Role of Technology in Tourism Management

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Abstract

This paper seeks to address the spread of technology in tourism industry in India. This paper will analyse how and to what extent technology is being used by various stakeholders in performing their operations which increases the value of offering. Further, the paper will address the leads and lags of advent of technology in the industry from the perspective of various stakeholders and will try to put forward a view which would help in optimum utilization of industry resources through technology.

Keywords: value chain; primary activities; supporting activities.

INTRODUCTION

Management if defined as planning, organising, staffing, directing and controlling of activities of an organisation. Management is a universal concept. It is applicable to every industry everywhere around the world. But its application has evolved over time. Although the process of management has remained the same, the way of managing has changed altogether. There was a time when to manage things one needs to be present at a place, but today one can manage things over a distance of thousands of kilometers. This has been possible because of technological advancement and its application in management. Technology now plays important role in planning, organising, staffing, directing and controlling activities of organisation. Tourism Management would be defined as planning, organising and controlling the activities related to tourism industry. Tourism industry has also witnessed changes because of advent off technology. From innovation in tourism products to changes in how the industry operates, the technology has played a pivotal role in revolutionizing management of tourism industry.(1) So, a restaurant owner can market itself on social media and attract customers engaging in food tourism. Similarly, preparing plans, organising, Budgeting, communication, training and development and other aspect of management have directly or indirectly been influenced by the use of technology. The following figure shows how technology assists in performing the different functions of management in tourism industry.

From the figure it is clear that technology has impacted the way in which management is practiced. Similarly, one can identify the different ways in which technology has impacted the functions of tourism industry. Being of service nature, tourism industry is not concerned with production of goods and services, but still...
whatever production is done by hotels, restaurant and home stay owners, technology has improved the efficiency. Installing refrigerators and coffee/tea machines is an example of producing goods with the help of technology. Before production even begins, it is purchase department which is responsible to acquire good quality raw materials at reasonable rate.

E-procurement of goods and services helps in saving time as well as cost in procurement of supplies from far located places. Further e-procurement also enables comparison of goods due to availability of large variety and options of product without even visiting the different stores. Sales and Marketing has been completely revolutionized after the advent of technology. E marketing and digital marketing have largely taken over the traditional methods of marketing. Because the youth today spends more time on social media rather than watching television, therefore companies have started targeting their audience in their playground rather than focusing on newspaper, magazines and television. Technology has also affected the human resource management in an organisation. (14)

Now, social media platforms have been developed such as LinkedIn, which helps in connecting the various professional across the country. This also helps in identifying the potential candidates for jobs. By scanning the social media accounts of prospective candidates, company try to analyse whether the person is suitable for job or not. Induction programme, training methods and development programme have highly evolved because of technology. Video lectures and tutorials help in easy demonstration of concept any where any time. Finance function has witnessed several changes due to technology. It is now easier to get information about securities available, manage the portfolio and estimation and calculation of financial needs in an organisation. Complex calculations are made easier with use of technology. Tourism industry has multiple stakeholders. If we classify stakeholders on the basis of demand and supply side then demand side of stakeholders will include tourist and supply side of stakeholder will include hoteliers, home stay owners, restaurant owners, travel agencies, tour

![Planning, Organising, Staffing, Directing, Controlling Diagram]
guides, photographers, researchers and academicians and local population of a destination. Every stakeholder performs management functions not necessarily in the same name and to some extent. Therefore one can safely assume that technology has some impact on the behavior of stakeholder in their functioning. What is notable is that management by hotelier will be different from management by a tourist because they play different role in industry, but, here the study is more concerned with their use of technology rather than the absolute behavior they exhibit in the industry. If one considers the case of tourist, management of their trip has drastically changed in the recent era. Earlier one used to either contact travel agent to make prior bookings or every booking was made after reaching the destination. Now, technology has made easier to book without need of intermediaries and with full transparency. One can even take a look of hotel room without having visited the hotel in physical sense. (2.3-5)

Similarly, whole trip can be planned from transport facility to food requirements. Further information can be availed about destinations, weather forecast, major attractions in a single click.

1. Literature Review
(Poon, 1993) described the constant need of tourism industry to upgrade itself to changing technological needs and customer demands. The book also discussed the growing role of technology in developing competitive advantage for the stakeholders. (Mamaghani, 2009) analysed the e-commerce penetration in travel and tourism industry. The study also highlighted the changing pattern of consumer needs and preferences in relation to e-commerce and tourism industry. The study identified the impact of new emerging technologies such as global positioning system and its impact on customer satisfaction as well as highlighted that providing value added services is the key challenge for the tourism industry in the near future. (Law, Leung, & Buhaliss, 2009) offered a comprehensive view of articles published in different tourism and hospitality journals across the world. The study highlighted the evolution of information technology in tourism and hospitality sector. The study concluded that IT is playing significant role in operations such as marketing, distribution and management of tourism. (Kaewkitipong & Rotchankitumnuai, 2012) studied the use of web 2.0 technologies through out the supply chain in tourism industry. The researchers conducted an extensive literature review and on the basis of literature conceptualised a model which would demonstrate the integrative use of technology by the players in the supply chain. (15)

(Aramendia-Muneta & Ollo-Lopez, 2013) studied the impact of ICT on competitiveness of firm. The impact on firm ability to innovate, their productivity and their market share depending on tourism area was also studied. The study concluded that ICT has little effect on competitiveness ability of a firm and positively impact the market share of the firm. (Ismail, Zorn, Boo, Murali, & Murphy, 2013) investigated the impact of three factors company age, sufficient capital and affiliation and demonstrated multi diffusion stages, multiple
innovations and multivariate analysis in tourism industry. (Sadr, 2013) investigated the ICT effect on tourism industry over a period. The study also examined the changes which have been caused by the technology in tourism industry; the impact of such changes for the industry and what does these changes in reality hold for the country as well tourism industry in the country. The study concluded that if investment is being done in e-tourism, then it could boost the revenue generated from the tourism industry.

(Bethapudi, 2013) explored the impact of technology on development of business, revenue generation capabilities, reduction of cost and increase in reach of customers of tourism industry stakeholders. The study laments the gap which exists between tourism industry and their use of ICT and suggests measures which would boost the use. The main aim of the study was to inculcate use of ICT in tourism industry to increase customer satisfaction. (Biadacz & Biadacz, 2015) examined the use of information technology in creating a information system on tourist which would assist the stakeholders in formulating policies as well as in serving the needs of tourist. Because the objective of stakeholders in the industry is to better serve the tourist, the researchers were of the view that an effective and efficient information system would better assist the stakeholders in fulfilling their objectives. (Wahab, 2017) studied the trends and status of information technology in the tourism sector.

The study identified the areas such as e-tourism, e-management, e-strategy; e-procurement which are related with tourism industry and requires use of information technology. The study concluded that major advantage of technology in tourism industry is the ability to hold the information for long by storing it in database form. As the share of information technology is rising among the people, the cost involved in transfer of information and knowledge is getting down. Also, another important role technology is playing is that it is reducing the constraint of time and distance. (Rathore, Joshi, & Ilavarasan, 2017) highlighted the role of social media in tourism industry in India. The study identified various challenges in the form of legal and administrative compliances which act as hurdle in use of social media by stakeholders and suggested strategies to overcome them. (Gunawan, 2018) studied the use of mobile technology in development of tourism in Banyumas regency. The researcher primarily focused on use of mobile based application service to enable more customised and efficient dispersal of information to the tourist.

The existing literature talks about technology being a means to do the functions in an industry. But, the perspective on role of technology should not be limited to be viewing it as mechanism to do things. Rather focus should be on looking at technology as a way to increase value of our offering. This paper therefore makes an attempt to understand whether technology can help in adding the value or it is just and alternate way of doing things. The advent of technology can be viewed as success only when it is able to do either of the two things, i.e. saves time or saves cost or both. Therefore on the basis of research

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gap identified, this paper will serve the certain research objectives.

2. Research Objectives
The research gaps identified from the literature review serve as the objective of the study. This paper seeks to address the following research objectives-
- To examine the impact of technology in value addition in the tourism industry.
- To identify the leads and lags of technology from perspective of various stakeholders in tourism industry.

3. Research Methodology
This paper will be based on primary as well as secondary data. For primary data collection, a structured questionnaire was developed and data was collected from 100 stakeholders who include hoteliers, restaurant owners, travel agents, tourist guides, photographers and tourist.

The questionnaire included questions about demographic characteristics of respondent, their professional characteristics, how do they use technology in their operations, time and cost savings they experienced with and without use of technology.

Secondary data sources include reports published by government, semi-government and private agencies working in tourism industry, articles and research papers published. The paper uses Porter Value Chain model to demonstrate the value addition to the offering because of technology.

Porter value chain model helps in identifying the value addition to a product after it passes through series of operations performed by an organisation or individual. As per this model, the aim of an organisation should be to add value to the products at different levels such as operations, sales, services, procurement and others, where value is defined as excess of benefit over cost of product. The study then demonstrate how technology assists in reducing the time and cost involved in activities of stakeholders.

4. Adding Value in Tourism industry using technology: A Porter value chain analysis
Michael Porter suggested a model for manufacturing sector on how to add value to the offering.

The major objective of the organisation is to add value to the product by passing it through series of inter connected steps which are related with acquisition of raw materials, conversion into finished goods, transfer of goods from place of production to consumption and all activities which are related with maintenance of organisation.

By value addition it means that the benefits added to the product after a step must be greater than the cost incurred in a particular step. The porter value chain method classifies activities of an organisation into two types-Primary Activities and Secondary activities.

Primary activities are those which are core activities in an organisation. These activities provide a base for creating a competitive advantage over rivals. Secondary activities are those ancillary activities which assist in better performance of primary activities. These determine how well someone can create its competitive advantage.
Source: (Bhasin, 2017)

But this model was criticized by various experts for being unsuitable for service industry. Because products in service industry differ from products in manufacturing sector, therefore, one needs to customize the basis model of porter to meet the needs of service sector. (13)

The objective of using the generic model of porter in the study is the assumption that tourism industry although in itself is service industry, but if we assume it as interaction of components belonging to different sectors, when the generic model is suitable to be applied for the fulfillment of objective.

The following section will highlight how has technology helped in increasing the efficiency at each step in porter value chain and thereby increasing the value offering by tourism industry.

4.1. Primary Activities - Primary activities in the model of value chain are activities which are performed by different organizations. These activities are essential in the sense that they are performed by universally all organisation in a way or other, although, their extent might differ. These activities include Inbound logistics, Operations, Outbound logistics, Marketing & Sales and Service. The following section explores in detail highlight how technology has impacted primary functions by stakeholders.

- Inbound logistics- This activity is concerned with inflow of raw materials in an organisation. Technology assists in reducing the cost of procurement and also by identifying the best quality raw materials. Stakeholders in tourism industry such as hoteliers, home stay owners and restaurant owners can benefit themselves by using technology in obtaining raw materials in cost efficient manner. Comparing of different raw materials available is another option which ensures that only the best available raw material gets selected. Thus, one can make comparison of different bedsheets,
furniture, and crockery in case of hotels and similar products in case of other stakeholders.

- Operations- This activity is responsible for converting raw materials into finished goods. By assisting in creating standardized and high quality products, technology helps in increasing value of offering. Computer aided designing can help in better designing of the hotels as well as assist in interior designing of rooms and restaurants. Use of photo editing applications can assist photographers in providing visual effects to the images clicked.

- Outbound logistics- This activity is concerned with outflow of goods from place of production to the distribution channels. By ensuring that products reach the right place at right time at minimum costs and without any compromise in quality, technology increases the value of the offering. So suppose, a photographer in Himachal Pradesh wants to send the images clicked to the client located at Kerala in a cost effective manner as well as within limited time. Therefore, normal courier channel would not fulfill even one of his objectives. Technology such as email here is an alternative which would serve both of its purpose.

- Marketing and Sales- Marketing is the backbone of tourism industry. How well you identify tourist needs as well as how well you market a destination will determine the success of a destination. Technology helps in reaching a wide scale audience, developing marketing plans suitable with customer needs, building brand equity and better assessment of needs and wants. Emerging concepts such as e-marketing play a pivotal role in development of tourism industry. Social media has increased the reach of every stakeholder in tourism industry. They could advertise themselves and their products at a very low cost to a wide scale of audience. New customized packages could be developed as per the needs and wants of tourist. Travel agencies lure customers by providing them with customized tour packages. Advertising has also significantly evolved over a period of time and new methods such as vlogs and blogs are also used in advertising. Technology has helped in better product positioning through effective marketing.(16)

- Service- This activity includes after sales services offered to customers. Technology helps in developing customer relationships, providing a platform for grievance redressal and better understanding of customer needs and wants. All this helps in eliminating cognitive dissonance and therefore adds value to the offering. By providing a platform to write their experience, every stakeholder like hoteliers, restaurant owners, travel agencies provide a platform to the tourist to share their positive negative experience. This helps in developing a mutual understanding with the tourist that their opinion also matters and their problems are resolved which provides them satisfaction. Developing social media pages is one such way of doing so.

4.2. Support Activities- These activities in the value chain are those activities which assist in the functioning of organisation by improving the
efficiency in performing the primary function. These activities are responsible for determining the extent to which competitive advantage over rivals be built through primary activities. Support activities include Procurement, Technological advancement, Human Resource Management and Firm Infrastructure.

- **Procurement** - This activity helps in supporting role for inbound logistics. It includes developing records of vendors and procurement of raw materials at effective cost. E-procurement of goods is an example of how raw materials can be attained at lower cost. Without going to the location where raw materials are located, one can order them with the help of technology.

- **Technology Development** - Technology makes or breaks a firm. Giants like Nokia have fallen because they did not well understand the role of technology. Therefore latest development is a key component in adding value. Travel agencies have developed their offerings through technology. Providing virtual tour of a place which acts as mock tour for tourist is one of the ways which has created a buzz in the tourism industry.

- **Human Resource Management** - Your people determine the success of your organisation. People here mean the employees working in an organisation. Technology helps in acquiring the right talent for the job, helps in better directing and motivating them, developing suitable training programme and help in career building of employee. Maintaining a database of employees is also possible because of technology. Training employees with the help of simulation method by developing a computerized scenario, providing tutorials in the form of video lectures, building database of employee and using statistical analysis to showcase their career progression are some ways in which technology has helped in better HRM and adding value to the offering.

- **Firm Infrastructure** - It includes activities which assist in maintenance of a business. It would include all legal compliances such as tax filing, registration of business, taking necessary permission and license etc. Filing of income tax returns, Goods and Service tax returns, fulfilling necessary legal compliances related to tax and other laws, getting business registered are some of the examples technology assists in maintenance of infrastructure of firm.

4.3. A comparative analysis to show time and cost difference in activities with and without use of technology-

To better understand the importance of technology in adding value to the offering by tourism industry, a comparative analysis has been done to determine the cost and time savings in different operations. An hotelier purchases raw materials and supplies, constructs a hotel and rooms, rents that room to other stakeholders, market its hotel and provides a platform for providing suggestions and complaints. A restaurant owner purchases raw materials and supplies from market, hires required professional and semi skilled staff for operations, delivers the food, promote the outlet with advertising and sales promotion tools and files
appropriate tax returns on the income generated. A travel agent prepares the design and tour packages by collecting information from various sources, markets its product through different media channels, give lucrative discount offers, provide facility of virtual tour to the tourist. (17) A tourist searches for all the stakeholders located at the destination. He has to make arrangements for hotels at destination, arranges for transport facility, look out for food delivery outlets, make booking arrangement for travel guide and photographers and give reviews for the visit. A photographer at a tourist destination performs the operation of clicking photos for tourist and delivers the product to them. Steps involved in this process include purchasing camera and camera rolls (in case of old camera) and memory cards in case of digital camera. Then, photos clicked are developed from negatives in case of old cameras and in case of digital camera there is no time lag in developing product. Then these photos are sent to the tourist at their location and advertisement and sales promotional technique are used by photographer to promote themselves and last activity is that photographer asks for suggestions from tourist regarding his service. The following study provides answers to the question of time and cost involved in all of the activities with and without use of technology by different stakeholders.

<table>
<thead>
<tr>
<th>S.No</th>
<th>Activity</th>
<th>Traditional way</th>
<th>With Technology</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Time</td>
<td>Cost (Rs)</td>
</tr>
<tr>
<td>1</td>
<td>Inbound logistic</td>
<td>5 days</td>
<td>10000</td>
</tr>
<tr>
<td>2</td>
<td>Operations</td>
<td>2 days</td>
<td>-</td>
</tr>
<tr>
<td>3</td>
<td>Outbound logistic</td>
<td>5 days</td>
<td>1000</td>
</tr>
<tr>
<td>4</td>
<td>Marketing and Sales</td>
<td>2 days</td>
<td>4000</td>
</tr>
<tr>
<td>5</td>
<td>Services</td>
<td>4 days</td>
<td>-</td>
</tr>
<tr>
<td>6</td>
<td>Procurement</td>
<td>4 days</td>
<td>7000</td>
</tr>
<tr>
<td>7</td>
<td>Human Resource Management</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>8</td>
<td>Technological Development</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>9</td>
<td>Firm Infrastructure</td>
<td>7 days</td>
<td>600</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>25 Days</strong></td>
<td><strong>15600</strong>*</td>
</tr>
</tbody>
</table>

**Source:** Drawn from primary data  
* Approximate figures

The above table can be interpreted in the following ways:

- Without use of technology the total activities can be done by stakeholders in 25 days and by use of technology the same work is done in approximately 7.5 days.
- The cost incurred without use of technology is about Rs 15600 and with use of technology is around Rs 9100.
- Thus, use of technology leads to saving of time as well as money.
- Cost saving is result of less expenditure in traveling and information search, savings in costs.
due to easy comparison of goods at multiple websites and saving of costs on e-filing of income tax.
- Value addition is done by reducing the time which is spent on each activity. Thus, when time is reduced from 7 days in firm infrastructure to 1 day, value has already been added to the offering.
- Further value addition can be done by technological upgradation which could reduce the cost incurred and time elapsed in each activity.

5. Role of technology in development of tourism industry
Technology provides various benefits to the tourism industry. These benefits are in the form of higher efficiency in operations, more revenue due to new tourism products and developing an edge over the competitors. Some of the benefits that technology provides to the tourism industry are as follows:
- Building up a competitive advantage- Technology has become an important means to develop competitive advantage. Companies in IT industry have longed developed their competitive advantage in technology. Stakeholders in tourism industry have also started following the same path. Travel agencies have started focusing more on use of technology. They provide virtual tour of destinations, hotels to enable customer to know more about the product. (14)
- An economical medium- Technology has been proven to be more economical means for performing management functions. Marketing through social media enables wide reach at lower costs than the traditional advertisement method. Technology has also been found to be fruitful in dispersal of products from place of production to place of consumption at even lower cost. This was visible in our example of photographer when photographs were sent to Kerala from Himachal at very affordable rates.
- Venturing into Blue Ocean- Technology can help in development of new tourism products and could boost innovation in the way tourism stakeholders provide services. This would also help in creation of blue oceans in tourism industry. Tourism products such as virtual tourism cannot be imagined without the technology. Similarly, use of Blogs and Vlogs for advertising is possible only because of advent of technology in the industry.
- Strengthening its Strength- Technology advent is not an alternative to strengths, rather it acts as add-on to the existing strength. Strengths are very important for any business. It determines the future course of action for any industry. Technology helps in refining and re-developing strengths in dynamic environment.
- Development of New products- Technology has helped in creation of certain types of tourism products which were non-existent traditionally. As these products are created, it provides new business opportunities for the stakeholders. Let us take a case of photography, which has evolved due to technology. With the advent of photo editing applications, the role of photographer is not limited to just clicking photos, rather it has now been extended to professionally edit them as per the customer requirements.
• Propagates Innovation- Technology assists stakeholders in innovating. Be it innovation in product or in process, technology has helped in increasing the attractiveness of tourism products. This is visible in hotel rooms which have now been coupled with Wi-Fi connection so that tourist does not feel lack of internet connectivity in remote locations. This innovation has evolved tourism product which were expected products to potential products.

• Ease in doing business- Use of technology eases the way work is done by the stakeholders. Managing the work with database management and other information systems assist the stakeholders in decision making. With technology work can be scheduled more accurately and it can be ensured that work follows the schedule.

• Technology helps in assisting tourist as well. Wall mounted maps in hotels of foreign countries would assist tourist in getting information about destinations and thus getting saved from hassle of getting lost and asking for directions.

6. Issues for Stakeholders due to advent of technology in Tourism industry-
Although technology poses tremendous advantages to the tourism industry, there are significant shortcomings which can not be ignored. These shortcomings are issues and challenges which need to be addressed so that fruits of advent of technology are fully enjoyable to the stakeholders. Some of the concerns for stakeholders of tourism industry are as follows-

• Up gradation- Technology is the most dynamic component in environment. It forces people engaged in industry to constantly upgrade. This is a major concern for tourism stakeholders. To constantly upgrade, one needs to be in continuous touch with the technical environment. Also, Indian psychology does not permit one to keep upgrading because it requires expenditure which is deemed to be unnecessary. Therefore, it acts as a hurdle in adopting technology in the operations.

• Requirement of technical expertise- To implement technology in operations, there is requirement of technical knowledge. Studies have depicted that technical literacy in India is not sufficient. So, optimal use of technology is not possible as of now. Further, because technology keeps on changing, it is also not feasible to study and learn new technology as it would shift the focus from the work which is required to be performed.

• Requirement of capital- Technology comes at a cost. Creating or adopting a technology requires funds. Stakeholders in unorganized sectors do not have access to funds to innovate and change. Even if the access is there, people utilize it for other purposes rather than innovating or investing it in new technology.

• Shift of focus from core competence- Technology is an additive to the human performance. It can never be an alternate to it. Too much focus on innovating might cause a shift of focus of stakeholders from their basic operation. This reduces the inefficiency in the operations and reduces the profit earning capability of the stakeholders. (11)

• Increased threats from environment- Technology implementation would invite threats in this globalized world.
Lucrateness of industry might attract firms with higher efficiency in technology and drive out domestic players.

- Resistance to change- Tourism industry in India is heavily unorganized sector. Stakeholders are scattered and work independently on their own. This independency comes at the cost of fear. Fear of uncertainty looms over unorganized sector. This fear also causes resistance to change among the stakeholders. This acts as barrier to adopting technology.

- Fear of Intellectual Property Right infringement- Huge funds are invested in developing and adopting technology so there is necessity of rewarding the innovator for its creation. Also, there is need for preventing the theft of intellectual property. In recent times, it is seen that multiple cases of infringement of property rights have come up and it acts as barrier to develop new technology.

7. Conclusion and Suggestions
From the above discussion it is evident that one can not deny the growing importance of technology in the tourism industry. Not only technology has provided alternate ways in which actions can be performed in the industry, rather it has also added value in the products being offered and the way in which they are offered in terms of cost savings and time savings. This benefit is the sole reason that technology is no penetrating deep into the tourism industry. Stakeholders are keen on using the technology to gain upper hand on the rivals. But, everything comes at a cost. Rise of technology has reduced the use of labour and therefore a threat exists of escalation of unemployment problem of the country. Therefore a little caution is necessary in case the tourism industry wants to fully utilize its potential with the use of technology. Following are the suggestions which would assist the tourism industry in effective and efficient utilization of technology.

- Spread of technical education among youth in tourism industry- It is the youth who can act as harbinger of change. Also, young people if they are able can help in spread of technical education among children and elders. By using technology they can propagate the use of technology by everyone involved in the industry. So, the planning agencies must ensure that youth are educated with use of technology and for that it needs to set up institute that impart the technical training and knowledge.

- Promote and incentivize use of technology- The planning agencies must promote the use of technology in the industry by providing proper incentives to the stakeholders. These incentives can be in the form of intellectual property rights as well or in the form of some monetary discounts and subsidies on use of technology in operations. Laws related to IPRs should be stringent and harsh penalty must be imposed on those who violate these laws.

- Provide funding needs for technology implementation- Lack of funds is also a major problem which acts as barrier for technovation in tourism industry. Therefore, the government or planning agencies must set up funds to ensure that lack of funds do not create hurdle in the way of a good technical
innovation. This fund must assist all those who are willing and are able to implement the technology in their operations.

- Set up centers for developing customized technology - Customization is necessary in order to gain advantage over rivals. If business themselves focus too much on developing technology, they would lose their focus on their core work. The only solution to this problem is that a center must be set up for solely developing the customized technical applications so that business and innovation go in hand to hand. (6-10)

- Safeguard against foreign firms - Innovation in tourism industry would acquire the attention of foreign firms which have access to high technology and are able to constantly upgrade themselves due to high funds availability. The government therefore must protect the domestic firms by imposing reasonable restrictions on FDI and FII in tourism industry.

- Use technology to necessitate use of technology - If panning agencies themselves start use of technology and develop platform for legal compliances digitally only, then this would necessitate the use of technology by others. This would be an act of suasion without pressurizing the stakeholders directly.

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