**IMPACT OF INFORMATION TECHNOLOGY IN TOURISM**

**BY**

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**ST/CS/ND/18/222**

**BEING A SEMINAR PAPER**

**PRESENTED TO THE DEPARTMENT OF COMPUTER SCIENCE**

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**IN PARTIAL FULFILMENT OF THE COURSE REQUIREMENTS FOR THE AWARD OF NATIONAL DIPLOMA (ND) IN COMPUTER SCIENCE**

**FEBRUARY, 2021.**

**ABSTRACT**

*Tourism is travel for recreational, leisure or business purposes. Information technology (IT) is the acquisition, processing, storage and dissemination of vocal, pictorial, textual and numerical information by a microelectronics-based combination of computing and telecommunications. Information Technology in tourism is of special significance. Information technology is used for Transport sector, Accommodation sector Attraction sector. These technologies are used in order to find out and satisfy the ever-changing demands for tourism. This paper discusses field related to tourism and various information technologies available to enhance the existing infrastructure of tourism industry.*

**INTRODUCTION**

The fast-tracking and synergistic interface between information and communications technologies (ICTs) and tourism in recent times has brought about necessary changes in the industry and in its receptiveness to the former (Law, 2009), in both developed and, increasingly, developing contexts. The espousal of new technologies has reformed the whole process of tourism service development, management and marketing, as well as the entire tourism industry (Opara & Onyije, 2013). Due to their increasing impact on the efficiency and effectiveness of tourism establishments, ICTs may be seen as being a fundamental part of modern tourism business (Stiakakis & Georgiadis, 2011). Hence, Buhalis and Mihalic (2013) posit that the tourism industry has undergone some important changes, due to the innovative developments brought about by ICT. In the available literature, ICT has been broadly used as referring to multiple communication technologies, including the wireless Internet and smartphone applications. Digital radio, television, and cameras (Shanker, 2008) are creating a new global marketplace that is more competitive by the day (Sedmak, 2016).

According to Stiakakis and Georgiadis (2011), ICT has gradually generated a new paradigm shift, altering the tourism industry’s structure, and developing a whole range of opportunities and threats. Consequently, Aghaei (2012) provide a convincing argument when they postulate that ICTs provide a powerful tool that can bring advantages to the promoting and strengthening of the tourism industry’s strategy and operations, in general. Omar (n.d.) asserts that, in the near future, countries without ICT infrastructures are unlikely to be able to keep up with the pace of tourism growth in other countries that have a significant ICT infrastructure. Consequently, the impact of ICTs in the tourism industry cannot be underestimated, since they are a crucial driving force in the current information- driven society (Paraskevas, 2005).

Existing scholarship that has focused on examining how ICT has in recent time played an important role in reshaping the tourism industry, mostly agree that ICT has provided and continue to provide a range of opportunities, for sub-sectors such as tour operators, accommodation, restaurants, travel agencies in a globalise context. Furthermore, a major contribution that has been touted for the tourism industry also includes improving productivity market and market share improve competitive advantage and business performance as well as reducing operational costs (Chandler & Munday, 2011).

Despite the advances and growth in technology that have occurred on a global scale, and the arguments made in relation to its significance, Ashari (2014) contend that few studies, as yet, have researched the impacts of ICT on tourism businesses. Consequently, the current study recognises the pressing need to close the present research gap. Regrettably, a glance at the abovementioned scholarship have shown a limited focus on countries in the global south. Consequently, the current study uniqueness is grounded in the fact that it investigates the impact of ICT on tourism businesses from a developing country perspective. As emphasised by Berne (2015), such analysis is important in the formerly colonised countries in Africa that have only recently attained independence. The countries in question are at the beginning of a transition, in terms of which tourism businesses have tended to employ ICT far less frequently than have the more developed, traditional market and customer-oriented tourism sectors. In this context, studying the impact of ICT on tourism businesses in South Africa is relevant, as it might provide useful insights into its implications for the future.

**The Interrelationship between Tourism and ICT**

According to the World Travel and Tourism Council (WTTC) (2016), tourism remains a major foreign exchange earner and a pillar industry for many countries across the globe. In terms of a holistic approach, it is a strongly interlinked discipline, with ties to other sectors of the given economy.Chen (2013)perceive tourism to be a powerful wagon for socio-economic advancement and development, and, as such, small businesses are seen to be creating capacity for people to engage with the industry. However, the past decade’s development of ICT and social media has dramatically influenced and changed how tourism and hospitality sectors produce, market and deliver their products, with their use having, unquestionably, become an essential tool and strategy. Karimidizboni (2013) states that the accelerated collision between technology and tourism in recent years has brought about indispensable changes in the understanding of the nature of tourism, with all its economic ramifications, within the tourism industry as a whole.

Werthner and Klein (1999) show the relationship between the overall ICT, using the Internet as an example, and the variables that are linked to it from a tourism perspective. Subsequently, a chain of communication is created. The overall structure of the industry has been transformed since ICT and the Internet have become the essential communication tool for the industry. Bughin (2011) present the argument that the importance of the Internet, and of online presence, is demonstrated by means of the high levels of Internet penetration.

The availability of Internet resources, and the Internet itself, offers the tourism industry opportunities to provide wider, deeper and more customised offerings than before to a pool of clients, by achieving active relationships at affordable cost, and without substantially altering the quality of information delivered (Buhalis, 2002). According to Shanker (2008), the contemporary information society has made tourism a highly information-rich and intensively structured sector, as the dispersion of ICT has huge potential impacts for tourism business. Alam (2009) states that the business world has become deeply influenced by ICT, with the application of ICT among businesses being widespread.The impact of ICT on businesses relates to the facilitation of communication among organisational stakeholders, with it serving as an effective sales channel, and providing an effective platform for engaging in marketing and other like-minded pursuits (Wang & Xiang, 2012).

In the light of the above, ICTs have become important tools in terms of an organisation’s capabilities to endure and to extend to a position of advanced competition in the global economy, and, moreover, in the digitalised economy. A nexus between tourism and ICT can, unquestionably, not be established without ICT having given organisations new managerial ways in which to retrieve information(Alam, 2009).The last decade’s development of ICT, and especially of the social media has, undeniably, reinvented how the tourism and hospitality industries produce, market and deliver their offerings, as well as communicate both internally and externally.

Munar (2012) argue that ICT has become an invaluable business tool and strategy that is capable of being used efficiently within the travel sector. However, its use does require up-to-date knowledge of the latest technological trends.

A glance at the above narrative has shown that, while tourism and ICT has become an important research theme in the last decade, analysis that focuses on such a phenomenon from an African perspective, and particularly on those who seek to unpack the impact of ICT on the tourism sector, is still regrettably scant. The current research, in part, provides a useful case study that seeks to determine Africa’s pathways in terms of tourism and ICT within an increasingly globalised context.

**NEED OF INFORMATION IN TOURISM**

Travel is a basic human nature. Technological revolutions in the last few decades and the resulting changes in the social systems go faster its intensity in the current century. Thus, tourism is presently a mass phenomenon involving every human being in the world. They need detailed information about each place they intend to visit. The specific elements of such information needs are:

1. Geographical information on location, landscape and climate, etc.
2. Information Needs in Tourism.
3. Accommodation, restaurant and shopping facilities.
4. Accessibility though air, railway, water and road and availability of scheduled means of transport.
5. Social customs, culture and other special features of the place.
6. Activities and entertainment facilities.
7. Seasons of visit and other unique features.
8. Quality of facilities and their standard prices including exchange rates.

Though the ultimate users of this information are the tourists, the actual benefits in money terms accrue to the tourism industry consisting of the destination managers and service providers. The travel intermediaries like travel agents, tour operators, and reservation system store such information in respect of each destination to service their clients and improve their business. They need the information in the easiest retrieval format so that the information needs of the clients are met as quickly as possible.

Tourists generally need both static and dynamic information. It includes details information about location, climate, attraction features, history, facilities available, etc. Information about airline, train and bus schedules, tariffs of transport and accommodation units and current availability of such facilities is considered as dynamic as they can change very frequently. These items of information have to be gathered, stored and disseminated on a real time basis. All types of reservation systems including air, railway and accommodation sectors contain such information. The tourism industry is made up of three major components:

namely,

1. Transport sector,
2. Accommodation sector
3. c)Attraction sector

**INFORMATION TECHNOLOGY AND THE TOURISM INDUSTRY COMPONENTS**

1. **Transport sector:**

The travel services, all over the world and in many parts of India are fully computerized. The travel services, such as, railways, car rental, bus/coach hire or trip and airlines tickets, all are computerized and thus, proper information management is possible. Information regarding the tourists or passengers of yesterday, today and tomorrow is now readily available through the data generated by various tourism organizations.

The various fields of travel services using computer applications:

**1a. Car Rental:**

Car Rental is a big business world over and in the metropolis and big cities. The main clients of car rental are the corporate or business travelers along with the tourists wanting better service and comforts while travelling. The car rental business is fully computerized abroad, especially in America and Europe, and the Information and Reservation System, such as that of Amadeus, Sabre, etc. are being used for car rental and information.

**b. Railways:**

Railways is the most favoured form of travel. The computerization of the railway services was introduced a few years back. The software package used in ticketing and other customer services has been specially designed and developed for Railways. The computerized system broadly centers around the PNR (Passenger Name Report) number provided on each ticket of the customers. Each one of these PNR number is unique and identifies not only the person travelling on\ the ticket along with the passenger’s personal details but also the train and the destination of travel. Now a person can book tickets well in advance of the date of travel and get reservation on the spot. The computerized ticketing system has also shown way to computerized customer service facilities.

1. **Airlines:**

The airlines have seen the maximum computerization in the travel segment. Computer Reservation System (CRS) is widely used to book tickets in all the airlines. The CRS helps in generating a higher rate of occupancy and also provides a better scope of marketing and distribution to the airlines. The increasing popularity of air-travel globally, gave rise to the need of a better and efficient distribution mechanism. In the 1970s, the first Information and Reservation System (IRS) was developed in U.S. This system provided both information of tourism industry, including that of airline industry and also provided CRS for direct booking on the airline of choice.

**b. Accommodation sector-**

The structure of the tourism industry meant that businesses in the accommodation sector lacked direct access to travelers and consumers. E-business has changed the way firms in this sector can do business. In fact, groups in the hotel sector are developing communications networks designed to compete with information about availability, prices, and related services for Airlines, Car Companies, Hotel Companies, Rail Companies, etc. and through which reservations can be made and tickets can be issued. A GDS also makes some or all of these functions available to subscribing travel agents, booking engines, and airlines.

**c. Attraction sector:**

In the case of attractions both manmade and natural attraction owners need to communicate or inform their customers and potential customers about their production. Information about the kind of attraction, where they are located and how to get there is of vital importance. The attraction owners particularly the national tourist offices discharge their duty of promoting their country’s tourist attractions using the information.

**Conclusion**

The tourism industry is widely acknowledged and accepted to be one of the largest and fastest growing economic sectors in the world. Thus, the sector cannot be excluded from the current upsurge in technology and its huge impacts. Existing scholarship has underpinned the importance of incorporating ICT into business activities for ventures to succeed in terms of competitiveness and profitability, insofar as the contemporary global economy is concerned. Empirical research has shown that ICT has both indirect and strong positive potential for the performance of firms.

**Recommendations**

The aforementioned has been confirmed to be especially true in the case of transitional countries, where ICT is used much less than it is in more industrialised countries.

1. Therefore, for tourism businesses to increase their competitive position, the conclusion is drawn that they should incorporate ICT in their business practice so as to increase their performance.
2. As a result, tourism enterprises need to understand, incorporate and utilise ICT systems strategically in order to serve their target markets; improve their efficiency; maximise their profitability; enhance their services; and maintain their long-term profitability.
3. While the above needs to be done by tourism enterprises, it would be myopic to neglect the role that government authorities should be required to play. Certainly, tourism authorities should continuously develop and improve upon the current e-tourism infrastructures in order to keep up with the increasing competitiveness in the sector, so as to enable South Africa, as a whole, to benefit from the global benefits to be provided by the tourism industry.

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