

THE AGILITY OF INDIA'S TOURISM INDUSTRY ON THE HEELS OF MODERN TECHNOLOGY – ICT IN

FOCUS

¹Brako Prince, ²Dr. Sebastian T. Joseph

¹Sam Higginbottom University of Agriculture, Technology and Sciences

²Sam Higginbottom University of Agriculture, Technology and Sciences

ABSTRACT

Technological advancement in contemporary eras has rendered tourism enterprises across the globe more innovative than ever before. There has been a paradigm shift in the management of contemporary organizations related to the tourism industry as a result of the more established relationships between business and technology. Information, Communication and Technology (ICT) tools are now indispensable to the tourism industry as ICT systems are being rapidly diffused throughout the industry allowing none of the players to break free from its impacts. The Tourism industry in India on the heels of ICT can be rendered agile for the benefit of the Indian economy since tourism affects everything in a country.

This study is therefore set into motion to analyse the nexus between ICT and tourism, to investigate the role ICT plays in tourism operations and lastly to identify the effect of ICT based tourism on the Indian economy. The design used for this study was that of the exploratory research design and data was collected for this research using secondary sources. It was concluded according to this study that the Indian tourism industry can certainly be developed more swiftly and progressively if ICT tools and modules are streamlined in an effort to harness its benefits and advantages for the overall advancement of the Indian economy since tourism aids economic developments.

KEYWORDS: Agility, Heels, ICT, Social network, Tourism.

INTRODUCTION

The tourism industry in India has a huge potential to rub shoulders with the tourism performances of other countries, in particular, the 'first world' countries. It can be asserted that the right input mix of tourism operations can give impetus to the sustainable growth and development of the industry. Ostensibly, among the various inputs mix of tourism operations is the immense contribution that modern technology or Information Computer Technology, hereafter referred to as ICT, can exert on the industry to make it more attractive, interactive, stress-free and economically viable. Hence, the

timely and urgent need to turn attention to ICT as an effective tool to accelerate the growth and development of the tourism industry in India.

Information and Communication Technologies (ICT) is the generic term for the high-tech advancement in the production, analysis, storage, search, distribution and use of information. ICT includes a combination of hardware, software, telecommunications, Netware, groupware Humanware (Jamsandekar, 2013). ICT enables efficient data processing & communication, organizational assistance – it provides gigantic capabilities for consumers. ICT has played an exceptional responsibility for the development of modern tourism. It has provided new tools and enabled new distribution channels, thus creating a new business environment. ICT tools have facilitated business operations in the industry by networking with trading partners, distribution of product services and providing information to consumers across the globe (Sadr, 2013). On the other hand, consumers are using services online to obtain information and plan their trip and this makes Information, and for that matter ICT, the key element in the tourism industry.

Tourism is an information intensive industry and Information and Communication Technology is a key driver for developing countries in organizing and marketing their tourism products. With the help of ICT applications, tourists can view information regarding a destination, book accommodation and reserve tickets for train, flight or other forms of transport and at the same time pay for all these without leaving their homes (Mahajan et al, 2011).

OBJECTIVE OF THE STUDY

- To establish the nexus between ICT and tourism.
- To investigate the roles ICT plays in tourism operations.
- To identify the effect of ICT based tourism on the Indian economy.

LITERATURE REVIEW

One of the major limitations of all of the information distribution channels in the tourism industry is that they, for the most part, ultimately flow through the GDSs (Global Distribution System). Of course, this has several implications in terms of cost, audience and information content. As a result, many tourism suppliers would like to bypass the GDS route and use electronic distribution to sell directly to the consumer (Alireza et al, 2013).

With the phenomenal growth in the use of the Internet and the World Wide Web both in the homes and in the workplaces and the opportunities presented by falling hardware and communications costs, the potential now exists for tourism suppliers to both distribute information to and process reservations from customers directly. ICT can support or enable such strategies. According to Gupta (2001), tourism is acknowledged to be very information intensive. Tourists need information before

going on a trip to help them plan and choose between options, and also increasingly need information during the trip as the trend towards more independent travel increases. In modern societies, time has become a scarce commodity. Therefore, for many consumers, their annual holiday represents a major emotional investment that cannot easily be replaced if something goes wrong. Therefore, since travellers cannot pre-test the product or easily get their money back if the trip does not meet up to their expectations, access to accurate, reliable, timely and relevant information is essential to help them make an appropriate choice. It is notable that the greater the degree of perceived risk in a pre-purchase context, the greater the consumer propensity to seek information about the product (Gupta, 2001).

At present tourism is one of the fastest growing industries across the world. Tourist arrival all over the world grew at an average rate of 4.3% per annum and is contributing significantly to the GDP growth. World Tourism Organization (WTO) predicts one billion international arrivals in the year 2010 and has forecasted that by 2020 international tourism arrivals to the Asia Pacific region will experience more than 400% growth from 105 million in 2002 to 438 million in 2020 (Gupta, 2008). Tourism is primarily a service industry as it does not produce any goods but offers services to various classes of people. Perhaps tourism is one such rare industry, which earns foreign exchange without exporting national wealth (Shanker, 2008).

As clearly stated by Akehurst (2008), ICT is one of the most useful and effective tools for managing the external environment of the tourism industry. Several social media networks like facebook and twitter can be used to interact with the consumers. On the other hand, interaction with the consumers can also be done by using other video calling tools like box mail, Hotmail, Gtalk, skype etc. The consumers need to be updated regarding various facilities and services that can help in maintaining customer relations (Carvão, 2010). So it can be said that ICT is one of the effective measures for achieving the goals and objectives of an organization and tourism-based organizations are no exceptions (DiPietro, 2010).

In the present scenario, most of the hotels use the ICT facilities in order to input the documents of the customers at the time of check-in. It is known that the use of smartphones has been extensive in recent times and it is also used to find hotels and in various locations and it also allows direct access to the required information by the users. The consumers can also make payments and book the rooms from the device (Chia, 2011).

THE INROADS OF ICT IN TOURISM

According to Mahajan et al. (2011), ICTs are entering in almost all of the day-to-day activities of human beings and in the same manner, it has also entered in the tourism industry all over the world,

the Internet and development of ICTs have revolutionised the entire tourism industry, generating new business models, changing the structure of tourism distribution channels and re-engineering all the traditional processes.

As part of the inroads ICTs have had on tourism, Davcev and Gomez deliberated on the novel applications of technology, and experience in applying recent ICT research advances to practical situations (Davcev and Gomez, 2010). Sigala et. al. publishing nearly fifty research articles served as a global corpus of state-of-the-art ICT Travel and Tourism research (Sigala et. al. 2007). O'Connor et. al. has presented cutting-edge researches on the topic of "e-Tourism: The View from the Future" (O'Connor, et al 2008). The ENTER 2008 conference papers embraced a wide range of cutting-edge areas presently motivating research and development activities in the field of IT and travel and tourism such as online communities, user-generated content, recommender systems, mobile technology, platforms and tools, website optimization, electronic marketing, ICT and tourism destinations and technology acceptance (Wolfram et al 2009). Gretzel et. al. addressed advances in mobile tourism services, online destination marketing, GPS-based tracking of tourist behaviours, decision support tools, website design and evaluation, online travel distribution, ICT adoption in tourism and hospitality businesses, virtual experiences, online information search, Web 2.0, social media marketing, and the role of ICTs in sustainable tourism development. It shows a high diversity in disciplinary approaches and methodologies used to explore the intersection of tourism and technology (Gretzel, et al 2010). Golding et. al. also argued that small and medium-sized enterprises (SMEs) play a pivotal role in national and regional economies. These companies play a major part in sustaining domestic and regional economic growth and are important agents for alleviating poverty in developing countries. It has been suggested that the use of ICT increases richness, reach and the ability of local SMEs to participate in the digital economy (Golding et al 2008). The role of self-efficacy to computer novices through a longitudinal study is discussed by Jolie et. al. (Jolie et al 2005). Jennifer et. al. examined how the ICT and Internet gradually change the tourism industry structure in China; how important such changes are; and to where such changes will lead China's tourism industry. This exploratory research is conducted based on information collected from several tourism organizations, such as airlines, hotels, tour operators, visitor attractions and the tourism authorities within China (Jennifer et al 2003). Buhalis and Connor have identified a number of key changes in ICT that gradually revolutionize the tourism industry. E-tourism and the Internet, in particular, support the interactivity between tourism enterprises and consumers and as a result, they reengineer the entire process of developing, managing and marketing tourism products and destinations (Buhalis et al 2005).

NEED FOR ICT BASED TOURISM IN INDIA

According to Gondkar et al (2014), the introduction of ICT in tourism has the potency to cause a total transformation and upliftment of the tourism industry in India. It is capable of leading a new digital age of information. The ICT based tourism in India can create new global platforms, and more players could be involved due to the introduction of ICT. ICT has the ability to reach global customers, obtain instant market information and conduct electronic business transactions. ICT based tourism is an avenue of accumulating capital for major tourism projects in the country. It connects new business opportunities, increases trades and investment. It shows that there is a positive relationship between ICT based tourism and economic development and has the ability to impact the economy of India positively. Today, tourism is among the most important application domains on the World Wide Web. Estimates suggest that approximately 33% of Internet transactions are tourism-based (Strassel 2014). In the coming decades, it is expected that tourism demand would shift from mass tourism to more tailor-made customized tourism for the individual traveller. The Internet has dramatically changed the way in which consumers plan and buy their holidays. It has also affected how tourism providers design, shape, promote and sell their products and services. The market for tourism relies heavily on information. Since the emergence of the Internet, travel information search and booking has been one of the top five most popular online tasks in India (Gondkar et al, 2014). Internet and strategic implementation of IT are now critical for companies to survive in the global economy. However, not many efforts are made to study e-tourism developments in India and other developing countries.

Giant tourism companies in India have reacted to these new opportunities and developed e-commerce applications and own global reservation and distribution networks which interconnect tourism distributors with tourism suppliers to sell their products and services. Unfortunately, most tourism SMEs have traditionally avoided the rather costly electronic distribution networks and established their own Internet presence, for advertising and marketing their products and services. The ICT & Tourism Initiative aims at facilitating SMEs to interconnect via big distribution networks at affordable costs with all relevant market players and thus helping them to participate in the digital value chain. As India is a vastly populated country, the scope for the growth and the development of this industry with the help of the ICT is immense. But the tourism and the hospitality industry in India is in a budding stage which requires a special attention as this industry is the largest service industry in the country (Sanchita, 2014).

KEY FACTORS FOR APPLYING ICT IN TOURISM

- IT education and training for policymakers, managers and other players in the tourism industry;
- Integration of various sectors like transport, lodge etc.;
- Technical infrastructure;
- Human infrastructure, which includes skilled people, vision and management;
- Legal Infrastructure;
- Regulation of telecommunication providers;
- Subsidies for Internet service providers;
- The legal framework for online advertisement or official endorsement for online marketing;
- ICT culture;
- Creation and sustainability of ICT environment;
- Maintenance and updating of websites;
- ICT training of staff from different levels;
- Building a computer network linking all related sectors

PROSPECTS OF ICT BASED TOURISM IN INDIA

As emphasized by Bethapudi (2015), 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 in 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 inter-connectivity of numerous terminals and applications (Bethapudi, 2015). ICTs can provide a powerful tool that can bring advantages in promoting and strengthening the tourism industry's strategy and operations in India. ICT can play a crucial role in the tourism sector to further enhance India's guiding pillars of authentic philosophy to pace smoothly. With the vast prospects ICT can have on tourism in India, the sector being the major source of employment creation and income generation, policymakers should be focusing on various strategies for improving the tourism industry with the developments of advanced ICT information but the development should be within the core boundary of sustainable development goals (Namgyel, 2016).

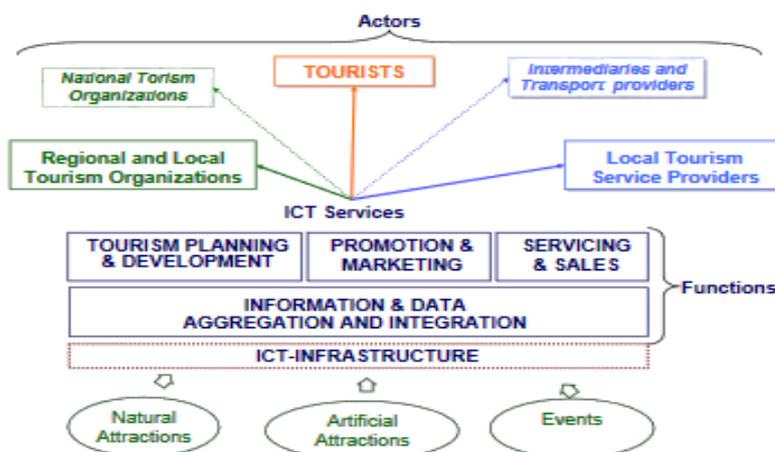
Tourism Products Distribution Channels – ICT as a Direct Contributor



Source: European Commission, 2017.

THE VIRTUAL INCOMING AGENCY MODEL (VIA)

Specifically, the virtual incoming agency is conceptualized as the system in charge of the promotion and coordination of an integrated tourism system within a tourism destination - including the creation of the necessary cultural, organization and technological conditions to ensure its effective implementation - that relies on ICTs to undertake its functions. It is an ICT-enabled and ICT-native model for the management of tourism destinations (Claudio et al, 2009).



Source: Claudio et al, 2009.

As it can be seen from the figure above there are three main categories of actors involved in the virtual incoming agency:

1. Tourists, including same-day visitors, but also residents interested in organizing their free time in the surroundings.
2. Enterprises, mainly all the local providers of tourism and tourism-related services, such as hoteliers, restaurant owners, entertainment service providers, travel agencies, local transports and other complementary services providers within the destination. Also, intermediaries and transport providers (such as airlines, rent-a-car or cruises) that are usually outside the destination region can be targeted by some of the virtual incoming agency services, for example the creation of personalized packages to be sold to their customers or the provisioning of local reliable tourism information for their catalogues and brochures.
3. Institutions, in particular, local and regional tourism authorities. For their functions in the coordination and promotion of local tourism offerings, these actors are the main beneficiaries of virtual incoming agency services. Institutions include also other local and regional authorities concerned with tourism activities (for example regional investment boards or infrastructures/environment authorities) and even national ones (for the production of statistics useful for their planning and monitoring functions).

METHODOLOGY

The design used for this study was that of the exploratory research design which aimed at delving deeper into the tourism industry in India and how ICT has contributed to the industry. Data was collected for this research using secondary sources. Thorough studies were conducted on existing literature by reviewing textbooks, related literature, articles, journals and online resources and the seaming trends were identified to predict the future prospects of the industry.

CONCLUSION

ICT is revolutionising the distribution and sales of travel and tourism information. It provides direct access to end consumers but is also a tool for business to business communication. The internet is now the preferred source for researching and planning travel. It has overtaken travel agents and is well of guidebooks and newspapers/magazines. The revolution in ICT based tourism has profound implications for economic and social development. Contemporary information society has made Tourism a highly information-intensive industry as ICT has a potential impact on tourism business. The role of ICT in the tourism industry cannot be underestimated and it is a crucial driving force in the current information-driven society. The role of ICT tools in the tourism industry for marketing,

operation, and management of customers pervades almost all aspects of tourism and related industry.

The Indian tourism industry can certainly be developed more swiftly and progressively if ICT tools and modules are streamlined in an effort to harness its benefits and advantages for the overall advancement of the Indian economy since tourism aids economic developments.

REFERENCES

Akehurst, G. (2008). User-generated content: the use of blogs for tourism organisations and tourism consumers. *Service Business*, 3(1), pp.51-61.

Alireza, F., Mahmood K., Mehdi R, Jamshid A, Farrokh L. H. (2013) E-Tourism: The role of ICT in the tourism industry. *European Online Journal of Natural and Social Sciences*. Vol. 2, No.3.

Bethapudi A (2015) Role of ICT in Promoting a Rural Tourism Product. *J Tourism Hospit* 4: 154. doi:10.4172/21670269.1000154.

Buhalis D, O'Connor P. (2005). "Information Communication Technology Revolutionizing Tourism", in the *Journal of Tourism Recreation Research*, Vol. 30(3), pp.7-16, 2005.

Carvão, S. (2010). Embracing user-generated content within destination management organizations to gain a competitive insight into visitors' profiles. *WW Hospitality Tourism Themes*, 2(4), pp.376-382.

Claudio, P., Giuseppina P. (2009). Getting the Benefits of ICTs in Tourism Destinations: Models, Strategies and Tools. [Online] from:

https://www.researchgate.net/publication/50367379_Getting_The_Benefits_Of_ICTs_In_Tourism_Destinations_Models_Strategies_And_Tools [accessed Jun 29 2018].

Davcev D, Gomez J. M, (2010), "ICT Innovations 2009", ISBN 978-3-642-10780-1, 2010 Springer – Verlag Berlin Heidelberg, 2009.

DiPietro, R. and Wang, Y. (2010). Key issues for ICT applications: impacts and implications for hospitality operations. *WW Hospitality Tourism Themes*, 2(1), pp.49-67.

Golding P, Donaldson O, Tennant V, Black K. (2008). "An Analysis of factors affecting the adoption of ICT by MSMEs in rural and urban Jamaica", in the proceeding of European Conference on Information Systems 2008 (ECIS 2008), Galway, Ireland June 9-11, 2008

Gondkar J., Vikhe, G. (2014). ICT Based Tourism:-Need of Today's World. ISSN 2319–5479, Volume-3, Issue–2.

Gretzel U, Law R, Fuchs M, (2010). "Information and communication technologies in tourism 2010", ISBN 978-3-211-99406-1, Springer Wien New York, 2010.

Gupta, S & Bansal, S.P. (2001). *Tourism Towards 21st Century*, Deep and Deep. New Delhi.

Gupta D., (2008), "Adoption and the Use of ICT in Indian Tourism: Interventions for the top tourist destination of India, in the proceedings of Tourism in India – Challenges Ahead", 15-17 May 2008 IIMK.

Jamsandekar, W. A. (2013). Role of ICT in Tourism. International E-journal of Ongoing Research in Management and IT.

Jennifer X. M, Buhalis D, Haiyan S., (2003). "ICTs & Internet Adoption in China's Tourism Industry", in the International Journal of Information Management, Vol. 23, No. 6., pp. 451-467, December 2003.

Jolie L, Lee Matthew K. O., Wong Y. C., Fung John Y. C., (2005), "A Digital Inclusive Society Study – Understanding The Social Impact Of Information Communication Technology (ICT) Usage In China", in the proceeding of European Conference on Information Systems 2005 (ECIS 2005), Regensburg, Germany May 26-28, 2005.

Mahajan, K.B, A.S. Patil A.S, Gupta R.H, Pawar B.V. (2011). Use of Information and Communication Technology in the Tourism Industry of Maharashtra and Goa States of India: A Survey. International Journal of Hospitality & Tourism Systems Volume 4 Issue 2, 2011 ISSN: 0947-6250.

O'Connor P, Wolfram H, Gretzel U, (2008). "Information and communication technologies in tourism", ISBN 978-3-211-77279-9, Springer Wien New York, 2008.

Sanchita Paul. (2014). ICT for Tourism and Hospitality – India Has Huge Opportunities. [Online]. Available at <https://www.mapsofindia.com/my-india/travel/ict-for-tourism-and-hospitality-india-has-huge-opportunities>. Accessed in August 2018.

Sadr, S. M. (2013). The Role of ICT in the Tourism Industry on Economic Growth: European Journal of Business and Management.

Shanker, D., (May 2008), "ICT and Tourism: Challenges and Opportunities, in the proceedings of Tourism in India – Challenges Ahead", IIMK, 15 -17 May 2008.

Sigala M, Mich L, Murphy J, (2007), "Information and communication technologies in tourism 2007", ISBN 978-3-211-69564-7, Springer Wien New York, 2007.

Stoyanova, T. and Boycheva, N. (2010). The Role of ICT in the Tourism Industry: Innovations and Challenges. [Online] Available at <http://www.ecom45.uma.es/images/stories/results-documents/final/Result14ECom45PaperICTandTourism.pdf>. Accessed in August 2018.

Strassel, K. A: E-Commerce can be Elusive. In Gondkar et al (2014). ICT Based Tourism:-Need of Today's World. ISSN 2319–5479, Volume-3, Issue–2.

Wolfram H, Gretzel U., Law L., (2009). "Information and communication technologies in tourism 2009", ISBN 978-3-211-93970-3, Springer Wien New York, 2009.