E-COMMERCE FOR DEVELOPMENT

eTourism as a Showcase

Faustin R. Kamuzora

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Faustin Kamuzora

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Acronyms

AATTA	All African Travel and Tourism Association
CRM	Customer Relationship Management
CMS	Content Management System
CRS	Computerised Reservation System
DMO	Destination Management Organisation
E-commerce	Electronic Commerce
E-mail	Electronic Mail
ERP	Entreprise Ressource Planning
eTourism	Electronic Tourism
FIT	Free and Independent Traveler
FOSS	Free and Open Source Software
FoUS	Friends of Usambara Society
FTP	File Transfer Protocol
GDP	Gross Domestic Product
GDS	Global Distribution System
GPRS	General Packet Radio Service
GSM	Global System for Mobile communication
HKAT	Hotel Keepers Association of Tanzania
IATA	International Air Transport Association
ICT4D	Information and Communication Technologies for Development
ICTs	Information and Communication Technologies
IEEE	Institute of Electrical and Electronics Engineers
Kbps	Kilo bit per second
KM	Knowledge Management
LAN	Local Area Network
OECD	Organisation of Economic Cooperation and Development
NTO	National Tourism Organisation
PC	Personal Computer
PMS	Property Management System
SNV	Dutch Aid Agency
SNA	Systems of National Accounting
TA	Travel Agent
TAHOSA	Tanzania Hunting Operators Association
TAOA	Tanzania Air Operators Association
TASOTA	Tanzania Society of Travel Agents
TATO	Tanzania Association of Tour Operators
TCT	Tourism Confederation of Tanzania
TCP/IP	Transfer and Control Protocol/Internet Protocol

TO	Tour Operator
TSA	Tourism Satellite Accounting
TShs	Tanzanian Shillings
TTB	Tanzania Tourist Board
URT	United Republic of Tanzania
EU	European Union
UK	United Kingdom
UN	United Nations
UNCTAD	United Nations Conference for Trade and Development
US	United States
USD	United States Dollar
W3C	World Wide Web Consortium
WAP	Wireless Access Protocol
WiFi	Wireless Fidelity
WTTC	World Travel and Tourism Council
WTO	World Tourism Organisation
WWW	World Wide Web

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Much debate has taken place on the role of information and communication technologies (ICTs) in development. The debate has informed the opinion to the degree of changing the focus of some development partners to consider a different way of mainstreaming the ICTs agenda in development process. This has happened because the initial approaches were basically to fund purely ICTs projects but over time it is being realised that ICTs are mere tools for increasing efficiency and effectiveness of various development processes. Thus, several development partners have started to mainstream ICTs in their development projects and programmes.

In many developing countries various ICTs have been adopted in recent years. The phenomenal success has been the mobile phones. One of the reasons of the mobile phone success has been a fact that it has been a demand-led initiative in contrast with not-so-successful ICTs which are usually supply-led. To a good degree, eTourism, which is defined as the digitization of all processes and value chains in the tourism system, seem to emulate the mobile phone phenomenon, albeit at relatively smaller scale. Contrary to other "e-initiatives" which are more supply-led, eTourism is more demand led. This is because as discussed in the book, domestic tourism is not well developed in Tanzania thus the majority of business in tourism sector depend heavily on international tourists for their survival and profits. Tourism and ICTs particularly the Internet technologies such as the world wide web are described as "perfect fit" by UNCTAD. The potential customers for destinations such as Tanzania are from the West and they are increasingly making the Internet as a major source of information for tourism and travel. Businesses in tourism sector, of all sizes in the developing countries as well as in developed world, have responded to establishing some form of eTourism. The book details how various categories of the tourism system in Tanzania have responded to this reality.

Thus, eTourism (a subset of e-commerce) is facilitating the development process in countries such as Tanzania and elsewhere when various businesses such as tour operators, hospitality providers and tourist attractions get some more business opportunities through disintermediation. Due to the connectivity of various value chains in the tourism system and through income multipliers, added business opportunities are crucial in reducing income poverty. In addition, eTourism provides some opportunity of

lowering leakages from tourism through bypassing some traditional intermediaries.

The data used to present this reality about the state of eTourism in Tanzania was collected by the author in a period of twelve months (August 2004 to July 2005). Twelve categories of different players in tourism system in Tanzania were involved in a purposive survey which targeted organisations which were dealing with international tourists. A total of 307 organisations were involved in the survey. The questionnaire that was used for data collection is in Appendix 1. Also, about 100 international tourists who visited the Lushoto and Longido (both rural areas) were interviewed to find out sources of information, inter alia, for the respective locations (Lushoto and Longido).

Since the data was collected and analysed by someone (the author) with no direct connection to the tourism system, the observations and discussion are based on "an outsider" account. It is possible that a few analyses might have changed already but the main story the book intents to tell is that eTourism is being practiced in Tanzania albeit at lower levels. By comparing the situation in Tanzania with other advanced ICTs adopters, a benchmark is created to monitor the future improvement. For example, it is reported that only 2.5% of surveyed organisations were accessing the Internet at a broadband bandwidth whereas the world average is 25%. Therefore, the data discussed in the book form a good benchmark or baseline for the monitoring of future development of the utilisation of ICTs in the tourism industry in Tanzania.

The content of the book will inform different types of audience. For policy makers, the book provides original data and information which could be deployed in informing the debate on ICTs for development (ICT4D). Since there are very few sources of such detailed data and information and books related to electronic commerce as wells as ICT4D in the majority of developing countries, the book is suitable to both academics, students, and practitioners interested in the subject. Similarly, donors and other development partners are likely to find the book interesting as it provides a detailed analysis on issues of e-commerce in a developing country. For example, it is observed that the concept of digital divide is broader than as it is usually considered since an access to ICTs is only a necessary condition since there are several other sufficient conditions which need to be addressed in order to bridge the divide effectively and

sustainably. Some of these sufficient conditions include possessing the right technical knowledge and information culture as well as the enabling environment such as appropriate legal framework and infrastructure.

The book is organized in two parts. Part one covers some background information about the subject. Chapter One discusses the place of tourism in the economy. Similarly the chapter demonstrates the way various technologies have influenced the development of tourism. The chapter ends with discussing the synergy between tourism and information as well as introducing an idea of changes in Western tourists information search behavior whereby the Internet is becoming one of the popular source of travel and tourism information.

Chapter Two presents a brief account of one of the popular Internet services, namely the world wide web. It is also demonstrated that e-commerce follows a staged-growth pattern in which simpler technologies such as web presence and use of e-mails form lower stages. Much of the chapter discusses both physical and information and transaction value chain in tourism. The Tanzanian tourism value chain mapping presents an informed account on how numerous players are related with the aim of creating the value to tourists as well as make their own profit margins for the commercial ones. Finally, the chapter discusses how eTourism can be used to disintermediate some intermediaries and increase profit levels of even smaller players in tourism value chain in developing countries.

Chapter Three combines ICTs and tourism and discusses on how both can be used in efforts of poverty reduction and attainment of sustainable development in developing countries with tourist endowments. Whereas, Chapters Four, Five and Six form the second part of the book. In these chapters a gamut of research findings are discussed highlighting the state of eTourism among the eleven categories of players in the Tanzanian tourism system. It is observed that some of these players such as tour operators, airlines and galleries are quite ahead in deployment of ICTs in their business processes. In these chapters, an array of Internet technologies and other systems such as property management system as well as computerized reservation systems/global distribution systems are discussed. In these chapters, where necessary, a background literature is first covered before presenting the actual research

results so as to contextualize the results in a developing country context.

The book ends with Chapter Seven which first presents summaries of the findings of the major categories of tourism system in Tanzania. Finally, a synthesis on the implication of eTourism on sustainable development is presented. It is concluded that despite the lower e-commerce level the majority of players in Tanzanian tourism system still occupy, the Internet has been a boon to these players as it has empowered them to disintermediate some of the traditional intermediaries.

Faustin R. Kamuzora
September 2006

PART ONE

ROLE OF TOURISM IN ECONOMIC DEVELOPMENT AND THE EFFECT OF INFORMATION AND COMMUNICATION TECHNOLOGIES ON TOURISM VALUE CHAIN

CHAPTER ONE: INTRODUCTION AND BACKGROUND ON INFORMATION AS LIFE BLOOD OF TOURISM BUSINESS

1.2 Tourism in Global Economy

Tourism is defined by the United Nations World Tourism Organisation [1] as travel that involves staying away from the normal place of residence for at least one night (but not for over a year) in a person's own country or abroad, with the purpose other than a permanent paid activity at the destination. There are several reasons why people engage in tourism, but the major reason as been summarized by Wang [2:216] is that tourism travel provides the tourist with "an alternative experience of time, i.e.[sic] time off or holiday time, which appears as an alternative rhythm, free from the constraints of the daily tempo." Therefore, tourism processes (as will be discussed later) are geared towards maximizing the experience of a tourist. In maximizing the lifestyle experience there occurs a possibility of learning and gaining new knowledge and meaning from the process of travel as well as from the places visited [3, 4].

The importance of tourism is evidenced by the increase in the number of people travelling yearly. According to the United Nations World Tourism Organization [5], 698 million people travelled to a foreign country in 2000, representing a 25-fold increase from 1950 when the figure was 25 million. By 2003, some 2 million people crossed an international border each day, compared with only 69,000 in 1950 [6]. According to the World Travel and Tourism Council (WTTC) [7] about one-fifth of these tourists travel to developing countries such as Tanzania. It is expected that the number of tourists will increase to 1.56 billion per year by 2020 at the global growth rate of 4.1 per cent per annum for the 1995-2020 period [5]. On the other hand, the growth for Africa is estimated to be relatively higher at 5.1 per cent per annum.

Combined with passenger transport, international tourism receipts make tourism the world's number one export earner, ahead of motor vehicle products, food, computer and office equipment, fuels, textile

and clothing, telecommunication equipment and iron and steel, respectively [8]. Tourism and travel (referred hereto as tourism system) lead other industries as they both contribute about 11 per cent to the world gross domestic product (GDP) and 9 percent of the world workforce is employed in the system [9]. In addition, the WWTC estimates that tourism and travel contribute about 12.2 percent of world's total exports well as 9.4 percent of total investments [8]. These facts place travel and tourism as one of the world's largest and fastest growing industries. For example, in 2005 travel and tourism was estimated to account for over 221 million jobs worldwide [7]. In addition, in many developing countries such as Tanzania, tourism is a leading source of economic growth, foreign exchange earnings, investments, and job creation [5]. To these countries, tourism is among very few industries which offer positive comparative advantage over developed countries in terms of cultural heritage, natural wildlife, and climate [5, 10].

1.3 Technologies as Engines of Tourism Growth

1.3.1 History of Tourism at Global Level

The history of international tourism has been covered by several Western writers, some of whom equate the Western history of tourism with the world's history. For example, Harrison [11] summarises the history from ancient to modern times in Western perspective. While in ancient times only a few people would travel long distances, the onset of railway construction in Europe ushered an era of mass tourism. Urry [12:119] concludes that the effect of railways construction generated "one of the most distinctive experiences of the modern world, compressing time and space, and bringing places once deemed far from the teeming cities within the reach of the prosperous middle class and (later) the more affluent working class."

Commercial tourism activities are recorded to have been started by Thomas Cook in England in 1841. Cook is widely credited with starting the tourism business when he arranged a train excursion for temperance campaigners from Leicester to Loughborough [13]. The Thomas Cook company name continues up to today albeit under different ownership. The development in means of transport expanded further to include ocean liners, cars and planes [11]. In the second half of the 19th century, the construction of large and increasingly luxurious ocean-going liners expanded long-haul travel. By the end of the 1930s, car ownership was facilitating travel across Europe and North America. By 1937, for example, British tourists

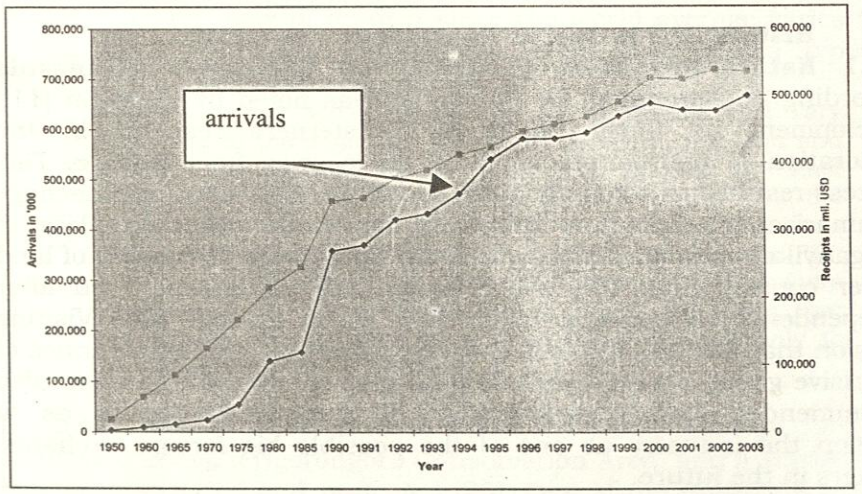
were travelling to various destinations and in that year alone, some 1.4 million trips were made from the UK, mainly to Belgium, France, Italy and Switzerland [11, 14].

If the mid-19th century was 'the age of the train', the mid-20th century was the 'age of the plane' [15]. In 1959, even before passenger jet aircraft were introduced, more passengers crossed the Atlantic by air than by sea, and the advent of passenger jets, followed by the introduction of wide-bodied jets in the late 1970s, meant that individuals who could afford to pay the airfare world could travel quickly and relatively comfortably, not only across the Atlantic but also to an ever expanding tourist periphery [16]. In other words, technologies have enabled people more leisure time since technologies increase efficiencies thus people work for shorter time. Working for shorter times saves time to travel. In addition, advancement in technologies modify travellers' behaviours too [4].

1.3.2 Combined Factors Which Led to Rapid Growth of ModernTourism

The developments in technology discussed above, combined with improved socioeconomic conditions in several parts of the world from 1950s led to a fast increase in the number of tourists worldwide as shown in Figure 1.

Figure 1: Worldwide Tourism Arrivals and Receipts (1950 – 2003)



Source: WTO various years and [17]

Specifically, Swarbrooke [13:17-18] delineates these conditions as follows:

- Increase in disposable income,
- Advances in aircraft technology,
- The greater availability of motor cars,
- Further increase in leisure time,
- Increased education levels, and
- Growth of tour operators and the package tour holidays.

The information revolution superheaded by the Internet as part of ICTs has facilitated travel and tourism much further. The remarkable difference in tourism is that in the pre-Internet period most tourists would travel without much information about the destination. The onset of the Internet has created a different breed of tourists who travel informed about the destinations. This brings a challenging business environment since informed customers expect more predictability of service thus making them relatively more difficult to satisfy [4]. Corresponding to the increasing number of tourists is an increase in the revenue earned from the system. The gap between the two curves in Figure 1 has not been constant because of several reasons, one of which is the volatilities in exchange rates between currencies. Since final figures are computed in the US dollar, fluctuations in exchange rates would be among several reasons to account for the change. However, both curves are indicating a trend which has been rising over 50 years as depicted in Figure 1 above.

1.4 History of Tourism in Tanzania

1.4.1 Natural Resources as Attraction of Foreigners to Tanzania

According to Chachage [18, 19, 20] and as noted by Harrison [11], development in travel habits by Westerners resulted in the exploration of natural resources in areas away from Europe. This process resulted in colonialisation later on in 19th century. Chachage summarises the process by which both the colonial rulers of Tanganyika, namely, Germany and Britain, placed vast areas of land under conservation. The conservation was to be continued after independence in response to a 1960 United Nations (UN) Visiting Mission that had recommended the development and maintenance of extensive game reserves and national parks. The same mission also recommended further development of tourist facilities so as to develop the industry as one of the possible big foreign exchange earners in the future.

1.4.2 Conservation Initiatives after Political Independence

Close to political independence in 1961, a new government showed a serious commitment to the conservation of wildlife. In a speech, commonly known as the Arusha Manifesto made in September 1961, the first President of Tanganyika, J.K. Nyerere said [21:481] quoting Tanzania Wildlife Policy [22]:

> The survival of our wildlife is a matter of grave concern to all of us in Africa. These wild creatures amid the wild places they inhabit are not only important as a resource of wonder and inspiration but are an integral part of our natural resources and our future livelihood and well being. In accepting the trusteeship of our wildlife we solemnly declare that we will do everything in our power to make sure that our children's grand-children will be able to enjoy this rich and precious inheritance. The conservation of wildlife and wild places calls for specialist knowledge, trained manpower, and money, and we look to other nations to co-operate with us in this important task the success or failure of which not only affects the continent of Africa but the rest of the world as well.

Thus, the success of conservation of Tanzania's fauna and biodiversity has been a concerted effort of various governments (from colonial – German and British rule to the present ones). These efforts have resulted in a highly successful conservation output whereby a total of 242,000 square kilometres, or 28% of Tanzania's total land area of 945,090 square kilometres are under different forms of protection. This massive of land under protection puts Tanzania in a league of its own since the world average varies from 3.04% to 5.1% [21]. Goldstein [21:481] summarises types of protected land in Tanzania as follows:

> Protected areas are grouped into six categories that vary according to the degree of protection offered to the land and wildlife. These categories in order of greatest to least protection are: National Parks (NP), Game Reserves (GR), the Ngorongoro Conservation Area (CA), Game Controlled Areas (GCA), Partial Game Reserves (PGR), and Forest Reserves (FR). Three of these areas have been designated as Biosphere Reserves and six are World Heritage sites, indicating that these sites have unique ecosystems important not only to Tanzania, but also to the world.

By 2005, a total of 14 national parks, 31 game reserves, 38 game controlled areas, a Ngorongoro Conservation Area, and a Marine Park had been gazetted and protected [23]. One of the major aims of the conservation has been to reap economic benefits emanating from international tourism.

1.5 Contribution of Tourism in Tanzania's Economy (1995 - 2003)

Tanzania is one of the developing countries in which tourism is quite significant economically. For the trends in the performance and growth of tourism in Tanzania, see for example, [24, 25, 26]. These authors show that for the last decade tourism has grown to be more an important sector in Tanzania. As a share of total exports, tourism earnings increased from 15% in the 1980s to over 40% after late 1990s as depicted in Table 1 below.

Table 1: International Visitor Arrivals and Receipts from Tourism and Merchandise in Tanzania, 1995 – 2003

Year	Number of Visitor Arrivals*	Receipts from Tourism* (US $ Mill)	Receipts from Merchandise** (US $ Mill
1995	295,312	259.44	758.0
1996	326,188	322.37	763.8
1997	359,096	392.39	752.6
1998	482,331	570.00	588.5
1999	627,325	733.28	543.3
2000	501,669	739.06	663.3
2001	525,000	725.00	776.4
2002	575,000	730.00	902.5
2003	576,000	731.00	1142.4
2004	587,141	739.00	
2005	599,000	740.00	

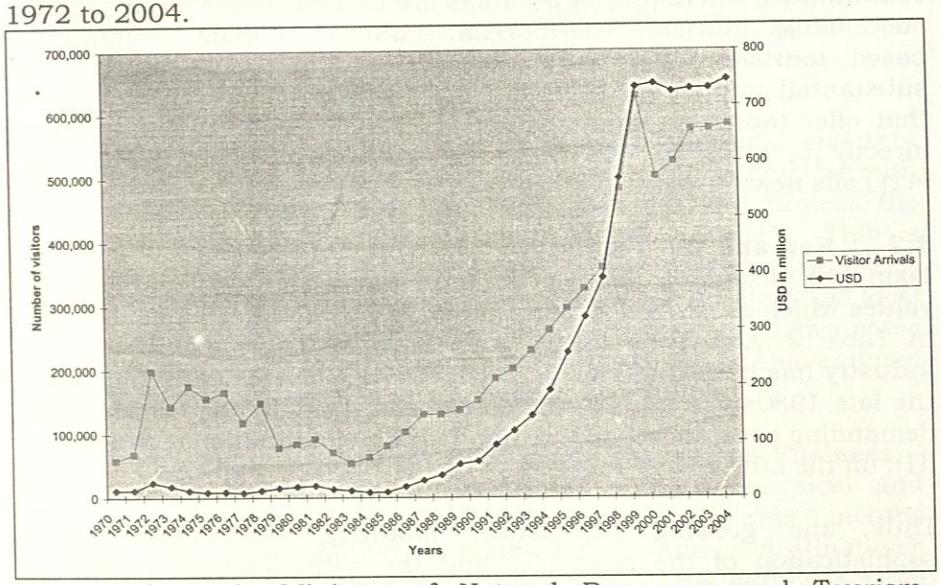
Source: * URT [27] and ** BoT [28]

Due to its low small-size economy, Tanzania is among seven other developing countries where tourism is the number one export earner. The other small countries are the Comoros (51.7) Gambia (58.8), Maldives (71.0), Samoa (47.4), Tuvalu (29.5), and Vanuatu (33.9) Roe et al.[29:28]. As can be discerned from 1, the percentage of foreign exchange earned from tourism as a ratio of total foreign exchange in the small economy of Tanzania is relatively high. This situation of overdependence on one sector puts Tanzania's economy at risk since international tourism business is known for its high volatility [30, 31] as it is affected by many external factors. Some of these factors could

be, for example, outbreaks of diseases such as the SARS virus (as in some Asian countries) in 2003, or war and terrorism [17].

Prior to the new rise in tourist arrivals in Tanzania as depicted in Table 1 above, there had been a drop in numbers due to some economic and political realities that existed in Tanzania from the mid-1970s. One of those realities was the break-up of the East African Community in 1977 which adversely affected tourist arrivals, since Tanzania had to close its border with Kenya. Tourist arrivals started picking up in mid 1980s and the trend has continued to rise to more than 500,000 arrivals after year 2000. Tanzania is expecting to receive a million international tourists in 2010 who will generate 1.5 billion USD in the economy [32, 33]. Figure 2 depicts the trend of arrivals as well foreign exchange received from tourism.

Figure 2: Visitor arrivals and revenue from tourism in Tanzania: 1972 to 2004.



Source: Tanzania Ministry of Natural Resources and Tourism, various years

In addition, as depicted in Figure 2, the average income spent by international tourists had been rising too. The average rose to USD 1000 in 1998 and the trend continued up to 2000. This echoes well the vision of developing tourism in Tanzania whereby more revenue

can be collected without a corresponding increase in the number of tourists [34, 35][1]. Since tourism in Tanzania is nature based and the ecosystem is usually fragile, receiving large number of tourists may result in overstretching the carrying capacities of some of the natural tourist attractions. The policy in Tanzania is to support the development of high value tourism that is sustainable within the fragile ecosystem of the natural resources [34, 35].

1.6 Typologies of Tourism and Emerging Characteristics of New Tourists

Tourism activities take place under different topologies of which the most common is the conventional or mass tourism. Conventional tourism attracts the majority of travelers, but, it has little impact in improving incomes in rural areas [38] [39] where the majority of the citizens live [40]. However, other forms of tourism are gaining currency [38], whose shared vision is to benefit members of the communities where tourist products are located. These forms include sustainable tourism, eco-tourism, cultural tourism, community based tourism (CBT), rural tourism and pro poor tourism. A substantial number of tourists from the West prefer visiting areas that offer tourist products which are benefiting rural communities directly [5, 9, 34, 39, 41]. These constitute the type of tourists Poon [42] calls new tourists.

1.7 New and Old Tourists

Poon [42] discusses changes in tourist consuming behaviour and values which are critical driving forces for the new tourist as depicted in Table 2. Also Poon [43] argues that the international tourism industry has been undergoing rapid and radical transformation since the late 1980s – a transformation driven largely by experienced and demanding consumers, on one hand and by information technologies (IT), on the other.

Thus, the growing experience, maturity, independence and sophistication of the consumer and the ascendancy of consumer influence on the market are major factors changing the travel and tourism industry. An important element of this change has been the demand by consumers for cleaner, greener and more sustainable tourism services, products and experiences. It is easily discerned

[1] However, by the time of writing this book, Tanzania had not implemented the Tourism Satellite Accounting (TSA) [36, 37] in collecting information from tourism system. Therefore, the accuracy of the information collected by the National System of Accounting (NSA) method could be low. The data is not considering the multiplier and leakage effects arising from the tourism system.

that the new tourist is interested in destination sustainability as he/she seeks to understand and enrich his/her experience

Table 2: Features of old tourists compared against new tourists' features

OLD TOURISTS		NEW TOURISTS
Search for the sun	⇨	Experience something different
Follow the masses	⇨	Want to be in charge
Here today, gone tomorrow	⇨	See and enjoy but not destroy
Just to show that you had been there	⇨	Just for the fun of it
Having	⇨	Being
Superiority	⇨	Understanding
Like attractions	⇨	Like sports
Precautions	⇨	Adventurous
Eat in hotel	⇨	Try local fare
Homogeneous	⇨	Hybrid

Source: Poon [42, 43]

Thus, learning is one of the major reasons of gaining a different experience. Similarly, the new tourist is interested in interacting with people in a destination [43]. Pine and Gilmore [44] profess the importance of "social experience" for the "new tourist". This is important in leveraging tourism in issues of poverty reduction, since the new tourist is more likely to include in his/her itinerary the local rural areas and spend some financial resources in buying some items and even trying to eat local food as opposed to the conventional (old) tourist who only eats in large, Western like hotels.

1.8 Tourism is Increasingly Becoming Information Business

Tourism is a hybrid industry composed of both physical and information services [45]. The physical components include transport, accommodation, restaurant, and destination's infrastructure. On the other hand, examples of the additive service components include information in travel planning and room services. However, more than other services, tourism services are increasingly dominated by information [45, 46, 47, 48, 49]. Thus tourism is becoming more of information business since a tourist depends on quality information to make a decision to travel to a destination, *inter alia*. In addition, according to Werthner [45], since tourism services are highly perishable, the supply chain provides value based on time-sensitive information. Contrary to many other

businesses in which a consumer can touch a product before buying it, in tourism consumer has to travel to the "factory" where a product is situated. This feature qualifies tourism as a "confidence good" because product choice is generally made prior to its consumption [50] Thus, the geographical and temporal distance between decision making and consumption can only be partially eliminated through timely and high quality information to the traveler.

In addition, the bundling of services (for example air travel, accommodation, ground transportation, tour) to offer a tourist package is dependent on interorganisational information flows within the value chain. A large number of suppliers in the industry interact to integrate complementary components, creating countless product and service configurations [51]. For example, the purchase of a holiday package to Tanzania by, say, a Western tourist involves both *a priori* and *ad hoc* communication, negotiations, and transaction processing between airlines, hotels, and ground transportation which may be offered by in-coming operators in Tanzania. Apart from perishability, other characteristics of several products and services offered by travel and tourism businesses are heterogeneity and intangibility [46]. An example of the perishability of services is an empty seat in a plane/train/coach/cruise or an unoccupied hotel room/bed for a night which represents a lost income. Therefore, successful providers or principals of these services rely on the efficient transmission of information about "stocks" to various intermediaries involved in reaching consumers. Without efficient transmission of information about the availability of seats or rooms/beds, more income would be lost. On the other hand, timely information processing may add to the profitability of commercial players in the tourism system through, say, the yield management techniques [52, 53].

1.9 Information as Life Blood of Tourism

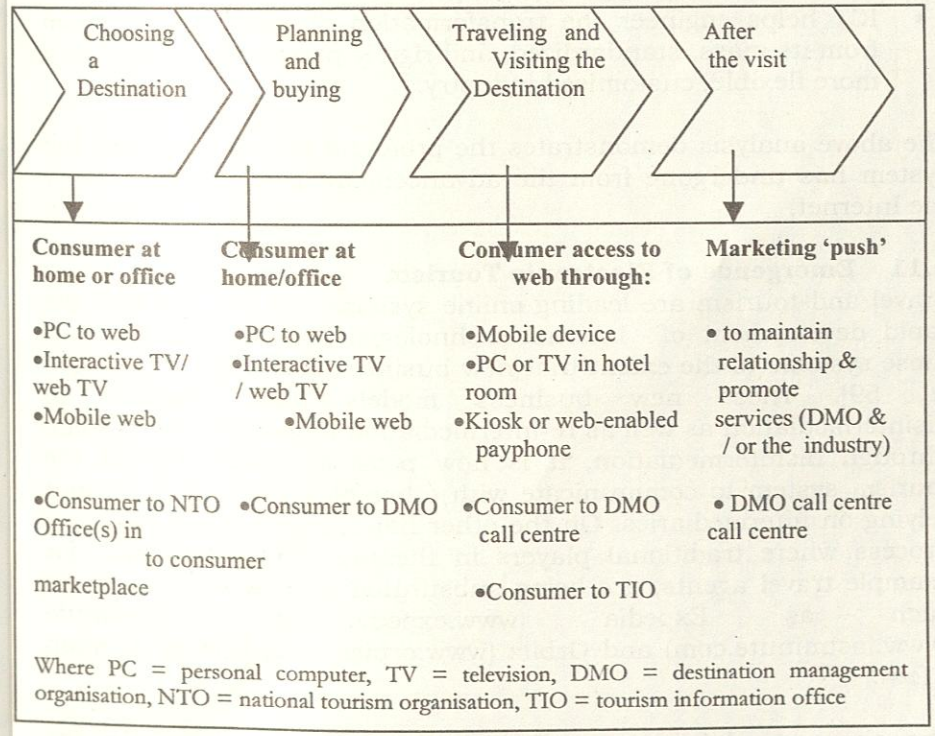
Due to the importance of information in tourism activities, Sheldon [46] characterizes it as a life blood and an essential competitive factor in the tourism system. It is through the communication process that suppliers of various goods and services reach the potential tourists and engage them throughout the whole customer journey. The customer journey, is the transition from a condition of never-a-customer to having a customer who pays for a service or good a supplier is selling and possibly continuing being a loyal customer [54, 55]. In this journey of the tourism business the quality

of information is very critical deciding on a destination and other associated services a consumer chooses. It is through the tourism information systems that a consumer is informed about the products and services available in a highly competitive market place.

1.10 Tourism Information Systems and the Internet

The Internet is the transport vehicle for information such as tourism information stored in files or documents on another computer [56]. As pointed earlier, in early days of 19th century, it was the transport technology which facilitated the growth of tourism in Europe. Towards the end of 20th century, the Internet had changed greatly the way people planned their travel activities. Figure 3 demonstrates how the Internet and other ICTs have become part and parcel of the tourism communication lifecycle.

Figure 3: Ubiquity of the Internet in Tourism Communication Lifecycle



Adapted from [1] based on TEAM.

Various ICTs are utilising Internet technologies in assisting tourists' access to information in the entire journey from choosing a destination, planning and buying, travelling and visiting a destination, and keeping on receiving information about the destination after travel. As demonstrated in Figure 3, the ICTs using Internet technologies to bring tourism information to a consumer include PCs, television (particularly interactive TV), mobile phones and web based kiosks.

The implications of the development in ICTs to tourism and travel system are summarized by Poon [42] as follows:

- ICTs change the rules in the industry.
- ICT is substantially altering the role of each player in the value-creation process of the industry.
- ICT facilitates the production of new, flexible, and high-quality travel and tourism services that are cost-competitive with mass, standardized, and rigidly packaged option.
- ICT helps engineer the transformation of travel and tourism from its mass, standardized, and rigidly packaged nature into a more flexible, customised industry.

The above analysis demonstrates the profound changes the tourism system has undergone from the advancement in ICTs, particularly the Internet.

1.11 Emergence of Electronic Tourism

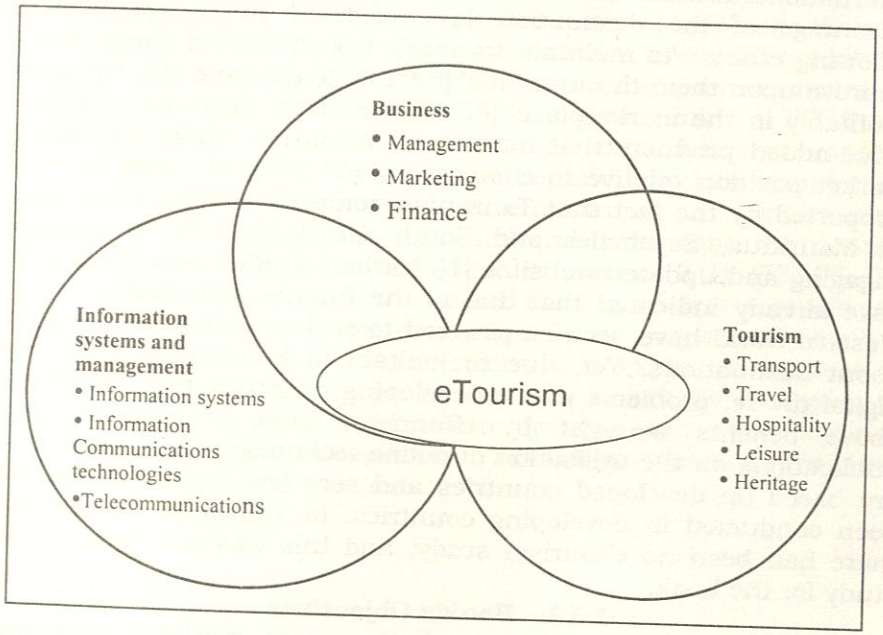
Travel and tourism are leading online systems [49, 57, 58] and the rapid development of Internet technologies have revolutionalised these systems to the extent that new business models have emerged [1, 59]. These new business models have resulted in disintermediation as well as re-intermediation in the tourism system. Through disintermediation, it is now possible for players in the tourism system to communicate with other players directly without relying on intermediaries. On the other hand, re-intermediation is a process where traditional players in the tourism system [60], for example travel agents, are being substituted by new online players such as Expedia (www.expedia.com), Lastminute (www.lastminute.com) and Orbitz (www.orbitz.com), just to mention a few.

The above development is taking place at a fast speed in the developed countries to the extent that a new field of knowledge

known as eTourism (electronic tourism) is emerging as a multidisciplinary study. Electronic tourism as a discipline combines three disparate disciplines, namely, business management, information systems and management, and tourism. [59:77]. Figure 4 depicts the pictorial representation of the components eTourism discipline.

Despite the above rapid technological development, developing countries are still facing a digital divide. Since developing countries such Tanzania depend substantially on tourism for their economic growth, the effects of development in eTourism do percolate to these countries.

Figure 4: The electronic tourism (eTourism) concept and eTourism domains



Adapted from [59]

Therefore, there is a need to examine the extent to which eTourism is being utilized in these countries in order to gain deeper understanding and provide possible recommendations on how to improve the situation. As UNCTAD [47, 58] correctly observed, the

failure of tourism players from developing countries to be online is tantamount to being out of business since other competitive destinations will outsell them. The same sentiment is shared by Castell [61] who cautions that, in a networked economy, digital divide will further marginalize the poor countries. From the above arguments, it is apparent that the rapid development in Internet technologies is creating both opportunities and challenges for developing countries that depend on tourism. An example of the opportunities wrought by Internet technologies is that through the process of disintermediation, even small players in poor countries are standing to gain by directly communicating with the customers through the Internet.

This book focuses on whether the Tanzanian tourist industry has the capability to employ the web for increased competitiveness in the international tourism market share as a destination. The competitive advantage of the destination is considered to encapsulate the following ethos: 'to maintain its market position and share and/or improve upon them through time' [62:23]; 'to compete effectively and profitably in the marketplace' [63:417]; and 'to create and integrate value-added products that sustain its resources while maintaining market position relative to competitors' [64:240]. The conclusion is supported by the fact that Tanzanian competitor destinations such as Mauritius, Seychelles and South Africa have more dynamic, engaging and updated websites [1]. Various studies [42, 43, 65, 66] have already indicated that due to the Internet, consumers in the Western world have been empowered to seek and share information about destinations. Yet, due to limitations brought about by the digital divide, problems in the developing countries may curtail the above benefits wrought by eTourism. This is because most publications on the utilisation of online technologies and other ICTs are based on developed countries and very few such studies have been conducted in developing countries. In Tanzania, particularly, there had been no eTourism study, and this was the basis of the study for the book.

1.12 Book's Objectives

The tourism system comprises both source market/region and destinations (where tourists travel to) such as Tanzania. The general objective of the book is to critically evaluate, and discuss the extent and effectiveness of the utilisation of ICTs, particularly the Internet services/technologies, by various stakeholders in the tourism system

in Tanzania[2]. The book also explores the extent to which various stakeholders are knowledgeable in ICTs skills such as web authoring, as well as in utilising the web analytics techniques. In addition, it had been estimated that more than 10% percent of international tourists coming to Tanzania end up visiting areas practising community based tourism as an add-on product. From the literature, the trend of tourists who are sympathetic with real- people development (these are known as new tourists as per Poon [42, 43] classification is on the rise. Since it is claimed that one of the characteristics of the new tourists is the skills to use the Internet, the book seeks to verify this claim by providing evidence on the source of information from tourists who actually visited the areas where rural tourism is practised. This is because community based tourism or rural tourism is another product which Tanzania is working hard to promote as a means of diversification apart from the traditional nature based tourism (safari tourism) [34]. Finally, it is contended that free and open source software (FOSS) is a more sustainable route for poor countries in developing their IT capabilities [67, 68, 69]. In other words, FOSS is considered vital in bridging the digital divide [70, 71] confronting poor countries. In addition, it has been concluded that strategic adoption of FOSS may increase competitiveness of countries and companies as summarised by Graham [72:206]: ... "those countries and companies that adopt FOSS ... will have a huge competitive advantage...." Since various studies conducted in Tanzania had indicated that the tourism system was leading in the utilisation of general ICTs [73, 74, 75], therefore tourism system is considered ideal to analyse regarding the deployment of electronic commerce in a developing country such as Tanzania. The final objective, therefore, is to explore the extent the stakeholders in tourism system in Tanzania is actually employing the FOSS in their tourism information systems and other business processes to gain competitive advantage through business communication cost reduction.

[2] The discussion is based on a research conducted by the author for the July 2004-2005 period (details on methodological issues are discussed in Kamuzora (2006)).

CHAPTER TWO
GAINING COMPETITIVE ADVANTAGE FROM INFORMATION TECHNOLOGIES IN TOURISM VALUE CHAIN

2.0 Introduction

This chapter surveys the role of the Internet in the tourism industry. It presents a brief account of how the Internet is revolutionising various businesses. One of the business systems that has adopted this revolution is travel and tourism by adapting its information value chain to this reality. The chapter also, describes two types of value chain in tourism systems, namely, physical and information and transaction flow. A mapping of Tanzania physical tourism value chain is presented.

2.1.3 Internet Services and Applications

There are various Internet technologies or services and applications that exist for use by different types of users. As noted above, since the Internet is a "layered" infrastructure, these services are not necessary a core part of the Internet but are layered-on or added-on [76]. There are several of these services including the world wide web, file transfer protocol (ftp), e-mails, gopher, telnet, mail lists, voice over IP (VoIP), virtual communities, intranet and extranet and instant message services. Using all these tools and services, the Internet can facilitate numerous activities to individuals/companies/institutions with appropriate connectivity, software and skills. Some of the activities are communication, collaboration, information gathering, direct marketing and advertising, and direct online selling [77]. The following section provides a brief description of the web as one of popular Internet technologies or services.

2.1.3.1 World Wide Web

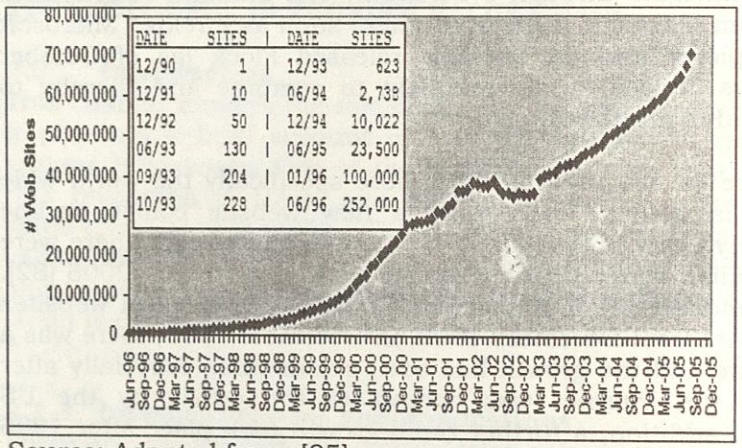
The development of the World Wide Web (www or the web), hyperlinks, and graphical browsers stimulated further the growth of the Internet. It began as a standard that defined how a user could travel from one computer to computers throughout the world by following embedded links in a screen display of words (hypertext). In March 1989, Tim Berners-Lee of the European Particle Physics Laboratory (commonly known as CERN) launched a project to create a more user-friendly way to transmit information between locations, resulting in the web [78]. The web is based on the Hypertext Transport Protocol (HTTP) and it uses hypertext mark-up language (HTML) to create web pages. The invention resulted in a point-and-click, user-friendly, flexible part of the Internet [79, 80] which made it easier to navigate through cyberspace. The addition of graphical browsers from Mosaic in 1992 and others such as Firefox, Microsoft Internet Explorer and the recently released Flock (as of October 2005), allows images, audio and text to combine and thereby to create a world of multimedia [78].

The audience for the Internet, and more specifically the world wide web (web), is growing rapidly as a new website comes on-line approximately every 30 minutes [81]. It is estimated that there were about 70 million active public websites worldwide in July 2005 [82]. Figure 5 demonstrates a phenomenal growth of number of websites on the Internet from December 1990. In December 1990, there was a single website and the growth has been exponential, especially after 1991 when the Internet was opened to the public by the US Congress. In addition, a further rapid growth took place after 1995 with the onset of electronic commerce as portrayed in Figure 5 due to the availability of graphical user interface web browsers (starting with NSCA Mosaic in 1992 which went on to form Netscape Communications).

The interactive features of the web have been a basis of a fast growing form of business commonly known as electronic commerce (e-commerce). Under e-commerce, there is eTourism, which is one of the major the interests of this book. The success of e-commerce over a relatively short period of ten years (from 1995) is attributed to the fact that a website is an inexpensive way to reach millions of potential and actual stakeholders with the convenience of seven days a week and 24-hour (24/7) access [48, 83].

One essential benefit of the Internet is that it renders 'time' and 'place' obsolete [84] much faster compared with the train in mid-19th century and the plane in mid-20th century as described in Chapter 1. The cost of transmission of information on a business is relatively low and the 24/7 feature allows customers (old and new) to obtain information anytime and from anywhere (provided there is an Internet connection).

Figure 5: Growth of number of public websites



Source: Adapted from [85]

Thus, the Internet enhances business competitiveness [51, 86]. The competitive concept is discussed in the following section.

2.2 Building Blocks of Competitiveness

The value chain theory employed in this book (to be covered shortly is based on Porter's conceptualisation on the competitive strategy. In other words, the value chain theory is one of the three core concepts embedded in Porter's Competitive Strategy. The other two core concepts being the basic competitive forces and the generic competitive strategies [87]. Detailed in his three books, namely, *Competitive Strategy Techniques for Analyzing Industries and Competitors* [88], *Competitive Advantage: Creating and Sustaining Superior Performance* [89], and *The Competitive Advantage of Nations* [90], Porter contends that each business has a chain of activities that yielded value to its customers, and it is only through careful analysis of this "value chain" that a company can find sources of sustainable competitive advantage. Specifically, Porter [89:26] defines the value chain as "the basic tool for diagnosing competitive advantage and finding ways to enhance it..." In addition, company's value chain is based on its history, strategy and activity processes [89]. The main aim of this research, therefore, was to explore the extent various players in the Tanzanian destination tourism value chain were utilising the Internet to increase their competitive advantage. The

following section briefly presents Porter's conceptualisation on the sources of competitive advantage.

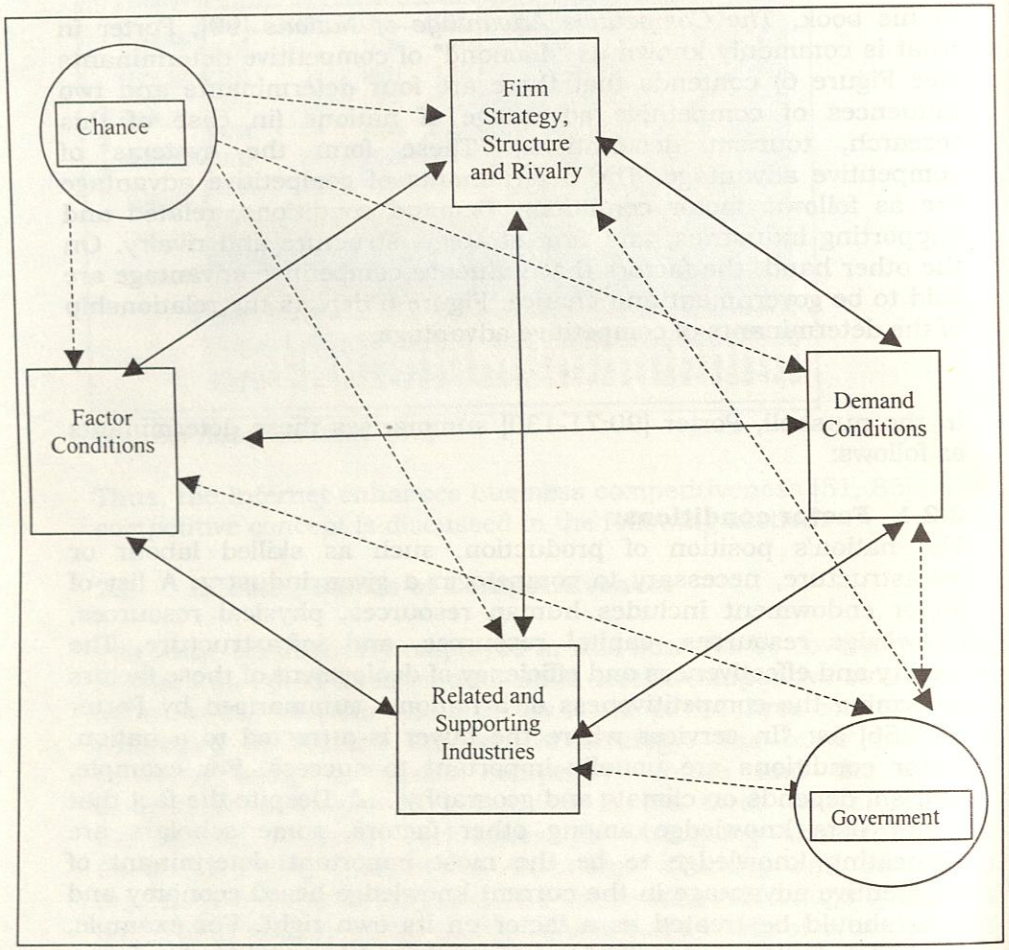
In his book, *The Competitive Advantage of Nations* [90], Porter in what is commonly known as "diamond" of competitive determinants (see Figure 6) contends that there are four determinants and two influences of competitive advantage of nations (in case of this research, tourism destinations). These form the systems of competitive advantage. The determinants of competitive advantage are as follows: factor conditions, demand conditions, related and supporting industries, and firm strategy, structure and rivalry. On the other hand, the factors that influence competitive advantage are said to be government and chance. Figure 6 depicts the relationship of the determinants of competitive advantage.

In the nutshell, Porter [90:71-130] summarises these determinants as follows:

2.2.1 Factor conditions:

The nation's position of production, such as skilled labour or infrastructure, necessary to compete in a given industry. A list of factor endowment includes human resources, physical resources, knowledge resources, capital resources, and infrastructure. The quality and effectiveness and efficiency of deployment of these factors determine the competitiveness of a nation, summarised by Porter [90:256] as: "In services where the buyer is attracted to a nation, factor conditions are usually important to success. For example, tourism depends on climate and geography ...." Despite the fact that Porter lists knowledge among other factors, some scholars are advocating knowledge to be the most important determinant of competitive advantage in the current knowledge-based economy and thus should be treated as a factor on its own right. For example, Khalil and Wang in [91:5] assert that "the ability to learn, collaborate, and innovate faster than one's competitors is possibly becoming the only sustainable source of competitive advantage in the knowledge-based economy." In the same tone, Christodoulou [92] quoting Andreta asserts "knowledge-capital" factor as the most important factor in value creation through knowledge integration.

Figure 6: The Complete System of Competitive Advantage



Source: [90:127]

2.2.2 Demand conditions:
These include the nature of home demand for the industry's product or service. Porter asserts that a product or service can serve two types of markets, namely, internal and external. Competitive advantage would be gained depending on the composition of the domestic demand market not necessarily the size. For example, competitive advantage accrues to firms when local buyers place more

innovative pressure through qualitative than quantitative factors. This is because manufacturers are most sensitive to needs of closest clusters. Also, large and sophisticated domestic market is an advantage since it provides feedback fast to manufacturers and forces them to meet high standards. In relation to the demand conditions, a discussion in Chapter Five demonstrates that with low level of domestic tourism, Tanzanian tourism business is highly susceptible to international demand conditions. The problems arising from a low level of domestic tourism demand implying that the Tanzanian tourism business is highly dependent on international demand conditions [93].

2.2.3 Related and supporting industries:
The presence or absence in the nation of supplier industries and related industries that are internationally competitive. A network of suppliers in close proximity results in lower costs and higher quality. Also, supporting industries enhances competitiveness. Examples of the supporting industries include banking, insurance, and accounting services. It will be demonstrated later the way lack of credit card processing facilities is reducing competitiveness of some tourism services providers in Tanzania.

2.2.4 Firm strategy, structure, and rivalry
The condition in the nation governing how companies are created, organised, and managed, and the nature of domestic rivalry. For example, competitive domestic market is likely to result into a successful and competitive international business. This is because an internal rivalry creates firms that are battle tested domestically which are likely to be more successful internationally.

2.2.5 Competitive Advantage Influencing Factors (Government and Chance)
Government and chance are added to complete the system of competitive advantage. According to Porter these two are not direct determinants but they have a considerable influence on the competitive advantage of a nation, sector or firm. Porter [90:128] claims that government is an "important influence on competitive advantage." The government lies outside the diamond because its role has both positive and negative influence on the four determinants. Of itself, government cannot create competitive advantage. Finally, chance describes elements outside the control of firms or sectors, such as wars or surges in demand or major technological changes. Chance is seen as lying outside the diamond

because it is not one of the core determinants that decide which nations or sectors gain or lose from chance. Examples of chance in increasing competitiveness of one destination include political unrest, war, or natural disaster (such as the Tsunami of Boxing Day in 2004) in a competitive destination.

Thus, it is some of these determinants that provided some of the theoretical basis for the analysis of the exploration of the extent various players in the Tanzanian destination tourism value chain were utilising the Internet technologies to increase their competitive advantage.

2.3 Using ICTs to develop Competitive Advantage

Of the four components of the "diamond" in Figure 6 the discussion deals mainly with strategy, structure and rivalry but concentrating more on strategy component. In Porter's earlier work, *Competitive Advantage: Creating and Sustaining Superior Performance* [89], he had dwelt much on the importance of strategy. He defines the following generic strategies for achieving above-average performance in an industry:

2.3.1 Cost leadership

Businesses are required to minimize their costs to be competitive. Thus, strict cost control is one of the main business functions. Cost leadership may emerge, for example, from standardizations, economic of scale or better deals with suppliers. In our discussion, it is theorised that the effective utilisation of ICTs in tourism information system would reduce costs of business transaction and result in cost leadership thus bestowing competitive advantage to stakeholders.

2.3.2 Differentiation

Differentiation can be achieved by creating products through a unique selling proposition (USP) or services that are appreciated industry-wide as being unique and valuable.

2.3.3 Focus

Focus refers to the strategy in which a narrow competitive scope within an industry, such as a particular buyer group, a segment of the product line, or a geographical market, is targeted and a cost leadership or differentiation strategy is tailored exclusively for its needs.

2.3.4 Time

Time can be regarded as an additional potential source for competitive advantage [59]. In a society where time and responsiveness are increasingly rare commodities, organisations offering efficient and effective communications and transactions for the entire marketplace will be able to gain competitive advantage. Buhalis [59:53], summarises in Table 3 how proper deployment of ICTs can aid these generic strategies in attaining competitive advantage.

Table 3: Using information and communication technologies (ICTs) to develop competitive advantage

Strategies	How ICTs develop competitive advantage
Cost leadership	• Use ICTs to reduce the cost of customers or suppliers • Reduce cost of business processes • Increase cost efficiency • Ensure competitive pricing • Decrease supply costs and ease supply • Maximise resources utilisation especially for fixed costs
Product differentiation	• Use ICTs to develop unique products and add value • Differentiate products/services of a company • Reduce differentiation advantage of competitors • Use information as a product itself
Focus	• ICT-enabled segmentation and targeting • Develop relationship marketing • Aim to develop mini-market segments • Enhance the ability to create niche markets
Time	• Provide timely solutions to consumer and trade problems • Maximise interaction and reduce response time • Enable just-in-time initiatives, reducing stock and distribution costs

Buhalis (2003:53)

2.4 Internet and Competitive Advantage

Internet services such as the web has been only with us for just about ten years but due to its utility to some business processes,

more particularly in developed world and some people in developing countries, one may think it is older than 10 years. Thus, business management books written by the gurus and amateurs before second part of 1990s did not include the Internet in discussion. For example, by the time of writing his earlier books in 1980s and early 1990s, Michael Porter did not incorporate the Internet in his famous Value Chain and Competitive Advantage theories since the Internet had not reached a commercial status. However, of recent Porter has commented on the role of the Internet in his competitive advantage framework. Porter [94:78] summaries the role of the Internet as follows: "Only by integrating the Internet into overall strategy will this powerful new technology become an equally powerful force for competitive advantage." This is because the Internet technologies such as the world wide web (web) are transforming the rules of competition in business in two ways, firstly by the reduction of information asymmetry, and secondly by disintermediation and reintermediation processes [45, 46, 94].

Through reduction of information asymmetry tourists can easily collect information about products or services without actually going to tour operators and comparing prices. In the offline market, researching product offers can be expensive and time-intensive [95, 96]. On the web, a complete search of product offers is possible at low cost, thus the search cost for the consumers are lowered. In addition, the size of a firm is not a significant factor in establishing one's presence in the virtual marketplace (web). Big and small companies can be located side by side with no differences; the capital requirement to operate on a market is strongly reduced. The web also reduces market imperfection and allows more players to compete in cyberspace. Consumers can search for product and service information and compare prices over the whole web where geographical distances does not play any role. This will significantly affect the competition within an industry. Bakos [97] and Buhalis [59] assert that lower buyer search costs in electronic markets promote price competition among sellers thus benefiting consumers who pay lower prices for goods and services.

On the other side, the web provides new possibilities and technologies for companies to create electronic marketplaces that support new types of intermediaries, commonly known as cyber-eMediaries or eMediaries resulting into reintermediation [1, 17, 59, 60, 98]. These new intermediaries perform functions that include

matching buyers and sellers providing product information to buyers and marketing information to sellers, aggregating information goods, providing trust, and integrating components of consumer processes [51]. However, due to the relatively low cost of owning websites, even small businesses have the capacity to use the web and make direct contacts and sales with customers without a need of going through traditional intermediaries such as retailers. Thus, traditional intermediaries can be disintermediated by producers (big or small) and reduce the cost of business transactions which may add competitive advantage for those businesses which may deploy the Internet technologies strategically. In other words, quality information on the Internet is another source of competitive advantage. If one destination management organisation (DMO) (supplier) can better represent its destination on the Internet than another then it may win the tourist who is uncertain about where to travel. Therefore, to compete, the successfully DMOs such as Tanzania must provide a better information experience than their competitors

2.5 Value Chains in the Tourism System

The value chain concept is described as the sequence of all the activities needed to envision, create, engineer, produce, distribute, market, and sell a set of related products or services. The value perceived by the end-consumer of the product or service is derived in part from each step in the chain, although not all steps create the same amount of value or deliver the same profit potential [86, 99]. Evolution of the value chain concept spans to the 1960s and the 1970s when it was used by analysts charting a path of development for mineral-exporting economies. It was also adopted in French planning literature in the form of the *filière* [100] (which literally means "thread"). Kamann and Strijker summarise the filière as follows:

> The filière originally was developed as a tool to make an inventory of all existing activities and actors involved in order to *improve* the entire network in respect of quality and completeness. The philosophy behind it being that the strength and competitiveness of the actors represented as a group – the network – depends on the performance of the weakest participant. By drawing up and analysing the filière, the various types of actors could be traced and analysed on their value and contribution to the network.

But from the 1980s Porter's [88, 89, 90] writings have propagated the value chain ideals further. According to Porter [89:xvi] value is "...what buyers are willing to pay for a product or service, and the cost of performing the activities involved in creating it, determines profits." In addition, Womak and Jones (who refer to it as the "value stream" have added more influence on the concept [100]. Others scholars who have written about it extensively are Gereffi [99, 101, 102] and Kaplinsky [100], particularly in relation to developing countries. As described earlier, tourism is a hybrid product with physical as well as information and transaction components. Therefore, there are two types of value chains which describe tourism, namely physical value chain and information and transaction value chain (virtual value chain). The following section briefly discusses the physical value chain, first generically and then specifically to the tourism system.

2.5.1 Generic Value Chain Analysis

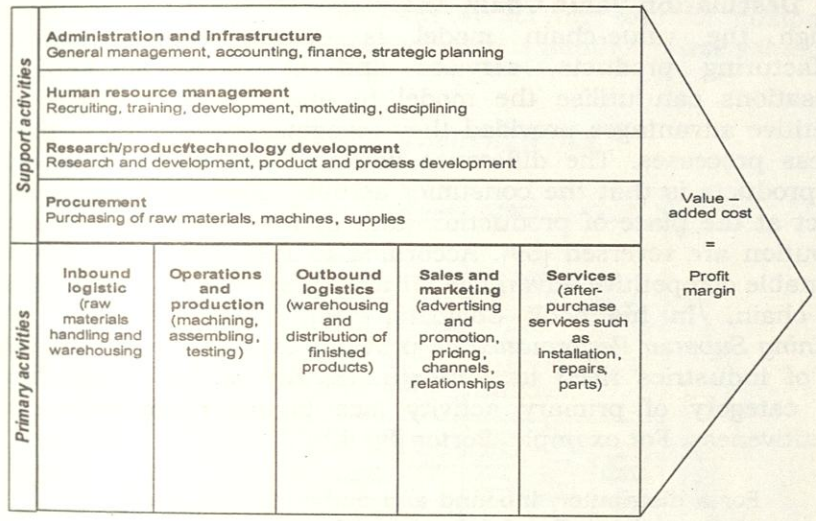
The following description on the generic value chain is based on Porter [89] and Buhalis [59:36-37]. In order to produce goods or services, firms require various resources. In the value chain analysis these resources are divided into primary and support activities as depicted in Figure 7. Primary activities examine the process of transformation of raw material or information to products and offerings and then their delivery to customers and partners through the sales and marketing as well as the service functions.

Support activities facilitate the smooth functioning of primary activities and have an indirect relationship with the process of adding value to the product. They include all administration and infrastructure required to run any business, such as accounting and finance. The human resource management is in charge of making available the right human resources for the operation of the organisation. Product development aims at improving the existing products and redesigning them in a way that maintains their attractiveness and appeal to new target markets; and procurement deals with ensuring that all materials required for the organisations are purchased at appropriate prices.

Naturally the higher the difference between the value added to the product and the cost to the organisation, the higher the profit margin and the benefit for the organisation. Specifically, Porter [89:38] refers to the margin as "...the difference between total value and the

collective cost of performing the value activities", as depicted in Figure 7.

Figure 7: Generic value chain analysis



Adapted from Buhalis [59:36]

The value chain of each organisation is incorporated within a greater value system, sometimes known as value stream [100]. This includes the value chain of its suppliers, distributors and retailers. Ultimately, the value chain of all actors involved in the chain should be coordinated for the system to work efficiently and to deliver seamless products. If any of the partners fail to deliver appropriate value and products, the entire chain can break and the system can even collapse. This is because each organisation operates its value system in parallel with those of its competitors. Every other organisation in the system will also have a value chain that it supports. Similarly, the broader value system for one industry also includes the value chains of competitors. In even broader sense, each organisation operates within an economic system, which can be represented as a series of value chains running in parallel and supporting each economic sector [59]. This also is the basis for the supply chain management concept [103], however, in this book a discussion is only limited to the value chain concept. Finally, according to Porter [89] the above linkage of value chains when operates smoothly, results into efficient production of goods and services and

competitive advantage can be gained by optimisation and co-ordination of activities and processes of members in the value chains.

2.5.2 Destination Value Chain Analysis

Although the value-chain model is mainly associated with manufacturing products, services and in particular tourism organisations can utilise the model to analyse their sources of competitive advantages provided they recognise differences in their business processes. The difference between tourism services and other products is that the consumer actually goes to consume the product at the place of production and, therefore, all logistics and distribution are reversed [59]. According to Porter [89], sources of sustainable competitive advantage for any company are buried in its value chain. In his book *Competitive Advantage: Creating and Sustaining Superior Performance* he provides examples how different types of industries need to contextualize the model in selecting which category of primary activity (see Figure 8) is source of competitiveness. For example, Porter [89:42-43] notes:

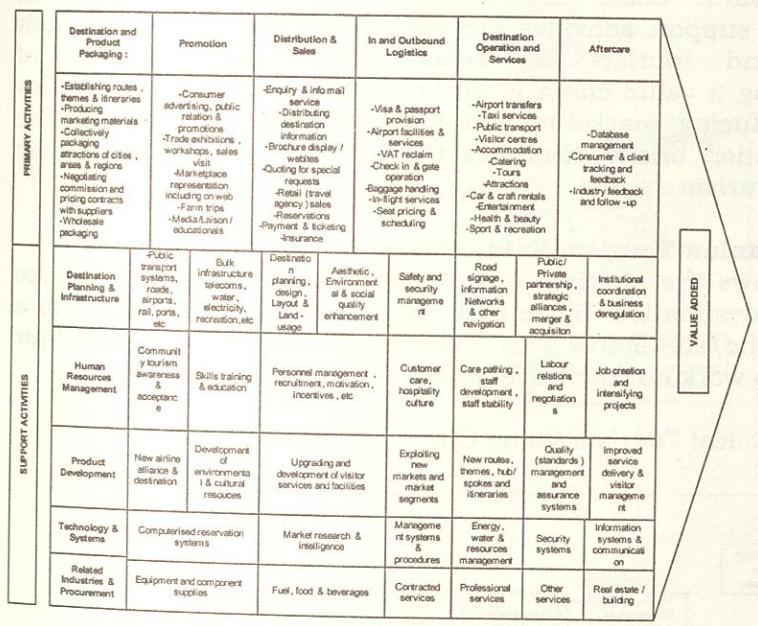
> For a distributor, inbound and outbound logistics are the most crucial... For bank engaged in corporate lending, marketing and sales are a key to competitive advantage through the effectiveness of the calling officers and the way in which loans are packaged and priced. For a high speed copier manufacturer, service represents a key source of competitive advantage.... In chocolate manufacturing and electric utilities ....procurement of cocoa beans and fuel respectively is by the most important determinant of cost position [and, therefore strategy]... In steel....a firm's process technology [development] is the single greatest factor in competitive advantage

Tourism activities are supported by almost the entire range of industries at the destination level, from energy to agriculture and manufacturing. Thus, the ability of the various components of tourism value chain to develop and deliver its products will depend to a greater extent on other sectors of the economy and their value chains [59]. For example, as demonstrated in Figure 8 at a destination level, for example Tanzania, various actors collaborate to perform both primary and service activities.

Suppliers of services and goods from private sector and some from public sector their ultimate aim of being in business is to generate

profit margin. Whereas public entities such as DMOs and other government bodies aim at regulating tourism business by setting rules and standards and enforcing them, private stakeholders aim at making profits. However, since all of these suppliers of goods and services at a destination aim at serving tourism customers, on demand side the tourists' experience is another prime value added.

Figure 8: Destination Value Chain Analysis



Source: Adapted from Jonker [104:216]

Among the primary activities undertaken at a destination is product packaging of tourist attractions or maintaining existing attractions. New as well existing attractions need to be promoted through various means including the web. Distribution and sales is a third primary activity by destinations which include activities such as taking orders from customers as well as receiving payments. On other hand, in and outbound logistics are undertaken to ensure smooth arrivals of tourists at a destination. The activities include visa processing and flight logistics. While at a destination, operation and services activities include provision of transport, accommodation, food and beverage. When a tourist has visited attractions at a destination and

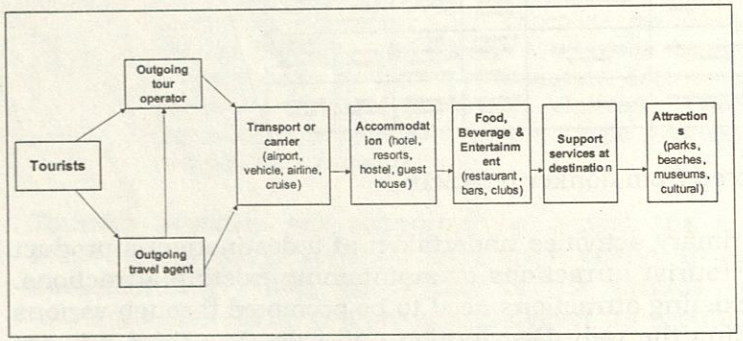
returned home, after sales activities entail conducting customer relationship management (CRM) where possible to get feedback on the level of satisfaction and recommended areas for improvement. As is with primary activities, the support activities are all geared to enhance tourists' experiences at a destination. These activities include destination planning and infrastructure, human resource management, product development, technology and systems, and related industries and procurement.

The above value chain analyses have demonstrated how both primary and support activities are vital in generating value to both suppliers and tourists on demand side. Another way of demonstrating a value chain is outlining the sequence of activities involved producing, marketing and selling the goods or services. The following section briefly discusses the tourism value chain in the Tanzanian tourism system.

2.5.3 Tanzanian Tourism Value Chain

Figure 9 shows the physical value chain of tourism from a source market to a destination. Since a tourist has to travel physically to a destination, he/she starts with consulting a travel agent and tour operator who work out the travel plans.

Figure 9: Physical Tourism Value Chain for Tanzania

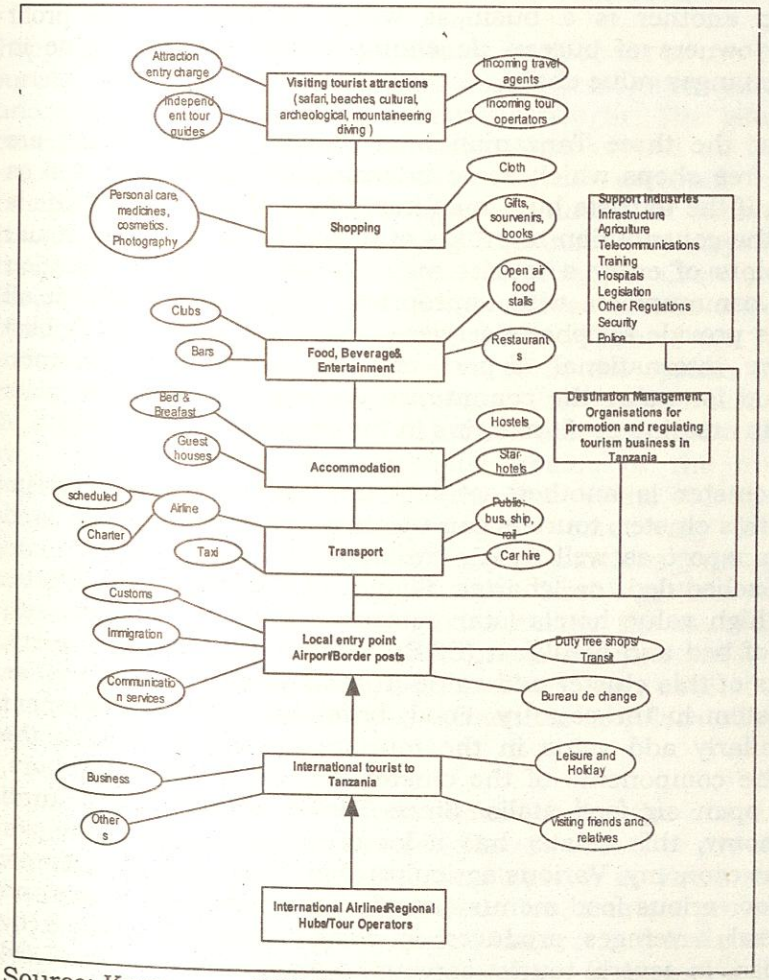


Source: Kamuzora (2006)

The tourist has then to travel to a destination by means of carrier and upon arrival at the destination she/he will make use of the accommodation services, as food, beverage as well as entertainment services. Finally the tourist travels to visit various attractions as per itinerary through the service of incoming tour operators who are among the support providers at the destination Tanzania.

Specifically, Figure 10 provides a Tanzanian tourism value chain mapping which details the linkage of primary providers of various services and goods to tourists visiting Tanzania. Figure 10 depicts the value chain mapping for Tanzanian tourism system by showing various players in adding value in the system[3].

Figure 10: Tanzania Tourism Value Chain Mapping



Source: Kamuzora (2006)

[3] Up to time of writing this book there were no disaggreaged figures for value added per each cluster in the Tanzanian tourism value chain. The Systems of National Accounting (SNA) which was being used to compute contribution of tourism in economy does not have such capability [37, 105]

From the points of entry, a tourist is served by several categories of business organisation (private and public). For example, at the point of entry, immigration and customs personnel would ensure the tourist has the right travel documents including visa payment where appropriate. Entry tourist visa for majority of Western countries where most of tourists come from can be bought at point of entry. Since the visa charges are in USD there are a few bureau de changes at points of entry to serve the tourist. Changing money from one currency to another is a business which generates some profit margins to owners of bureau de changes thus creating value in bureau de changes value chain.

Similarly, at the three Tanzanian international airports there are some duty free shops which serve international arrivals as well as departures. If the tourists buy some items from these shops value is created in the contribution to profits of duty free shops value chain. Also, at points of entry a tourist may use several communication services to communicate with appropriate people. While almost all entry points provide telephone services (landlines as well as mobile) only at one international airport one can access the Internet. Charges paid for using the communication services by the tourists contribute in creating profit margins in the respective value chains.

Transport cluster is another set of value chains in the tourism system. In this cluster, tourists can use taxi, rental cars, public land and sea transport as well as air transport. The air transport can either be scheduled or charter flights. Accommodation cluster comprises high value hotels (star category), hostels, guest houses, and a few of bed and breakfast (B&B) services. By serving tourists, components of this cluster add value in their value chain as well as tourism system in the country. Food, beverages and entertainment cluster similarly add value in the tourism system by serving the tourists. The components of the cluster include restaurants, bars, clubs and open air food stalls. Since Tanzania is an agricultural based economy, this cluster has a lot of linkages with the major sector of the economy. Various agricultural produces are used as raw materials for various food menus served to the tourists. In bars and clubs several beverages produced in Tanzania are consumed by tourists. Also, in several tourist serving hotels and clubs some local music bands are used to entertain the tourists, thus creating value in that particular value chain.

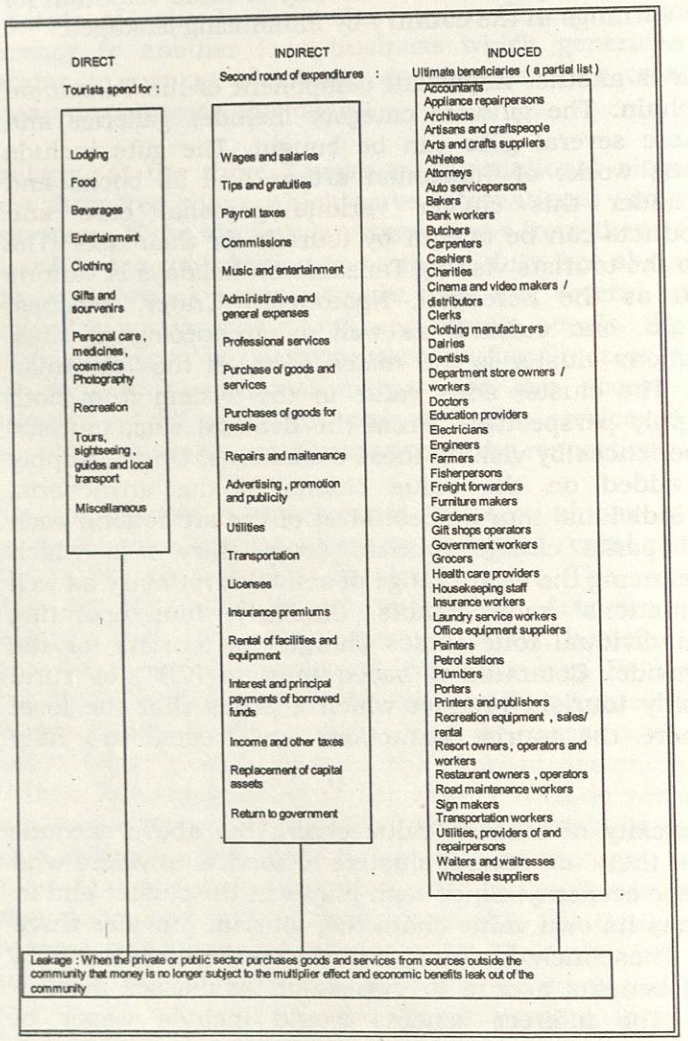
The open air food stalls, such as that one at Forodhani Bay in Zanzibar and a few cases of *Mama Ntilie* elsewhere, are of special interest in Tanzanian tourism system as they serve Tanzanian food only. While some of the food menus served in the large hotels would contain some foreign produced raw materials (representing leakages of foreign exchange) this is not a case with the open air food stalls. The open air food stalls represent the best way of value retention for keeping tourism earnings in the country by minimizing leakages.

Shopping cluster is another important component of the Tanzanian tourism value chain. The giftware category includes galleries and curio shops where several gifts can be bought. The gifts include souvenirs, various works of Tanzanian art as well as books and clothes. Also under this cluster various personal care and photography products can be bought by tourists for their use. The ultimate value to the tourists visiting Tanzania on holidays is various attractions such as the Serengeti, Ngorongoro Crater, beaches, Mount Kilimanjaro, and cultural as well as archaeological sites. Thus, the attractions cluster is the *raison d'être* of the Tanzanian tourism system. The cluster adds value in the system from both demand and supply perspectives. From the demand side, tourists' add on their experiences by visiting these attractions. On the supply side, value is added on the value chains of the attractions, companies, and individual tour guides. Most of the attractions such as the national parks charge tourists some entry fees which contribute in enhancing the entire range of activities (primary as well support) in attractions' value chains. Similarly, tour operating companies and individual tour guides charge the tourists for the services they provide. Communityl based tourism (CBT) or rural tourism is the only tourism product which ensures that the local communities where the tourist attractions are located are fully engaged..

Due to the complexity of tourism value chain, the above account demonstrates that there are several clusters of service providers who serve tourists in the economy. Since each player in the cluster and in the value chain has its own value chain too, tourism provides three types of benefits. These include direct, indirect and induced benefits [106]. The direct benefits accrue to owners of businesses directly serving tourists. The indirect benefits would include wages of employees of the businesses serving tourists and various taxes governments charge these businesses. The induced benefits accrue to almost all members of the economy since taxes from tourism

system are spent on goods and services governments provide to the citizens. Equally, the induced benefits also come from the multiplier effect of incomes earned from tourism. Figure 11 demonstrates the flow of the benefits from tourism.

Figure 11: Flow of income from tourism



Adapted from [106]

Figure 11 demonstrates that the tourists would normally pay directly for services offered by suppliers who directly deal with tourists such as accommodation providers, for example lodging; food; recreation; and tour operators, tour guides and local transport.

Those who receive direct income from tourism pay for other services such as utilities, insurance premiums, licenses, raw materials such agricultural produces and professional services. In terms of direct livelihoods of other people, the suppliers of direct services to the tourists pay wages and salaries to their employees who subsequently spend their incomes on various services representing the induced multiplier of income from tourism. Also, these suppliers buy raw materials from other producers (a case of those operating restaurants buying food and drinks from other suppliers of these items). Therefore, if developed strategically to reduce leakages, tourism provides some means of developing an economy by creating several employment and business sales opportunities in components of the value chain. In other words, individuals employed by these service providing organisations obtain their livelihoods so as individuals accessing business opportunities of selling their merchandise to the tourists. In a second round of expenditure, various industries which supply goods and services to businesses directly serving tourists also obtain their livelihoods too from tourism. A good example in Tanzania is the agricultural sector as briefly pointed above.

2.5.4 Tanzanian Tourism Value Chain Governance

The value chain governance concept has been propagated by Gereffi [101]. In order for the tourism value chain to operate smoothly, it has to be governed by several bodies. In Tanzania, the Ministry of Natural Resources and Tourism provides several rules and guidelines to regulate the sector. However, since some of the players fall out of the realm of the ministry, some of the regulations come from other ministries as briefly summarised by CHL Consulting Group [107]. In Tanzania, government is one form of legislative governance in setting and enforcing the rules, policies and regulation (sort of legislative and judicial governances). However, Tourism Confederation of Tanzania (TCT) which is an apex organisation for private sector actors in the system forms a sort of "executive governance" as it assists its members to meet the standards which the private sector has set to itself. In addition, TCT becomes an umbrella to directly communicate with the government on behalf of its members. As part of governing the tourism value chain, the legislation in Tanzania bars non-citizens to conduct travel agency business and restricts the

vertical integration of tourism business in the country. However, not all players in the chain have the same amount of business power since there are a few large tour operators as well international hotel chains which control relatively a higher market share of the business. For example, it was reported that about five large tour operators in the country control close to a half of the tour operating business in the country [34]

2.5.5 Value to a Tourist

Creating value to a customer is considered the *raison d'être* for business organizations [108]. Because of its central role in business process, Woodruff [109] predicted that customer value will be "the next source for competitive advantage" because a business which provides high level of satisfaction to its customers is more likely to outsell its competitors and gain more loyalty. Since tourism is composed of an extensive value chain of many players, all the players in the value chain aim at maximizing tourism experience which is the ultimate end product a tourist is travelling to enjoy. The perceived value of a tourism experience, or the tourism product, is the result of many combined factors such as purchasing the trip, travelling to the destination, accommodation, attractions, and entertainment experienced. Thus, the tourism experience happens in multiple environments along a geographically dispersed value chain.

As demonstrated by Figures 10 and 11 for case of a tourist visiting Tanzania, with consuming all the goods and services provided by various suppliers, which add some value to a tourist's experience, the ultimate goal, however, is to climb Mount Kilimanjaro, visit Ngorongoro Crater or the Serengeti. In other words, it is visiting the tourist attractions in a destination such as Tanzania which provide the experience a tourist travels to enjoy. Therefore, customer value to tourists is a contribution of various actors' foresight to enhance the efficiency of the entire tourism value chain to serve the tourists better. This requires the actors to create value throughout all the stages of customers (tourists) journey [54, 55]- from planning to visiting a destination to returning home. Previous noted is that tourism is a hybrid product, two types of value chains can be mapped. One type representing tourism as physical service such as the one presented above and the other representing information and transaction flows in tourism value chain, as described in the following section.

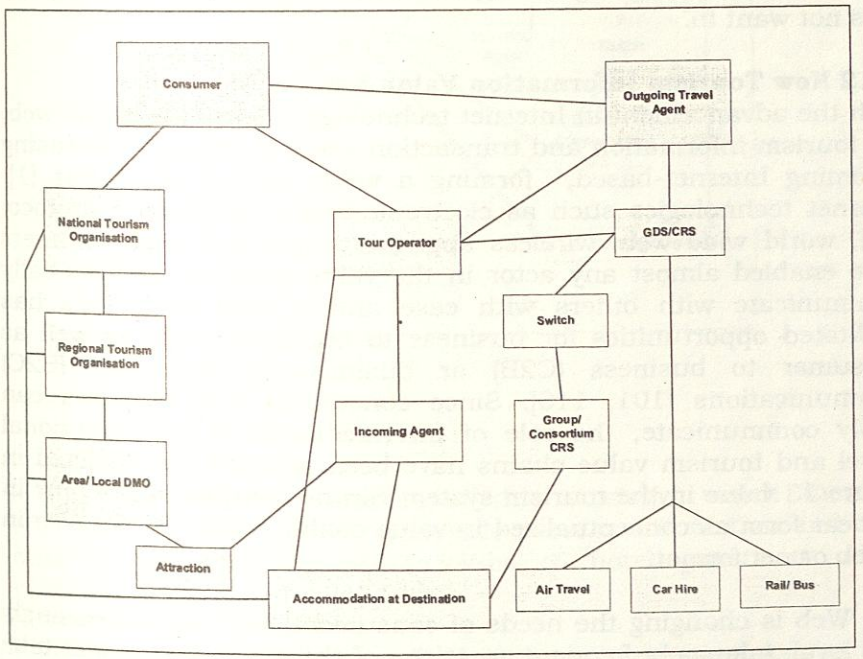
2.6 Tourism Information and Transaction Value Chain

Based on Buhalis' conceptualisation of the information and transaction tourism value chain, it possible to present two scenarios of tourism information and transaction value chain [59]. One scenario is a traditional tourism value chain before the explosion of the Internet technologies and the other is with the current state with Internet technologies.

2.6.1 Traditional Tourism Information and Transaction Value Chain

Figure 12 represents traditional travel and tourism value chains for the distribution of information as well as transactions flows. In the traditional value chains, the tourism organisations operate independently of the commercial sector (for example airlines and major hotel chains).

Figure 12: Traditional Tourism Information Value Chains



Adapted from [110, 111]

In the same vein, the communication between a consumer and principals, that is, service providers such as transport companies (for example air travel and car hire), destination management organisations (DMOs) and accommodation at destination is normally only possible through intermediaries. For example, international telephone calls as well as telefax services are relatively expensive and at times unreliable, especially in developing countries. In the traditional value chain, some of the intermediaries a consumer or would-be tourist needs to go through are travel agents and tour operators. These in turn are connected to other intermediaries such as global distribution systems/computerised reservation systems (GDS/CRS). In order to interoperate various GDSs/CRSs are connected to another intermediary, namely, the Switch[4]. Since all these intermediaries charge commissions for their services, the leakage [113, 114] from the consumers' payment becomes large leaving a little margin to destinations. In addition, a traveler or would be tourist does not have much choice because there is no way he/she could avoid going through the above intermediaries if he/she does not want to.

2.6.2 New Tourism Information Value Net

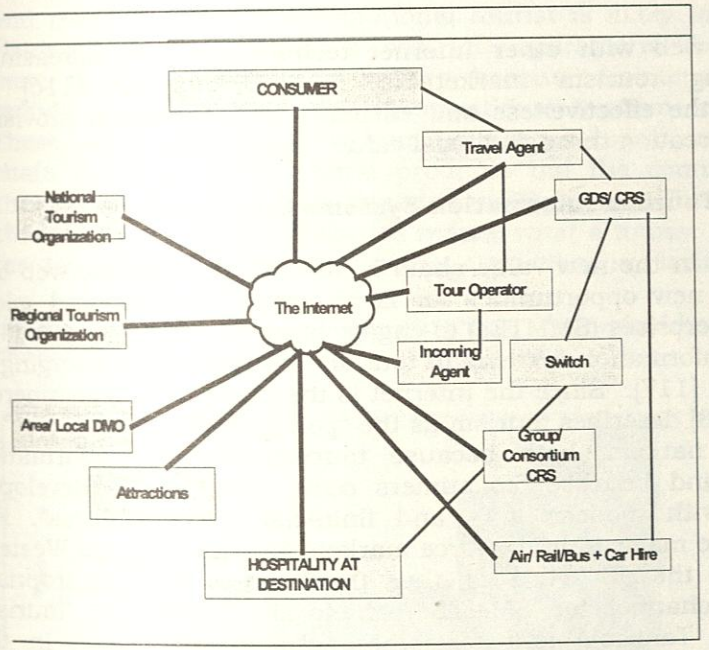
With the advancement in Internet technologies, particularly the web, the tourism information and transaction value chains are increasing becoming Internet-based, forming a value net or value star [1]. Internet technologies such as electronic mail, file transfer protocol (ftp), world wide web, wireless application protocol, and extranets have enabled almost any actor in the value chain to electronically communicate with others with ease and a little cost. This has facilitated opportunities for business to business (B2B) as well as consumer to business (C2B) or business to consumer (B2C) communications [101, 115]. Since consumers and business can easily communicate, the role of intermediaries in the traditional travel and tourism value chains have been reduced. As depicted in Figure 13 value in the tourism system can be considered not only in a linear form as conceptualized in value chains thinking, but also in a web or net format.

The Web is changing the needs of consumers, who are increasingly less loyal, take more frequent vacations of shorter duration, and take less time between choosing and consuming a tourism product [49].

[4] A Switch a bi-directional translator connecting any computerised reservation system (CRS) to the numerous GDS platforms [112].

The Web is also forging new ways to satisfy consumer needs (as discussed earlier based on Poon's insightful analysis), as it allows for an "informatisation" of the entire tourism value chain—resulting in numerous value-generating strategies [49:103] quoting Sweet as follows:

Figure 13: New Travel and Tourism Value Net



Adapted from [1]

- *Value extraction.* Examples of this strategy, which increases efficiency and reduces costs, include process automation and client outsourcing, such as self-check-in of hotel guests or airline passengers.

- *Value capture.* Data mining for forecast or yield management is an example of this strategy, in which client and sales information supports marketing goals.

• *Value addition.* This strategy involves a linear combination of products and services to create richer product bundles. One example is the linkage of mobile services and existing websites, to advise tourists during their travel.

• *Value creation.* The focus here is on network effects, involving, for example, tourists participating in service definition and destination planning.

Thus, the web with other Internet technologies are increasingly transforming tourism marketplace to marketspace [116] by increasing the effectiveness and efficiency of information provision and value creation through virtual value chain.

2.6.3 All Tourism Information Systems Converging to the Internet

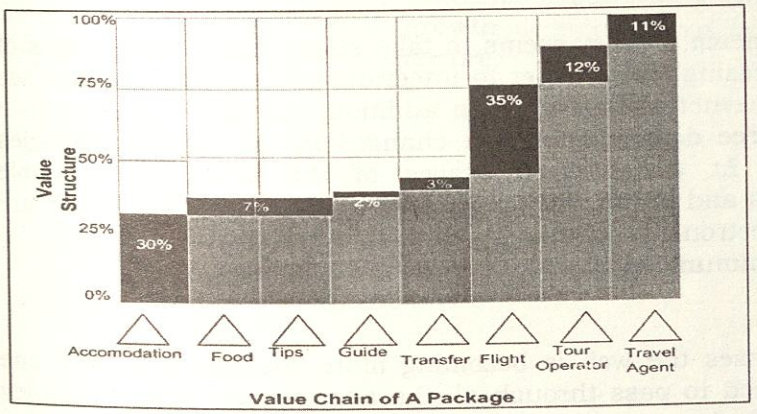
As depicted in the new value chain in tourism system, the web has opened up new opportunities for large, small, medium and micro tourism enterprises (SMMTEs) to engage in electronic commerce [48]. Nearly all information systems in tourism industry are converging to the Internet [117]. Since the Internet is the platform of e-commerce, UNCTAD [58] describes tourism as the "perfect fit for e-commerce" in developing nations, both because tourism is "very information intensive" and because "consumers come from mostly developed countries with modern ICTs and financial infrastructures". For example, the major tourist source markets for Tanzania are Western Europe and the US [24, 105]; thus the Internet is an appropriate marketing channel for SMMTEs which are dominating tourism industry in Tanzania and somewhere else. For example, in the European Union (EU), SMMTEs dominate the industry since they represent 99% of the business [57]. In addition, the tourism sector in EU leads other sectors (tèxtile, ICTs services,) in making online sales [57]. This demonstrates the fact that tourism is indeed a killer application for e-commerce [48] which has enabled the industry to be innovative in their business processes.

2.7 Internet as Consumers Empowering Agent

On the other hand, as demonstrated by Figure 13, Internet technologies have revolutionalised the entire tourism industry mainly by empowering the consumers who can now contact directly providers/principals of various travel and tourism goods and services. It is now very possible for an international tourist to directly contact a local tour operator or accommodation provider and arrange

for his/her trip to a destination without relying on outbound travel agents as well as tour operator. Since the Internet makes tourism information access easy, tourists are capable of choosing destinations and service providers after comparing prices and potential quality [4]. Equally, the traveler/tourist is capable of making his/her travel arrangement online. This kind of arrangement is empowering both local SMMTEs and consumer. Since there are no commission paid to intermediaries such as outbound tour operators and travel agents the international tourist is likely to pay less for visiting a destination and a local tour operator is likely to receive more revenue. This may happen because disintermediation can reduce the leakages caused international tourism intermediaries. These intermediaries, apart from handling information in the value chain do not provide tourist products but the commissions they charge can be as high, as depicted in Figure 14. The commissions charged by these intermediaries reduce what a tourist may spend at the destination where actual tourist attractions are located [48, 65].

Figure 14: An example of value structure of a typical holiday package charges in percent



Source: [51]: 61

Figure 14 shows distribution of charges in percentages among the components of tourism value chain for a normal holiday package (a common form of international tourism in Tanzania [105]. Flight is number one cost item as it takes up 35 percent followed by accommodation which consumes 30 percent. However, close to 23% of the package value goes to the intermediaries (tour operator and travel agent) for their services. Since other components such as

accommodation, food, and flights are vital for the tourist to reach at the destination, it is the intermediaries' costs which can be avoided or to a certain degree reduced through e-tourism so as to increase the amount spent on a destination. Therefore, e-tourism can disintermediate and deconstruct the tourism value chain, thereby driving income closer towards the actual providers of tourism experiences [58, 65]. Even small or remote destinations and products with well developed and innovative web sites can now have equal access to international markets.

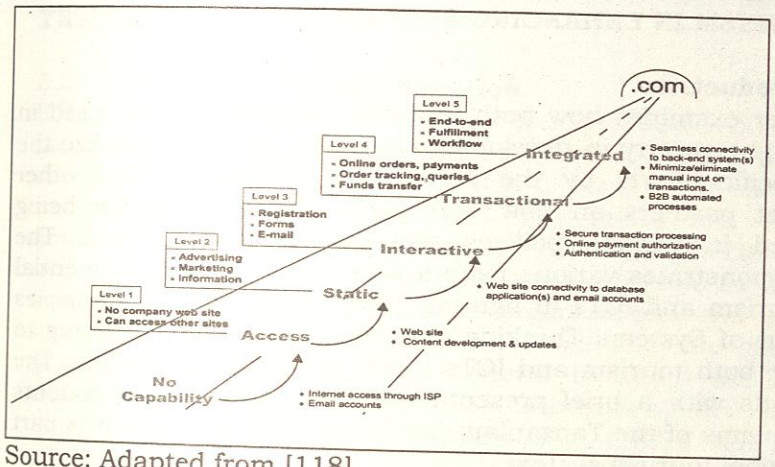
2.8 E-commerce as a Staged Journey

E-commerce, which includes eTourism, develops in stages [118] [119] [120]. The stages demonstrate, that e-commerce is more evolutionary than revolutionary since lower stages involve relatively simpler technologies. Technologies at lower stages in e-commerce include e-mail communication and posting static websites on the web. On the other hand, higher stages comprise more sophisticated technologies such as on-line payment and integrating most business processes and logistics using Internet technologies [121]. Duncan [118] presents these steps in Figure 15.

The e-commerce journey seems to take steps from simple stages of merely accessing the Internet to integrating the business processes with the Internet technologies. In addition, the above journey to a certain degree demonstrates the changes in the web technologies over time. At the nascent stages of the web, the available technologies and knowledge are limited to static websites which are basically electronic brochures. At this stage the web was offering one-way communication.

As time passes the web is becoming more sophisticated, and one does not need to pass through all the above stages now to employ web technologies in his/her business. It is quite possible that a newcomer in web technologies can now start with a high level of the journey type of website, that is, transactional and integrated depending on available resources such as finances and skills.

Figure 15: Electronic commerce journey as evolutionary rather than revolutionary



Source: Adapted from [118]

Finally, given that tourism represents close to a half of all e-commerce activities in developing countries [122] (citing UNCTAD estimates), the role of tourism in growth of e-commerce in these countries is potentially enormous therefore.

CHAPTER THREE

ROLE OF INFORMATION AND COMMUNICATION TECHNOLOGIES AND TOURISM IN ENHANCING SUSTAINABLE DEVELOPMENT

3.1 Introduction

This chapter examines how both tourism and ICTs can be used in efforts to fight poverty in developing countries. To contextualize the study, specific efforts by the Tanzanian government and other development partners on how both ICTs and tourism are being incorporated in various policies and projects are covered. The chapter demonstrates various factors which may hinder of potential of both tourism and ICTs in fighting poverty. The chapter proposes employment of Systems Thinking as one of the means of trying to incorporate both tourism and ICTs in the development agenda. The chapter ends with a brief presentation of the various components and subsystems of the Tanzanian tourism system and how it is part of larger global tourism system.

3.2 Potential of ICTs and Tourism Synergy for Poverty Reduction

Tanzania is one of the poor developing countries despite its endowment of various natural resources such as a large arable land, minerals, water bodies, and a variety of tourism attractions. Tanzania's level of poverty is poignantly captured by various indices such as high infant mortality rates, high maternal mortality rates, low life expectancy, and low levels of various literacy (for specific data on Tanzania, see [123, 124, 125]). The interest in this study is literacy in ICTs since it is now well documented that ICTs, if properly deployed, can be invaluable tools of fighting poverty [65, 126, 127]. However, ICTs are mere tools which, in order to be efficacious, have to be employed in the appropriate sector of the economy. Tourism is considered to be among the top sectors which have high a synergetic relationship with ICTs, as demonstrated earlier - especially by UNCTAD's "perfect fit" analogy. This synergy emanates from the fact that tourism is an information intensive business and on the tourism demand side, ICTs are in high use.

In addition, both ICTs and tourism complement each other at a global level. They have both been incorporated in the current global proclamation on fighting poverty which is embodied in the millennium development goals (MDGs).These were endorsed by the leaders of all UN member states in 2001, and they set clear

quantifiable targets to be achieved in all countries by 2015 in term of eliminating poverty [128]. The following two sections briefly discuss how both ICTs and tourism have been linked with poverty fighting initiatives.

3.3 ICTs and Poverty Reduction

ICTs are among the important tools in economic activities which may facilitate achieving high growth rates in developed as well as in developing countries. ICTs are also a platform to exchange data, information, and knowledge and they are a tool to implement applications such as e-commerce (eTourism in this case), e-schools, and e-health. Thus, ICTs can play a catalytic role as an enabler to fight poverty [129]. A number of organisations and authors have analysed the synergy between ICT tools and the efforts to fight poverty and, in particular the efforts to attain the MDGs. For example, the United Kingdom Department for International Development (DfID) [126] summarises how ICTs can enhance the efforts of fighting poverty and UN [129] details each MDG target and how ICTs could be used to attain them. However, although both institutions admit that tourism is an important sector in efforts to reduce poverty, their analyses on ICTs for poverty reduction did not include tourism.

3.3.1 Different Views on Information and Communication for Development (ICT4D)

Despite the above narrative on how ICTs can facilitate the efforts against fighting poverty, there are several and (to a degree) contradicting views on efficacy of ICTs in attaining the goal of the efforts. For example, Pohjola [130] delineates three categories of views on ICT4D as follows:

Proponents (optimists): Examples of authors in this category include [131], [132]. These highlight the positive effects of the ICTs to create new economic, social and political opportunities for developing countries and the poor. The proponents of ICT4D paint a rosy picture on how poor countries can easily leapfrog some stages of development and advance the socioeconomic conditions of their people by deploying ICTs. The summaries provided by both of the above organisations (DfID and UN), therefore, in one way or another tend to fall in this category of being too optimistic since most of the possibilities assumed as achievable by ICTs are not matched by the most likely constraints that are encountered in the implementation stages.

Critics (pessimists): This category asserts that, due to existing socio-economic inequalities, ICTs will favour the privileged segments within society and not reach the economically and socially disadvantaged thus leading to a widening of the socio-economic gap within developing countries (see for example, [133, 134, 135].

Contextualized approach: Proponents of this approach proffer that socio-economic and cultural contexts are crucial for better understanding the potential effects of ICTs on development and the empowerment of poor communities. Examples of the proponents of this approach include [136, 137, 138], [139] [140]).

From the above perspectives on ICT4D, the contextualized worldview seems to present the better picture. Thus, it is the approach that is adopted in this study. This is because the presence of technology *per se* does not solve socio-economic problems, despite the fact that they could be among the "necessary" tools for development. As poignantly concluded by Castell [141:92]

> the availability and use of ICTs are a pre-requisite for economic and social development in our world. They are the functional equivalent of electricity in the industrial era. ... the ability to use it is the critical factor in generating and accessing wealth, power and knowledge in our time.

Therefore, the skill levels as well the appropriate information culture [142] of using ICTs seem to be the missing "sufficient" condition in effective utilisation of these tools for socio-economic development purposes in poor countries such as Tanzania. The results by two institutions, namely, Research, Education and Democracy in Tanzania (REDET) and HakiElimu demonstrate the extent of information culture in Tanzania [143]. The results reveal that that only 14 per cent of the respondents had sought information from public offices in 2005. In other words, 86 per cent of the respondents revealed that they had not sought or requested any type of public information [143]. Search behaviour for public information is used here as a proxy for information culture because the above research found that those with more education levels were more likely to seek the information. The following section briefly evaluates the ICTs situation in Tanzania, particularly in the skills domain.

In addition, Tanzania ranks low in the knowledge economy (KE) index as compiled by the World Bank. A knowledge economy is one

that creates, acquires, adapts, and uses knowledge effectively for its economic and social development [144]. One of the critical requirements for sustained growth in the knowledge economy (KE) is the availability of educated, creative and skilled people who can create, share, and use knowledge well. Others are economic incentives, an institutional regime that provides incentives for the efficient use of existing and new knowledge, the flourishing of entrepreneurship, and a dynamic information infrastructure which usually is dependent on the incorporation of digital ICTs and can facilitate the effective communication. Other factors include dissemination and processing of information, and an effective national innovation system of firms, research centres, universities, think tanks, and other organizations that can tap into the growing stock of global knowledge, assimilate and adapt it to local needs, and create new technology [144]. When benchmarked with other countries, Tanzania is placed at the lower end of the global KE map (1.48, where KE index ranges from 0 to highest 10). Tanzania lags behind its neighbouring countries such as Uganda (1.7) and Kenya (2.29). It also lags behind the Africa region average (2.03). Comparing it with some of its fellow members in the region such as Botswana (4.96) and South Africa (5.35), Tanzania seems even lower [144].

The above indicators suggest that the level of utilisation of modern digital information and communication technologies (ICTs) is still low in Tanzania. The challenge for Tanzania is how to build the conditions for electronic business development such as e-tourism. Such modern businesses as shown above are critically dependent on more the effective creation, dissemination, and use of knowledge and the underlying and necessary digital ICT structures. In response to the above situation, in 1999 Tanzania abolished a value added tax on computers and some of the allied equipment to encourage the acquisition of more ICTs facilities such as computer systems. It also formulated an ICT policy [145] which was released in 2003 after an elaborate consultation with relevant stakeholders. Furthermore, in recognition of the importance of appropriate legal framework to facilitate the implementation of electronic commerce in the country there have been some efforts. These efforts include forming a Law Reform Commission of Tanzania which has conducted a study and concluded that almost all laws which were formulated on a paper-based thinking need to be modified to accommodate e-commerce. For example, in its seminal position paper, the Commission [146:9] lists the following laws which needed to be reviewed: Laws of Contract Ordinance, The Bill of Exchange Ordinance CAP 215, Sale of Goods

Ordinance, and Banking and Financial Institutions Act. In conjunction with the above efforts, the government had continued working with the United Nations' Commission on International Trade Law (UNCITRAL) on developing capacities of local stakeholders[5] towards incorporating the Model Law of Electronic Commerce [147] in Tanzanian law. However, despite the above efforts, up to the time of writing this book (August 2006), Tanzania had not amended the above laws. In the current rapidly changing world of e-commerce and knowledge economy a nation which is too slow to adapt is left far behind. More than three years have elapsed since publication of the Law Reform Commission of Tanzania position paper. Three years is not a short period to review and change the above laws. One should add that the paper failed to include another important component of law which is quite important in e-commerce. This component is related to protecting the data of individuals in the society (equivalent to the Data Protection Act of the UK of 1998 [148], for example).

Due to the importance of ICTs in development, several studies have been conducted to determine the extent of ICTs use in Tanzania. A study by Matambalya and Wolf [74] compared several sectors in the use of ICTs in Kenya and Tanzania. It revealed that tourism small, micro and medium enterprises (SMMEs) in the country were far ahead of other SMMEs in other sectors in using general forms of ICTs such as fixed telephones, mobile phones, faxes and personal computers. The survey compared three leading export industries, namely, food, textile and tourism. However, since the study focused on economic parameters it did not address the knowledge levels of users and specific details of Internet services (technologies). As demonstrated above knowledge levels are critical to the effective use of the Internet for business in a digital economy.

3.4 Tourism and Poverty Reduction

Several authors have pointed out various justifications of linking these apparently disparate phenomena, namely, tourism and poverty reduction, see [5, 9, 39], for example. The World Tourism Organisation's vision on utilising tourism in fighting poverty was enshrined initially in the 1980 Manila Declaration [149] and more recently in the Sustainable Tourism for Eliminating Poverty (ST-EP) initiative [5]. If properly planned and implemented, rural

[5] An example of this is a three-day workshop which was conducted in Dar es Salaam in September 2004. Various relevant stakeholders from public and private institutions (including myself) participated. The workshop was conducted by an expert lawyer from UNICTRAL.

/sustainable tourism is potentially better placed to enhance the efforts to fight poverty as summarised in Box 1.

Being a complex value chain, tourism benefits an economy in a number of ways. The direct effects include spending by tourists on items such as accommodation, prepared food, transport, retail trade, cultural and recreational spending. The indirect effects of tourism are linked to the supply of inputs for the above purchases, such as raw materials and trade services.

Box 1: Potential advantages of tourism in poverty reduction

- Tourism is consumed at the point of production. This means that the consumers are much more aware of the production process and the conditions of those who are providing them with the benefit. There is an opportunity for direct interaction.
- Many of the poorest countries are actually at a comparative advantage over developed countries in this sector. They have capital assets of enormous value to the tourism industry - culture, art, music, landscape, wildlife and climate. This can include, for example, World Heritage Sites, where visits by tourists can generate employment and income for surrounding communities as well as helping in their conservation.
- Tourism contributes to a geographical spread of employment. It can be particularly relevant to rural areas where the above assets are often found. Three quarters of people in extreme poverty live in rural areas, usually remote from the main centres of economic activity or with least productive land. Tourism can sometimes provide a source of income in such locations while few other industries can do so.
- Tourism is a more diverse industry than many others. It has the potential to support other economic activity, both through providing flexible, part time jobs that can complement other livelihood options, and through creating income throughout a complex supply chain of goods and services.
- It is labour intensive, which is particularly important in tackling poverty. It also provides a wide range of different employment opportunities – from the highly skilled to the unskilled.
- Tourism employs more women and young people than most other industries. Providing economic benefits and independence to women is very important in terms of supporting child development and breaking the cycle of poverty.
- It creates opportunities for many small entrepreneurs and is an industry in which start-up costs and barriers to entry are generally low or can easily be lowered.
- Tourism provides not only material benefits for the poor but also cultural pride, greater awareness of the natural environment and its economic value, a sense of ownership and reduced vulnerability through diversification of income sources.
- The infrastructure required by tourism, such as transport and communications, water supply and sanitation, public security, and health services, can also benefit the poor

Source: [5]

Finally, economic activity will also generate more employment, which in turn will lead to induced effects in the form of additional consumption by those earning wages generated directly and indirectly by tourism. When the sum of these effects is related to the initial direct effect of tourism, a series of multiplier effects for output, income and employment can be applied to the gross national product [150]

Several multiplier studies in various developing countries have indicated that if properly planned, tourism has the potential of creating a virtuous cycle of economic activities from micro to macro levels. For example, a study on Indonesia showed that the tourism multiplier (1.59) was the highest of all categories, including final demand, and exhibited strong links to the agricultural sector on which it had no direct effect at all [151]. Another study in South Africa indicated that both international and domestic tourism had a multiplier of 1.9 in economic development [152].

3.4.1 Leakages from Tourism

Tourism has great potential to contribute to poverty reduction efforts but a caveat is that "it must be planned and implemented properly" [5, 58, 153] otherwise tourism is known for leaking resources from destinations to rest of the world. When balanced, leakages from tourism are a natural result of international commerce whereby as a trade activity it involves inflows of foreign financial resources and outflows [151]. However, when the outflows exceed specific levels, the countries in this kind of situation will not reap the economic benefits international tourism is supposed to generate. Benavides [151:12] summarises below why excessive leakages from tourism are not desirable:

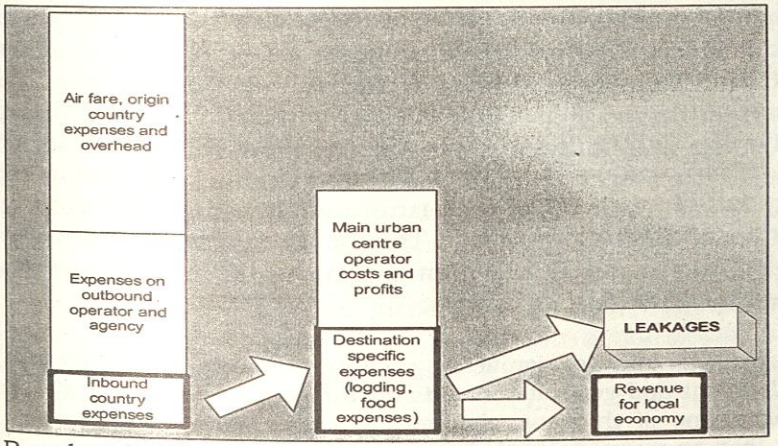
> Leakages of foreign exchange earnings are a major obstacle to the positive contribution of tourism to development. Leakage is the process whereby part of foreign exchange earnings generated by tourism, rather than being retained by tourist-receiving countries, is either retained by tourist-generating countries or remitted back to them. It takes the form of profit, income and royalty remittances; payments for the import of equipment, materials, and capital and consumer goods cater for the needs of international tourists; the payment of foreign loans; various mechanisms for tax evasion; and overseas promotional expenditures...

Various figures have been put forward to demonstrate the magnitude of leakages by a number of authors. For example, UNEP [154] reports that of each US$ 100 spent on a vacation tour by a tourist from a

developed country, only around US$ 5 actually stays in a developing-country destination's economy. Figure 16 shows how the leakage happens.

The issue of leakage from the sector has been alluded to at least by the media in Tanzania. For example, Mwijarubi [155] reported that normally more than 95 percent of income from tourism goes into foreign hands, leaving only 2- 4 percent to be channeled into local pockets. This is more imminent since even the UN-World Tourism Organization (UNWTO), the United Nations body entrusted with the role of overseeing the development of tourism activities on a sustainable basis, paints a grim picture on the leakage situation. For example, WTO [156] reports that the share of leakage of tourism revenues from the local economy at as high as 75 percent, particularly in the developing world

Figure 16: Illustration of Leakages from Tourism



Based on [154]

Much of the 75 percent of the revenues leave the destination in the form of profits for foreign-owned businesses, promotional spending abroad, or payments for imported goods or labour. If WTO (ibid) had considered the transport costs to travel to and from the destination, the percentage of leakage would be as high as the observations from Tanzania. However, since there are several types of tourism typologies, some types are better placed to minimize leakages while the others are more prone to leakages as described earlier in Chapter One. The typology which is optimal in fighting poverty is the pro-poor

or sustainable tourism [9, 39, 137]. This type is also commonly known as community based tourism (CBT) or rural tourism in Tanzania. Since the customers of CBT originate from developed countries, CBT projects in the developing world need to effectively use the web to "capture" the potential tourism customers or at least create awareness. More tourists are expected to generate more income for local economic development.

3.5 Tourism as a Means of Poverty Reduction in Tanzania

In Tanzania, various government official documents have at different levels claimed tourism as one of the tools in the efforts of fighting poverty. For example, the Tourism Policy of 1999 of Tanzania Mainland [157], the Tourism Policy of Zanzibar of 2004 [158] and, the Wildlife Policy of 1998 [22] clearly identify the potential of the sector in fighting poverty. However, perhaps a more important document, the Poverty Reduction Strategy Paper (PRSP), which is the major basis of development planning in the country, scarcely mentions tourism sector in fighting poverty. This oversight seems to have been rectified to some extent by another recent and important document, namely, the National Strategy for Growth and Reduction of Poverty [40], popularly known as MKUKUTA in Kiswahili. The document admits that, since tourism is one of the fastest growing sectors in the country, it can contribute significantly to poverty reduction. The strategy recommends developing and promoting community based tourism (CBT) or rural tourism in order to achieve the objective of fighting poverty. This is in alignment with the Sustainable Tourism for Eradication of Poverty (ST-EP) initiative as summarised by WTO [5:9] as follows:

> Tourism can play a significant part in balanced sustainable development and generate benefits for the poor. ... the power of tourism—one of the most dynamic economic activities of our time—can be more effectively harnessed to address the problems of poverty more directly.

3.5.1 Rural Tourism Initiatives in Tanzania

Rural tourism under the name of Cultural Tourism Programme in Tanzania was funded by SNV (Dutch Aid Agency) in 1997, but in March 2002, SNV handed over the activities to Tanzanian Association of Cultural Tourism Organisers (TACTO). TACTO is supposed to work with the Tanzania Tourist Board (TTB) to manage the projects (commonly known in Tanzania as modules) that are offered by the several tourist sites. Most sites under cultural tourism in Tanzania are in the Northern tourist circuit of Arusha, Kilimanjaro

and Tanga regions. Names of the module sites include: Babati, Engaruka, Gezaulole, Ilkiding'a, Kisangara, Longido, Machame, Marangu / Mamba, Mbeya, Mkuru, Monduli Juu, Mto wa Mbu, Mulala, Ng'iresi, Northern Pare Mountains, Pangani, Lushoto, and Southern Pare Mountains. Among these modules, Lushoto and Longido are considered to be the most successful cases [34].

Sustainable / rural tourism or cultural tourism in this book refers to a form of tourism in which local people are closely involved in execution. Local people design and organise the tours and show tourists the area in which they live including aspects of their daily life. During the tours, local people often show their development projects, like irrigation and soil conservation activities or income generating projects of women's groups. The tourists visiting these areas pay for tour guide fees. Thus, community members participate in tourism activities that create employment and generate income which can be used for improving their living conditions. Visitors leave the area feeling they have made new friends and with information on the many positive developments going on in communities [34]. Thus, tourism not only provides livelihoods for both rural and urban communities, but also has the capacity, when planned, developed and managed properly, to enhance community relations and build bridges of understanding and peace between individual people. Finally, an initiative to promote rural tourism in Tanzania was formulated in Kagera region in 2001. Since Bukoba is not a conventional site of tourism in Tanzania, much of the efforts have been exerted on promoting Kagera region as a cultural tourism destination. There has been some success as a number of tourists have started visiting some of the tourist attractions. The success of Kiyoyera efforts were due to the use of the Internet services such as the web and electronic mail to promote the region's tourist attractions [159].

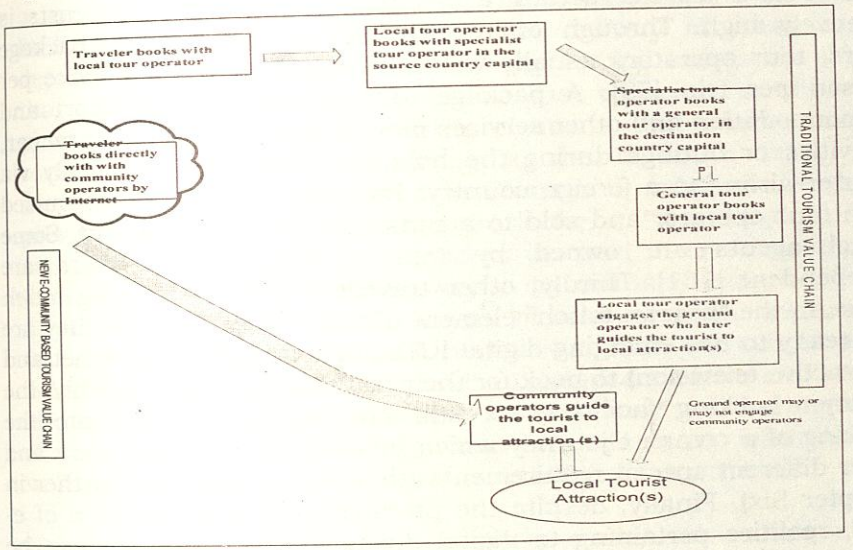
3.6 Using the Internet for Marketing Community Based Tourism Products

As a specialized product, sustainable / rural tourism, commonly known as community based tourism, is a relatively new product in some destinations such as Tanzania. Therefore, web marketing is a strategic tool for community-based tourism advocacy and sustainability [6, 160]. The Internet is the ideal channel to handle the information and marketing aspects of community-based pro-poor tourist products. The new the tourists who are likely to be attracted to the products have been empowered by the Internet as discussed

earlier. As demonstrated in Figure 13, the Internet provides a viable opportunity of by-passing some of the intermediaries in the tourism value chain. The intermediaries that can be disintermediated are travel agents (TAs) as well as tour operators (TOs). It was demonstrated in Figure 14 that close to 23 per cent of a holiday traveler's budget is consumed by these intermediaries. Apart from being experts in handling the information about tourism products these intermediaries do not own any physical tourist products which facilitate the tourism process. Therefore, a traveler who can seek travel as well as destination information on her/his own using the Internet stands a chance of saving part of the 23 per cent of the budget spent on mostly outgoing TAs and TOs. It is more likely therefore that part of the saved amount could be available for spending in the destination. As discussed earlier therefore, due to the multiplier effect, an income spent in one component of the tourism value chain in the destination economy produces three effects (direct, indirect and induced) which benefit the economy. Also, as discussed earlier regarding the leakage problem facing tourism, the multiplier effect is more felt if such expenditure is done in sustainable tourism products such as community based tourism (CBT). Using the Internet to book for CBT product disintermediates the above outgoing TAs and TOs as well some incoming TAs and TOs in the destination market as demonstrated by Figure 17.

Despite the fact that not all international tourists are currently using the Internet to book for their tourism travel, the trend is on the rise [161, 162]. Thus, the Internet is not only increasingly becoming a natural partner for tourism, it is also a natural partner for the particular tourism market niche that electronic CBT (e-CBT) targets. The tourists targeted by e-CBT have been identified by a growing area of research as an emerging breed of consumer [1, 43, 48, 58, 163]. This segment of consumers represents less than a quarter of the population in developed countries, but controls around half of the discretionary spending power of the economy [6, 164].

Figure 17: Internet as means to enhance community based tourism



Source: Adapted from [165]

The travel habits of the new tourists that make them relevant to e-CBT are delineated by Harris [6:12-13] as follows:

- are independent travellers
- are looking for more experiential tourism
- are Internet savvy and heavy technology users
- like to research individual experiences
- do not crave luxury
- want to stay connected 24/7
- do not seek mass market information
- seek authentic cultural encounters
- are resilient travellers
- must travel, regularly and frequently

Thus the efficacy of using the Internet to disintermediate the traditional intermediaries relies on a specific group of customers with the above features. Despite the fact that they are said to possess a half of discretionary spending power, the remaining majority (close to 75 percent) of tourists would still go through the traditional intermediaries for several reasons. Firstly, tour operators and travel agents have accumulated a wealth of knowledge which an ordinary traveler can tap to in selecting an appropriate destination. Secondly,

since the tour operators conduct a large volume of business, the chance of a traveler getting a discount on the trip total costs is relatively high. Through organizing package holidays or package tours, tour operators usually would charge relatively low price per person per trip [59]. A package tour consists of transport and accommodation and other services may be provided like a rental car, activities or outings during the holiday. Transport is typically via charter airline to a foreign country. Package holidays are organised by a tour operator and sold to a consumer by a travel agent. Some travel agents are owned by tour operators and others are independent [161]. Thirdly, other travellers are still putting much value on the "human-touch" element of travel business that they are not ready to use emerging digital ICTs (for example the Internet and interactive television) to book for their travel [166, 167]. Fourthly, the Internet booking facilities are still not capable to facilitate the booking of a complex journey which involves several stop-overs and other different special requirements (this point is clarified further in Chapter Six). Finally, despite the promising value proposition of e-CBT, realities pertaining to digital divide discussed earlier can be constraints in deploying the Internet to facilitate the process. For example, Harris [168:26] summarises one of these constraints as follows:

> the lack of on-line payment facilities, which are fundamental to closing sales, and the lack of local financial and technological infrastructure that is typical of rural and remote locations in developing countries, regularly force e-businesses to establish external subsidiaries and accounts, thereby perpetuating dependence on established intermediary operations.

Thus, the above discussion demonstrates some opportunities and the hurdles, which need to be considered if the potential of Internet technologies have to be realised in quest for sustainable tourism and consequently sustainable development in poor countries.

3.7 Sustainability as a Paramount Goal of Development

Due to the importance of attaining sustainable development, several instituitions have laboured to spell out what it means. Some of these institutions include the World Conservation Union, United Nations Environment Program (UNEP), and World Wide Fund for Nature who defines sustainable development as "means of improving the quality of life while living within the carrying capacity of supporting ecosystems." On the other hand, the International Council for Local Environmental Initiatives defines it as "development that delivers

basic environmental, social and economic services to all residents of a community without threatening the viability of the natural and built social systems upon which the delivery of these services depend" [169:317]. Thus, sustainability issues underscore the fact that livelihood system embraces not just economic conditions for physical subsistence, but all the elements that provide material continuity and cultural meaning to the life of a family in a community [170]. As observed in Chapter 2, value chain analysis provides a comprehensive framework for a "joined-up" series of activities by a range of stakeholders involved in creating values in their chains as well adding value to tourists' experience in a destination. By analysing the extent of value creation, addition and extraction of each player in tourism value chain one can be able to determine the direct, indirect and unintended positive and negative effects of tourism in the economy. In other words, a thorough value chain analysis can be an important input in policy formulation as well provide some insights on sustainability of the activities.

Using the example of leakages discussed earlier, value chain analysis can assist in exposing activities which are responsible in perpetuating the leakages which are obviously creating unsustainability in the system. For example, if most of the food stuff used by restaurants and hotels as raw materials for tourists' food is being imported instead of using local producers as is the case in some principals in Tanzania [171], this exacerbates the leakage and denies source of livelihoods to local farmers. On the other hand, value chain analysis demonstrates that since infrastructure to tourist attractions needs to be improved, this creates indirect benefit to other users of such infrastructure such as roads or telecommunication services. In addition tourism value chain analysis provides an opportunity to explore how the proceeds from international tourism are distributed among the players in the chain. This is very important for developing countries such as Tanzania if the policies to use tourism in efforts of poverty reduction have to record positive results and end up with sustainable development outcome. However, in order to transform the conventional tourist to have pro-poor and sustainability thinking a critical mass of players in a destination like Tanzania need to buy in the thinking [9, 39].

Finally, it is therefore important to employ holistic thinking to first understand and try to design with stakeholders interventions which are likely to engender sustainability not only in financial and economic sense but also in triple bottom line components

(environmental, social and cultural). There are several frameworks which are useful in conceptualising the sustainability issues when one is analysing social systems. Examples of such frameworks include sustainable livelihoods [172, 173], triple bottomline [174, 175] and Cybernetics. As much as the first two frameworks have been deployed considerably, there are very few attempts globally so far to try to incorporate ideas encapsulated by Cybernetics especially the second-order cybernetics in making decision on sustainable development issues as the discipline has a lot to offer [176, 177]. This is because as far as it is now recognised that sustainable development issues are complex and are in state of constant change (flux) resulting into emerging properties, it is possible that by employing cybernetics principles the possibility of realising a sustainable development strategy can be increased. For example, cybernetics issues of control, communication, feedback, feedforward, flux, and emergence properties if were used properly, sustainable development strategies could be understood and worked out better. This is because whether a strategy is successful or not, the most important thing is to learn, try to apply lesson(s) and avoid past mistakes to improve the strategy. This is succinctly stated by Maani and Maharaj [178:24] quoting Sterman as follows:

> insensitivity to feedback reflects a failure on the part of the decision maker to assess correctly the nature and significance of the causal structure of the system, particularly the linkage between their decision and the environment.

In other words, failure is a nothing but the feedback which can be employed to rectify the problem situation if one learns effectively from the feedback.

PART TWO

EXTENT OF UTILISATION OF ELECTRONIC COMMERCE IN TANZANIAN TOURISM SYSTEM

CHAPTER FOUR

PUBLIC AND SEMI-PUBLIC ORGANISATIONS: DESTINATION MANAGEMENT ORGANISATIONS, GALLERIES, AND AIR TRANSPORT SUBSYSTEMS

4.0 Introduction: Tourism System in Tanzania

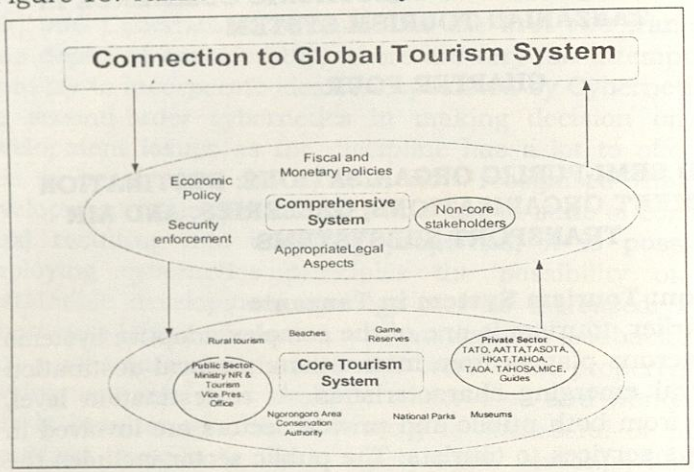
As described earlier, tourism is one of the complex adaptive systems which has numerous players from international to local destination level with several emerging characteristics. At a destination level, various players from both public and private sectors are involved in providing various services to tourists. The public sector includes the ministry of natural resources and tourism (MNRT) and the Vice President Office. On the other hand, the private sector comprises members of various associations under the Tanzania Confederation of Tourism (TCT). Members of TCT include Tanzania Association of Tour Operators (TATO), All Africa Travel and Tourism Association (AATTA), Tanzania Association of Travel Agents (TASOTA), Hotel Keepers Association of Tanzania (HKAT), Tanzania Hunting Operators Association (TAHOA), Tanzania Air Operators Association (TAOA), and Tanzania Hotel Schools Association (TAHOSA).

In addition, in order for the tourism system to operate effectively and efficiently, there must be legal and regulatory frameworks and economic policies for conducting business as well as ensuring the well-being of the components of the tourism systems. Appendix 3 briefly highlights the most significant domestic components of the tourism system in Tanzania. Figure 18 represents a tourism panarchy of Tanzania and the directions of information flow between different levels of tourism sub-systems.

As defined by Farrell [179:279], "the core [of tourism system] generally consists of an assemblage of structures, goods, services, and resources directly contributing to the sector, the comprehensive tourism system includes significant social, economic, geological, and

ecological components, along with processes and functions that complement its totality and are essential to its sustainability."

Figure 18: Tanzanian Tourism System Panarchy



Source: Based on Farrel [179]

Therefore, for Tanzania's tourism system, the core system comprises individual private members of various associations which provide various services to tourists. These represent, for example, tour operators, travel agents, and hotels. Another category of stakeholders in the core system are the respective divisions and sections of the Ministry of Natural Resources and Tourism. The respective divisions of the Vice-President's Office dealing directly with issues which touch tourism system fall under core system. The final category under the core system is the attractions such as the National Parks and the Ngorongoro Conservation Area Authority.

The comprehensive system in the Tanzanian tourism system the panarchy comprises all non-core stakeholders who benefit indirectly from the tourism system in the country. In addition, all environmental variables such as respective policies and legal aspects which affect tourism activities in the country form part of the comprehensive system. From the comprehensive tourism system, the panarchy connects to Global Tourism System. Between all these members of the panarchy, information flows from either way. The Internet, as already discussed in other places in the book, is one of the channels carrying the communications. The following sections are providing and discussing information on extent of utilisation of ICTs, particularly the Internet technologies among the components of the Tanzanian tourism system.

4.1 DESTINATION MANAGEMENT ORGANISATIONS

4.1.1 Introduction

Since tourism (unlike other products) has to be consumed at the "factory", a consumer has to travel to a destination where the tourist product is located. Management of the destination is therefore another equally important function in tourism system. Numerous authors as well institutions have voiced the importance of professional management of destinations so as to maximize tourists experiences (see for example, [1, 59, 180]. Specifically, for example, Buhalis [59] describes the destinations as the *raison d'être* for tourism due to their seminal position in the tourism value net. A study of the destination management organisations (DMOs) is therefore included here because of their central position in the modern tourism process.

4.1.2 Types of Destination Management Organisations (DMOs)

According to World Tourism Organisation [5] and Gratzer et al. [181] DMOs are bodies operating at a local level that have a responsibility for the development, management and promotion of tourism in their area. They may include, for example, local authorities, national park authorities or private-public partnership bodies. Essentially, these are the bodies best placed to provide long term leadership in the destination. Thus, in the Tanzanian context, DMOs (at the national level) include the Ministry of Natural Resources and Tourism and the Tanzania Tourism Board (TTB). On the other hand, the Tanzania National Park Authority (TANAPA) and Ngorongoro Conservation Authority are among the nature attractions. At lower levels of the government hierarchy, the district councils are supposed to be local destination organisations despite their lack of knowledge about their positions in the tourism value chain [93]. However, in general terms there are several other types of destinations as demonstrated in Figure 19 which indicates that travellers/tourists can combine several activities while at destination.

The usual combination is business and leisure. For example, executives who travel on business (public and private) may divide their time between attending meetings and visiting some tourist attractions in a destination. Thus, the meeting, incentive, conference and event (MICE) activities are demonstrably occurring in all

business related travel. According to Figure 19 the type of destination which describes Tanzanian position is "authentic third world".

Figure 19: Types of destinations: Main target markets and activities undertaken

Type of destination	Customers	Activities
Urban	Business – MICE*	Meetings-incentives-conference-exhibitions
		Education-religion-health
	Leisure	Sightseeing-shopping-shows-short breaks
Seaside	Business – MICE	Meetings-incentives-conference-exhibitions
	Leisure	Sea-sun-sand-sports
Alpine	Business – MICE	Meetings-incentives-conference-exhibitions
	Leisure	Ski-mountain sports-health
Rural	Business – MICE	Meetings-incentives-conference-exhibitions
	Leisure	Relaxation-agriculture-learning activities-sports
Authentic third world	Business – MICE	Exploring business opportunities – incentives
	Leisure	Adventure-authentic-charities-special interest
Unique-exotic-exclusive	Business – MICE	Meetings-incentives-retreats
	Leisure	Special occasion-honeymoon-anniversary

* MICE = meeting, incentives, conference, and events
Based on Buhalis [59:281]

Coincidently, the Tanzania Tourism Board advertises Tanzania as "Tanzania -Authentic Africa" [182]. However, another category of activities that Buhalis seemed to have forgotten is the Visiting Friends and Relatives (VFR). For Tanzania this category is as important as that of visitors who come for business. Results of

International Visitors' Survey carried in Tanzania [105]) recently revealed that "Leisure and Holidays" category represented 76.1% of the visitors, followedby those on "Business" and "Visiting Friends and Relatives", each category comprising 9.0% of the total. The remaining visitors for other purposes ("Others") which include activities such as study tours and sports accounted for 5.9% of the total.

4.1.3 Roles of Destination Management Organisations

DMOs have an important role in tourism system since they own the attractions which motivate tourists to travel to enjoy them wherever these attractions are located. Therefore, DMOs have to manage the environment in which an array of players (public and private) operate to provide various services to tourists. In other words, DMOs have to strive to maximise the "total tourism product" [59]. To able to accomplish this, DMOs have to bring together a number of tangible elements and attractions, as well as intangible aspects and facilities/services with aim of satisfying tourists' expectations. Therefore, DMOs have to strive to set sound policies and enforce the implementation of these policies. In addition, DMOs have to ensure security issues are taken care of by responsible stakeholders (security organs). In case of any unforeseen episode which affects tourism activities, DMOs have to be able to communicate with all stakeholders including the tourists in source markets using appropriate and effective means [183, 184, 185]. As the experience from the Tsunami of December 2004 demonstrated, the Internet is one of the effective channels of communicating during such disaster which international tourists are involved.

The DMOs functions are also succinctly stated by Gratzer et al. [181] who argues that DMOs focus on planning, marketing and administrative tasks for destinations. In most cases these organisations are not involved in the booking process. Thus, the marketing of the destination should aim at creating a brand or recognizable image about the destination. The need of creating a brand name for a destination is summarised by Chang [186:5-7] as follows:

> ... one of the possible ways to alter tourists' perceptions is to provide them the right information in order to form a positive and wonderful image of the destination in the tourists' minds. . DMO needs to think about not only the products and/or services (i.e., "what to sell") but also the quality of these products and/or services (i.e., "how to

develop, maintain and deliver"). These "what" and "how" issues actually represent two important dimensions in strategic management: *opportunity* and *resource allocation."*

4.1.4 Internet and Destination Management Organisations (DMOs)

According to PRISMA [187], DMOs are in a key position to utilise and stimulate use of eTourism services. They represent a major link between public and private sector players. In addition, Buhalis and Diemezi [188] claim that most recent developments in eTourism applications have been at the destination level. By employing the Internet, Intranet and Extranet, some DMOs have successfully integrated this function in promoting their destination, providing tourists with pre-trip and in-trip information and helping SMMTEs to promote their products. In addition, eTourism has enabled expansion in internal management within DMOs into "destination networking and promotion systems [189]:2.

The importance of integrating the Internet into DMOs' business is equally echoed by United Nations, particularly for developing countries, through its organs of UNCTAD and WTO as follows:

> Both private and public sector "*destination marketing organizations*" (DMOs) in developing countries should adopt a "total internet strategy" and by example and assistance should encourage all domestic industry players to do the same [190:1] and,
>
> The hard reality in the tourism industry today is "*that if you are not on-line, you are not on sale.*" Destinations and businesses eager to have an impact on the marketplace must be on-line. Small or remote destinations and products with well-developed and innovative web sites can now have "equal access" to international markets. In a real sense, it is not the cost of being there that must be reckoned with, but the cost of not being there [191:4].

Thus, being online is no longer a luxury to most components of tourism system even in developing countries. As stated earlier, information search behaviour of large proportion of potential tourists has already incorporate the Internet as one of the information source. For example, it was reported that in 2005 54% of the US travellers started with searching online for travel information [192] and in UK the Internet was reported to be number one source of travel and tourism information [1].

4.1.5 Use of the Internet Among Components of Tanzania Destination Management Organisations

As alluded to above (Section 4.0), several bodies form part of Tanzania destination organisations. These are the ministry, board of tourism, and institutions directly overseeing major tourism products as well local government authorities and the attractions themselves. A brief description of these categories is presented below.

(i) Ministry of Natural Resources and Tourism

Ministry of Natural Resources and Tourism is the one responsible for formulating and implementing various policies related to tourism development in the country. The current tourism policy was enacted in 2001[35]. Another policy directly formulated by the ministry and geared towards protecting the core of Tanzanian tourism – wildlife was formulated earlier in 1998 [22]. Given that the ministry is not responsible for direct promotion of Destination Tanzania, a website (www.tourismtanzania.go.tz) was created in September 2003. Due to the lack of skills to design and construct websites the ministry outsourced the service to another institution in Tanzania. The website is used to communicate with stakeholders and both the above policies have been uploaded on the site. Other resources found at the website include license application forms, various statistics on the arrivals of international tourists, and lists of authorised private sector players in the tourism system such as tour operators and travel agencies. The other Internet service the Division of Tourism uses is e-mail. A conversation with an interviewee from the Division revealed that between 25 to 50 per cent of communication of the division was done using e-mail service. Correspondences from out of the country were more likely to be in form of e-mails than correspondences from within the country. The interviewee praised the e-mail service in simplifying collaborative work. Because the Division works in collaboration with other stakeholders, say, from private sector or among other government departments, e-mail services make it easy for collaborators to put up a report in a short time.

E-mail and web services of the Internet facilitated conference organisation tasks for the Division. For example, in December 2003 the ministry (particularly the Tourism Division) organised an International Conference on the Role of Tourism and Peace Building in the World. The conference took place in Dar es Salaam. In September 2004, the Division organised a Regional World Tourism Organisation Conference for Sustainable Tourism for Alleviation of

Poverty which took place in Arusha. Communication to delegates of the above conferences was mainly done through the Internet (e-mail and the ministry's website). After the conferences, most of the papers and other documents related to the conferences were posted on the website for a wider dissemination. Thus, the Division realises the importance of the Internet in communicating with several stakeholders in and out of Tanzania.

(a) Lack of Website Updates and Non Use of Visitors' Information

The ministry's website was quickly constructed to coincide with the Tourism for Peace Conference activities in 2003. However, over time some of the internal links had ceased functioning and no updating seemed to have been done at the time of the research on the website (August 2006). The lack of updating leaves some irrelevant information on the site. For example, the invitation to the conference of 2003 was still on the website close to two years after the conference. Due to the lack of use of content management system (CMS) it has been so difficult for the less skilled staff of the Division to remove some of the contents on the website. Leaving such outdated information on the site causes suspicion in the visitors' mind even if some of the contents are really current or up-to-date. Failure to win a website visitor's confidence in the first three seconds jeopardises the visitors' further stay at someone's website [193, 194]. In addition, without constant updates, the website falls short of its supposed mission of being " a one-stop-shop access to the full set of data, research and forecasting outputs" [195:8]. Finally, despite uploading some of the resources that have been described above, the Division had no knowledge as to whether they were being used or not. There is no information collected on how many downloads have been done or how many visitors have visited the website. The official responsible for uploading some few additions on the website was not aware that such information could be made available from a server where the website is hosted.

(ii) Tanzania Tourism Board (TTB)

The role of TTB is to promote Destination Tanzania to all sources external markets. The board has implemented this role using several means such as attending travel and tourist fairs around the world, the publication and distribution of brochures and videos, conducting on-road shows in various source markets, and the use of websites [196]. The use of websites is our major interest. The story of website use in TTB is quite an interesting one. The first website

(*www.tanzania-web.com*) was developed by a UK based tour operator (World Archipelago Internet Limited) in 1998. According to one interviewee, this resulted in a perceived conflict of interest since the firm was considered by local tour operators to use the website to promote itself more than other stakeholders in the tourism business in Tanzania.

As more local stakeholders voiced their concern on the above matter, TTB decided to construct another website. With funding from UNDP, a local firm was appointed to construct another website after negotiations between TTB and owners of *www.tanzania-web.com* on transferring ownership of the website had failed. This means that for over six years (1998 to 2004) TTB did not have the right to change or update any information on the site which was supposed to market it. Despite these shortcomings, the website was cited as one of the successful cases in the journey of eTourism globally. For example, UNCTAD [190:17] displayed the website homepage and had this to say about the website:

> The Tourism Board of the United Republic of Tanzania website focuses on, among other things, establishing a strong link between the natural heritage of the country and its tourist offer[sic].

Other DMO websites cited as examples were the Malaysia Tourism Promotion Board (MTPB) or *Tourism Malaysia* and the Netherlands Board of Tourism website. Both Malaysia and Holland are highly successful tourist destinations and their websites have been transformed into effective destination management systems (DMS). The author considers that the first TTB website did a good job in promoting Tanzania online despite the ownership problems alluded to above. However, a new website had to be constructed to appease other local stakeholders.

The local firm has built a new website for TTB (*www.tanzaniatouristboard.com*). However, some of the TTB documentations such as headed papers and business cards were still carrying the URL of the former website even after the new website had been operational. In international marketing for *Destination Tanzania* image or brand this may not be beneficial. As pointed above, TTB staff members were travelling all over the world to attend various travel and tourism fairs, handing to customers stationery which does not bear the best identity of TTB. This may dilute the brand image. Another observation related to branding issue when it comes from Internet service was the lack of using e-mail address

with TTB domain name. Business cards of some staff of TTB showed that TTB had not been using its domain name in e-mail address. It would have been expected that for branding purpose, the e-mail address should have been *ttb-info@tanzaniatourism.com* or a similar one but with a ttb domain name. However, again the choice of .com as top level generic domain name (gTLD) is somehow questionable since the use of .tz as a country code top level domain (ccTLD) would have indicated that indeed this was a Tanzanian product.

The new website is well constructed with some sections being interactive (database driven). Due to a lack of sufficient knowledge on the importance of websites in tourism marketing, TTB up to the time of the research did not have anyone who could update the website. Management of the website was still under the firm which constructed it even though the contract was just for construction. One of the interesting interactive functions (*Newsletter* feature) was incorporated on the website. On the website it is indicated that one can subscribe to the Newsletter by entering his/her e-mail address. However, no more information is relayed back to one who subscribes since the coding for this feature had not been completed at the time of writing this book.

The firm managing the website admitted that they were not utilising website logfiles. Thus apart from the website being uploaded on the Internet, there was no any other information that was collected for business intelligence. In addition, knowing the pattern of visitors on one's website may determine if investment in developing the website are used effectively (return on investment – ROI- analysis). Therefore, developing an effective destination management system (DMS) requires constant monitoring and evaluation of the performance of the system. The TTB website is still short of well web based functional DMS compared to the world class DMSs such as Tiscover [1, 49, 59] and VisitBritain [187, 197]. However, the importance of constant monitoring and evaluation cannot be over emphasised.

(a) Web and Travel Warnings to Tanzania

In the course of conducting this research, the researcher observed the way websites can be a source of disruption in tourism travel. Due to possible terrorist threats, various source market countries advise or at times warn their citizens to shun some destinations. In June 2004 the US State Department posted a warning that Tanzania was not a safe destination to travel to. However, authorities in Tanzania did not have knowledge of the posting until in August 2004 when a

regional weekly newspaper printed the message on its front page. The reaction of authorities in Tanzania was to challenge the travel warning using local media such as newspapers, radio and television that the country was not unsafe. Several press releases were issued in the local newspapers and the President during his end of month addresses to the nation talked on the same issue. However, since the information was posted on the web, a probable alternative approach was to post the counter information on the Tanzanian websites. The logic of this proposition is that once a traveller searched Destination Tanzania, both the US Department of States' and Tanzanian websites would come up. The traveller would read both messages and make a better informed decision. Probably using some web strategies such as paying some search engines (paid keywords) to ensure websites providing information on safety of destination Tanzania came on top for whenever anyone searched several keywords on Tanzania could have served the purpose. Another web strategy could have been paying web advertising agents to design banners on the safety of destination Tanzania which would appear on websites specialising on travel to Tanzania.

What the above episodes demonstrates is that the web can be a force of disruption to the tourism system if not used responsibly. In other words, the web can be a source of destabilization in the tourism system. Therefore, all players in the tourism value net should be on the vanguard of learning what is being written on their image or brand. As a matter of reaction to misinformation about a destination, if the misinformation is on the Internet, it is considered pragmatic to use the same medium to counter it. The Ashby Law of Requisite Variety should be enforced in such a case. This law states that "the variety within a system must be at least as great as the environmental variety against which it is attempting to regulate itself" [198:14]. To a certain degree, Tanzania's way of reacting to the travel warning could have been due to slowness of learning about the realities encapsulated in rapid development in ICTs, particularly the web.

(iii) Tanzania National Parks (TANAPA) and Ngorongoro Conservation Area Authority (NCAA)

TANAPA and NCAA are major destination organisations in the country. However, before discussing how these DMOs were using the Internet, it important to first present the available major tourist attractions in Tanzania (as presented Box 2).

Box 2: Tourism Attractions in Tanzania

> With its 14 National parks, 31 Game reserves, 38 Game Controlled Areas, a Ngorongoro Conservation Area, and Marine Park, Tanzania's wildlife resources are considered among the finest in the world. The leading wildlife resources include the great Serengeti plains, the spectacular Ngorongoro Crater, Lake Manyara and Africa's highest mountain, Kilimanjaro, in the north. In the southern part of the country, the following wildlife areas are located: Mikumi, Udzungwa and Ruaha National parks, and Selous Game Reserve. Selous is the largest game reserve in the world. Elsewhere, additional natural attractions include the sandy beaches in the north and south of Dar es Salaam and Zanzibar and an excellent deep-sea fishing area at Mafia island. Also, Tanzania has a rich heritage of archaeological, historical, and rock painting sites, a number of which have been designated to World Heritage Sites. At Olduvai Gorge, in the interior Rift Valley, is the site of discoveries of the traces of the earliest man, and along the Indian Ocean are the remains of historical settlements.

Source: [107:16].

TANAPA is a parastatal organization responsible for managing the country's 14 National Parks. Its main function is to conserve the habitat, scenery, flora and fauna of the Parks for the enjoyment and the benefit of the current and future generations. The number of human resource to accomplish the above tasks stood at 1626 at time of the research. This was the largest employing single organisation involved in this research. TANAPA headquarters are in Arusha city. The organisation is utilising some of the Internet technologies to increase its efficiency. The technologies used are e-mails, intranet and the web. TANAPA is connected to the Internet through an ISP in Arusha at a speed of 128 kilobits per second (kbps) as a dedicated wireless bandwidth. Electronic mails represent slightly less than 50% of its business communication and the intranet is used to share documents among staff in headquarter office, automate accounts, and support human resource management activities. In addition, the organisation had a static website (*www.tanzaniaparks.com*[6]) which was designed by a firm outside of Tanzania. The website was rich in content and was in three languages (English, French and German) with a lot of Flash animation but without option to turn off the animation (as per October 15, 2005 visit).

As it was with TTB, the e-mail addresses of TANAPA officials do not bear their domain name as per two business cards that were presented to the author. The website was constructed using frames and it seemed not to have been search engine optimised since the Meta tags were left empty. It therefore came to no surprise as it emerged 7th in a Google search of August 7, 2005. Both frames and lack of meta tags are considered "enemies" of crawling robots which rank the websites [193]. In addition, frames create an accessibility problem to those users whose web browsers are old (say Internet Explorer 4.0 and below). This again is against the sprit of Web Accessibility Initiative of World Wide Web Consortium (W3C) [199, 200].

Unlike the TTB, TANAPA had own IT expert who runs the intranet and updates the website. The richness of the website includes the web mail option (using IMail Server Web Messaging Version 8.05) on which TANAPA staff can access their e-mail wherever they are, provided they have a web access. However, statistics from the website were not used for any management purpose. It was not known how many visitors visited the website, which pages were visited and how long they stayed at the site, for example. In similar vein, TANAPA did not know how visitors arrived at their website, whether was through the homepage or being referred to the site by search engines. Also, information on which page visitors left the website was not collected. The reason for all this is that the IT expert was not aware of Web Analytics techniques. Since the top management did not understand the importance of information from the website either, no effort was made to collect the information.

The last crucial observation of the website was its lack of updates. The website did not show when it was last updated, something which may cause a serious web user to doubt the currency of the content. A vivid indication of lack of updates was demonstrated by the various fees which TANAPA charges for its services. The park entry fees, for example, had been raised by one hundred per cent in March 2005 to be effective in January 2006. However, this information was not available on the website five months after the offline announcement. Lack of updatedness was equally echoed by one of their website visitors on the *Comments* section of the website.

[6] Choice of dot com generic top level domain (gTLD) is not considered appropriate by the author since TANAPA is not a commercial entity per excellence.

(b) Ngorongoro Conservation Area Authority (NCAA)

Ngorongoro Area prides itself as the cradle of human kind since the oldest remains of modern humankind (Zinjanthropus Man) was found in Olduvai Gorge in 1956. Also it is in this area where the famous Ngorongoro Crater is located. Ngorongoro Crater is the largest extinct volcanic crater in the world, measuring 12 miles across and is home of the largest permanent population of game in all of Africa [201, 202]. Functions of the NCAA include to conserve and develop the natural resources of the Conservation Area, to promote tourism within the Conservation Area, to safeguard and promote the interests of Maasai citizens and to promote and regulate the development of forestry within the Conservation Area [201]. The authority has a sizeable workforce of about 500 and its headquarters are in Ngorongoro Area which is about 140 kilometres from Arusha city. It has a branch in Arusha city. The researcher visited both offices and conducted two interviews (one in each office). The Authority did not seem to utilise Internet technologies when compared with the majority of the respondents, since it was revealed that only up to 10 percent of its communication was through e-mails and the Internet has had a little positive impact on its activities. This was contrary to many other respondents who rated the effect of the Internet to be significantly positive to their business. Nevertheless, the Authority had a static website (*www.ngorongoro-crater-africa.org*) which was uploaded in 2000. The authority paid an external firm to develop the website and management of which was still in the hands of the external firm because the Authority did not have someone to do it. Just like TANAPA, the NCAA did not make use of statistics from the website.

As far as the choice of the domain name was concerned, one could raise two logical questions: Why did they not only use "ngorongoro" without the "-crater-africa" extension and why prefer a generic top level domain instead of country code? There is only one Ngorongoro in the world and it is in Tanzania. It is considered that the choice of .or.tz would have added value on the domain name. As will be discussed later in next chapter, the use of country code top level domain (ccLTD) names is one of the web metrics measures of how countries are advanced in web utilisation. Whereas in some countries such as United Kingdom almost all domain names end with .uk ccLTD, in Tanzania even government institutions such as Ngorongoro Conservation Authority and TANAPA went for generic level top domain names (.org and .com, respectively).

(iv) Meeting, Incentive, Conferences and Events (MICE)

Business travel forms an important part of tourism system in the world. Despite the fact that business travel accounts for only 9 per cent of the international visitors in Tanzania [105], those coming specifically for MICE activities are significant [203]. However, the Department of Migration's Custom's Entry form does not break international arrivals' into separate MICE category but only uses one for business. International visitors coming for MICE activities end up touring several tourism attractions in the country. Since the tourists falling in this category are likely to be well educated, they are more likely to visit some rural areas too as add-on product. Also, visitors in this category are more likely to be in higher income brackets hence their spending averages in the country are likely to be higher. Thus, MICE is another important destination management organisation in Tanzania.

(1) Importance of MICE Globally

The importance of the MICE industry is based predominantly on the fact that it is the fastest growing segment of the tourism market. Internationally, MICE tourism accounted for USD 90 billion in 1997 and the industry was growing at between 8 and 10 percent per annum [204]. The opportunity for a small country like Tanzania to participate in this market arises from the fact that 53% of world meetings and conferences rotate worldwide, with the remaining 47% being rotated around specific regions such as Europe (27%) and Asia (4%). As such, Tanzania can in principle ascribe to capturing some percentage of the USD 47.7 billion spent on internationally rotating MICE activities. However, Africa hosted a mere 3% of international meetings and conferences in 1998; in actual terms only 77 of the surveyed 2648 international meetings which took place that year were held in Africa. South Africa hosted 45 of the 77 meetings, making it the dominant conference player in Africa and placing it as 21st internationally as a destination for MICE activities [204].

(2) MICE Situation in Tanzania

In recognition of the importance of MICE, the Tourism Confederation of Tanzania published for the first time a local directory of MICE in 2005 [205]. The confederation had been publishing a general Tourism Directory for over four years. Despite the fact that close to 60% of African MICE business is dominated by South Africa, there are several MICE establishments in Tanzania. For example, in the survey close to 10 per cent of the institutions involved in research

claimed to offer MICE services as either a first or second line of business. However, the list is dominated by large hotel establishments which offer both accommodation and MICE services. Therefore, much of the discussion on the Internet use as a group of MICE in Tanzania is to some extent similar to a discussion in the hospitality subsection in next chapter, particularly for large hotels. Only four establishments in the survey had MICE business as their first line of business. Of these businesses, Arusha International Conference Centre (AICC) is the largest and oldest (constructed in 1967) MICE facility in the country, therefore, much of the discussion will dwell on AICC.

(a) Arusha International Conference Centre

An in-depth interview with one senior official revealed that AICC is a member of International Congress of Conferences Association (ICCA). "Being a member of ICCA provides a right to access the Association database through an extranet where you can check all major MICE activities planned to take place so that you can bid where necessary" he said. On evaluation of the position of AICC in the region, the official said: "In Africa, AICC is a small player; South Africa is a bigger player in MICE business. However, our close regional competitors are not doing well either. For example, Kenyatta Conference in Nairobi is being remodelled after being neglected for a long time. In addition, Harare International Conference was another competitor but the political climate there is not very conducive."

(b) Internet Use by AICC

AICC has its static website (*www.aicc.co.tz*)[7] that was designed by a firm out of the country in 1999. The website is hosted by a firm in Arusha and the interlocutor was responsible for managing it. However, AICC does not have an intranet despite the extensive distribution of the offices. The Internet connection was by wireless means and the bandwidth was shared 64 kbps. Since the bandwidth was shared, accessing the organisation's website was very slow. In addition, the source html codes of a very important page, home page, revealed that the designer did not include the meta tags for search engine optimisation (SEO).

It was also learned that the website was not generating much business and there were no any promotion and redesigning efforts

[7] Choice of domain name can still be questioned since AICC is a government property; the subdomain .co does not reflect this fact despite using the country code top level domain name.

taken by the AICC management since they were not knowledgeable of its importance. However, the importance of e-mail service in communicating with various stakeholders was appreciated by everyone in the AICC. When the services were down (from ISP side), many workers in AICC recognised that some business communication might be delayed. In recognition of branding their institutional name, AICC's e-mail addresses use the institution's domain name. This is a good, simple marketing and credibility building strategy since when an executive of a company provides a business card with a freely available e-mail address such as Yahoo and Hotmail, a serious customer may ask him/her-self some questions on the credibility of such institution.

(v) Museums

(a) Museums as Part of Major Tourist Attractions Worldwide

Despite the fact that the state of museums in Tanzania is not very promising in terms of number of visitors and revenue generated (as per author's direct observation and conversation with museum experts in the country), worldwide museums are among the leading tourist attractions. According the figures computed by Euromonitor [17, 206], museums are the fourth most popular tourist attractions in terms of revenue generation. Table 4 indicates that museums fall behind casinos, theme/amusement parks and theatres in the level of importance globally.

Table 4: Tourist Attractions: Analysis of Global Revenue by Types 1999-2003

	Type of Attraction	% of Value				
		1999	2000	2001	2002	2003
1	Casinos	47.1	48.3	50.0	50.1	50.1
2	Theme/amusement parks	18.4	18.0	16.9	16.2	16.0
3	Theatres	10.5	10.1	9.6	9.8	9.9
4	Museums	6.3	6.2	6.2	6.2	6.3
5	Zoos/aquariums	3.9	3.5	3.4	3.4	3.4
6	Historic sites	2.8	3.1	3.2	3.2	3.2
7	Art galleries	2.7	2.8	2.8	2.8	2.7
8	National parks	2.5	2.5	2.6	2.7	2.6
9	Industrial tourism	0.3	0.3	0.3	0.3	0.3
10	Circuses	0.1	0.1	0.1	0.1	0.1
11	Others	5.3	5.1	5.0	5.2	5.4
	TOTAL	100.0	100.0	100.0	100.0	100.0

Source:[17:149].

(b) National Museum

The department of the National Museum is under the Division of Antiquities of the Ministry of Natural Resources and Tourism. The National Museum is mandated to run four properties falling under its jurisdiction. The first and largest property is Dar es Salaam's National Museum which houses many historical attractions. The other three properties include the Village Museum in Dar es Salaam, and the Arusha and Butiama museums. The Arusha branch of the National Museum is dedicated for biological resources found in Tanzania as well as the history of Tanzania, particularly from German rule to the current period. The property in Butiama is dedicated to the first President of the United Republic of Tanzania, the late Julius Nyerere.

With such a richness of historical artefacts, it is quite surprising that Tanzanian authorities have not diversified the tourist products which Tanzania is known for. It seems the safari product was the one which was highly promoted at the expense of others, such as a museums and galleries. Probably due to a lack of domestic customer base, museum and gallery officials in Tanzania did not see the reason of exerting more efforts on promotion. It was revealed that very few mature residents visit the museums and that only school children, often as part of school activities, come to visit the museum properties. This was a typical reply of many managers of tourist attractions who were involved in the research. While in other countries domestic tourism is quite substantial, it is almost inexistent in Tanzania. The culture of travelling for the purpose of learning and relaxing, such as visiting museums and other tourist attractions, is not part of the majority of Tanzanians' culture. Thus, tourism principals in a country such as Tanzania are quite vulnerable to international exogenous factors such as international terrorism as well as economic factors in source countries. Since tourism is well known for its seasonality, domestic tourism where it exists helps to cushion the lack of activities as well as revenue during the lean season [152].

(1) Use of Internet Technologies in the National Museum

An interview with one senior official revealed that despite the fact that they had an Internet connection (the official did not know its bandwidth); there was no website advertising the rich collection

listed above[8]. As far as the Internet services were concerned, it was the e-mail service which was being utilised. Workers of the museum use e-mails to correspond with external partners. While the situation of using Internet services in museums in Tanzania was still at the very beginning of eTourism journey (just using e-mails for communication), somewhere else, especially in developed countries, the web is revolutionalising museum activities. Many museums have placed images of their artefacts on the web by creating virtual museums. Websites dedicated to museums where the offline artefacts have been digitalised and are being displayed are numerous and are increasing [207, 208].

4.2 ART GALLERIES

4.2.1 Introduction

Art galleries are part of tourist attractions in the tourism system. Globally, in terms of revenue receipts, art galleries are ranked seventh out of eleven types of tourist attractions [17] as depicted in Table 4. In addition, a study conducted by Market and Opinion Research International (MORI) in the United Kingdom in 2004 [209:3] revealed that "the higher an individual's social class, household income and education, the more likely they are to visit museums, art galleries and other types of cultural attractions." This finding tallies with the description of Poon [42, 43] of the "new tourist." Thus, enlightened tourists are more likely to visit art galleries and other cultural attractions in various destinations such as Tanzania.

4.2.2 Galleries and the Internet

Galleries, like museums have utilised the Internet to digitalise their products and put some of them on the web. Due to its multimediated interfaces and the rapid expansion of the bandwidth to many parts of the world, the web has become the ideal place for the galleries to market their products. The multimediated interfaces of the Internet [78] enables galleries to upload text, graphics, movies clips and sound clips or real-time audio transmissions on their websites [81]. As stated earlier, the Internet represented a channel of transmission of information not matched by other channels in many attributes including costs of information transmission and retrieval. This has

[8] Ten months after the interview, the authority commission a creation of their website, *www.museums.or.tz*. The choice of top level domain - .tz and subdomain of .or was impeccable.

resulted in an explosion of websites representing virtual museums and galleries of different countries. Typifying the ubiquity of galleries on the Internet is *http://www.virtualmuseum.org/* website which hosts an array of galleries and museums. In addition, some of the museums such the US based Smithsonian Museum provide interactive features with high quality videos, images and audio to anyone with appropriate Internet connection to visit them (see, for example *http://2k.si.edu/2k/node_rotunda/indexe.htm).*

4.2.3 Art Galleries in Tanzania

Art galleries in Tanzania belong to the semi-private sector or cooperatives of individual members. This is to a certain extent contrary to many other countries where some of the art galleries belong to the public sector. Only museums in Tanzania, described already, belong to the government. Since the citizens of Tanzania do not have a strong culture of visiting tourism attractions as national parks, museums, and galleries, the development of galleries and curio business is related to targeting international tourists.

(i) Art Galleries and the Internet in Tanzania

As the world is continually becoming a "global village", the influence of the Internet on the trend of art galleries in the developed countries is, to a certain degree, trickling down to developing countries such as Tanzania. In the following sections, the extent of application of various Internet technologies among art galleries in Tanzania is briefly presented.

(a) Internet Access

Despite the fact that most of the art galleries involved in the research were among micro-enterprises, nearly all of them had access to the Internet in their offices. This demonstrates the importance these firms attached to communicating using the newer channel i.e. the Internet as shown in Table 5.

Table 5: Internet access

Presence of Internet access in office	Frequency	Percentage
No	1	9.1
Yes	10	90.9
Total	11	100.00

(b) Internet Connection Mode

Table 6 shows that all art galleries that had Internet connections in their office were using the wireless means of connection. The only gallery that did not have Internet access in office could still access the Internet using Internet cafés.

Table 6: Internet access/connection mode

Internet connection mode	Frequency	Percentage
Wireless	10	90.9
Internet café	1	9.1
Total	11	100.00

(c) Knowledge of Bought Bandwidth

As stated earlier, the knowledge of how much bandwidth the firm was paying for was considered a proxy of IT literacy on the part of the respondents who were mainly senior officials. Among ten firms which had Internet connection in their offices only two were aware of the bandwidth they were paying for as Table 7 depicts.

Table 7: Bandwidth for Internet access

Internet connection bandwidth	Frequency	Percentage
128 kbps	2	20.0
I don't know	8	80.0
Total	10	100.00

(d) Frequency of Using E-mail in Business Communication

As Table 8 demonstrates, art galleries in Tanzania were employing e-mail as means of business communication to a very high extent. Nine firms out of eleven reported that they were using e-mails almost daily, save for non-business days. Only one firm claimed to have not been not using e-mails at all. This firm could be among the type which depended on walking-in customers along a high street.

Table 8: Frequency of use of electronic mail

Frequency of using e-mail in business communication	Frequency	Percentage
Never	1	9.1
Weekly	1	9.1
Almost daily	9	81.8
Total	11	100.00

(e) Proportion of E-mails in Business Communication

E-mails contributed significantly in the business communication of the art galleries involved in the research. Table 9 shows that close to 46% of the firms depended on e-mails as a major communication means in their business processes. Only one firm would not mind if there were no e-mail services as part of the Internet technology, since it never used e-mail in business communication.

Table 9: Percentage of business communication by electronic mails

% of e-mails in communication	Frequency	Percentage
0%	1	9.0
10-25%	4	36.4
26-50%	1	9.1
50-75%	5	45.5
Total	11	100.0

(f) The Impact of the Internet on Business

Respondents were asked in Table 10 to rate the influence of the Internet in their business processes particularly in raising the volume of sales. Out of the 11 firms, two reported that the Internet has had no effect on their business.

Table 10: Internet impact on business

Impact of Internet on business	Frequency	Percentage
No effect	2	18.1
Significant positive	5	45.5
little positive effect	4	36.4
Total	11	100.0

Four of the firms reported that the Internet has had some little effect on their business while five firms representing close to 46% reported a significant positive effect.

(g) Websites Ownership

As Rao et al., Duncan, and Moodley [118, 121, 210] respectively, authoritatively demonstrate, web presence is the initial stage of the long e-business journey. The survey intended to find out about web presence of the art galleries in the research. It was revealed, as demonstrated Table 11 below, that only two firms were not on the web and had no immediate plan to be there. As alluded to above, the business model of the firms not intending to be online was usually depending on walking-in customers.

Table 11: Website ownership

Website Owning	Frequency	Percentage
No	2	18.2
Yes	7	63.6
Under construction	2	18.2
Total	11	100.0

(h) Type of Websites Owned by Art Gallery Firms in Tanzania

Majority of the art galleries in Tanzania (those with websites) owned static websites; only three out of nine firms had dynamic websites as shown in Table 12.

Table 12: Type of websites

Type of websites	Frequency	Percentage
Static	6	66.7
Dynamic	3	33.3
Total	9	100.0

(i) Internal Web Skills Capacity

As a proxy of available web knowledge in the firm, designing and maintaining own website was a good measure of the internal web skills. Among the art gallery firms involved in the study, Table 13 reveals that only three had designed their website internally. It was

the firms that had dynamic websites which had internally developed their websites.

Table 13: Skills to design and build website

Who designed the website	Frequency	Percentage
Internal departmental staff	3	33.3
Outsourced service in country	6	66.7
Total	9	100.0

4.2.4 Acceptance of Credit Cards as means of Payment

Given the size of many of the art galleries in Tanzania, it would be expected that the majority would not be in the position of accepting credit cards as a means of settling payment of their merchandise. As Table 14 demonstrates, it was only three large galleries which had capability to accept the credit cards.

Table 14: Percentage of galleries accepting major credit cards

Acceptance of credit cards	Frequency	Percentage
No	8	72.7
Yes	3	27.3
Total	11	100.0

Tables 5-14 have demonstrated the central role the Internet is fulfilling in the day to day business activities in the art gallery component of the Tanzanian tourism system. Despite the limited Internet and web knowledge displayed by knowledge proxies employed in the study, the majority of the respondents (82 percent) use e-mail for business communication on daily basis. However, nearly two-thirds of the respondents had static websites which in today's world one does not gain much competitive advantage from such websites since the competitors have better interactive and transactional websites.

4.2.5 Nyerere Art Centre as Paragon of E-commerce Success

Nyerere Art Centre started in 1972 as *Nyumba ya Sanaa* (House of Art) under the government. By time of the study, it was run as civil organisation for training artists and marketing their products in the country and outside the country. It was also entrusted with the duty of collecting data of arts activities in the country. The centre had a

webpage with web space donated by PeopleLink (www.peoplelink.com) project. According to Batchelor et al. [211:91], this project supported the development of the "Catalogue Generator" software (CatGen, first version) and conducted a regional training to enable some 55 artisan producer groups to build, maintain, and update their own web catalogues of craft products for use in business-to-business marketing. The CatGen system allowed users to create online catalogues with minimal computer and web skills. The project had brought significant benefits to producers, especially in the areas of collaborative product development, finding buyers, and simple web or email-based marketing.

The interlocutor revealed that the centre was selling a good quantity of artistic products all over the world. The URL for the group was *www.catgen.com/sanaa*. PeopleLink provided about 50 mega bytes (MB) of web space but one could buy more if desired so. The interviewee had the following to say about new ICTs and art business in general:

> in Tanzania, "people are still in 1947 era"[9] in terms of thinking; very few people are putting efforts to learn new technologies to market their products. A few friends and I have self-trained and now we are benefiting a great deal from the web skills." He added, "the Internet makes interaction with buyers and donors quite easy since one can initiate communication using e-mails and reach a point of concluding a deal. Even though in Tanzania e-mail communication is not legal, it is quite effective. Otherwise, if one wants to make the communication legal one can sign a document and scan a signature and paste on the electronic document.

He continued,

> The website is very important to smoothen our otherwise erratic business since the internal market is quite seasonal as it depends on the arrival of international tourists. But with the websites, orders come in all over the year so we continue generating revenue all over the year. Communication with external partners is basically 80% by e-mail. It is after the business deals are concluded that we revert to fax to receive orders and send invoice documents. However, some of these documents can be scanned and be sent as e-mail attachments[10]."

[9] This is a common term in Tanzania referring to very old days. The term originated from a commercial of one of the banks in Tanzania.

[10] However, a reservation on this is that in Tanzania (up to time of writing up the book), delivery in terms of commercial law did not recognise e-mail attachment or the fax document in case of legal proceedings.

Furthermore, he said,

> the website is important since other people cannot travel to our premises from their countries due to numerous constraints such as time and finances. The website provides them with an opportunity to see what we offer and can easily order. We do business with wholesalers who need large quantities; so the website and Internet in general is almost everything in our current business. We cannot envisage a situation without internet now.

The above observations from the interlocutor are corroborated by the positive evaluation of the PEOPLink's contribution to artists in developing countries by [212:3] as follows:

> ... local craftspeople in developing countries are increasing their incomes not only through access to new markets, but also because the wholesaling intermediaries for their produce have effectively been removed. Local craftspeople can now receive up to 95 percent of the selling price for their produce where previously they received only 10 percent.

Therefore, as demonstrated by the above interlocutor, the Internet has the potential of disintermediating the middlemen in dealing with art products from the developing countries. In order to harness that potential several necessary conditions need to be present. One of the condition as demonstrated by the interlocutor is the web knowledge. Without mastering the skills to create and update the websites, it is difficult for suppliers of art products from developing countries to utilise the web effectively even if free web space is provided by projects such as PeopLink in our case.

4.2.6 Tanzanian Art on the Web

A survey on the web showed several works of various Tanzanian artists such as *Tingatinga* to be present on a number of websites. Something which worried the researcher was that all the art work could be downloaded and saved in one's hard disk or any other medium. It would be more prudent if the owners of the websites barred the saving or downloading of these works. However, this did not apply to Tanzanian art only; it applied also to the work of many famous arts. For example, many of Da Vinci's and well as Picasso's digital images of the works can be downloaded with ease. Another possible measure of protecting artists works posted on the web could be to watermark the images so that those downloading the images may be discouraged to print them.

4.3.0 AIRLINES, AIRPORT AND AIR PASSENGER AND AIR CARGO HANDLING

4.3.1 Introduction

This section summarises the field findings from a survey and interviews conducted with officials of three components of the tourism system dealing with air travel in Tanzania. The components are the airlines, airport, and a company responsible for handling passengers and cargo at one of the international airports.

4.3.2 Airlines

Although the air travel in Tanzania is not much developed, there are some airlines serving a few international destinations and several local destinations. The importance of airlines in facilitating tourism activities is enormous. There are two types of passenger airlines in Tanzania, namely, scheduled (Air Tanzania Corporation as flag carriers) and other local and international airlines, and charter airlines such as Coastal, Air Exel, and Tanzair. The charted airlines carter for the tourism sector so much because some of the tourism attractions such as Selous Game Reserve, Katavi and Gombe can only be reached easily by charted flights.

4.3.3 ICTs in the Airline industry

Airlines have been behind the use of ICTs in the travel sector as they were the inventors of computer reservation systems (CRSs) and global distribution systems (GDSs) [188, 213]. Apart from enabling effective ticket bookings, ICTs are equally important in operations management and contribute to the optimisation of procedures and processes as well as for softer service elements such as in-flight entertainment and customer service [214].

4.3.4 Airlines and the Internet Revolution

With the practical knowledge of the importance of ICTs in their profitability levels, the airlines have aggressively utilised the Internet to reduce the distribution costs of tickets. The distribution costs through traditional distributors were as high as 25-30 percent of airlines' turnover [59]. Thus, the airlines have utilised the Internet technologies such as intranets, extranets and the web to enhance their competitiveness by creating transactional websites in form of portals. These portals are now used as a distribution channel where passengers can conduct most of activities such as travel booking, buying air tickets, and check flight information, *inter alia* [214]. With

the International Air Transport Association (IATA) decree that by 2007 all air tickets should be in electronic form (e-tickets) [215], the websites as the distribution channels are getting more critically important.

(i) Air Travel Leads in Online Travel Sales

Due to the above efforts of air travel migrating to online technologies, air travel has emerged as a leading sector in benefiting from online sales as depicted by Table 15 using a case of Western Europe in 2002.

Table 15: Online Travel Sales in Western Europe

Travel Service	Percentage
Air travel	62.0
Hotel	12.5
Package tour	12.5
Rail travel	10.0
Car rental	3.0
Total	100.0

Source: Euromonitor [17:128]

(ii) Leading Online Travel Websites

As Table 16 demonstrates, much of online travel sales are dominated by air travel. To attain the above situation several websites are responsible, some of which belong to airlines themselves as well as to other eMediaries. Using information from the US, Table 18 depicts the fact that the first five most popular websites for travel sales are eMediaries. Only three airlines' websites, namely, Southwest, Delta, and NWA appear in the 14 leading travel websites. Table 16 demonstrates that the interdependence between the airlines and the eMediaries is still strong since most of the visitors on eMediaries websites are looking for air tickets [216 2005].

Table 16: Leading Travel Websites in the United States (March 2003)

Rank	Website	Unique visitors ('000)
1	Expedia Travel	14,716
2	Orbitz.com	12,874
3	Travelocity	11,123
4	Trip Network Inc	10,931
5	AOL Proprietary Travel	6,759
6	Southwest.com	5,870
7	Priceline.com	5,411
8	Hotwire.com	5,411
9	Yahoo! Travel	4,717
10	Hotels.com Sites	4,642
11	AA.com	4,062
12	Delta.com	3,499
13	Travelnow.com Sites	2,780
14	NWA.com	2,651

Source: Euromonitor [17:130]

5.3.5 Tanzanian Situation: Use of Internet Services in Airlines

Twelve of the 307 stakeholders in tourism system in Tanzania who were involved in survey were airlines. The distribution of these airlines was as follows: One national carrier (Air Tanzania Corporation Limited – ACTL), four international airlines, three domestic airlines, and four charted flight airlines.

(a) Internet Access

All of the 12 airlines had the Internet access and ten claimed to access the web almost daily as depicted in Table 17.

Table 17: Internet access

Internet access	Frequency	Percentage
Yes	12	100.0
Total	12	100.00

(b) Frequency of Web Use

The majority of the airlines, as demonstrated by Table 18, reported to be accessing the web on daily basis as it would be expected.

Table 18: Frequency of use of web

Frequency of use of web	Frequency	Percentage
Weekly	2	16.7
Almost daily	10	83.3
Total	12	100.0

(c) Internet Connection Mode

Wireless was the dominant means of connection to the Internet as three quarters of the airlines employed this mode as depicted by Table 19.

Table 19: Internet connection mode

Internet connection mode	Frequency	Percentage
Wireless	9	75.0
VSAT	2	16.7
Point-to-point Leased Line	1	8.3
Total	12	100.0

(d) Internet Connection Speed

As it was with managers in other components of tourism system in the country, most of the interviewees did not recognise the size of bandwidth their airlines were paying for from the ISPs. Table 20 shows that two thirds of the respondents in airlines subsystem did not have a recollection of the speed their offices were connected on the Internet.

Table 20: Bandwidth for Internet access

Internet connection bandwidth	Frequency	Percentage
64 kpbs	2	16.7
128 kbps	2	16.7
I don't know	8	66.6
Total	12	100.0

(e) Electronic Mail in Business Communication

Electronic mails are one of the most used services of the Internet worldwide [217]. According to Graham [217] e-mails provide all

benefits or advantages of normal letter, fax and telephone calls without the subsequent disadvantages of each, respectively. Because e-mails are fast, extremely cheap and convenient their application in business as well as personal communication has gained popularity. All airlines in the survey indicated that the use of e-mails in business communication was almost on a daily basis as depicted in Table 21. With an exception of two chartered airlines which did not depend much on direct communication with international tourists, the rest of the airlines in the survey rated high e-mails in their business communication. As indicated in Table 22, 83.3 percent of the airlines reported that e-mails accounted for more than half of business communication.

Table 21: Frequency of use of email

Use of e-mail in business communication	Frequency	Percentage
Almost daily	12	100.0
Total	12	100.0

Table 22: Percentage of business communication by electronic mail

% of business communication by e-mail	Frequency	Percentage
<10%	2	16.7
50-75%	6	50.0
>75%	4	33.3
Total	12	100.0

(f) Owning Websites and Type of Websites

Table 23 shows that only two chartered airlines did not have websites, eight (two thirds) had websites, and other two other airlines had their websites being reconstructed.

Table 23: Website Ownership among Airlines in Tanzania

Website Ownership	Frequency	Percentage
No	2	16.7
Yes	8	66.6
Under re-construction or improvement	2	16.7
Total	12	100.0

However, for those domestic airlines whose websites were under reconstruction, the activity was being done offline while the old version of the websites was still running.

On the other hand, Table 24 shows that only two international airlines had transactional websites through which all electronic commerce could be conducted. These websites enable the traveller to buy a ticket online and select various services such as seat and food menu.

Table 24: Type of Websites among airlines in Tanzania

Type of your website	Frequency	Percentage
Static	5	50.0
Dynamic (database driven)	3	30.0
Transactional	2	20.0
Total	10	100.0

In addition, the websites have functions of managing one's frequent fliers miles and checking the arrival and departure times of respective flights. Due to the development of these web-based technologies, the international airlines have continued cutting the commissions they pay to travel agents on ticket sales as will be described further in Chapter Five.

(g) Web Skills

Following the requirement by the International Air Transport Association (IATA) that all airlines should use e-tickets by 2007 [215], the domestic airlines (including the national carrier) were upgrading their websites. The spin-off of this requirement has been job opportunities for some web designing and scripting professionals. An example was the remarks from one interviewee who was an IT expert [218] in one of the domestic airline: "thanks to the requirement of IATA, I have been able to change job to this airline. They required someone to revamp their website and their job conditions are far better than those of the job I was previously doing." Therefore, due to the importance of websites to most airlines, employment of own IT experts was more prevalent than in the other stakeholders involved in the study. This became more apparent when an analysis of the source of the personnel who designed and managed the website was done. Thus, Tables 25 and 26 demonstrate

a case which was peculiar to the airlines whereby six out of ten websites were designed by internal staff, and day-to-day maintenance and management of the websites was done by internal staff. No other stakeholders group or components of the tourism system in Tanzania had such a high numbers for both parameters.

Table 25: Source of expertise to design and build website

Experts who designed and built website	Frequency	Percent
Internal departmental staff	6	60.0
Outsourced service in country	4	40.0
Total	10	100.0

Table 26: Internal staff managing airlines websites

Who manages website	Frequency	Percent
Internal staff	10	100.0
Total	10	100.0

(h) Use of Website Logfiles

Despite the fact that there were knowledgeable personnel in airlines (which had websites) only three out of ten managed to analyse the web logfiles as depicted by Table 27. It was also revealed that all of the three airlines undertaking the analysis of logfiles did the job internally (see Table 28), implying that the IT experts in these airlines were more than just web designers and had more skills to analyse the logfiles.

Table 27: Use of website logfiles

Analysing the website logfiles	Frequency	Percentage
No	7	70.0
Yes	3	30.0
Total	10	100.0

Table 28: Presence of expertise to analyse web logs

	Person(s) analysing the logfiles	Frequency	Percentage
	internal staff	3	100.0

4.3.6 Connection to Computerised Reservation System/Global Distribution System (CRS/GDS)

The importance of CRS/GDS to the airlines business is that they are means through which various players in the travel services can book and sell air tickets. Three-thirds of the airlines that were involved in the survey had the connection(s) to CRS/GDS as depicted by Table 29. Two airlines had more than one connections as shown by Tables 30 and 31.

Table 29: Status of computerised reservation systems/global distribution systems (CRS/GDS) connection

	Connection to CRS/GDS	Frequency	Percent
	No	4	33.3
	Yes	8	66.7
	Total	12	100.0

Table 30: Name of first computerised reservation systems/global distribution systems (CRS/GDS)

	Name of CRS/GDS	Frequency	Percent
	Amadeus	2	25.0
	Gabriel	6	75.0
	Total	8	100.00

The four airlines that did not have connection to CRS/GDS were from the charter category. Among the famous GDS names that was specialised for airlines was Gabriel, which (as expected) accounted for three quarters of CRS/GDS used in airlines in Tanzania (see Table 30).

Table 31: Name of second computerised reservation systems/global distribution systems (CRS/GDS)

	Name of second CRS/GDS	Frequency	Percent
	Galileo	2	100.0
	Total	2	100.0

Two airlines had two connections to CRS/GDS and for both cases Galileo was the name of the second GDS as depicted by Table 31.

5.3.7 Acceptance of Major Credit Cards

For convenience and safety, the typical international tourist does not carry a lot of cash money. The normal way of paying for services and goods is the use of plastic money in the form of debit and credit cards. During international travel, tourists feel safer if they can get services paid by means of credit cards. Apart from safety against theft, credit cards usually obtain favourable currency exchange rates (despite a premium charge by credit card companies) [219]. In addition, credit cards (as their name implies) means that one can spend up front the income that he/she borrows from credit card companies. With these advantages, service providers who were able to accept payment by means of credit card relieved a traveller/tourist from lot of inconveniences. As Table 32 indicates, the majority (83%) of the airlines in the study accepted the credit cards as a means of payment.

Table 32: Status of use of credit cards

	Acceptance of major credit cards	Frequency	Percentage
	No	2	16.7
	Yes	10	83.3
	Total	12	100.0

This rate was higher among airlines than among other stakeholders involved in the study, implying that airlines were far ahead in terms of use of respective ICTs services.

(a) Flag Carrier Responsibility Regarding Management of CRS/GDS

As indicated earlier, Air Tanzania Corporation Limited (ACTL) is a national carrier. This status gives it some more responsibilities as described in the following box.

Box 3: Special responsibility of national airline carrier

As indicated by the figures on the type of CRS/GDS used by airlines (Table 30), Gabriel accounted for a three quarters. Gabriel is owned by an Atlanta (United States)-based company known as SITA. SITA's policy is to work with national carriers who take on a responsibility of management and distribution of Gabriel to other airlines in the country. Under this agreement, 40% of SITA revenue remains with ATCL since the staff working on Gabriel are employees of ATCL.

(b) GDS Migrating to IP

According to a senior ATCL official responsible for GDS, formerly Tanzania Telecommunications Company Limited (TTCL) was used to transmit communication to SITA headquarters in Atlanta, but recently SITA has adopted Internet Protocol (IP) to transmit information. The implication is that TTCL is losing out some business due to Internet revolution.

Results presented in Table 17-32 have demonstrated the way the airline component of the tourism system in Tanzania is relatively using deploying the Internet technologies compared with the art gallery and other components that will be discussed later. Globally, the airlines have been behind the invention of information distribution technologies such as CRSes as well as GDSes. Therefore it follows that even in Tanzania the airlines are ahead of others in deploying the Internet as a newer technology in information distribution technology. Being advanced in usage of distribution technologies, the airline sector accepts the credit and debit cards as means of payment more than many other sectors in tourism system in Tanzania. Given the IATA decree of using e-tickets from 2007, the airline sector in Tanzania seems prepared to handle the transition smoothly since the stock of web and other distribution technology knowledge available in the sector is sufficient.

4.4. AIRPORTS

Airports are another very important component in international tourism, since they are one of the entry and departure points of

international tourists. For example, in Tanzania, the Mwalimu Julius Kambarage Nyerere International Airport (known as Dar es Salaam International Airport DIA at the time of the research) was the major departure point for international tourists. According to the Tourist Exit Study [105], about 50% of visitors surveyed in the low season survey departed through DIA and about 34% departed through the same point in peak and mini-peak season. The second prominent departure point in all the seasons was Namanga (Kenyan border). Most probably, the same should also apply for entry of the international tourists. Another importance of airports is considered in terms of air transport costs. Airport charges contribute about 5% of airlines' operating costs worldwide [215]. When combined with air navigation charges, the total is 10% of airlines' operating costs. In terms of money, this amounts to a US$ 40 billion annual bill. Airlines pay when they fly, when they land and when they park at the airports. These costs in turn are paid for by the passenger as part of air fare. Thus, the efficiency of airports can contribute to lower the costs of air travel. One of the strategies airports use to lower their operating costs is to effectively utilise various ICTs including the Internet technologies. The following section briefly discusses how DIA was incorporating the Internet technologies in running its operations.

4.4.1 Use of Internet Technologies at Dar es Salaam International Airport

Dar es Salaam International Airport is one of the two international airports in Tanzania. The other is Kilimanjaro International Airport which is situated near the Tanzania's tourist northern circuit. Tanzania Airport Authority (TAA) oversees all airports in Tanzania. Currently there are no private airports. An in-depth interview with one senior official [220] revealed that DIA was using several Internet services as follows:

(a) E-mail as Major Means of Communication

DIA uses e-mail communication with various external and in country business partners using e-mails. Telephone calls and paper-based letters were used only when it were necessary. The senior official interviewed summarised the situation as:

> Using e-mails is quite cost effective and since its popularity rose DIA has saved a lot of money from using it. Otherwise, other means of communication were expensive. For example, sending faxes to our external partners used to cost a fortune due to high charges by TTCL. Nowadays, you

simply scan a document and send it as an e-mail attachment.

DIA E-mail system can be accessed using two interfaces: Internally, they were using a proprietary calendar software and once one is out of office one could still access the e-mail server using WebMail; at the head office (Tanzania Airport Authority).

(b) Installation of Wi-FI Access Points

Erickonet company had been contracted to install Wi-Fi access services at DIA. Given the right authorisation (by buying scratch card) one could access the Internet through hot spots at the airport. However, a tender to supply the scratch cards has stalled. DIA expected to get a commission when passengers access the web through the system.

(c) Use of Web for Initial Process of Procurement

The interviewee revealed that DIA used the web in procurement as an initial place to look for estimates of prices of various items and services before issuing public tendering. Since the existing Tanzania Procurement Act of 2001 was still paper based, DIA could not buy products and services online.

(d) Use of Web to Advertise Corporate Activities

DIA as part of Tanzania Airport Authority uses the website *www.tanzaniairports.com*[11] to let the public know of various services which DIA provides. However, no analysis of the statistics from the website had been done to determine the efficacy of the website in fulfilling the above objective.

(e) Use of Intranet

The intranet supported one of the core functions of the airport of providing information on the status of flights. Using Flight Information System (FIS) passengers and others are informed of departure and arrival times of their respective flights and other relevant information. Other services supported by the intranet were a camera and TV system to cover several events. The server for the intranet was running on Linux operating system (Red Hat distribution). Otherwise, TAA was paying quite a lot of money to for proprietary software. The interlocutor was asked about the

[11] Choice of top level domain, .com, follows the trend of other public organizations such as TANAPA discussed earlier.

possibility of reducing the amount of the license fees by deploying some successful free and open source applications [221]; his response was that he was not aware of the existence of such applications. According to Ghosh [222], payment of commercial software fees was a large burden to poor countries as it drains their financial resources.

4.5. DAR ES SALAAM INTERNATIONAL AIRPORT CARGO HANDLING COMPANY (DAHACO)

5.5.1 Introduction

Handling passengers and their luggage is another crucial activity related to air travel. Travellers expect smooth check-in, security assurance and proper handling their luggage. These functions at DIA are performed by DAHACO which is housed in DIA's buildings. DAHACO was formerly a parastatal owned by the Government of Tanzania. In 2001 a Swiss Cargo company bought 51% of DAHACO's shares and the government sold some of its shares (25%) to the public. The initial public offering (IPO) was highly oversubscribed, due to the track record of the company local investors expected good returns on their investment. In order to realise this expectation, DAHACO employs various tools to increase its efficiency. Some of these tools are IT based.

4.5.2 Software Used by DAHACO

DAHACO uses proprietary software for network and office applications. License fees paid are said to be high but there was no plan to migrate to FOSS. IT staff fear of switching costs in terms of efforts in learning to use new applications. It was learned that the management was not aware of possible savings the company could get from the switch. The IT manager complained that they have had some virus attacks and some of the proprietary products seemed not to be very stable for company's operations. Other types of the Enterprise software used were Accupac for accounting functions, C&F (clearing and forwarding) software which was in-house developed by a local software development company, and Human Resource (HR) software for HR functions. All these software products were based on commercial database management systems (DBMS). For example, Accupac was based on SQL and C&F and HR were based on Oracle. In order to deploy them, DAHACO had to buy licenses for these DBMS which was reported expensive. Since the management was not aware of the existence of equivalent DBMS (for

example, Postgre and MySQL) which were relatively inexpensive on a FOSS platform and the IT staff feared switching to the open source standard, DAHACO's investors are likely to continue foregoing part of their dividends to pay for the above licenses. Another software used by DAHACO is Cordeco which is a Departure Control System (DCS). DCS controls activities in the following departments: check in, load control in plane, baggage tracing and lost and found (worldwide computerised tracing systems utilised by the majority of the world's airlines), and transfer desk. SITA company controls the global network for the above software. In order to go with the IP revolution, SITA was planning to migrate to web-based software otherwise, by time of the research Cordeco was still command driven and non-IP based.

4.5.3 Use of Internet Services in DAHACO

Only two Internet services were used by DAHACO, namely, web and e-mail. DAHACO relied on e-mail communication with many of its business partners. For example, DAHACO was required to send a report of activities done each day to Zurich, Switzerland. The report would be sent over the Internet as an e-mail attachment.

(a) DAHACO Website

In the process of advertising DAHACO parastatal, a website was created through which to inform the public in and out of the country on activities DAHACO was doing and the potentiality of the parastatal. The website had not been updated for three years. In March 2005 the website was taken off-line on the pretext that it was being reconstructed. However, four months after being offline (the time the interview was conducted); it seemed there were no major efforts to re-upload it. In the process of the interview, I informed the responsible official that having offline website might have been bad for the company image as it might show to shareholders that the company was not being serious with their business. This is because without the running website, the choices of customers looking for information about the company were significantly reduced. Since the information on the website can be accessed at anytime (24/7 basis), at a relatively low cost, and from anywhere, using other means of searching information such as telephoning would be more resource consuming. The possible resources include time of both customers and DAHACO's workers as well as financial cost for telephone calls or driving to DAHACO office. Since DAHACO was dealing with cargo clearing and forwarding, an interactive website would be quite ideal to inform the clients on the state of their cargo in the process of

clearing and forwarding. Finally, while some airports in developed countries had started relying on advanced IT systems for check-in for IT literate passengers (checking in kiosk), DAHACO reported that acquiring this type of technology was not in their immediate plan.

CHAPTER FIVE

PRIVATE SECTOR: TOUR OPERATORS, HOSPITALITY PROVIDERS, TRAVEL AGENTS, AND CAR RENTAL SUBSYSTEMS

5.1 TOUR OPERATORS

5.1.1 Introduction

Tour operators are among the intermediaries in the tourism system. Their business is to buy individual travel services from its suppliers and sell them as a package [59:352]. In general, there are two categories, that is, outgoing and incoming tour operators. Outgoing tour operators sell the service in originating country and incoming tour operators receive the tourists in a destination.

5.1.2 Functions of Tour Operators

Tour operators are quite an important intermediary in the system as they contribute immensely in the tourism distribution channel or value chain. Specifically, their functions and roles are summarised by Buhalis [59]. These include selling or offering packages for sale directly to the consumer or through a travel agency, and setting up packages (combination of aircraft seats and beds in hotels and transfers and tours) at a single price.

5.1.3 Opportunities and Challenges from the Internet to Tour Operators

Internet technologies are bringing opportunities as well as challenges to the tour operators through reintermediation and disintermediation, respectively, as other intermediaries. Among the opportunities is that the Internet is enabling the tour operators to disintermediate travel agencies. On the other hand, among the challenges to the tour operators from the Internet is disintermediation which may work against them [59, 60]. This may arise from the practice of consumers/tourists making their direct bookings to various destinations. If a tourist books directly to an attraction or hospitality establishment or car hire service through the Internet, both outgoing and incoming tour operators may be by-passed (disintermediated).

5.1.4 Results on Tanzanian Tour Operators Use of Internet Technologies

Tanzania is a destination market in the tourism system, therefore, the tour operators operating in the country are incoming tour operators. Tanzania Association of Tour Operators (TATO) is an

association bringing together all tour operators. As it can be expected, the sizes of individual firms vary from micro (around three employees with a very limited number of vehicles) to a large one with hundreds of employees and a fleet of hundreds of vehicles. In this research, an employee variable is used to categorise tour operators as follows: micro tour operators (up to five employees), small tour operators (between six and 25 employees), medium tour operators (between 26 and 49 employees), and large tour operators (above 50 employees). Out of the 307 institutions surveyed, 151 firms claimed that tour operating was among their business. Distribution in numbers per categories of tour operators was 46 for micro, 78 for small, 17 for medium and only 10 for large. Figure 20 demonstrates the distribution in percentage per each category.

Figure 20: Categories of tour operators

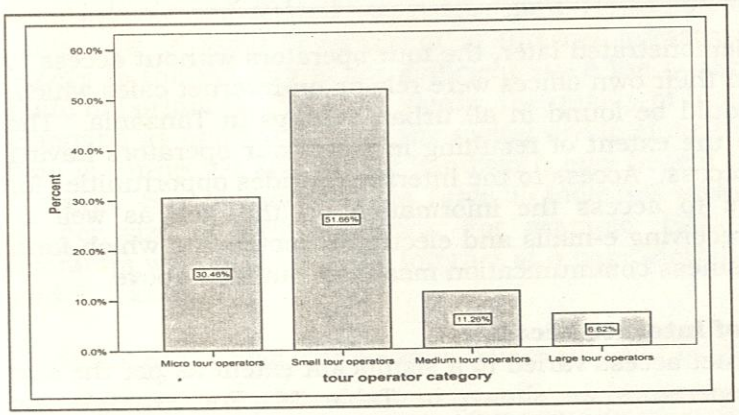


Figure 20 shows that micro, small and medium tour operators dominated the business in terms of numbers. Large tour operator companies only accounted for about seven percent in terms of numbers. However, this does not mean that they were insignificant in terms of market share since these companies had more investments in terms of fleet of vehicles and logistical supports. Larger tour companies had international alliance or they were part of global chains. Therefore, in terms of tour operation market share, the concentration was among the few large tour operators. According to Mwenguo [34], the five largest tour operators in the country controlled more than 50 percent of the business. Fearing that small tour operators might lose out in business, Tanzania is discouraging a vertical integration of tour operation business [35]. Vertical

integration occurs when tour operators, airlines and hotels are being managed or owned by one group.

(a) Internet Access

As depicted in Table 33 below, access to the Internet increases with the size of the tour operators. Approximately one quarter of micro tour operators did not have access to the Internet in their offices.

Table 33: Internet access by tour operators in Tanzania

Tour Operator Category	Internet Access		
	Yes	No	Total
Micro	34 (73.9%)	12 (26.1%)	46 (100%)
Small	72 (92.3%)	4 (7.7%)	76(100%)
Medium	16(94.1%)	1(5.9%)	17(100%)
Large	10 (100)	0	10(100%)

As it will be demonstrated later, the tour operators without access to the Internet in their own offices were relying on Internet cafes which, fortunately, could be found in all urban settings in Tanzania. The trend rises to the extent of resulting in large tour operators having 100 percent access. Access to the Internet provides opportunities for tour operators to access the information on the web as well as sending and receiving e-mails and electronic documents which form significant business communication means as outlined above.

(b) Mode of Internet Access

Modes of Internet access varied to a significant extent as per the size of the tour operators as shown in Table 34. For example, as expected, close to a quarter of micro TOs accessed the Internet using the Internet cafes.

Table 34: Means of Internet Access

Internet access mode	Tour operator category			
	Micro	Small	Medium	Large
Wireless	24 (69.6%)	66 (92.3%)	12 (70.6%)	9 (90.0%)
VSAT	1 (2.2%)	1 (1.3%)	3 (17.6%)	1 (10.0%)
Point-to-point Leased Line	2 (4.3%)	1 (1.3%)	1 (5.9%)	
Internet café	7 (23.9%)	4 (5.1%)	1 (5.9%)	
Total	34 (100.0%)	72 (100.0%)	17 (100.0%)	10 (100.0%)

None of the large TOs accessed the Internet using Internet cafes. Some of the micro TOs might not have been capable of paying for installation as well as monthly charge fees which stood at USD 1000 and USD 70, respectively. In addition, VSAT was a relatively more significant means of Internet access to medium and large TOs.

The different means of accessing the Internet was caused by lack of optic fibre connection to the global Internet infrastructure in Tanzania. Thus, relying on satellite connection makes the cost of Internet access excessive. The above monthly fee charge of USD 70 was for a shared bandwidth of 64 kbps. The monthly charge of 70 USD to a very low bandwidth compares unfavourably with what other people in the world pay for a broadband connection. For example, in the UK one is likely to pay less than a half of what a relatively poor Tanzanian tour operator was being charged. In addition, the UK user would be connected on a broadband - not such as a narrow and shared bandwidth as a Tanzanian tour operator. Thus, due to rapid development in Internet infrastructure, a mere access to the Internet is not sufficient since the quality of access is quite important too. In other words, the quality of Internet access is emerging as another form of the digital divide since the stakeholder who is connected at a higher bandwidth may benefit more from the Internet. Size of bandwidth as Table 35 indicates varied significantly as per size of tour operators. For example, 60% of large tour operators were accessing the internet at a bandwidth of between 256 and 512 kbps.

Table 35: Knowledge about size of bandwidth tour operators pay for

Bandwidth for Internet access	Tour operator category			
	Micro	Small	Medium	Large
33.3kpbs		2 (2.7%)		
64 kpbs	6 (17.1%)	33 (45.3%)	8 (47.1%)	2 (20.0%)
128 kbps	2 (5.7%)	13 (18.7%)		
256 kbps				4 (40.0%)
512 kpbs				2 (20.0%)
Don't know	26 (77.1%)	24 (33.3%)	9 (52.9%)	2 (20.0%)
Total	34 (100%)	72 (100%)	17 (100%)	10 (100%)

Most of managers in micro and medium tour operators did not know what bandwidth they were paying for. Only 20% of the managers in large tour operators could not recollect what bandwidth they were paying. The implication of this is that on average large tour operators had managers who were more competent in IT issues compared with smaller TOs.

(c) Web Presence

Since tour operators rely on customers coming from out of the country, particularly from developed countries, with the exception of micro tour operators whose web presence was close to 70% as per Table 36, the rest of the categories had very high web presence.

Table 36: Ownership of Websites

Owning a website	Tour operator category			
	Micro	Small	Medium	Large
No	10 (21.7%)	6 (7.7%)		
Yes	32 (69.6%)	72 (92.3%)	17 (100.0%)	10 (100.0%)
Under construction	4 (8.7%)			
Total	46 (100%)	78 (100%)	17 (100.0)	10 (100%)

According to the majority of the interviewed managers of TOs, not owning a functioning website was tantamount to being out of business. This emanates from the fact that the web has drastically changed the way incoming tourists from developed countries plan their travels. The web has empowered the incoming tourists to seek for information and contact the tour operator using e-mails and conclude arrival arrangements before going to most destinations. Thus, TOs which depended on walk-in tourists in their offices had seen their market share decline. Another importance of having a working website is the fact that out-bound TOs in the West who are a good source of business to small TOs in Tanzania prefer working with reputable local TOs. To have a functional website was considered to be one of the criteria of being a reputable local TO, among other factors.

(d) Types of Websites Owned by Tour Operators in Tanzania

As pointed earlier in Chapter Three, electronic commerce of which electronic tourism is a subset develops in stages. Lower stages include the use of e-mail and posting a static websites on the web. Higher stages include having transactional websites and later integrating all business processes in e-business framework. This requires integrating with back office information systems, for example, inventory and financial systems, and connecting with business partners ([59] [223]. Therefore, as it can be expected, various TOs were at different stages of e-tourism in Tanzania. From micro to medium TOs, static websites tended to dominate as shown in Table 37.

Table 37: Type of websites among Tour Operators

Type of website	Tour operator category			
	Micro	Small	Medium	Large
Static	31 (85.7%)	66 (91.7%)	16 (94.1%)	4 (40.0%)
Dynamic	5 (14.3%)	6 (8.3%)	1 (5.9%)	4 (40.0%)
Transactional				2 (20.0%)
Total	36 (100%)	72 (100%)	17 (100%)	10 (100%)

Whereas for large TOs, static and dynamic websites were equal in terms of percentages, only 20 percent of the large TOs' websites were of high category of transactional websites. This shows that Tanzanian TOs had a distance to cover before more effective benefits from e-commerce accrued to them.

(e) Frequency of Use of E-mails in Business Communication

As discussed above, business communication through electronic mails (e-mails) had become an important means of communication. E-mail seemed to be the most used Internet service (compared to other services that were included in the questionnaire, namely, file transfer protocol, telnet, the web and wireless application protocol). Most of the surveyed TOs affirmed the importance of e-mails in their business communication by praising the efficacy of e-mails in the form of reduction in operating costs as well as speeding up business processes. One tour operator had the following to say on the importance of e-mail: "even if a customer calls me on the phone and we conclude a business deal, I'll always ask him to send me an e-mail to confirm what we have agreed on so that I can print and file the agreement."

Table 38 shows the way the surveyed TOs value the importance of e-mails in business communication. Eight out of ten of large TOs depend mainly on e-mails in business communication since between half and three quarters of communication was through this medium.

Table 38: Frequency of use of electronic mails in business communication

% of business communication by e-mail	Tour operator category			
	Micro	Small	Medium	Large
<10%	4 (8.7%)			
10-25%	2 (4.3%)	2 (2.6%)	4 (23.5%)	
26-50%	12 (26.1%)	20 (25.6%)	2 (11.8%)	2 (20.0%)
50-75%	24 (52.2%)	48 (61.5%)	7 (41.2%)	8 (80.0%)
>75%	4 (8.7%)	8 (10.3%)	4 (23.5%)	
Total	46 (100%)	78 (100%)	17 (100%)	10 (100%)

Due to the speed of business communication using e-mails, the TOs indicated that they could handle considerably more business enquires in a day. Some of these business enquires ended up becoming business deals. Thus, due to the importance of e-mails in business communications, the majority of TOs had invested in the Internet access in their offices. To demonstrate the importance of the Internet in the business, one respondent [224] had the following to say:

> Relying on other forms of Internet access such as Internet cafes is not quite effective since customers expect quick responses when they enquire about business through e-mail.

The respondent narrated a case when he had to drive for ten minutes to go the Internet café to access his e-mail account. He could do it in the morning and evening on daily basis. "If a customer sent an enquiry between the times I had to travel to the Internet café, then I might lose that business. Then I decided to invest in the Internet access in my office," he said.

(f) Impact of Internet on Business

Even though the majority of TOs in the survey had static websites (level 2 of eTourism road map as per Duncan [118], the majority concluded that the Internet had a significant positive impact on their businesses as demonstrated in Table 39.

Table 39: Impact of the Internet on business

Internet impact on business	Tour operator category			
	Micro	Small	Medium	Large
No effect	2 (4.3%)			
Significant positive	38 (82.6%)	69 (93.6%)	15 (88.2%)	10 (100%)
Negative	6 (13.0%)			
Little positive		1 (1.3%)	2 (11.8%)	
Don't know		8 (5.1%)		
Total	46 (100%)	78 (100%)	17 (100%)	10 (100%)

However, a few TOs (13%) indicated that the Internet had negatively affected their business. An in-depth interview with these TOs revealed that the Internet had resulted in these TOs losing the market share they used to enjoy before the explosion of Internet services (web and e-mail). One TO [225] complained that Internet has made it easy for newcomers (competitors) to establish themselves in the market place compared to the previous period when the cost of entry was quite limiting. This sentiment was shared with a few other TOs who did not own websites. On the other hand, all of the large tour operators concurred with the statement that the Internet has had a positive effect on their business, as shown in Table 39.

(g) Problems Preventing More Integration of Internet in the TOs Business

For the e-commerce road to complete, firms have to integrate all business process with online technologies as observed above. However, as indicated in above tables, Tanzanian TOs still had a long way to go to achieve the higher stages of e-commerce. There are several reasons for this state of affair which is more prevalent in developing countries. Table 40 depicts some of the problems which respondents from the tour operation subsystem mentioned as the hindrance to integrate their business systems with online technologies.

Table 40: Problems hindering more integration of electronic business technology in tour operations in Tanzania

Problem number one to integrate internet in business	Tour operator category			
	Micro	Small	Medium	Large
Security problems concerning payments	6 (18.2%)	8 (10.5%)		25.0%
Uncertainty concerning contracts, terms of delivery and guarantee	8 (22.7%)	17 (23.7%)	3 (23.5%)	25.0%
Costs of developing, maintaining e-commerce system	17 (50.0%)	32 (44.7%)	8 (47.1%)	25.0%
Lgistical problems for example ISPs	3 (9.1%)	9 (13.2%)	5 (29.4%)	25.0%
Others		4 (5.3%)		
No any problem		2 (2.6%)		
Total	34 (100%)	72 (100%)	16 (100%)	10 (100%)

As can be seen from Table 40, micro, small and medium tour operators considered the cost of developing e-commerce system as a major hindrance. Security issues were not a major problem to these smaller TOs compared to large tour operators who considered them as a problem by a 25%. Costs were being compounded by the lack of knowledge among some of these smaller TOs. For example, for those TOs which had websites, most of the websites were developed by outsiders who charged quite a high price for developing a static website. Table 41 demonstrates that whereas large tour operators developed their websites internally by 60%, smaller TOs relied on outsourcing. Close to two-thirds of smaller TOs had outsourced the service.

Table 41: Source of expertise to design and build tour operators' websites

Designer and builder of website	Tour operator category			
	Micro	Small	Medium	Large
Internal departmental staff	4 (11.1%)	24 (33.3%)		6 (60.0%)
Outsourced service in country	22 (66.7%)	28 (38.9%)	12 (76.5%)	2 (20.0%)
Outsourced service out of country	8 (22.2%)	20 (27.8%)	4 (23.5%)	2 (20.0%)
Total	34 (100%)	72 (100%)	16 (100%)	10 (100%)

(h) Internet is Challenging Tour Operators to Understand More Their Products

As observed by one respondent [226], international tourists were becoming more knowledgeable about products found in destinations. According to this respondent, "formerly a tourist was somebody 'ignorant about a destination' but now somebody comes to visit a place after doing own research. When you start narrating some of the things to many tourists you will hear them saying 'I've heard about it', 'I know about it'". She remarked that a Kiswahili saying: *"we mtalii nini?"* which can be loosely be translated as "are you a tourist?" used to be used in reference to someone who displayed some ignorance about something. But things have changed, tourists are just coming to confirm and see physically what they had already seen on print or on the Internet. She concluded that "*sasa mtalii anakuja anajua*", which means that a tourist arrives with a lot of knowledge on particular destination product(s).

The above description about the *new tourist* from a seasoned tour operator [226] who had observed the changes in tourists' knowledge about destination confirms the need of providers of tourism services to strive to be more customer-centric [1, 51, 227]. Today, more than ever before, providers of various tourism services have to understand more about the specific needs of their clients. In addition, since the sources of information on various products have increased, thanks to the Internet, providers of tourism services such as TOs are required to expand their understanding and knowledge on their products.

This is because, as demonstrated above, some of the customers may not be satisfied with shallow replies on their enquiries since their quest for knowledge on a particular product at a destination may be deeper than in the past. Thus, the quality of human resource involved in delivering services to tourists needs to be high if a destination wants to really retain its market share or increase the market share. Without a well trained and motivated workforce, a destination competitive advantage is likely to erode quickly as the *new tourist* is demanding higher quality services as described earlier based on Poon's [43] explication.

Thus, for a tour operator to be able to add value to a tourist product, more knowledge of the current realities of tourism business is required. Unfortunately, as concluded by CHL Consulting Group [107], there was an acute shortage of high quality local personnel to manage the modern tourism business in Tanzania. This lack was in part compounded by the fact that there a paucity of high level training in tourism related fields in the country. A few people with at least at first and second degrees in tourism related disciplines were all trained abroad; otherwise, some disciplines such as Forestry were used as substitutes in some cases (particularly at regional and district levels). Tourism is multidisciplinary dealing with business management and strategical issues related to transport, travel, hospitality, leisure and heritage, among others in the tourism system. However, Forestry discipline does not have tourism has its forte. The relationship between Forestry and Tourism disciplines is more or less indirect one. Since the major tasks of Forestry discipline include conservation of environment and nature based tourism relies on environmental endowments such as forests then these disciplines relate as such. This is because there are some types of tourism such as urban, heritage, medical, academic and others which do not have anything to do with Forestry disciplines. This lack of long (only of very recent the Open University of Tanzania has started degree studies in tourism) established training facilities of high level human resources in tourism in the country rises a following question: For how can a sector which is claimed to contribute more than 16% of GNP and 25% of foreign exchange lack the supporting training programmes in the country?

5.1.5 Tourism Related Videos on the Web

Due to development in some of the Search Engines such as Yahoo and Alta Vista, and more recently Google, among the type of information one can search on the web include videos. Some

Tanzanian tour operators had posted several videos on tourist products a tourist might enjoy while visiting the destination. These videos varied in terms of length, quality and format. Another group of videos on Tanzania tourist products (same with other destinations) had been posted by several tourists who had visited Tanzania. Individual tourists posted these videos and written testimonials either on their web logs or their dedicated websites.

Thus, these videos on the web provided a virtual tour to anyone with Internet connection, especially with a broadband. In addition, the presence of numerous videos and images on tourist products on the web from different sources demonstrates the change in distribution channels. Whereas, formerly such information was exclusively distributed by specific agents such as DMOs and tour operators, now customers/consumers are becoming part of the distribution agents. The implication of this and the ability of customers to discuss their experiences through various virtual communities [66] as well as through numerous travelogues (for example *www.wikitravel.org*) typifies the need of striving to be as much as customer-centric as possible. Destinations where tourists would get poor services are likely to lose more future customers since unsatisfied customers are likely to spread their experience more easily with the Internet technologies such as mail lists (virtual communities) as well as personal web logs. Another challenge is for the providers to try to check what is being written about them and make appropriate adjustments in business operations where possible.

5.2 HOSPITALITY SUBSYSTEM

5.2.1 Introduction

Due to its diversity, there are several ways of defining a hospitality subsystem as various authors and institutions have demonstrated. For example, Nykiel [228], summarises hospitality as a component of a tourism system which deals with products and services offered to the consumer away from home. On the other hand, as per Schmidgall, Hayes and Ninemeier [229], the hospitality subsystem includes three domains: lodging operations, food/beverage services, and travel/tourism. In this study, a hospitality subsystem was considered to include the services which provided accommodation and food and beverages to international tourists in Tanzania destination. These services might have been offered by high class tourist hotels, restaurants, hostels and tourist tented camps.

5.2.2 Roles of Hospitality Subsystem in Tourism Experience

In a tourism system, each component is important in adding to the ultimate aim of maximising a visitor's experience from a destination. A hospitality subsystem is therefore equally important since it takes care of issues of food, drinks and accommodation. As described earlier, in Tanzania, these activities and services are provided by the private sector with some regulations from the government (public sector). Businesses offering these services fall under one association, namely, Hotel Keepers Association of Tanzania (HKAT). On the other hand, various training institutions offering catering and other hospitality related courses have an association known as Tanzania Hotel Schools Association (TAHOSA). As it will be demonstrated below, various firms offering these services were of various sizes and under different ownership. Due to its importance in the tourism value net, hospitality subsystem had been using various ICTs to increase its productivity over time [112, 188, 230].

5.2.3 The Internet and Hospitality Subsystem

As it has been described for tour operators, the rapid growth of the Internet has had some effects on the hospitality component too. Whereas, computerised reservation systems/global distribution systems (CRS/GDS) and property management systems (PMS) are part of the ICTs application in the hospitality business, until recently they were not designed on Internet infrastructure, in other words, using the Internet protocols. This being the case, the access of the PMS, CRS/GDS was restricted to specialized agents such as TAs, TOs, and members of hotel subsystem. With the expansion of Internet resources especially the web, access to some hospitality resources has been placed on both private as well public domains of the web. Therefore, some of the companies have capitalised on this possibility by building websites which directly link with databases with capability of making transactional activities such as booking rooms and paying for them online. This has had a positive impact on the hotel business because by using online technologies, hotels can sell their properties without going through the GDS/CRS and Switch companies which charge some commissions. Specifically, some of the impacts the subsystem has had from the Internet explosion are observed O'Connor and Frew [98:4] as follows:

> .. many of the hotel chains have taken advantage of the opportunities presented by the web. A 2002 survey of the top fifty hotel companies revealed that over 95% of chains had a company Web site, with nearly 90% of these providing reservation facilities to allow the customer to book directly. Chain sites appear to be highly effective, with the majority of Internet bookings flowing through such sites rather than through the Web intermediaries. The reduction in costs from the avoidance of GDS fees and travel agent commission are estimated to be substantial, with cumulative gross savings for the 2000 to 2003 period forecast to reach US$1.3 billion, representing an annual saving equivalent to 1.7% of total industry profits in 2000.

As an example of the rates various intermediaries used to charge before the popularity of the Internet, Morrison and Harrison [231] provided an example in Table 42 to demonstrate the fact that globally property owners used to pay high commission to intermediaries.

Table 42: Example of commissions paid to intermediaries

Intermediary	Commission
Hotel booking agency	15% on net commission paid
Travel agent	15% commission paid
Booking through GDS	17.5% commission, plus 72p per transaction, and up to $4.38 depending on system used plus VAT
Switch companies	Charges equal to 1-2% of annual sales

From Morrison and Harrison [334]

Therefore, with own websites some hotel properties have been able to save on the commissions as elaborated by O'Connor and Frew above. However, the Internet technologies, particularly the web, have brought about new intermediaries, commonly known as eMediaries as briefly mentioned above, which many authors have analysed extensively (see [59, 60, 117, 187, 189], for example). According to one of the major business and online consulting firms (PhocusWright) [232], some of these eMediaries have constructed websites which have become popular to the extent that the "Big Three" third-party distributors – Hotels.com, Expedia and Travelocity – controlled approximately 74 percent of the online hotel sales market in 2003. The arrangement of the eMediaries selling some of the rooms for hotels as a third party and charging commission per merchant business model [233].

5.2.4 Online Booking Trend on the Rise

Booking of hotels rooms using online means is demonstrably rising as per worldwide information presented in Table 43.

Table 43: Trend of Modes of Hotel Bookings

Year	Online Travel Agency	Hotel Chain Own Website	Traditi on Travel Agency	Hotel Telephone Reservation	Individual Walk-In Customers	Total
2001	3%	3%	21%	63%	10%	100%
2002	5%	5%	20%	60%	10%	100%
2005	9%	11%	18%	53%	9%	100%

Source: [234]

While both online travel agency (eMediaries) and hotel chain own website are rising (from 6% in 2001 to 20% in 2005), bookings through traditional travel agencies and via telephone lines are on decline. The above situation is for developed countries. In the following sections, the extent of Internet adoption in the hospitality subsystem in Tanzania will be briefly presented.

5.2.5 Use of Internet in Hospitality Subsystem in Tanzania

The following sub-section summarises the findings on how the hospitality sub-system was utilising the Internet technologies in Tanzania. Since hotel business is labour intensive, it was considered important to categorize the hotel establishments or properties into only two groups. Groups of fewer than 75 employees were categorised as small and medium hotels, and those with more than 75 employees as large hotels. From the 307 institutions that were involved in the survey, 109 classified themselves as having hospitality related businesses. Large hotels were 28 and small and medium category comprised 81 hotels. Of the 28 large hotels, 13 were located in Dar es Salaam, 6 in Arusha and the rest in other parts of the country involved in the research. A comparison of various parameters pertaining to Internet services is done below among categories as done previously in other the subsystems.

(a) Internet Access

As expected, all of the large hotels had always-on Internet access. Even among the small and medium hotel the Internet access rate was quite high since about 92% had Internet access (see Table 44). However, it should be noted that the small and medium hotels that were included in the survey were the ones serving international tourists. Therefore, the high percentage of the Internet access even by small and medium hotels presented above does not necessarily

represent all small and medium hotels in the country, particularly, those serving the domestic market.

Table 44: Internet access among hotel establishments in Tanzania

Internet access	Hotel categorization	
	small and medium hotels	large hotels
No	6 (7.7%)	
Yes	75 (92.3%)	28 (100.0%)
Total	81 (100.0%)	28 (100.0%)

(b) Internet Connection Mode

Table 45 shows that a large proportion of both categories of hospitality firms accessed the Internet using the wireless technologies provided by ISPs. Other means of Internet access include VSAT and modem. Where relatively more large hotels used VSAT, the same was true for modem access with small and medium properties.

One of the medium hotel managers informed the researcher that it was absolutely necessary to install a VSAT albeit its expensive costs (installation as well as monthly payment to data company) since accessing the Internet was very vital to his business. His hotel was located 10 kilometres from Lushoto town where he or one of his staff used to drive twice a day to go read e-mails. He concluded, "on balance, having our own VSAT has been helpful in our business; in fact we get some customers here because they know that they can access the Internet while at our property."

Table 45: Internet access/connection mode

Internet access mode	Hotel categorization	
	Small and medium	Large
Wireless	55 (67.9%)	24 (85.7%)
Modem	10 (12.8%)	
VSAT	5 (6.4%)	4 (14.3%)
Leased Line	4 (5.1%)	
Internet café	7 (7.7%)	
Total	81 (100.0%)	28 (100.0%)

Therefore, tourists as part of the tourism system need to be factored in when it comes to decision of installing the Internet access. To a considerable extent, this fact has been taken seriously by some of the providers of accommodation as well MICE (meeting, incentive, conference, and events) services in Tanzania. Several of these providers provide Internet access at a cost in their business premises. On average, the Internet access at hotel premises was higher compared with Internet cafes along the high streets. With an average of USD 1 per hour access for ordinary Internet cafes, some hotels charged up to USD 5 per hour. All in all, the Internet access at either premises seemed quite important to international tourists visiting Tanzania. Direct observation in all areas where this research was conducted revealed that tourists frequented Internet cafes. As much as this helped these tourists to access their mails as well as keep in contacts with their loved ones back home, Internet café businesses benefited directly in terms of the charged access fees.

(c) Bandwidth for Internet access

Table 46: Bandwidth for Internet access among hospitality subsystem in Tanzania

Bandwidth for Internet access	Hotel categorization	
	Small and medium	Large
33.3kpbs	2 (2.7%)	2 (7.1%)
64 kpbs	17 (23.3%)	8 (28.6%)
128 kbps	6 (8.2%)	3 (10.7%)
256 kbps	2 (2.7%)	
I don't know	48 (63.0%)	15 (53.6%)
Total	75 (100.0%)	28 ((100.0%))

Table 46 shows that the majority of the managers in the hospitality subsystem do not know what size of bandwidth their establishments were paying for. As a proxy of IT knowledge, this may show that the managers did not bother themselves to understand basic concepts related to Internet access. In addition, this may come from the ISPs who did not like to disclose to their clients what bandwidth they were supplying. This was verified in Arusha when one ISP owner informed me that they were selling 64 kbps to clients. However, when he was asked as to whether the bandwidth was dedicated or shared, after some hesitation, he revealed that it was a shared bandwidth.

(d) Web Presence

Both small and medium and large hospitality establishments in the study had a high web presence as depicted in Table 47.

Table 47: Web presence for hospitality firms in Tanzania

Owning a website	Hotel categorization	
	Small and medium	Large
No	10 (12.8%)	2 (7.1%)
Yes	67 (82.1%)	26 (92.9%)
Under construction	2 (2.6%)	
Under improvement	2 (2.6%)	
Total	81 (100%)	28 (100%)

Only about 13% of small and medium establishments did not have websites as depicted by Table 49. However, a significant difference was observed in terms of types of websites as demonstrated Table 48. Whereas small and medium establishments' websites were basically static, more than 50% of the websites of the large establishments were either dynamic or transactional. Some of large establishments had business contracts with some travel eMediaries such as *www.travelsouth.com* on revenue sharing in case some bookings originated from these eMediaries.

Table 48: Types of websites of hotels in Tanzania

Type of website	Hotel categorization	
	Small and medium	Large hotels
Static	57 (80.9%)	13 (46.2%)
Dynamic	14 (19.1%)	12 (42.3%)
Transactional		3 (11.5%)
Total	71 (100.0%)	28 (100.0%)

The concept of deploying eMediaries in marketing hospitality services was still new to some managers in Tanzania. For example, during one of the interview sessions with a marketing manager of one of the large hotels in Dar es Salaam central business district, it was revealed that the manager was not aware of these eMediaries. In order to learn more on the eMediaries, the manager asked the researcher for an appointment to be enlightened on the same. He had to travel 200 kilometres to my place of work in Morogoro for a further discussion and web demonstration. After the session, he

promised to immediately engage one of the eMediaries to market his hotel online.

Despite the fact that short message service (SMS) was included in the options of receiving the information, none of the establishment seemed to be using the service. As correctly observed by Marcussen [235, 236, 237], SMS is one of the component of mobile commerce (m-commerce), the other one being WAP (wireless application protocol). However, among the surveyed hospitality establishments in Tanzania, the m-commerce was not yet practised.

(e) Turnover From Online Sales

The majority of the establishments that reported utilising the web to market themselves attained a turn over of between 11 to 25 per cent. As represented by the Table 49, only two large establishments reported that their online sales were more than 25 per cent. These hotels were part of the international chains which as depicted by Table 43, the online booking is becoming one of the major means of distribution.

Table 49: Percentage of turnover from online sales for hospitality establishments

Percentage of turnover from online sales	Hotel categorization	
	small and medium	large
<10%	1 (0.01%)	2 (0.4%)
11-25%	2 (0.02%)	10 (36%)
>26-50%	0	2 (0.07)

(f) Types of online services for receiving online bookings

The respondents who reported benefiting from online bookings were asked to explain the way they received the information on the booking. As Table 50 shows, e-mail was the major means the bookings were received by these establishments.

Table 50: Use of online technologies as way of getting information on online order

Use of online tech as way of getting info on online order	Hotel categorization	
	Small and medium	Large
Online technologies other than email	27 (33.3%)	6 (21.4%)
Ordinary email	54 (66.7%)	20 (71.4%)
Order integrated with backend system		2 (7.1%)
Total	81 (100.0%)	28 (100.0%)

(g) Importance of e-mails in business communication

Table 51 shows that E-mail communication was important to both types of hospitality establishments that were surveyed in Tanzania. For about 57% of small and medium establishments, e-mail communication accounted for more than a half of business communications. On the other hand, for more than 85% of the large establishments, e-mail communication accounted for more than a half of the business communication. As indicated earlier, e-mail communication was also a major means of receiving the online bookings for those establishments with the facilities.

Table 51: Percentage of business communication by e-mail

% ofbusiness communication by e-mails	Hotel categorization	
	Small and medium	Large
<10%	7 (9.0%)	2 (7.1%)
10-25%	10 (12.8%)	0
26-50%	17 (20.5%)	2 (7.1%)
50-75%	22 (26.9%)	16 (60.7%)
>75%	25 (30.8%)	8 (25.0%)
Total	81 (100.0%)	28 (100.0%)

(h) Major Credit Cards Acceptance

As it would be expected, nearly all large establishments accepted the major credit cards as a means of payment and more than a half of

the small and medium establishments did not as indicated by Table 52.

Table 52: Acceptance of credit cards among hospitality establishments in Tanzania

Acceptance of major credit cards	Hotel categorization	
	Small and medium	Large
No	46 (56.4%)	2 (7.1%)
Yes	35 (43.6%)	26 (92.9%)
Total	81 (100.0%)	28 (100.0%)

However, an in-depth interview among non-chain large establishments indicated that credit cards were not their preferred means of payment even though some accepted them. Since the procedure to process payment was cumbersome and took some time to get real money in their bank accounts, cash payment was a better means despite its associated risks. In addition, in the process of using third party institutions to process the credit payments, some commissions were deducted, thus reducing actual amount received by these establishments. Another reason of preferring cash over credit card payment was securing the operating capital with ease. In Tanzania, financial institutions have a lot of rigidity in providing operating capital financing. Therefore, receiving cash made it easy for establishment to able to run daily business operations.

(i) Connection to Property Management System or CRS/GDS

Only 29% of the large establishments were connected to the property management systems or CRS/GDS databases as shown in Table 53.

Table 53: Property management systems/computerised reservation systems/global distribution systems (PMS/CRS/GDS) connection

Connection to PMS /CRS/GDS	Hotel categorization	
	Small and medium	Large
No	81 (100.0%)	20 (71.4%)
Yes		8 (28.6%)
Total	81 (100.0%)	28 ((100.0%)

As described earlier, these databases enable various players in the system to book a traveller at various establishments as well as check the inventory.

Among small and medium establishments none was connected to the databases (CRS/GDS). As demonstrated earlier, being connected to these databases entails paying some fees, thus it may not be economical for smaller establishments to opt for this alternative especially now with the ubiquity and utility of websites.

For the establishment connected to the above databases, those which reported having more than one connection, Amadeus and Fidelio, were the most used databases. The second only option was Galileo. Two establishments reported to have had created their PMSs which were used in-house. Table 54 depicts the distribution of names of the databases.

Table 54: Names of Property management systems/computerised reservation systems/global distribution systems connecting hospitality establishments in Tanzania

Name of PMS/CRS/GDS	First	Second
Amadeus	4 (50%)	
Fidelio Property Management System	2 (25%)	
In house developed PMS	2 (25%)	
Galileo		4 (100%)
Total	8 (100%)	4 (100%)

5.3 TRAVEL AGENTS

5.3.1 Introduction

As one of the intermediaries in tourism, travel agents continue to play a vital role in the tourism distribution system, forming the whole important link between suppliers or principals and consumers. Unlike tour operators who might buy stock, travel agents' stock in trade is expertise knowledge and it is that knowledge that they sell to consumers [238]. Due to the vast knowledge they are supposed to possess about itineraries and destinations, travel agents have been described as opinion formers to their clients; in other words, travel agents are capable of influencing a client on making choices about travel arrangements [239]. Thus, destination-naïve

tourists and those people who travel internationally are particularly likely to use the services of a travel agency [238].

5.3.2 Characteristics of Travel Agent Business

Unlike other retail sectors, travel agents purchase no stock; instead, they sell the products on a commission basis. In exchange they perform the labour intensive clerical activities on behalf of suppliers/principles (for example, hotels, airlines, cruise liners, and car rentals), such as ticket processing, the provision of information on fares and the provision of advice [240]. Profitability for travel agency depends on three factors: selling products that pay the highest commission to maximize income, increased volumes of sale, and processing customers in the most time efficient manner to minimize costs. Therefore, this is high volume/low margin business. As a result, travel agents almost always have fewer personnel than the volume of business requires who eventually ending working for long hours. Efficiency, therefore, dictates survival of travel agent businesses. Traditional volatility in demand, coupled with recent changes to the tourism distribution system, including the advent of the Internet, capping and stopping payment of commissions by some principals such as airlines and the development of alternate distribution channels have made profitability of these agencies more difficult [238].

5.3.3 Internet and Travel Agents

Despite being gatekeepers of travel information and knowledge, the onset of internet services such as world wide web, has affected the position of travel agents. The web has made some of the information which formed a competitive advantage of TAs to be available with much ease. In addition, suppliers of travel services such as airlines and cruise ships have started selling their services directly to consumers through their websites or other syndicated websites. This development has resulted into a few airlines (so called no frill airlines such as easyJet (UK) and Ryanair (Ireland)) to rely on sales of ticket on the web without any mortal and brick office [214]. Thus, the position of travel agents, especially those called "high street" which rely on "walk-in" business model, is still being debated by travel and tourism experts and authors. However, something new is now emerging as many of the world airlines have cut the rates of commission they used to pay travel agents for air ticket sales. For example, in Europe, some of the large airlines such as British Airways have practically stopped paying the commission by imposing a specific cap (UK £ 10) on a ticket sold by travel agents regardless

of value of the ticket. In addition, a few airlines such as Virgin have pleaded to pay a flat rate of 2% for registered TAs and 1% for non-registered TAs [241]. The situation is not very different in developing countries such as Tanzania either where the commission rates airlines pay to TAs have been going down constantly. Starting at 10% in 1995, the commission has been slowly reduced periodically to 5% in 2005 [242].

In spite of the above impact of the Internet technologies on TAs, there was another positive side of the business. Since TAs were experts in their profession and not all customers had a lot of time and expertise to spend on the Internet making booking online, demand for service of TAs would still be there in the foreseeable future. However, the nature of TAs might change since there is a little margin on tickets sold (actually the commissions were being squeezed by airlines as pointed above). TAs require high volumes of business to make profits since this business survives on very small margins from ticket sales upon which a commission is paid. This fact is likely to force out many of the small TAs and only few large ones are likely to remain in business. This has forced a fierce competition among TAs in Tanzania vying to win public tenders to supply travel services to large corporations and government departments. Having such base of customers ensured that a TA could earn more from high-value tickets since some of the executives travel in higher classes and will increase volumes of sales. This fact was observed in the process of interviewing managers in the TA subsystem.

Also, a few studies have indicated that the odds of getting a better price are higher by booking through travel agents than by booking online, particularly if the travel trip is complex with several stopovers and requires specialised services such as accommodation [243, 244]. With this reality, Takim (Personal Communication) [245] had confidence that since TAs were equipped with more connectivity to several databases, they were still offering better services compared to other intermediaries, especially the eMediaries. However, he cautioned that "in order for travel agents to remain in this ever changing business, they need to add value to what they are offering to customers. In order to do this effectively they a need well trained and dedicated workforce." This echoes well with [246:12] (quoting Cooper, Fletcher and Gilbert), who observed the importance of high quality staff in the success of tourism as follows:

> ...the challenges facing the tourism industry will be met successfully by a well educated, trained, bright, energetic, multilingual and entrepreneurial workforce who understand the nature of tourism and have a professional training. A high quality of professional human resources in tourism will allow enterprises to gain competitive edge and deliver added value with their service.

Another impact from the Internet technology had been more time wasting on the part of TAs. Takim [245] elaborated that:

> since it is easy to send an e-mail, we are receiving many enquiries from consumers. It takes a lot of our time in replying and yet a few sales do materialise. .. an annoying thing is that people expect that you are staying staring at your e-mail account since they expect an instant reply ... this is increasing stress to our staff.

5.3.4 Internet Use in Travel Agency Business in Tanzania

Out of 307 survey entities of tourism system in the country, 30 claimed to do travel agency as either a first or second business line. A good number of tour operators offered some travel agency business as well as a very few hotels. Contrary to tour operating business, travel agency business could only be done by Tanzanian citizens. Since it was a fragile business as described above, few firms had stayed in this business for long. Those which had lasted for many years were family managed. Since the number of employees among all firms dealing with TA business ranged from 4 to 50, all TAs fall under the categoration of small and medium enterprises [247]. In addition, firms which had travel agency as core business had fewer employees compared to the firms which travel agency was an add-on line of business, the primary one being tour operating. Therefore, results on how these SMEs use the Internet technologies will be presented as a group. As pointed earlier, there are two types of TAs - those involved in source countries and those based in destination countries. Those in source market deal with outgoing travellers and those in destination deal with customers based in the country as well incoming tourists. At times a tourist in a destination country may use local travel agents to change his/her travel arrangements and buy extra air ticket(s) to travel to other parts of the country. In order to accomplish all these activities, travel agents are equipped with various IT related tools and their use of the Internet varies as demonstrated in Table 55.

(a) Internet Access

Table 55: Internet access among travel agents in Tanzania

Internet access	Frequency	Percentage
No	2	6.7
Yes	28	93.3
Total	30	100.0

Table 55 shows that almost all travel agents (TAs) had Internet access, which is expected since TAs rely on being connected to CRS/GDS. Thus, Internet connection becomes relatively easy due to the ownership of computers required for CRS/GDS. Access to the Internet through the Internet Service Provider (ISP) is a very important stage in the eTourism roadmap. Access to the Internet provides opportunities for SMMTEs to access the information on the web as well as sending and receiving e-mails and electronic documents which form significant business communication means. With the development of many of the information systems migrating to web based technologies, communication with IATA is done using their extranet. Travel agents have passwords to upload documents indicating the business returns every 15 days. In turn, TAs download documents from the International IATA[12] extranet using internet access. The two TAs which did not have Internet access work in partnership with other TAs. Actually, these TAs (without Internet connection) were quite specialised in serving donor communities from their respective countries. What these TAs were doing was to organise travel arrangements of those funded by the projects from respective donor countries and correspond over phone with other travel agents for booking and issuing tickets at a commission.

(b) Means of Internet Access

Table 56 shows that all TAs with Internet access used the wireless mode of connectivity. Observation in all TA offices revealed that all were using similar type of personal computer (PC) hardware.

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[12] IATA has 270 member airlines which represent 94% of scheduled international traffic. It also conducts 71BSPs (Business Systems Planning) for 390 airlines covering 150 countries worldwide. Number of travel agents registered with IATA is 79,000, processes over 300 million tickets annually, and processes US$225 billion in industry settlements as per Bisignani [[215]

Table 56: Mode of Internet access among travel agents

Mode of Internet access	Frequency	Percent
Wireless	28	93.3
Internet café	2	6.7
Total	30	100.00

An interview with one owner of the agency revealed that one GDS had provided the hardware and training so that all TAs could use their system. It was not very common in Tanzania to find all PCs in an office with liquid crystal display (LCD) screens since they were quite expensive. But all TAs had 3-12 PCs clusters of LCD screens of 17 inches and all were on a local area network.

(c) Bandwidth for Internet Access

As a proxy of IT knowledge of what one is paying for, nearly 57 per cent of managers of TAs did not know the size of bandwidth they were paying for (see Table 57).

Table 57: Bandwidth for Internet access of travel agents

Bandwidth	Frequency	Percent
64 kpbs	7	23.3
128 kbps	4	13.3
I don't know	17	56.7
Not applicable	2	6.7
Total	30	100.0

Since most of these TAs were quite small, they did not employ an IT expert of their own. TAs were relying on calling a supplier of hardware as well as of software when they got stuck. However, since working with CRS/GDS required one to be highly competent in some computer operations, especially software, it was expected that, more than in other subsystems of tourism system, managers of TAs would be knowledgeable on issues of bandwidth. As it will be shown below, the major GDS used in Tanzania was Galileo which was still employing videotext system whereby interaction with software is through command line as opposed to the easy to use Graphical User

Interface (GUI). Buhalis [59] describes the disadvantages of using videotext to be slow and relatively hard to use, proprietary, possesses less sophisticated ticket issuing and back office systems, reservation process is time consuming, and there was no integration between "front and back offices." From the above disadvantages, some GDSs had been working to be web compatible. A good example was Amadeus which had placed it booking engine on the web (*www.amadeus.net)* as per March 2005. Other GDSs were working hard to convert their legacy systems to Internet Protocol standards [248].

(d) Web Presence

Table 58: Web Presence of travel agents in Tanzania

Owning website	Frequency	Percentage
No	6	20.0
Yes	24	80.0
Total	30	100.0

As expected, some of the travel agents did not have websites (20%) (see Table 58) because the business model of serving mainly Tanzania-based travellers did not necessitate owning websites. The normal practice was still a traveller walking in a TA office and places a booking and settles payments by cash. For corporate travellers, usually the booking was done over the telephone and sending an invoice was done in the traditional way of Posts or courier service. Corporate organisations settled their bills by cheques. All this made some TAs not invest in web presence since the return on investment (ROI) was expected to be low. Thus, most of the 80% of the TAs with websites were mainly coming from a section in which travel agency was a secondary line of business. It is therefore not surprising to see that 71% of TAs had static websites as depicted in Table 59.

Table 59: Types of Websites by travel agents in Tanzania

Type of Website	Frequency	Percentage
Static	17	70.8
Dynamic (database driven)	3	12.5
Transactional	4	16.7
Total	24	100.0

5.3.5 Major Credit Cards Acceptance

More than half of the TAs did not accept major credit card as one of the payment means for their services as in Table 60. There were several reasons for this situation. According to one of the interlocutors (managers of TAs) in the research, there was a limited means of processing the payment in the country, *inter alia*.

Table 60: Credit card acceptance as means of payment among travel agents in Tanzania

Acceptance of credit cards	Frequency	Percentage
No	16	53.3
Yes	14	46.7
Total	30	100.0

At the time of the study, there was only one bank which could process payment in the country, and it took relatively long for tourist service providers to be credited with the funds in their bank accounts. Also, a few TAs have had bad experiences with some unscrupulous customers who presented forged credit cards and the TAs ended up taking the loss. As described above, for individual travellers the means of payment was by cash which endangered both the customers and a supplier of travel service (TAs) since fungibility of cash is relatively easy, especially with some possibility of armed robbery. In other words, in spite of dangers the TAs still preferred cash. Thus, poor e-business infostructure in the country was forcing many of TAs not to accept credit/debit cards as means of payment. The United Nations' Commission on International Trade Law (UNCITRAL) [147] recommends minimum requirements for e-business activities to take place. These include a legal framework which supports e-business activities such as e-transaction; e-signature; consumer/private protection; authentication and certification; and public key infrastructure (PKI). In addition, another important requirement includes e-payment infrastructure. These requirements are supposed to be initiated by governments [147, 249].

5.3.6 Use of E-tickets in Tanzania

By the time of this research only three international airlines (out of ten which participated in the research) were issuing e-tickets. According to Takim [245], the introduction of e-tickets was good to TAs business since there was no longer a need of paying for IATA

paper tickets upfront which was kind of tying money in an asset. This was so because all paper air tickets belong to IATA and for a TA to get them it had to pay a certain deposit to IATA. Takim [245] summed the importance of e-ticket for customers as follows:

> with e-ticket a traveller has not to worry about losing his/her ticket by whatever means ... what is needed with your e-ticket is just your number which can be easily retrieved from the computer system even if you forget it. Now if a customer for whatever reason he/she wants a paper ticket I have to charge him/her extra USD 25 to cover the cost of the ticket.

In addition, e-tickets are considered important to travel agents because they can save some money on couriers and postage (in case of mailing tickets to buyers or travellers such as a case of Prepaid Ticket Advice (PTA), printing and hardware costs. Also, the security worries of keeping valuable blank airline ticket stock are eliminated. E-ticketing also enables travel agents to raise tickets for clients very close to departure time and not worry about how to get the ticket to the passenger [250]. All airlines would be required to issue e-tickets by 2007 according to IATA regulation. This has necessitated several improvements in infostructure of some players in the travel subsystem in Tanzania, as discussed earlier in the airlines section.

5.3.7 Connection to computerised reservation systems/global distribution systems

Table 61 shows that not all firms that claimed to be in the travel agency business were connected to CRS/GDS. In fact, close to two thirds had no such connection.

Table 61: Computerised reservation systems/global distribution systems connection

Connection to CRS/GDS	Frequency	Percentage
No	19	63.3
Yes	11	36.7
Total	20	100.0

The possible explanation is that not all firms which claimed to be in the business were actually doing the business per se as their first

line. For example, some tour operators and very few hotels had licenses to operate as travel agents as well but they were not practising as agencies. As pointed out above, travel agency is a high-volume and low-margin business, for tour operators and hotels that made profits from their first lines of business had no propensity to practise as travel agencies.

(a) Name of First Priority CRS/GDS Connection

Table 62 shows that Galileo was the GDS of choice for travel agents proper as this company had won the contract to supply the service among TAs, as already pointed out.

Table 62: Names of primary CRS/GDS

Name of primary CRS/GDS	Frequency	Percentage
Amadeus	4	40.0
Gabriel	1	10.0
Galileo	5	50.0
Total	10	100.0

Gabriel GDS was used by one of the airlines which had a travel agency section. The same was true for Amadeus which belonged to two other airlines which had travel agency sections. Another category of business which employed Amadeus as their primary GDS was the two car rental companies as depicted in Table 63.

Table 63: Name of first computerised reservation systems/global distribution systems for categories of tourism business in Tanzania

Name of Primary CRS/GDS	Category of tourism business		
	Travel Agent	Airline	Car rental
Amadeus	0	2	2
Gabriel		1	0
Galileo	5	0	0
Total	5	3	2

(b) Name of Secondary CRS/GDS

Table 64 shows that a total of five TAs were connected to more than one CRSs/GDSs and Galileo was a major second GDS.

Table 64: Names of secondary computerised reservation systems/global distribution systems

Name of secondary GDS	Frequency	Percent
Amadeus	1	20.0
Galileo	4	80.0
Total	5	100.0

Table 65: Distribution of secondary computerised reservation systems/global distribution systems per category of tourism business

Secondary GDS	Travel Agent	Airline	Car rental	Total
Amadeus	1	0	0	1
Galileo	0	2	2	4
Total	1	2	2	5

The distribution of the secondary CRS/GDS was as depicted in Table 65, whereby, two airlines and two car companies as well one travel agent were connected to a second CRS/GDS. From the previous discussion on the power of being on GDS due to the network effects as per Metcalfe's Law [251], some of the above firms had invested in having more than one GDS connections. Since each GDS operates a different database, the benefits of being on more than one database includes the opportunity of being "seen" by more intermediaries as well as accessing more varieties of information such as fares. Therefore, this is one of the strategic business decisions a firm has to make depending on the returns on the investment because these GDSs charge various fees and commissions. A close look revealed that it was the larger hotels which possessed more than one CRS/GDS connections. Due to the perishability of travel and accommodation services (seats and bed nights, respectively), it made business sense to pay for more visibility of ones business to appropriate intermediaries such travel agents (off and online) and tour operators. This business strategy is in the spirit of yield management which was briefly alluded to earlier in Chapter One.

5.4 CAR RENTAL

5.4.1 Introduction

Since tourism activities requires moving from one place to another in the destination, there are several means by which a tourist can move around. One of the convenient ways is to rent a car. According to the World Tourism Organisation, as quoted by Euromonitor [206:1] "car rental market covers the hire of passenger cars by both business and leisure users, whether from the airport or not, in the context of the total short-term rental fleet. This excludes long-term leasing to businesses." Car rental business is, therefore another supporting component in tourism system. Renting a car at the destination provides flexibility and convenience to a tourist since one can decide to go to any place and at any time depending on one's preference. Also, renting a car may be inexpensive means of transport, especially if tourists are in a group of four or five since all can use one car.

5.4.2 Car Rental in Comparison with Other Transport Modes

The size of car rental business globally is somehow substantial, in terms of the revenue generated. It was estimated to be about half a percent of the receipts of entire transport subsystem in 2003, as depicted in Table 66.

Table 66: Global sales trends by transport mode 1999-2003

Transport mode	% value				
	1999	2000	2001	2002	2003
Air	58.7	60.3	59.2	56.7	55.0
Bus/coach	18.8	18.3	19.3	19.9	20.4
Rail	16.1	15.4	15.5	17.1	17.9
Cruise	3.6	3.5	3.6	3.8	3.9
Ferry	2.3	2.1	2.0	2.1	2.3
Car rental	0.4	0.4	0.4	0.4	0.5
TOTAL	100.0	100.0	100.0	100.0	100.0

Source: Euromonitor [17:172].

Since air travel is more expensive, it leads in terms of global sales followed by bus/coach, rail, cruise, ferry, and car rental, respectively. Although half a percent representing the car rental business is a small proportion of the rest, it is quite substantial in actual value of sales. For example, in Egypt (a country known for successful tourism system in Africa) car rental business generated 199 million Egyptian Pounds (equivalent to EU € 29.2 million) in 2003. The amount generated from car rental business in Egypt represented 0.71 per cent of total receipts from tourism in the respective year [252].

Numbers (percentages) for Tanzania were not available since the method of tourism information collection that was being used (National Statistics Accounting) [37, 105] could not provide such disaggregated data. Hopefully, when the Tourism Satellite Accounting method is implemented, such information will be available [253]. Due to the importance of the rental car subsystem, some global chains of rental car brands have emerged in a few cities in Tanzania. Common international brands found in Tanzania include Avis, Hertz Corp, Budget Rent-a-car and Europecar International. Together with these international brands there were some few domestic companies conducting business in Tanzania.

5.4.3 Car Rental Business Use of the Internet

The phenomenon of using the Internet services, especially the web for shopping around for better prices before buying, is prevalent among majority of travelers in the developed world. To be able to capture the business from these web surfers, many of the car rental businesses have created transactional websites [17]. Using transactional websites, travelers can easily make bookings for cars in various destinations where the global chains are operating.

5.4.4 Use of the Internet Technologies in Tanzanian Car Rental Business

In the survey, firms which indicated to be in car rental business were 21 out of the sample of 307. Out of these 21 only four were part of the global chain or brand. This demonstrates that local entrepreneurs are not left behind in the car rental business. As other businesses in the tourism system, car rental utilises the Internet in the business operations [59:123]. Below is an account on how the car rental business is deploying the Internet services in business operations in Tanzania.

(a) Internet Access

Table 67 shows that the majority of the car rental businesses had access to the Internet in their offices. Only two of the surveyed companies did not access the Internet in their office. Internet access is vital for these companies since a major proportion of their customers are from the developed countries.

With the e-mail service popularity, businesses need to check on their e-mail boxes frequently to see if there are some bookings. In the same token, having an Internet access in office made it convenient and effective to reply on any enquiries on timely basis.

Table 67: Internet access among car rental companies in Tanzania

Internet access in office	Frequency	Percentage
No	2	9.5
Yes	19	90.5
Total	21	100.0

(b) Modes of Internet access

The two car rental businesses that did not have own office Internet access used Internet cafes to access the Internet. With the easy availability of internet cafes in Tanzania, accessing the Internet by this means was inexpensive in monetary terms, save for convenience and time lost in commuting from office to Internet café. However, for a small company, this means might have been the most effective due to externalizing all associated costs (repair of hardware and trouble shooting, for example) to the Internet café owners, let alone savings on installation as well as monthly payment fees. The remaining 19 business accessed the Internet by wireless means as depicted in Table 68.

Table 68: Internet access/connection mode

Type of access	Frequency	Percentage
Wireless	19	90.5
Internet café	2	9.5
Total	21	100.0

(c) Frequency of E-mail Use

Table 69 shows that 19 of the car rental businesses use e-mails on a daily basis while those which use Internet cafés to access the Internet use e-mails on a weekly basis.

Table 69: Frequency of use of e-mail

e-mail use	Frequency	Percent
Weekly	2	9.5
Almost daily	19	90.5
Total	21	100.0

It can be inferred that the latter should be relying more on the local market for customers because they were located Morogoro town where tourism activities were very low.

(d) Contribution of E-mails in Business Communication

As stated earlier, e-mail communications offer several advantages over other communication means such having a written proof of business communication and relatively low cost. Table 70 demonstrates that in more than 80 per cent of the firms under consideration, e-mails contributed more than half of business communications.

Table 70: Percentage of business communication by e-mail for car rental companies

% of business communication by e-mails	Frequency	Percentage
<10%	2	9.5
26-50%	2	9.5
50-75%	9	42.9
>75%	8	38.1
Total	21	100.0

(e) Impact of Internet on Car Rental Business in Tanzania

The managers of car rental business who participated in the survey indicated that the Internet has had significant positive effect on their business as demonstrated in Table 71.

Table 71: Internet impact on business

Impact of Internet on business	Frequency	Percent
No effect	2	9.5
Significant positive	17	81.0
I don't know	2	9.5
Total	21	100.0

With the Internet technologies, travelers could book directly the cars of their choice well in advance at relatively low cost due to the

disintermediation. In addition, the Internet has been instrumental to Tanzania- based car rental companies in buying used cars from Japan and Dubai for the business. One respondent summarized this as follows:

> the Internet enables you to see a photograph of a car before you commit yourself to buying. It is impossible to imagine how life would be now without Internet."

Thus, even without fully travelling the e-commerce journey, that is, completing the transactions on the web and integrating e-business solution in an entire business, the fact that one can see a photograph of product and compare it with products of other suppliers means that the power of the web in creating transparency and reducing information asymmetry in business is unmatched. The interlocutor finished his remarks by adding the following:

> earlier on, one supplier would send you a price catalogue with black and white photographs of the cars through the post and you had to write to many suppliers to be able to compare the prices. Writing letters to Japan and getting catalogues would take a long period. But now things are easier because if you like a car and price on the website you simply send an e-mail and business communication ensues.

(f) Websites Ownership and Types

Tables 72 indicates that nearly all car rental businesses owned websites since 19 businesses had active websites and the remaining two had their websites under construction.

Table 72: Web site ownership

Web site ownership	Frequency	Percentage
Yes	19	90.5
Under construction	2	9.5
Total	21	100.0

As was the case with most websites in other components in the tourism system in Tanzania, static websites dominated types of websites in rental car businesses. Only ten per cent of the websites had transactional capabilities as depicted in Table 73. It should be noted that one company did not indicate the type of website it owned.

Table 73: Type of websites

Type of websites	Frequency	Percentage
Static	16	80.0
Dynamic (database driven)	2	10.0
Transactional	2	10.0
Total	20	100.0

(g) Website Construction Skills

Managers were asked to inform on who designed their company websites. The firms which used internal staff were expected to have more internal IT skills. However, out of 21 firms, only six had used internal staff to develop own websites. The remaining firms outsourced the service as shown in Table 74.

Table 74: Web site construction skills

Designer of website	Frequency	Percentage
Internal departmental staff	6	28.6
Outsourced service in country	11	52.4
Outsourced service out of country	4	19.0
Total	21	100.0

Lack of internal capacity in web technologies resulted in lack of the culture of updating the websites on regular terms. At times, the contracted firms signed a contract to update the website (see the Table 75 below) but this in practical terms it became difficult.

The difficulty arose from the fact that the firm owning a website had to produce the information to be updated so that the website design company could effect the changes or updates on the website. This process took longer and increased some chances of introducing errors on the website.

Table 75: Skills to manage website

Person managing website	Frequency	Percentage
Internal staff	6	30.0
part of hosting contract	14	70.0
Total	20	100.0

An ideal condition would be that an internal member of staff should be the one who updates the website since he/she is supposed to know better on the practicalities of the respective business.

5.4.5 Connection to CRS/GDS

Connection to CRS/GDS provides the advantage of receiving the booking from different players on the network such as travel agents, tour operators, and hotels. However, only four of the car rental businesses were connected to CRS/GDS (Amadeus) as shown in Table 76.

Table 76: Connection to Computerised reservation systems/global distribution systems

Connection to CRS/GDS	Frequency	Percentage	Name of CRS/GDS
No	17	81.0	---
Yes	4	19.0	Amadeus
Total	21	100.0	

5.4.6 Credit Cards Acceptance

Despite the benefits of credit cards (as previously described) of easing transaction on the part of tourists, only four car rental firms accepted credit cards as a means of payment as depicted in Table 77.

The situation is understandable since with the exception of the four firms which accepted the credit cards, the rest of the firms were local based.

Table 77: Acceptance of credit cards

Accepting credit cards	Frequency	Percent
No	17	81.0
Yes	4	19.0
Total	21	100.0

Due to lack of appropriate infrastructure and policies, as described earlier in the chapter and based on LRCT [146], local firms in Tanzania found it hard to accept the credit cards as means of payments for the services they provided.

5.5 SOURCE OF INFORMATION TO TOURISTS VISITING RURAL AREAS IN TANZANIA

5.5.1 Source of Information to Tourists Visiting Lushoto

Table 78 demonstrates that despite the fact that the Internet was source number one of information to some destinations in the world (see for example, [1, 254]. the Lushoto case was quite different. It was still the "traditional" information systems (guide books and word of mouth) that were delivering more information to tourists visiting Lushoto.

These "traditional" information systems were main source of information to 85% of international tourists visiting Lushoto implying that 15 percent of visitors obtained their information on Lushoto from the web.

Table 78: Major sources of information to international tourists visiting Lushoto

Information Source	Count	Percentage
Word of Mount	8	15.0
Guide Books	34	70.0
Internet	8	15.0
Total	50	100.0

Therefore, the Internet as a source of information to tourists visiting Tanzania seemed to have continued to grow. The national visitors' survey which had been conducted four years earlier found that the

Internet was a source of information to only 8.2 percent of international visitors to Tanzania [105:14]. The number of international tourists who filled the questionnaire was 50

5.5.2 Source of Longido Information

According to Ally [255] some of the international visitors to Longido came as travel and tourism information consolidators for guide books such as *Lonely Planet* and *Rough Guide*. Therefore, Longido had been covered well in many guide books and these form an important source of travel information for tourists during the initial phase of trip planning as demonstrated in Table 79.

Table 79: Sources of information to international tourists visiting Longido

Source of Longido Information	Frequency	Percentage
Word of mouth	6	13.0
Guide book(s)	18	39.1
Internet	16	34.8
Others (for example tour operator)	6	13.0
Total	46	100.0

Three names of websites were mentioned to be the sources of information for those who indicated that the Internet was the source number one of information about Longido. These website addresses in terms of frequency of being mentions are presented in Table 80.

Table 80: Names of websites supplying information to Longido tourists

Name of website	Frequency	Percentage
www.intoafrica.co.uk	6	40
www.africaline.com or www.africaline.pl	6	40
www.yahoo.com	4	20
Total	16	100.0

CHAPTER SIX
USE OF ADVANCED E-BUSINESS SERVICES AND TECHNIQUES

6.1 Introduction

As already discussed, electronic commerce growth assumes a stages approach whereby in lower stages some basic internet based technologies are employed. The first part of Chapter 6 presents a synthesis of collected research data on the use of relatively advanced technologies related to e-commerce. The synthesis is conducted in light of Tanzania tourism system addressing research question one. After the discussion on the use of advanced technologies, the chapter ends by evaluating and discussing the deployment of relatively advanced techniques of web analytics for a selected tourism-related websites in the country.

6.2 Use of Advanced E-Business Services in Tanzanian Tourism System

As demonstrated earlier in Figure 15 (Section 2.4), development of e-commerce takes place in stages. The initial stages (stages one to two, that is, up to owning a static website) do not require intensive ICT investment. However, for higher e-commerce stages to be efficacious several investments both in relatively advanced hard and software systems are needed to establish services required [57, 59]. Some of the services include connecting various IT systems and the use of integrated suites such as enterprise resource planning (ERP). The following section presents and discusses results on Tanzanian tourism system as far as usage of some of the advanced e-business services is concerned.

6.2.1 Availability of Local Networks in Business Premises

In order for businesses to benefit from the Internet technologies, availability of local area network (LAN) in the business premises is vital [56, 59]. The LAN enables sharing of various resources such as printers, storage and folders quite easily. Also advanced forms of e-business of integrating both front and back end processes with the Internet can only be done through a LAN. Thus, the research intended to find out the extent to which various components of the tourism system were applying the concept of networking their IT resources. Table 81 indicates that the travel agents had more LAN infrastructure than tour operators and many other tourism system components in the country. The airport and the cargo handling company had their computers networked too. Since travel agents

need PCs to access the CRS/GDS databases, the necessity of having a network physical infrastructure becomes more obvious.

Table 81: Availability of local area network (LAN) in tourism system in Tanzania

Category of tourism business	Presence of local area network	
	No	Yes
Incoming Travel Agent	7 (36.8%)	12 (63.2%)
Tour Operator	89 (63.1%)	52 (36.9%)
Hospitality (Hotel/Restaurant/Cafe)	55 (58.5%)	39 (41.5%)
Airline	2 (16.7%)	10 (83.3%)
Car rental	3 (30.0%)	7 (70.0%)
MICE (Meeting, Incentive, Conference, Events)	0 (.0%)	4 (100.0%)
Attractions	1 (25.0%)	3 (75.0%)
Publishing	4 (66.7%)	2 (33.3%)
Destination Management Organisations	3 (50.0%)	3 (50.0%)
Curio and gallery	5 (55.6%)	4 (44.4%)
Airport	0 (.0%)	1 (100.0%)
Cargo handling company	0 (.0%)	1 (100.0%)
Total	169 (55%)	138 (45%)

In addition, as stated earlier, Galileo company provided the hardware and software to travel agents in Tanzania in a contract for them to use Galileo GDS. With such a contract, expertise and other resources of laying the network would not be a constraint compared to a case where travel agents had to invest in the infrastructure by themselves.

6.2.2 Use of Telnet Services in Tourism system in Tanzania

Telnet, derived from "terminal emulation" is one of the Internet services by means of appropriate software that enables a person to remotely access another computer. Telnet service allows a person to log into an Internet host and execute various operations. A telnet session is established using the TCP/IP protocols and based on a set of facilities known as a Network Virtual Terminal (NVT) [256] [257] . Telnet was the first service to be used on the Internet infrastructure in 1969. Thus, it has been dubbed as "the mother of all protocols" [256] [257]. In describing the importance of telnet service as far as the history of the Internet is concerned, Mintz and Venditto [257] titled their paper: "It all begun with telnet". Among various stakeholders in tourism system, telnet would be useful in accessing

remote computers and performing appropriate business operations. In order to ascertain whether this service was being utilized, an appropriate question was included in the survey questionnaire. As Table 82 shows, nearly 96% of the surveyed firms had never used the telnet service and close to three percent of the firms used it once in a month.

Table 82: Use of telnet services in tourism system in Tanzania

Category	Frequency of use of telnet			
	Never	Monthly	Weekly	Almost daily
Travel Agent	18 (94.7%)	0 (.0%)	1 (5.3%)	0 (.0%)
Tour Operator	137 (97.2%)	2(1.4%)	0 (.0%)	2 (1.4%)
Hospitality	89 (94.7%)	3 (3.2%)	0 (.0%)	2 (2.1%)
Airline	12 (100.0%)	0	0	0
Car rental	10 (100.0%)	0	0	0
MICE	2 50.0%)	2 (50.0%)	0	0
Attraction	4 (100.0%)	0	0	0
Publishing	6 (100.0%)	0	0	0
DMOs	6 (100.0%)	0	0	0
Curio /gallery	9 (100.0%)	0	0	0
Airport	1 (100.0%)	0	0	0
DAHACO	0	1 (100.0%)	0	0
Total	294 (95.8%)	8(2.6%)	1 (0.3%)	4 (1.3%)

Thus, this service is practically not employed by the surveyed organisations. This arises from the fact that during the administration of the questionnaire many respondents including a few IT managers were not knowledgeable about the telnet service. This implies that among the few self-administered questionnaire sets which were returned to the researcher (either by surface mail or electronic mail) there is likelihood that the respondents indicating to be using the service might have misrepresented their responses.

6.2.3 Use of FTP Service

File transfer protocol (ftp) is one of very useful applications on the Internet for retrieving and transferring files whether text or binary between an FTP server and a client [56] . In the Tanzania tourism system, the findings in Table 83 indicate that 87.3 percent of the respondents had never used the ftp service. However, this figure is

far different from the figures presented by Table 84 on location of hosting websites and Table 85 on website management.

Table 83: Use of file transfer protocol (ftp) Services in Tourism system in Tanzania

Category of business	Frequency of use of ftp				Total
	Never	Monthly	Weekly	Almost daily	
Travel Agent	15 (78.9%)	0	2 (10.5%)	2 (10.5%)	19
Tour Operator	132 93.6%)	7 (5.0%)	2 (1.4%)	0	141
Hospitality	84 (89.4%)	5 (5.3%)	3 (3.2%)	2 (2.1%)	94
Airline	9 (75.0%)	1 (8.3%)	0	2 (16.7%)	12
Car rental	8 (80.0%)	0	2 (20.0%)	0	10
MICE	2 (50.0%)	2 (50.0%)	0	0	4
Attraction	2 (50.0%)	0	2 (50.0%)	0	4
Publishing	4 (66.7%)	0	2 (33.3%)	0	6
DMOs	4 (66.7%)	0	2 (33.3%)	0	6
Curio gallery	8 (88.9%)	1 11.1%)	0	0	9
Airport	0	0	0	1 (100%)	1
DAHACO	0	0	1 100.0%)	0	1
Total	268 (87%)	16 (5%)	16 (5%)	7 (3%)	307 (100%)

The results reveal in Table 84 that only 11 firms were hosting their websites in own servers implying that the overwhelming majority were hosting their websites somewhere else. Whereas, Table 85 shows that slightly over half of the respondents were managing their websites.

Both functions would definitely involve the use of ftp service in updating the websites. It was possible that those individuals involved in updating the websites did not understand that they were conducting file transfer using the appropriate protocol (ftp). In addition, very few respondents indicated that they were using CMS (as discussed later in this chapter), thus, for those who claimed to be managing their websites, ftp was available option of accomplishing the task. The low number of using ftp as demonstrated in Table 83 could have been caused by the lack of knowledge that respondents were using ftp unknowingly.

Table 84: Locations of websites hosting

Category of tourism business	Place where website is hosted				Total
	Own server	hosting company in country	hosting company out of country	Free hosting web space	
Travel Agent	0	5 (38.5%)	8 (61.5%)	0	13
Tour Operator	4 (3%)	74 (59%)	45 (36%	2 (2%)	125
Hospitality	5 (6%)	27 (33%)	50 (61%)	0	82
Airline	2 (20%)	0	8 (20%)	0	10
Car rental	0	3 (33%	6 (67%)	0	9
MICE	0	4 (100%)	0	0	4
Attraction	0	2 (50%)	2 (50%)	0	4
Publishing	0	6	0	0	6
DMOS	0	2 (50%)	2 (50%)	0	4
Curio or gallery	0	2 (29%)	5 (71%)	0	7
Airport	0	0	1 (100%)	0	1
DAHACO	0	1 (100%)	0	0	1
Total	11 (4%)	126 (47%)	127 (48%)	2 (1%)	266 (100%)

In addition, the need of using ftp function is demonstrated by spatial locations of where the websites were hosted as demonstrated in Table 84. The table shows that only 11 entities had their websites in their own servers. Otherwise, the remaining entities had their websites hosted by other IT houses in equal proportions in the country as well as outside the country.

On the other hand, Table 85 indicates that close to half of respondents who had websites used other companies to manage their websites.

Similarly, the majority of website hosting companies offered the website management service. Only 2 percent of the respondent's outsourced the website management services to non-website hosting companies.

Table 85: Website management

Category of business	Who is managing your website			Total
	Internal staff	hosting contract	Outsourcing	
Travel Agent	6 (46.2%)	7 (53.8%)	0	13
Tour Operator	66 (52.8%)	59 (47.2%)	0	125
Hospitality	37 (45.1%)	44 (53.7%)	1 (1.2%)	82
Airline	10 (100.0%)	0	0	10
Car rental	2 (22.2%	7(77.8%)	0	9
MICE	2 (50.0%)	2 (50.0%)	0	4
Attractions	2 (50.0%)	2 (50.0%)	0	4
Publishing	6 (100.0%)	0	0	6
DMOs	4 (66.7%)	0	2 (33.3)	6
Curio or gallery	1 (14.3%)	4 (57.1%)	2 (28.6%)	7
Airport	1 (100.0%)	0	0	1
DAHACO	1 (100.0%)	0	0	1
Total	138 (51.5%)	125 (46.6)	5 (1.9%)	268

Table 85 also demonstrates the differences in web skills among the components of the tourism system in Tanzania. Whereas, the airline and publishing components were highly web skilled, car rental and curio/gallery categories were relatively low skilled, for example. Skill levels of incoming travel agents, tour operators, MICE, and hospitality providing components did differ not significantly. The web skills levels of these components were only satisfactory since close to 50 percent of website management was done internally.

6.2.4 Use of Wireless Access Protocol (WAP)

WAP is a global standard developed to make Internet services available for mobile users. Marcussen [237:3] summarises WAP as follows: "Even though WAP is based on Internet technology, WAP and the Internet live side by side. A company or a person that has an Internet site can make the information available for mobile users by transforming the pages into WAP pages." WAP is a result of the convergence in communication technologies. Formerly it was the fixed telephone line which was used to access the Internet by dial-up mechanism now WAP enables the above through mobile phones

[258] [56]. In this research, the interest was to verify whether WAP was being applied by any component of the tourism system in Tanzania. The findings from the survey as presented in Table 86 indicate that none of the entities involved in research actually used WAP. The two cases which responded to the question, after a follow-up, it revealed that the respondents meant WiFi (Wireless Fidelity) connection rather than WAP.

During the period of research there was no WAP services. Equally, by September 2006, the majority, except one, of existing mobile phone companies in the country are still using the Global System for Mobile communication (GSM 2.0) with plans to upgrade to General Packet Radio Service (GPRS) later.

Table 86: Use of wireless application protocol in tourism system in Tanzania

Category of business	Frequency of use of WAP	
	Never	Almost daily
Travel Agents	19 (100.0%)	0
Tour Operator	141 (100.0%)	0
Hospitality	93 (98.9%)	1 (1.1%)
Airline	12 (100.0%)	0
Car rental	10 (100.0%)	0
MICE	4 (100.0%)	0
Attraction	4 (100.0%)	0
Publishing	6 (100.0%)	0
DMOs	6 (100.0%)	0
Curio or gallery	9 (100.0%)	0
Airport	0	1 (100.0%)
DAHACO	1 (100.0%)	0
Total	305 (99.3%)	2 (0.7%)

On the other hand, WiFi is a globally recognized medium for the delivery of (IP) connectivity via wireless technology using 802.11b standard which specifically uses the 2.4Ghz ISM (Instrument, Scientific and Medicine) band or frequency range [259]. The access point for the Internet is commonly known as "hotspot". Where

"hotspots" are areas that offer WiFi[13] access using one of the 802.11 standards [260].

On other hand, the application of WAP in tourism related operations is on increase [236]. A good example typifying the use of WAP in tourism is the Mediterranean by Internet Access (MEDINA) cultural tourist project. The MEDINA portal is WAP-enabled thus accessible through mobile devices (for example personal digital assistants and smartphones). Tourists are able to search appropriate information on various cultural products (historical, artistic, archaeological and folkloric) and make informed decisions on which attractions to visit [261]. WAP is considered to have the following advantages in providing tourism products: it provides location specific information on the mobile phones which are increasingly ubiquitous; and it can enable performing various travel related functions such as booking means of transport, and checking in hotel or flight. However, as noted by Laudon and Laudon [56], WAP uptake is still low due to various constraints. The constraints include the tinyness of keyboards and screens of mobile phones which make using the interacting with the web pages more difficult compared with conventional keyboards; slow data transfer speeds due to bandwidth limitations; the WAP enabled mobile phones still have limited memory to cache web pages as well as the power batteries can only last for a limited time; and finally, there are a few websites which are WAP enabled and usually web pages are more in text and little graphics. Use of WAP services for business communication were practically nonexistent in Tanzania as demonstrate in Table 86.

6.2.5 Use of Intranet

The availability of basic IT infrastructure such as LAN is a "*sine qua non*" for e-business implementation in an institution as observed earlier. However LAN as physical infrastructure is better utilised by deploying appropriate software to enable the integration of business operations. One way of achieving this is to create a functional intranet. The intranet utilizes the Internet technologies and standards (protocols) but it is only accessible within the organisation. The intranet enables sharing of information and makes collaborating in various online activities easy in an organisation.

[13] A number of organisations and thinkers are pinning on WiFi to reduce the Internet connectivity in developing countries. A good example of these organisations is the Association of Progressive Communication (APC) *www.apc.org* who have been organizing several training workshops for IT experts in developing countries. I was among 30 participants in one of the workshops that was held in Zanzibar, March 2005.

Various tourism organisations have already benefited by deploying the intranets in their information systems infrastructure for strategic and competitive advantage [214, 262]. It was therefore the aim of the research to explore the extent at which various players in Tanzania tourism system had deployed the intranets in their information system infrastructure. The results are summarised in Table 87.

As depicted Table 87, just close to only 10 per cent of the entities involved in the survey had incorporated intranet in their information infrastructure. Compared to tourism businesses in European Union, which reported ownership of intranet infrastructure of 32% [263]:18, Tanzanian tourism entities were relatively not doing so badly in this aspects. This assessment is based on the level the existing gaps regarding other Internet technologies.

Table 87: Use of intranet in tourism system in Tanzania

Category of business	Intranet ownership		Total
	No	Yes	
Travel Agents	16 (84.2%)	3 (15.8%)	19
Tour Operator	133 94.3%)	8 (5.7%)	141
Hospitality	87 (92.6%)	7 (7.4%)	94
Airline	9 (75.0%)	3 (25.0%)	12
Car rental	6 (60.0%)	4 (40.0%)	10
MICE	3 (75.0%)	1 (25.0%)	4
Attraction	2 (50.0%)	2 (50.0%)	4
Publishing	6 (100.0%)	0	6
DMOs	6 (100.0%)	0	6
Curio or gallery	9 (100.0%)	0	9
Airport	0	1 (100.0%)	1
DAHACO	0	1 (100.0%)	1
Total	277 (90%)	30 (10%)	307

6.2.6 Extent of Online Purchasing

Participation in e-commerce can be considered in two perspectives, namely, supply and demand. It has been demonstrated that many of the components in the tourism system in Tanzania are involved in some initial stages of e-commerce from a supply perspective by placing on the web their businesses. On the other hand, a demand

perspective would be demonstrated by the extent of purchasing of various goods and services online. Table 88 demonstrates the way all components of the tourism system had a very low participation in online purchase. On average it was a paltry of 7 per cent of the firms which had participated in online purchases.

Possible reason for the low participation in e-commerce activities from a demand perspective are succinctly described by UNCTAD [264:1] as follows:

> The current low level of participation in e-commerce by developing countries cannot be attributed to the lack of benefits of e-commerce for those countries; rather, it has more to do with the special constraints that developing countries are facing in this area, including lack of awareness, the high cost of connectivity, lack of infrastructure, legal issues and security problems, as well as the need to enhance national and international policies that encourage competition and investment.

Table 88: Extent of online purchasing

Category of business	Use Internet to purchase goods/services		Total
	No	Yes	
Travel Agents	17 (89.5%)	2 (10.5%)	19
Tour Operator	132 (93.6%)	9 (6.4%)	141
Hospitality	86 (91.5%)	8 (8.5%)	94
Airline	12 (100.0%)	0	12
Car rental	9 (90.0%)	1 (10.0%)	10
MICE	3 (75.0%)	1 (25.0%)	4
Attraction	4 (100.0%)	0	4
Publishing	4 (66.7%)	2 (33.3%)	6
DMOs	6 (100.0%)	0	6
Curio or gallery	9 (100.0%)	0	9
Airport	1 (100.0%)	0	1
DAHACO	1 (100.0%)	0	1
Overall total and average	284 (92.5%)	23 (7.5%)	307

From a demand angle, Tanzania's low participation in e-commerce activities could be attributed to an array of factors such as low level of credit card ownership as well as belief systems. Importance of belief systems in economic decision is extensively and authoritatively elaborated by North [265]. One of the belief systems prevalent in Tanzania is purchasing goods and services on cash. This has been one of the effects of lack of credit facilities in the economy. In addition, there was no credit rating agency in the country making credit card provision more difficulty.

6.2.7 Implementation of Electronic Customer Relationship Management (eCRM)

As noted in several places in this work, quality information is very critical in strategic management of tourism business. One type of the information is customer-related information. The collection and use of this information is a process known as customer relationship management (CRM). Specifically with tourism, the role of CRM is summarised by Varlow [266:9] of VisitBritain – an organisation with the duty of marketing British tourism products globally – as follows:

> CRM for VisitBritain is the ongoing process of gathering of relevant information about our customers, using it in an integrated programme of communications, service and contact - to better meet their needs and maximise their lifetime value and tourism expenditure

In order to investigate how the components of the tourism system in Tanzania were implementing e-CRM, a question was included in the questionnaire. Only 14 firms indicated that they had some CRM software which they use for the purpose. This is another tiny percentage of 4.5 of all entities that were involved in the survey as Table 89 is showing. In the EU the percentage of tourism entities using e-CRM was again three times higher than the Tanzanian percentage, that is, 13 percent [57:24].

Despite the fact that the majority of the entities indicated that they were not using e-CRM in their marketing mix, the knowledge about the importance of CRM varied greatly. Some of the entities indicated that they were taking some initiatives to continue contacting their customers even after they had served them. Some of the entities indicated that their duty was to serve the customer while the latter was under their jurisdiction and no more efforts were made thereafter to contact them.

Table 89: Implementation of electronic customer relationship management (e-CRM) in tourism system in Tanzania

Category of business	Implementation eCRM		
	No	Yes	Total
Travel Agents	16 (84.2%)	3 (15.8%)	19
Tour Operator	134 (95.0%)	7 (5.0%)	141
Hospitality	93 (98.9%)	1 (1.1%)	94
Airline	11 (91.7%)	1 (8.3%)	12
Car rental	8 (80.0%)	2 (20.0%)	10
MICE	4 (100.0%)	0	4
Attraction	4 (100.0%)	0	4
Publishing	6 (100.0%)	0	6
DMOs	6 (100.0%)	0	6
Curio or gallery	9 (100.0%)	0	9
Airport	1 (100.0%)	0	1
DAHACO	1 (100.0%)	0	1
Total	293 (94.5%)	14 (4.5%)	307

As indicated earlier, CRM is a process or (to use a journey metaphor) is a journey. Once conducted well, the tourism business attains a customer-centric focus as opposed to transaction-centric [267]. Conducting a successful CRM enables a business to engage a customer in a "conversation" along the whole journey of business, and the quality of information garnered could be a key in strategic business decisions. In addition, CRM enables businesses to analyse the patterns of their customers which again would assist businesses in taking necessary steps to either protect their market share and competitiveness or take corrective steps if the information collected indicate the need to do so.

6.2.7.1 E-CRM Activities Performed in Tanzanian Tourism System

As regards the components of the tourism system in our study, Table 90 presents the breakdown of the type of activities performed by those entities who conducted e-CRM.

Table 90: Implementation of electronic customer relationship management in Tanzania

Category of business	CRM Activities Conducted		
	Sales analysis	customer profile analysis	loyalty analysis
Travel Agents	4	0	2
Tour Operators	4	4	0
Hospitality	1	0	0
Airline	2	0	0
Car rental	2	2	0
MICE	1	0	0
Total	14	6	2

Table 90 shows that there was little focus on customer analysis among those few entities that conducted e-CRM. Relatively more effort was devoted on sales analysis rather than on analysing customer profiles and loyalty levels as these activities were performed by 20 of the 22 companies which conducted some e-CRM. In the quest for being customer-centric business, as described earlier, all of the three e-CRM activities need almost equal attention.

6.2.8 Use of Enterprise Resource Planning (ERP)

One of the integrating tools at a higher level of e-business process is ERP. ERP is defined as "comprehensive, packaged software solutions [that] seek to integrate the complete range of a business' processes and functions in order to present a holistic view of the business from a single information and IT architecture" [268:3]. On the other hand, Shanks and Seddon [269:243] define ERP as "comprehensive packaged software solutions that integrate organizational processes through shared information and data flows." In addition, the utility of ERP in tourism organisations has been described by some authors such as Yan et al.[270]. However, the question on application of ERP in the tourism system in Tanzania returned only one response which was positive in the sense that it was used. Otherwise, the rest of the surveyed entities (306) indicated that they were not using any ERP application in their business operations. Compared with the EU, ERP is by far used by fewer tourism businesses too as the figure for EU

was 9% in 2003 [57]. The possible cause of this low use of use of advanced e-business solutions in tourism system was presented by Baggio [271:10] as follows:

> " the tourism and travel industry does not understand fully the importance and the potential of advanced contemporary ICTs ... and the solution cannot be a 'pure technological' solution, a cultural change is needed."

The advanced e-business solutions as alluded to by Baggio include CRM, ERP, supply chain management (SCM), and knowledge management (KM). Baggio advocates the use of education to bring about the required integration of these advanced technologies tourism systems by educating professional in the systems.

6.2.9 Use of Content Management Systems

Content management system (CMS) is software that facilitates the process of uploading, publishing, archiving, searching, and modification of the website's content in an easier and manageable way. It also facilitates to place the content online in real-time without specialist help [272]. In addition, CMSs enables various users modify different areas of the website depending on levels of authorisations. Thus, CMSs are useful in saving time need to construct and maintain websites since they contain several useful features such as templates, search engines, calendars, and web mail [273, 274]. While there are several commercial CMS products, on the free and open source software (FOSS) platform there are a few powerful CMS products too. Examples of these include *Zope* and *Plone* [221]. Thus, with CMS, commercial or FOSS, management of a website becomes quite easy. CMS products clearly are critical to advanced website operation and maintenance and the research aimed to find out to what extent CMSs were used in tourism system in Tanzania. The results presented in Table 91 show that there was no significant use of CMSs among the entities which were involved in the research. Only four entities indicated that they were using CMSs. If Table 91 is juxtaposed with the one which indicated who was managing websites of the respondents (Table 85), it becomes easy to see why many respondents were not managing their websites.

Table 91: Use of content management systems in Tanzanian tourism system

Category ofbusiness	Use CMS		
	No	Yes	Total
Travel Agents	19 100.0%)	0	19
Tour Operator	141 (100.0%)	0	141
Hospitality	94 (100.0%)	0	94
Airline	12 (100.0%)	0	12
Car rental	10 (100.0%)	0	10
MICE	3 (75.0%)	1 (25.0%)	4
Attraction	4 (100.0%)	0	4
Publishing	5 (83.3%)	1 (16.7%)	6
DMOs	4 (66.7%)	2 (33.3%)	6
Curio or gallery	9 (100.0%)	0	9
Airport	1 (100.0%)	0	1
DAHACO	1 (100.0%)	0	1
Total	303 (98.7%)	4 (1.3%)	307

6.3 Impact of the Internet on Tourism System in Tanzania

Comparison of all Tanzania-based components in the tourism system on the impact of the Internet on their business operation is summarized by Tables 92 and 93. Table 92 presents results based on the size of the respondents' organizations and Table 93 on various business lines.

The two major services of the Internet which were in the respondents' minds were the web as well as e-mail. As expected, to some degree the results indicate that on relative terms micro and small enterprises would be on the lower side. However, since most of the micro and small enterprises were tour operators whose dependency on the Internet was higher, more than 80% of the members of the category reported that the Internet has had a positive impact.

Table 92: Impact of the Internet as per size of the enterprise

Classification	Internet impact on business					
	No effect	Significant positive	Negative	little positive effect	Don't know	Total
Micro	4 (3.9%)	83 (81.4%)	6 (5.9%)	7 (6.9%)	2 (2.0%)	102
Small	2 (5.0%)	34 (85.0%)		(2) 5.0%	2 (5.0%)	40
Medium		22 (91.7%)		2 (8.3%)		24
Large		36 (94.7%)		2 (5.3%)		38
Total	6 (2.9%)	175 (85.8%)	6 (2.9%)	13 (6.4%)	4 (2.0%)	204

An average of the respondents who reported to have been negatively affected by the Internet technologies was only three per cent. As discussed under the tour operators section, some of the tour operators had lost their market share because they did not learn quickly enough to adapt their marketing strategies to be online. On type of business, Table 93 demonstrates that incoming travel agents in Tanzania were among the enterprises which reported to have benefited from the Internet technologies by relatively low percentage.

Table 93: Impact of the Internet as per first line of business

Category of business	Internet impact on business					
	No effect	Significant positive	Negative	little positive effect	Don't know	Total
Travel Agents	2 (10.5%)	13 (68.4%)		4 (21.1%)		19
Tour Operators	2 (1.4%)	126 (89.4%)	6 (4.3%)	3 (2.1%)	2.8%	141
Hospitality	2 (2.1%)	88 (93.6%)		4 (4.3%)		94
Airline		1(100.0%)				1
Car rental		10 (100.0%)				10
MICE		4 (100.0%)				4
Attractions		2 (50.0%)		2 (50.0%)		4
Publishing		6 (100.0%)				6
DMOs		6 (100.0%)				6
Curio or gallery	2 (22.2%)	3 (33.3%)		4 (44.4%)		9
Airport		1 (100.0%)				1
DAHACO		1 (100.0%)				1
Overall Average	**8 (2.6%)**	**272 (88.6%)**	**6 (2.0%)**	**17 (5.5%)**	**4 (1.3%)**	**307 (100%)**

Another category with lower percentage of Internet impact is the attractions. The attractions under TANAPA ideally are advertised externally by the TTB; therefore, managers of the attractions who were interviewed in the survey did not connect the two. In the same vein, the majority of the curio businesses depended on walking-in customers and thus they did not see the importance of advertising themselves on the web. Despite the fact the curio business in Tanzania depended on international tourists who (as discussed earlier) were using the Internet to get some of the information to travel to Tanzania, the curio managers could not connect this fact too. Otherwise, the respondents from some of the businesses such as car rental, MICE, and airlines were in total agreement that the Internet has had a positive effect on their businesses. Since in both of the above tables, the average of respondents who reported that the Internet had a positive impact on their businesses ranged from 86 to 88 per cent, it may be prudent to conclude that the Internet is very important in the tourism system in Tanzania. As some of the respondents summed up on the importance of the Internet in their businesses, that it is impossible to image how their business would be without the Internet.

6.4. Use of Free and Open Source Software in Tourism System in Tanzania

Since the commercial CRM and ERP systems/software are quite expensive [221], the theoretical expectation was that various entities in the tourism system in Tanzania would have availed themselves with free and open solutions available on the web for free or at relatively low prices. Examples of these FOSS suites include SugarCRM and Campiere [275] for CRM and ERP respectively. However, as it was pointed out by UNCTAD [264], it seems many decision makers in tourism systems in developing countries were not aware of such possibilities. This lack of awareness could be one of the major reasons why there were very few firms in the survey which employed free and open source software (FOSS) in their digital information systems. As depicted by Table 93, only 14 (4.5 per cent) entities used some forms of FOSS.

Since a very small number of the respondents were paying licenses for the commercial software they were using, it might be assumed that the free and open source concept did not mean much to them. However, the profit levels of those few who were paying the fees were being eroded because levels of business in some of these respondents

were low. In addition, as observed by Kamuzora and Baruch [276], relying on pirated copies of software may stifle the programming skills of a society while FOSS utilisation unleashes the skills in a society.

Table 94: Deployment of free and open source

Business Category	Use free and open source software		Total
	No	Yes	
Travel Agents	19 (100%)	0	19
Tour Operators	137 (97.2%)	4 (2.8)	141
Hospitality	93 (99%)	1 (1%)	94
Airline	10 (83%)	2 (17%)	12
Car rental	10 (100%)	0	10
MICE	2 (50%)	2 (50%)	4
Attraction	2 (50%)	2 (50%)	4
Publishing	4 (67%)	2 (33%)	6
DMOs	6 (100%)	0	6
Curio or gallery	9 (100%)	0	9
Airport	0	1 (100%)	1
DAHACO	1 (100%)	0	1
Total	293 (95%)	14 (5%)	307 (100%)

Due to the above lack of awareness on the benefits of FOSS, it comes as no surprise that in all surveyed firms none were using either content management systems (CMS) or enterprise resource planning (ERP) software, as discussed earlier. The second reason could be the prevalence of piracy of proprietary software. The investigation by Ghosh [222] that painted a frightening picture of the high price-equivalent paid by users of software in poor countries. For example, in case of Tanzania, Ghosh's computations show that Microsoft's Windows XP and Office XP which are both bought at USD 560.0 in the United States would translate to over 24 months of GDP/capita in Tanzania. This is the equivalent of charging a single–user licence fee of USD 72,860.0 in Tanzania using what Ghosh termed as *licence fee relative to GDP/capita*. However, the real situation on the ground seems not to be applicable in some cases such as Tanzania. Except for a very few large firms which were paying millions of Tanzanian shillings as licence fees to proprietary software companies, most of small firms were not paying any licence fee. However, pirating

proprietary software is a double-edged sword for software development in a pirating country. On one hand, it may help a pirating country develop its software industry through reverse functional engineering as observed by Heeks [277], on the other hand, it is also likely to stifle any creative initiative to develop software. The third reason of low adoption of FOSS could be the low level of IT skills prevalent in the country as demonstrated by indices discussed earlier. Participating in FOSS development requires a high level of IT skills. For example, the kernel of Linux is complex at the current level of development after its inception in 1991 by Linus Torvalds. The community of FOSS developers has extensively expanded in terms of quality and number over time. This makes it difficult for inexperienced new comers to make a meaningful contribution to the kernel. Thus, despite the fact that many other writers have included switching costs as well as lock-in effects to be among the reasons of low adoption of FOSS in some firms and countries (see for example, [50, 278], it is the view of the author that these are not major reasons in Tanzania. As per Rogers' theory of Diffusion of Innovation [279], issues of costs are factored in the innovation adoption decision process after the first two stages of awareness and persuasion have been completed. Therefore, with the lack of awareness on the importance of FOSS prevalent in Tanzania (as discussed above), both switching costs and lock-in effects are not credible causes of low adoption of FOSS in Tanzania.

6.5 Application of Web Analytics Techniques

Web analytics concerns itself with what goes on inside a particular web site. It asks questions related with the performance of a specific website. Examples of questions include: How successful is the site at attracting visitors? Once an individual becomes a visitor, what does he/she do at the site? Where do they go? How easily can they accomplish what they want and what you want them to? [194, 280]. Owning a website is an investment since some resources are committed for it, thus, website owners ought to know how effective their websites are. Questions related to return on investment, a website owner can ask himself/herself are as follows: Are we getting the right kind of people at our site? Do they drill down to the product information? Do they put things in their shopping carts (those dealing with e-commerce at a higher level)? Is the company saving money by providing online customer care? How sticky is the website to users (how long do they stay at the website)? [280]. Therefore, the role of ensuring that one's online presence is not a source of losing

market share and profit or other website's objective lies with the owner of the website. It is through monitoring and reporting of website usage that website owners can expect to reap benefits wrought by online technologies. Thus, web analytics enables enterprises to better understand the complex interactions between web site visitor actions and website offers, as well as leverage insight to optimise the site for increased customer loyalty and sales [281].

6.5.1 Empirical Results on Application of Web Analytics in Tanzania

For the respondents in the survey whose organizations had websites, the level of conducting web analytics is presented in Table 95.

Table 95: Use of logfiles as a proxy for web analytics

Category of business	Use of website logfiles		
	No	Yes	Total
Travel Agents	5 (38.5%)	8 (61.5%)	13
Tour Operators	105 (82%)	23 (18%)	128
Hospitality	76 (92.7%)	6 (7.3)	82
Airline	7 (70%)	3 (30%)	10
Car Rental	6 (60%)	4 (40%)	10
MICE	2 (50%)	2 (50%)	4
Attraction	4 (100%)	0	4
Publishing	6 (100%)	0	6
DMOs	6 (100%)	0	6
Curio or gallery	7 (100%)	0	7
Airport	1 (100%)	0	1
DAHACO	1 (100%)	0	1
Total	226	46	272
Overall Percentage	**83.1**	**16.9**	

As Table 95 depicts, only about 17 per cent of surveyed organisations (which responded to the respective question on conducting web analytics) employed some use of web logfiles. In order to understand the situation better a few in-depth interviews (using semi-structured guide) were conducted as means of triangulating the findings from the main survey.

CHAPTER SEVEN

SUMMARY AND SYNTHESIS OF LINKAGE BETWEEN E-TOURISM AND DEVELOPMENT

7.0 Introduction

The book commenced with setting the scene of the research and a situating the Internet in tourism system. It has been demonstrated that tourism is an important economic subsystem which is prone to a leakage problem. Few topologies such as rural or pro-poor tourism had been earmarked in the literature to be more appropriate if developing countries wish to exploit the potential of tourism in fighting poverty since such topologies lower the leakage effect. Similarly, the literature revealed that growth and change of tourism activities historically had been a subject of technological development. Development in transport technologies expanded and changed the nature of tourism. Of the recent, a new wave of technological development has been in digital information and communication technologies (ICTs). The development in digital ICTs has revolutionalised many human activities including travel and tourism. The literature covered in the book indicated that the Internet is becoming more and more a point of convergence in the tourism value chains for distribution of information as well as transactions flows.

The potential of the Internet in empowering small players in the tourism value chain to be able to directly reach the consumers through the disintermediation process is quite attractive. The attractiveness of this potential is that even small players in developing countries have the potential of competing in the tourism market place without relying on powerful intermediaries. By the same token, the Internet empowers individual consumers of travel and tourism services to be able to seek relevant information on 24/7 basis. By its nature, tourism is more an information business whereby the quality of information a consumer receives plays a large part in the decision which destination to visit. Therefore, providers of tourism services who provide quality information on the web are more likely to win in the competition for visitors. Equally important is the potential emanating from the free and open source software (FOSS) to developing countries. Several productivity enhancing tools such as content management systems, enterprise resource planning, web authoring, desktop suites and others are available on FOSS

platform. The financial costs of acquiring these FOSS based programs are far less than the commercial or proprietary equivalents.

The aim of the book was to understand the extent which various components of the tourism system (both from supply and demand sides) in Tanzania were realizing competitive advantage from the above potentials from the Internet and the free and open source software. This chapter concludes the book by revisiting the initial objectives and briefly discussing how and to what extent the research fulfil the objectives.

The discussion in this book is guided by one major objective which was split into three sub-themes. The major object was as follows: To critically discuss and assess the extent and effectiveness of the utilisation of ICTs, particularly the Internet services/technologies, by various stakeholders in the tourism system in Tanzania with the aim of enhancing the competitive advantage through cost leadership. The discussion has been based on three related sub-themes, namely, exploring the extent the various stakeholders in the tourism system in Tanzania are utilising the Internet technologies in their tourism business information systems; extent stakeholders in the tourism system in Tanzania are using open source software in their computerised information systems; and determination of source of information to tourists visiting rural areas.

Disussing the research results from a survey of 307 organisations (Chapters 4 and 5) has revealed that some of the Internet technologies, particularly the web and e-mail, are relatively in high use. However, several other technologies were not in much use. A second common finding was that many of the participants had relatively low levels of web skills and participants from rural tourism had the lowest. This resulted in outsourcing all aspects of web design and day-to-day management of the websites. One of the effects of outsourcing the management of the website is lack of appropriate and timely updates on several sites. Specifically, the following section summarises and concludes the findings from individual categories of stakeholders.

7.1.1 Destination Management Organisations:

The levels of utilisation of Internet technologies were as diverse as these entities were as diverse. Whereas the e-mails were the major Internet service that was being utilized by nearly all of the entities,

the use of the web was more important to TTB and galleries. With the exception local district authorities (as local destination management organisations) who did not have own websites, the majority of the rest of entities in this category had websites. We can therefore conclude that nearly all DMO entities in Tanzania were not exploiting sufficiently the power of the Internet in realizing the competitive advantage. For example, the fact that the authorities failed to use the TTB website and other appropriate websites to inform potential tourists on the safety of the destination, showed lack of knowledge on how to effectively use the web strategically. The response could include positing counter information on DMO websites or pay for a variety of services such as banner advertisements as well as paid keywords to inform potential visitors on safety of the destination.

7.1.2 Art Galleries

Research results have indicated that art galleries in Tanzania, albeit their small number, were beneficiaries of e-commerce technologies. Through the disintermediation process, respondents claimed that their profit margins had increased appreciably. Therefore, this case demonstrates that given sufficient support and right products, the Internet may be a tool for fighting poverty. Thus, galleries were able to maximize their competitiveness using the Internet by marketing and selling their merchandise on the web.

7.1.3 Airlines

In this category, both domestic and international airlines were included. In terms of deployment of the Internet technologies the international airlines were quite ahead of the domestic ones. Some of the international airlines had fully functional e-commerce websites where most of airline related business could be conducted. Also, it was revealed that most computerised reservation systems/global distribution systems (CRS/GDS) were migrating to internet protocol [282]. For Tanzanian stakeholders, the development in Internet technologies on the side of airlines was expected to result in different impacts. Thus, despite the fact that local airlines in Tanzania were still relying on traditional distribution channel for selling the air tickets, use of e-tickets slotted to be mandatory in 2007 would similarly benefit them. This means more transaction turnover to the airlines which is likely to increase profitability level as even the local airlines will be able to add the web as another distribution channel for the tickets.

7.1.4 Dar es Salaam International Airport (DIA) and DIA Handling Company (DAHACO)

The research results have indicated that, despite these companies employing the new ICTs such as PCs and a variety of software, effective utilisation of Internet technologies was lacking. With some creativity, DAHACO and DIA could have used their websites to communicate with its clients on the status of their cargo and flights respectively. Therefore, as far as DIA and DAHACO were concerned, the Internet technologies were not being employed to enhance their competitive advantages especially in serving effectively their clients. Also, by not combining the use of FOSS and other licensed software, both DIA and DAHACO were reducing their competitiveness - through paying a lot of money for proprietary software licenses.

7.1.5 Tour Operators

As a major category of respondents in terms of numbers, tour operators of all sizes (micro, small and large) demonstrated their reliance on the Internet technologies in their business operations. E-mails represented a major means of business communication with clients, and nearly all tour operators acknowledged that the Internet has had a positive effect on their businesses. Tour operators, especially the micro and small ones which were owned by local enterprises, were indeed the success stories of the disintermediation process wrought by Internet technologies. More than at any other time before, these tour operators were able to attract some customers from the Western world without relying on intermediaries. However, as with other groups of the respondents the knowledge and skills to create and maintain websites was one of the limiting factors to harness further the web. Only less than 10 percent of tour operators' websites were not static. Thus, apart from acting as digital brochures, most of the websites would not compete with higher class websites of competitors from other destinations. Therefore, the observed lack of skills to adapt quickly with the trend in website design and on-time updating of relevant contents is expected to erode the little competitive advantage these tour operators had gained.

7.1.6 Hospitality Subsystem

The hotels and restaurants involved in this study were those which served mostly the international tourists. Since international customers were part of the customer mix, nearly 90% of the respondents had websites. Of these websites slightly more than 25% were dynamic. However, only 3% of the websites were transactional

but this represented 11.5% of the large establishments. Despite the relatively low percentage, the subsystem was the second one (after international airlines) selling services online in the study. In addition to selling services online, 29% of large hotel were connected to property management systems and/or global distribution systems. Also, there were several websites (for example (www.southtravel.com) that functioned as eMediaries which had agreement with some of the hotels to be paid a commission for clients booking through them. Coupled with clients who made direct booking with the hotels, the Internet technologies were very vital for the hospitality subsystem in Tanzania. However, if the Tanzanian case is compared with other countries, the percentage of hotels connected to PMS/GDS is quite low.

7.1.7 Travel Agents

Much had been written on the effect of rapid adoption of Internet technologies to traditional tourism and travel intermediaries such as travel agents. Just as other countries the commissions paid to travel agents had been stopped or capped, the situation in Tanzania was getting in that direction. In order to continue being relevant and profitable, the travel agents will need to increase their efficiency and stock of knowledge so that travellers could still rely on them as travel consultants.

7.1.8 Car Rental

As was at global level, car rental represented a small proportion of businesses in the Tanzanian tourism system. Whereas all international companies' websites were either dynamic or transactional, the local companies' websites were static (digital brochure like). In addition, perhaps another major difference was how each category utilized the web. For some of the local companies, the web provided an unmatched channel in procuring used cars from Dubai and Japan for business purposes. On the other hand, the international brands used their websites to sell the services to international tourists. Thus, both types of car rental business were benefiting from the web technologies despite the fact that the levels and nature of benefits varied to an extent.

7.1.9 Use of Relatively Advanced Internet Technologies and Techniques

The study has discussed the research results on use of file transfer protocol (ftp), telnet, customer relationship management software, ERP, local area networks, intranets and extranets, wireless

application protocol (WAP) and wireless fidelity (WiFi), content management systems, and FOSS as relatively advanced technologies. The advanced Internet related technique discussed was web analytics. From the findings, it can easily be generalized that the use of the above relatively advanced technologies and techniques was low among the surveyed respondents. Coupled with the lack of appropriate e-business framework in the country, the above low usage of the technologies and techniques demonstrates how low the Tanzanian tourism system was in the e-commerce and knowledge economy ladders.

7.1.10 Main sources of information used by international tourists who visited villages practising rural tourism projects

The research results for both cases indicated that the commercial Guide Books such as *AAA*, *Fodors*, *The Rough Guide*, and *Lonely Planet* were the major sources of information for both Lushoto and Longido international visitors. However, the percentage differed quite substantially. For example, Guide Books were the source of information for 75% of respondents in Lushoto while for Longido it was 39.1%. In both cases the Internet was the second source of the information. For Longido, the Internet represented approximately 35% while in Lushoto it only represented 15%. On the other hand, the word of mouth as a source of information represented 15% for Lushoto and 13% for Longido.

7.2 A SYNTHESIS OF POTENTIAL OF ELECTRONIC TOURISM TO DEVELOPING COUNTRIES

It has been demonstrated that the Internet by means of the world wide web provides a means of reaching out to potential clients in a better controlled way. The owner of the website is in command of what information he/she wants to pass out to clients and the frequency of updating the information (if skills and accessibility are available). With more sophisticated websites, a user may be able to personalize what information he/she views [283], and use a live chat functionality to interact with suppliers of services in real time. Thus, websites in comparison are the effective communication channel which a principal/provider of tourism related services has at his/her disposal to exploit. Also, having own website with high quality information on a destination may benefit the destination if the authors of the Guide books need to update their books but without spending a lot of resources of sending physically their writers to the destination can use the information on the website.

Thus, given the new interest of the United Nations system [1, 47, 71, 153, 284] and other development partners of deployment electronic tourism for development, the content of the book provides evidence that eTourism is a reality in countries such as Tanzania albeit it is still at lower e-commerce level (discussed in Section 2.8). Therefore, the discussion in the book enhances the understanding on the role of the Internet technologies in developing countries. To a good extent evidence provided respond to authors such at that of Mercer [285] and Kenny [133] who have questioned if the Internet is really useful in developing countries such as Tanzania. Thus, by using the eTourism field it is demonstrated that that despite the prevalent digital divide various players in poor countries such as Tanzania do employ some of the Internet technologies in the tourism information and transaction value chains. In addition, a few questions on the role of domain names as a branding tool have been put forward. It was observed that nearly all websites of domestic management organisations (DMOs) and other respondents in the research who had websites employed top level generic domain names (TLD) such as .com and .org instead of .tz country code top level domain (ccTLD). As a marketing and branding strategy using TLD hides the location of the DMOs and other Tanzanian businesses involved in tourism value chain. In some countries such as the United Kingdom and Germany the majority of tourism related businesses and other businesses as well are employing the .uk and .de ccTLDs respectively for the branding purpose and it works well [266]. Using only the gTLD names demonstrated lack of web knowledge on the institutions in questions for even if they felt that the gTLD names were providing more visibility on the web, at least they should have registered the same domains using ccTLD aliases. Where a domain name alias is a registered domain name that points to another domain [286]. In addition, registering multiple domain names for the same site not only brings the largest draw to one's website but it also can prevent competitors from poaching another business' potential customers as well limit cybersquatting [287].

Another observation related to eTourism is a revelation that very few respondents were making use of relatively advanced electronic business techniques which are known to increase the productivity from websites. One of these techniques is web analytics. The major cause of this situation is the lack of skills to interpret the information left behind by visitors on the websites. This finding

confirms others studies such as World Bank Institute's Knowledge Economy Index (KEI) [144] which ranks Tanzania low compared to her competing neighbours. In addition, despite the promising trend on rural tourism worldwide, see for example [288, 289, 290, 291, 292], there was no study that had been conducted in Tanzania to reveal the source of information to tourist visiting rural areas in Tanzania. The evidence presented in this book highlights this fact and calls for more such surveys since if a destination such as Tanzania wishes to develop further this tourism niche market, the need of understanding the potential visitors cannot be overemphasised.

The book has also detailed how ICTs, particularly the Internet could enhance competitiveness through reducing costs of doing business through cost leadership in the value chains and disintermediation. This was directly linked to Porter's assertion that competitive advantage of each business is embedded in their value chains (Chapters One, Two and Three). Given that tourism is characterized as both physical and information product [45], Chapter Two presents both physical and information and transaction value chain analyses of tourism. A tourism physical value chain analysis including mapping of Tanzanian tourism value chain was conducted to demonstrate the connectedness of various businesses involved in creating their profit margins and creating value to tourists. However, the mapping could not report the exact distribution of value to various players in the chain because the National Systems of Accounting still used in Tanzania does not provide such a breakdown. It is expected that the implementation of Tourism Satellite Account sometime in future will be able to provide such breakdown [37] [171]. Despite this lack of exact figures of extent of distribution of value distribution among actors in Tanzanian tourism value chain, the direct observation in the field demonstrated the importance of tourism business to these actors. Due to its nature, tourism in Tanzania is a seasonal business [293, 294]. For example, during the peak season (June-October) hotels room occupancy rates are highest and other tourism related businesses operate at their near capacities. Some of the businesses such "tented camps" tend to close during off-season (February-May). The implication of this is that when the tourism business is operating at high capacity several other players in the value chain their businesses get opportunities to supply goods and services and reverse is true.

Using the value chain model and the role on the Internet technologies in disintermediating some traditional intermediaries, the evidence in the book (Chapters Two, Three, Four and Five) demonstrates that even some small players with sufficient web knowledge and connectivity can access the international tourism market. For example, tour operators (Chapter Five) and art product sellers (Chapter Four), in Tanzania have benefited by directly contacting some customers in Western countries. Due to reduction in information asymmetry wrought by Internet technologies as discussed in Chapters One, Two and Three, the nature of tourists has changed [42, 43, 46] which requires principals in the tourism system to be more customer-centric rather than product-centric [267]. It has been demonstrated that the Internet technologies such as e-mail could facilitate customer relationship management (CRM) for tourism businesses that would be ready to employ this strategy. However, the value chain theory does not accord issues of knowledge integration a primary importance. In the theory, issues patterning to knowledge do not form a set of primary activities but secondary activities (discussed in Chapter Two).

If knowledge is one of major sources of competitive advantage, treating it as a support activity does not commensurate with today's realities. This is because, the empirical evidence is indicating that availability of factors such as those delineated by Porter [90] (Section 2.2 on the Building Blocks of Competitiveness) might be only a necessary but not sufficient condition to create a competitive advantage. The sufficient condition is the proper deployment of knowledge which is acquired from constant effective learning and being flexible and proactive in a rapidly changing world [61, 94, 295]. Evidence from the earlier discussion indicates that despite the fact that Tanzania is endowed with natural factors of high world class tourist attractions such as Mount Kilimanjaro, Ngorongoro Crater, the Serengeti and Zanzibar, and gamut of other attractions, lack of the knowledge (as observed by CHL Consulting Group [107]) to market and organise the other logistics of the entire tourism value chain effectively lowers its competitiveness compared with neighbouring and competing destinations such as Kenya, South Africa, Botswana, Mauritius and the Seychelles [296]. Tanzania's relatively low competitiveness is similarly echoed by Utz [297]. Utz [297:7] reminds Tanzania as follows:

> Consequently [due to the twin forces of globalisation and rapid technological advances], countries' competitiveness depends more

than ever before on their ability to access, adapt, and utilise knowledge for development.

In the same tone of emphasising the role of knowledge for development, His Excellence the President of the United Rublic of Tanzania while addressing a fund raising event in Arusha for education said:

> Tanzania is endowed with vast natural resources but we cannot make use of them if we lack education... we must concentrate on improving education if we want progress [298].

Similarly, the discussion in the book has presented evidence of realities on digital divide by demonstrating that it is more than access to the ICTs facilities (Chapters Four, Five and Six). As much as access is important but the divide is further evidenced by the quality and cost of access. The evidence presented revealed the extent of the narrowness of the bandwidth most of the respondents were accessing the Internet at. Of the respondents who were knowledgeable about the bandwidth they were accessing the Internet at, for 70 percent the bandwidth was a shared-64 kbps band or less and for 27.5 percent 128 kbps. Only 2.5 percent could be said that they were accessing the Internet at a broadband of more than 256 kbps [299]. However, the monthly cost was USD 70 for the shared-64 kbs which is quite high compared to the levels of income[14] in the country and what other countries such as the UK pay for broadband [300], for example. Also, low the bandwidth compares unfavourably with the rest of the world where by 2006 more than a quarter of one billion people who had the Internet access were on a broadband [301]. Apart from wasting time resources, slow Internet connection speed limits extent of using the web since some of the useful contents such as multimedia products as well as large documents cannot be efficiently accessed.

Further aspects of the digital divide revealed are the levels of knowledge and skills to deploy the Internet in business. It has been shown in Chapters Four, Five and Six that only a few respondents had owners/employees with skills to design, construct, update websites, and conduct web analytics. Without the skills to create

[14] According to Mercer [285] quoting World Bank, per capita income for Tanzania was USD 290 in 2004.

website content and evaluate its performance is another divide which limits businesses to take advantage of the 24/7 opportunity offered by the electronic commerce. As discussed in Chapters One, Two and Three, quality information is increasingly becoming one of the sources of competitive advantage [86, 214, 302]. Also, low levels web knowledge resulted in designing websites which were not optimised for search engines [303]., as briefly alluded to in Chapter Four. In addition, nearly all of the websites lacked interactive features of modern business websites such as personalisation and live chat functionalities. Equally important, is the fact that at a country level the divide is increased by a lack of effective Internet Exchange infrastructure (since not all ISPs are members of Tanzania Internet Exchange Point) a fact that forces some users of the Internet in Tanzania to first go through some international gateways using satellite connections even when the web content to be accessed is hosted in Tanzania. This not only delays the users' web servers receiving the requested packets but also forces Tanzania to pay for the services of the international gateways and satellite transponders (up to time of writing this thesis there was no under sea fibre cable connecting to international gateways making communication through satellite more expensive and slow [304]) for even the local contents [145]. However, adoption of these ICTs, just as other technologies, is not a value free process and thus there is a compelling need of deploying holistic thinking in synthesing the phenomenon.

7.2.1 Need for Holistic Thinking in Synthesising the Adoption of ICTs in Developing Countries

The holistic thinking recognises that technologies are not value free as similarly advocated by the social construction of technology (SCOT) [305, 306] perspective which states that technologies are shaped by social circumstances. The SCOT school of thinking does not agree with rational diffusion models such as the Diffusion of Innovation [279] and Technology Acceptance Model [307]. This is because rational diffusion models do not consider the array of complex factors which determine the adoption of technologies. Thus, the power of the holistic thinking emanates from the fact that it recognizes the interplay of complex networks of actors (both human and non-human) which "configure" adoption of technologies. Therefore, in the process of the development of technologies, the values of developers are integrated in the technology. This is summarised as follows by Kline and Pinch:

relevant social groups who play a role in the development of a technological artefact are defined as those groups who share a meaning of the artefact" [308:765]

If the user of the technologies happens to fall in the same value system with the developers, it is expected that the meaning of the artefact (technology) will be easily shared. However, if the technology is to be used in a different value system, there is a possibility that some of the meaning of the artefact will not to be easily shared. Various scholars have laboured to compile an abundance of examples where many technologies developed and highly adopted in the Western world failed to produce similar results in other parts of the world. For example, Walsham [139] described the failure of the global information system (GIS) technology in India. Similarly, Heeks [140] and Hagenaars [309] observed the difference between Western outlook on the importance of information in business decision making compared with the case in developing countries. Hagenaars provides examples of farmers in Jamaica and Tanzania using different sources of information which looks "unconventional" forms of ICTs.

The above account highlights the need to employ a holistic approach in synthesising the adoption of ICTs in developing countries. Most of these technologies are developed in the Western world where value systems are to a great extent different from those of the developing countries. Studies such World Values Surveys (WVS) [15] and a numerous publications from WVS by various authors such as Inglehart and Welzel [310] and the earlier studies such as those by Hofstede [311, 312] have demonstrated that different parts of the world subscribe to different value systems or cultures. Therefore, the value systems of people supposed to use a technology are one of the factors which must be considered in synthesising adoption of ICTs. Other factors include level of skills of the users, and legal and business environments in the receiving society (destinations) as it has been demonstrated using a Tanzanian case. The business environment may include general economic and legal policies as well as the availability of other supporting infrastructure (in our case infostructure). This demonstrates that technology adoption is an interplay of the interconnection of various issues, some which are related to human and non-human elements. Therefore, by using a

[15] http://worldvaluessurvey.com

holistic thinking one can try to understand the role of each component in an adoption process of technologies.

Similarly, the effectiveness of deploying the holistic thinking in synthesising the utilisation of ICTs in development issues is necessitated by the reality that these issues operate as complex adaptive systems[16]. One of these development issues is the tourism system. In this system, one can delineate two distinct groups of users. One group is from the demand side or from the source market and the other from the supply side or destination market. Holistic thinking is useful in demonstrating that in a customer-centric and a highly competitive business environment, suppliers have to strive to provide services which not only will satisfy the customers but also create a competitive advantage. If customers are expecting a supplier to be online so that they can collect information which will help them to make a decision to visit the destination, an online absence will eliminate a business from competition, as earlier warned by Castells [61] and UNCTAD [47, 58, 153, 190, 264]. In addition, due to being enlightened about the importance sustainability (economic, environmental and social) of destinations, the holistic thinking forms a pivotal framework which can be employed in implementing destination sustainability strategies. The concerns of sustainability of a destination will always see the "development at any cost" thinking as myopic and unsustainable. This is because holistic thinking acknowledges possible non-linearity and non-predictability as well the role of values among the agents in technology adoption. As detailed above, all of these three factors have been found to be relatively efficacious in approaching sustainable development issues, see for example [315, 316].

Therefore, in ending the odyssey of this book, it is urged that in order for stakeholders in tourism system and other sectors to be able to optimally enjoy sustainable competitive advantage from the ICTs, particularly the Internet, several institutions have to be right. This is because there is a strong interconnection of institutions' activities, values (such as right information culture, reading and writing culture), appropriate knowledge and skills levels, and behaviours of important individuals to a system's performance. Without appropriate institutions to create enabling environment for electronic

[16] Properties of complex adaptive systems such as interdepencies, synergy, emergence are detailed by Farrel and Twinning-Ward [179], Holling [313], and Geyer [176, 314].

commerce (for example legal framework as well IT infrastructure), it is difficult to benefit from the Internet economy. Equally, without a sufficient number of individuals and institutions adopting effectively the e-commerce values of operating in a fast changing knowledge economy, destinations such as Tanzania would not be competitive in increasing market share through cost leadership wrought by advancements in ICTs.

Appendix 1:

Questionnaire on the Implementation State of eTourism in Tanzania

MZUMBE UNIVERSITY IN COLLABORATION WITH TOURISM CONFEDERATION OF TANZANIA

QUESTIONNAIRE ON THE INTERNET USE IN TOURISM INDUSTRY IN TANZANIA

Dear Sir/Madam:

The Questionnaire aims at collecting information on the state of use of the Internet in tourism industry in Tanzania. Your organisation, being one of the important stakeholders in the tourism industry in this country, is requested to take part in the study.

The information provided will be useful in providing data to a PhD study of Mr. F. Kamuzora of Mzumbe University, who he is studying in the School of Informatics of University of Bradford, UK. In addition, the information could serve as input in enhancing electronic tourism in Tanzania. Thus, Mzumbe University in collaboration with Tanzania Confederation of Tourism request you to answer the questions in this questionnaire objectively. We are hereby affirming that the information you provide will be treated with confidentiality as required by the Code of Practice for Ethics in Research of the University of Bradford as well as Mzumbe University Research Guidelines.

If you receive this questionnaire electronically (via e-mail attachment), you can fill it out electronically too by placing an X mark close to appropriate boxes and typing on places with lines (please delete the lines first before typing and then underline your typed responses). If you fill the questionnaire electronically, kindly e-mail your response (filled questionnaire) to *f.r.kamuzora@brad.ac.uk* and copy to *tct@cats-net.com*. Alternatively, you may print the questionnaire and fill it out by hand by ticking appropriate boxes and writing the text on lines provided. Please post your response to: Faustin Kamuzora, P. O. Box 397, Morogoro.

Thank you very much for your time and efforts.

QUESTIONNAIRE ON THE INTERNET USE IN TOURISM INDUSTRY IN TANZANIA

(original font point size was 12 but due to use of different margin sizes in this book, the font size has been reduce to 10 in order to keep check boxes aligned)

1. How do you categorize your business? (*please tick the appropriate box(es)*)

- ☐ Travel Agent
- ☐ Tour Operator
- ☐ Hospitality (Hotel / Restaurant/ Cafe)
- ☐ Airline
- ☐ Car Rental
- ☐ MICE (Meeting, Incentive, Conference and Events)
- ☐ Tourist Attraction
- ☐ Publisher of Paper Based Tourism Related Literature
- ☐ Destination Management Organisation
- ☐ Gallery/Curio
- ☐ Airport
- ☐ Air passengers and cargo handling company
- ☐ Other (please specify) _____

2. Please indicate whether your company/organisation uses of the following in your business premises:

Non-connected (stand alone) computer(s)	☐ No	☐ Yes
Local Area Network (LAN)	☐ No	☐ Yes
Wide Area Network (WAN)	☐ No	☐ Yes

3. Does your company have access to the Internet?" No ☐ Yes ☐

4. What is your Internet Access mode? ☐ Wireless ☐ Modem ☐ VSAT
☐ Cable ☐ Dedicated telephone line ☐ Internet café(s)
☐ Other (*please specify*) _____

5. What is the maximum bandwidth of your company's connection to the Internet?
☐ 33.3 kbps ☐ 64 kbps ☐ 128 kbps ☐ 256 kbps
☐ 512 kbps ☐ 1 Mbps ☐ 2 Mbp
☐ I do not know ☐ Not Applicable
☐ Other (*Please specify*) _____

6. Please indicate the frequency you use the following Internet services:

Internet Service	Never	Monthly	Weekly	Almost Daily
Electronic mail (e-mail)	☐	☐	☐	☐
Telnet or remote login	☐	☐	☐	☐
FTP i.e. File Transfer Protocol	☐	☐	☐	☐
The World Wide Web (the Web)	☐	☐	☐	☐
Wireless Application Protocol / Wi-Fi (*select what is applicable*)	☐	☐	☐	☐

7. On average what percentage of your business communication is through electronic mails? ☐ < 10%
☐ 10% -25% ☐ 26%- 50% ☐ 50-75% ☐ >75%

8. Does your company use an Intranet, i.e. an internal network using Internet standards (protocols) to enable communications within your organisation? ☐ No *(go to question 10)* ☐ Yes

9. How often do you use online technologies (through your intranet) to support the following internal business processes:

	Never	Sometimes	
Sharing documents online internally to conduct collaborative work	☐		☐
To track working hours and production time?		☐	☐
Automate accounting processes online		☐	☐
Supporting human resource management activities		☐	☐

10. Does your company use online technologies other than e-mail, for example an extranet to exchange documents electronically with your business partners? ☐ No ☐ Yes

11. Does your company use the Internet or other online services to purchase goods or services? ☐
No *go to 14)* ☐ Yes

12. Which of the following platforms and channels does your company use for making online purchases?
☐ Website of suppliers
☐ eMarket place i.e. a business-to-business Internet trading forum in which buyers and sellers exchange goods and services
☐ Extranet
☐ Electronic Data Interchange (EDI)

13. Please estimate in percentage your total purchases conducted online:
☐ 1 -5% ☐ <6-9% ☐ 10 -25% ☐ 25-50% ☐ >50%

14. According to your experience, how would you rate the impact of the Internet or of e-business technologies on your company's revenue?
☐ Negative ☐ No effect ☐ Very little positive ☐ Significant positive ☐ I do not know

15. Has your company implemented an electronic Customer Relationship Management (software for automating and improving the means by which you interact with customers)?
☐ No *(go to 17)* ☐ Yes

16. Indicate which activity (ies) you use CRM software for:
- ☐ Sales analysis
- ☐ Customer profile analysis
- ☐ Loyalty analysis

17. Does your company have a website on the Internet? ☐ No *(go to 25)* ☐ Yes

18. What is the type of your website? ☐ Static ☐ Interactive (database driven)
☐ Transactional ☐ Other (*please specify*) _____ ☐ I do not know

19. When was your website uploaded on the Internet? *Please indicate a month/quarter and year*
_____

20. Please indicate who designed and built the website:
☐ Internal departmental staff ☐ Outsourced the service (*please indicate where you outsource the service*): In the country _____ Out of country _____

21. Where do you host your company's website?
- ☐ In your company's server(s)
- ☐ Hosting company (*please indicate where your website is hosted*): In the country _____
  Out of the country _____

☐ Other (please specify) _____

22. Who manages your website? ☐ Internal staff ☐ Outsourcing the activity

23. Does your company make use of your website logfiles? ☐ No *(go to 22)* ☐ Yes

24. Who analyses the web logfiles? ☐ Internal staff ☐ Part of hosting contract
☐ Outsourcing the job

25. What was the motivating factor of establishing your website? *(Tick all appropriate boxes)*
- ☐ Company image considerations
- ☐ To reduce business costs
- ☐ To speed up business processes
- ☐ To improve quality of services
- ☐ To reach new customers
- ☐ To expand the market geographically
- ☐ To launch new products/services
- ☐ To keep pace with competitors
- ☐ Any other factor *(please specify)* _____

26. Does your company make use of a content management system (CMS), i.e. software which allows departments to update different information on the website? ☐ No *(go to 27)* ☐ Yes

27. Name of CMS used in your company: _____

28. Does your company sell services on the Internet or through other online distribution channels? ☐ No *(go to 30)* ☐ Yes

29. What percentage of the total turnover (in monetary terms) do the Internet sales represent? ☐ <10% ☐ 11-25% ☐ 25 -50% ☐ >50% ☐ Do not know

30. If an online order comes in, how is your company informed about the order?
- ☐ Use of online technologies (other than text e-mail) to exchange documents with suppliers
- ☐ Use ordinary electronic mail
- ☐ The order is fully integrated with the back-end system.
- ☐ Use of a Supply Chain Management System (SMC)
- ☐ Use of telephone/fax
- ☐ Use of text message service (SMS)

31. When did your company purchase goods or services online for the first time? *Please indicate the year and the month* _____.

32. When did your company offer services for sale online for the first time? *Please indicate the year and the month* _____.

33. Does your company accept major credit cards as means of payment for the services you are offering?
☐ No ☐ Yes

34. Is your company connected to the computerised reserve system (CRS)/global distribution system (GDS)? ☐ No *(go to 35)* ☐ Yes

35. Please indicate the CRS/GDS(s) you are connected to: _____
_____ _____

36. Does your company use any open source software (OSS)? ☐ No *(go to 38)* ☐ Yes

37. Please indicate which OSS you are using:
Operating system (name of distribution) _____
Application(s) (i)_____(ii) _____ (iii) _____

38. Has your company implemented an ERP, i.e. Enterprise Resource Planning System (software integrating all business processes)? ☐ No ☐ Yes

39. Name the ERP used in your company: _____

40. What would you cite as main problem(s) facing your company in integrating the Internet in your business? *Please rank as follows: 1 being the most pressing problem followed by 2, 3, etc in appropriate box.*
- ☐ The products/services of the enterprise not applicable for Internet sales
- ☐ Customers not ready to use Internet commerce
- ☐ Security problems concerning payments
- ☐ Uncertainty concerning contracts, terms of delivery and guarantees
- ☐ Cost of developing and maintaining an e-commerce system
- ☐ Lack of appropriate skills and other logistical problems
- ☐ Any other *(please specify)* _____

41. What is the number of your permanent employees? _____

42. Write any comment(s) related to role of the Internet in your business competitiveness
_____
_____

ONCE AGAIN, THANKS VERY MUCH FOR YOUR TIME AND EFFORTS

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Despite the prevalent digital divide in most of developing countries, e-commerce is a reality, albeit at lower levels of the ladder, to some industries in these countries. Using Tanzanian tourism sector, the book demonstrates the extent which various information and communication technologies (ICTs) are utilised in the tourism value chain. The ICTs covered include online access as well as several Internet services such as worldwide web, type of websites, e-mails, file transfer protocol (ftp), intranet, extranet, and wireless application protocol (WAP). Other ICTs include computerised reservation systems/global distribution systems (CRS/GDS), web content management systems (CMS), credit card processing facilities availability, and free and open source software (FOSS), *inter alia*. Similarly, a need of using country code top level domain (ccTLD) names as a destination branding strategy is discussed.

The book also demonstrates that the Internet technologies have empowered both consumers and service providers (big and small) in tourism system to bypass (disintermediate) some traditional intermediaries in information and transactions flows access and dissemination. Thus, if applied strategically, eTourism (defined as digitisation of processes and value chains in the tourism system) presents more viable possibilities for developing countries to integrate tourism in their poverty reduction endeavours.

Dr. Faustin Rweshabura Kamuzora is a lecturer at Mzumbe University, Tanzania. He holds a BSc. (Agric.) from Sokoine University of Agriculture, Tanzania; an MSc. (Agric. Econ.) of North Carolina A&T State University, US; a Postgraduate Diploma in Research Methods and a PhD in Development Informatics of University of Bradford, UK.

Contents:

Part One: Role of Tourism in Economic Development and the Effect of ICTs and Tourism Value Chain: Chapter One: Introduction and Background on Information as Life Blood of Tourism Business; Chapter Two: Gaining Competitive Advantage From ICTs in Tourism Value Chain; Chapter Three: Role of ICTs and Tourism in Enhancing Sustainable Development.

Part Two: Extent of Utilisation of Electronic Commerce in Tanzanian Tourism System: Chapter Four: Public and Semi-Public Organisations: Destination Management Organisations, Galleries, and Air Transport Subsystems; Chapter Five: Private Sector: Tour Operators, Hospitality Providers, Travel Agents, and Car Rental Subsystems; Chapter Six: Use of Advanced E-Business Services and Techniques; Chapter Seven: Summary and Synthesis

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