



THE ROLE OF ICT IN TOURISM INDUSTRY

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Abstract

The Information Communications Technologies (ICT) plays a major 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.

Key words

Tourism; ICT; Integration; e-Tourism.

INTRODUCTION

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 inter-connectivity 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

Compared to other sectors of the global economy, the tourism industry is one of the fastest growing, accounting for more than one third of the total global services trade. 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.

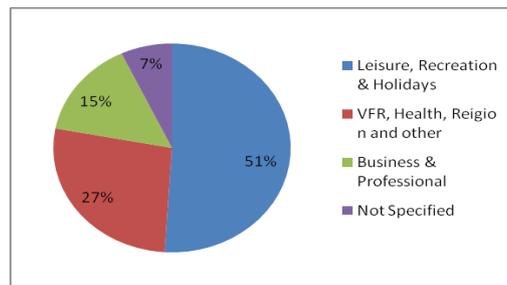


FIG. 1 INBOUND TOURISM BY PURPOSE OF VISIT, 2011

Source: UNWTO Report (2008)

Trends in Tourism Industry

Demand for international tourism maintained momentum in 2011. International tourist arrivals grew by 4.6% to reach 983 million worldwide, up from 940 million in 2010. Europe, which accounts for over half of all international tourist arrivals worldwide, was the fastest-growing region, both in relative terms (+6% tied with Asia and the Pacific) and absolute terms (929 million more visitors). The Middle East (-8%) and North Africa (-9%) were the only (sub)regions to record a decline in arrivals, due to the Arab spring and political transitions in the region. International tourism receipts for 2011 are estimated at US\$ 1,030 billion worldwide, up from US\$ 928 billion in 2010 (+3.9% in real terms), setting new records in most destinations despite economic challenges in many source markets.

According to monthly and quarterly data for 2012 included in the UNWTO World Tourism Barometer, international tourist arrivals worldwide grew at a rate of 5% in the first four months of 2012, consolidating the growth trend that started in 2010. Forecasts prepared by UNWTO in January 2012 point to growth of 3% to 4% in international tourist arrivals for the full year 2012.

Over the past six decades, tourism has experienced continued expansion and



diversification, becoming one of the largest and fastest- growing economic sectors in the world. Many new destinations have emerged, challenging the traditional ones of Europe and North America. Despite occasional shocks, international tourist arrivals have shown virtually uninterrupted growth – from 277 million in 1980 to 528 million in 1995, and 983 million 2011. According to Tourism Towards 2030, UNWTO's recently updated, long term outlook and assessment of future tourism trends, the number of tourist arrivals worldwide is expected to increase by 3.3% a year on average from 2010 to 2030. This represents some 43 million more international tourist arrivals every year reaching a total of 1.8 million arrivals by 2030.

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.

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.

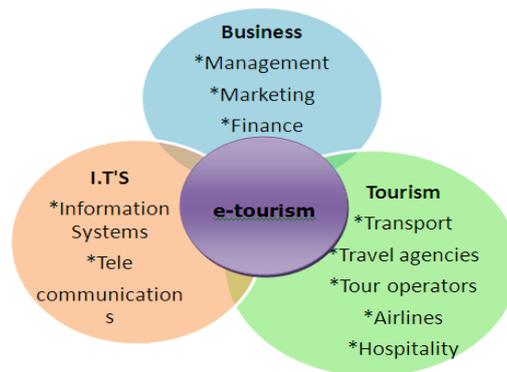


FIG. 2 E-TOURISM, IT FOR STRATEGIC TOURISM MANAGEMENT

Source: Buhalis, D. (2003: 77)

E-Tourism Impacts on Marketing Mix

ICTs provide unique opportunities for innovative organizations to redesign tourism products to address individual needs and to satisfy consumer wants. ICTs have also become part of the core product, especially for business travelers who now expect certain facilities to be available during their trip. The internet and the World Wide Web have revolutionized the promotion and communication functions of tourism. ICTs can reduce commission costs. Expedia, eBookers, to emerge and gain a significant market share, propelling a reintermediation in the distribution channel.

E-Airlines

In 1962, American Airlines introduced its SABRE Computerized Reservations Systems (CRS) to in the place of manual reservations on display boards where passengers were listed and travel agencies had to locate the best routes and fares for their customers in a manual and then telephone for availability, reservation and confirmation before issuing a ticket manually.

The lodging industry is the most under-automated segment of the international travel industry. Property Management Systems (PMSs) were introduced to facilitate the front office, sales, planning and operation functions. This was achieved by administering a database with all reservations, rates, occupancy and cancellations, thus managing the hotel inventory. Hospitality organizations increasingly use computerized systems to improve their inventory management, communicate with their interaction with consumers and reduce some of their operational costs.



E-Hospitality

ICTs have penetrated hospitality management at a fast pace, integrating the hotel operations, reshaping the marketing function, improving total efficiency, providing tools for marketing research and partnership building, and enhancing customer services, while also providing strategic opportunities. In addition, consumers increasingly expect ICT facilities in their rooms; internet access via the television set and data ports have become standard for higher hotel categories. The Internet has improved the hotel representation and reservation processes dramatically. Bookings through the web is particularly convenient for customers who frequent the hotel as that provides an efficient and effective communication mechanism. The greater the capacity, number of departments, transactions, arrivals, departures and reservations, the greater the need for technologies to facilitate the processes. Further integration between PMSs and Hotel CRSs can improve efficiency, facilitate control, reduce personnel and minimize the response time to both customers and management requests.

E-Tour Operators

Tour operators need constantly to interact with all their partners, including accommodation and transportation principals, ICTs are also critical for the distribution of tour operators' packages. The introduction of the Internet, Intranets and Extranets as strategic tools has as strategic tool has a number of benefits for tour operators. The co-ordination and exchange of timely information is important because it allows tour operators to co-ordinate activities, to resolve potential problems and to ensure that customer requirements are communicated to all principals delivering the tourism product. Strategically, ICTs play a critical role for tour operators. For example, Kuoni allows consumers to alter their tourism package online and to build their own itinerary by making it possible to extend the trip, change accommodation, meal plans and add value – added services such as car rentals, scuba-driving lessons.

However, it is quite evident that tour operators will need to shift their focus from the information provision and the reservation mechanism to a strategic role of adding value to the product and the process. Tour operators will therefore need to re-assess their core values and identify specific market segments that they can satisfy in the future.

E-Travel agencies

ICTs have introduced major improvements in the internal organization of travel agencies. By integrating their back-office (e.g., accounting, commission monitoring,

and personnel) and front Office (customers' history, itinerary development, ticketing and communication with suppliers) functions, travel agencies have achieved significant synergies, efficiencies and cost savings. As transactions made in branch offices can automatically be reported back to the head office, tighter financial control can be achieved.

In addition, transactions provide invaluable marketing research data, which can almost instantly report market movements and aid tactical decisions. At the individual level, CRM systems support agencies in tracking the activity of their efficiency, control and competitiveness. Storing information in data warehouse can also help them to develop proactive marketing tools in order to target individual customers with specialized products, thereby increasing the value added services offered to each customer, and to defend themselves against disintermediation. Hence, agencies need to utilize updated ICT on par with the suppliers and customers usage.

E-Destinations

Destination management System (DMS) have been used to integrate the entire tourism supply at the destination. Their contribution to strategic management and marketing is demonstrated by their ability to integrate all stakeholders at destinations and to reach global market. DMS offering innovative information and sometimes facilitating reservations. Destination Integrated Computerized Information Reservation Management Systems (DICIRMS) address entire range of needs and services required by both tourism enterprise and consumers for specific destinations. DICIRMS provide the infostructure for communications and business processes between all stake holders, including consumers, principals, distributors and destination marketing organizations.

NEED FOR THE STUDY

The tourism industry in India is in growth stage and has a high potentiality to grow and equipped with the number of tourist destinations to attract domestic and international tourists. After emergence of low cost aircraft services, India has more growth potential. However, the satisfaction level of the tourist is not high in terms of ICT in India. The UNWTO has ranked tourism industry in India at 61st position as a matter of competitiveness. The number of inbound tourists reached one billion in 2012. Therefore, Indian tourism has strengthen to prepare to attract maximum number of domestic and international tourists. In this study, the ICT plays a vital role in promoting, integrating and building brand loyalty in Indian tourism. Government, entrepreneurs, management and employees in tourism and hospitality industry are the major contributors for the development of tourism. Hence, there is a need to study the ICT role and its implementation to increase the profitability of Indian tourism industry.



OBJECTIVES

- i) To identify the role of ICT in tourism industry;
ii) To find the gaps in level of usage of ICT in tourism industry in India;
iii) To analyse the opinion of industry top executives towards ICTs in tourism in India; and
iv) To suggest measures to improve the profitability by implementing ICTs in Tourism.

Sample and procedures

To achieve the objectives of the study, the research has been focused on scenario of international tourism trends and role of ICTs in the tourism by referring UNWTO, OECD, ILO reports, as well as globally reputed standard textbooks and journals.

To identify the gaps in the levels of usage of ICTs in tourism and to analyze the opinion of the managers and to suggest the measures, a five point scale questionnaire has been prepared by understanding the industry literature, observing, understanding and consulting industry experts and professors. 112 professionals responded across India and the responses have been recorded online and offline using a questionnaire. The responses are being represented in the form of horizontal bar diagrams and pie charts (Figure 3).



FIG. 3 SECTOR vs RESPONDENTS

Among 112 respondents, 41% are from tourism organizations, 15% of the respondents are from the Airlines, travel and tour operations, and 37% are from hospitality industry. The average experience of the respondents is 8.4 years in the industry, ranging from 1-35 years. The respondents are located in different parts of the country. The primary data is collected during the months of October-November, 2012.

Scope of the research

The research study has been conducted in tourism organizations, travel agents, hotels, restaurants, resorts, professionals in tourism, travel and hospitality industry

across the India.

Limitation of the Study

- The respondents are from the industrial employees only;
- The respondents are from India only; and
- The study is conducted in two months only.

Gaps in ICTs in tourism, travel & hospitality industry

- i) Most Indian tourism, travel and hospitality websites are not mobile ready;
- ii) Top level managements are not aware of updated;
- iii) ICTs employees are not trained in usage of ICT;
- iv) Many of the enterprises are operating with the traditional tools;
- v) Majority of enterprises are not integrated with the updated ICTs;
- vi) Most of enterprises are not utilizing social media for business development purpose;
- vii) The internet connectivity is not available everywhere across the country.

Data Representation and Interpretation

Furthermore, the interpretations for each statement responded from the sample are additionally addressed.

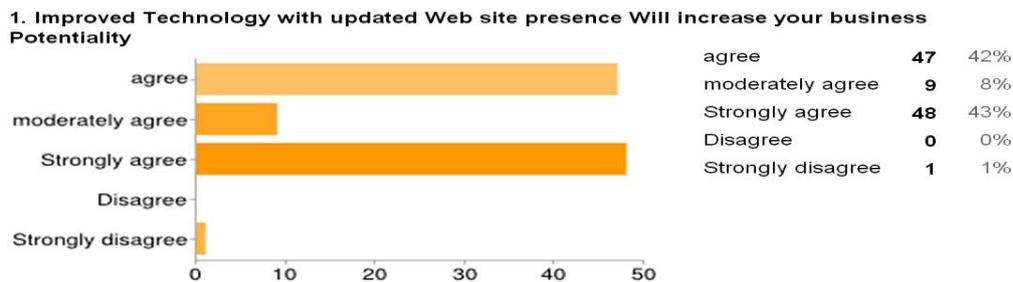


FIG. 4 UPDATED WEBSITES WITH IMPROVED TECHNOLOGY

Interpretation regarding Figure 4: 93% of the respondents agree that the updated website has vital role in improvement the business potentiality. Only 1% of the respondents disagree with this statement.



2.Face Book (Social Media)is an effective medium of Marketing & Promotion Online for Tourism Industry

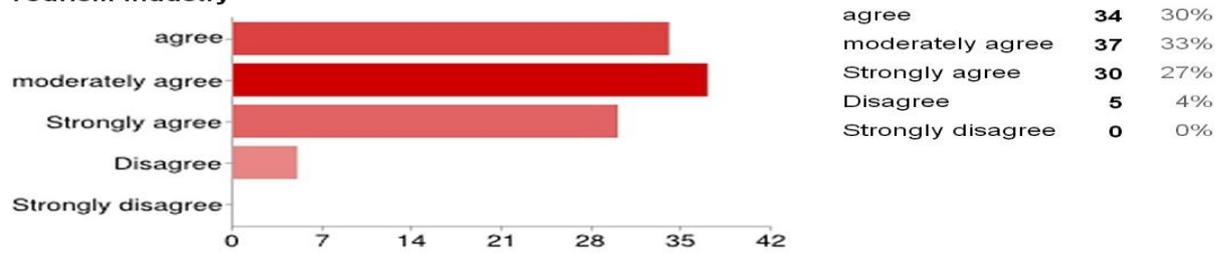


FIG. 5 SOCIAL MEDIA IN MARKETING

Interpretation regarding Figure 5: 90% of the respondents agree that social media is an effective in promotion online and marketing tool for enterprises. Only 5% of the respondents disagree.

3.Internet Medium (Face Book ,You-tube,Googeletc)occupies equal priority along with mass mediums (TV,Paper,Radio) in Tourism Promotion ?

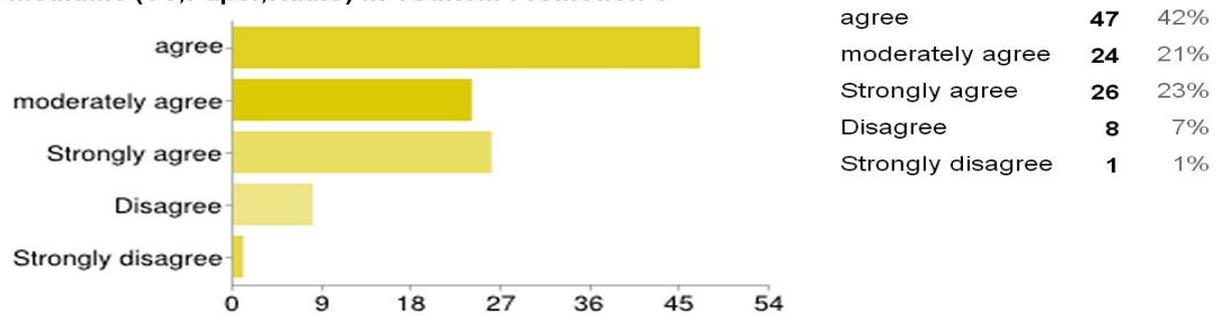


FIG. 6 INTERNET MEDIUM VS.MASS MEDIUM

Interpretation regarding Figure 6: 86% of respondents agree that Internet has equal role with the TV, newspapers and radio. Only 9% of the respondents disagree.

4. Marketing through Googlepages(SEO) conveys your Tourism Products greatlyto your Target group tourists

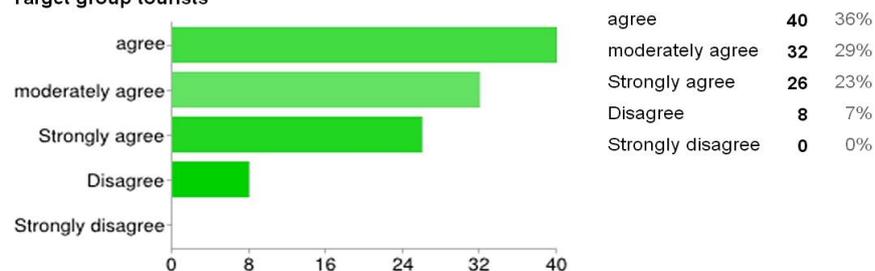


FIG. 7 SEARCH ENGINE OPTIONS FOR TOURISM PRODUCTS

Interpretation regarding Figure 7: 88% of the respondents agree that the Google pages play significant role in promoting. 7% of the respondents disagree with this

statement.

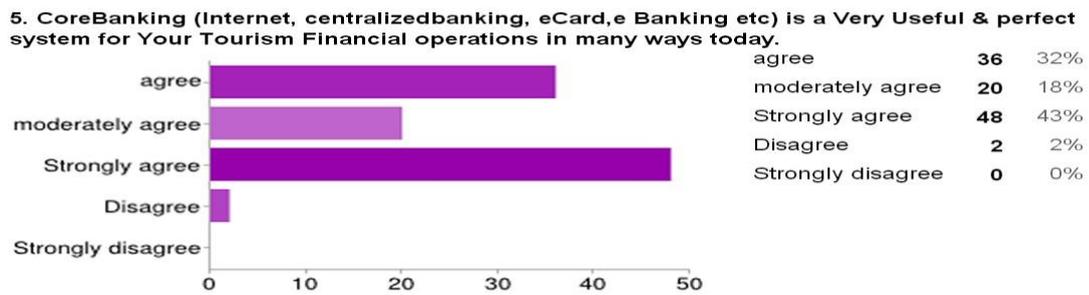


FIG. 8 CORE BANKING AS A TOURISM FINANCIAL OPERATIONS

Interpretation regarding Figure 8: 93% of the respondents agree that the core banking has more role to play in tourism financial transactions. Only 2% of respondents disagree on this statement.

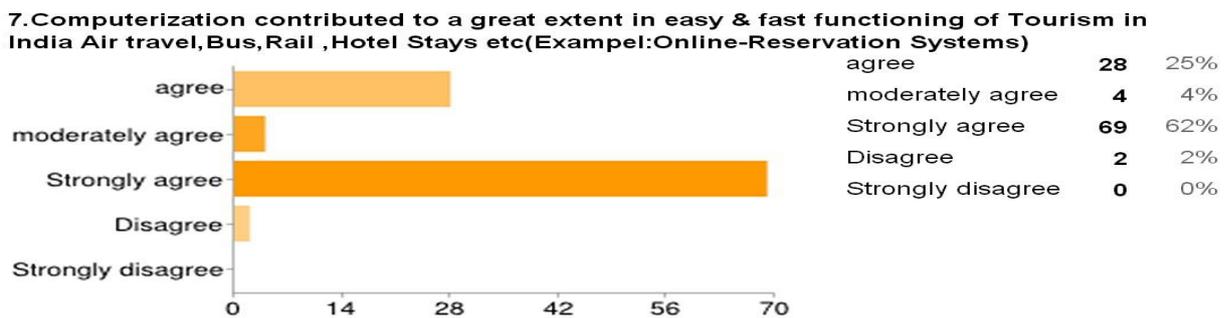


FIG. 9 ICT AND ON-LINE RESERVATION

Interpretation regarding Figure 9: 91% of the respondents agree that online reservation system is essential to sell the products and services. 2% of the respondents disagree with this statement.

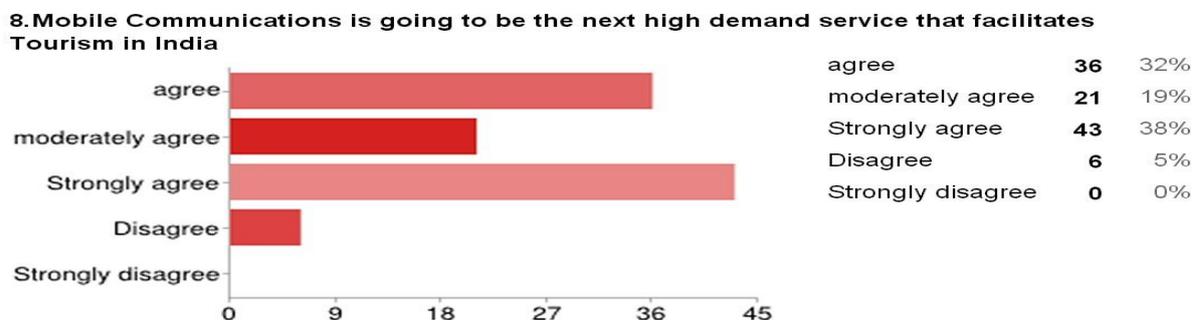


FIG. 10 MOBILE COMMUNICATION IN TOURISM

Interpretation regarding Figure 10: 89% of the responds agree that the role of mobile commerce is very high in tourism industry. Only 6% of the respondents disagree.



9. Do you think it is effective as a model through ICT is in Indian Tourism "A single tourism firms' websites on which suppliers such as airlines, car rentals or hotel chains" distribute their products directly to the customer

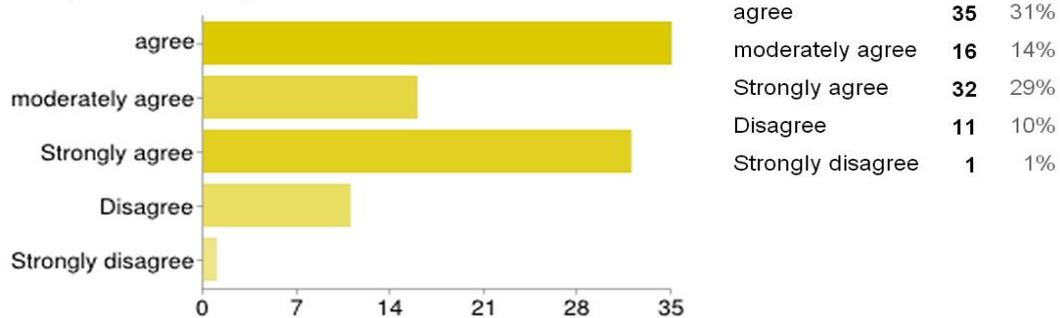


FIG. 11 WEBSITE AS A DIRECT PRODUCT DISTRIBUTION

Interpretation regarding Figure 11: 74% of the respondents agree that the websites may reduce the tourism intermediaries. Yet, 12% of the respondents disagree the statement, which is somehow significant.

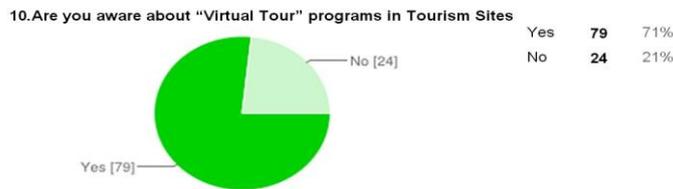


FIG. 12 AWARENESS OF VIRTUAL TOUR

Interpretation regarding Figure 12: 71% of the respondents agree that they are aware of the virtual tour and 24% of the respondents have opposite opinion.

11. (If yes) Virtual Tours contributes to considerable click-visits on Our Tourism site & it is a strong Online marketing pull factor to tourists.

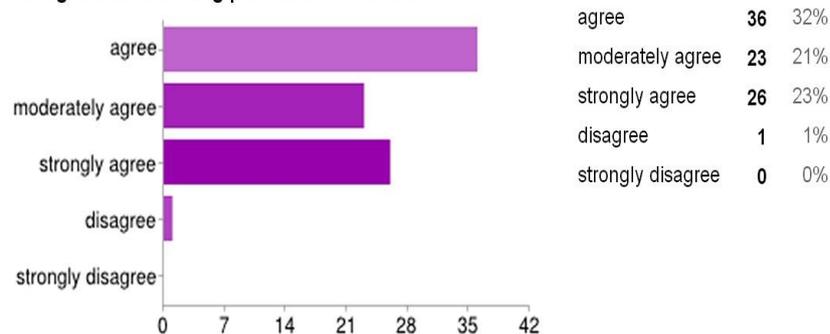


FIG. 13 VIRTUAL TOUR AS A PULL FACTOR

Interpretation regarding Figure 13: 76% of the respondents agree that the Virtual tour acts as a online marketing pull factor and 1% disagree the statement.

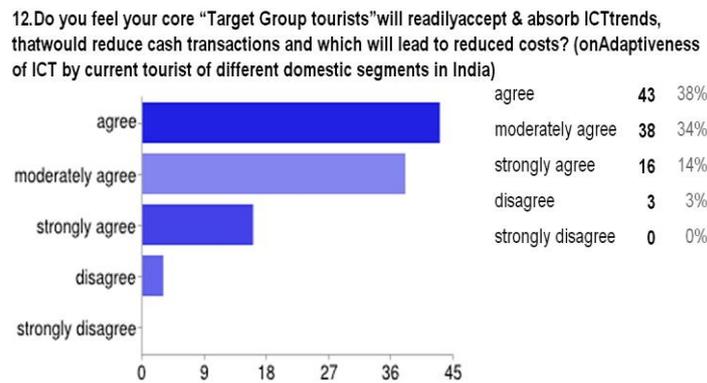


FIG. 14 MATIVENESS OF ICT IN TOURISM

Interpretation on Figure 14: 86% of the respondents agree that they will readily accept the ICTs trends to reduce costs and 3% of the respondents did not support this statement.

ANALYSIS

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.

Suggested Strategies

The Enterprises websites should be upgraded and updated with the latest technologies to increase the business potentiality. The governments and enterprises should encourage and train the industry in terms of utilizing the social media. The governments should see that the high speed Internet availability and affordability to reach common man and prices of the computer systems should go down further. The awareness for the stakeholders towards Google search should be provided. Enterprises should integrate all departments through ICT. High-speed internet facilities should be provided by the government and power failures should be



avoided. The government should encourage the development of mobile commerce (e.g., promotion, payments etc.,) and should be integrated within tourism industry.

CONCLUSION

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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