Hulisi Binbasioglu

https://orcid.org/0000-0001-7488-8450 Malatya Turgut Ozal University, Turkey

Mevlut Turk

Inonu University, Turkey

ABSTRACT

Mobile devices, such as smartphones, have influenced people's lives more than any other technological invention in human history. Thanks to the ubiquitous nature and advantage of mobile technologies, mobile marketing has remarkable potential. A successful mobile marketing strategy is related to consumers' acceptance and use of mobile technology. Understanding the factors that affect the consumers' technology acceptance process is important in terms of developing an effective marketing strategy. As one of the rapidly growing industries around the world, tourism has always been in the frontline in terms of using the new technologies and used the advantages of the synergy generated by the technologies. In this study, which is designed based on the technology acceptance model (TAM), smartphone usage experience and the factors which affect the acceptance levels of travelers were investigated. In this study, it is aimed to determine mobile technology acceptance among Turkish travelers. Based on the results, a few managerial implications are drawn in this chapter.

DOI: 10.4018/978-1-5225-9783-4.ch006

Copyright © 2020, IGI Global. Copying or distributing in print or electronic forms without written permission of IGI Global is prohibited.

INTRODUCTION

Nothing remains the same in the twentieth century since a new technology becomes out-of-date in a very short time. Nowadays, the most important technological devices which change people's lifestyle are computers, internet, and mobile devices. Mobile devices, such as smartphones, have influenced people's lives more than any other technological invention in human history (Thakur & Srivastava, 2014). There are approximately five billion unique mobile phone users, which constitutes 67% of the total population in the world (Wearesocial, 2019). In Turkey, there are also almost 80 million mobile subscribers (BTK, 2019). Additionally, worldwide smartphone sales are nearly 1.6 billion units in 2018, an increase by 1.2% each year (Gartner, 2019). These numbers show that mobile technology (e.g. call, SMS, Apps, internet) has its potential also in marketing activities businesses.

Smartphones are the most popular personal technological devices that mankind will ever hold (Krum, 2010). There are many characteristics of mobile devices that help this unique form: portability, personalization, location-specificity, wireless feature and contextual information (Bauer et al., 2005; Buhalis & Foerste, 2014; Shankar & Balasubramanian, 2009; Smutkupt et al., 2010; Varnali et al., 2011; Wang et al., 2014). The spread of these characteristics and services has significantly increased the demand for mobile technology in developed and developing countries (Scaglione et al., 2015).

As in the early days of e-commerce, companies had to design a website for successful e-commerce (Venkatesh et al., 2003b); now tourism businesses should use a mobile application and/or mobile-based website for successful m-commerce to gain an advantage in a competition. The mobility of travelers is a certain topic for understanding what businesses can recommend them in terms of tourism services (Baggio, 2017). As one of the rapidly growing industries around the world, tourism has always been in the frontline in terms of using the new technologies and used the advantages of the synergy generated by the technologies. Thanks to this technology, tourism is now the symbol of a new "mobility nexus" that travelers increasingly use mobile devices on their trips (Molz & Paris, 2015). Also with its technologically supported network, mobile technology provides a "travel network" which helps travelers to plan their trips, find information about their trips and share their experiences during and after the trip (Baggio & Scaglione, 2017).

There is naturally a huge gap between the research about information technology and mobile technology. But with the rapid growth of mobile technology, it seems that research about mobile technology will also deepen and increase. Many types of research in tourism are concerned with the application, experiences, technology, social media, design, development of mobile technology (Brown & Chalmers, 2003; Buhalis & Foerste, 2014; Gavalas et al., 2014; Tan et al., 2017; Tussyadiah, 2015; Zhang et al., 2017). However, there is limited research on the traveler's acceptance of mobile technology. So, the current study is likely to fill the gap in mobile technology acceptance in the field of tourism research.

The research motivation of the study is to investigate the factors that affect the acceptance of mobile technology usage among travelers. In this respect, the aim of this study is to develop a comprehensive conceptual framework that empirically examines and explains the factors that affect travelers' acceptance of mobile technology in the tourism industry. More specifically, the study allows to determine whether the factors of perceived usefulness, perceived ease of use, attitude and behavioral intention were correlated between the level of smartphone experience and between the factors themselves. Current cultural differences can affect the ability of multinational tourism and hospitality businesses to adapt and use mobile technology (Straub et al., 1997). With an understanding of the cultural differences of the tourists, tourism businesses gain an advantage in serving appropriate mobile marketing activities (Harris et al., 2005). There is a need to test the mobile technology acceptance model in different cultural environments such as Turkey. Because it is the first study to investigate mobile technology acceptance among Turkish travelers, it is thought that this study will contribute to the literature. The results of the study can also provide practical and managerial implications for tourism managers and mobile technology practitioners.

BACKGROUND

The Importance of Mobile Technology in Tourism Industry

Mobile technology usage in the tourism industry is very important for both tourism practitioners and tourists. As a new era of information technology, mobile technology is crucial for the tourism industry such as accommodation, food & beverage and travel. Today, additionally, the use of this technology has a significant effect on smart tourism (Dorcic, 2019) which is an ecosystem formed with different stakeholders using different technologies (e.g. internet and mobile communication) to collect considerable amount of data in tourism destinations (Arenas et al., 2019; Gretzel et al., 2015). Mobile technology has created opportunities for tourism businesses to compete with other firms (Saarijärvi et al., 2014), and has enriched relationships between tourism businesses and users (Budd & Vorley, 2013).

In addition, mobile technology helps consumers to reach the information whenever and wherever they want. While the travelers need to find an information search such as transportation, direction or accommodation during their trip, they will ask to get this service immediately. Travelers need to get personalized and current information soon because they find themselves in unfamiliar places during their trips. Information is the vital factor for travelers to minimize the risks because of the nature of touristic services during all stages of travel (Buhalis & Foerste, 2014; Steinbauer & Werthner, 2007). So, tourism businesses should be at the right time and right place to reach the consumers and learn the channel where the travelers get this information. In this situation, mobile devices can be used as a digital guide (Wang & Xiang, 2012). Thus, mobile devices become new and important technological tools forming an interaction between businesses and travelers, and between travelers themselves (Nunes & Mayer, 2014).

People who are more informed and more skilled thanks to mobile devices are better masters of their travel experience (Dal Fiore et al., 2014). The touristic experience is associated with the behavioral and psychological dimensions by sharing the activities via smartphones any time during the trip (Tussyadiah & Fesenmaier, 2009; Wang et al., 2012). According to a report (Adobe, 2014), the travelers' major activities associated with travel services via mobile devices include maps or directions (87%), research travel destinations (81%), check reviews (75%), compare travel prices (71%), check itinerary (61%), flight check-in (51%), book travel (45%) and change itinerary (33%). And these mobile services especially mobile booking, ticketing, and check-in contribute to the increase in total revenues of tourism companies as well (Morosan, 2015). Mobile devices make trips easier than ever for travelers. If travelers accept to use mobile technology easier, they can have a better travel experience.

Technology Acceptance Model (TAM)

A successful mobile marketing strategy is related to consumers' acceptance and use of mobile technology. Otherwise, a huge budget the companies spend will be wasted, if they don't notice the importance of ease of use and usefulness of this technology (Venkatesh & Davis, 1996). There are three most common theories in explaining the acceptance of the technologies. These are the "Theory of Reasoned Action" (TRA), "Theory of Planned Behavior" (TPB) and "Technology Acceptance Model" (TAM).

The Fishbein and Ajzen's (1975) TRA is a leading theory which studies the connection between the belief and behavior in social psychology. According to the TRA, a person's adopting or refusing the technology is determined by his/her attitude and subjective norm. Also, a person's attitude is determined by his/her belief and evaluations and the subjective norm is determined by his/her normative beliefs and motivation to comply.

The Ajzen's (1991) TPB is an extended version of the TRA. TPB points out that intention affects behavior. Unlike TRA, according to TPB, a person's intention is determined by not only his/her attitude and subjective norm factors but also perceived behavioral control factor. Also, factors are linked among themselves.

Finally, the Davis' (1986) TAM is an adaptation of TRA especially fitted for modelling the user acceptance of new technologies (Davis et al., 1989). TAM describes a person's attitude towards using a new technology by two key factors: perceived ease of use and perceived usefulness. Davis' (1986, p. 26) defines the factor of perceived usefulness as "the degree to which an individual believes that using a particular system would enhance his/her job performance", and the factor of perceived ease of use as "the degree to which an individual believes that using a particular system would be free of physical and mental effort". The TAM, which tastes the predictors of acceptance of new technology, has been based on so many consumer research related to technology. And some other theories have been integrated with TAM. In all of these theories, TAM is considered the most common and most adopted theory to describe a person's level of acceptance of new technology (Lee et al., 2003). Then, Davis et al. (1989) added a factor, behavioral intention, which is determined by an individual's attitude and perceived usefulness, and the crucial aim of this TAM is to provide the external variables on attitudes and intentions. Apart from these, TAM has been changed a few times until now. Venkatesh and Davis (2000) introduced the Technology Acceptance Model 2 (TAM2), Venkatesh et al. (2003a) performed the Unified Theory of Acceptance and Use of Technology (UTAUT) model and lastly, Venkatesh and Bala (2008) introduced the Technology Acceptance Model 3 (TAM3).

A great number of studies have extended the TAM till now. The studies specifically about mobile technology are from a wide range of following topics: mobile advertisement (Izquierdo-Yusta et al., 2015; Muk & Chung, 2015; Yang, 2007), mobile viral marketing (Yang & Zhou, 2011), mobile commerce (Liébana-Cabanillas et al., 2017; Wu & Wang, 2005;), mobile coupons (Im & Ha, 2012; Jayasingh & Eze, 2009), mobile television (Choi & Totten, 2012; Wong et al., 2014), mobile music (Sim et al., 2014), mobile game (Liu & Li, 2011; Park et al., 2014), mobile payment (Chauhan, 2015; Slade et al., 2014) and mobile banking (Gu et al., 2009; Luarn & Lin, 2005).

As is shown in Table 1, however, not too many of the TAM (and its related theories) studies have been conducted for mobile technology in the tourism industry, despite the increased studies using TAM for mobile technology.

Authors	Theory/Model	Context	Construct
Park et al. (2007)	UTAUT	Chinese consumers' technology acceptance during their trips	Gender, Education, Usage experience, Performance expectancy, Effort expectancy, Social influence, Facilitating conditions, Attitude to use, Intention to use
Kim et al. (2008a)	TAM	Travelers' acceptance of mobile technology during their trips	Technology experience, Trip experience, Perceived usefulness, Perceived ease of use, Attitudes, Intention to use
Kim et al. (2008b)	TAM	Users' acceptance of hotel front office systems	Information quality, System quality, Service quality, Perceived usefulness, Perceived ease of use, Perceived value, Attitudes towards use, Actual use
Kim et al. (2009)	TAM	Customers' acceptance of airline B2C e-commerce websites	Subjective norms, E-trust, Perceived usefulness, Perceived ease of use Attitudes towards use, Intention to reuse
Oh et al. (2009)	UTAUT	Travelers' intent to use mobile technologies	Previous ICT usage, Previous trip experience, Performance expectancy, Effort expectancy, Behavioral intention
Lee & Mills (2010)	ACSM	Tourist satisfaction with mobile experience technology	Technology experience, Perceived value of m-technology, Perception towards m-technology, Satisfaction towards m-technology, Intention to use m-technology
Peres et al. (2011)	TAM	Tourists' intention to use mobile electronic tourist guides	Knowledge, Perceived usefulness, Attitude, Intention
Bader et al. (2012)	UTAUT	Users' acceptance of mobile services in domestic tourism	Cost, Gender, Type of journey, Connection to services, Age, Mobile devices, Speed of connection, Perceived usefulness, Perceived ease of use, Self- efficacy, Social influence, Behavioral intention to use, Mobile tourism services usage
Bouwman et al. (2012)	TAM and Diffusion of Innovation	Use of mobile travel services	Personal innovativeness, Mobility context, Physical setting, Social setting, Perceived usefulness, Perceived ease of use Use of mobile travel services
			continues on following page

tourism
, in
ology
techn
mobile
for
TAM
\mathcal{D}
q
relate
studies
Previous
Ι.
Table

Authors	Theory/Model	Context	Construct
Morosan (2012)	TAM	Guests' perceptions of biometric systems in hotels	Perceived innovativeness, Perceived usefulness, Perceived ease of use, Attitude, Intentions
San Martín & Herrero, 2012	UTAUT	Adoption of new information technologies by the users of rural tourism services	Innovativeness, Performance expectancy, Effort expectancy, Social influence, Facilitating conditions, Online purchase intention
Chen & Chang (2013)	UTAUT	User acceptance of near field communication mobile phone service	Gender, age, and experience, Performance expectancy, Effort expectancy, Social influence, Anxiety, Attitude toward the use of technology, Facilitating conditions, Behavioral intention
Yang et al., (2013)	TAM	Tourists' adoption of mobile travel booking	Perceived enjoyment, Cost, Mobility, Perceived usefulness, Perceived ease of use, Behavioral intention to use
Escobar-Rodríguez & Carvajal-Trujillo (2014)	UTAUT	Online purchasing tickets for low-cost carriers	Habit, Innovativeness, Trust, Information quality, Perceived security, Perceived privacy, Performance expectancy, Effort expectancy, Social influence, Facilitating conditions, Hedonic motivation, Price-saving orientation, Behavioral intention, Use behavior
Yilmaz (2014)	TAM	The effect of the hotel's websites' features on customers' information searching for accommodation	Information on accommodation, Information on destination, Interactivity, Navigability, Perceived usefulness, Perceived ease of use, Intention to use
Lai (2015)	UTAUT	Travelers' technological acceptance of an app-based mobile tour guide	Informativeness, Entertainment, Performance expectancy, Effort expectancy, Social influence, Facilitating conditions, Behavioral intention

Table 1. Continued

continues on following page

nec	
ıtin	
Col	
Ι.	
able	

Authors	Theory/Model	Context	Construct
Chang et al. (2016)	Decomposed TPB	Chinese patients' intention to use the Taiwan Medical Travel (TMT) App	Attitude, Perceived usefulness, Perceived ease of use, Social influence, Electronic word of mouth, Mobile self-efficacy, App involvement, Perceived behavioral control, TMT App usage intention
Fong et al. (2017)	UTAUT	Predicting intention to reuse mobile apps for making hotel reservations	Performance expectancy, Effort expectancy, Social influence, Facilitating conditions, Perceived risk, Internal control, Control by powerful others, Chance control, Intention to reuse
Kang et al. (2018)	TAM	Understanding museum visitor satisfaction and revisit intentions through mobile guide system	Age, Perceived usefulness, Perceived ease of use, Perceived enjoyment, Perceived interactivity, Satisfaction toward mobile guide system, Satisfaction toward museum experience, Revisit intention
Okumus et al., (2018)	UTAUT	Examining the adoption of smartphone diet applications by restaurant customers.	Performance expectancy, Effort expectancy, Social influence, Facilitating conditions, Personal innovativeness
Paulo et al. (2018)	UTAUT2 and Task Technology Fit	Understanding mobile augmented reality adoption in tourism	Performance expectancy, Effort expectancy, Social influence, Facilitating conditions, Hedonic motivation, Price value, Habit, Behavioral intention, Use behavior and Task characteristics, Technology characteristics, Task technology fit
Tan & Ooui (2018)	UTAUT	Investigating on the motivation of consumer's behavioral intention to purchase tourism products using m-devices	Gender, Age, Effort expectancy, Facilitating conditions, Mobile perceived compatibility, perceived critical mass, Performance expectancy, Perceived Enjoyment, Personal Innovativeness in information technology, Perceived risk, Social influence, Wireless trust.
Tan et al. (2018)	Mobile Technology Acceptance Model	Consumers' intention to adopt mobile social media advertising in receiving tourism-related advertisements.	Experience of using mobile social media sites, Frequency of browsing tourism- related advertisements, Frequency of receiving tourism-related advertisements, Mobile self-efficacy, Technology self-efficacy, Mobile usefulness, Mobile ease of use, Behavioral intention, Interactivity
Source: authors.			

Research Hypothesis

In this study, TAM was used to explain the predictors of travelers' mobile technology acceptance. This has been the most frequently used model for mobile commerce researches (Yeh, 2014). TAM takes advantage in design and application of the model with its particular, understandable and generalizable features (Taylor & Todd, 1995).

This study proposed that a person's smartphone technology experience, perceived usefulness, perceived ease of use, attitude and behavioral intention are the key predictors to use mobile technology during their travel.

Smartphone Usage Experience

Technology usage experience may positively affect the actual system use (DeLone, 1988). Users develop their attitudes towards the system use with prolonged usage of technological devices (Adams et al., 1992). Additionally, according to Bauer et al. (2005, p. 182) "the success of a new marketing instrument depends largely on its acceptance by consumers". The first step of consumer purchase decision processes is mobile technology adaptation (Shankar & Balasubramanian, 2009). Also, the important factor in this stage is the acceptance of this technology by consumers. Helpman & Rangel (1999) emphasize that one of the key determinants for adjusting to new technology is the level of general skills required to operate the new technology. Prior studies have emphasized the importance of mobile technologies in tourist experience (Neuhofer et al., 2014). Mobile devices especially smartphones make an important contribution to tourism marketing activities. Tourism has a big advantage for businesses and consumers thanks to mobile technology. This new technology trend makes usage of smartphones effective on the purchase intentions of users (Ozuem & Mulloo, 2018). The intention to use mobile devices in travel activities will be also quite high, in the future (González-Reverté et al., 2018). Because tourism is one of the industries that give an opportunity for innovative new technologies, it is studied in the current chapter. On the other hand, Kim et al. (2008a) pointed that their study examined general mobile devices, and they offered for future studies to define the types of mobile devices for a better understanding. Since the generalizability of mobile devices may fail to supply meaningful information on effecting perceived usefulness and perceived ease of use, there is a need for devices to explore separately. So, smartphones are specifically examined as an external variable in this study.

Perceived Usefulness

Perceived usefulness is the degree to which a person believes that using a particular system would enhance his or her job performance (Davis, 1989). Mobile technology

can be useful if it supplies with user's needs at any time and place (Mallat et al., 2009) and if it increases his or her performance about the usage (Davis et al., 1989). In the frame of the tourism industry, perceived usefulness may be defined as a traveler's perception of smartphone's usefulness, well-quality, productivity, and effectiveness during his/her trip. During a trip, the functional purpose provided by the mobile devices such as convenience, effectiveness and productivity can be more important than hedonic features of mobile devices such as interactivity and ease of use (Kim et al., 2008a).

Perceived Ease of Use

Perceived ease of use refers to the extent to which a person believes that using a particular system would be free of effort (Davis, 1989). People who are familiar with mobile technology is more likely to use it for the respect of convenience (Kim et al., 2008a). New devices designed to use by people should be easy to operate. With regard to this determinant, people anticipate that this technology will be free of effort (Davis et al., 1989). In the context of the tourism industry, perceived ease of use may be defined as a traveler's perception of smartphone's easiness, clarity, and understandability during his/her trip.

Attitude

Attitude has a very important place in the decision-making process of purchase of consumers. Learning the attitudes of consumers makes tourism businesses' work easier. Predictors of perceived usefulness and ease of use affect users' attitudes towards mobile technology (Morosan, 2012). It is commonly known that perceived usefulness, and perceived ease of use of a technological device enhance the attitude of use of it. In other words, attitudes define behavioral intention to use mobile technology (Joo & Sang, 2013). Users may develop negative attitudes toward mobile technology because of their difficulties and useless (Adams et al., 1992). Attitude may be about the travelers' choice, finding interesting, and liking to use mobile technology during their trips in the context of tourism.

Behavioral Intention

Behavioral intention is determined by attitudes. It is a very important determinant as travelers' future mobile using behavior (Oh et al., 2009). Perceived usefulness, perceived ease of use, and attitude may lead to the usage of mobile technology (Kim et al., 2008a; Lu et al., 2003). It is defined as a traveler's willingness and recommendations to use mobile technology. There is a link between behavioral

intentions of travelers towards technology adoption and their level of addiction towards mobile devices (Li et al., 2006). Furthermore, travelers' behavioral intention is not only to use mobile technology but also to share their travel experiences, feelings and stories through mobile devices (Tan, 2017). That causes mobile technology usage enhancement.

Thus, the following hypotheses, describing correlations among variables, were developed and tested in the present study:

- **H**₁: There is a statistically significant correlation between travelers' smartphone experience and perceived usefulness.
- **H₂:** There is a statistically significant correlation between travelers' smartphone experience and perceived ease of use.
- **H₃:** There is a statistically significant correlation between perceived ease of use and perceived usefulness.
- H₄: There is a statistically significant correlation between perceived ease of use, perceived usefulness, and travelers' attitude.
- H_5 : There is a statistically significant correlation between travelers' attitude and their behavioral intention.

METHOD

Design

This study was designed based on a baseline survey model. The first phase of the study aimed to determine the mobile technology acceptance among Turkish travelers. During the development of the data collection tool, three studies using Davis' (1986) Technology Acceptance Model (TAM) were examined. Based on these measures an item-pool was created. These three studies are Kim et al.'s (2008a) "A model of traveler acceptance of mobile technology", Lee and Mills' (2010) "Exploring tourist satisfaction with mobile experience technology" and Yang et al.'s (2013) "Predicting tourists' decisions to adopt mobile travel booking". The second phase intended to discover the acceptance of mobile technology predictors including perceived ease of use, perceived usefulness, attitude and behavioral intention, and smartphone usage experience.

Sample and Data Collection

The survey was conducted between the 1st and the 7th of September 2015 in seven 5-star hotels in Istanbul, Turkey. There were 87 five-star hotels in Istanbul according

to statistics by Istanbul Provincial Directorate of Culture and Tourism (2015). Hereafter, the seven hotels were selected randomly to collect data, and a simple random sampling method was applied to the volunteered customers of selected hotels. Seven trained researchers visited these hotels branded and located in different districts of Istanbul. The survey was comprised of questions focusing on Turkish travelers' responses on (a) demographic information, (b) smartphone usage experiences, and (c) the constructs that directly influenced behavioral intention to use mobile technology. The 28 items based on a 5-point Likert scale (1 for 'strongly disagree' to 5 for 'strongly agree') were applied to 700 respondents. After eliminating the incomplete or unqualified forms, 664 forms were analyzed in the study. Table 2 summarizes the respondent characteristics.

	Frequency	Percentage
Gender		
Male	399	60.10
Female	265	39.90
Age group (years)		
18-25	70	10.55
26-33	139	20.90
34-41	249	37.50
42-49	124	18.70
≥ 50	82	12.35
Education		
Secondary school graduate level and below	188	28.30
Bachelor graduate level	408	61.45
Postgraduate graduate level	68	10.25
Occupation*		
Professionals	299	44.0
Armed forces occupations	10	1.5
Managers	73	11.1
Technicians and associate professionals	78	12.2
Clerical support workers	39	5.9
Services and sales workers	114	17.5
Craft and related trades workers	7	1.1
Elementary occupations	44	6.7

Table 2. Summary of respondent characteristics

continues on following page

Table 2. Continued

	Frequency	Percentage
Monthly income (USD\$)		
≤ 1.000	197	29.70
1.001-1.700	215	32.40
1.701-2.400	137	20.60
≥ 2.401	115	17.30
Purpose of the visit		
Holiday	364	54.80
Business	180	27.10
Family	120	18.10
Type of travelers' mobile devices**		
Smartphone	644	96.99
Featured phone	458	68.98
Tablet	360	54.22
Laptop	514	77.41
How long using smartphones (n=644)		
≤ 2 years	58	9.00
3-4 years	138	21.40
5-6 years	347	53.90
7-8 years	101	15.70

* The occupation is grouped according to ISCO-08 (International Standard Classification of Occupations)

** Since more than one choice can be picked, the sum is higher than 100%.

Source: authors.

Research Instrument

The data was collected using the studies of Kim et al. (2008a) (16 items under 4 factors), Lee & Mills (2010) (16 items under 5 factors) and Yang et al. (2013) (21 items under 6 factors). These items were examined and new items were added to the item pool. After exposing the items to an expert panel and piloting the scale, 28 items were finally generated. Following the translation-back translation studies, the validity and reliability analysis of the Turkish version of the scale was tested with the data set obtained from the study. The results of the analysis are presented in Table 3.

In this study, the scale included 28 items under four factors (Perceived Usefulness, Perceived Ease of Use, Attitude to Use and Behavioral Intention). Cronbach's alpha, coefficient of variation, Mean and Standard Deviation (SD) results for each factor was showed in Table 3.

Item No:			SD	Factor Loadings	Reference				
"Perceiv Cronbac	"Perceived Usefulness" Factor Cronbach's alpha=0.91; coefficient of variation=0.1053; Mean=4.56; SD=0.48								
1	Mobile devices enhance the quality of my trips	4.53	0.59	0.82	(Lee & Mills, 2010)				
2	Using mobile devices increase my trip productivity	4.51	0.63	0.80	(Kim <i>et al.</i> , 2008a)				
3	Using mobile devices enhance the effectiveness on my travels	4.58	0.56	0.81	(Lee & Mills, 2010)				
4	Mobile devices enable me to have more convenient travels	4.57	0.57	0.80	(Lee & Mills, 2010)				
5	Mobile devices make information retrieval of travel services easier	4.60	0.55	0.75	(Yang <i>et al.</i> , 2013)				
6	Mobile devices enable me to accomplish booking more quickly	4.58	0.56	0.72	(Yang <i>et al.</i> , 2013)				
"Perceived Ease of Use" Factor Cronbach's alpha=0.93; coefficient of variation=0,1038; Mean=4.43; SD=0.46									
7	I have the knowledge necessary to use a mobile device while I am travelling	4.46	0.55	0.75	(Lee & Mills, 2010)				
8	Using mobile devices during my travel fits into my travel style	4.44	0.57	0.75	(Lee & Mills, 2010)				
9	It is easy for me to become skillful at using mobile devices	4.45	0.57	0.77	(Kim <i>et al.</i> , 2008a)				
10	Learning to operate mobile devices would be easy for me	4.43	0.58	0.79	(Kim <i>et al.</i> , 2008a)				
11	I find that the use of mobile devices is easy to use	4.39	0.58	0.77	(Kim <i>et al.</i> , 2008a)				
12	Mobile technology can't be trusted because there are many technical problems*	4.41	0.58	0.79	(Lee & Mills, 2010)				
13	I do not use mobile devices because of its costs*	4.45	0.57	0.83	(Yang <i>et al.</i> , 2013)				
14	Using mobile devices on my travels suffers me*	4.45	0.57	0.83	Authors				
15	I can easily access the information I want by using mobile devices on my travels.	4.39	0.56	0.74	Authors				
"Attitud Cronbac	e to Use" Factor h's alpha=0.92;, coefficient of variation=0,1106; M	ean=4.52	; SD=0.	50					
16	I can't rely on mobile technology for communication on my travels*	4.49	0.60	0.78	(Lee & Mills, 2010)				
17	Using mobile devices on my trips is a good idea	4.48	0.60	0.84	(Kim <i>et al.</i> , 2008a)				
18	I find using mobile devices on my travels is enjoyable	4.52	0.59	0.83	(Yang <i>et al.</i> , 2013)				

TT 1 1 2	D 1.	C	C.	C .	1.
Table 3	Results	of coi	ntirmatorv	tactor	analysis
10010 0	. 10000000	0,001	gri monory	Jucior	0110119515

continues on following page

Table 3. Continued

Item No:		Mean	SD	Factor Loadings	Reference
19	Using mobile devices on my travels provide me with a lot of enjoyment	4.55	0.59	0.76	(Yang <i>et al.</i> , 2013)
20	I predict I would use mobile devices for my "future travels"	4.55	0.59	0.75	(Lee & Mills, 2010)
21	Mobile devices can provide different travel product or services based on different places and times	4.54	0.60	0.73	(Yang <i>et al.</i> , 2013)
"Behavioral Intention" Factor Cronbach's alpha=0.95; coefficient of variation=0,1834; Mean=4.09; SD=0.75					
22	Tourism businesses that use marketing activities via mobile devices (SMS, Apps, QR code, etc.) attract more attention	4.10	0.85	0.82	Authors
23	My interest in tourism businesses using mobile marketing activities increases	4.14	0.78	0.84	Authors
24	While evaluating alternatives between businesses before travelling, it is essential to include businesses that use mobile marketing activities	4.10	0.86	0.86	Authors
25	I prefer tourism businesses that use mobile marketing activities on my travels	4.07	0.84	0.87	Authors
26	My loyalty (re-prefer) in tourism businesses using mobile marketing activities increases	4.08	0.85	0.87	Authors
27	I will recommend my family or friends to use mobile devices in the future	4.07	0.83	0.86	(Yang <i>et al.</i> , 2013)
28	I can easily remember the tourism businesses that use mobile marketing activities	4.09	0.85	0.88	Authors

*Reverse coded items

**KMO= 0.93; Bartlett Test of Sphericity= 16196.300; p=.000; internal consistency reliability= 0.94 Source: authors.

Data Analysis

Before the data was analyzed, the data were tested for normality and homogeneity, then correlation analysis and multiple linear regression analysis were performed to determine whether the factors were correlated between the level of smartphone experience and between the factors themselves.

RESULTS

The results of the analysis were presented below with the order of Hypothesis. The correlations analysis results are showed in Table 4.

Because correlation would be increased in strength, both Pearson and Spearman-Brown correlation analysis were conducted in Table 4. As seen in the table, there is a statistically significant, moderate and positive correlation between travelers' smartphone experience level and perceived usefulness. Accordingly, it can be said that as the number of travelers using smartphones increases, the perceived usefulness of mobile devices also increases. The H_1 hypothesis is accepted.

There is a statistically significant, low and positive correlation between travelers' smartphone experience and perceived ease of use. It can be said that while the number of travelers using smartphones increases, the perceived ease of use to mobile devices also increases. The H₂ hypothesis is accepted.

There is a statistically significant, moderate and positive correlation between travelers' perceived ease of use and perceived usefulness. Accordingly, it can be said that as the travelers' perceived ease of use to mobile devices increases, the perceived usefulness of mobile devices also increases. The H_3 hypothesis is accepted.

		Smartphone Usage Experience	Perceived Usefulness	Perceived Ease of Use	Attitude	Behavioral Intention
ation	Smartphone usage experience		0.334	0.192	0.298	0.311
orrel	Perceived usefulness	0.334		0.339	0.561	0.348
n Cc	Perceived ease of use	0.192	0.339		0.387	0.383
arso	Attitude	0.298	0.561	0.387		0.355
Pe	Behavioral intention	0.311	0.348	0.383	0.355	
-	Smartphone usage experience		0.331	0.207	0.305	0.252
man atior	Perceived usefulness	0.331		0.314	0.560	0.336
pear	Perceived ease of use	0.207	0.314		0.355	0.421
۲ ک	Attitude	0.305	0.560	0.355		0.235
	Behavioral intention	0.252	0.336	0.421	0.235	

Table 4. Results of correlations analysis

Sig. (2-tailed) (p)= 0.000; α =0.05 Source: authors.

Table 5. Multiple linear regression analysis results of attitude on perceived usefulness and perceived ease of use

	В	SE	β	t	р	Partial
Constant	1.14	0.18		6.27	0.00	
Perceived usefulness	0.50	0.03	0.48	14.64	0.00	0.49
Perceived ease of use	0.24	0.03	0.22	6.72	0.00	0.25

Notes:

a. Dependent variable: Attitude

b. R²=0.35; F=184.49; p=0.00

c. B=Unstandardized regression co-efficient, SE=Std. Error, β =Standardized co-efficient, t=t value, p=Significance.

Source: authors.

As seen in Table 5, there is a statistically significant, positive correlation between travelers' perceived ease of use-perceived usefulness and attitude. Thus, it can be said that as the travelers' perceived ease of use and perceived usefulness to mobile devices increases, the attitude to use the mobile devices also increases. The H_4 hypothesis is accepted.

As seen in Table 4, there is a statistically significant, moderate and positive correlation between travelers' attitude to use and their behavioral intention to mobile devices. Accordingly, it can be said that as the travelers' attitude to use to mobile devices increases, the behavioral intention to mobile devices also increases. The H_5 hypothesis is accepted.

DISCUSSION

This study aimed to determine the mobile technology acceptance levels among Turkish travelers. The results revealed that there is a statistically significant correlation between travelers' smartphone experiences level and not only their perceived usefulness but also perceived ease of use to mobile devices on their travel. According to this result, as travelers use smartphones more, they find these smartphones more useful and easy on their travel. Especially smartphone users have a more positive perception to use mobile devices on their trips. So, it can be easier for tourism businesses to influence them with mobile marketing activities. In similar studies, there is no result indicating any association between smartphone experience and the same factors. The mobile devices in general, it was noted that there was a positive correlation between perceived usefulness, perceived ease of use, attitude and intention, and mobile devices experience (Kim et al., 2008a). In another study, it was revealed that

there was a positive correlation between perceived value and intention to use mobile devices (Lee & Mills, 2010). Also, Oh et al. (2009) found a positive correlation between prior mobile device experience and intention to use them.

There is a statistically positive and significant correlation between perceived ease of use and perceived usefulness. It can be said with this result that as people can use smartphones easily on their travels, they find these mobile devices more useful. Besides, Yang et al. (2013), Bader et al. (2012) and Bouwman et al. (2012) revealed that the travelers' perceived ease of use has a positive effect on the perceived usefulness.

There is a statistically positive and significant relationship between perceived usefulness - perceived ease of use and travelers' attitudes towards using mobile devices. Acting from this result, if the travelers find mobile devices more easily and useful, their attitude towards using them increases more. Usefulness and easiness influence attitude. Kim et al. (2008a) stated that a positive and significant correlation between perceived usefulness and attitudes to the use of mobile technology. Park et al. (2007) found a positive and significant correlation between travelers' performance expectations for mobile technology and attitudes towards this technology. Kim et al. (2008a) stated that there was a positive and significant correlation between the perceived ease of use and the attitude to the use of mobile technology.

There is a statistically positive and significant correlation between travelers' attitudes towards using mobile technology and their behavioral intentions. It can be said that the behavioral intentions of those who exhibit attitudes towards using mobile devices on their travels are increasing their purchasing services through this technology. That is the more travelers whose attitudes towards using mobile devices on their trips, the more they intend to behave on mobile devices. Kim et al. (2008a) and Park et al. (2007) concluded that the correlation between attitudes and behavioral intention to use mobile technology were both positive and significant. Lee and Mills (2010) indicated that attitudes affect tourists' buying behavior.

FUTURE RESEARCH DIRECTIONS

This study may contribute by holding a projection to tourism businesses that intend to implement mobile marketing strategies. There are some limitations to this study. First, the study is limited to domestic customers staying in five-star hotels in Istanbul between the 1st and the 7th of September 2015. The application of the survey in other major metropolises may be useful for deepening the subject. There should be more comprehensive models covering more explicable variables. The current analysis should be extended by using more general methods such as multi-logistic

regression, structural equation modelling. Additionally, factors may be correlated with different variables (i.e. trip type, gender, travel companions) for future research. Since the study examined smartphones as a variable, the other specific types of mobile devices such as laptops, tablets and wearable devices, mobile phones, wireless can be used to explain the acceptance. Also, the factors other than perceived ease of use, perceived usefulness, attitude and behavioral intention can be used for mobile technology acceptance.

CONCLUSION

The communication tools have changed many times since communication via pigeon. A technological device may be meaningful if it is used by people. So, users should accept this technology before they use it. In this study, it is aimed to determine mobile technology acceptance among Turkish travelers. Because it is the first study to investigate mobile technology acceptance among Turkish travelers, it is thought that this study will contribute to the literature.

Based on the results above, the following implications can be drawn:

- Tourism businesses can gain an advantage by providing an easy and useful service for travelers in mobile marketing activities.
- It may be beneficial for tourism businesses to know what mobile tools their target groups use.
- It can be advantageous for tourism businesses in mobile advertising not only sending SMS but also carrying out many activities especially mobile apps.
- Tourism businesses' marketing activities may be more effective if they reach their target group using mobile devices and find the skillful staff at mobile marketing activities.
- Tourism marketers should apply several useful activities to support tourists in making real-time decisions on the go.
- The messages presented to the consumers in mobile marketing activities and the design and usage of mobile websites and apps should be easily understood.
- Marketers are strongly encouraged to enhance their technology along with service quality.
- Today, mobile devices can make people's lives easier by providing great convenience and benefits when travelling. Consumers who use mobile devices can reach the information wherever and whenever they want on their travels. However, tourism businesses could collect the location information from travelers and make suggestions and recommendations for them.

- Consumers have the opportunity to evaluate many different options offered by different tourism businesses at anytime and anywhere.
- Consumers who use mobile devices on their trips can allocate more time to themselves.

Because mobile device users have become increasingly important, many companies should pay attention to the needs and preferences of this group. The present study raises the awareness of tourism industry marketers concerning the importance of acceptance of mobile technology and its factors such as usefulness, ease of use, attitude and behavioral intention. The results of this study have urgent and inevitable managerial implications, considering that mobile technology represents a unique and great opportunity for the tourism industry. Tourism and hospitality businesses should consider how to develop mobile applications that enhance the tourist experience.

ACKNOWLEDGMENT

This paper is based on the doctoral thesis (A research about mobile technology acceptance of consumers in tourism industry) of first author. The second author is the academic advisor of this doctoral thesis.

REFERENCES

Adams, D. A., Nelson, R. R., & Todd, P. A. (1992). Perceived usefulness, ease of use, and usage of information technology: A replication. *Management Information Systems Quarterly*, *16*(2), 227–247. doi:10.2307/249577

Adobe. (2014). *Adobe 2014 mobile consumer survey results* [White paper]. Retrieved from https://solutionpartners.adobe.com/content/dam/collateral/APEXAssets_Public/54458_amc_mobile_survey_report_ue_v3.pdf

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211. doi:10.1016/0749-5978(91)90020-T

Arenas, A. E., Goh, J. M., & Urueña, A. (2019). How does IT affect design centricity approaches: Evidence from Spain's smart tourism ecosystem. *International Journal of Information Management*, *45*, 149–162. doi:10.1016/j.ijinfomgt.2018.10.015

Bader, A., Baldauf, M., Leinert, S., Fleck, M., & Liebrich, A. (2012). Mobile tourism services and technology acceptance in a mature domestic tourism market the case of Switzerland. In M. Fuchs, F. Ricci, & L. Cantoni (Eds.), *Proceedings of Information and Communication Technologies in Tourism 2012* (pp. 296–307). Springer. doi:10.1007/978-3-7091-1142-0_26

Baggio, R. (2017). Network science and tourism – the state of the art. *Tourism Review*, 72(1), 120–131. doi:10.1108/TR-01-2017-0008

Baggio, R., & Scaglione, M. (2017). Strategic Visitor Flows (SVF) analysis using mobile data. In R. Schegg & B. Stangl (Eds.), *Information and Communication Technologies in Tourism 2017* (pp. 145–158). Springer. doi:10.1007/978-3-319-51168-9_11

Bauer, H. H., Barnes, S. J., Reichardt, T., & Neumann, M. M. (2005). Driving consumer acceptance of mobile marketing: A theoretical framework and empirical study. *Journal of Electronic Commerce Research*, 6(3), 181–192.

Bouwman, H., Carlsson, C., López-Nicolas, C., McKenna, B., Molina-Castillo, F., Tuunanen, T., & Walden, P. (2012). Mobile travel services: The effect of moderating context factors. *Information Technology & Tourism*, *13*(2), 57–74. doi:10.3727/10 9830512X13258778487272

Brown, B., & Chalmers, M. (2003). Tourism and mobile technology. In K. Kuutti, E. H. Karsten, G. Fitzpatrick, P. Dourish, & K. Schmidt (Eds.), *Proceedings of the Eighth European Conference on Computer Supported Cooperative Work 2003* (pp. 335-354). Kluwer Academic Publishers.

BTK. (2018). *Quarterly market data report*. Retrieved from https://www.btk.gov. tr/uploads/pages/pazar-verileri/4-ceyrek-2018kdisi.pdf

Budd, L., & Vorley, T. (2013). Airlines, apps, and business travel: A critical examination. *Research in Transportation Business & Management*, 9, 41–49. doi:10.1016/j.rtbm.2013.08.004

Buhalis, D., & Foerste, M. K. (2014). SoCoMo marketing for travel and tourism. In Z. Xiang & I. Tussyadiah (Eds.), *Information and Communication Technologies in Tourism 2014* (pp. 175–185). Springer.

Chang, I. C., Chou, P. C., Yeh, R. K. J., & Tseng, H. T. (2016). Factors influencing Chinese tourists' intentions to use the Taiwan Medical Travel App. *Telematics and Informatics*, *33*(2), 401–409. doi:10.1016/j.tele.2015.09.007

Chauhan, S. (2015). Acceptance of mobile money by poor citizens of India: Integrating trust into the technology acceptance model. *Info*, *17*(3), 58-68.

Chen, K.-Y., & Chang, M.-L. (2013). User acceptance of 'near field communication' mobile phone service: An investigation based on the 'unified theory of acceptance and use of technology' model. *Service Industries Journal*, *33*(6), 609–623. doi:10 .1080/02642069.2011.622369

Choi, Y. K., & Totten, J. W. (2012). Self-construal's role in mobile TV acceptance: Extension of TAM across cultures. *Journal of Business Research*, 65(11), 1525–1533. doi:10.1016/j.jbusres.2011.02.036

Dal Fiore, F., Mokhtarian, P. L., Salomon, I., & Singer, M. E. (2014). 'Nomads at last'? A set of perspectives on how mobile technology may affect travel. *Journal of Transport Geography*, *41*, 97–106. doi:10.1016/j.jtrangeo.2014.08.014

Davis, F. D. (1986). *Technology acceptance model for empirically testing new enduser information systems theory and results* (Unpublished doctoral dissertation). Sloan School of Management, Massachusetts Institute of Technology.

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *Management Information Systems Quarterly*, 13(3), 319–340. doi:10.2307/249008

Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1989). User acceptance of computer technology: A comparison of two theoretical models. *Management Science*, *35*(8), 982–1003. doi:10.1287/mnsc.35.8.982

DeLone, W. H. (1988). Determinants of success for computer usage in small business. *Management Information Systems Quarterly*, *12*(1), 51–61. doi:10.2307/248803

Dorcic, J., Komsic, J., & Markovic, S. (2019). Mobile technologies and applications towards smart tourism – state of the art. *Tourism Review*, 74(1), 82–103. doi:10.1108/TR-07-2017-0121

Escobar-Rodríguez, T., & Carvajal-Trujillo, E. (2014). Online purchasing tickets for low cost carriers: An application of the unified theory of acceptance and use of technology (UTAUT) model. *Tourism Management*, *43*, 70–88. doi:10.1016/j. tourman.2014.01.017

Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention and behavior: An introduction to theory and research*. Reading, MA: Addison-Wesley.

Fong, L. H. N., Lam, L. W., & Law, R. L. (2017). How locus of control shapes intention to reuse mobile apps for making hotel reservations: Evidence from Chinese consumers. *Tourism Management*, *61*, 331–342. doi:10.1016/j.tourman.2017.03.002

Gartner. (2019). Gartner says global smartphone sales stalled in the fourth quarter of 2018. Retrieved from https://www.gartner.com/en/newsroom/press-releases/2019-02-21-gartner-says-global-smartphone-sales-stalled-in-the-fourth-quart

Gavalas, D., Konstantopoulos, C., Mastakas, K., & Pantziou, G. (2014). Mobile recommender systems in tourism. *Journal of Network and Computer Applications*, *39*, 319–333. doi:10.1016/j.jnca.2013.04.006

González-Reverté, F., Díaz-Luque, P., Gomis-López, J. M., & Morales-Pérez, S. (2018). Tourists' risk perception and the use of mobile devices in beach tourism destinations. *Sustainability*, *10*(2), 413. doi:10.3390u10020413

Gretzel, U., Werthner, H., Koo, C., & Lamsfus, C. (2015). Conceptual foundations for understanding smart tourism ecosystems. *Computers in Human Behavior*, *50*, 558–563. doi:10.1016/j.chb.2015.03.043

Gu, J.-C., Lee, S.-C., & Suh, Y.-H. (2009). Determinants of behavioral intention to mobile banking. *Expert Systems with Applications*, *36*(9), 11605–11616. doi:10.1016/j.eswa.2009.03.024

Harris, P., Rettie, R., & Kwan, C. C. (2005). Adoption and usage of m-commerce: A cross cultural comparison of Hong Kong and the United Kingdom. *Journal of Electronic Commerce Research*, 6(3), 210–225.

Helpman, E., & Rangel, A. (1999). Adjusting to a new technology: Experience and training. *Journal of Economic Growth*, 4(4), 359–383. doi:10.1023/A:1009888907797

Im, H., & Ha, Y. (2012). Who are the users of mobile coupons? A profile of US consumers. *Journal of Research in Interactive Marketing*, 6(3), 215–232. doi:10.1108/17505931211274688

Istanbul Provincial Directorate of Culture and Tourism. (2015). *Istanbul Tourism Statistics 2015 January-June*. Retrieved from http://www.istanbulkulturturizm.gov. tr/Eklenti/48843,haziran-2015doc.doc?0

Izquierdo-Yusta, A., Olarte-Pascual, C., & Reinares-Lara, E. (2015). Attitudes toward mobile advertising among users versus non-users of the mobile internet. *Telematics and Informatics*, *32*(2), 355–366. doi:10.1016/j.tele.2014.10.001

Jayasingh, S., & Eze, U. C. (2009). An empirical analysis of consumer behavioural intention towards mobile coupons in Malaysia. *International Journal of Business and Information*, 4(2), 221–242.

Joo, J., & Sang, Y. (2013). Exploring Koreans' smartphone usage: An integrated model of the technology acceptance model and uses and gratifications theory. *Computers in Human Behavior*, *29*(6), 2512–2518. doi:10.1016/j.chb.2013.06.002

Kang, J. H., Jang, J. C., & Jeong, C. (2018). Understanding museum visitor satisfaction and revisit intentions through mobile guide system: Moderating role of age in museum mobile guide adoption. *Asia Pacific Journal of Tourism Research*, 23(2), 95–108. doi:10.1080/10941665.2017.1410190

Kim, D.-Y., Park, J., & Morrison, A. M. (2008a). A model of traveller acceptance of mobile technology. *International Journal of Tourism Research*, *10*(5), 393–407. doi:10.1002/jtr.669

Kim, H., Kim, T., & Shin, S. W. (2009). Modeling roles of subjective norms and eTrust in customers' acceptance of airline B2C eCommerce websites. *Tourism Management*, *30*(2), 266–277. doi:10.1016/j.tourman.2008.07.001

Kim, T. G., Lee, J. H., & Law, R. (2008b). An empirical examination of the acceptance behaviour of hotel front office systems: An extended technology acceptance model. *Tourism Management*, *29*(3), 500–513. doi:10.1016/j.tourman.2007.05.016

Krum, C. (2010). Mobile marketing: Finding your customers no matter where they are. Indianapolis, IN: Que.

Lai, I. K. W. (2015). Traveler acceptance of an app-based mobile tour guide. *Journal of Hospitality & Tourism Research (Washington, D.C.)*, *39*(3), 401–432. doi:10.1177/1096348013491596

Lee, J. K., & Mills, J. E. (2010). Exploring tourist satisfaction with mobile experience technology. *International Management Review*, 6(1), 92–102.

Lee, Y., Kozar, K. A., & Larsen, K. R. T. (2003). The technology acceptance model: Past, present, and future. *Communications of the Association for Information Systems*, *12*(50), 752–780.

Li, D., Browne, G. J., & Chau, P. Y. (2006). An empirical investigation of web site use using a commitment-based model. *Decision Sciences*, *37*(3), 427–444. doi:10.1111/j.1540-5414.2006.00133.x

Liébana-Cabanillas, F., Marinkovíc, V., & Kaliníc, Z. (2017). A SEM-neural network approach for predicting antecedents of m-commerce acceptance. *International Journal of Information Management*, *37*(2), 14–24. doi:10.1016/j.ijinfomgt.2016.10.008

Liu, Y., & Li, H. (2011). Exploring the impact of use context on mobile hedonic services adoption: An empirical study on mobile gaming in China. *Computers in Human Behavior*, 27(2), 890–898. doi:10.1016/j.chb.2010.11.014

Lu, J., Yu, C.-S., Liu, C., & Yao, J. E. (2003). Technology acceptance model for wireless internet. *Internet Research*, *13*(3), 206–222. doi:10.1108/10662240310478222

Luarn, P., & Lin, H.-H. (2005). Toward an understanding of the behavioral intention to use mobile banking. *Computers in Human Behavior*, 21(6), 873–891. doi:10.1016/j. chb.2004.03.003

Mallat, N., Rossi, M., Tuunainen, V. K., & Öörni, A. (2009). The impact of use context on mobile services acceptance: The case of mobile ticketing. *Information & Management*, 46(3), 190–195. doi:10.1016/j.im.2008.11.008

Molz, J. G., & Paris, C. M. (2015). The social affordances of flashpacking: Exploring the mobility nexus of travel and communication. *Mobilities*, *10*(2), 173–192. doi:1 0.1080/17450101.2013.848605

Morosan, C. (2012). Theoretical and empirical considerations of guests' perceptions of biometric systems in hotels - extending the technology acceptance model. *Journal of Hospitality & Tourism Research (Washington, D.C.)*, *36*(1), 52–84. doi:10.1177/1096348010380601

Morosan, C. (2015). Understanding the benefit of purchasing ancillary air travel services via mobile phones. *Journal of Travel & Tourism Marketing*, *32*(3), 227–240. doi:10.1080/10548408.2014.896763

Muk, A., & Chung, C. (2015). Applying the technology acceptance model in a two-country study of SMS advertising. *Journal of Business Research*, 68(1), 1–6. doi:10.1016/j.jbusres.2014.06.001

Neuhofer, B., Buhalis, D., & Ladkin, A. (2014). A typology of technology-enhanced tourism experiences. *International Journal of Tourism Research*, *16*(4), 340–350. doi:10.1002/jtr.1958

Nunes, M. O., & Mayer, V. F. (2014). Mobile technology, games and nature areas: The tourist perspective. *Tourism & Management Studies*, *10*(1), 53–58.

Oh, S., Lehto, X. Y., & Park, J. (2009). Travelers' intent to use mobile technologies as a function of effort and performance expectancy. *Journal of Hospitality Marketing & Management*, *18*(8), 765–781. doi:10.1080/19368620903235795

Okumus, B., Ali, F., Bilgihan, A., & Ozturk, A. B. (2018). Psychological factors influencing customers' acceptance of smartphone diet apps when ordering food at restaurants. *International Journal of Hospitality Management*, 72, 67–77. doi:10.1016/j.ijhm.2018.01.001

Ozuem, W., & Mulloo, B. N. (2018). Basics of mobile marketing strategy. In W. Ozuem & G. Bowen (Eds.), *Competitive social media marketing strategies* (pp. 155–172). IGI Global.

Park, E., Baek, S., Ohm, J., & Chang, H. J. (2014). Determinants of player acceptance of mobile social network games: An application of extended technology acceptance model. *Telematics and Informatics*, 31(1), 3–15. doi:10.1016/j.tele.2013.07.001

Park, J. K., Yang, S. J., & Lehto, X. (2007). Adoption of mobile technologies for Chinese consumers. *Journal of Electronic Commerce Research*, 8(3), 196–206.

Paulo, M. M., Rita, P., Oliveira, T., & Moro, S. (2018). Understanding mobile augmented reality adoption in a consumer context. *Journal of Hospitality and Tourism Technology*, *9*(2), 142–157. doi:10.1108/JHTT-01-2017-0006

Peres, R., Correia, A., & Moital, M. (2011). The indicators of intention to adopt mobile electronic tourist guides. *Journal of Hospitality and Tourism Technology*, 2(2), 120–138. doi:10.1108/17579881111154236

Saarijärvi, H., Mitronen, L., & Yrjölä, M. (2014). From selling to supporting – Leveraging mobile services in the context of food retailing. *Journal of Retailing and Consumer Services*, 21(1), 26–36. doi:10.1016/j.jretconser.2013.06.009

Scaglione, M., Giovannetti, E., & Hamoudia, M. (2015). The diffusion of mobile social networking: Exploring adoption externalities in four G7 countries. *International Journal of Forecasting*, *31*(4), 1159–1170. doi:10.1016/j.ijforecast.2015.03.005

Shankar, V., & Balasubramanian, S. (2009). Mobile marketing: A synthesis and prognosis. *Journal of Interactive Marketing*, 23(2), 118–129. doi:10.1016/j. intmar.2009.02.002

Sim, J.-J., Tan, G. W.-H., Wong, J. C. J., Ooi, K.-B., & Hew, T.-S. (2014). Understanding and predicting the motivators of mobile music acceptance – a multistage MRA-artificial neural network approach. *Telematics and Informatics*, *31*(4), 569–584. doi:10.1016/j.tele.2013.11.005

Slade, E., Williams, M., Dwivedi, Y., & Piercy, N. (2015). Exploring consumer adoption of proximity mobile payments. *Journal of Strategic Marketing*, 23(3), 209–223. doi:10.1080/0965254X.2014.914075

Smutkupt, P., Krairit, D., & Esichaikul, V. (2010). Mobile marketing: Implications for marketing strategies. *International Journal of Mobile Marketing*, 5(2), 126–139.

Steinbauer, A., & Werthner, H. (2007). Consumer behaviour in e-tourism. In *Information and Communication Technologies in Tourism 2007 proceedings of the international conference in Ljubljana, Slovenia* (pp. 65–76). Wien: Springer.

Straub, K., Keil, M., & Brenner, W. (1997). Testing the technology acceptance model across cultures: A three country study. *Information & Management*, *33*(1), 1–11. doi:10.1016/S0378-7206(97)00026-8

Tan, G. W.-H., Lee, V.-H., Hew, J.-J., Ooi, K.-B., & Wong, L.-W. (2018). The interactive mobile social media advertising: An imminent approach to advertise tourism products and services. *Telematics and Informatics*, *35*(8), 2270–2288. doi:10.1016/j.tele.2018.09.005

Tan, G. W.-H., Lee, V. H., Lin, B., & Ooi, K.-B. (2017). Mobile applications in tourism: The future of the tourism industry? *Industrial Management & Data Systems*, *117*(3), 560–581. doi:10.1108/IMDS-12-2015-0490

Tan, G. W.-H., & Ooi, K.-B. (2018). Gender and age: Do they really moderate mobile tourism shopping behavior? *Telematics and Informatics*, *35*(6), 1617–1642. doi:10.1016/j.tele.2018.04.009

Tan, W.-K. (2017). The relationship between smartphone usage, tourist experience and trip satisfaction in the context of a nature-based destination. *Telematics and Informatics*, *34*(2), 614–627. doi:10.1016/j.tele.2016.10.004

Taylor, S., & Todd, P. A. (1995). Understanding information technology usage: A test of competing models. *Information Systems Research*, 6(2), 144–176. doi:10.1287/ isre.6.2.144

Thakur, R., & Srivastava, M. (2014). Adoption readiness, personal innovativeness, perceived risk and usage intention across customer groups for mobile payment services in India. *Internet Research*, *24*(3), 369–392. doi:10.1108/IntR-12-2012-0244

Tussyadiah, I. P. (2015). Personal technology and tourism experience. In ISCONTOUR 2015 Tourism Research Perspectives (pp. 1-10). Academic Press.

Tussyadiah, I. P., & Fesenmaier, D. R. (2009). Mediating tourist experiences: Access to places via shared videos. *Annals of Tourism Research*, *36*(1), 24–40. doi:10.1016/j. annals.2008.10.001

Varnali, K., Toker, A., & Yilmaz, C. (2011). *Mobile marketing – fundamentals and strategy*. McGraw-Hill.

Venkatesh, V., & Bala, H. (2008). Technology acceptance model 3 and research agenda on interventions. *Decision Sciences*, *39*(2), 273–315. doi:10.1111/j.1540-5915.2008.00192.x

Venkatesh, V., & Davis, F. D. (1996). A model of the antecedents of perceived ease of use: Development and test. *Decision Sciences*, 27(3), 451–481. doi:10.1111/j.1540-5915.1996.tb01822.x

Venkatesh, V., & Davis, F. D. (2000). A theoretical extension of the technology acceptance model: Four longitudinal field studies. *Management Science*, 46(2), 186–204. doi:10.1287/mnsc.46.2.186.11926

Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003a). User acceptance of information technology: Toward a unified view. *Management Information Systems Quarterly*, *27*(3), 425–478. doi:10.2307/30036540

Venkatesh, V., Ramesh, V., & Massey, A. P. (2003b). Understanding usability in mobile commerce. *Communications of the ACM*, 46(12), 53–56. doi:10.1145/953460.953488

Wang, D., Park, S., & Fesenmaier, D. R. (2012). The role of smartphones in mediating the touristic experience. *Journal of Travel Research*, *51*(4), 371–387. doi:10.1177/0047287511426341

Wang, D., & Xiang, Z. (2012). The new landscape of travel: a comprehensive analysis of smartphone apps. In M. Fuchs, F. Ricci, & L. Cantoni (Eds.), *Information and Communication Technologies in Tourism* (pp. 308–319). Springer.

Wang, X., Hong, Z., Xu, Y., Zhang, C., & Ling, H. (2014). Relevance judgments of mobile commercial information. *Journal of the Association for Information Science and Technology*, 65(7), 1335–1348. doi:10.1002/asi.23060

Wearesocial. (2019). *Digital in 2019*. Retrieved from https://wearesocial.com/ global-digital-report-2019

Wong, C.-H., Tan, G. W.-H., Loke, S.-P., & Ooi, K.-B. (2014). Mobile TV: A new form of entertainment? *Industrial Management & Data Systems*, *114*(7), 1050–1067. doi:10.1108/IMDS-05-2014-0146

Wu, J.-H., & Wang, S.-C. (2005). What drives mobile commerce? An empirical evaluation of the revised technology acceptance model. *Information & Management*, 42(5), 719–729. doi:10.1016/j.im.2004.07.001

Yang, H., & Zhou, L. (2011). Extending TPB and TAM to mobile viral marketing: An exploratory study on American young consumers' mobile viral marketing attitude, intent and behavior. *Journal of Targeting. Measurement & Analysis for Marketing*, *19*(2), 85–98. doi:10.1057/jt.2011.11

Yang, K. C. C. (2007). Exploring factors affecting consumer intention to use mobile advertising in Taiwan. *Journal of International Consumer Marketing*, *20*(1), 33–49. doi:10.1300/J046v20n01_04

Yang, Y., Zhong, Z., & Zhang, M. (2013). Predicting tourists' decisions to adopt mobile travel booking. *International Journal of u- and e- Service. Science and Technology*, 6(6), 9–20.

Yeh, J. Y. (2014, October). Mapping the intellectual structure of mobile commerce. In *Proceedings of 2014 IEEE International Conference on Service Operations and Logistics, and Informatics* (pp. 430-433). IEEE.

Yilmaz, Ö. (2014). The effect of websites on customer preferences related to tourism products within the framework of technological acceptance model (TAM). *IIB International Refereed Academic Social Sciences Journal*, *16*(5), 46–59. doi:10.1109/SOLI.2014.6960763

Zhang, T. C., Omran, B. A., & Cobanoglu, C. (2017). Generation Y's positive and negative eWOM: Use of social media and mobile technology. *International Journal of Contemporary Hospitality Management*, 29(2), 732–761. doi:10.1108/ IJCHM-10-2015-0611

KEY TERMS AND DEFINITIONS

Attitude: It is one of the positive and negative psychological factors of a person affecting the consumer purchase decision process.

Behavioral Intention: It is referred to as measuring the strength of a consumer's intent to perform an action plan to buy and consume.

Mobile Marketing: Mobile marketing is a form of marketing via mobile technology.

Mobile Technology: Mobile technology, a form of technology that enables people to use it anywhere and anytime is mostly used in cellular communication and other related areas.

Perceived Ease of Use: It is the degree to which a person believes that a special technology that he or she is using will not make physical and mental efforts.

Perceived Usefulness: It refers to the degree to which people expect the benefits of technology and to believe that the performance of their work will increase by using this technology.

Technology Acceptance: It is the adaptation process and a system that is claimed to be due to different variables by the user of new technology.