, i.e. Sophistication-Specialization-Segmentation-Satisfaction by providing consumers with the entire range of tourism services offered at the destination level by independent enterprises (Buhalis, 1997). These systems attempt to provide a flexible, tailor-made, specialized and integrated tourism product- the personalized destination experience- by enabling assembly of individually supplied tourism products. The supply side also recognized that ITs stimulate a paradigm shift in tourism management and distribution.

However, CRSs failed to address the leisure markets and provide little information on destinations’ attractions and amenities, while jeopardizing the competitiveness of SMEs which are effectively marginalized from the distribution mechanism (ibid). SMTEs are also excluded because they cannot afford the entry and transaction fees charged by such systems.

Buhalis (1997) mentioning the earlier researches, explain both the growing independent leisure market and SMTEs are inadequately served and suffer from isolation. DMSs score heavily over CRSs for remote, insular and less developed destinations which attract a large number of independent tourists.

In addition, DMSs can be suitable for destinations which cannot achieve adequate prices due to the domination of inclusive tour visitors and purchasing power of tour operators.

2.3.3. The Destination Integrated Computer Information Reservation Management Systems (DICIRMS)

The DMS concept can be taken a step forward to formulate an ideal and perhaps near utopian system, which can revolutionize all aspects of destination management as well as integrate all tourism actors at the local level. DICIRMS address the entire range of needs and services required by both tourism enterprises and consumers for specific destinations (Buhalis, 1997).

Figure 3 describes how DICIRMS provides industries with the opportunity to diversify its products by designing uniquely customized tourist packages in order to satisfy specific customer needs.

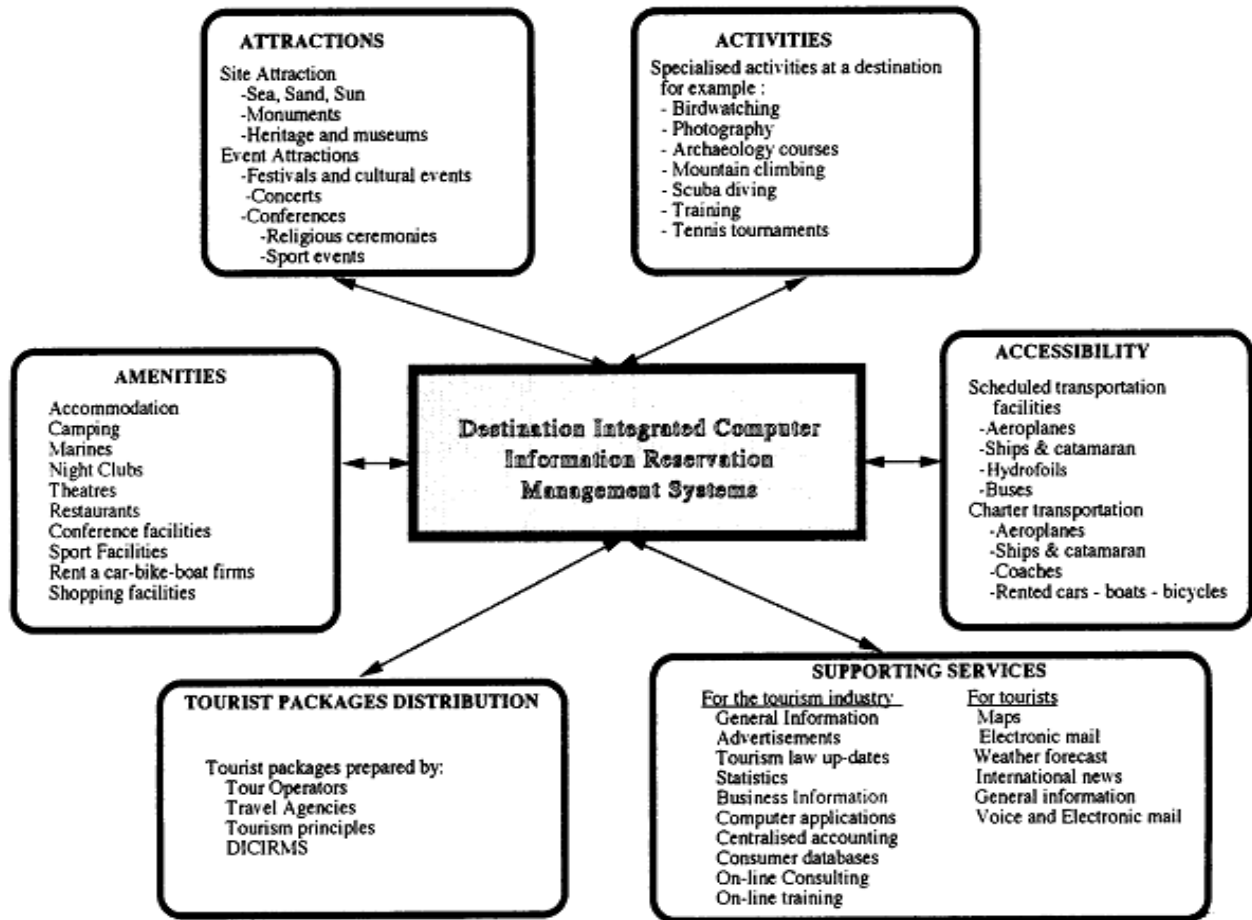


Figure 3: Contents of Destination Integrated Computer Information Reservation Management Systems (Source: Buhalis, 1999)

In DICIRMS, the total tourism providers need to be available to facilitate choice for customers. It should also be multi-integrated by utilizing all available ITS to integrate the local economy and optimize their benefits. Computerization and networking will enhance full benefits as there is a consistent reduction in price of basic IT equipments. Information provision is an integral part of DICIRMS as they should disseminate information about everything related to a destination. Reservation and purchasing enhance comprehensive service by enabling the management and create value and wealth for destinations (ibid). Consequently,

DICIRMSs can support the long term prosperity of host populations, by improving economic impacts and capitalizing on multi-integration at the destination level.

2.4 Challenges and Opportunities in Contemporary TIS

Challenges faced by small enterprises in developing countries in adopting the Internet have been well visited in a number of researches. Some of these obstacles are the cost of technology, access to telecommunications infrastructure, lack of timely and reliable systems for the delivery of physical goods, low bank account and credit card penetration, lack of payment systems, government and regulatory systems and problems with security and trust (Karanasios and Burgess 2006).

Karanasios and Burgess (2006) further state that small enterprises in general are characterized as: resource poor; having basic technology needs; being informal in nature; family owned and relying on family labor and not in direct competition with larger enterprises; suffering from information scarcity and being in an environment where managerial and financial factors can contribute to business failure (ibid).

Furthermore, the situation of small enterprises in developing countries is complicated by limited market and often they are susceptible to harassment from criminal gangs and corrupt institutions. Moreover, the political

environment is conducive only to small enterprises favoring larger businesses. These characteristics suggest that small enterprises face many challenges to adopting new technologies (Karanasios and Burgess, 2006)

Lack of financial resources and knowledgeable staff, security and legal issues, lack of knowledge and skills and a general lack of knowledge of the full potential of the Internet are also mentioned (ibid). However, smaller traveling agencies, among others, are more interested in the application of Internet to gain certain competitive edges over their larger counterparts. (Yang, Flynn, and Anderson, n.d)

Despite the potential benefits, ITs do not guarantee profitability and they may even worsen the competitive position of firms and the attractiveness of an industry (Buhalis, 1998). However, ignoring and under-utilizing ITs could be disastrous as it would create strategic vulnerability and competitive disadvantage. ITs can be fruitful only if proper planning and management's commitment along with training is implemented. Perhaps the greatest challenge is to identify and train managers who will be effective and innovative users of ITs.

Destination marketing organizations are entrusted with the role of promoting and marketing their cities, states and countries to consumers and travel trade intermediaries (Morrison, 1998). One crucial market communication channel for DMOs has been the Internet, as IT has transformed the tourism industry

into a digital economy (Buhalis and Spada, 2000 as cited in Choi, et al., 2007). Although the integration of IT into the fabric of a DMO's overall marketing strategy is considered as an important key to success (Gretzel *et al.*, 2000), the exponential explosion of information online has presented the DMOs with increasing challenges as well as opportunities in the information era.

Deegan and Horan (2003) wrote that one key application in service operations is about the possibility of online delivery of the services customers ordered - as not all types of services (or products) can be delivered online. The travel booking industry is one of several services - which can be checked, inquired, and ordered online easily, and conveniently communicated and delivered electronically via the Internet. This is an opportunity for such businesses. It has been reported that the online booking in the hospitality industry (including hotel/motel, airlines, travel packages, etc.) is increasing at a very rapid speed recently, especially at the lower rate end (*ibid*).

According to Yang et al., (n.d), there certainly are some challenges and issues in the application of Internet technology in the hospitality industry (including e-booking). One major obstacle addressed most in the practice is the security concern. Customers are certainly concerned about giving their personal financial information (e.g., a credit card numbers) online, and many customers somehow are also afraid to pay an invoice through the Internet. Another issue challenging the online booking is the quality of delivered service - including

both delivery speed (i.e., short advance time required in ordering) and delivery reliability (i.e., the rooms booked are available on check-in times). It has been predicted that in the travel industry to be successful in long-term, the operations of an online booking business must compete in a more creative way comparing to those traditional business counterparts. That is, the strategic positioning decision of an online booking business must establish its own unique competitive advantages over its traditional business competitors as well as its online business counterparts.

New information technologies have provided travel organizations (both public and private) speedy and efficient delivery of comprehensive information without geographical confinement. While most travel suppliers and intermediaries have now adopted the Internet as an important marketing and distribution channel, almost every destination (at the country, state or city level) provides tourism information online (Sheldon, 1997; Gretzel, 2004 as cited in Choi et al., 2007). However, these opportunities presented by new technology have, ironically, caused new challenges. The complex composition of tourism products and the overlapped boundaries of service provision often lead to serious competition in the physical market; this seems no different in the virtual spaces (Werthner, 2003). Meanwhile, consumers are often overloaded with information provided by multiple sources and feel overwhelmed before finding the intended information. Irrelevant or untargeted information will be filtered through consumers' cognitive system with little impact. This has heightened the

importance of quality information provision for tourism organizations (Kaplanidou and Vogt, 2004). Since the Internet allows each organization to deliver information and services through structures and processes that are fast, flexible and flat, the hierarchical elements in travel organizations, which is another challenge, are expected to be dissolved on the virtual space (Barnatt, 1997).

In general, tourism is an information intensive industry which needs an organized information management so as to enable tourism businesses get a competitive advantage over their rivals. The web allows all kind of businesses to take part in the international market and reach millions of customers at ease. The security, trust, reliability and service differentiation are some of the concerns need to be addressed by such businesses while they plan to sell their products and services on the Internet. It is with this theoretical background, that the study was conducted and the next chapter describes the findings and discussions from the research.

CHAPTER THREE

RESULTS AND DISCUSSIONS

In this chapter, full results of the study through the different methodologies employed throughout the study have been reported. Discussions on the trends, challenges and opportunities in the Ethiopian context will also be made later at the second part of this chapter.

The methodologies involved include: a questionnaire and an interview under survey one and a questionnaire only under survey two. The first survey deals with institutions which are involved in the tourism industry in Ethiopia, specifically in Addis Ababa. These comprise tour operators, travel agents, hotels, galleries and museums.

Of the 30 questionnaires distributed to the institutions, the researcher was able to get 24 responses. This is an 80 per cent response rate. It was possible to get high response rate compared to, for instance, the Nysveen et al., (2003), Morrison et al. (2001). All the 24 responses were used for analysis as they were all complete. Under this questionnaire, we had 71 different variables covering the different objectives of the study.

In this first survey, interview was also employed as another method. Interviews were conducted with five different institutions' information technology experts

and managers. These were conducted after the questionnaires were collected. The interviewees were selected based on the results from the questionnaires.

The second survey was conducted through a questionnaire. The researcher, along with volunteer expatriates, took part in disseminating the questionnaires and collecting the results. After selecting potential tourist availability sites, including the National Museum and major hotels, it was possible to collect 46 questionnaires. Of these, 44 responses were used for analysis as the two questionnaires are incomplete. This second questionnaire contains 46 different variables.

3.1 Empirical Findings/ Results

3.1.1 Demographic Information

In the first survey different tourism businesses have participated. These businesses include: tour operators, travel agencies, museums and galleries. Many give mixed services. Their years of establishment range from as early as 1905 to as recent as 2007 and owned by both the government and private.

The results of this study indicate that the majority of the organizations who are involved in the tourism industry can be labeled as small and medium enterprises. Three fourths or 75 % of such institutions employ 50 or fewer employees. Of these 50 % of the total sample employ less than 10 employees.

In the second survey, the respondents were from 17 different countries all over the world, and various continents including: Europe, North America, Asia, Australia and Africa. Among the respondents, the majority of them have a Graduate level or above educational status. This figure accounts to 63 % of the total respondents and 22 % of them have at least a Bachelor degree. The rest are high school students. Around 44 % of these tourists' ages lie between 21 and 30 years and 39% of them between 31 and 50. The rest belong to 15 to 20 or 51 or above years of age. About 74% of the total respondents used the Internet for tourism related activities almost every time or very often. And about 17% use the Internet for similar purposes only sometimes. Among the respondents 50% have used or visited the Ethiopian based tourism websites.

3.1.2 Trends in the Ethiopian TIS

The “Father of Tourism in Ethiopia”, Mr. Habte Selassie Tafesse, came up with the sign slogan, “Thirteen Months of Sunshine” to promote tourism in Ethiopia and draw the attention of the rest of the world to the country in the early 1960's. Tourism information is now being released on different local websites which are owned by local tourism businesses.

Television and radio advertisements were among the traditional tourism information systems used by tourism businesses to promote themselves and sell their products and at the same time to prove their competence with peer businesses locally or elsewhere. Brochures were also among the commonly

used mechanisms of promotions. Telephone calls and faxes were used for customer contact and Magazines and Newspapers were also available to the affording institutions. They were of course costly to the Small and Medium tourism enterprises. Websites, once they are designed and released, they are believed to be the cheapest and would allow the businesses to be in contact with millions of customers all over the world.

Results from the questionnaire indicate that almost all of the tourism businesses own their own websites which they use them for different purposes. According to the study conducted, 96 % of these institutions own their own websites. In terms of the purpose of the websites of these business firms, many of these businesses, close to 61%, use their websites for either a promotional service or information provision only. 26% of them use for information provision, promotional services and other business transactions followed by those, 13%, which use their sites for business transaction, entirely. The following table illustrates the above results.

		Frequency	Percent	Valid Perc.	Cumul. Perc.
Valid	information provision only	4	16.7	17.4	17.4
	promotional service	10	41.7	43.5	60.9
	business transaction	3	12.5	13.0	73.9
	1,2, or 3	6	25.0	26.1	100.0
	Total	23	95.8	100.0	
Missing	Not applicable	1	4.2		
Total		24	100.0		

Table 1: What is the purpose of the website?

As shown in the table below, the majority, 61%, of these websites have been developed by different web developing companies in the country or abroad. Whereas, 26% of them by the employees of the respective organizations.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	An employee	6	25.0	26.1	26.1
	A web developing company	14	58.3	60.9	87.0
	A family member	3	12.5	13.0	100.0
	Total	23	95.8	100.0	
Missing	Not applicable	1	4.2		
Total		24	100.0		

Table 2: Who developed the website?

When these businesses were asked if they followed a World Tourism Organization Standards or local tourism governing institutions' standards for websites, around 52% claim that they have followed those standards and close to 48% of them say that either they did not follow any standards or have no idea of whether any standards were followed during website development.

The results also indicate that close to 57% of the websites are maintained by web developing companies. Close to 17% of the websites are The one which are maintained by the employees of the respective businesses. Forty four per cent of the websites are both developed and maintained by web developing companies in Ethiopia or abroad. ETC ranks first - with 54%, in hosting these websites; followed by international institutions based outside Ethiopia - with 29%. Only close to 13% of the businesses have their own server to deploy their websites on. Those who host their websites on companies based abroad, 71%,

believe that it is expensive to pay for such website hosting companies and they do it just because the hosting is sponsored by a separate group of volunteer institutions based overseas.

			Who maintains the website?				Total
			An employee	A web dev. company	A family member	Others	
Who developed the website?	An employee	Count	3	3	0	0	6
		% of Total	13.0%	13.0%	.0%	.0%	26.1%
	A web dev. company	Count	1	10	0	3	14
		% of Total	4.3%	43.5%	.0%	13.0%	60.9%
	A family member	Count	0	0	3	0	3
		% of Total	.0%	.0%	13.0%	.0%	13.0%
Total		Count	4	13	3	3	23
		% of Total	17.4%	56.5%	13.0%	13.0%	100.0%

Table 3: Crosstabulation (Who developed the website? * Who maintains the website?)

The businesses were also asked how many computers they have in their offices to do tourism related activities and half, 50%, of the businesses have 6 to 10 computers in their offices. Some 29% have got more than 10 computers and the remaining - 21% have less than 6 computers. The majority, 67%, of the companies said that they use their computers for customer contact, database management and word processing. The rest, 29%, said they use them purely for customer contact.

Seventy percent of the businesses believe that they do not have adequate Information Technology (IT) experts and the rest think that they have got

enough experts. The majority, 79%, of these experts have never been trained to update them with the ever changing and developing technologies.

Forty six percent of the businesses believe that IT enhances their business by facilitating communication between them and the customers, whereas, some 29% and 21% of them said IT is simply important or facilitates access to information, respectively.

One of the results of the study is about the culture of the Internet being used by the businesses. Almost all, 96%, of the responding institutions have got access to the Internet or make use of the Internet for different purposes. The purposes of the Internet include: promotional service, information search, customer contact, online transaction, fun and entertainment. They do these activities, almost every day. Only one business, a restaurant believes that a website and the Internet are of no use for its business.

While 63% of the businesses never use any other systems software, the rest do. Galileo software, a global distribution system and one of fare-shopping tool, is used by 25% of tour operators and travel agents according to the study. Sixty one percent of them are planning to buy new kinds of system softwares which aid their businesses. Fifty three percent are using their computers for database application systems like excel, where, 32% - have got intranets in their companies.

As depicted in the results of this study, around 42% of the businesses involved in tourism have no idea which component of their websites is the most important to attract more customers. 'Packaged tours' and 'Home pages' of these websites, in general, were claimed as the most important components by 33% of the respondents. The rest of the respondents said that all the components of the websites are equally important for their businesses. However, around 79% of the businesses admit that their websites still need improvement.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Details of products	3	12.5	12.5	12.5
	Home page	4	16.7	16.7	29.2
	Packaged tours	4	16.7	16.7	45.8
	All components	3	12.5	12.5	58.3
	Not sure/I don't know/ Missing	10	41.7	41.7	100.0
	Total	24	100.0	100.0	

Table 4: The most important website component

About 50% of these organizations either have no idea about value added services on their websites or have no such services to call for more customers and increase more site visits. Twenty five per cent of the businesses say that 'Packaged tours' is a value added service which is attracting more customers. In line with this fact, about 50% of the ones who visited the websites either never come to use the services provided by the organizations or only a few of them show up to consume the service rendered.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Special offers like dinner and small gifts	3	12.5	12.5	12.5
	Tour Packages	6	25.0	25.0	37.5
	Pictures	3	12.5	12.5	50.0
	Missing/ I don't know	12	50.0	50.0	100.0
	Total	24	100.0	100.0	

Table 5: Which value added service is attracting more customers?

In most of these websites there is no mechanism to track the number of website visitors; therefore it is not possible to accurately tell how many visitors they get on their sites each day. This number accounts for 58% of the responding institutions and almost all of these websites are visited by less than a hundred visitors per a day.

3.1.3 Challenges in the Ethiopian TIS

One of the major challenges facing tourism businesses in Ethiopia is the gap between customers' (tourists') perceptions about the tourism websites and the businesses' judgment about their own websites. To identify these gaps, different criteria were identified from literature and both the businesses and the visitors were made to evaluate the local tourism websites.

Eighty seven percent of the institutions either strongly agree or agree to the fact that their websites contain travel company information, whereas only 61% of the tourists believe that such information is either totally not provided on local websites or are indifferent or neutral to speak about its existence.

Around 73% of the tourists disagree or are indifferent when asked about the presence of links to airline websites. Some businesses, 44%, admit the absence of such links on their websites by strongly disagreeing, whereas, 39% are indifferent. Only 5% of the tourists can confidently speak of the possibility of airline booking from these sites. The majority, 68%, are indifferent on this fact and 23% of them disagree with this. On this point, 44% of the tourism organizations admit by strongly disagreeing; whereas 57% either claim its presence or are indifferent.

When we look at the possibility of online accommodation, only 14% agree and the rest are either indifferent, disagree or strongly disagree. On the other hand, 58% of the institutions strongly claim or simply believe that online accommodation is possible from their websites. Some 21% of these businesses admit to the absence of such components on their site.

Contact addresses, "Contact Us", on local tourism websites is believed to be available by 68% of the visitors. Whereas, 96% of the organizations believe that they put their addresses on their websites.

Ninety one percent of the tourists also say that customer service is not active online whenever they needed help, but contrastingly 87% of the service-rendering institutions claim that their customer service is very active or active.

Regarding the current currency exchange rate at the time of a website visit of the respective businesses, an overwhelming majority, 73%, of the tourists are indifferent about its existence. Businesses also admit this with 71% of them either strongly disagree, disagree or are neutral about the accessibility of such services from their own websites. Only 25% believe about such services accessibility.

According to the tourists, 36% agree that there is travel guide information and about 41% of the responding tourists are neutral about the presence of such information. Whereas, 71% of the businesses claim the provision of travel guide information on their websites and 17% are indifferent on this issue. And 32% of the responding tourists agree with the idea of transport information presence on local tourism websites, whereas, half of them are indifferent about the existence of transport information. Contrasting with this, more than three fourth, 78%, of the businesses either strongly agree or just agree about such information's existence on their websites.

More than half, 55%, of the visitors just agree with the presence of major events such as holidays being posted on local websites. Only 27% of them disagree with this idea. 52% of the tourist serving firms either strongly agree or just agree with this. Surprisingly, 35% of these businesses strongly disagree or disagree about such information's provision on their sites.

Seventy seven percent and 14% of the visitors respectively, agree or disagree about major tourist attractions presence on local websites. The percent goes up to 87% in the case of businesses who strongly agree or just agree about their sites content of such components. And no organization agrees that its site miss such information.

Government services such as visa provision or renewal information is believed to be found on local sites only by 32% of the tourists who used Ethiopian based tourism websites. The same amount of tourists said that, the sites do not contain such information. On the other hand 61% and 39% of the businesses, respectively, strongly agree or are indifferent about the existence of such information. None admit about its absence.

Ninety five percent of the tourists disagree or are neutral on whether emergency contacts are provided on local sites. However, 35% of the tourism firms either strongly believe or just believe about the occurrence of this component on their sites. The same figures of businesses admit to its absence.

Eighty seven percent of the businesses who responded to the questionnaire claim that they have 'Tips or Frequently Asked Questions (FAQs)' on their websites. But, only 10% of the visitors agree with this. None of the organizations believe that they miss such components, whereas 24% of the visitors say that they do not own such components.

Though majority, 57%, of the tourists are indifferent about the presence of links to overseas tour operators' websites on local websites; only 5% and 38% of them agree or disagree about this, respectively. Contrastingly, 30% agree and 44% of them disagree or strongly disagree.

According to the visitors' perceptions, only 5% believe that there are adequate numbers of accommodation links and 43% say the sites do not have such links. Thirty percent of the businesses believe that they have such links and close to 43% admit to their absence. In general, only 14% of the tourists are satisfied with linked pages and 86% are either indifferent or are not totally satisfied with linked pages.

Fifty seven percent of the tourists think that the local tourism sites have no clear organization and are not logically structured. Only 33% and 38% agree that they have clear structure and logically structured, respectively. Eighty seven percent of the institutions, on the other hand, say that their sites have got a clear structure and are structured logically. Sixty two percent and 29% of the visitors do disagree and agree, respectively, that the local sites are straight forward to navigate. Sharply contrasting to this figure, all the tourist organizations either strongly agree or simply agree that their websites are easy to navigate through.

About half, 48%, of the tourists are indifferent about whether the information provided on local websites is accurate. Moreover 29% and 24%, respectively,

agree or disagree about the accuracy of the information provided on such websites. On the other hand, around three fourths, 74%, of the organizations speak confidently about the accuracy of the information posted on their websites. Convenient search engine, being one of the most important components of tourism websites, is only believed by 14% of the tourists to be found in local websites. Fifty seven percent of them said the sites do not possess such components. Contrasting to this fact, 90% of the businesses claim that they have such components incorporated in their sites.

More than three fourth, 76%, of the tourists believe that the local websites are compatible with their operating systems. More than half, 52%, of the responding visitors perceive that the URL addresses of the tourism websites in Ethiopia are not easy to remember. And only 29% of them believe that the sites are visually attractive. Forty three percent are indifferent on this issue. Close to 57% of these tourists also said that the pages on these websites are relevant to their purpose.

Only one fourth of the visitors say that the sites are not routinely slow, whereas, the rest, three fourths, either believe that they are slow or are indifferent about the issue. Seventy eight percent of the businesses agree that the sites are routinely slow or are indifferent about their speed. Eighty six percent of the tourists believe that they are indifferent whether the sites are

secure to transact on. However, only 20% of the businesses admit that their sites are insecure to do such business transactions.

More than half, 52%, of the tourists believe that the information on the sites are not updated and appear outdated at times of visits. But, 61% of the businesses claim that the information posted on their sites are up to date. Where more than half, 52%, of the tourists say that the local tourism websites are not user friendly, 87% of such local tourism organizations claim that their sites are user friendly to their customers. Around 62% of the tourists said that site maps are not provided on Ethiopian tourism websites, whereas, 52% of the businesses believe that site maps are one of the components of their websites. The rest admit that they do not have site maps on their websites.

Majority, 71%, of the responding tourists believe that the information provided on the local tourism websites is not enough. Contrastingly, 74%, of the tourism institutions claim that they provide enough information on their websites for tourists. More than half, 52%, of the tourists judge the websites as not well written. But, 87% of the tourism businesses claim that their sites are well written. Moreover, 70% of the businesses believe that their websites do not have multilingual property. Fifty seven percent of the tourists are indifferent about the sites' multilingualism.

Close to 80% of the tourists rated the local websites as poor and the rest are either indifferent or believe that they are excellent.

Those respondents who did not use the local websites were also asked why they did not use the Ethiopian based tourism websites or why at all they should not, in case they won't, visit them in the future. The following table illustrates this.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Didn't appear top on the search engine results	8	17.4	26.7	26.7
	Non-Eth based sites were more relevant or I trust them not	10	21.7	33.3	60.0
	Did not have time or didn't feel the need to do it	7	15.2	23.3	83.3
	Reservation and travel arrangement done by other body	5	10.9	16.7	100.0
	Total	30	65.2	100.0	
Missing	Not applicable/ Missing/Not sure	16	34.8		
Total		46	100.0		

Table 6: Why haven't you used or might not use the Ethiopian based websites?

As can be observed in the table above, more than half, 60%, of the responding tourists said that they did not use or might not be using the websites in the future, because the websites either did not appear top on the search engine results or non-Ethiopian based tourism websites were much more relevant. The rest either did not feel the need to do it or did not have time or reservation or travel arrangements were made by a separate body.

Results from the detailed interview made with the managers and IT experts of five tourism businesses also reveal that full utilization of the Internet, network

access costs, IT experts' training, skill development and human resources provide big challenges for smaller companies.

Describing this fact one of the managers of the institutions says,

“Apparently, it is a good chance for our business to get such opportunity for expanding our business to a global level, because it is an easy mechanism. In early days the Ministry of Tourism itself does some promotional services for us through its information center, but now we can do those ourselves. But, we do not have IT professionals here. Whenever we need help we go to the different IT companies in town... it is even difficult to get them sometimes... they are busy.”

Another marketing manager also responds to how frequently or on what basis they update their websites and whether is it really affordable. He says,

Well, we do that ...for instance, which day is the New Year this year. We tell this to the company which hosts our website in London. It is also difficult to pay the fee...it's because he is my friend, who ones came here for a visit, who voluntarily wanted to do us a favor. Otherwise, it might be a pain for us.”

One of the interviewee, an Information Technology expert, was also asked what he means when he says; “we use the Internet for business transaction”.

“By that, I mean, we use the Internet for example, to contact our customers through it. We use email. They will send some money to confirm if they are interested in our service. There is no such thing as credit card. We don’t have such service. We have of course begun accepting the Visa card thanks to Dashen Bank, but barely used. This may be because, ... you know, the foreigners, do not want to pull the card out of their pocket, even if they have one. May be they’re afraid of the security about their financial issues.”

A marketing manager of the restaurant also says we do not own a website because,

“We do have excess customers here. A lot of people come here to use our services. We believe that, if we try to promote the restaurant through the Internet, then we might not be able to give a quality service as a lot of customers may turn in. We had better work harder on organizing our kitchen. The thing is we are also in a very strategic site, near the National Museum...”

Noder (n.d) agree with this idea in that, sectors that overlap with tourism (like restaurants) have a lower level of uptake and have more basic web-presence or none. This is due to the fact that many of these businesses do not really see the need to reach visitors directly through the Internet, preferring instead for core tourism operators to direct visitors and to use local word of mouth.

The tourists also do not trust the security of SMTE websites to transact on. Literatures also indicate this. The difficulty in addressing issues of trust and confidence also makes SMTEs more vulnerable than large firms to problems linked to authentication/certification, data security and confidentiality and the settling of commercial disputes (Buhalis, 1999).

The managements' of these businesses look very committed to strengthen the IT usage in their offices despite the limitations being observed in the telecommunications infrastructure. Sixty two percent of these businesses list telecommunications infrastructure as a big limitation to their businesses. Financial constraint is also another issue that pulls back these institutions from fully utilizing the information technology.

In general terms, the tourism businesses in Ethiopia are using neither the Destination Management Systems nor other kind of Tourism information Systems like GDS. The majority, 63%, do not use any other system different from the website. They do not also have incorporated on their websites. There are some businesses using the CRS like Galileo. This fact is tied to the fees charged by the GDSs and CRSs (Buhalis, 1997; Gruescu et al, 2009).

3.1.4 TIS Opportunities in Ethiopia

In this section, the opportunities that tourism enterprises in Ethiopia could get from tourism information systems have been discussed. Literatures discuss the potential advantageousness that such tourism businesses in developing

countries could benefit from such technological advancements. It has been tried to relate other countries, especially the developing countries, experiences to the Ethiopian businesses during the course of the discussion.

The local businesses can be beneficial by understanding the needs of the tourists. When the tourists were asked about what kind of content and capabilities would they be pleased to find in local tourism businesses' websites; the following results were observed. The majority, 57%, would like to see more components, especially discussion forums by peer tourists where they share experiences, search engines, interactive maps, online reservation systems, and better language.

Updated information on weather, health, accommodation and currency rates were also given the second most attention, 21%, by these visitors. A few visitors, 10%, request the combination of all the above and the rest want to see better and valid links which do not have either dead ends or not functioning or outdated links. The following table shows the figures.

		Frequency	Percent	Valid %	Cum. %
Valid	Updated info on weather, health, etc.	6	13.0	20.7	20.7
	Better and valid links	1	2.2	3.4	24.1
	More components (Forum, Search eng.)	17	37.0	58.6	82.8
	Better language	2	4.3	6.9	89.7
	1,2,3, and/or 4	3	6.5	10.3	100.0
	Total	29	63.0	100.0	
Missing	Not sure/Missing/ NA	17	37.0		
Total		46	100.0		

Table 7: What kind of content and capabilities do you expect in the Ethiopian tourism websites?

These visitors were also asked if at all they have websites in mind that can be cited as best practices. The 'Lonely Planet' website, especially the "thorn tree" page was cited by 68% of the respondents as the best website to be visited. Some 21% mentioned their own country's governmental or state body tourism websites.

		Freq.	Percent	Valid %	Cum. %
Valid	Lonely planet (Thorn Tree)	19	41.3	67.9	67.9
	Own country's site (State or govt. body)	6	13.0	21.4	89.3
	Trip Advisor	1	2.2	3.6	92.9
	Rovia	1	2.2	3.6	96.4
	Hostel World	1	2.2	3.6	100.0
	Total	28	60.9	100.0	
Missing	N/A/ Not sure/Missing	18	39.1		
Total		46	100.0		

Table 8: Any website that you would recommend as best practices

The growing number of Internet users that want to obtain tourism-related information and prepare their itineraries, and the growing demand for new

travel experiences respectful of environmental preservation and involving cultural, natural and social resources, open up huge opportunities for tourism institutions in developing countries like Ethiopia. Information and Communication Technologies also help destinations and national tourism providers to develop, manage and sell their offerings worldwide.

Small businesses such as hotels in developing countries have often been excluded from global tourism distribution channels. Some of them have been under the influence of foreign tour operators for decades in order to ensure their inclusion in the international tourism scene (Ataefar, 2008). Before the advent of the Internet, local hotels often had no other option than to sell their room capacity at a low price to well-known tour operators, ensuring a small but stable amount of revenue for them throughout the year (ibid). As a result, the destinations marketed by tour operators may have gained in popularity, increasingly in the form of low-price package vacations, encouraging the development of “mass tourism”, but earned very low returns.

The fact that the Internet operates as a global marketplace accessible to the general public 24 hours a day, 7 days a week has also opened a way for such tourism businesses. It is a marketplace based entirely on information provision and exchange transactions. The most important use of the Internet is related to the exchange transactions (marketing) between businesses that are purchasing and others who are supplying (Middleton & Clarke, 2001).

Another opportunity that the Internet could bring to such businesses is its capability of doing more than just automating online business transactions. It can be an “informant” in that it provides a vast amount of information that was previously unavailable. Moreover, small and medium tourism enterprises can make use of the Internet as it is an invaluable source of low-cost but up-to-date marketing intelligence. These can be sourced through a company’s own site (for details of its customers) and other websites (for information on competition situations, market conditions, and the general environment). It is also extremely useful in building a customer information database (Buhalis, 1998), which otherwise would cost them a lot or would be totally impossible for them to pay.

An important feature of the Web as a medium is that it is the consumer who is actively searching for information about products or brands in which he/she is interested (ibid). This would provide a very good platform for the SMTEs to compete with the rest of their rivals. Internet technologies can also contribute to the improvement of current products through offers or development of new products and services that redefine the company’s strategic position. The Internet also gives tourist attractions such as museums and galleries wider format options for electronic presentation and show web collections that are physically impossible to construct (De and Mathew, 1999; Pena and Jamilena, 2009).

The role of the Internet in pricing is based on its ability to process and exchange large amounts of data instantaneously with a great number of people (Buhalis, 1998). The uniqueness of the Internet as a means of distribution is based on the fact that it exists in “cyberspace”; thus, physical phenomena such as location and distance are less significant or even irrelevant. For the producer, the Web enables it to have direct links with consumers at a low cost and therefore provides it with the opportunity of “disintermediation” (ibid). This can also be considered as another significant advantage of the Internet as another means of TIS for SMTEs, like hotels, in our country. Therefore, the Internet provides a labor-efficient and cost-effective way of distributing information almost instantaneously to millions of potential clients in the global markets.

As, discussed above, the Web enables more information to be transmitted to (potentially) more people cheaply, instantly, and with a multimedia effect. The key to achieving these benefits is a well-designed and maintained website that is attractive, informative, and interactive. Through its multimedia capability, a good website can and should incorporate information as accurately and detailed as brochures or timetables, photos, and graphs as glossy as magazine advertisements, and videos as entertaining as TV commercials.

The site can supply as much promotional information as possible as there is virtually no capacity constraint or advertising space limit on the Web. The

businesses could only benefit from such websites if and only if they understand the capability a good and a well designed website can offer to them. By hyperlinking pages together in an appropriate fashion, the Web marketer can create an ultracomprehensive brochure to include everything a user wishes to know. For instance, a tourism destination website may become an “information mall” that provides the users with all the basic information about it such as the exchange rates, local traditions, weather, what to buy, etc., and, through the hyperlinks to the sites of tourism firms, details of flight schedules, tour prices, park opening times, late offers, and so on. A company website with email links or even telephone numbers and addresses will enable users to contact it for further and often more personalized information (Mathur, Mathur, and Gleason, 1998).

3.2 Discussions

A detailed analysis of the results from the two surveys conducted, including the questionnaires and the interview; indicate some of the following trends, challenges and opportunities to the local tourism institutions.

The Ethiopian TIS has been tied to the traditional paper based until up the introduction of the Internet in Ethiopia. Manual ads and sometimes radio and TV were the ways of promoting services and products. But, now many of these businesses have begun adopting the modern TIS, like websites. Modern Tourism Information Systems (TIS) is in its infancy in Ethiopia. The results of

this study indicate that there is a very huge awareness; for instance, compared to tourism businesses in Egypt (Eraqi and Abdalla, 2008), and encouraging management's readiness to implement such information systems technology in the tourism industry. This disagrees with Cardoso and Lange (2007) ideas where they believe that the majority of SMTE do not use web service technology. But, the findings agree with the fact that most of these businesses use their websites for basic information provision. That is, there still seems to be some challenges with these local tourism businesses in fully implementing TIS and enjoying the benefits. These challenges are not discouraging since there are still some opportunities ready to be exploited by willing and daring institutions. Below is given the discussion from the results of the study and literatures from similar developing nations like Asian countries.

One of the major challenges that the local tourism websites are facing is the gap observed between tourists' perception about the tourism information systems, especially the websites, and the actual website offerings. Looking at the findings of the research, tourist businesses should work harder in incorporating or elaborating some of the following components in their websites as they either miss the components at all or are not well organized. In some cases, they are not functioning or outdated, but they are there as part of their components. These include: travel company information, online accommodation booking, contact addresses, active customer service, travel guide information, transport information, major events such as holidays, major

tourist attractions, governmental services such as visa information, emergency contacts, tips/frequently asked questions, links to overseas tour operators and adequate numbers of accommodation links.

These problems might have arisen because the websites are not designed taking into consideration the users' needs or are developed by website developers who have no idea of tourism business at all. Buhalis (1997) and Choi et al. (2007) when discussing about the users' satisfaction, they say it depends on the quality, accuracy and relevance of tourism information on the websites and response to tourists' requests. The evaluation of the website must also ultimately hinge upon the users, the travelling public.

All the websites were static in nature. That is, they were basic websites, developed and updated infrequently. The types of information provided on the websites were business contact details, descriptions of tours and accommodation, images and reviews. This suggests that despite many participants having a web presence for years, they are at the early stages of website development. This is in line with Cardoso and Lange's (2007) idea which describes the websites are used for mere information provision in most businesses' websites in STEs.

Their websites more or less do not have clear structures, the contents are not structured logically, the sites are not straight forward to navigate, and do not provide accurate information, neither do they have convenient search engines.

The URLs are not easy to remember and the site designs are not visually attractive. The site is routinely slow and customers do not feel secured to transact online. If these things will not be improved, the country might lose a large amount of money, as will the businesses.

Information on the sites are not updated, do not appear current and the websites are not straight forward to navigate as perceived by the visitors. Site maps are not provided. And the sites neither provide enough information, nor are well-written.

There are also low telecommunications infrastructures or are costly, lack of timely and reliable systems for the delivery of physical goods, low bank account and credit card penetration, lack of uniform payment systems, and problems with security and trust and the cost of technology, in few places. This is in line with the World Economic Forum's Travel and Tourism Competitiveness Report in 2009. Ethiopia is ranks 132nd of 133 countries with ICT infrastructure penetration among tourism and travel businesses. With the extent of businesses' internet use and broadband internet subscribers, the country stands as 117th and 126th, respectively of 133 world countries (Blanke and Chiesa, 2009). Challenges also include a lack of financial resources and knowledgeable staff, security and legal issues, lack of knowledge and skills and a general lack of knowledge of the full potential of the Internet. This is in line with Karanasios and Burgess (2006); Yang, Flynn and Anderson (n.d) where

they list the challenges to SMTEs as security, trust, reliability, telecommunication infrastructure and cost.

The study conducted reveal that in Small and Medium sized tourism enterprises the most common uses of the Internet include: email communication between suppliers and customers, research and information gathering and to a lesser extent basic information websites were the most common uses of the Internet. In developing a website or purchasing software many operators seek and accept professional advice from ICT experts who sometimes have very little knowledge about the tourism industry and its needs.

Issues of certification/authentication were also observed as another challenge to these institutions. In such cases, the institutions' websites may be hosted by third party sites, co-branding, which are better known for their services and which are trusted. Being registered as a member of a certified national tourism organizations governed by the government can also be a solution to buy trust and confidence. Government tourism websites add value through the destination brand. These types of portal websites act as an umbrella for individual tourism operators. Consumers generally regard these websites as a source of unbiased and high quality information. They are typically in a position to provide in-depth destination information and offer a whole range of products that a consumer may seek on a destination. Tourists will feel

confident to transact online if technologies for secure payments become part of their TIS. Trust is a crucial part of success of business in electronic markets.

Discussion forums, like customer communities are among the components that are requested by the responding tourists. On the Internet more and more Web sites are offering customer communities or bulletin boards. Nysveen, et al (2003) also agrees to this fact in that communities make it possible for customers to exchange experiences with other customers. Such communities give customers access to fair “word-of-mouth” information.

These tourism businesses do rarely use other tourism information systems, like the CRS, HDS and GDS. This is attributed to a financial constraint. Buhalis (1997) also describes that SMTE, like the ones studied here, are marginalized from CRS and GDS because of fees, though some researchers, Gruescu et al (2009), believe that such systems play a decisive role and serves as a vertebral spine for international tourism as they connect the consumer with the producer.

Destination management systems, which are more of specialized on a given destination, are more favored by Buhalis (1997). CRS failed to address the leisure markets and provide little information on destination attractions while jeopardizing the competitiveness of SMTEs which are marginalized from the distribution media.

There are still encouraging opportunities brought about modern TIS. The study has identified that, inclusion of some website components like the “discussion forums” could be an opportunity for these local businesses. Because, visitors perceive some tourism websites because of such capabilities they have, since the visitors give value to word-of-mouth from their peers about destinations.

Moreover, the growing figure of internet users searching for travel related activities is presenting other opportunities for tourism businesses in Ethiopia, as well as other developing countries. Internet has also enabled these businesses to reach a large number of customers to sell their products and services. This provides them an equal opportunity with big firms in the tourism industry given that they have a well designed websites.

The possibility of using the Internet, especially websites, for promotion, service and product selling has relieved them from the unaffordable GDS and HDS. This is because such systems have often excluded such small businesses in developing countries from global tourism distributions channels, because of their higher fees.

The intermediaries or middlemen between the suppliers and the consumers have also been concerns to such SMTEs; but this can be eliminated through the strategic use of the Internet as it brings the two sides face-to-face.

CHAPTER FOUR

CONCLUSIONS AND RECOMMENDATIONS

4.1 Conclusions

As discussed in the previous chapter, the Ethiopian tourism businesses used manual TISs before the emergence of the Internet in the country. Though there are encouraging awareness level and managements' readiness to fully implement Informtion Technology, it can be said that modern TIS is in its infancy in the Ethiopian tourism industry.

The study results indicated that there are still gaps between the businesses' perception about their TIS, especially the websites, and the customers' opinions about them. In most cases, the businesses give higher value to their websites as they believe that they are meeting customers' needs. But, this contradicts with the findings of the study as the customers are requesting for more services and every bit of information on these sites. This may be attributed to the businesses' lack of knowledge in being able to fully utilizing the Internet. The websites do not seem to be designed taking into consideration the customers' needs, otherwise such big differences would not have been observed. That is part of why the majority of the tourists prefer to use other websites which are not locally based in Ethiopia.

There are also trust or security concerns on the side of the tourists to use the local websites. The situation also worsens with these businesses as such local websites do not often appear top on the search engine results. Lack of IT professionals who have a basic know how of tourism businesses is also another concern. Technological infrastructures, such as telecommunications are also criticized by these businesses for their low performances or expensive costs. This needs attention, as data often released on such websites have multimedia nature; and the amount, quality and nature of digital media depends on the bandwidth of the delivery mechanism.

The Internet has also brought some opportunities to such SMTEs. It is the place where there is fair competition as it enables them to have equal access to the millions of customers worldwide. The websites have somehow freed them from the impact of unaffordable GDS and HDS by such small businesses. The impact of middlemen between the suppliers and the customers has also been reduced as it can cut the cost they pay for the intermediaries. Therefore, the Internet allows the tourism businesses reach millions of customers around the world at ease as opposed to the traditional use of printed media like brochures, magazines, posted signs and newspapers.

4.2 Recommendations

Tourism producers in developing countries could achieve autonomy and save costs by promoting and selling products directly to consumers provided that they have an effective TIS. The Internet enables tourism producers to manage

their assets, make decisions on yield management and reduce commissions to third-party distributors. However, the Internet should be regarded as a distribution channel complementary to other offline and online distribution channels that attract a large number of consumers worldwide.

Generally, the following recommendations would be valuable to the local tourism businesses, the government of Ethiopia and future researchers to improve the problems currently being observed and make the most out of the opportunities brought about modern TIS.

- Tourism businesses should take advantage of the new opportunities offered by ICT to brand and promote their own services and products. To achieve this would require wider involvement of local small and medium-sized tourism enterprises in global ICT networks by building up their capacity, increase their awareness and fully utilize modern TIS.
- Creating the right technology infrastructure is an essential ingredient in the tourism industry in the country.
- Tourism businesses should use appropriate tag words on their websites as part of the SEO to appear top on the search engine results. Links to other sites, such as those offering news or entertainment services and those offering complementary products, can also make the site more interesting as well as providing more relevant and up-to-date information for the users.

- The government should build tourism portals which help the tourism businesses in the country to post their websites on so that it helps as an umbrella for them as tourists want to feel confident about any tourism websites which they pass their personal records to.
- In addition to using the Internet to market the businesses' offers, tourism policies and strategies should be based on effective tourism innovations (new tourism products and services, technology) as well as innovative national ICT policies for the sector.
- Tourism businesses need to add some components like discussion forums as part of the components of their websites as the customers do value such components.
- The businesses need to study the needs of the tourists to close the gap between the tourists' perception and theirs before developing their websites; otherwise it will be difficult or impossible for them to make use of the opportunities discussed above. Privacy and security policies should be highly developed and prominently stated on the website. Transparency in these two areas is of paramount importance for building confidence.
- Researchers may take the identified gaps into consideration and work on developing TIS framework for the Ethiopian tourism businesses based on which subsequent TISs use as a stepping stone in the country for the future.

References

1. **Ataefar, Z., Teyfoori, & Teymoori, T.** 2008, Impact of E-tourism in Developing Countries: A Case Study for Cambodia, paper presented at 3rd International Conference on E-Commerce with Focus on Developing Countries, Isfahan, Iran.
2. **Badnjevic, J & Padukova, L.** 2006, ICT Awareness in Small Enterprises in the Indian Tourism Branch, M.Sc. theses, IT University of Goteborg.
3. **Barnnat & Barnattc, C.** 1997, 'Virtual organization in the small business sector: the case of Cavendish management resources', *International Small Business Journal*, vol. 15, no.4, pp. 36-47.
4. **Beech, J, Hadwich, & Hadwich, C.** 2006, *The Business of Tourism Management*, Pretince Hall, imprint of Pearson.
5. **Blanke J., Chiesa T.,** 2009. *The Travel & Tourism Competitiveness Report 2009 Managing in a Time of Turbulence*. World Economic Forum, Geneva, Switzerland.
6. **Brisaboa, R, Farina, A, Luaces, R, Parama, R, Penabad, R, Places, S & Viqueira, R.** 2003, 'Using Geographical Information Systems To', *Information Technology & Tourism*, vol. 6, no.1, pp. 31-46,
7. **Buhalis, D.** 1997, 'Information Technology as a Strategic Tool for Economic, Social, Cultural and Environmental Benefits Enhancement of Tourism at Destination Regions', *Journal of Progress in Tourism and Hospitality Research*, vol. 3, pp. 71-93.
8. **Buhalis, D.** 1998, *Strategic use of Information Technologies (final)*, University of Surrey
9. **Cardoso, J & Lange, C.** 2007, 'A Framework for Assessing Strategies and Technologies', *Information Technology & Tourism*, vol. 9, no.1, pp. 27-44,
10. **Choi, S, Lehto, Y, Oleary, & Oleary, T.** 2007, 'What Does the Consumer Want from a DMO Website? A Study of US', *International Journal Of Tourism Research*, vol. 9, no.2, pp. 59-72.
11. **Convenience Sampling** <http://www.htm.uoguelph.ca/> [October, 2009]
12. **Das S.** 2002, *Global Distribution Systems in Present Times, HVS International*, [OnLine], Available: <http://www.hvsinternational.com/> [July, 2009].

13. **Davidson, P & Yu, Y.** 2005, 'The Internet and the Occidental Tourist:' *Journal of Information Technology & Tourism*, Vol. 7 pp. 91–102, vol. 7, no.2, pp. 91-102
14. **Deegan, M. and Horan, T.** 2003, Smith Travel Research, PhoCusWright Inc., Pricewaterhouse Coopers Graphic, Chicago Tribute.
15. **Duran E., Geker D. Z. and Shrestha M.** 2004, 'Web Based Information System for Tourism Resorts; A Case Study for Side/ Manavgat', [Online], Available: <http://www.isprs.org/> [05 May 2009]
16. **Eraqi M., Abdalla G.** 2008, 'Information Systems And Tourism Marketing: New Challenges For Tourism Business Sector In Egypt', *Journal of Information Technology in Hospitality*, Vol. 5
17. **Ethiopia Tourist Attractions** - Discovering Africa's Best Kept Secret, AfricaPoint. March 3, 2009, [OnLine], Available: <http://www.zimbio.com/> [10 May 2009].
18. **EuroMonitor International & Euromonitor International.** August, 2009, *Travel and Tourism in Ethiopia*, [OnLine], Available: <http://www.euromonitor.com/> [September, 2009].
19. **Firoiu, D & Mihalcescu, C.** 2008, 'New Technology For Tourism Information Systems', *Fascicle of Management and Technological Engineering, Volume*, vol. 7, pp. 2485-2489.
20. **Gharavi, H, Ogle, A & Dwivedi, Y.** n.d., Infusion of the Internet and Indigenous Tourism: An Australian Framework (final), [Online], Available: <http://is2.lse.ac.uk/> [10 May 2009]
21. **Govers, R & Go, M.** 2005, 'Projected Destination Image Online:' *Journal of Information Technology & Tourism*, vol. 7, no.2, pp. 73-89, [14 May 2009].
22. **Gruescu, R, Nanu, R & Pirvu, G.** 2009, 'Destination Competitiveness: A Framework for Future Research', *Entelequia. Revista Interdisciplina*, vol. 9.
23. **Jamnia, M.**2008, The Role of Information Technology on Tourism Destination Marketing, Ph.D. theses, University of Exeter
24. **Kamuzora, F.** 2003, 'The Internet as an Empowering Agent for Small, Medium and Micro Tourism', *e-Review of Tourism Research*, vol. 3, no.4.
25. **Kaplanidou,, Kaplanidou, K & Vogt, C.** n.d., *Destination Marketing Organization Websites (DMOs) Evaluation and Design*; [OnLine], Available: <http://www.travelmichigannews.org/>[August, 2009].

26. **Karanasios, S & Burgess, S.** 2006, 'Exploring the Internet Use of Small Tourism Enterprises: Evidence from Developing Country', *The Electronic Journal of Information Systems in Developing Countries*, vol. 3, no.27, pp. 1-21,
27. **Kibruyisfa Achamyeleh.** 1997, Making Information on Ethiopia Available on the Internet: A Case Study of Tourism in Ethiopia, M.Sc. theses, Addis Ababa University, Faculty of Informatics, Dept of Information Science.
28. **Kim, C.** 2004 *E-Tourism: An Innovative Approach For The Small And Medium-Sized Tourism Enterprises (SMTEs) In Korea, (final)*, OECD.
29. **Kim, D, Park, J & Morrison, A.** 2008, 'A Model of Traveler Acceptance of Mobile Technology', *International Journal of Tourism Research*.
30. **Liikaken, E, Liikanen & Liikanen, E.** 1999, Tourism in the Information Society, paper presented at Tourism in the Information Society, Brussels.
31. **List of Ethiopia Tour Operators**, n.d., Anonymous. [OnLine], Available: <http://www.ethiopianembassy.org/> [10 May 2009].
32. **Litvin, W & Crofts, C.** 2003, 'A Framework For Online Sales Negotiations Of', *Journal of Information Technology & Tourism*, vol. 6, no.2, pp. 91-97,
33. **Lu, Y, Deng, Z & Wang, B.** 2007, 'Analysis and evaluation of tourism e-commerce websites in China"', *International Journal of Services, Economics and Management*, vol. 1, no.1, pp. 6-23.
34. **Ma, J, Buhalis, D & Song, H.** 2003, *ICTs & Internet Adoption in China's (final)*, University of Surrey, UK, Available:
35. **Market Directions**, (n.d) *Determining Survey Sample Size - A Simple Plan.* <http://www.marketdirectionsmr.com/>
36. **Melaku Kebede.** 1997, An Approach to the Integration of Exert Systems and Hypermedia Technology in Developing A Prototype TIS for Ethiopia, M.Sc. theses, Addis Ababa University, Faculty of Informatics, Dept of Information Science.
37. **MicroSteps.** 2009, *TIS (Tourist Information System)*, [OnLine], Available: <http://www.microstep-mis.com/> [July, 2009].
38. **Morrison, & Morrison, M.** n.d., *Hospitality and Travel Marketing*, Amazon.com, Germany
39. **Mulwani.** 2009, *How to Make Your Website Appear Top in Search Engine*

40. **Murphy, J & Hofacker, F.** 2006, 'Testing Position Effects And Copy', *Information Technology & Tourism*, vol. 8, no.1, pp. 3-13
41. **NationMaster.** 2005 *Likert Scale* [Online], Available: <http://www.statemaster.com/> [October, 2009]
42. **Nodder, C, Masson, D, Ateljevic, J, Milene & Milne, S.** n.d., *ICT Adoption and Use in New Zealand's Small and Medium Tourism Enterprises: (final)*.
43. **Nysveen, H, Methlie, B & Pedersen, E.** 2003, 'Tourism Web Sites And Value-Added Services: The Gap', *Journal of Information Technology & Tourism*, vol. 5, no.3, pp. 165-174
44. **Odularu, G.** 2008, *How Large Is Tourism`S Impact On The West Africa Economy? An Econometric Investigation*, paper presented at ECOMOD, 2008 International Conference on Policy Modeling. Berlin, Germany [July 4 2008].
45. **PADECO/ADB Website & TIS Intl Consultant.** 2001, *Guidelines For The Content And Structure Of Mot's Website (final)*, Kingdom of Cambodia.
46. **Pena, P, Jamilena, & Jamilena, F.** 2009, 'The Relationship between Business Characteristics and ICT Deployment', *International Journal of Tourism Research*.
47. **Podesta, G.** 2000 'Collecting and Analyzing Interview Data', [Online], Available: <http://www.rsmas.miami.edu/> [31st May 30, 2009].
48. **Skadberg, X, Skadberg, N & Kimmel, R.** 2005, 'Flow Experience And Its Impact On The Effectiveness', *Information Technology & Tourism*, vol. 7, no.34, pp. 147-156
49. **StatPac Inc.** 2009, *Advantages of Written Questionnaires'*, [OnLine], Available: <http://www.statpac.com/>[September, 2009].
50. **Steven K.,** 2001, My Brandeis, How do I make search engines find my website? [Online], Available: <http://my.brandeis.edu/> [October, 2009]
51. **The Ethiopian Millenium Festival National Sec.** 2006-7, Ethiopia has high gain in toursim revenue in 2007/8, [OnLine], Available: <http://www.ethiopia2000.com> [10 November 2008].
52. **Thirteen Months of Sunshine,** n.d., African Travel Magazine. [OnLine], Available: <http://www.africa-ata.org/> [September, 2009].

53. **Trepper, C.** (2000). *E-commerce strategies: Mapping your organization's success in today's Competitive marketplace*. Redmond, WA: Microsoft Press.
54. **UNCTAD.** 2001, *E-commerce and development report 2000*, paper presented at United Nations Conference on Trade and Development, New York, Geneva
55. **United States Department of Transportation.** 2009, *Computer Reservations System (CRS)*, [OnLine], Available: <http://www.dot.gov/> [16 October 2009].
56. **UNWTO,** 2007. *Committed to Tourism, Travel and the Millennium Development Goal* [October, 2009]
57. **USTOA,** 2002, *Ustoa Votes To Amend Bylaws*, <http://www.ustoa.com/pressroom/newsreleases/bylaws02.html> [October, 2009]
58. **Web GIS,** [OnLine], n.d., Available: <http://www.crwr.utexas.edu/> [14 November 2008].
59. **Werthner, H & Klein, S.** (1999). *Information Technology and Tourism – A Challenging Relationship*, Springer, Wien and New York.
60. **Werthner, H.** 2003, *Intelligent Systems in Travel and Tourism*, paper presented at 18th International Joint Conference on Artificial Intelligence, [OnLine], Acapulco, Mexico
61. **Wiig, A.** 2003, *Developing countries and the tourist industry in the Internet age: The Namibian case*, paper presented at CMI Report in Forum for Development Studies, vol. 30, pp. 59-87
62. **World Trade Organization.** (2001). *E-business for tourism: Practical guidelines for tourism destinations and businesses*. Madrid: World Tourism Organization.
63. **WTO,** 2000, *Tourism Satellite Account: Methodological Reference*, paragraph 3.37, page 40; <http://www.nscb.gov.ph/>
64. **Yang J, Flynn J & Anderson K.** n.d., 'A Case Study on E-Business Application in the Hospitality Industry', *Communications of the International Information Management Association*, vol. 3, no.1
65. **Zekaria, S. February,** 2008, *The 2007 Population and Housing Census of Ethiopia*, [OnLine], Available: <http://unstats.un.org/> [14 May 2009].

Appendices

Appendix 1: Questionnaire for Tourism Institutions

Dear Respondent:

I would like to thank you in advance for your time and assistance in filling out this Questionnaire. I am currently conducting a research on “**Exploring Trends, Challenges, and Opportunities in The Ethiopian Tourism Information System**” as a partial fulfillment of the degree in **MSc in Information Science at Addis Ababa University**. It is believed that your genuine answers to the questions will help the researcher to find out problems tourism enterprises are currently having in making use of Information and Communication Technologies and pin point potential opportunities that such incorporation of technologies in their business would bring. As a result, the results of the study may influence tourism policies in our country in which case your organization can be benefiting. All of the information given on this questionnaire will be kept confidential and will be used for this specific research purpose only.

N.B: This questionnaire can be filled by the institution or company’s **Information Technology (IT) expert**. Where there are no IT experts, the **manager** of the respective institution (travel agent, tour operator, hotel, museum or gallery) can fill out.

Please feel free to contact me through the following address if you should need any further clarification or have any questions and comments.

Mobile No: **0911-705607** E-mail Address: **digoh0809@yahoo.com**

General Instruction: Please circle the best answer. If there are more than one best answers then circle all that apply.

I. **GENERAL:**

1. Name of the Company/ Institution:

2. Address: _____
3. Position of the respondent: _____
4. When did you start your business? Year _____
5. How many employees does your company have?
 - a. 1-5
 - b. 6-10
 - c. 10-50
 - d. 50-150
 - e. More than 100
6. What type of services does your company offer to tourists?

II. **WEBSITE**

7. Does your company have a Website?
 - a. Yes
 - b. No

If your answer to **Question No. 7** is **Yes**,

Please state the address of your website: _____

Otherwise, please go to **Question No. 20**

8. What is the purpose of the website of your organization?
 - a. Information provision only
 - b. Promotional Service to sell products and call for more customers
 - c. For conducting some business transaction like e-booking
9. When has your website been initiated?
 - a. 0 year after start-up
 - b. within 1 year after start-up
 - c. 1-3 years after start-up
 - d. 3-5 years after start-up
 - e. More than 5 years after start-up
10. Who developed the website?
 - a. An employee
 - b. A web hosting company
 - c. A friend
 - d. A family member
 - f. Other? Please, specify!

11. Do you think your website has been developed based on existing Tourist website standards and available guidelines of the World Tour Organization (WTO) or other national or regional organizations?

- a. Yes b. No c. I don't know

If **Yes**, which standard has been followed? _____

12. Who is responsible for maintaining your website?
a. An employee b. Another Travel Agency
c. A web hosting company d. A friend
e. A family member f. Other _____

13. Who hosts the website?
a. ETC
b. By our own company server
c. International institutions based outside Ethiopia

If your answer is choice "c", is the price affordable? How much?

14. Which component of your website do you think is the most important for the tourists?

15. What kind of value added services on your website are attracting more customers to your company?

16. Do you think your website needs improvement?
a. Yes b. No c. I don't know

Comments: _____

17. Can you please rate the daily company's website user traffic?
(Please, put an average number)

- a. Less than 10 b. 11-50
c. 51-100 d. Hundreds e. Thousands

18. How many of the customers who have visited your websites have personally come and used or visited your products or services?

- a. Only a few b. Some
c. Majority d. All of them

19. Please put an 'X' mark in one of the columns based on genuine judgment about your company's website.

	Strongly Agree	Agree	Undecided	Disagree	Strongly disagree
Travel company information is provided					
Links to airline websites are provided					
Airline booking is possible directly on the site					
Online accommodation booking is possible, such as: hotels, rental cars and other tour packages					
Contact us is provided					
Customer service is active					
Current currency exchange rate is accessible					
Travel guide is provided					
Transport information is provided					
Major events are shown, such as: holidays					
Major tourist attractions are provided, such as cultural places, mountain climbing, bird trekking, etc.					
Governmental services are provided, such as visa issuance					
Emergency contacts are provided					
Tips/Frequently Asked Questions (FAQs) are in the website					
It is possible to find links to overseas tour operators and accommodations					
There are adequate numbers of accommodation links, such as: hotels, travel agents, etc.					
The site has a clear structure					

	Strongly Agree	Agree	Undecided	Disagree	Agree
The content is structured logically					
The site is straight forward to navigate					
Provides accurate information					
Convenient search engine					
The site format is compatible to any operating systems					
The URL is easy to remember					
The site design is visually attractive					
The pages are relevant to my purpose					
The site is routinely slow					
The website is secure to transact on-line					
In terms of timeliness, the information is updated and the pages appear are current					
The website or the system is user friendly					
A site map is provided					
The site provides enough information					
The site is well-written					
The site is written in several languages					
In general, the websites can be rated as excellent					

III. **ICT AWARENESS AND INFRASTRUCTURE**

20. How many computers (including PCs, laptops, workstations and terminals) are there in your company?

a. 1-5

b. 6-10

c. More than 10

21. For what purposes does your company uses its computers?
- a. Word processing
 - b. Customer contact
 - c. Database management
 - d. Conduct other business transactions
22. Do you have adequate Information Technology experts?
- a. Yes
 - b. No
 - c. I am not sure
23. How often does your company train the IT experts so that they will keep pace with the dynamic technology?
- a. Every month or less
 - b. Twice in a year
 - c. Yearly or more
 - d. Never
24. How do you think Information technology enhance your business?

25. Does Your Company use the Internet for business purposes?
- a. Yes
 - b. No

If your answer to **Question No. 12** is **Yes**,

26. When did Your Company start to use the Internet?
- 1. 0 year after start-up
 - 2. within 1 year after start-up
 - 3. 1-3 years after start-up
 - 4. 3-5 years after start-up
 - 5. More than 5 years after start-up
27. For what purpose is Your Company using the Internet?
- a. Promoting and marketing services
 - b. Information Search
 - c. Direct or indirect contact between customers/ suppliers/ clients/partners etc
 - d. Purchasing or selling on-line
 - e. Fun/ entertainment
28. How often is the Internet used in Your Company?
- a. Every day
 - b. A few times a week
 - c. A few times a month
 - d. More seldom

If your answer to **Question No. 25** is **No**,

29. When will your company consider using the Internet for business purposes?
- a. Not thought of that entirely
 - b. In the coming few months
 - c. In the coming year
 - d. In the coming one year
 - e. Long years plan in the future
30. What are the reasons for not using the Internet for business purposes?
- a. The Internet has no relevance for the business
 - b. The access to Internet is too expensive
 - c. The Internet would be a waste of time for my employees
 - d. Customers are not willing to contact us through the Internet
 - e. We have no idea of the existence of Internet

If your answer to **Question No. 7** is **No**,

31. Why haven't you developed a website for your organization?
- a. Because it was not important
 - b. Because we didn't have any idea about website usefulness
 - c. Because of financial constraint
 - d. Others, please, specify! _____
-
32. Is your company planning to develop a website? When?
- a. Few months
 - b. Half a year
 - c. One year
 - d. Couple of years
 - e. Not at all

IV. **SOFTWARE**

33. Does your company use any kind of system software?
- a. Yes
 - b. No

If your answer to **Question No. 33** is **Yes**,

34. What kind of system is it? Please, Explain!

-
35. When did you start using it?
- a. 0 year after start-up
 - b. within 1 year after start-up
 - c. 1-3 years after start-up

- d. 3-5 years after start-up
- e. More than 5 years after start-up

If your answer to **Question No. 33** is No,

36. Are you considering purchasing some kind of software system?
- a. Yes
 - b. No. Why not? _____

OTHER

37. Do you use any one of the following in your company? Please, circle One!

a. Intranet:	Yes	No	I don't know
b. Extranet:	Yes	No	I don't know
c. Portals:	Yes	No	I don't know
d. Database:	Yes	No	I don't know

Other: _____

38. How do you put the management's readiness to implement information technology?

- a. Not at all willing
- b. Ready to implement in the near future
- c. In the long term in the future
- d. I don't know

39. Can any of the following points be mentioned as limitations that hindered you not to implement or fully utilize information technology?

- a. Telecommunication infrastructure
- b. Financial constraints
- c. Government policy implications
- d. Others. Please, specify! _____

General Comments: _____

Thank you, indeed!

Digajara Hailu

July, 2009.

Appendix 2: Questionnaire for Tourists

Dear Respondent,

I would like to thank you in advance for your time and assistance in filling out this Questionnaire. I am currently conducting a research on “**Exploring Trends, Challenges, and Opportunities in The Ethiopian Tourism Information System**” as a partial fulfillment of the degree in **MSc in Information Science at Addis Ababa University**. In doing this, I am trying to capture the views and opinions of tourists from abroad who are currently visiting Ethiopia, with regard to information provision by local travel agencies, tour operators, hotels and other similar stakeholders. The researcher is mainly interested in the stakeholders’ websites and/or other computerized systems. Your genuine responses, comments and suggestions will be a stepping stone for the betterment of such service providers and the Ethiopian tourism industry. All of the information given on this questionnaire will be kept confidential and will be used for this specific research purpose only.

Please feel free to contact me through the following address if you should need any further clarification or have any questions and comments.

Mobile No: **0911-705607** E-mail Address: **digoh0809@yahoo.com**

General Instruction: Please circle the best answer. If there are more than one best answers then circle all that apply.

I. GENERAL

1. Which country are you from? _____
2. What is your highest educational level?
 - a. High school
 - b. Some college education
 - c. Bachelor degree
 - d. Graduate level or above
3. How old are you?
 - a. 15-20
 - b. 21-30
 - c. 31-50
 - d. 51 or above
4. Have you ever used the Internet to book or reserve and buy products relating to tourism? How often?
 - a. Never
 - b. Sometimes
 - c. Very often
 - d. Almost every time
5. How many times have you visited Ethiopia?
 - a. My first time
 - b. 2-3 times
 - c. 4-10 times
 - d. More than 10 times
6. Where did you get information about Ethiopia before you came here for a visit?
 - a. From the Internet
 - b. From different brochures
 - c. From my countries embassy
 - d. Entirely from friends
 - e. Other sources: Please, specify! _____

II. WEBSITE EVALUATION

7. Have you ever visited Ethiopian based tourism websites or systems? Choose "Yes" even if you tried to and did not use it for reservation or booking.
 - a. Yes
 - b. No

If the answer for **Question No. 7** is **Yes**, please put 'X' in one of the columns of each question in the table below according to your opinion about Ethiopian tourism websites. Otherwise go to **PART III**.

	Strongly Agree	Agree	Undecided	Disagree	Strongly disagree
Travel company information is provided					
Links to airline websites are provided					
Airline booking is possible directly on the site					
Online accommodation booking is possible, such as: hotels, rental cars and other tour packages					
Contact us is provided					
Customer service is active					
Current currency exchange rate is accessible					
Travel guide is provided					
Transport information is provided					
Major events are shown, such as: holidays					
Major tourist attractions are provided, such as cultural places, mountain climbing, bird trekking					
Governmental services are provided, such as visa issuance					
Emergency contacts are provided					
Tips/Frequently Asked Questions (FAQs) are in the website					
It is possible to find links to overseas tour operators and accommodations					
There are adequate numbers of accommodation links, such as: hotels, travel agents, etc.					
I am satisfied with linked pages					

The site has a clear structure					
The content is structured logically					
The site is straight forward to navigate					
Provides accurate information					
Convenient search engine					
The site format is compatible to my operating systems					
The URL is easy to remember					
The site design is visually attractive					
The pages are relevant to my purpose					
The site is routinely slow					
The website is secure to transact on-line					
In terms of timeliness, the information is updated and the pages appear are current					
The website or the system is user friendly					
A site map is provided					
The site provides enough information					
The site is well-written					
The site is written in several languages					
In general, the websites can be rated as excellent					

III. FOR NEW USERS (who haven't ever used Ethiopia based tourism Websites)

8. If you haven't ever used Ethiopian based websites to gather information about Ethiopia or different travel related services, why not?

9. What kind of content and capabilities would you expect to find if you intend to use them in the future based on any other previous tourism experiences?

IV. GENERAL COMMENTS

10. Are there any examples of websites, for tourism organizations that you would recommend as best practice? Why? _____

Thank you, indeed!

Digajara Hailu

July, 2009

DECLARATION

I, the undersigned, declare that this thesis is my original work and has not been presented for a degree in any other University, and all sources of other materials used for the thesis have been duly acknowledged.

DIGAJARA HAILU

This thesis has been submitted for examination with my approval as an advisor.

TIBEBE BESHAN

Addis Ababa, Ethiopia

October, 2009