International Journal of Hospitality & Tourism Systems
Volume 8 Issue 1 June 2015
ISSN: 0947-6250 Print

Hospitality & Tourism Systems

A New ICT based Business Model for Tourism Industry for the Maharashtra and Goa States of India

K. B. Mahajan*, A. S. Patil, R. H. Gupta***, B. V. Pawar******

Abstract *Tourism is the act of travel for the purpose of recreation. It is an industry of moving, housing and entertaining people. It is one of the world's largest service industries and fastest growing economic sectors in terms of generating gross revenue as well as earning of foreign exchange. Nowadays the Internet and the developments in ICTs have revolutionized the entire tourism industry all over the world. It provides new tools and enables new distribution channels to create a new business environment. In order to increase the efficiency and effectiveness of transactions, to reduce the cost of transactions and to provide the one stop services to the customers, tourism market needs a new ICT based business model to grow tourism industry in the states of Maharashtra and Goa. In this paper we propose a new ICT based tourism business model that includes the modern tools of ICT which affects the tourism business as a whole.*

Keywords: *Tourism, Maharashtra, Goa, Information Communication Tools, Business Model*

INTRODUCTION

Information Communication Technology (ICT) is having a deep impact on the tourism sector all over the world (Deepthi, S. 2008). It is one of the most deeply affected industries amongst all other industries. It has provided several tools that are useful for the promotion and regular operations of the tourism business. ICT has enabled the connectivity between different sections of the industry i.e., various actors of tourism, to have trade with each other which in turn saves time and energy. There has been a drastic change in the way things are executed for instance, exchange of information, distribution of products and various services etc. All the services offered by ICT are available at the finger tips of the user. The tourists are also given the opportunity to remotely access and communicate with various tourism agencies to get a better deal. It enables businesses to integrate business activities or functions. Here, we have spelt out the need of an ICT based business model for the states of Maharashtra and Goa, which will support integration of information in variety of sectors spread all over both of the states. This integration of ICTs with the business model will make use of ICTs to their full potential and it will also be useful to attract tourist inflow to both the states. In this paper we propose the ICT based tourism business model which has high level of integration, it satisfies the tourist needs by providing service like one-stop tourism. It however requires collaborative efforts by building a strategic alliance among the different actors involved in the tourism industry.

LITERATURE REVIEW

The business model is a framework for successful business practices ranging from business ideas to sources of revenue and the distribution structure for partners. In order to increase the efficiency and effectiveness of the transaction, to reduce the cost of transaction and to provide direct services to customers, the tourism markets need a new business model to

* Associate Professor, Moolji Jaitha College, Jalgaon, Maharashtra, India.
** Associate Professor, School of Computer Sciences, North Maharashtra University, Jalgaon, Maharashtra, India.
*** Professor, School of Social Sciences, North Maharashtra University, Jalgaon, Maharashtra, India.
**** Professor and Director, School of Computer Sciences, North Maharashtra University, Jalgaon, Maharashtra, India.
E-mail: bvpawar@nmu.ac.in.

grow tourism industry in the states of Maharashtra and Goa. (Mahadevan, B. 2000) throws light on success of Internet based businesses in the Business to Customer (B2C) segment in recent years and it is an indication of the events to unfold at the dawn of the new millennium. It is widely projected that the Business to Business (B2B) segment is poised for a spectacular growth. However, a consistent definition and a framework for a business model for the Internet based businesses are still non-existent. It also proposes a three dimensional framework for defining a business model and apply it to the emerging market structure. Furthermore, it identifies certain factors that would guide organizations in their choice of an appropriate business model. (Mohammod, A., Kawsar, J. et al, 2012) have discussed existing business models in tourism and also proposed a new business model G2B2C which can promote tourism in developing or underdeveloped countries of the world. (Chulwon, K. 2004) discussed that the entrepreneurs need to adopt business models for their own e-business objectives to sell their tourism products and services directly in international market. (Buhalis, D. 1998 and Buhalis, D. 2003) said that the Information Communication Technologies (ICTs) have been transforming tourism globally and play a critical role for the competitiveness of tourism organizations and destinations. (Buhalis, D. and Peter, C. 2005) discusses that the Internet and E-tourism support the activities between tourism organizations and customers and as outcome they re-engineer the entire process of developing, managing and marketing tourism products and destinations. (Manat, C. 2006) describes the growth rate of tourism industry in Thailand, a model of tourism planning and implementation of tourism product in Thailand was proposed to exhibit demand factors. Marketing, transportation and communication play a linking role with five groups of supply factors. (Jaehun, J. 2002) proposes a business model for electronic tourism markets, the strategies for its development, and a case study of the electronic tourism market. It presents a classification of electronic markets specifically intended for the tourism industry. This classification combines two dimensions: (1) integration of processes or functions and (2) cooperation among players. It leads to four types of markets. This article also reviews the development strategies from the perspective of potential travelers, cooperation among players, and technology and development methodology. In (Elena, L. 2008) author discusses the general framework of the distribution structure, including both traditional business models and the new, networked models, the analysis focuses on the evolution of travel agencies and also presents the business models from three different, but interrelated perspectives. (Buhalis, D. and Maria, C.L. 2002) discusses the use of new distribution channels and the launch of value-added services and features across all e-Platforms. ICTs can be used as a powerful tool in tourism industry of Maharashtra and Goa states for monitoring, forecasting, location identification, online payments, information gathering and management (Mahajan, K.B. and Patil, A.S. et al 2011). Web 2.0 technologies enable the Internet users to become the co-producers, the co-designers, the co-marketers and the co-distributors of tourism experiences and services as well as the co-entrepreneurs of new e-business models (Marianna, S. 2007).

Need of a Business Model

According to (Mahadeven, B. 2000), for the sector of the industry that is hardly a decade old, a formal definition of a business model is non-existent. There have been scanty attempts in the past to formally define and classify business models in the Internet context. However, according to him these attempts to formally define and classify business models in the Internet context were neither complete nor robust. According to (Jaehun, J. 2002) a business model is a framework for successful business practices ranging from business ideas to sources of revenue and the distribution structure for partners. The states of Maharashtra and Goa do not have an ICT based business model in place. The situation of both the states due to the absence of such a model is as below:

- There is apathy from the various tourism actors
- There is a fragmentation of products and services
- Nearly all tourism operators are working in isolation
- Absence of single point of contact for the local tourism operators and external agencies

Tourism industry is a consumer oriented industry where services and information play major roles in transaction processes. The tourism markets need a new business model to grow tourism industry in the state of Maharashtra and Goa. This can be achieved by increasing the efficiency and effectiveness of the transactions, by reducing the cost of transaction and by providing direct services to customers. The ICT based business model enables each player participating in the tourism market to integrate its own systems into the web system. From the tourists perspective, the system allows potential travelers anywhere in the world to directly access all tour-related information including details of destinations, transports, tour schedules, and accommodations, as well as booking and shopping. From the player’s perspective, the system allows players to manage information and transactions seamlessly, and to share knowledge among them.

In the section to follow we propose a new ICT based business model that includes the modern tools of ICT which affects the tourism business as a whole. The main objectives of developing the business model are states as under.

Objectives

1. To provide the integrations of the processes or functions in a tourism business
2. To establish linkages among the players within the tourism industry and across various industries related to the tourism industry.

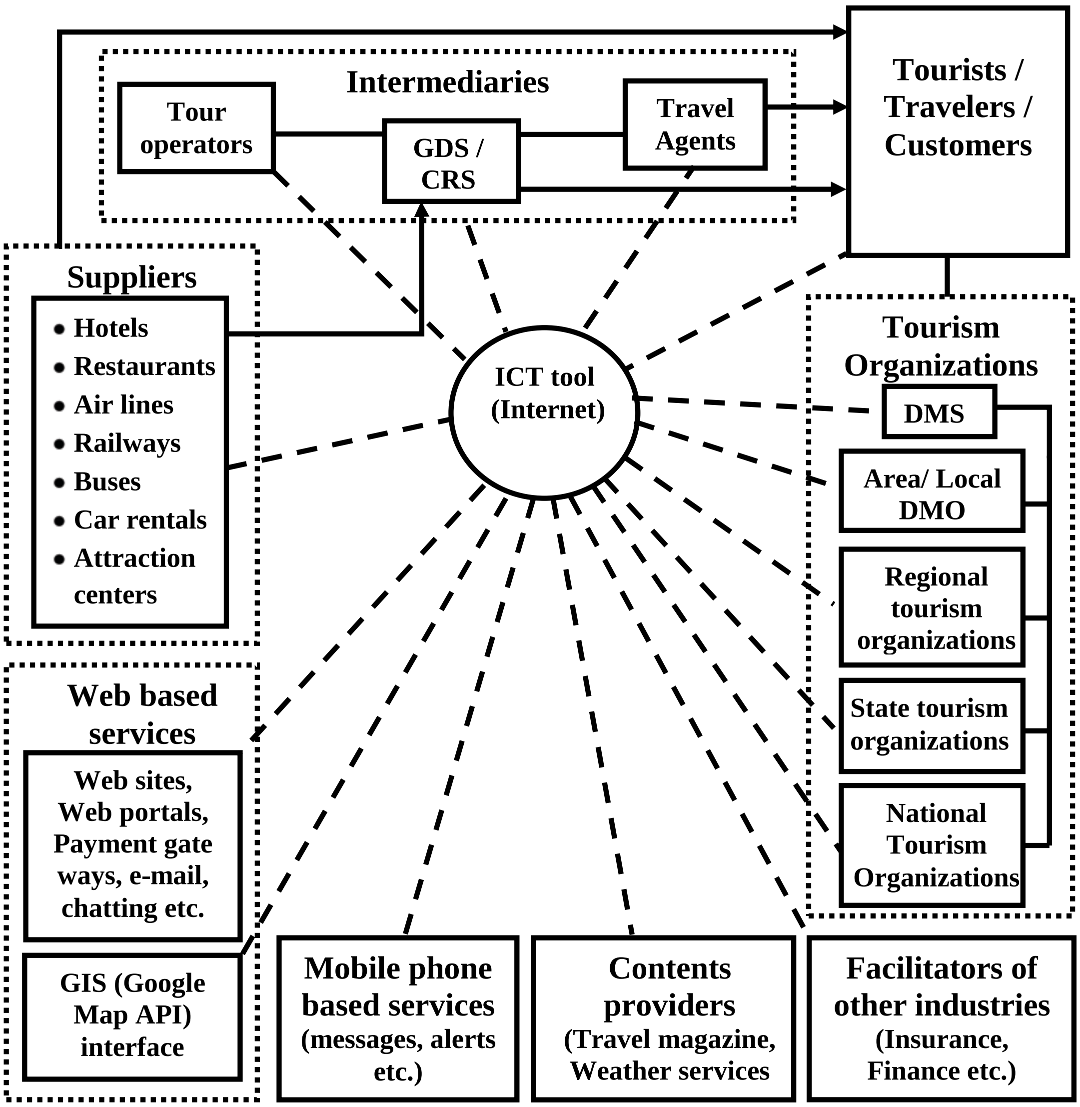
The proposed ICT based Business Model

(Elina, L. 2008) studies business models from three different, but interrelated perspectives:

1. Changes in business concepts, so as to define defensive and aggressive strategies to cope with the challenges of the new economy;
2. Reviewing of the value creation process through the re-engineering of operations, and changing a sequential value chain in a "value constellation", based on information and knowledge.
3. Evolution of entrepreneurial resources, competences and capabilities which are necessary for a business to be competitive and to develop sustainable advantages.

The above three perspectives can be used to describe the business model. However (Mahadevan, B. 2000) argues that a business model is a unique blend of three streams that are critical to the business. These include the value stream for the business partners and the buyers, the revenue stream and the logistical stream. Value stream identifies the value proposition for the buyers, sellers and the market makers and portals in an Internet context. The revenue stream is a plan for assuring revenue generation for the business and

Figure No. 1: ICT based Tourism Business Model



the logistical stream addresses various issues related to the design of the supply chain for the business. The long-term viability of a business largely stems from the robustness of the value stream. Furthermore, the value stream in turn influences the revenue stream and choices with respect to the logistical stream. The process of arriving at an appropriate business model involves picking up the right mix of alternatives. A few aspects that are peculiar to its business often guide an organization (Mahadevan, B. 2000).

The new business model proposed by us (see figure no. 1) for the integrated ICT based tourism market includes various major players and services as follows:

- Intermediaries
- Suppliers
- Customer (Tourist/Traveler)
- Tourism organizations
- Mobile services
- Content providers
- Facilitators of other industry

The business model for the states of Maharashtra and Goa has been developed by using the following streams as building blocks. All the streams are classified as logistic, values and revenue stream as given in table no. 1.

Logistic Stream

The different logistic streams involved are:

a. Information mediation

In the tourism market there are various stakeholders like tourism organizations, suppliers, facilitators, and content providers. Each of these further consists of several components and can be seen in table no. 2.

The information generated by them is huge for a normal information seeker. The information is present in the form of travel and tour guides, pamphlets, banners, newspapers, magazines, websites etc. The general information seeker will not be able to access all such information as and when needed. The ICT based tools are used in the model to aggregate all such information at a single location. This information along with other meta information is utilized by the information seeker with the help of search facility (search engine) present on the portal. Thus the portal acts as both custodian and agent (broker) for the information seeker. Travelers can search the up-to-date information for example events, time tables, open hours, real time availability etc. The portals provide security with the help of secure Internet based protocol (HTTP) and electronic payment gateways, thus enhancing trust and privacy.

b. Elimination of Intermediation

The nature of services and products offered in tourism industry along with use of internet has limited the scope of intermediation by curtailing the supply chain. As a result of this the collective transaction cost has also dropped drastically. The different services that have deeply impacted in curtailing the supply chain are:

Table 1. Classification of Various Streams

Logistic Stream	Value Stream	Revenue Stream
• Information Mediation • Elimination of Intermediation • Meta Mediation	• Reduction in transaction costs • Virtual Communities • Value added market making	• Increased profits • Revenue from online seller communities • Advertising • Free offerings

Table 2. Stakeholders of Tourism Industry

Supplier	Intermediaries	Tourism Organizations	Facilitators
• Hotels • Restaurants • Air lines • Railways • Buses • Car rentals • Attraction centers	• Tour Operator • Travel Agent • GDS • CRS	• Local tourism organizations • Regional tourism organizations • State tourism organizations • National tourism organizations	• Insurance agencies • Finance agencies • Content providers • Weather services

- Destination Management Systems (DMS)
- Global Distribution System (GDS)
- Computer Reservation System (CRS) and
- Payment gateways

c. Meta mediation

The fragmented supply chain may lead to high search cost with respect to vendor, information product comparison etc. Meta mediation not only aggregates the buyers, suppliers and products but also provides additional services required for execution of transaction. Meta mediation does add values to all the actors and other stakeholders like suppliers, tourism organizations. The tourism organizations include local tourism organizations (LTO), regional tourism organization (RTO), state tourism organization (STO), national tourism organization (NTO) etc.

Value Streams

a. Reduction in transaction costs

The model allows different businesses a common platform to exchange prices and product offerings among each other. The seller i.e., who is making the offer may not know the potential buyers and on the other hand the buyers may not know about such sellers who have a better offers. The model's web based services offers mechanism that reduces the searching costs involved in locating such information. Due to such timely information on prices and offers, businesses can further reduce costs in their products, which in turn attract more tourists.

b. Virtual Communities

Virtual communities are built by allowing people to register themselves to the online portal offered by the web based services component of the model. This allows different businesses to register on the portal. Periodic offers and other information can be sent to the members of the virtual communities according to their area of interest.

c. Value added market making

The existence of the model brings all the parties including the tourists together with an increased sense of security and trust amongst them. Rules and regulations can be formulated so that there will also be growth in trading amongst new unknown partners within purview of the members of the community. The potential value propositions added are:

- Buying guides
- Fulfilment of orders
- Procurement management
- Security
- Quality assurance
- Trust
- Privacy
- Insurance and finance

Revenue Streams

a. Increased profits

The ICT based concept of the model offers a lot of opportunities that lead to increased profits in the business compared with the brick and mortar operation of traditional tourism business. This is due to:

- Reduction in transaction cost i.e., saving time in searching for products, prices, business offers (including discounts)
- Existence of virtual communities of tourist along with their relevant information reduces search for potential tourists and can be targeted with specific and customized product offers with the help of creating dynamic web pages based on the profile of the tourist. The offers can lure the tourist to make business with the agency giving the offer in turn generating revenue.

b. Revenue from online seller communities

Due to options to sell of product online on the internet with the help of systems like global distribution system and computerized reservation system it is easy to make electronic payments vide payment gateways. The transaction is fast, reliable and highly secure. There is no barrier of time as well as physical location both to the buyer and seller of the product.

c. Advertising

Advertisements can be hosted on multiple web sites or on the portal itself. The advertisements can contain detailed information about various tourists' services. The entire database of tourists can be maintained and various advertisements alerts can be targeted towards them on their mobile phones. Advertisements can also be given on offline and online travel magazines. The website of the tour operator is also the best source for the advertisement and its details can be communicated with the help of email to all potential tourists.

d. Free offerings

Free offers may be made to persons interested in tourism on various tourism related websites and on the tourism portal. In order to avail such offer the individual may be asked to fill up a form. This process will build the database of potential tourists. This existence of strong customer base will attract all sellers and suppliers (as seen in the fig. 1) related to the tourism industry. In order to capture a large customer base they will offer services at a much more competitive price Thus the free offerings results in global spread of customers, better offers from sellers and suppliers and also contributes in customer feedback and product improvement initiatives.

CONCLUSION

We have proposed our own new ICT business model from three streams i.e., logistic, value and revenue stream. This model will act as a single point of contact for all local tourism operators as well as external agencies. Thus enabling all the tourism actors to work in collaboration with each other, rather than work in isolation. The apathy of the various tourism actors will be reduced. There shall be no fragmentation between various products and services. The model also provides for the integration of the processes and functions in a tourism business. It establishes linkages among the players within the tourism industry and across various industries related to the tourism industry. The model also helps to cope with the information change, create new job opportunities and at the same time generate more revenues.

REFERENCES

Buhalis, D. (1998). Strategic use of information technologies in the tourism industry. *Tourism Management*, *19*(3), 409-423.

Buhalis, D., & Maria, C. L. (2002). The Future e-Tourism intermediaries. *International Journal of Tourism Management*, *23*(3), 207-220.

Buhalis, D., & Peter, C. (2005). Information Communication Technology Revolutionizing Tourism. *Journal of Tourism Recreation Research, 30*(3), 7-16.

Buhalis, D. (2003). *E-Tourism: Information technology for strategic tourism management*. Financial Times Prentice Hall.

Chulwon, K. (2004). E-Tourism: An innovative approach for the Small and Medium-Sized Tourism Enterprises (SMTES) In Korea, OECD, 01-11

Deepthi, S. (2008). ICT and Tourism: Challenges and Opportunities. Conference on Tourism in India – Challenges Ahed, IIMK, 50-58

Elena, L. (2008). Information Technology and New Business Models in the Tourism Industry", 8th Global Conference on Business & Economics, Florence, Italy, ISBN: 978-0-9742114-5-9, October 18-19th, 2008:01-13

Jaehun, J. (2002). A business model and its development strategies for electronic tourism Markets. *Information Systems Management*, *19*(3), 58 – 69.

Mahadevan, B. (2000), "Business Models for Internet based E-Commerce an Anatomy", California Management Review, Summer, *42*(4), 55-69.

Mahajan, K. B., & Pawar, B. V. (2001). On the use of Information Technology in Tourism", in the *Journal**,** Library Progress (International), 21*(1-2), 25-28. ISSN No. – 0970-1052

Mahajan, K. B., & Pawar, B. V. (2002). Information Technology in Tourism (E-Tourism), in the National Level Workshop on 'Advances in Web Based Computing AWBC-2002', Department of Computer Science, North Maharashtra University, Jalgaon, 9-10 Feb. 2002.

Mahajan, K. B., 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 and Tourism Systems*, 4(2), 60-68. ISSN NO. 0947-6225

Mahajan, K. B., & Pawar, B. V. (2001). E-Commerce in Tourism, in the National Conference on Microcomputers 'COMMICRO 2001: Era of e-Revolution', CSI Lucknow Chapter., 14-15 April 2001:45-50

Manat, C. (2006). Policy and planning of tourism product development in Thailand: A proposed model. *Asia Pacific Journal of Tourism Research, 11*(1), 01-16

Marianna, S. (2007). WEB 2.0 in the tourism industry: A new tourism generation and new e-business models. *Travel Daily News*. Retrieved from www.traveldailynews.com/pages/show_page/20554.

Mohammod, A. K., Kawsar, J., Md. Nasim, A., & Nargis, K. (2012). business model of e-tourism for developing countries. *International Journal of Computer Science and Information Technology, 03*(1), 30-34. ISSN 2078-5828,