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THE USE OF SMARTPHONE FOR THE SEARCH OF TOURISTIC INFORMATION. AN APPLICATION OF THE THEORY OF PLANNED BEHAVIOR

Abstract. The study highlighted some of the current trends in tourism, showing that smartphone use was profoundly changing the tourism industry, including hotel customers' information search behavior. The aim of the research was to test the applicability of the Theory of Planned Behavior (TPB) in explaining the formation of tourists' intention to use smartphones to search for touristic information. One contribution of this research was the identification of the most relevant behavioral outcomes, referent groups and control beliefs for the targeted population. Moreover, the study revealed that, within the investigated group, the final model included two more causal paths compared to the original TPB model: from normative beliefs to attitude and from normative beliefs to intention. The results implied that, within studied population, the modified model of the TBP might be a good predictor of hotel customers' intentions to use the smartphone for information search. Thereby, from a practical perspective, the investigation provides insights into tourists' decision-making processes, allowing hotels and other companies to develop effective marketing strategies.

Keywords: theory of planned behavior (TPB), tourist behavior, smartphone, information search, touristic information, mobile, online.

1. Introduction: Tourism development and the adoption of mobile technologies

Tourism is one of the largest and fastest-growing economic sectors in the world with almost continuous growth over time(UNWTO, 2018). A look at tourism indicators demonstrates sector strengths. For instance, the evolution of international tourist arrivals is remarkable – they have increased from 25 million globally in 1950 to 278 million in 1980, 674 million in 2000, and 1,236 million in

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2017; the contribution of international tourism to the world's exports in goods and services is relatively high – 7%, and places it on high positions among other sectors as a global export category: tourism surpassed automotive products and food, ranking third after chemicals and fuels(UNWTO, 2018). It was also observed that in certain regions the service sector (to which the tourism belongs) has an important influence on the quality of life (stronger than construction, industry and primary sector) (Gil-Lafuente et al., 2015). The future seems equally promising because forecasts predict that international tourist arrivals worldwide will increase by 3.3% a year between 2010 and 2030 to reach 1.8 billion by 2030 (UNWTO, 2011). Regarding Romania, in 2017, tourist arrivals increased by 11.3% compared to 2016, while the average increase of Central Eastern Europe was 5.3%(UNWTO, 2018).

Since the 1990s, like most other economic sectors, tourism has been increasingly affected by digitization and the rise of internet-based services. Mobile applications for smartphones and other similar technologies have now a huge influence both on the supply and on the demand in tourism. Before, during, and after the trip the Internet is heavily used and connects and informs interested actors. Reservations, payments, tourist information search, and experience sharing are most often done *via* the Internet and this has changed consumer behavior. Globally, the number of smartphone users estimated for 2020is 2.87 billion (Statista, 2019)and more than half of the world's web traffic is now made by mobile phones(Kemp, 2017). In tandem, tourists are largely using travel applications to plan and enjoy their trips and travel businesses are developing mobile applications that are deeply changing the sector in terms of consumers' communication patterns, interests, payment, reservation, etc.

In Romania, the "mobile-ization" is definitely generalized, according to latest statistics. Thus, Romania has among the largest growth rate of online shopping in Europe – 30% from 2017 to 2018; 80% of the online shops traffic is generated by mobile phones (10% more compared to 2017 and 30% to 2016); and 86% of the internet users connect through their mobiles(GPeC, 2019).Within a country population of 19,5 million inhabitants (in 2018), the number of mobile broadband Internet connections was 19,3 million (compared to 16,6 million in 2017) and 11,7 million of them were active Internet users (GPeC, 2019). Studies also indicate that the online component of a business has become a requirement for success in Romania, too (Voineagu et al., 2016). Statistics place the online purchasing frequency of travel services on the third place among other categories (electro-IT&C; fashion and beauty; airline tickets and travel services; home furnishings and decorations; books; gifts and flowers; tickets to shows and concerts; products in the auto and moto category (including RCA policies); children's products)(GPeC, 2019). Definitively, the trend is "mobile" and hospitality and tourism industry should be prepared to be proactive, to make one step ahead of events by understanding how travelers, hotel clients, events participants and other categories of tourists think, feel, and act.

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According to Xiang et al. (2015), the use of the Internet in tourism knew two stages. During the first one, from1991 to 2002, the use of the Internet was adopted by the entire the travel and tourism industry, and during the second stage, from 2001 to present, the focus of tourism marketing changed from website functionalities and usability to one of persuasion and customer empowerment, and more recently to ubiquity through mobile systems. In this stage, when the adoption of smartphone (which incorporates the Internet, communications technologies, GPS, and photography) has increased even more the importance of consumer and has transformed tourism and its marketing, the need to understand how consumers use the mobile technology is a *sine-qua-non* condition for business success(Xiang et al., 2015).

The smartphone is a powerful tool for tourists due to its ubiquitous capability to link people to remote information data bases and to exchange location-based data and social information(Dickinson et al., 2014). The never-ending diversification of tourism applications and the increasing number of smartphone users made tourism market to turn from a place-based connectivity to individual, person-to-person connectivity (Wellman, 2001; Dickinson et al., 2014). It is only natural that in this constantly evolving environment the need to monitor consumers renews constantly.

The use of smartphone, among other recent trends, let to the appearance of smart tourism, a type of tourism that aims to the increase the adoption of emerging forms of ICT that allow for massive amounts of data to be transformed into value propositions(Gretzel et al., 2015). Smart tourism brings along significant changes in tourist information search behaviors, other consumer behaviors (e.g., sharing information, making tour arrangements), and also in tour organizations(Li et al., 2017). Consumers use smart technologies in general, smartphones in particular, in different ways, challenging companies to make efforts for decoding tourists' behavior. There is a rich diversity of approaches to the investigation of tourist behavior. For instance, through social media analytics, hotel managers, restaurant managers, event organizers, etc. can provide better, safer, and more efficient tourism experience in the city. Taking into account that social media communication directly influences brand trust and brand affect(the two main determinants of brand loyalty)(Orzan et al., 2016), social media can used to retain customers. User behavior on a mobile device can be recognized based on its characteristics and hotel managers can adapt their mobile applications in order to offer personalized data to that user (Zamfiroiu and Ciurea, 2017), thus increasing its satisfaction and loyalty.

Among the theories and models that attempt to explain various aspects of consumer behavior, Ajzen's Theory of Planned Behavior (TPB) is one of the most used(Ajzen, 1991) and it was selected for the present study. The current research aimed to test the applicability of the TPB in explaining the formation of hotel customers' intention to use smartphones to search for touristic information. Although figures regarding the general use of the Internet and smartphones are

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encouraging, information on the use of mobile phones for the search of touristic information is lacking. Moreover, the investigations on the use of mobile technologies are rather scarce and are focused mainly on stimulating factors for the use of mobile technology or satisfaction aspects (Ukpabi and Karjaluoto, 2017). Regarding the TBP, this was mostly applied to online shopping or to other aspects related to the Internet use and tourism, and often to sustainability aspects of tourism but not to the online search of touristic information using smartphones.

In this context and by focusing on the application of TBP to the online search of touristic information, the current study represents a novel approach which brings together a well-known theoretical model (TBP), the focus on a high interest field (tourism), and a dominating trend of the present and future (the use of mobile technology). The objective of this study was to identify a version of the Ajzen's model for the TBP valid in the case of the search of touristic information using the mobile technology by Romanian consumers.

The research questions were: Which are the most relevant components of the three variables (attitude, subjective norm, and perceived behavioral control) that influence intention, according to TPB, in the context of studied population? Which is the structure of the TPB model that best fits to the characteristics of studied population?

From a practical perspective, the investigation of the underlying factors that led to customers' intentions to use the smartphones to search for touristic information will provide insights into their decision-making processes, allowing hotels and other companies to develop effective marketing strategies.

2. The Theory of Planned Behavior: people's intention to use the smartphone to search for touristic information

Prediction of consumer behavior has always represented a survival condition for companies and, therefore, a topic of high interest for researchers. Ajzen's Theory of Planned Behavior (TPB) explains that most human behaviors are predictable based on intention to perform that behavior (Ajzen, 1991). According to the TPB, behavioral intention is a function of three factors; namely, attitude toward performing the behavior, subjective norm, and perceived behavioral control; at their turn, each of these three determinants is generated by a number of beliefs and evaluations (Ajzen, 1991) (Table 1, Figure 1). According to Ajzen(Ajzen, 2018), a behavioral belief is the subjective probability that the behavior will produce a given outcome. From the numerous beliefs related to a behavior that any person holds, only a few have a strong influence on the intention. These, combined with the subjective values of the expected outcomes determine the prevailing attitude toward the behavior. The normative beliefs represent the perceived behavioral expectations of important referent individuals or groups (e.g., family, coworkers); together with the motivation to comply they determine the prevailing subjective norm. Finally, control beliefs reflect the perceived presence of factors that may facilitate or impede performance of a behavior. According to

TPB, the combination between control beliefs and the perceived power of each control factor determine the prevailing perceived behavioral control (Ajzen, 2018).

In the vision of Nunkoo and Ramkissoon (2010) the application of the TBP to a tourism context, would have three meanings. Firstly, it would mean that if an individual has a positive attitude towards tourism, he or she will support the industry. Secondly, if the individual perceives that his or her family, friends, or members living in the community encourage such support for tourism, he/she will be more willing to support such development. Thirdly, the greater the control that the individual perceives that he/she has over his/her behavior toward tourism, the more willing to support tourism development he/she will be (Nunkoo and Ramkissoon, 2010).

The use of the Internet can serve to various purposes, such as to search for information, to shop online, to share information, etc. and it can be performed by various technological means: computer, smartphone, tablet, etc. For this study, we chose to focus on the search of information because it precedes and is a condition for other actions, such as on-line shopping. Moreover, information search is a significant part of the purchase decision process and was revolutionized as a result of the Internet (Buhalis and Law, 2008).

Due to the importance that studies assigned to trust (closely linked to user's security and privacy concerns) of the Internet users (Kim et al., 2011; Cyr, 2013; Amaro and Duarte, 2015; Bonsón Ponte et al., 2015; Huang et al., 2017), usefulness and enjoyment as relevant aspects that influence on attitude toward adopting mobile shopping (Yang, 2012), these three variables were introduced in the questionnaire used in the present research. Trust was represented by security of the device and of the personal data; usefulness was expressed as reliable information, high quantity of information, economy of time and effort, and new, up to date information; enjoyment was included in its reverse form –being boring and unpleasant. Attitude concerning the search of information on the Internet is about consumers' favorable or unfavorable beliefs toward this action. Subjective norms weights consumers' perceptions regarding the opinion or referent groups about the action under study. Perceived behavioral control (PBC) refers to consumers' perceptions of their own capacity to perform the search, the factors that can help them to search for information or prevent them from doing it. In the design of the perceived behavioral control factors set, both self-efficacy and facilitating conditions were taken into consideration. All these being taken into consideration, the items included in the final questionnaire were those listed in Table 1.

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Table 1. Variables used in the study to apply the TBP for explaining the formation of tourists' intention to use smartphones to search for touristic information

Main variables	Components of main variables	Variables specific to this study	Measurement of variables	Calculation
Attitude (A)	Behavioral (salient) beliefs (b)	The search will provide reliable information. The search will provide high quantity of information. The search is convenient, saves time and effort. The search will provide new, up to date information.	Scale: 1= total disagreement, …, 7= total agreement	$A = \Sigma\, b_i \times e_i$
	Subjective evaluations of the belief attribute (e)		Scale: 1= very unimportant, …, 7= very important	
Subjective norm (SN)	Normative beliefs related to important groups (n)	My family believes that I should use the smartphone to search for touristic information. My close friends believe that I should use the smartphone to search for touristic information My social media friends (Facebook, Twitter etc.) believe that I should use the smartphone to search for touristic information My colleagues believe that I should use the smartphone to search for touristic information	Scale: 1= very unlikely, …, 7= very likely	$SN = \Sigma\, n_i \times m_i$
	Motivation to comply (m)		Scale: 1= not at all interested, …, 7= very interested	
Perceived behavioral control (PBC)	Control beliefs related to hindering factors (c)	The search of information tires the eyes. The search of information threatens the security of the device and of the personal data.	Scale: 1= very often, …, 7= very rarely	$PBC = \Sigma\, c_i \times p_i$

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		The search of information is boring and unpleasant. The search of information is difficult to be done.		
	Perceived power of control (p)		Scale: 1= total disagreement, …, 7= total agreement	
Behavior (I)	The on-line search for touristic information using the smartphone		Scale: 1= extremely rarely, …, 7= extremely often	B = f(I)
Behavioral intention (BI)	The intention to perform the above mentioned behavior		Scale: 1= very low probability to happen, …, 7= very high probability to happen	BI = f(A, SN, PBC)

Source: adapted by authors from Ajzen (2018)

3. Methods

The study is based on a sample of 242Romanian hotel customers interviewed face-to-face and online. The process of creating the questionnaire had four stages. The first one was the correct identification of the behavior and behavior intention. The next two concerned the elicitation of the beliefsand a lot of attention was invested init because the accuracy of the following research stages depends on it (Curtis et al., 2010). Thereby, in the second stage the following variables were defined in relation to the selected behavioral intention: the salient beliefs (on which the attitude is based), the important referent individuals or groups that approve or disapprove the interviewed person in performing a given behavior (used to assess the subjective norm) and the factors that stimulate or hinder the studied behavior (included in the evaluation of the perceived behavioral control).For the generation of these three groups of variables, seven focus group sessions with 52 participants in total were organized and a large number of salient beliefs, reference groups, and factors that influence behavior emerged during discussions. In a third stage, these variables were evaluated by participants and the most important ones were retained for the analysis. In the fourth stage, the questionnaire was created following the guidelines of the TBP(Ajzen, 1991). The answer options for each question were Likert-type scaleswith 7 points. The questionnaire was pre-tested on 34 people and the final version was then obtained. The first question was filter one and aimed to select people who searched for touristic information during the last five years, regardless of the searching method or instrument used. The positive response rate to it was 100%.

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Data analysis was carried out using the software Excel and SPSS. AMOS was used to test the overall fit of the path model. The level of statistical significance was set at p<0.05. The reliability of the scales was tested using Cronbach's coefficient alpha.

4. Results and discussion

The reliability of the scales was tested using Cronbach's coefficient alpha before the application of the questionnaire. It can be affirmed that all scales had a good level of reliability because Cronbach's alpha tests estimated for this survey was above the recommended level 0.70 for five of them, while for one the value vas close to the this recommended level, being close to 0.7, namely 0.682 (Table 2), which is acceptable for scales with fewer than ten items (Pallant, 2005)and was also accepted in similar research (Elbanna and Elsharnouby, 2018).

**Table 2. Cronbach alpha coefficients for the scales used in the questionnaire**

Scale	Cronbach alpha coefficients
Behavioral beliefs	0.874
Evaluation of the outcome	0.893
Normative beliefs	0.863
Motivation to comply	0.877
Control beliefs	0.682
Perceived power of the control factor	0.795

Source: authors' calculations based on survey data

The model had seven measured variables, out of which three were exogenous variables (behavioral beliefs, normative beliefs, and control beliefs) and four were endogenous variables (attitude toward the behavior, subjective norm, perceived behavioral control, and intention). The degrees of freedom was positive (12 df), so the model was identified.

A path analysis in AMOS with the direct and indirect predictors of intention was run and several common measures were used to assess the model's overall goodness-of-fit (e.g., chi-square, Root Mean Square Error of Approximation, Normalized Fit Index). The application of path analysis in AMOS indicated a significant difference (*p*=0.000) between the first tested version (Figure 1) and the ideal model. Other measures also had poor values compared to recommended levels. Thus, the *p* value for CMIN was significant (*p*=0.000, Table 4) indicating that there was a statistically significant difference between the tested model and the ideal one. The GFI, NFI, and RFI were lower than the recommended level of 0.9 (Table 4), pointing out a poor fit of the model. The RMSEA was higher than 0.05 (Table 4), suggesting again that the model was not good. This means that there was a poor fit of the model to the data or, in other words, that Ajzen's approach might not work well when it is applied to the intention of using the smartphone to search for touristic information.

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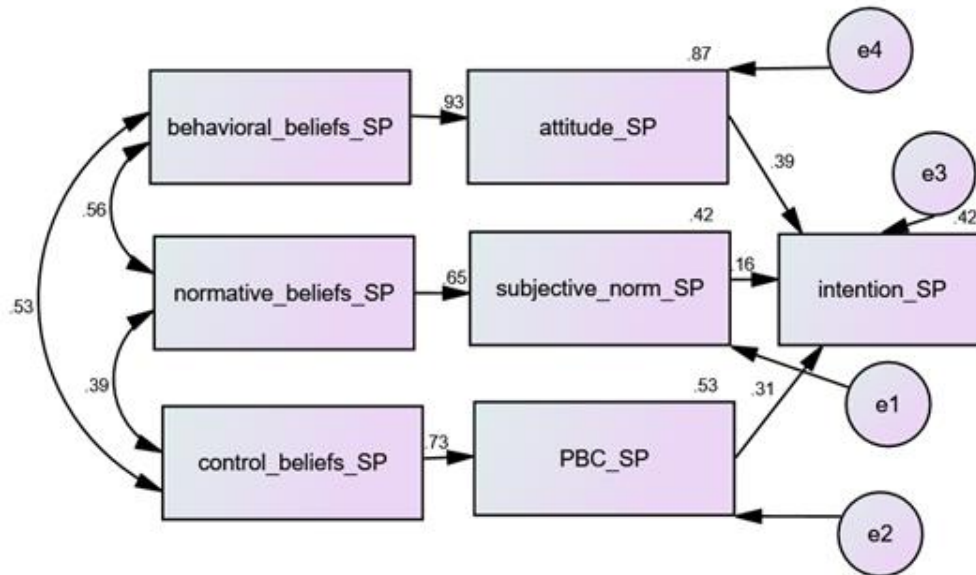
Legend: SP=smartphone, PBC=perceived behavioral control
rectangle: measured variables; rectangles that only have arrows going out = exogenous
variables; rectangles that have arrows going in (or both in and out) = endogenous variables;
double arrow = correlation; simple arrow between rectangles = direction of the influence
between variables; circle = error terms (unobserved variables); values written above simple
arrows = standardized estimates

Figure 1. The TBP model and values generated by path analysis
Source: model –Ajzen(2018); values – authors' calculations based on survey data

Table 3. Main results of the original model

Result (Default model)
Minimum was achieved
Chi-square = 137.586
Degrees of freedom = 14
Probability level = 0.000

Table 4. Model fit summary for the original model
CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	14	137.586	14	0.000	9.828
Saturated model	28	0.000	0		
Independence model	7	1149.074	21	0.000	54.718

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RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	32.546	0.879	0.758	0.439
Saturated model	0.000	1.000		
Independence model	235.742	.388	0.184	0.291

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	0.880	0.820	0.891	0.836	0.890
Saturated model	1.000		1.000		1.000
Independence model	0.000	0.000	0.000	0.000	0.000

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	0.192	0.164	0.222	0.000
Independence model	0.474	0.451	0.498	0.000

Source: authors' calculations based on survey data

As a consequence of the poor fit, the modifications suggested by AMOS and listed in Table 5 were applied. They consisted in adding a path between normative beliefs and attitude and another path between normative beliefs and intention; thus, an improved model was obtained (Table 5; Figure 2).

Table 5. Regression Weights: (Group number 1 - Default model)

			M.I.	Par Change
attitude_SP	<---	normative_beliefs_SP	15.405	0.640
intention_SP	<---	normative_beliefs_SP	4.376	0.030

Source: authors' calculations based on survey data

Conceptually, the first modification indicates that tourists who believe the people who are important to them approve them to search touristic information from the smartphone will have better attitudes toward the act of searching. The second modification suggests that tourists who believe the people who are important to them approve them to search touristic information from the smartphone will have stronger intention to search. Similar effects were found in other studies. For instance, a crossover effects of normative beliefs on attitude was discovered in the case of migration from the online stores to the physical ones(Pookulangara and Natesan, 2010).
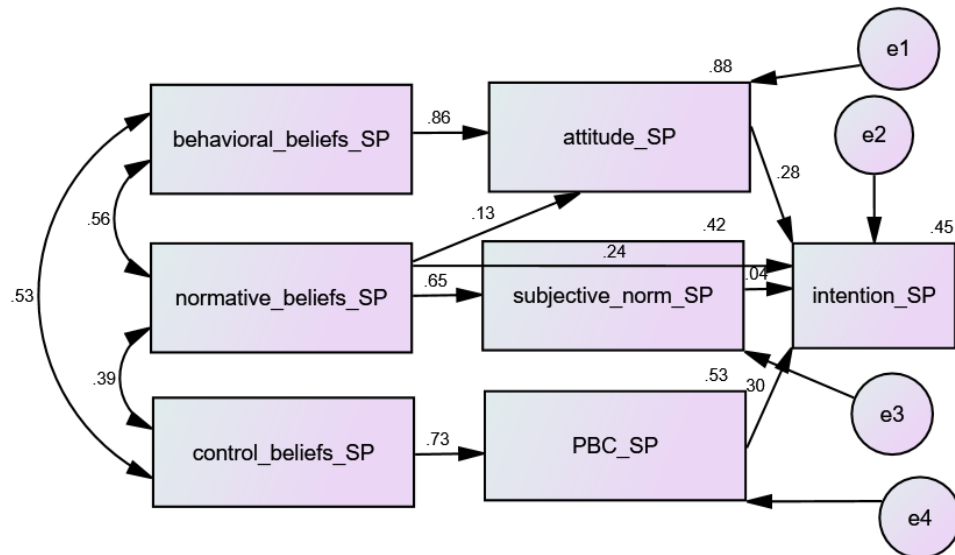
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Figure 2. Modified model of the TBP fit for studied population
Source: adapted from Ajzen(2018) and based on path analysis results

Path analysis was run again, this time on the improved version of TBP and the measured obtained described a good model. Thus, the *p* value for the modified model was not statistically significant (p=0.591; Table 6), indicating that there was no significant difference between the improved model and the perfect model.

Table 6. Main results of the improved model

Result (Default model)
Minimum was achieved
Chi-square = 8.389
Degrees of freedom = 10
Probability level = 0.591

Source: authors' calculations based on survey data

The *p* value for CMIN was also not significant (*p*=0.591, Table 7). The GFI was 0.990, respecting the requirement of being greater than 0.9 (Table 7). NFI and RFI were also greater than 0.9 (Table 7), indicating that we had a good model.The RMSEA was lower than 0.05 (Table 7), showing again that the model was strong.

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Table 7. Model fit summary for the improved version of the model
CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	18	8.389	10	.591	.839
Saturated model	28	.000	0		
Independence model	7	1149.074	21	.000	54.718

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	28.434	.990	.973	.354
Saturated model	.000	1.000		
Independence model	235.742	.388	.184	.291

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.993	.985	1.001	1.003	1.000
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.000	.000	.061	.892
Independence model	.474	.451	.498	.000

Source: authors' calculations based on survey data

In Table 8, a *p* value smaller than 0.05 (***) will indicate a significant relationship between variables. Therefore, only one relationship is not very strong: the influence of subjective norm on intention to perform the behavior. No further modifications are suggested by AMOS.

Table 8. Regression weights generated by path analysis
Regression Weights: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
attitude_SP	<---	behavioral_beliefs_SP	7.796	.241	32.341	***	
subjective_norm_SP	<---	normative_beliefs_SP	4.564	.345	13.240	***	
PBC_SP	<---	control_beliefs_SP	5.797	.355	16.349	***	
attitude_SP	<---	normative_beliefs_SP	.926	.187	4.960	***	
intention_SP	<---	subjective_norm_SP	.002	.003	.646	.518	
intention_SP	<---	attitude_SP	.012	.003	4.498	***	
intention_SP	<---	PBC_SP	.014	.002	5.884	***	
intention_SP	<---	normative_beliefs_SP	.072	.022	3.331	***	

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Standardized Regression Weights: (Group number 1 - Default model)

			Estimate
attitude_SP	<---	behavioral_beliefs_SP	.860
subjective_norm_SP	<---	normative_beliefs_SP	.650
PBC_SP	<---	control_beliefs_SP	.727
attitude_SP	<---	normative_beliefs_SP	.132
intention_SP	<---	subjective_norm_SP	.041
intention_SP	<---	attitude_SP	.282
intention_SP	<---	PBC_SP	.305
intention_SP	<---	normative_beliefs_SP	.244

Source: authors' calculations based on survey data

Path analysis also shows which effects are larger *vs*. smaller. Thus, the strongest influence is that of control beliefs on perceived behavioral control, followed by the influence of behavioral beliefs on attitude (Table 8). These findings serve as guiding tools for marketers which thus know where to invest more efforts. For instance, if a company is interested in stimulating people from studied population to use the smartphone to make a hotel reservation, the company should try to improve tourists' beliefs their control power over the use of smartphone for making hotel reservation. Taking into account that the study revealed that the variables that best represent tourists' control interests are eyes fatigue as a consequence of the search from the smartphone, the security of their smartphone and personal data, the fact that making the reservation is boring and uncomfortable, and the fact that making the reservation is complicated/difficult, the company can select one or more of these variable and focus on it. For instance, if the security of the data is targeted, marketers can let tourist know how strong their security measures are; if the health of the eyes is the concern, the company can explain how the color choice and movement pattern were chosen with the purpose to minimize the impact on the eyes.

As with all research, the present study has several limitations that must be considered. One is the limited representativeness of the sample for the entire Romanian population and, consequently, a future study should add to the analysis other groups besides hotel customers or tourists. However, it must be mentioned that most people are, at some point, hotel customers. Another minus might be that even if the smartphone is the most used mobile device, other mobile technologies exist (e.g., tablet) and should be included in a future analysis. Also, the investigation of the use of smartphone by tourists can be extended to other tourism related actions besides information search, such as social media communication. Despite its limitations, this study contributes to the advancement of hotel customer understanding regarding the use of smartphones in the search of touristic information and thereby supports managers in making better informed and more effective decisions.

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5. Conclusions

A company's capacity to understand consumer behavior trends and to adapt to them is a condition of business success. Due to its divers and convenient functions and ubiquity, the smartphone has rapidly been adopted as a tourism tool, changing the tourist behavior, including the search for information.

The promising development opportunities that tourism industry shows and the broad and deep impact that mobile technologies have on people make the interest in understanding consumer behavior related to the use of smartphone for the search of touristic information more than justified. Based on the fact that the TBP has strong predictive utility for a wide range of human behaviors (Han et al., 2010), its application to the current research provides reliable information.

One contribution of this research was the identification of the most relevant components of attitude, subjective norm, and perceived behavioral control for targeted population. Thus, firstly, in relation to attitude, it was observed that the behavioral outcomes most important for the search of touristic information using the smartphone were: provision of reliable information, generation of high quantity of information, the feature the search of being convenient and of saving time and effort, and the provision of new and up to date information. Secondly, regarding subjective norm, it was discovered that the referents with the strongest influence on studied population were subject's family, his/her close friends, his/her social media friends, and his/her colleagues. Thirdly, concerning perceived behavioral control, the most important factors that may support or hinder the search of touristic information using a smartphone in the context of this research were: eyes fatigue, danger to the security of the device and of the personal data, the fact of being boring and unpleasant, and the difficulty of the search.

This study has both theoretical and managerial implications for understanding the determinants of tourists' intentions to use the smartphone for touristic information search. Thus, from a conceptual perspective, previous to this research, the information about the formation of the behavior intention in the studied field was limited. The findings revealed the fact that, within investigated group, the final model includes two more causal paths compared to the original model: from normative beliefs to attitude and from normative beliefs to intention. This suggests that formation of attitude and of intention toward using the smartphone for touristic information search is also influenced by referents' opinion regarding the use of smartphone for information search by the tourist. Consequently, marketers should acknowledge the impact of referent groups on attitude and intention and include it in their strategy design and in their efforts to attract and retain customers.

The research highlighted some of the current trends in tourism, showing that smart tourism, with smartphone use in particular, is profoundly changing tourism industry, including hotel customers' information search behavior, on which the present study is focusing. The results imply that, within studied population, the modified model of the TBP can be a good predictor of hotel customers' intentions to use the smartphone for touristic information search.

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