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Indian tourism and the role of ICT

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Abstract

The Information Communications Technologies (ICT) plays a key role in tourism, travel and hospitality industry. The Integration of ICT in the tourism industry is an essential for success of tourism enterprise. ICT facilitates an individual to access the tourism products information from anywhere any time. Tourism enterprises can also reach the targeted customers across the globe in a single click on the keypad after emergence of mobile computers, web technologies etc. The purposive sample of 112 managers of tourism, travel and hospitality enterprises in India were surveyed through a questionnaire with the Managing Directors, Directors, General Managers, Team Leaders and Senior Managers. The present study explores the business development, revenue generation, minimization of cost and reaching the customers. The paper explains the gaps between tourism business and ICT influence and suggests measures to fill the gaps in tourism enterprises. The strategic goal is to integrate ICT with tourism that will enable more accessibility, visibility of information, availability of variety of products and satisfaction.

Keywords: Tourism; e-tourism, digitalization

Introduction

Tourism in India is important for the country's economy and is growing rapidly. The World Travel and Tourism Council calculated that tourism generated ₹16.91 lakh crore (US\$220 billion) or 9.2% of India's GDP in 2018 and supported 42.673 million jobs, 8.1% of its total employment.

Digitization essentially refers to the process of converting analog information into its digital form. Digitalization enhances the efficiency of working by improving the operations of business with the help of digitized data and information. The current emphasis of Government of India is on digitalization of business and economy (Keerthan & P. S., 2018) [20]. The policies such as Digital India aim to push the usage of electronic means in economy to improve the efficiency and maximize the productivity. The impetus to make digital payments more attractive for the objective of making the economy less-cash during the demonetization period, reducing the service charges on digital payments, enabling the application-based work for various services like Aadhaar enrolment, passport application, filing and verification of income tax returns are some of the initiatives taken by government towards the paradigm shift on reaping the benefits of digitalization by digitizing the information and data. Information communication technologies (ICTs) have been transforming tourism globally. The ICT driven re-engineering has gradually generated a new paradigm shift, altering the industry structure and developing a whole range of opportunities and threats. ICTs empower consumers to identify, customize and purchase tourism products and support the globalization of the industry by providing tools for developing, managing and distributing offerings worldwide. Increasingly ICTs play a critical role for the competitiveness of tourism organizations and destinations. ICTs are becoming a key determinant of organizational competitiveness. The enhancements in ICTs' capabilities, in combination with the decrease of the size of equipment and ICTs' costs, improved the reliability, compatibility and interconnectivity of numerous terminals and applications. ICTs provide a powerful tool that can bring advantages in promoting and strengthening the tourism industry's strategy and operations.

Scenario of global tourism industry

Amongst the various sectors of the global economy, the tourism industry is one of the fastest growing. It accounts for more than one third of the total global services trade.

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International tourist arrivals have grown by 4.3% between 1995 and 2008. In recent years, air transport has increased more than surface transport and the expansion of low-cost air travel has greatly altered the industry in many regions. Figure 1 provides statistics to demonstrate the visitor objectives characterizing inbound tourism in 2011.

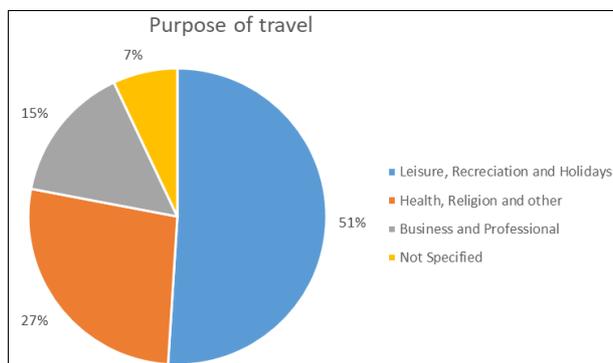


Fig 1: Trends in Tourism Industry in India

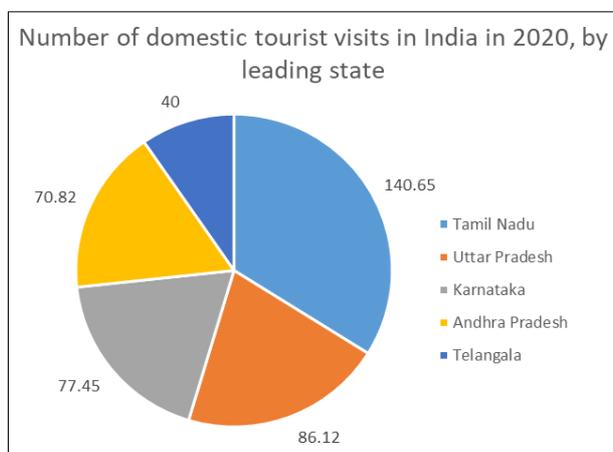


Fig 2: Number of domestic tourist visits in India in 2020, by leading state

The Role of ICT in Tourism

Effective and high-speed ICT infrastructure and software applications in the tourism and hospitality industry are crucial for tourism development. ICTs allow customer - management relations and supply chain management to be combined into a single source that facilitates a variety of operations - product selection, ordering, fulfillment, tracking, payment and reporting to be performed with one easy-to use tool. ICTs ultimately cut costs by enabling the provider to be in direct contact with the consumer and also impact employment through the need for required maintenance of ICT equipment. Management within tourism companies use ICTs to undertake a range of tasks that enhance the efficiency of employees in the workplace, notably online reservations.

The development of ICTs has also led to changes in demand and supply. A higher demand for flexible, individualized options and quality of information has personalized leisure and tourism behavior, a consequence of increased ICT use. Through new technology and social and economic ratings (e.g., social media platforms like Facebook, Twitter, blogs) customers have the ability to share information and research ratings on destination, quality of service in hotels and restaurants and environmental and social conditions. Number of hotels (e.g., Marriot Hotels and Resorts, Ritz

Carlton Hotels, Hyatt Hotels and Resorts) have strengthened their brand image and communicate directly with their customers by posting links to a press release or promoting new package through Twitter.

Review of Literature

The integration of Information and Communication Technology (ICT) and Tourism is essential for the development of Tourism Industry, The implications of ICT on the Tourism sector is widely studied. The benefits of ICT associated with the tourism sector include fast diffusion of information, reducing the distance between countries and increased transparency. Hojaghan and Esfangareh (2011) [15] studied the effects of digital economy on tourism industry. The study highlighted the acceptance of technologies in the industries such as airlines, hotels, car rentals, tour and travel operators and the resultant shift in their way of operations. The study suggested that standards should be set up for effective implementation of digitalization in the industry. Milović (2012) [25] pointed the development of electronic customer relationship due to digitalization in the hospitality sector. The study analysed the impact of websites, social media and other electronic marketing campaigns on the promotion of hotel and performance of business. Aramendia-Muneta and Ollo-Lopez (2013) [4] analysed the impact of ICT on productivity and competitiveness of travel agency firm. The study concluded that although digitalization has less impact on competitiveness and increasing productivity, it still has revolutionized the market share of the travel agencies. Egger (2013) [11] assessed the potential prospects, benefits and challenges for near-field communications in tourism industry. The study suggested use of consistent business models in combination of push and pull market strategies to enable diffusion of technology in the industry. Chang and Jang (2014) [7] investigated the use of mobile phones by the young and literates in availing smartphone booking services. The study concluded that price level, relative advantage and complexity significantly impact booking by smartphones. Tsokota, Solms, and Greunen (2014) [29] examined the current usage and adoption of information and communication technology in tourism sector in Zimbabwe. The study identified lack of government policy, ICT legislation, interrupted network supply, commitment from organizations are some of the hindrances in adopting technology in tourism industry. The study suggested implementation of strategy at national level to diffuse technology in tourism sector. Bilghan and Nejad (2015) [5] mentioned that service sector has played an important role in the development of various industrialized economy. The study identified the trends such as the concept of sharing economy, which has been emerging in the hospitality sector, courtesy to the innovation through the digitalization. The study also points out that now consumers themselves have been more demanding for digitalization. Jaremen (2016) [17] discussed the usage of ICT in hospitality industry, particularly in hotel industry. The study suggested that ICT is applied in hotels to improve the service quality. Also, capital requirement was found to be major barrier in implementing ICT in hotel industry. The study by Maráková and Medved'ová (2016) [23] showed that decrease in number of tourists, length of stay and decreasing sales have forced the market players of tourism industry in Europe to innovate in terms of their products as well as the way they cater their customers. The study concludes that there is need for

carrying out more research about innovation in tourism and hospitality sector. Further, the focus of the policies designed should be on medium and small-scale enterprises in the tourism industry. Rajamohamed (2016) ^[28] studied the role and importance of ICT and its impact on tourism industry in particular. The study was conducted to determine how ICT affects the hospitality sector and the viewpoint of managers about the role of ICT in the tourism and hospitality industries. Alexis (2017) ^[2] through case study model examined the impact of digitalization and automation in tourism industry. The study suggested that instead of resisting digitalization, stakeholders must embrace it. This would help in increasing customer satisfaction and would also open future research prospects in the field. Dhingra (2017) ^[9] studied the impact of digital revolution through schemes such as Digital India on the tourism industry and listed out the benefits that digitalization has provided to the industry. By providing benefits such as easier payment services, more informed travel choices and developing new age travel trends, digitalization has transformed the way one travels. Greenwood and Quinn (2017) ^[13] examined the influence of digital amnesia and its influence on future tourist. The study highlighted that digitalization has influence on decision-making by tourists, the way marketing messages are conveyed to them and on the way the tourist experience can be memorized. Härting, Reichstein, Härtle, and Stiefl (2017) ^[14] conducted an empirical study in Germany to find out the potential benefits that digitalization could offer to the tourism industry. The study also discussed how far the tourism industry has come in respect to digitalization and how much more it needs to do. The study also identified the main drivers of digitalization in tourism industry with the help of structural equation modelling technique Matteo, Evangelista, and Ferrari (2018) ^[24] examined the impact of digital endowment and developing telecom infrastructure on domestic tourism demand in Italy. The study concluded that digital endowment positively impacts domestic tourist inflow. Increased level of literacy and level of consumer income too have positive impact on domestic tourism industry. Adeola and Evans (2019) ^[1] studied the impact of mobile phones and internet on tourist inflow in Africa. The study showed a bi-directional causality relationship between internet usage, squared internet usage and tourism; unidirectional causality between mobile penetration and tourism and bidirectional causality between squared mobile penetration and tourism. Kumar and Kumar (2019) ^[22] studied the effect of ICT on tourism demand. The study concludes that destination income positively impacts tourism demand but in short-run. Also, ICT had causality impact on tourism demand as conclude by study.

Research Objectives

In this study, an attempt has been made to address the various factors that have an impact on or are impacted by digitalization in tourism industry. A hierarchical relationship is then established among the factors to further develop flexible strategies for digitalization. Following are the objectives of this study:

1. To develop analyze the impact of digitalization in tourism industry.
2. To examine the benefits of digitalization on different stakeholders in the tourism industry with particular focus on the tourists.

Research Methodology

To address the objectives of the study both primary as well as secondary data are used. The secondary data sources include previous research on the topic, published government reports, newspaper articles, online reports and journal articles. A questionnaire consisting of open-ended questions was prepared and responses from 100 travellers were collected using the snowball sampling technique.

Impact of Digitalization on Different Stakeholders in Tourism Industry in India

The development of tourism industry involves crucial impact of various stakeholders. It includes tourists, who are the most important and primary stakeholder in the industry. They constitute the demand side of the industry. The hoteliers and restaurant owners act as supplier to the tourists. Travel agencies acts as middlemen who connect the demand side with the suppliers. At last are the planning agencies at the regional, state and national level that formulate and execute tourism-related policies. For sure, digitalization has impacted each and every stakeholder in the industry. On the one hand, it has revolutionized the experience of tourists, while on the other side it has changed the operation of various stakeholders in the industry. Some of the way's digitalization has benefited the various stakeholders are listed below-

Tourists

The key stakeholders who are most crucial to the development of tourism industry are the tourists. Every step that other stakeholders take is correlated with increasing the satisfaction of the tourists so as to increase their number. Digitalization offers potential benefits to the tourists in multiple ways. In the era of Geographical Information System, it has become much easier to access the information on weather trends of a particular place for the upcoming days. This ensures that tourists do not have to worry about the possibility of bad weather during their trip. Tourists therefore can screen destinations on the basis of temperature trends. Reservation for flights and trains as well as booking for hotels can be made easily with the help of various applications. This leads to saving of a lot of time for the tourists. As per reports, Dubbudu (2016) ^[10], it is estimated that it takes only 35 seconds to book a ticket on IRCTC website. According to government reports, Dubbudu (2016) ^[10], around 60 per cent of ticket booking is done online which has also increased the number of overall tickets sold. Also, the facility of online check-in ensures time saving and eliminate hassle of reaching airport early. On daily basis one receives numerous offers from websites such as Yatra.com, Make my trip or even from food delivery platforms like Swiggy and Zomato. These offers are personalized and it is because of digitalization that the companies are able to make such offers to the tourists. The benefit of sharing economy cannot be fully exploited in case of classical booking system, but digitalization has made it possible to execute the plans so as to retrieve the benefits which otherwise could not be received. With all the information being available at ease and accessible with respect to hotels, tourism attractions, guides and other stakeholders, and their ratings, it is easier for tourists to make decision. Also, now tourists can search for what is famous food of that area. Thus, exchange of information is easier as well as efficient due to digitalization. Various companies like Matoke Tours and Thomas Cook allow tourist to take a virtual tour to the

destination. In case of confusion, these tours can act as the deciding factor for selection. The latest trend in virtual reality (VR) is Space Tourism. Also, VR is being adopted in hotel industry such as by Shangri-La and Marriott to provide additional value to the customers.

E-Tourism - Demand and Technology-driven Revolution

The Internet revolutionizes flexibility in both consumer choice and service delivery processes. Customers have become much more sophisticated and discerning. This is because they have experienced high levels of service and because the standard of living has grown considerably. As a result, tourists have become more demanding, requesting high-quality products and value for their money and, perhaps more importantly, value for time. This reflects people's shortage of time. Having been exposed to several tourism products and destinations, experienced, sophisticated; demanding travelers rely heavily on electronic media to obtain information about destinations, as well as to be able to communicate their needs and wishes to suppliers rapidly.

Conclusion

From the analyses, we may conclude that the ICT plays a major role in the development of Tourism and therefore is an inevitable part of tourism industry's expansion. Most of the hotels & tourism organizations need to be upgraded with the latest ICT trends. Travelling is one of the important things in tourism so on-line reservations, particularly for accommodation, plays an important role. More awareness must be done on process of information and training is needed in India for ICT at various levels of tourism, travel and hospitality enterprises. So, tourism education in India should focus on ICT trends. India should work on penetration of ICT into the masses, which are essential for its success. One may note that this is the most efficient way to do business in tourism industry. In this line, tourism organizations should provide more services to customers which is easily access to everyone in their places. The Government of India possesses huge amount of responsibility in streamlining the usage of ICT amongst stake holders (B to B) and clientele (B to C). The Tourism websites should be upgraded and updated continuously. There is a need of more facilities for B2C as well as B2B for mode of payment through mobile phones for their bookings. It is essential that the current information and communications technologies should be updated, upgraded and seamless integration both internally and externally should be done to improve the tourism business operations. The integration of ICT in tourism would benefit both, service providers and customers bringing together other stakeholders as well, on a common platform. The selection of right information communications technology tool is crucial to match the customer requirements with service dimensions. The proliferation of technology throughout tourism distribution channels and professionals use the new tools in order to retrieve information, identify suitable products and perform reservations. ICTs integration provides a powerful tool that brings advantage in promoting and strengthening tourism industry.

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