DOCTORAL DISSERTATION SUMMARY: Modelling intentions for online reservations in hotel industry

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MODELLING INTENTIONS FOR ONLINE RESERVATIONS IN HOTEL INDUSTRY

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SUMMARY

Purpose

Over the last twenty years, information and communication technologies have completely changed the way hotel companies do business and the behaviour of tourists. The Internet has become the most important sales channel in the hotel industry, and tourists have become "experts" in searching, communicating and buying tourism products and services. The importance of understanding the online tourists' behaviour is extremely important for hotel companies, travel agencies, tourist destinations, but also for other stakeholders in the tourism sector. Online tourist behaviour is an extremely complex research area in which both the tourists and the environment itself are changing extremely rapidly. A number of interrelated factors influence the online tourist behaviour. Online reservations are one of the fastest growing segments of online sales. The two main channels of online hotel sales are online travel agencies (OTA) and directly through hotel websites. Over the last decade, these two distribution channels have been fighting for market share and despite all the efforts of hotel companies to increase direct bookings, OTA still holds a dominant position in the market. The reason for this may be that OTA invests considerable resources in managing and improving the online customer experience, while hotels use their websites primarily to present hotel content and information.

A comprehensive literature review has revealed a lack of studies investigating the relationship between website quality, online customer experience and booking intentions, which are the main research concepts of this doctoral thesis. The main objectives of the doctoral thesis are: to examine the existing theoretical knowledge in the field of the observed research concepts, to develop a conceptual model to measure the influence of website quality on online experience and booking intentions, to investigate

the reliability and validity of the model on two independent samples, and to test the proposed hypotheses.

Existing studies have largely concentrated on examining customers' online travel purchases based on theories and models that use a cognitive approach to predict customer behaviour (such as the Technology Acceptance Model, the Theory of Reasoned Action, the Theory of Planned Behaviour). These have often been criticised for not providing sufficient theoretical support to explain the affective side of customer behaviour. Recently, Moon et al. (2017) stated that researchers could use the stimulus-organism-response model (S-O-R) to better predict and explain the intentions of online shopping. Therefore, based on the relevant literature on tourism and consumer behaviour, this study proposes a conceptual model based on the S-O-R paradigm (Mehrabian & Russell, 1974) to measure the influence of website quality on the online customer experience and future booking intentions.

The stimulus in the proposed conceptual model is the website quality. The model proposes that website quality will positively and significantly influence the cognitive and affective online customer experience (organism), which will ultimately have a positive and significant impact on future booking intentions.

Methodology

In order to test the proposed research hypotheses, an empirical study based on primary data was conducted using the online survey method. The questionnaire was based on a comprehensive review of previous research on website quality, online customer experience and behavioural intentions. The questionnaire was designed in English, Croatian, German and Italian language. In order to check the content validity, clarity and comprehensibility of the questionnaire as well as to determine the exact time needed to complete it, a pre-test of the questionnaire was conducted on a sample of six members of the academic and four members of the non-academic community.

The open source application 1ka (http://english.1ka.si/) was used to create the questionnaire and conduct the research. A convenience sample was used, but in order to reach a larger number of respondents, a snowball sampling was also applied, where the contacted respondents were asked to forward the e-mail to friends and acquaintances to fill out the questionnaire. In addition, links to the survey were posted on social networks and professional research groups, as well as on websites specializing in online research. The survey was conducted from mid-April to the end of September 2018. During this period, 3869 respondents approached the questionnaire, while 833 respondents completed the questionnaire. With screening question whether they had booked hotel accommodation online in the last 12 months, 159 questionnaires were excluded from further analysis. When the database was checked, 127 questionnaires were identified with more than 15% of the missing values, and according to the recommendation of Hair et al. (2017), such questionnaires are not be included in the further analysis. Finally, the sample of the empirical study consisted of 547 respondents, which corresponds to a response rate of 14.15%.

An empirical analysis was carried out using univariate (average scores, coefficient of skewness and kurtosis for all variables), bivariate (Mann-Whitney U test) and multivariate (partial least squares structural equation modelling method; PLS-SEM) non-parametric statistical methods.

Findings

In the sample, 381 (69.65 %) of the respondents made their last reservation through the OTA website, while 166 (30.68 %) of them made a reservation through the hotel's website. The clear disparity between the two samples confirms the results of previous research that tourists prefer OTA websites when booking accommodation. Women are significantly more represented in both samples and the most represented age group is between 23 and 33 years. Respondents are highly educated and come from 53 countries around the world. Although 42% of respondents are from Croatia, most foreign respondents are from the UK, the Netherlands and Serbia. From the sociodemographic characteristics studied, it can be concluded that there are similarities between the two samples. The results of the research showed that when looking for information about the hotel, the respondents mostly use the websites through which they made the reservation. Most of the respondents made their last reservation for a holiday abroad. More than half of the respondents stated that they spent 3-6 nights in a hotel and mostly booked 4-star hotels.

The results of the descriptive statistical analysis show that in both samples the respondents rated all characteristics of website quality (system quality, information quality, service quality and hedonic quality), constructs of cognitive online experience, affective online experience and behavioural intentions with relatively high marks. Respondents who booked through the OTA website mostly agree that the website provides secure transactions ($\bar{x}$=6.17), that they received exactly what they booked through the website ($\bar{x}$=6.04) and that the information on the website is clear ($\bar{x}$=6.03), useful ($\bar{x}$=5.99) and complete ($\bar{x}$=5.99). Respondents who have made a reservation through the hotel website mostly agree that the information on the website is up-to-date ($\bar{x}$=6.05), accurate ($\bar{x}$=6.05), complete ($\bar{x}$=5.90), and useful ($\bar{x}$=5.89), and that the website provides secure transactions ($\bar{x}$=6.01). Regarding the construct cognitive online experience, respondents generally agree that they controlled activity while on the site (OTA sample $\bar{x}$=5.56; hotel sample $\bar{x}$=5.58) and they were able to communicate with the website (OTA sample $\bar{x}$=5.56; hotel sample $\bar{x}$=5.42). The lowest degree of agreement was expressed for thinking about other things while using the website (OTA sample $\bar{x}$=3.72; hotel sample $\bar{x}$=3.71) and that the website aroused the imagination (OTA sample $\bar{x}$=4.10, hotel sample $\bar{x}$=3.92). In both samples, respondents mostly agreed that a visit to the website was interesting (OTA sample $\bar{x}$=4.72; hotel sample $\bar{x}$=4.43), while the least agreement was expressed that the website was fun to visit (OTA sample $\bar{x}$=4.45; hotel sample $\bar{x}$=4.23). The average scores for future behavioural intentions in both samples are high, suggesting that they will book hotel accommodation through this website in the near future, that they will consider this website if they need to book hotel

accommodation, and that they have a high desire to book hotel accommodation through this website in the future.

The results of the bivariate statistical analysis show that only three out of twenty-three variables of the website quality construct differ statistically and significantly in the average scores between the two independent samples. Since the scores of the majority of the tested website quality variables are not statistically and significantly different, the H1a hypothesis was not confirmed. Furthermore, for all the constructs measured, except for affective online experience (H1c), there are no statistically significant differences in the average scores between the two independent samples. Therefore, the hypotheses H1b and H1d could not be confirmed.

PLS-SEM was subsequently conducted to assess the validity and reliability of the data and to empirically test the hypothesized relationships between the constructs. Based on the analysed criteria, the reliability and validity of the measurement (external) model was determined. The results confirmed the hypotheses (H2a and H2b) in both structural models that the website quality is a multidimensional higher order construct.

In order to evaluate the predictive power of the structural models, coefficients of determination (R^2) of endogenous constructs were calculated. From the R^2 values it can be concluded that in the OTA sample 60.8% of the variance of the cognitive online experience, 22.7% of the affective online experience and 16.3% of the behavioural intentions were explained. In the hotel sample, the calculated coefficients of determination R^2 indicate that independent variables explained 72.2% of the cognitive online experience, 17.2% of the affective online experience, and 34.0% of the main dependent variable future booking intentions.

These low coefficients of determination of the main dependent variable (especially in the OTA sample) could be justified by the fact that only certain factors (website quality and online experience) were included in the model. In addition to these factors, the decision to make a reservation could be influenced by various personal factors (such as sociodemographic characteristics of individuals, booking habits, motivation, etc.) or characteristics of sales channels (such as price, purchasing conditions, image, trust, etc.). However, if the coefficients of determination are compared with previous similar studies, it is possible to conclude that they do not deviate significantly.

It was found that the website has a positive and significant impact on the cognitive customer online experience. In the OTA sample, the relationship is weakest in the structural mode but still statistically significant (H4a: ß = 0.185, t-value = 4.665), while in the hotel sample the relationship between these constructs is strong (H4b: ß = 0.490, t-value = 12,113). The obtained research results are similar to those of previous studies that found a positive and significant relationship between website quality and cognitive experience (Gao & Bai, 2014; Ali, 2016; Huang et al., 2017).

The research found that in both samples (H5a and H5b), website quality had a positive and significant impact on the affective online customer experience. In both structural models, the relationship between website quality and affective online experience is not

only statistically significant but also very strong (H5a: ß = 0.477, t-value = 12.898; H5b: ß = 0.414, t-value = 6.688).

In this doctoral thesis, which refers to the research of Rose et al. (2012), the influence of the affective online experience on the cognitive online experience was tested. The results indicate a strong statistically significant correlation in both structural models (H6a: ß = 0.674, t-value = 17.428; H6b: ß = 0.520, t-value = 11.316). This indicates that the more customers find a visit to the website interesting, fun, and enjoyable the more they are mentally involved in online reservations.

The differences between the two structural models can be seen in the analysis of the relationship between the cognitive online experience and future booking intentions. While this relationship was not confirmed in the OTA sample (H7a: ß = -0.101, t-value = 1.186), it was statistically significant in the hotel sample (H7b: ß = 0.276, t-value = 2.035) at p <0.05. Further differences in structural models result from the analysis of the relationship between the affective online experience and future booking intentions. While in the OTA sample the relationship was statistically significant (H8a: ß = 0.332, t-value=3.497), in the hotel sample the relationship between these two constructs was not confirmed (H8b: ß = 0.136, t-value = 1.196).

The research tested a mediating effect of the cognitive and affective online experience between website quality and future booking intentions. The mediating effect of the cognitive online experience in the structural model of the hotel sample was confirmed (H9b: ß = 0.135, t-value = 1.979) as well as the mediating effect of the affective online experience in the structural model of the OTA sample (H10a: ß = 0.158, t-value = 3.358). The mediating effect of the cognitive online experience in the OTA sample was not confirmed (H9a), nor was the mediating effect of the affective online experience in the hotel sample (H10b).

Although the proposed model has been developed on a rich theoretical background, as in any research project, this study has limitations that need to be taken into account when generalizing the results. The main research limitations relate to the choice of quantitative method, data collection, the sample of respondents and the design of the questionnaire.

Future research should include other constructs (e.g., website image, brand, trust) in the models that may be related to website quality, cognitive and affective online experience, and future behavioural intentions. This would provide additional insights into which combination of constructs best predicts the online experience and future behavioural intentions. It would also be interesting to explore the potential influence of different moderators (such as booking habits, motivation, and different sociodemographic characteristic) on proposed relationships in the model. The sample of the study contains an overrepresentation of Croatian citizens. In future studies, care should be taken to ensure that the proportion of respondents is more balanced in terms of country of residence. This would provide an opportunity to consider intercultural issues, which would provide useful information on how booking websites can be adapted to different markets.

Originality of the research

Regardless of these limitations, the results of this doctoral thesis contribute to the existing literature on the concepts of website quality, online customer experience and behavioural intentions regarding conceptual, empirical and applicative terms.

In terms of conceptual research, the doctoral thesis contributes through the development of a systematic literature review of the main research concepts and the development of a conceptual model to measure the impact of website quality on the customer's online experience and future booking intentions. As far as the empirical part of the scientific research is concerned, the contribution is reflected in the use of different methods of univariate, bivariate and multivariate statistical analysis to investigate the existence of statistically differences between the group of respondents who booked accommodation via OTA and the hotel website, testing the reliability and validity of the conceptual model and evaluating the relationship between measured constructs. In terms of the applicative part of the doctoral thesis, the scientific contribution is reflected in a better understanding of the website quality and the online experience in the hospitality industry. Moreover, this study provides measurement tool for simple and scientifically valid monitoring of the website quality and the online customer experience and defines specific recommendations for improving online booking experience on OTA and hotel websites.

Keywords website quality, online customer experience, future behavioural intentions, modelling, stimulus-organism-response model (S-O-R)