Impact of Information Technology on the Development of Tourism Industry:
A Case Study of Tehran Museums

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Abstract - **The main aim of this article is about evaluating the effect of IT on developing tourism industry. This article studied in Tehran's museum as a case study. The study was done in Tehran's museum on tourists who visited the museum. The sample was 101 questioners that randomly were answered by tourists. Thesis of the study was tested by the average one-way. The result of study represents that web and virtual reservation of museum has positive impact on the development of general sphere of tourism. While watching picture and movie of tourism hot place such as museum do not have any impact on the number of tourists.**

Index Terms— **Information Technology, Tourism Industry Development, Tehran's Museum**

I. INTRODUCTION

In the resent century appearing of the novel technology such as new media, fast and easy airline, computers, the internet and satellite caused a great change in different dimensions of human life in work and recreations. Since the internet and satellite have prepared appropriate position for nations around the world for getting information about nations around the world, the transportation system in the world transfer all the passenger very fast to all over the world. Jenifer study [3] shows the effect of information technology and function of these facilities were evaluated in tourism industry in China. This study represented that IT has changed China's tourism industry very slowly and fundamentally. Tourism is a huge industry in the world, people can use digital facilities to search and obtain different kind of information before travel to a place. They download picture and motion picture or even other digital products to have virtual tour around the world. This sort of tour is doing by computers and information technology. Tourists click on the link of pictures and visit web site of hot places to have virtual tour. These virtual tours can be contained visiting ancient place and museum. Going through the internet and watching movies or pictures is a useful manner for collecting information for travelling. Reaper suitable information about sites and places are the most important factor of developing tourism. On the other hand excising enough information caused to complete and accomplished projects of tourism.

Nowadays the most important task of IT is making visible

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image of tourism site and make a picture the geographic facts. Media pictures the reality of places for obtaining more and more tourist of destination. Countries try to make clear image of attractions for develop the infrastructures of tourism.

The imagination of people around the world about a specific country and place sometimes is making by factors in media such as movies or television programs or even literature of a country can make this imagination. Previous studies explain that how people use the internet has got fundamental effect on the city while ICT does not have direct impact on the planning in Iran.

Using IT in the life is undeniable, so society should understand the great impact of ICT on the different dimensions of life such as economic dimension, social dimension and cultural dimension. Society should predict the effect of all aspect before it appeared in the real world.

II. THEORETICAL FOUNDATIONS OF RESEARCH

A. Concepts of Tourism and Developing

Tourism is a process that contains some activities such as planning for travelling, transportation, and accommodation. Tourism industry tries to predict needs and prepare all the facilities and equipment's for tourists' .On the hand in destination managers and stockholders try to incentive others to travel to destination. Informing tourist cause increase satisfaction and finally reaching organization goal. In fact tourists due to finding new experience and travel to a destination, in the other word attractions pool tourist from all over the world to the destination [1].

Tourism products are not tangible or physical; they are services that have different criteria. Otherwise these products at first stage must be experienced after using because of this, evaluating of tourism products is hard. At the second stage tourism products are vanishing, these products cannot be reserved for future using. At the third stage, tourism products are personalized, it means that every person has got his or her own wants and they have different standards for recreation. So identifying and understanding of requests and wants of tourism is necessary for planning and development of tourism, in the marketing, marketer should understand the intrinsic factor of tourism. They should understand that tourism products not only are using by tourists but also by local people [2].

Since the particular factors of tourism products is specific, the role of marketing in this industry is so important, therefore utilizing marketing techniques for a country and a zone is so vital. Marketing and experts of marketing generally can give

information to the potential tourists and by this information; potential tourist would be able to have desire to visit the place [8].

From the second part of last century some factors such as globalization, capitalism and developing of it, developing in transportation system and progress in information technology caused a great development in tourism industry. Nowadays tourism industry is at the third position in the world. This industry has been growing very fast in the last six decades. While other industries were facing different kind of stagnant, tourism industry continued its prosper way. The statistic demonstrate that during 1950 there were 25 million tourists were travelling and this number in 1980 reached to 278 million tourists and in 1995 this number increased to 528 million tourist worldwide and finally in 2013 more than 1 billion and 83 million tourists travelled .UNWTO predicted that up to 2030 tourism industry will reach 3.3 percent growing and 1.8 billon will travel word wide. On the other hand according to the EU from 2005 to 2012, 26 percent of job generation was done by tourism directly while during this period 17 percent of indirect job opportunity was generated by tourism. This numbers represent 35 percent of all GDP of EU. So tourism has played an undeniable role in economy. UNWTO claimed that tourism industry has fundamental role in those developing country that have got plan for their tourism and can caused 11 percent of increasing in their economy otherwise it causes sustainability.

In conclusion , developing in ICT and facilities all aspect of tourism to this technology could be able facilities political integration and this technology can produce cultural products as well ,also causes economic progress too [4]

B. Information and Communication Technology

In fact Information technology is combining of hard ware, software and user. This combination caused information circulates. On the other aspect Information technology can be define as all kind of technology that save information such as business , voice ,motion pictures and multimedia [3]. There is another definition of information technology; also information systems and users are important but managing of information can be contain [5].

As a matter of fact IT is a vital key for omitting limitation of circulation of information. IT would be able to omit paper. So because there is no any paper for transferring information the process of waving transportation because of this factor is cheaper and faster. On the other hand exchanging money may facilities in the use of IT. In this process instead of money just some data exchange between banks and costumer, it seems this way is more secure than the old way [4]. Information technology has been growing very fast. This technology not only changed human behavior but also changed human society. One of the clear singe of these changes is producing personal computers and some tools that related to the information technology. The number of Pc s have been produced in the last 15 years from 2001 to 2016 reached to more than one billion Pcs while these numbers in the last year of last century just reached to 50 million Pcs.

C. Information technology and tourism industry

There are four features that it seems necessary Information

technology for developing tourism:

First: To generate a job in the field of information technology it is not necessary allocate more budget in compeer of other industry .so in tourism industry by putting less budget we can make more job opportunity generally. This factor seems vital when we understand that the amount of budget that put in Iran is playing a fundamental role for generation job. On the other hand there are too many young people in Iran that try to fine job. So developing information technology and tourism can prepare sufficient opportunity of job development.

The second feature relate to the fast growing demanding globally for industries that related to information technology such as marketing , programming ,network security and web services of tourism. As result information technology would be better developed [9].

The third feature that has got positive impact on the tourism development can be mentioned like this:

The role of Information technology on reducing of costs of tourism agent and stat portion might be an inevitable. For instance the average of time that a person should spend for doing particular task reduces dramatically by using the technology that related to information.

The last feature of influencing information technology on tourism is related to number of tourists. Nowadays most of people before their travel collect information through the internet they spend less energy and less time to coin out all aspect of a destination rather than the traditional way.

Electronic tourism contains all services that are needed by tourists. From planning to travelling electronic tourism prepare sufficient information and services for tourists. More over electronic tourism is mutual part of tradition tourism and all factors of management. Marketing, management and financial factors are collection in one field by using electronic tourism. The below figure shows the relationship of tourism factors is illustrated.
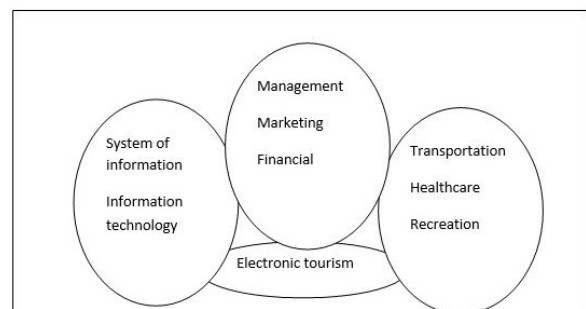

"Fig1. System of Electronic Tourism"

For empowering of electronic tourism some part would be mentioned like:
- Marketing for bring tourism to the place.
- Utilizing ticket reservation for reserving any kind of attractions.
- Evaluating satisfaction of consumers.
- Monitoring DMO .destination management organization
- Banking in the network. Using the electronic factors for banking process.

- E-learning and paying attention to the electronic learning.
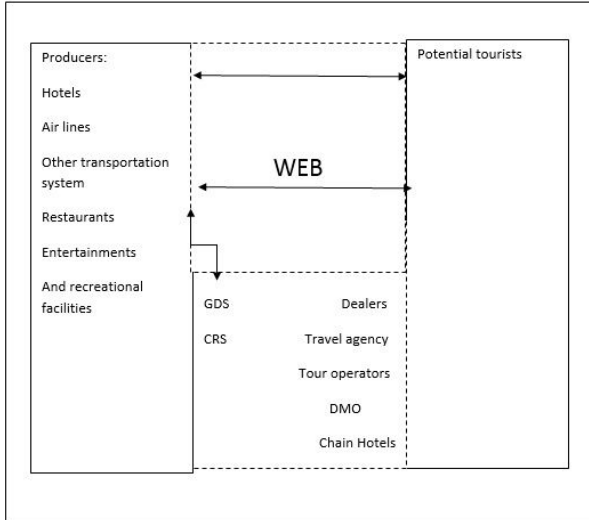
"Fig. 2 Distribution system of Tourism"

These days most of customers and consumers of tourism services are using the Internet for buying and reserving their needs, such as renting car, reserving airplane seats and hotels room. So in the new distribution system of tourism unlike the old marketing keep in touch to customer is vital because keep customers for tourism system can be profitable than finding new customers. Online reservation generally is less expensive than the old one in traditional way. More over global distribution system not only are using by air lines but also by car rental agencies and hotels.

III. RESEARCH METHODOLOGY

This research was done in 2017 in 40 museums of Tehran –Iran capital city- this museums' field are about different. The Sample was about all tourists that during research time visited museums. Randomly tourists were asked. The sample of this research was determined by Kocran equation .According to this equation when the whole society is not known and clear look like this:

$$ n = \frac{Z^2 p}{d^2 + Z^2 p} $$

Z: Standard of variable and it is 1.96
D: standard error of the estimated coefficient that is generally in researches is one percent.
The sufficient sample size in research is 92.and because of some questionnaires are not acceptable, so the number of samples are 101.

The present research is functional in aim, and it is descriptive in collecting data, analyzing of data was earlier events. Descriptive because this research tries to describe the circumstance and understand the atmosphere of place that research was doing in. It was earlier event research because this is an interrelationship between object and subject of variables. For analyzing data we used SPSS as a statistic analyze program. And the method of collecting data was questioner .in the questioner we used Likert spectrum.

A. Research Hypothesis

H_1: Publishing name of touristic places in the web site of Heritage, handicraft and tourism has effect on developing tourism.

H2: Reserving ticket of museum has positive effect on tourism industry development.

IV. RESEARCH FINDINGS

The In the Likert spectrum there are 5 ranks, so if people who were asked to complete questionary agreed the criteria the overall mark of criteria must be more than 3. For test hypothesis we used mean and T- test. And the result of these tests is shown below:

H0=µ≤3
H1=µ≥3

µ1= the mean of importance of publishing places in Heritage, handicraft and tourism organization.
µ2= mean of possibility of reserving places by tourism.

The mean of the first hypothesis in Likert spectrum is more than 3 .so standard division is positive. The meaning of test is 0.00 and the error is 0.05, this number represent that there is a clear relationship between number of tourists and web development. So this hypothesis is proved. It means that publishing the name of places has influence. (See Table 1)

"Table. 1 First Hypothesis Result (H_1)"

Comparative mean test		SD	M	N	test
P-value	T -test				
0.000	12.004	0.358	3.358	101	Publishing the place in web site

The result of the second hypotheses represents more than 3. Means that the second hypothesis is proved and feasibility of buying ticket by tourist has positive effect on developing tourism industry. (See Table 2)

"Table. 2 First Hypothesis Result (H_1)"

Comparative mean test		SD	M	N	test
P-value	T -test				
0.000	8.004	0.458	3.3.458	54	Reserving tickets by the internet

V. CONCLUSION

The result of this research represent that web site of heritage organization play crucial role in developing tourism ,so this organization can be more important if this organization. Moreover this organization can be the resource of researching for tourists. When they want to collect information heritage web site can be first option for data collecting.

On the other hand web site of heritage organization is completely suitable and offer sufficient information for people who want to visit places. Friend user web sites

persuade them to travel the place. Further more visitors of website want to find some information about destination from hotel to shopping centers as well.

These of the second hypothesis represent that if consumers can reserve ticket online they would like to use these facilities in conclusion reservation on line has got great impact on the development of tourism.

So it seems by developing infrastructure of information technology in Iran we can expect that tourism will develop more and more.

Some technologies such as the internet caused to help tourism industry to use these high technology or new generation technology to develop places to obtain more tourists to that place.

More over reserving online does not have any time limitation; tourists can reserve tickets at any time they want.

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