

Investigation of the role of information systems in tourism marketing as one of the strategies of tourism development

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Abstract

Nowadays tourism is considered as one of the main sources of income in the world, and also an effective factor in cultural exchanges between countries that is why it has a very special position as the largest service industry in the world. Therefore there is a close and intense competition in many countries to increase their revenues and interests by means of such an international activity. Obviously, a little negligence can lead to lost opportunities. Therefore, the most successful one among the competing countries is the one that moves forward based on a strategic plan; and one way of achieving the strategic plan is tourism marketing which aims at gaining customer satisfaction in a profitable manner. In order to succeed in tourism marketing, we must fit well to present the future orientations of the market. The purpose of this paper is to discuss the use of marketing information systems in tourism as a way of attracting tourists by descriptive approach. This paper shows that major changes have taken place in the business world; as a result, various economic sectors have been forced to manipulate information systems to gain overwhelming profits.

Keywords: Information systems, marketing, tourism, development

Introduction

Tourism industry is the largest and the most diverse industry all over the world. Many countries view this dynamic industry as the main source of income,

occupation, private sector growth, development of infrastructure (Way Gi, 2007: 19) and one of the effective factors in cultural exchange among countries (Risinger and Trener, 2012). This is true especially in developing countries where production and excavation is not cost-effective or does not play important role in commerce arena (Way Gi, 2007: 19). On the other hand, people view tourism as one of the most favorite ways of spending their leisure time as their economic and social conditions is developed. Therefore, the number of tourists is continuously increasing (Wei, 2012: 1105). Tourism functions are: a vital force for peace, social importance, economic importance, cultural richness, and occupation opportunities, educational intensions (Walker and Walker, 2011: 21).

Islamic Republic of Iran is one of the first 10 countries in terms of having touristic attractions but it does not have an acceptable place in tourism attraction and development (especially foreign) and making income from tourism (Mehrabani et al, 2012: 1). For example, according to the statistics of global council of tour and tourism, Iran had the rank of 127 in terms of participation of tourism industry in GDP, 135, in terms of tourism industry jobs and employees and had the rank of 138 in terms of investment in tourism industry in 2011 (in 182 countries). This is while Iran must have 5% of global tourism income in 2011 but only 0.4% of this income belongs to Iran and this is indicative of unfavorable condition of this industry in Iran (Zarei, Matin et al, 2012). Therefore, the problem is that why Islamic Republic of Iran is not successful in tourist attraction and which factors influence on this failure? The present

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paper investigates the role of marketing information systems in tourism marketing as one of the strategic ways of attracting tourism.

Research literature

Tourism industry refers to a set of economic activities which provide service and product for tourists (Pourfaraj et al, 2011: 47). Within the recent years, tourism has developed a lot (Peters and Ying, 2012: 301). Tourism is now one of the main income resources and one of the effective factors in cultural exchanges among countries and it is known as the largest service industry all over the world (Risinger and Trener, 2012: 452). Therefore, many countries compete on absorbing more and more tourists. Iran can also take part in this global competition and have an acceptable share of this income resource due to its several-thousand-years history (Kazemi, 2007: 99). However, studies have shown that Iran has not been successful in attracting tourists. Studies conducted by Homayoun (1999), Madhoushi and Naserpour (2003), Moshref Javadi et al (2008), Mehrabi et al (2012) and ZareiMatin et al (2012) refer to obstacles ahead of tourism industry development in Iran. All studies have a common point and that is: infrastructure is one important obstacle ahead of development of tourism industry in Iran. Furthermore, factors like economic dependence on petroleum and lack of need to tourism income and low profitability of economic activities in tourism industry influence on lack

of development of this industry in Iran (Mehrabi et al, 2012: 8). Therefore, avoiding one-product economy is essential because of the recent sanctions on petroleum industry and one of the solutions is development of tourism industry.

As it was mentioned above, infrastructure obstacles are the most important barriers ahead of development of tourism industry. One of the main infrastructure obstacles is technology-related obstacles in tourism attraction and its solution is to use e-tourism and improvement of technology infrastructure. Of course, it is obvious that success in this arena requires being familiar with proper management of institutes and organizations which are related to tourism industry, a management which is coordinated with newest scientific achievements.

In table 1, the present research fields and different subjects of tourism marketing studies have been presented. As it can be observed in table 1, e-marketing is one of the newest achievements in the field of tourism marketing:

E-marketing

In today's world, many factors have developed economic competitions in business, development of global economy, spread of internet application; increase in competition for better production and increase of influence of customer in production process have made organizations to develop new and more efficient ways for easier sales (Akbariyan and Hasani, 2011: 105).

Table 1. Different fields of the present research and tourism marketing research subjects

row	Research fields	subject
1	Consumer behavior	Motivations, perceptions, satisfaction
2	Market segmentation, goal, navigation	Classification of behavioral factors and mental image
3	Brand management	Destination brand actions, destination, destination image, destination personality, measurement of destination image
4	Service performance	Service quality, service offering, service defects
5	e-marketing	Trading, advertisement, web 2.0, contents produced by users, social media, mobile phone service
6	Demand model/pricing	Models of demand prediction and pricing strategies
7	Strategic marketing/ marketing concept	Market orientation, relationship marketing, empirical marketing

All these factors have resulted in an important phenomenon «e-commerce» in late 1990s and the third millennium and it had an effective role in exit

from recession resulted from traditional economy. This phenomenon which helps marketing a lot today was web 2.0 technologies which introduced

solutions for increasing customers' influences in search process, decision for purchase. These tools and solutions which are known as social media facilitate appropriate presence among large communities of people in virtual world and allowed commercial companies to send their direct and indirect messages to market (NikNejad & Akbariyan, 2011: 22). Furthermore, companies were able to use advanced methods of searching and monitoring for conducting data mining in web and become aware of users' attitude and special subjects based on demographic characteristics. These advanced technologies allow new kinds of marketing like mobile marketing which involves advertisement messages. Because of severe weakness of Iran in infrastructure and especially in technology infrastructure (Sajjadi and Ayat, as quoted from global tourism organization, 2007: 5), appropriate planning in this field seems to be necessary.

Information systems and tourism marketing

Tourism is severely dependent on information. In tourism sector, ITC can play role in innovation process, creation of opportunities, equilibrium between supply and demand and facilitation of new patterns development. Incorporation of ITC into tourism has many advantages for entrepreneurs and lets them adapt to changes which are resulted from global markets, new competitors and passengers' motivations (Ramos and Perna, 2008: 279).

Therefore, information systems (IS) can be a solution to many challenges ahead of tourism industry. Professionals believe that appropriate understanding of information and communications importance and application of information systems is very essential (Ramos and Perna, 2008: 280).

Marketing managers need more information in order to become able to make effective decisions. New technologies like small and powerful computers, tele-conference, internet network and advanced technologies allow companies to gather, classify and process large information. In spite of this, many marketers complain that they do not have enough information or they have a large amount of incorrect information. Many companies study on their managers' information needs and design appropriate information systems for meeting these needs (Kotler and Armstrong, 2010: 191).

An effective supervision on market is possible through marketing information systems which are based on IT (Speier&Venkatesh, 2002: 101). Furthermore, organizations will be able to understand

their customers' needs and expectations and respond to the more effectively (Nakata & Zhu, 2006: 60). On the other hand, application of marketing IS results in more effective and efficient marketing activities and for example development of new product or correction of communications in companies.

Marketing information systems can also help with development of new successful products (Azad and Sharifi, 2011: 4).

Elements of marketing information system (MIS)

As it can be seen in figure 1, MIS contains individuals, equipment, machinery and procedures which can be used by marketers for decision-making and gathering, classifying, analyzing, evaluating and distributing information (I.Eraqui&Abd-alla, 2008: 8). A well-designed information system is started and ended with user. In information systems, marketing managers are interviewed and then (in order to determine necessary information) a survey research or feasibility study is conducted (for achieving this information) and information needs are evaluated.

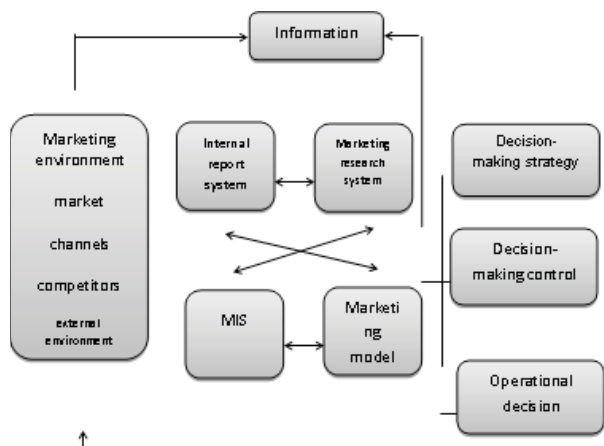


Figure 1. Main elements of MIS, Resource: (I.Eraqui&Abd-alla, 2008: 9)

Then, management information systems are used for gathering data from internal and external resources. Internal information can provide information on sales amounts, final cost of products, inventory, cash flows and accounts receivables and payables. This information can be achieved quickly and without any cost. However, this information should be adapted to existing conditions for making marketing decisions. Activities which are conducted in the field of gathering information and secret news in marketing are in a way that daily informa-

tion on external marketing environment events can be provided for executive management (Kotler and Armstrong, 2010: 191). Secret information can be collected from employees, customers, material suppliers, business companies, reports, conferences, advertisement, competitors' actions and other activities of environment. Marketing research includes collecting information which is suitable for a particular marketing reason. Finally, management information systems can help with delivering collected information to managers so that they can make better decisions (marketing decisions)(Kotler and Armstrong, 2010: 192).

Necessity of using commercial information systems

In this part, we talk about main changes which take place in commerce world so that we can understand the depth of need to information systems generally and the depth of commercial information systems specifically. Table 2 shows need to commercial IS.

Table 2. New trends in commerce and industry which makes us use IS.

row	New trends in commerce and industry
1	Ambiguity in industry borders
2	Industries reconstruction
3	Quicker pace of commerce
4	Increase in foreign competition
5	Establishment of global commerce associations
6	Establishment of information societies
7	Increase in management complexity
8	Dependence of organizational units
9	Improvement of productivity
10	Access to computer for end users
11	Recognition of information as a resource

Resource: Anonymous, 2004

Advantages of commercial information systems:

Commercial information system has three main advantages:

- Achievement of efficiency: doing more work with the same resources
- Improvement of effectiveness: application of resources for achieving goals;
- Achieving competitive benefits: improvement of performance in comparison with competitors (YazdanPanah, 2010: 30).

Conclusions

Tourism industry brings new income through tourists' costs, increasing employment, increasing tax income, and increasing external investment. A developed tourism industry can act like a catalyst for other sectors because this sector has relationship with all other economic sectors. Therefore, development of tourism industry improves production and creates new occupational opportunities and has other positive influences like increasing government income. Increase in production in different sectors result in increase in indirect taxes of government. Furthermore, studies show that development of tourism industry reduces national income distribution inequality. Many countries try to increase their benefits from this international activity. Iran can participate in this competition and have an acceptable share of its benefits because of having several years of history and many touristic attractions. Of course it is obvious that success in this arena involves familiarity with proper management of related institutes, a management which is coordinated with newest achievements of science. Familiarity with newest scientific achievements in any field is unavoidable and has many economic advantages. The present paper tried to line up one of the dimensions of tourism management, i.e. tourism marketing with newest scientific achievements, i.e. e-marketing and marketing information system in tourism.

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