



Available online at [www.sciencedirect.com](http://www.sciencedirect.com)

**ScienceDirect**

Procedia Economics and Finance 10 (2014) 16 – 22

**Procedia**  
Economics and Finance  
[www.elsevier.com/locate/procedia](http://www.elsevier.com/locate/procedia)

7<sup>th</sup> International Conference on Applied Statistics

## A model for assessing tourists' satisfaction of the existing information on online environment

Anamaria – Cătălina Radu<sup>a</sup>, Andra Ileana Dobrescu<sup>b</sup> \*

<sup>a</sup> Bucharest University of Economic Studies, Piața Romană, 1st district, Bucharest 010374, Romania

<sup>b</sup> Bucharest University of Economic Studies, Piața Romană, 1st district, Bucharest 010374, Romania

---

### Abstract

The present study aims at creating a conceptual model to determine the level of satisfaction experienced by tourists on the information found in the online environment. The research aims to identify the impact of such factors as: confidence, the existing advantages / disadvantages in the digital environment and the data security at the current satisfaction degree of the users. Multivariate analysis that was conducted aimed at creating and testing a model to determine on the one hand the satisfaction level experienced by tourists, on the other hand the factors that have the ability to influence. For model testing data were processed using IBM SPSS Statistics 20.

© 2014 Elsevier B.V. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/3.0/>).

Selection and peer-review under responsibility of the Department of Statistics and Econometrics, Bucharest University of Economic Studies.

Keywords: satisfaction, online marketing, tourism marketing, conceptual model ;

---

### 1. Introduction

The emerging digital technologies have led to major changes in multiple business sectors. Tourism is one sector which has been greatly shaped. Hojehgan and Esfangareh (2011) stated that internet surfing has made an impact in the tourism sector, an impact that has led not only to diversified „supply and demand”, but also to a higher number of competitors.

The digital media has offered tourists the possibility to obtain information about almost every possible travel

---

\* Corresponding author.

E-mail address: [andra.dobrescu29@yahoo.com](mailto:andra.dobrescu29@yahoo.com).

destination, with just a simple click of a button. The existing web technology and web applications have allowed users not only to gather whatever information they are interested in but also, based on it, to choose the travel packages they desire. The online media offers these users the possibility to compare information from multiple sites and also other users' reviews, thus having the possibility to obtain a complete and accurate image of where and how they want to travel.

The virtual environment brings a series of advantages not only to the tourists, but also to the companies that have the possibility to bring the consumer to the information regarding the tourism products they are advertising. What's more, the internet offers the tourism agencies the possibility to contact the consumers more easily, letting them know about the great offers they promote (Morgan, 1998). Hence, we can observe that the online media is powerfully linked to the tourism sector, directly connecting costumers to travel agencies and vice versa.

## **2. Tourism marketing application in the online environment**

The development of tourism marketing in the online environment has been considered a challenge that has faced the consumers not only with advantages, but also with disadvantages. Buhalis and Law (2008) stated that research in this particular field is still at its beginning, but the technological revolution certainly has left its mark. Thus, as various online applications have developed, the websites have managed to become more interactive, allowing tourists to map out their travel plans and even create custom travel itineraries.

Concerning the online environment, the behavior of the consumer is changing, leaving space for the development of a series of features (Mills, 2004). When studying the consumers' behavior a micro-analysis or a macro-analysis are the most frequently used (Stancioiu, 2004). The purpose of the micro-analysis is to identify the determinants and the demand models, taking into consideration data such as: the number of visits to a country, the tourist attractions visited, the rate of booking at hotels, the number of nights spent in a certain hotel. In comparison with this type of study, the macro-analysis is focused on social-cultural and psychological factors that transfer the individual choices of a tourist to a group level.

The behavior of a tourist is determined by a multitude of psychological, social and cultural variables that have been categorized in three classes: personal factors (needs, motivation, perception, attitude, the tourist's personality and the self-image that he projects), social factors (life style, family life cycle, family and social class) and conjunctures or situational factors (opinions leaders, physical ambiance, social ambiance, time and mood).

As previously mentioned, the online environment has brought consumers a series of benefits that can be quantified through: saved time, quick access to information, commodity in acquiring products and the possibility to compare the market's promotional offers (Morrison et al, 2001). Despite this, a large number of tourists do not show trust regarding online activities, mainly due to the lack of direct, personal contact, the uncertainty regarding data security, as well as due to the lack of experience in using the internet (Wolfe et al., 2004).

The trust that users have regarding the digital environment plays a vital role regarding the transactions that unfold online. Hence, there may be consumers that although want certain tourism products that can be bought via internet, won't acquire them due to the risk perceived regarding data safety. The lack of trust is caused mainly by lack of direct contact between the two parties, consumers becoming sceptical about the online actions that are conducted by companies (Cheshire et al., 2010).

This aspect is very common even in the tourism sector, a sector in which the personnel with whom the tourist makes contact is considered to be a very important asset of a company. Kim et al. (2011) has proven that the trust of tourists in the online environment (ex: websites) is influenced by a series of factors such as: data security, transaction costs or the ease in using data. Thusly, it has been observed that the more a tourist is content with the information he receives and with the services that are provided to him, the more he will want subsequently to acquire products or services online (Akhter, 2012). Because of this, companies should investigate all of these aspects and build strategies that succeed in increasing the level of trust among tourists.

The existing online interactions between the tourism agencies or the tourism services providing companies and the tourists are mainly created through the websites or through the social media platforms. The websites are destined most of the time to deliver the most important information regarding a company. Furthermore, they are seen as a go-between the product/service provider and the consumer. Kardaras et al. (2013) stated that tourism websites must offer consumers exactly what they want. In such a sector, it is most important to customize and adapt the websites to the demands of the external environment. The customizing actually implies the creation of a quality interface that offers tourists the possibility to easily access all the information they need. Moreover, applications and technologies

can be implemented so that they can offer users the means to view travel itineraries, accommodation and eating out units that are found at the destination of their choice.

An important role in the online advertising of tourism products is that of the social media platforms, through which the tourism agencies can continuously communicate with the potential clients, offering them all the information they need. The social media platforms thus provide companies the chance to display the main products they offer for sale and give customers the information they need to make acquisitions (Hvasa, Munar, 2012).

The online environment also provides tourists the possibility to read the reviews of other people that have visited the destinations they are interested in. This aspect is possible through the forum sections, blogs, but also through the social media platforms we have mentioned before. This “word of mouth” type of communication (Litvin 2008) is very important not only in the traditional environment, but also in the online one. If in the traditional environment information is offered most of the time by those close to us (friends, family), in the online environment this aspect has a series of particularities. Thus, information is supplied most of the time by anonymous people that have visited various destinations and who wish to share their experiences.

The “word of mouth” communication has a greater influence over the individual, if it is shared by a specialist or an accredited person in the tourism sector. Research has shown that data taken from various persons in the external environment can influence on a short and even on a long term the individual’s attitude towards the product or service that is offered for sale (Bone, 1995).

The online environment has been identified as being a challenge even for the tourism agencies that have continuously tried to adapt to the changes in the external environment. Research has proven (El-Gohary, 2012) that the use of online marketing when it comes to the tourism operators is influenced by a series of internal factors (the company’s traits, the organizational culture, the company’s resources, the size of the company, the set costs), external factors (the pressure coming from competitors, the governmental policies, the pressure coming from the industry, the market trends, the national infrastructure), by the ease in using the possible advantages that can be obtained, as well as by the compatibility of the company with this environment. The development of the internet has allowed companies to communicate more easily with both consumers and same sector business partners alike. The emergence of certain applications and technologies has led to the possibility that consumers have to create tourism packages together with the companies that promote them (Buhalis, Law, 2008).

Hence, we can observe the main advantages that the online environment offers both tourists and tourism services providing companies alike. Taking into consideration what has been mentioned previously, we consider that the digital environment must be used simultaneously with the traditional one, so that tourists can receive benefits both ways. Analyzing all the previous aspects, the tourism agencies have the possibility to build strategies that are meant to improve the activities that are conducted online, but only by having in mind all the influential factors that have been identified.

### **3. The methodological framework**

The current study aims to identify the level of satisfaction that tourists have regarding the information that exists in the online tourism sector. The purpose of this research is to determine how the tourists’ level of satisfaction regarding the existing online information is influenced by the trust in the online environment, by its existing advantages and disadvantages and by the security level of personal data.

In the present study, a multitude of influential factors have been taken into consideration, such as: access time, reduced costs, the possibility to compare offers, commodity, the possibility to have access to information offered by other individuals, the existence of irrelevant information, the impossibility to identify the tourism service providing company, the impossibility to directly discuss with a contact person, the level of trust in the tourism agency, the level of trust in the information a company is displaying, the level of trust in the information shared by other individuals, the level of trust in the transactions that unfold, personal data security and the security of transactions.

The research to identify the level of satisfaction that tourists have when it comes to the information found online has taken place in Bucharest, from the 12th to the 25th of August, among individuals aged 18 to 35 that turn to a tourism agency when it comes to acquiring tourism products or services. For this study a questionnaire has been created and it has been subsequently filled out by the respondents. The research is based on a sample of 157 individuals. The data that has been obtained through this study was analyzed through the IBM SPSS Statistics 20 program.

#### 4. The proposed conceptual model

The proposed conceptual model aimed at identifying how the advantages/ disadvantages existing in the online environment, users' trust in the environment, and data security are able to influence the level of satisfaction experienced by tourists on the information provided on the internet. It is presented in the following way:

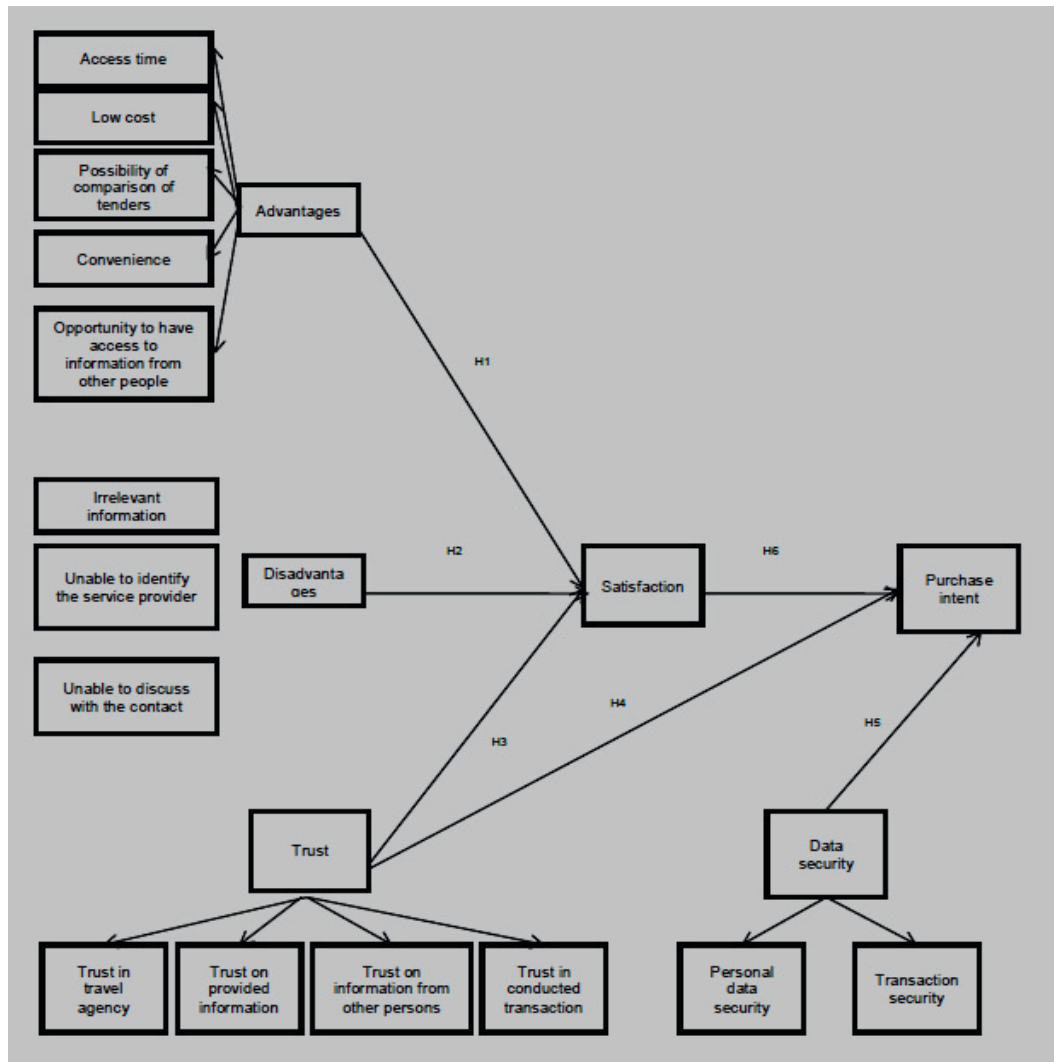


Fig.1. The proposed conceptual model

When the model was put together, it was based on the idea that the tourists' satisfaction regarding the information found online is influenced by a series of factors. After analyzing specialty literature, we have reached the conclusion that the most influential factors are: time of access to the information that is shared by other individuals, the existence of irrelevant information, the impossibility of identifying the tourism services providing company, the impossibility to directly discuss with a contact person, the level of trust in the tourism agency, the level of trust in the information that is displayed by companies, the level of trust in the information shared by other individuals, the level of trust in the transactions that have unfolded, the level of security regarding personal data and the security of

transactions.

### 5. The model

Based on the analysis we have conducted, we can observe that the tourists' trust regarding the activity in the online environment is the most important when evaluating satisfaction. Hence, the higher a tourist's level of trust is, the more satisfied he'll be when subsequently acquiring online tourism products or services. The advantages that this environment offers, as well as personal data safety have the role to directly influence the level of satisfaction of the users. On the other hand, the perceived disadvantages negatively influence the consumer's attitude towards the online environment, thus preventing users from acquiring online tourism products or services. Connected to the conducted study we can observe that satisfaction influences directly and in a positive manner the tourists' intention of acquiring online tourism products and services. We can deduce that the more satisfied a tourist is with the information found online, the more he will orient himself to acquire from this environment. The acquisition intent is also influenced in a high proportion by the level of personal data safety that individuals perceive. Thus, the more a tourist perceives a higher level of trust, the more he'll want to acquire tourism products or services online.

As for the analyzed indicators we have to mention that some of them have presented very high values, whereas others are under the normal quota. In this case, the value for Chi square is 378.055, at a level of 1555 degrees of freedom, with an associated probability lower than 0.05. This shows us that the value of Chi square/degrees of freedom (CMIN/DF) is actually  $2.439 < 3$ . This aspect proves the fact that this model is accepted. The RMR (root mean squared residual) absolute indicator has the value of  $0.087 < 0.1$ , hence we have a pretty good model that has the capacity to reproduce the evolution of the data we have observed. The GFI (index of goodness of fit) indicator is 0.803, a value near to 0.85, which clearly signals the presence of a very good model. This indicator is reliant to the number of data we have collected and to the complexity of the model. The restricted number of respondents in this research has determined a slightly lower value when it comes to this indicator. AGFI is an adjusted indicator of the GFI, with the value of 0.733. NFI (normed fit index) (0.749), RFI (relative fit index) (0.693), CFI (comparative fit index) (0.831) and IFI (incremental fit index) (0.835) have reached values of almost 0.85, which indicate that the model obtained is good enough to be used as a foundation for what analysis may be subsequently conducted regarding this subject.

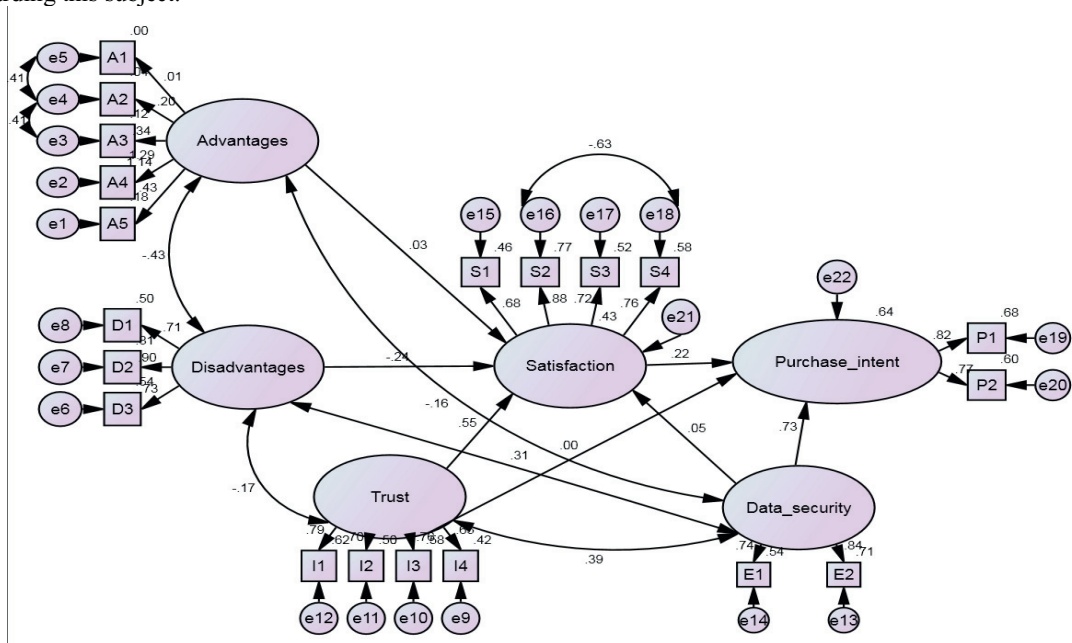


Fig. 2. The model

## 6. The limitations of the research

Concerning the limitations of this research we must mention that the study was based on a narrow sample of 157 individuals, this prohibiting us from extrapolating the data concerning the researched collectivity. For us to make an ample picture regarding tourist satisfaction when it comes to information found online, deeper analysis is needed so as to prove or disprove what we have stated previously. At for the inquiry, a multitude of factors that influence the level of satisfaction the tourists feel have been taken into consideration. What's more, there is a possibility that other such factors exist and haven't been taken into consideration at the time the study was conducted. Following the main limitations of this research, we consider necessary a deeper subsequent analysis which will be based on the results of this current study. Future inquiries should be made using representative samples that will allow us to have a more clear picture of what the degree of satisfaction tourists have regarding the information found in the online environment.

## 7. Conclusions

From the research conducted for this study we can observe the importance of various influential factors when taking into consideration the tourists' satisfaction regarding information found in the online environment. Hence, we can state that the more satisfied a tourist is with the information he receives, the more probable it is for him to subsequently acquire tourism products or services online. Moreover, an important role in the intent to acquire is the existence of the security of personal data. This aspect suggests that tourists take into consideration the existing security factors for the various existing websites. Regarding all the aspects previously mentioned we consider it necessary that all tourism agencies give them the importance they deserve when conducting activities in the online environment.

## References

- Akhter S.H., (2012). Who spends more online? The influence of time, usage variety, and privacy concern on online spending, *Journal of Retailing and Consumer Services* Vol. 19, Issue 1, pp. 109–115;
- Bone P. F., (1995). Word-of-mouth effects on short-term and long-term product judgments, *Journal of Business Research*, Vol. 32, Issue 3, pp. 213–223;
- Buhalis D., Law R., (2008). Progress in information technology and tourism management: 20 years on and 10 years after the Internet—The state of eTourism research, *Tourism Management*, Vol. 29, Issue 4, pp. 609–623;
- Cheshire C., Antin J., Cook K.S., Churchill E., (2010). General and familiar trust in websites. *Knowledge, Technology and Policy*, pp.311-331;
- El-Gohary H., (2012). Factors affecting E-Marketing adoption and implementation in tourism firms: An empirical investigation of Egyptian small tourism organisations, *Tourism Management*, Vol. 33, Issue 5, pp. 1256–1269;
- Hojeghan S. B., Esfāngareh A. N., (2011). Digital economy and tourism impacts, influences and challenges, *Procedia - Social and Behavioral Sciences*, Vol. 19, pp. 308–316;
- Hvass K.A., Munar A. M., (2012). The take off of social media in tourism, *Journal of Vacation Marketin*, Vol.18, pp.93 103;
- Kardaras D. K., Karakostas B., Mamakou X. J., (2013). Content presentation personalisation and media adaptation in tourism web sites using Fuzzy Delphi Method and Fuzzy Cognitive Maps, *Expert Systems with Applications*, Vol. 40, Issue 6, pp. 2331–2342;
- Kim M. J., Chung N., Lee C. K., (2011). The effect of perceived trust on electronic commerce: Shopping online for tourism products and services in South Korea, *Tourism Management*, Vol.32, Issue 2, pp. 256–265;
- Litvin S. W., Goldsmith R. E., Pan B., (2008). Electronic word-of-mouth in hospitality and tourism management, *Tourism Management*, Vol. 29, Issue 3, pp. 458–468;
- Mills, J., Law, R., (2004). *Handbook of consumer behaviour, tourism and the Internet*, New York: Harworth Hospitality Press;
- Morgan N., Arnette P., (1998). *Tourism promotion and power creating image, Creating Identities*, Chichester: John Eiley& Sons;
- Morrison A. M., Jing S., O'Leary J. T., Lipping A. C., (2001). Predicting usage of the Internet for travel bookings: An exploratory study, *Information Technology and Tourism*, Vol. 4, pp. 15–30;
- Stancioiu A.F., 2004, *Strategii de marketing in turism*, Bucuresti: Economica;
- Wolfe K., Hsu C. H. C., Kang S. K., 2004, Buyer characteristics among users of various travel intermediaries, *Journal of Travel and Tourism Marketing*, Vol.17, pp. 51–62;
- Clark, T., Woodley, R., De Halas, D., 1962. Gas-Graphite Systems, in "Nuclear Graphite".In: Nightingale, R. (Ed.). Academic Press, New York, pp. 387.
- Deal, B., Grove, A., 1965.General Relationship for the Thermal Oxidation of Silicon. *Journal of Applied Physics* 36, 37–70.
- Deep-Burn Project: Annual Report for 2009, Idaho National Laboratory, Sept. 2009.

- Fachinger, J., den Exter, M., Grambow, B., Holgerson, S., Landesmann, C., Titov, M., Podruzhina, T., 2004. Behavior of spent HTR fuel elements in aquatic phases of repository host rock formations, 2nd International Topical Meeting on High Temperature Reactor Technology. Beijing, China, paper #B08.
- Fachinger, J., 2006. Behavior of HTR Fuel Elements in Aquatic Phases of Repository Host Rock Formations. *Nuclear Engineering & Design* 236, 54.