



What Determines Consumers' Intention for Hotel Bookings through Smartphone Apps?

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Keywords:

UTAUT2, Hotel Bookings, Smartphone apps adoption, Perceived trust, Behavioral intentions.

Abstract.

In the emerging market, the usage of smartphone apps are playing an imperative role and supporting travelers in their online hotel bookings. This study aims to examine the various determinants that affect travelers' behavioral intention regarding hotel booking through smartphone apps. Data was collected from 379 hotel guests who used smartphone apps for hotel bookings. The respondents for this study are taken from Delhi. Further, the hypotheses of this study were validated with the help of structural equation modeling (SEM) using partial least squares (PLS). The results of this study found all dimensions significant except for effort expectancy, facilitating conditions and habits. A newly added dimension, perceived trust was also found a significant predictor of consumer's behavioral intentions for hotel booking through smartphone apps. The study provides implications for hotel managers that the information provided on apps must be accurate, up-to-date and reliable regarding hotel services. By incorporating relevant information in the system, travelers' will feel the hotels are trustworthy and thus their tendency to use smartphone apps for hotel bookings will increase. As well as hotel apps must be easy to operate which reduce travelers extra efforts and time while using it.

Kata Kunci:

UTAUT2, Pemesanan Hotel, Adopsi aplikasi smartphone, Kepercayaan yang dirasakan, Intensi perilaku.

Abstrak.

Di pasar yang sedang berkembang, penggunaan aplikasi smartphone memainkan peran penting dan mendukung wisatawan dalam pemesanan hotel online mereka. Penelitian ini bertujuan untuk menguji berbagai determinan yang mempengaruhi niat perilaku wisatawan terkait pemesanan hotel melalui aplikasi smartphone. Data dikumpulkan dari 379 tamu hotel yang menggunakan aplikasi smartphone untuk pemesanan hotel. Responden untuk penelitian ini diambil dari Delhi. Selanjutnya, hipotesis penelitian ini divalidasi dengan bantuan structural equation modelling (SEM) menggunakan partial least squares (PLS). Hasil penelitian ini menemukan semua dimensi signifikan kecuali untuk harapan usaha, kondisi memfasilitasi dan kebiasaan. Dimensi yang baru ditambahkan, kepercayaan yang dirasakan juga ditemukan sebagai prediktor signifikan dari niat perilaku konsumen untuk pemesanan hotel melalui aplikasi smartphone. Studi tersebut memberikan implikasi bagi pengelola hotel bahwa informasi yang diberikan pada aplikasi harus akurat, terkini, dan dapat diandalkan terkait layanan hotel. Dengan memasukkan informasi yang relevan dalam sistem, wisatawan akan merasa hotel dapat dipercaya dan dengan demikian kecenderungan mereka untuk menggunakan aplikasi smartphone untuk pemesanan hotel akan meningkat. Selain itu, aplikasi hotel harus mudah dioperasikan yang mengurangi upaya dan waktu ekstra wisatawan saat menggunakannya.

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1. Introduction

With the growth of technology, an individual's life faces continuous improvement. The influence of mobile technology has totally changed people's lifestyles (Jamal & Habib, 2020). Smartphone apps are the most recent which have already resulted in high penetration in the market (Morosan & DeFranco, 2016). It ensures user flexibility in their regular travel by providing various travel-support applications. Through the use of smartphone apps, society has been thoroughly transformed. The apps have greatly impacted the field of travel and tourism (Dickinson *et al.*, 2014). The market demand for smartphone apps is rapidly increasing (Santos-Vijande, 2018) and has significantly impacted the tourism industry and travellers behavior. By using smart technology, travelers are able to enhance their travel experiences (Karanasios *et al.*, 2012). Smartphone apps contain numerous features that facilitate users to share location based social information which thus works as a powerful tool for potential travelers (Dickinson *et al.*, 2014). There are few smart phone apps which are used by travelers much to access information related to hotels, destinations etc (Dickinson *et al.*, 2014). These smartphone apps include hotel booking (Booking.com, Trivago), travel planning (TripAdvisor), tour guide (DETOUR) and, transportation (Uber, Ola). As mentioned by Statista, (2020) India has 4.57 billion active internet users as it has 59 percent of the global population and so India is one of the leading countries globally. While travelling, 30% users opt for hotel deals through smartphone apps, 29% prefer smartphone apps to get flight deals, 8.1% prefer smartphone apps to buy tickets which are downloaded, by 15% users specifically while planning trip in advance (How mobile app benefits, 2015).

The Indian travel market is expanding daily and the availability of high disposable incomes people are very active in travelling related activity. A total of 1798 million Indians travelled to various domestic destinations in 2018, providing a growth rate of 2.3% while another 26 million traveled internationally ensuring a growth rate of 9.5% (Ministry of tourism, statistics, and 2018). The online travel market of India is expected to increase by 11-11.5% to \$48bn by 2020, with the hotel sector being expected to grow to \$13bn by the same year. Further, the size of the online hotel booking industry in India is projected to increase to \$4 bn by 2020. Online penetration of hotel booking in developed nations such as USA, UK, Germany, and France has expanded by 40-45% whereas India in an early adoption curve has 17% online hotel booking (ITU, 2015; World Bank Database, 2015; Eurostat statistics database, 2015).

Various studies in literature analyzed the use of smartphone apps. Palau-Saumell *et al.*, (2019) stated that users adopt smartphone apps for restaurant search and reservations. Lei, Wang, & Law (2019) felt that users adopted smartphone apps for hotel booking by checking reviews posted by other customers. Further, Wang *et al.*, (2016) discussed various factors which impact an organization's hotel apps adoption for reservations. However, there is dearth in studies regarding travelers' using apps for hotel bookings through smartphones. Hence, the current study is an attempt to fill this gap by objectively examining various determinants that affect travelers' behavioral intention regarding hotel bookings through smartphone apps.

The remaining paper is divided into various sections as follows: Section 2 sheds light on extensive literature review of existing studies and formulates the hypotheses. Further, section 3 details the research methodology. Section 4 presented the data analysis and findings part. Finally, section 5 explains discussion, theoretical & managerial implications and limitations associated with the study.

2. Literature Review

The present study has undertaken a comprehensive review of earlier studies. A report published by BCG, (2017) revealed that while booking, 62% travelers booked accommodation first while 22% booked their flights first and 16% booked an alternate mode of travel first. Further, it revealed that consumers usually plan their travels early rather than quickly purchasing tickets. They spend an average of 46 days to plan their trip, spending 49 minutes to search online and visit as many as 17

touch points before making their booking. In 2018, peer to peer accommodation such as Airbnb, Homeaway, VERBO etc. bookings totaled 7% booking across the globe. They provided a total of 8 million beds (World Bank Group, 2018).

The extended Unified theory of acceptance and use of technology (UTAUT-2) proposed by Venkatesh *et al.* (2012) is an extension of UTAUT (Venkatesh *et al.*, 2003). This extended model includes hedonic motivation, price value, and habit with the original four constructs: performance expectancy, effort expectancy, social influence, and facilitating conditions. Further, this study has extended UTAUT2 model by adding 'perceived trust' in context of hotel bookings through smartphone apps. Previous studies used various theories like TRA, TPB and TAM to study consumers' acceptance and intention using smartphone apps (Assaker, 2020; Dhir, Kaur & Rajala, 2020; Fatima, Ghandforoush, Khan, & Mascio, 2019; Halder & Goel, 2019; Humbani & Wiese, 2019; Vahdat, Alizadeh, Quach, & Hamelin, 2020; Rafique, Almagrabi, Shamim, Anwar, & Bashir, 2020).

However, Venkatesh *et al.*, (2003) integrated eight different theories to propose the determinants of users' adoption and usage of technologies. These theories include Theory of planned behavior (TPB), Theory of reasoned action (TRA), Technology acceptance model (TAM), Motivational Model (MM), Social cognitive theory (SCT), Combined TAM-TPB (C-TAM-TPB), Innovation diffusion theory (IDT) and Model of PC utilization (MPCU). Hence, UTAUT has better predictive ability compared to other theories. A study conducted by (Tosuntas *et al.*, 2014) postulated that UTAUT helps explicate around 70% technology adoption and usage. The four elementary variables of UTAUT (performance expectancy, effort expectancy, social influence, and facilitating conditions) are considered significant predictors of users' acceptance and intentions to use a technology (Nair, Ali & Leong, 2015). Past studies have applied UTAUT model in various contexts including mobile wallet (Madan & Yadav, 2016), m-banking (Tan & Lau, 2016), Internet banking (Sharma, Singh & Sharma, 2020) and smartphone adoption for flight bookings (Jeon *et al.*, 2018). However, application of UTAUT being used in travelers' smartphone apps for hotel bookings is still at the nascent stage.

2.1. Performance Expectancy

It is an extent to which user perceive that using a particular app or technology will increase her/his performance. Performance expectancy is an important predictor of behavioral intentions for using a technology (Venkatesh *et al.*, 2003). Parallel to this, Performance expectancy was also seen as a strong interpreter of behavioral intentions in various studies including mobile payment (Slade *et al.*, 2015), mobile wallet (Madan & Yadav, 2016), e learning (Decman, 2015), mobile shopping (Lu *et al.*, 2017) and purchase intentions (Martin & Harrero, 2012). Therefore, it is assumed that performance expectancy toward using smartphone apps for hotel bookings will influence traveler's behavioral intentions. Therefore, we hypothesize:

H1. Performance expectancy is positively associated with traveler's behavioral intention to use smartphone apps for hotel bookings.

2.2. Effort Expectancy

It is defined as the 'degree of ease associated with the use of a system' (Venkatesh *et al.*, 2012). Travelers favor using a technology for booking purposes which is effort free and provides maximum benefits. Kang (2014) postulated that if technology is easy to use, the probability of users' adoption of that technology would be higher. Further, Venkatesh *et al.*, (2003) stated that users' find there is less effort needed to perform and hence they are motivated and encourage using technology and finding good results. Various studies in previous literature have studied effort expectancy. These are social media (Gruzd, Staves & Wilk, 2014); internet banking (Martins, Oliveira, & Popović, 2014), m-banking (Hew, Lee, Ooi & Wei, 2015; Koksai, 2016), and m-payments (Teo, Tan, Ooi & Lin, 2015) and, m-learning (Saedi *et al.*, 2020). Therefore, it is postulated that if hotel patrons find hotel booking

apps trouble-free and uncomplicated, they are more convinced and are willing to use it to book hotel rooms. Therefore, we hypothesize:

H2: Effort expectancy is positively associated with traveler's behavioral intention to use smartphone apps for hotel bookings.

2.3. Social Influence

It refers to 'the degree to which an individual is influenced by his/her family/friends to use a certain technology' (Venkatesh *et al.*, 2003). Ajzen (1991) pointed out that persons are strongly influenced by peer groups to use technology. The perception is that an individual would easily influence r important members of his/her life with his/her intentions (Nysveen *et al.*, 2005). Various researchers found social influence as important determinant of behavioral intention in several contexts including m-payments (Saedi, Emran, Ramayah&Abhusham, 2020; Slade, Williams, &Dwivedi, 2014); mobile banking (Raza, Shah & Ali, 2019); mobile entertainment (Leong *et al.*, 2013); m-commerce (Marinkovic, Dordevic & Kalinic, 2019; Tarhini, Alalwan&Shammout, 2019) and, e wallet (Malik, Suresh & Sharma, 2019). Travelers always prefer good accommodation when travelling, and hence decide on hotel bookings depending on the opinion of their family/friends/peer groups. Therefore, it is assumed that social influence guides traveler's behavioral intentions for hotel bookings through mobile apps. Thus, we hypothesize

H3: Social Influence is positively associated with traveler's behavioral intention to use smartphone apps for hotel bookings.

2.4. Facilitating Conditions

It is defined as "the degree to which an individual believes that organizational and technical infrastructure exists to support the use of a system" (Venkatesh *et al.*, 2003). Maruping *et al.*, (2017) state that facilitating conditions influences an individual to use a system. This factor was not included In the TAM model, but was added later by Venkatesh *et al.*, in 2003 while proposing UTAUT as an antecedent of behavioral intentions. This factor was derived from different theoretical models as used in TPB, C-TAM-TPB, Ajzen, 1991; facilitating conditions in MPCU (Thompson *et al.*, 1991). With the growth and advancement of the internet, users are highly prone to use mobile technology (Ahmed, 2016). Previous researches studied facilitating conditions and proved that it was positively associated with facilitating conditions in various contexts including m-learning (Kang *et al.*, 2015); health & fitness apps (Higgins, 2016); banking service adoption (Zhou, Lu & Wang, 2010) and e-learning (Tan, 2013). Therefore, it can be inferred that facilitating conditions toward use of smartphone apps for hotel bookings will influence traveler's behavioral intentions. Thus, we hypothesize:

H4: Facilitating conditions are positively associated with traveler's behavioral intention to use smartphone apps for hotel bookings.

2.5. Hedonic Motivation

Hedonic motivation is defined as "fun or pleasure derived from using a technology" (Venkatesh *et al.*, 2012). Davis (1989) found that users' intentions were significantly influenced by perceived enjoyment. Previous studies found hedonic motivation as a significant antecedent of behavioral intentions in various contexts including m-payment (Gupta & Arora, 2019; Patil, Tamilmani, Rana &Raghavan, 2020); e-learning (Khechine, Raymond & Augier, 2019); e-satisfaction (Alalwan, 2020) and; m-health (Alam, Hu, Kaium, Hoque &Alam, 2020). Thus we hypothesize:

H5: Hedonic Motivation is positively associated with traveler's behavioral intention to use smartphone apps for hotel bookings.

2.6. Price Value

Price value is when users perceive using a smartphone provides him/her quality services. In this study, we find that travelers believe the price value of using smartphone hotel apps is reflected in its value. Price value is derived from perceived value (Dodds, Monroe & Grewal, 1991) and considered a significant determinant of user's perceived worth of using particular technology despite its benefits. The cost for maintaining smartphone apps, mobile data cost for internet services and bills are also included in the price value (Machado, Pinheiro, Lee & Ahmed, 2016). Researchers in previous studies found association between price value and behavioral intentions in the context of behavioral intention (Lau, Choong, Wei, Seow, Choong, 2020); m-banking (Baabdullah, Alalwan, Rana & Kizgin, 2019; Raza, Shah & Ali, 2019); purchasing intention (Akgul, Yaman, Gecgil & Yavuz, 2019); e-learning (Mehta, Morris, Swinnerton & Homer, 2019) and m-payment (Al-Saedi, Al-Emran, Ramayah & Abhusham, 2020). Thus, we hypothesize

H6: Price Value is positively associated with traveler's behavioral intention to use smartphone apps for hotel bookings.

2.7. Habit

It is defined as "the degree to which users believes technology use is instinctive or usual" (Ahmed, 2016). Users use technology and when they realize that it is easy and comfortable they become repeat customers. Various researchers found a positive relationship between habit and behavioral intentions in several contexts including m-payments (Slade ., 2015), mobile games (Ramirez-Correa *et al.*, 2019), social networking markets (Beuttner, 2017), e-learning (Gunasinghe *et al.*, 2019) and mobile banking (Moorthy, Chun, Chea, Wen, Joe, Chyi & Jia, 2019). It can be inferred that effort expectancy toward the use of smartphone apps for hotel bookings will influence traveler's behavioral intentions. Therefore, we hypothesize:

H7. Habit has a significant effect on traveler's behavioral intention to use smartphone apps for hotel bookings.

2.8. Perceived Trust

It is defined as "mutual consent between two parties that one party will not exploit the other's vulnerabilities" (Barney & Hansen, 1994, p. 176). It starts when an individual agrees with other's ideas and suggestions. Further, perceived trust is considered as an expectation that service providers provide to users (Gefen, Karahanna, and Straub, 2003). Previous researchers emphasized perceived trust based on consumers' acceptance and use of technologies due to risks and uncertainties associated with it (Lin, 2011). Previous researchers examined perceived trust in the context of purchase of online flight tickets (Suki & Suki, 2017), mobile wallet (Singh *et al.*, 2020); e-shopping (Nghia, Olsen & Trang, 2020) and mobile payments (Talwar, Dhir, Khalil & Mohan, 2020). And extensive literature review revealed studies that mentioned insignificant impact on behavioral intentions; for instance online purchase of Generation Y (Muda *et al.*, 2016) and; online games (Wu & Liu, 2007). Such mixed results from earlier studies was fascinating when examining the association between perceived trust on the behavioral intentions of travelers while booking flight tickets' via smartphone apps. Hence we hypothesize:

H8. Perceived trust is positively associated with traveler's behavioral intention for hotel bookings through smartphone apps.

2.9. Behavioral Intention

It is defined as the users' intent that helps to predict a particular behavior (Islam *et al.*, 2013). It is also explained as the eagerness of an individual to use technology and continue to use it further (Venkatesh *et al.*, 2012). Behavioral intentions are considered the strength of a person which helps him/her for a specified behavior (Fishbein & Ajzen, 1975). It is assumed that behavioral intention is the function

of attitude and subjective norms only in earlier technological models as it directly helps to identify one's intention for specific behavior (Sheppard, Hatwick & Warshaw, 1988). Previous researches confirmed the strong relationship between behavioral intention and actual usage (Davis *et al.*, 1989; Mafe, Blas & Mesias, 2010; Venkatesh *et al.*, 2003; Venkatesh *et al.*, 2012). Therefore, it can be inferred that behavioral intentions of travelers influence the actual usage of smartphone apps for hotel bookings. Thus, we hypothesize:

H9. Behavioral Intentions is positively associated with traveler's actual usage of smartphone apps for hotel bookings.

3. Research Method

3.1. Measurement

The items of performance expectancy, efforts expectancy, social influence, facilitating conditions, hedonic motivation, price value, habit, behavioral intentions and actual usage are taken from utaut2, a theoretical model developed by Venkatesh *et al.*, 2013. The items of perceived trust are taken from (Slade *et al.*, 2015). The items of questionnaire were measured on five-point Likert scale.

3.2. Sample and data collection

Data was collected from users who use smartphone apps for hotel bookings in the months of November and December, 2019. The respondents of this study were hotel guests in India, who used smartphone apps for hotel bookings. Hotel guests are more associated with travelling (Kamboj *et al.*, 2018). While planning and travelling on a trip, they continuously use various technologies (smartphones, various apps and internet). Besides they also use it to read others review and ratings and also post their after travel based on their satisfaction. Before starting data collection, permission was taken from the hotel manager. Hotel guests were invited to the hotel lobby and the study's purpose was explained to them. They were encouraged to participate and so round 80% guests expressed willingness to fill the questionnaire. Before data collection, a few questions were asked to the respondents orally to confirm their eligibility. The questions were: 'Do you use a Smartphone?' 'Do you prefer smartphone apps? Have you used smartphone apps for hotel bookings earlier? Initially, the respondents felt shy, but as they read the information, they understood the context gradually and their interest increased. Therefore, we received adequate responses for use of smart phone apps for hotel bookings. Totally, 650 questionnaires were distributed among the respondents, from which 379 questionnaires with complete answers were received, providing a response rate of 58 percent. Table 1 indicates the respondent's profile.

Table 1. Demographic Profile of the Respondents

	Characteristics	Frequency	Percentage
Gender	Male	217	57.2%
	Female	162	42.8%
Age	Below 20	44	11.6%
	21-35	121	31.9%
	36-50	109	28.8%
	51-65	56	14.8%
	Above 65	49	12.9%
Employment Status	Employed	117	30.9%
	Self-Employed	92	24.3%
	Student	131	34.5%
	Others	39	10.3%

4. Data Analyses and Result

This study has applied PLS-Structural Equation Modeling (SEM) which is considered an important tool., PLS has been widely used for research in tourism(Cheung *et al.*, 2008; Jeon *et al.*, 2018). It can be used under the condition of non-normality (Hair *et al.*, 2016; Hulland, 1999). In PLS, a bootstrapping technique is used to get path estimates directly. In the PLS algorithm, each indicator has flexibility to contribute to the composite score of the latent construct. I Indicators which provided weak relation to its latent construct are given lower weightage (Chin, Marcolin, & Newsted, 2003). The path models of PLS-SEM are made up of two models: outer model, called the measurement model and the inner model, called the structural model.

4.1. The measurement model

The PLS measurement model was examined by convergent and discriminant validity. The convergent validity in the measurement model was computed by examining composite reliability, Cronbach alpha and the average variance extracted (Fornell & Larcker, 1981). The cronbach alpha provides the alpha value for all indicators by treating them as equally reliable and does the saem for the constructs outer loadings. All values were more than the threshold values as mentioned in Table 2.

Table 2. Item Loadings, Composite Reliability, AVE, Cronbach Alpha Coefficients

Construct	Scale Item	Loadings	Composite Reliability	AVE	Cronbach Alpha
Performance Expectancy (PE)	PE1	0.797	0.861	0.609	0.788
	PE2	0.815			
	PE3	0.703			
	PE4	0.803			
Effort Expectancy (EE)	EE1	0.802	0.864	0.616	0.788
	EE2	0.755			
	EE3	0.678			
	EE4	0.890			
Social Influence (SI)	SE1	0.835	0.876	0.701	0.787
	SE2	0.794			
	SE3	0.882			
	FC1	0.866			
Facilitating Conditions (FC)	FC2	0.802	0.903	0.699	0.857
	FC3	0.861			
	FC4	0.813			
	HM1	0.829			
Hedonic Motivation (HM)	HM2	0.899	0.910	0.718	0.868
	HM3	0.781			
	HM4	0.916			
	PV1	0.883			
Price Value (PV)	PV2	0.886	0.916	0.784	0.862
	PV3	0.996			
	H1	0.768			
Habit (H)	H2	0.906	0.875	0.701	0.786
	H3	0.833			
	PT1	0.907			
Perceived Trust (PT)	PT2	0.890	0.838	0.722	0.621
	BI1	0.916			
	BI2	0.915			
Behavioral Intention (BI)	BI3	0.934	0.944	0.850	0.912
Actual Usage (AU)	AU	1.000	1.000	1.000	1.000

Discriminant Validity is an “extent to which the reflection of one variable doesn’t show the reflection of some other variable” (Hulland, 1999). It is established when the square root of AVE mentioned in matrix diagonal is greater than the correlation between the constructs (Fornell and Larcker, 1981) as mentioned in Table 3.

Table 3. Discriminant validity of constructs

	BI	AU	EE	FC	H	HM	PE	PV	T	SI
BI	0.922									
AU	0.853	1.000								
EE	0.459	0.344	0.785							
FC	0.381	0.283	0.175	0.836						
H	0.329	0.256	0.279	0.232	0.837					
HM	0.718	0.572	0.457	0.295	0.306	0.848				
PE	0.657	0.544	0.364	0.364	0.278	0.568	0.781			
PV	0.581	0.561	0.308	0.252	0.181	0.475	0.429	0.885		
PT	0.509	0.405	0.306	0.287	0.224	0.461	0.889	0.357	0.850	
SI	0.730	0.568	0.464	0.419	0.374	0.673	0.619	0.503	0.488	0.837

4.2. Structural Model

PLS structural equation modeling was used to test the model and hypotheses. Performance expectancy ($\beta=0.390, P<0.05$), Social Influence ($\beta=0.240, P<0.000$), Hedonic motivation ($\beta=0.282, P<0.05$), Price value ($\beta=0.192, P<0.05$), Perceived trust ($\beta=-0.190, P<0.05$) were found to be statistically significant on behavioral intentions. Further, Effort expectancy ($\beta=0.061, P=0.05$), Facilitating conditions ($\beta=0.045, P>0.05$) and Habit ($\beta=0.025, P>0.05$) were not found statistically significant. In addition, Behavioral Intention ($\beta=0.853, P<0.05$) was also statistically significant on Actual usage. From figure 1, behavioral intention had the highest impact with the path coefficient ($\beta=0.853, P<0.05$) whereas Habit had the lowest impact with the path coefficient ($\beta=0.025, P>0.05$). The two values squared multiple correlations (R^2) and path coefficient (β) values have the highest explanatory power in the structural model. The percentage of variance is depicted by the R^2 of endogenous variable whereas the strength of relationship between constructs is depicted by the (β) values (Chin, 1998).

5. Discussion and Conclusion

This study, along with UTAUT2 model, examined the role of various factors that influence behavioral intentions and actual usage. The finding of the study indicates that traveler’s behavioral intention in using travel apps for travelers actual usage is significantly impacted by its determinants. Looking at individual determinants, the proposed (H1) was found statistically significant revealing that consumers travelers found their performance increased with use of smartphone apps. Among all determinants, performance expectancy was found the strongest. The results of this study indicate that travelers prefer to use smartphone apps for hotels as they perceive it provides them relevant, accurate and up-to-date information. The results were found to be consistent with previous studies (Bhatiasevi & Yoopetch, 2015; Jeon, Ali & Lee, 2018; Suki & Suki, 2017).

Further, the relationship association between effort expectancy and behavioral intentions (H2) was found insignificant indicating that smartphone apps require much effort for hotel bookings. The result of the study was also reported in earlier studies (Tarhini *et al.*, 2016; Huang & Chuang, 2017). The proposed (H3) relationship between social influence and behavioral intentions was also significant which reveals that travelers’ intentions are influenced by the recommendations and suggestions of others. Social influence is a degree in which other people believe that one should use smartphone apps for hotel bookings. The results of this study was similar to that of previous studies (Slade *et al.*, 2015; Rondan-Cataluña *et al.*, 2015; Tavares & Oliveira, 2016).

The proposed (H4) was found statistically insignificant indicating that supporting facilities like internet and support systems do not affect travelers' behavioral intention to adopt online apps for hotel bookings. The results of this study were similar to previous studies (Mahfuz, Khanam & Hu, 2016; Rondan-Cataluña *et al.*, 2015).

Further, (H5) the impact of hedonic motivation on behavioral intention was significant indicating that s travelers do have fun and pleasure while using online apps for hotel bookings. Travelers are quite familiar with these apps and hence they enjoy and get pleasure when using it. . These findings were consistent with past studies conducted in the context of shopping behavior (Venkatesh *et al.*, 2012; Ozturk, Nusair, Okumus, & Hua, 2016).

The proposed (H6) relationship between price value and behavioral intentions was found statistically significant which states hotel patrons seek hotel search apps and find that they are worth the price incurred. it. Travelers believe that the price value of using hotel apps reflects in its value. Similar results were reported by earlier studies (Alalwan *et al.*, 2017; Mahfuz, Khanam, & Hu, 2016).

The proposed (H7) relationship between habit and behavioral intentions was found statistically insignificant. This might be due to the busy schedule of users who thus lacked the time to spend on smart phone apps. The findings of this study were in contrast with previous researches which were conducted in various contexts including job search apps adoption (Hew, Lee, Ooi & Wei, 2015) and apps adoption for shopping (Miladinovic & Hong, 2016).

The proposed (H8) relationship between perceived trust and behavioral intentions was found statistically significant. The perceived trust of travelers positively influenced their intentions while booking hotel rooms through smart phone apps. Travelers perceive the use of hotel booking apps to be reliable for hotel booking feeling it to be honest. Similar results were reported by previous studies also (Jeon *et al.*, 2018; Suki & Suki 2017).

Further, the relationship between behavioral intentions and actual usage (H9) was found significant. This indicates that travelers behavioral intentions influence their actual usage for the adoption of smartphone apps for hotel bookings. Previous studies conducted by various researchers agreed with this result (Hosizah *et al.*, 2016; Tan, 2013; Venkatesh *et al.*, 2012).

R-Square of endogenous is considered: substantial=0.670, moderate=0.333 and weak=0.190 (Chin, 1998). The value of coefficient of determination for behavioral intention was 0.702 and for actual usage 0.728 which revealed that the proposed model was strong and had considerable power to explain the impact of all constructs on behavioral intentions and actual usage. For adequate model fit, standardized root mean residual (SRMR) value was less than 0.08. The value of SRMR in the model was 0.065 which was acceptable in this study. The 5000 iterations under bootstrapping were performed to analyze the path coefficients. Figure 1 and Table 4 describe the results of the path coefficient. The diagnostic tool provided by Tenenhaus, Amato and Esposito Vinzi (2005) was used to examine the goodness-of-fit (GoF) indices. Hoffmann and Birnbrich (2012) provided the cut-off values: GoF small=0.1, GoF medium=0.25 and GoF large=0.36. For this study, GoF values were 0.720 for behavioral intention, and 0.733 for actual usage, indicating an excellent model fit.

Table 4. Goodness of fit indices

Constructs	AVE	GFI	R Square
Performance Expectancy	0.609		
Effort Expectancy	0.616		
Social Influence	0.701		
Facilitating Conditions	0.699		
Hedonic Motivation	0.718		
Price Value	0.784		
Habit	0.701		
Perceived Trust	0.722		
Behavioral Intentions	0.850		
Actual Usage	1.000		
Average Score	0.74		
AVE* R2 (BI)	0.519		0.702
AVE* R2 (AU)	0.538		0.728
(GoF= AVE* R2) BI		0.720	
(GoF= AVE* R2) AU		0.733	

Table 5. Summary of test results for the structured model

Hypotheses	Path	Standardized Coefficient	P value	Supported	Constructs	R-Squared
H1	PE-BI	0.390	0.000	Yes		
H2	EE-BI	0.061	0.050	No		
H3	SI-BI	0.240	0.000	Yes		
H4	FC-BI	0.045	0.146	No		
H5	HM-BI	0.282	0.000	Yes		
H6	PV-BI	0.192	0.000	Yes		
H7	H-BI	0.025	0.510	No		
H8	PT-BI	-0.190	0.004	Yes	Behavioral Intentions	0.702
H9	BI-AU	0.853	0.000	Yes	Actual Usage	0.728

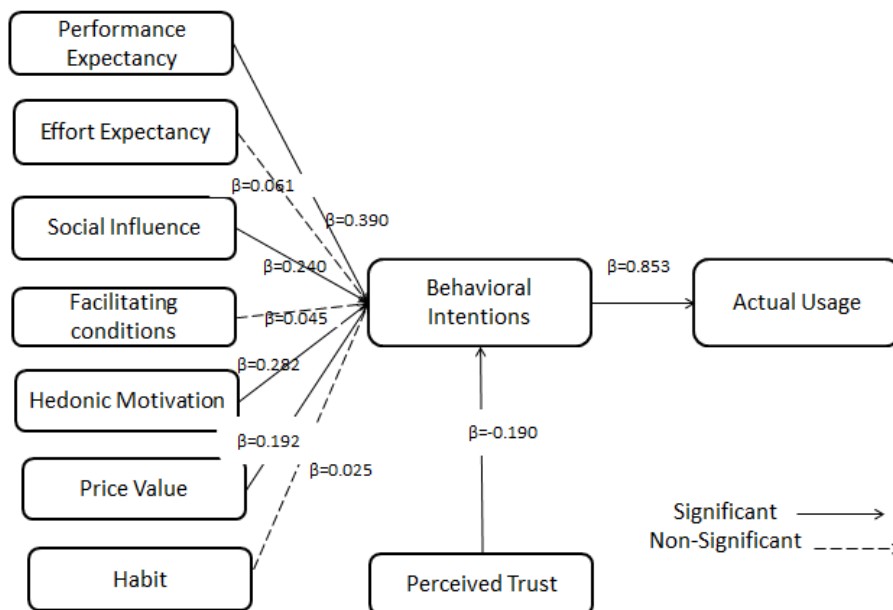


Figure 1. The Structural Model

5.1 Theoretical Implications

This study provided important theoretical contributions to travelers' smart phone apps adoption for online hotel bookings. It has extended the UTAUT2 model proposed by Venkatesh *et al.*, (2012) with an additional construct, perceived trust. This study contributed to previous literature through i) testing the UTAUT model in the hotel booking context by using smart phone apps in developing countries, ii) integrating the UTAUT model by adding a new variable i.e. perceived trust, iii) determining various predictors that strongly influence travelers' intention to use smart phone apps for hotel booking. This study provides implications for policymakers, hotel managers, advertisers who create strategies and make decisions to influence travelers' smartphone apps adoption. Finally, it adds to the adoption of travelers' smart phone apps for hotel booking literature which is at a nascent stage.

5.2 Managerial Implications

Indian travelers participate vigorously in travelling activities due to high disposable incomes (Arora & Lata, 2020). The massive growth of IT has penetrated the tourism market. The use of new technologies in hotel bookings can help in achieving a competitive advantage. Various factors determine travelers' behavioral intention to book hotel rooms using smart phone apps. This can further motivate other travelers. In addition, it will help decrease the administrative work of hotel managers in hotel bookings. The result of this study has proven performance expectancy as the strongest predictor of behavioral intention.

Related with utilitarian feature of smartphone apps, performance expectancy plays a pivotal role and hence, hotel managers should include all utilitarian features when creating their hotel apps to empower travelers' to opt for hotel booking through smart phone apps. These utilitarian features include response to travelers' queries, relevant and updated information about hotel rooms, their prices differences, services included in prices etc. This information will influence travelers' intentions and motivate them to use smart phone apps for hotel bookings. Further, the findings of study also present the significant role of hedonic motivation and price value on travelers' behavioral intention as these constructs have contributed a lot in terms of β values. Therefore, managers should focus on adding some flavor/fun and pleasure that travelers' can when using smartphone apps. Managers should also consider the economical usage of apps, as perceived trust was found as significant in travelers' intentions for hotel bookings through smartphone apps.

To maintain travelers' perceived trust, managers should provide accurate, up-to-date and reliable information and develop tools to secure travelers' information and transactions when booking hotel rooms through smartphone apps. By incorporating relevant information in the system, travelers' will feel the hotels are trustworthy and thus their tendency to use smartphone apps for hotel bookings will increase. Effort expectancy, facilitating conditions and habit were confirmed to having insignificant influence on travelers' behavioral intentions in using smartphone apps for hotel bookings. It states that resources and services provided by managers should be improved so that it can attract travelers' intentions after which they will use it on regular basis. This will be an additional force that increases their behavioral intentions for hotel bookings through smart phone apps.

5.3 Limitation and Future Scope

This study collected data from Indian travelers despite limitations and hence its findings cannot be generalized for travelers of other countries. They might have different perceptions and different ways of adopting apps. This study has not used any mediation and moderation analysis. So future researchers have to consider consumer scepticism and, personal cognitiveness as moderators during analysis. The study has proposed a theoretical framework which future researchers can use for a comparative analysis of travelers attention in different countries.

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