

FACTOR AFFECTING ADOPTION OF SMARTPHONE APPLICATIONS AS PERCEIVED BY CONSUMER

Dr. Goldi Puri

Associate Professor, IHTM, Maharshi Dayanand University, Rohtak

Brijesh

Research Scholar, IHTM, Maharshi Dayanand University, Rohtak

Abstract

Usage of Internet, Smartphone and its applications has seen a tremendous growth in hospitality and tourism industry. In today's rapid world people use smartphones not only for their day to day activities instead they make use of smartphones for their trip planning activities also. Now many academicians also focused their study on consumer's intention to adopt the smartphone and other technological advancements. The purpose of this study is to identify the factors that affect the adoption of smartphone and its applied apps. These factors were identified from various previously used technological acceptance mode like TAM, IDT, SCT, UTAUT, UTAUT-2. The result of the study identified that Performance expectancy, Effort expectancy, Social influence, Hedonic motivation and facilitating condition are the most relevant factors that affect the adoption of smartphones by the consumers.

Keywords: Smartphone adoption, Smartphone applications, Technology adoption,

Introduction

Technology is shifting very fast among the industries. Tourism and hospitality industry is also growing rapidly with the interruption of information technologies. Technologies have progressed in the direction of mobile and web 2.0 applications which are started from market invention and followed by applications. Today most of the industries need help of consumer websites to perform all PR and marketing tasks to cover the customers around the world. Tourism and hospitality sectors, which are interconnected with each other are extensively avail ICT systems. The most common use of ICT system is to enhance the communication between tour operators, travel agencies and tourists. Almost every tourist place, hotels, resorts, transportation and also other stakeholders of tourism and hospitality industry accepted ICT and, it became a noticeable part of the industry. Nowadays, the adaptation of e-tourism and tourism and hospitality activities are growing rapidly such as online advance booking, flashpackers, travel blogs, e-tour guides etc (Khatri, 2019).

The term "Smartphone" refers to a pocket or portable mobile phone with enhanced processing power, larger screens, secure Internet connectivity, and geographical support. The Smartphone has brought a veritable revolution in the tourism industry. Modern tourism institutions have adapted to the new digital era for the better management and developmental endeavors. Customers are encouraged to utilize Mobile phones and associated applications for travel and tourism because of how simple it is to use them. Smartphone use is mostly dependent on Wi-Fi, a type of wireless internet connection. However, there are also offline applications

accessible, so the smartphone application can be utilized even if the phone doesn't have a Wi-Fi connection. By using the Google or Yahoo tools on their smartphones, consumers may access the data about thousands of locations, occasions, restaurants, hotels, and vehicle rentals with just a single click.

The use of smartphones, particularly "mobile applications," has had a tremendous impact on not just daily life but also the tourism sector and consumer travel behaviour. Smart technology helps modern travellers improve their travel experiences (Karanasios et al., 2012), and a wide range of mobile applications are available across a range of travel services to do that.

The primary usage of a smartphone is through mobile digital applications, or "apps," which are computer applications that may be downloaded from an iPhone or Android's app store and run on mobile devices. According to D. Wang et al. (2012), Wang & Fesenmaier (2013), Gretzel, Fesenmaier, & O'Leary (2006), there has been a significant change in both visitor behaviour and the tourism business, as it results in increased use of smartphones. This is due to the fact that apps serve as a new means of distributing genuine contents. Understanding app users' typical intentions is crucial when using the updated tourism marketing channel.

There are numerous models/ theories available that explain the consumer's intention to the adoption of technology including Theory of Reasoned Action by Fishbein and Ajzen's (1975), Technology Accepted Model by Davis(1989), Theory of Planned Behaviour by Ajzen(1991), Model of PC Utilization by Thompson et al.(1991), Innovation Diffusion Model by Moore and Benbasat(1991), Motivation Model by Davis, Bagozzi and Warshaw(1992), Social Cognitive Theory by Compeau and Higgins 1995. The aim of this study is to recognize all the factors that affect the adoption of smartphones and their applications in order to get all the required information for travel. Furthermore this study also examines all the models related to technology adoption particularly in the perspective of hospitality and tourism industry. In this study no new methodology or new theoretical framework is adopted, this study is purely based on literature review.

Literature Review

Users all across the world are increasingly choosing smartphones as their mobile device of choice. Mobile devices have changed how people engage and communicate with one another, and mobile technologies have become an essential part of our day to day lives. As a result of the widespread use of mobile devices, the consumption of media has taken on previously unheard-of forms, and mobile marketing channels are expanding quickly (Gröne, Friedrich, Hölbling, & Peterson, 2009). As more people utilise mobile devices, there are more opportunities for mobile marketing and communication (Shankar, Venkatesh, Hofacker, & Naik, 2010).

Consumers may communicate, access, and exchange information, as well as buy products from location-based businesses, thanks to the widespread use of mobile devices (Sultan, Rohm, & Gao, 2009). Additionally, mobile technologies have had a huge impact on contemporary management by increasing the efficiency with which marketing operations are carried out (Haghirian & Madlberger, 2005).

Jennings and Weiler (2006) state that understanding, learning, and visiting the touristic places and the experience of rich culture rooted in such locations are the factors that are helpful in the development of touristic experience. The places that tourists visit and the culture they experience there are related to them by stakeholders, including tourism service providers, tourists, governments, and local communities and these stakeholders in the context of tourism mediates the tourist experience in positive and negative manners through

the representation of information. Tour guide is the best example of the mediators in the tourism industry. Cohen (1985) stated that tour guide provides a mediation mechanism to tourists which links travelers with the locals and also interprets the rich local culture to the tourists.

According to Leiper (1990), tourists directly get information about their destination/ attractions via print media like magazines, literature and through electronic media like film, TV and videos, which manage “tourists gaze” by fabricating and strengthening travelers’ prediction to travel places (Urry 1990). Nowadays smartphone helps not only in basic travel arrangements such as planning, reservation, and routing, but it also improve many “micro-moments” and helps in within travel activities like - locating gas stations, calculating wait times for transportation, with a huge range of information services (D. Wang et al., 2011).

(D. Wang et al., 2012) analyzed the tourist’s review on use of smartphone and its associated apps to know the mediation mechanism of Smartphone apps in the construction of tourist’s experience. For the purpose of this study 202 positive reviews were screened out of 37133 total reviews are associated with the top 100 most popular travel related Smartphone apps used by tourist’s downloaded from Apple store. The finding of the study reveals that instant information provider mechanism of Smartphone apps helped the tourist’s to deal with unanticipated situations, and the sharing mechanism of Smartphone apps are some of the factors that helped in the construction of touristic experience.

Customer adoption and acceptance of Smartphone apps

(Jeon et al., 2018) conducted a study on Customer’s intentions to identify the use of Smartphone apps for flight ticket bookings by using the extended version of Unified theory of Acceptance and use of Technology (UTAUT), customer involvement, perceived trust and customer innovativeness were the additional variables to the original four variables of UTAUT model, the original four variables are performance expectancy, social influence, effort expectancy and facilitating conditions. 369 respondents were selected for the study from Korea who previously made registration for their flight tickets through the use of Smartphone apps. The result of the study identifies that performance expectancy, facilitating conditions, customer innovativeness and perceived trust are the factors that positively affect the customer’s intends to use the Smartphone apps for flight ticket bookings. Among all the factors performance expectancy is the strongest factor among all the factors that results in the formulating customer’s intentions to use mobile phone apps to book flight tickets.

(Dogra, 2017) In his study on variables influencing tourist’s intentions to use mapping apps Extended version of Unified theory of acceptance and use of technology (UTAUT2) was used in the study, three new constructs namely price value, hedonic motivation and habit were added to the original UTAUT model that contains four constructs namely performance expectancy, effort expectancy, social influence and facilitating conditions. A total of 284 respondents were identified for the study through an email invitation link was sent to the respondents to domestic tourists of India. The finding of the study shows that habit, facilitating conditions, performance expectancy and hedonic motivation are the factors that affect the tourist’s intention of adoption of mapping apps during their travel. Habit is the strongest factor among all other factors in determining the traveler intention of using mapping app and also the use behaviour pattern of tourist’s.

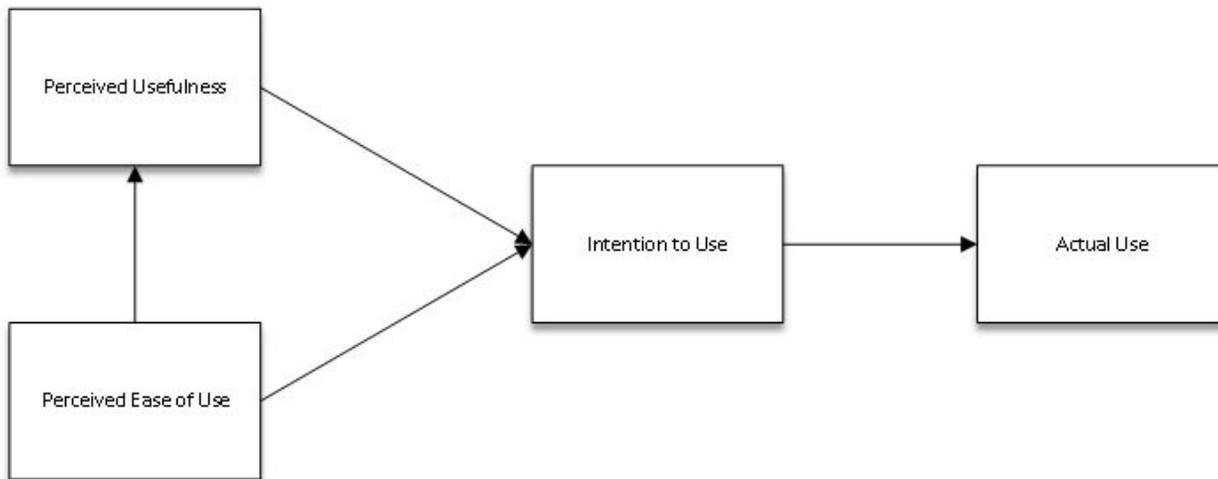
Smartphone are also used for entertainment purposes. Tourists make use of smartphone and its allied applications to gain some new experiences at tourist attractions and these serves as a instant functional support provider to tourists (Dorcic et al., 2018); (Ghaderi et al., 2019); (D. Wang et al., 2014b). (Germann Molz, 2012) explained that smartphone connect tourists with other people while on tour. Furthermore smartphone

gives a sense of virtual proximity with the friends and relatives of tourist while on their trip. Tourists use smartphone at the time of feeling of loneliness and boredom in between the activities (Kirova & Vo, 2019); (D. Wang et al., 2014b). Duffy (2019) examined that continuously using of smartphone by tourists at tourist destinations can either improve or hinder the overall touristic experience with the destination and connectedness with the locals.

“Travel companion connectedness” means the affection of mutual understanding in between tourists and their travel associate (Misra et al., 2016). So that, there is a chance if tourists and their travel associates are well connected to each other, tourists are not wasting their time on smartphones and decrease some tediousness during the tour. When a tourist is mutually connected with their travel associate, their trip is more likely to be satisfied, and such feelings may lead to overall tourist satisfaction as well (Wang and jiang, 2020). However, tourists are usually use smartphone during their trip, because smartphones are frequently pondered to be inevitability by their consumers (Hsiao, 2017).

Technology acceptance model (TAM)

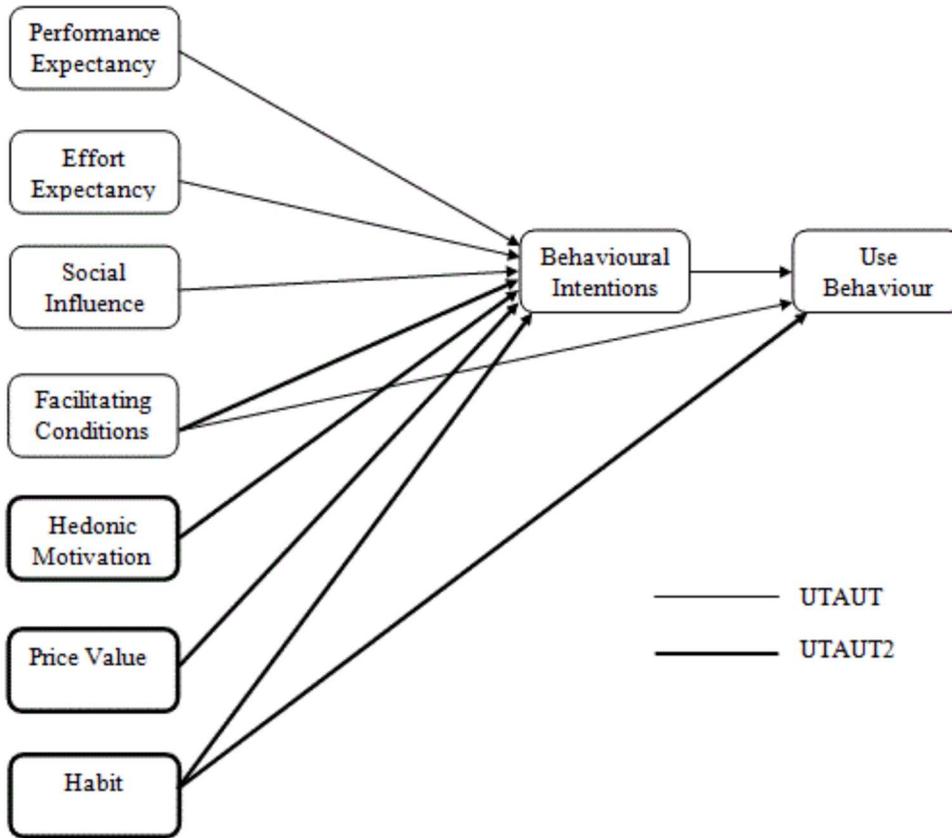
Technology acceptance model (TAM) was developed by the Davis, Bagozzi, & Warshaw, (1989). TAM's primary determinant is the understanding of user behaviour in regard to technology adoption (Davis et al., 1989). The Theory of Reasoned Action (TRA), presented by Ajzen and Fishbein in 1977, is the basis for the TAM model. TAM was initially created to explain the adoption of computers, but it has subsequently been applied to explain the use of mobile services and to investigate user online behaviour (Lin, 2011; Pagani, 2004). According to TAM theory, user behaviour is based on two elements, namely "perceived ease of use" and "perceived usefulness," when it comes to accepting technology. Perceived ease of use is described as the degree in which user believes that they do not have to put extra effort for using any particular technology (Davis et al., 1989). Perceived usefulness is described as the degree to which a user believes that their job productivity and performance will improve as a result of employing a certain technology (Davis, 1989, p. 320). TAM theory investigate acceptance of technology, use behavior and technology impacts on travel experience (Lamsfus et al., 2014; D. Wang et al., 2014a). TAM theory is utilized by a few researcher in the acceptance of IT in the tourism industry. Kim, Lee and Law (2008) utilized the extended TAM with additional determinants i.e. system quality, service quality, information quality and perceived value to examine the factors that affects the adoption behavior of hotels front office system. The results of the study shows that ‘perceived ease of use’ and ‘perceived usefulness’ were the only determinants that affect the actual usage of technology. Kim et al. (2008) utilized the TAM on traveler’s acceptance of mobile technology. The finding of the study reveled that ‘perceived ease of use’ and ‘perceived usefulness’ were the only factor that affect the acceptance of mobile technology in tourism industry. Ayeh et al. (2013) used the extended version of TAM to investigate the internet user’s intention to use the consumer generated media for travel planning. The result of the study found that empirical applicability of TAM to the context of tourist behavior. Huh, Kim, and Law (2009) even examined the attitude and taste of employees regarding the proper information system of hotel by recognizing the model of dominant which also includes TAM theory as well as theory of planned behavior (TPB). It also forecast and describes employees’ internal decision and agreement. The consequences supported to know about the perception of the employees.



Source: Marikyan, D. & Papagiannidis, S. (2022)

UTAUT 2 Unified Theory of Acceptance and Use of Technology Model

The UTAUT 2 model explains the user acceptance and use of technology mainly by consumers which was developed by Venkatesh et al. in 2012. It is an extended version of Unified theory of acceptance and use of technology (UTAUT) model proposed earlier by Venkatesh et al. in 2003. Venkatesh et al. in 2003 develop the UTAUT model after analyzing the various theories on the usage and acceptance of technology including Theory of Reasoned action developed by Fishbein in 1975, Innovation of Diffusion theory (IDT) by Rogers in 1962, Technology acceptance model (TAM) by Davis in 1989, Social Cognitive theory (SCT) by Bandura in 1986, Theory of Planned Behaviour (TPB) by Ajzen in 1991, Model of PC Utilization (MPCU) by Higgins and Howell in 1991, Motivational Model (MM) by Davis, Bagozzi and Warshaw in 1992 and Taylor and Todd's (1995) integrated model of TAM and TPB. Venkatesh et al. identified four factors from all the above reviewed theories namely Performance expectancy, Effort expectancy, Social influence and facilitating condition that mainly explains the usage and adoption of technology by employees. The extended version of UTAUT model has added three more factors to the original UTAUT model affecting the acceptance and use of technology by consumers these are Hedonic motivations, Price Value and Habit.



Source: Venkatesh et al. 2012

Many authors have adopted the UTAUT-2 Model in number of studies including adoption of mapping apps by tourists (Dogra, 2017), online purchase plan for low cost carriers (Escobar Rodriguez and Carvajal Trujillo, 2014), mobile banking (Baptista and Oliveira et al., 2016), use of UTAUT2 in access based services (Satama, 2014), In the payment of online purchase by the tourists (Oliveira et al., 2016), UTAUT-2 model was also proved fruitful in social medias’ role as a tool for tour arrangement (Chong and Ngai, 2013).

Research Methodology

The aim of this study is to identify all the factors that affect the adoption of smartphone and its applications in hospitality and tourism industry as perceived by tourists for the successful ongoing of their tour. To achieve the objective of this study, all the smartphone related published research articles were identified and gathered from Google scholar, Scopus, Science direct, and EBSCOhost. Following keywords and terms including “smartphone”, “smartphone applications”, “mobile phone”, “adoption of smartphone applications in hospitality and tourism industry” was used in order to search for published research articles on smartphones in scholarly journals. Only those articles were included in the study that was directly relevance to the study.

Factor affecting adoption of smartphone applications in hospitality and tourism industry

Sr. No	Factors	References
1	Usefulness/ Performance	(Antunes & Amaro, 2016; Bakar et al., 2020; Development et

	Expectancy	al., 2020; Dogra, 2017; Gupta et al., 2017; Y. Huang et al., 2019; Im & Hancer, 2014; Jeon et al., 2018; D. Kim et al., 2008; Management et al., 2019; Moro et al., 2018; No & Kim, 2013; Oh et al., 2009; Okumus & Bilgihan, 2014; Ozturk et al., 2021; Regan & Chang, 2015; Rivera et al., 2015; Tan & Lee, 2017; Verkasalo et al., 2010; T. Zhang et al., 2019)(Ho et al., 2021; Martín & Herrero, 2012; Phaosathianphan & Leelasantitham, 2019; Zhou et al., 2021; Koenig-Lewis et al., 2010; Ma & Peng, 2012; Park & Chen, 2007)
2	Ease of Use	(Antunes & Amaro, 2016; Ho et al., 2021; Y. C. Huang et al., 2019; Im & Hancer, 2014; D. Kim et al., 2008; Lu et al., 2015; Management et al., 2019; Martín & Herrero, 2012; Moro et al., 2018; No & Kim, 2013; Okumus & Bilgihan, 2014; Ozturk et al., 2021; Phaosathianphan & Leelasantitham, 2019; Regan & Chang, 2015; Tan & Lee, 2017; Yoon & Kim, 2014; T. Zhang et al., 2019; Zhou et al., 2021;Boontarig et al., 2012; Jyoti et al., 2014; Park & Chen, 2007)
3	Hedonic Motivation/ Perceived playfulness	(Antunes & Amaro, 2016; Dogra, 2017; Okumus & Bilgihan, 2014; Tan & Lee, 2017; Verkasalo et al., 2010; Yoon & Kim, 2014; T. Zhang et al., 2019; Zhou et al., 2021; Phaosathianphan & Leelasantitham, 2019; Dorcic et al., 2018;Ma & Peng, 2012; Pan et al., 2013)
4	Social Influence	(Antunes & Amaro, 2016; Bakar et al., 2020; Gupta et al., 2017; Ho et al., 2021; No & Kim, 2013; Tan & Lee, 2017; Okumus & Bilgihan, 2014;Jyoti et al., 2014; Ma & Peng, 2012; Pan et al., 2013)
5	Facilitating conditions	(Bakar et al., 2020; Dogra, 2017; Jeon et al., 2018; Moro et al., 2018; Ozturk et al., 2021; Tan & Lee, 2017; Ozturk et al., 2021;Boontarig et al., 2012; Jyoti et al., 2014)
6	Habit/ Compatibility (13)	(Dogra, 2017; Gupta et al., 2017; Lu et al., 2015; Meng et al., 2015; Ozturk et al., 2021;Jyoti et al., 2014; Ma & Peng, 2012; Pan et al., 2013; Koenig-Lewis et al., 2010)
7	Perceived Trust	(Development et al., 2020; Gupta et al., 2017; Jeon et al., 2018; Phaosathianphan & Leelasantitham, 2019; T. Zhang et al., 2019)
8	Customer Innovativeness	(Jeon et al., 2018; Martín & Herrero, 2012; Meng et al., 2015; Tan & Lee, 2017;Ma & Peng, 2012)
9	Travel website interface (Smartphone)	(No & Kim, 2013;Lin & Lu, 2000; Mills & Morrison, 2003)
10	Perceived value of travel	(No & Kim, 2013; Lin & Lu, 2000; Mills & Morrison, 2003)

	website (Smartphone)	
11	The perceived quality of travel website (Smartphone)	(No & Kim, 2013; Lin & Lu, 2000)
12	Extrinsic and Intrinsic Motivation	(Dorcic et al., 2018)
13	Situational Facilitators	(Dorcic et al., 2018)
14	Cognitive beliefs	(Dorcic et al., 2018)
15	Perceived Risk	(Gupta et al., 2017)
16	Emotional Attachment	(Regan & Chang, 2015)
17	Perceived Cost Saving (Monetary value, Time, Emotional effort)	(Yoon & Kim, 2014; Gupta et al., 2017)
18	Technological Experience	(Rivera et al., 2015)
19	Perceived Reliability	(T. Zhang et al., 2019)
20	Perceived Value (Effort expectancy, Perceived fee, Perceived Risk, Overall value)	(Moro et al., 2018; Boontarig et al., 2012)
21	Quality	(Phaosathianphan & Leelasantitham, 2019)
22	Self efficacy (ability to use apps)	(Okumus & Bilgihan, 2014; Chen et al., 2009)

Since the development of Information Technology, scholars developed many theoretical models related to the adoption and usage of IT. In this study all the major theoretical models have been discussed that have been developed and modified by the researches over the time period to get a better insight of the user adoption of using a particular technology. Ajzen and Fishbein in 1975 developed Theory of Reasoned Action (TRA), there are two constructs of this model Attitude and Subjective norms which are predictor of behavioural intentions. Attitude defined as a suggested behaviour of positive or negative attitude after the consequences of any action. Subjective norms defined as opinion of the individual against any person who thinks he/she should or should not perform any given behaviour. Technology Acceptance Model (TAM) developed by Davis in 1989 derived from Theory of Reasoned Action (Ajzen and Fishbein, 1975). There are two variables of TAM Perceived ease of use and Perceived usefulness. Davis defined perceived ease of use as “the degree to which a person believes that using a particular system would be free of effort”. Perceived usefulness is defined as “the degree to which a person believes that using a particular system would enhance his or her job performance”. It is used on extensive level by many researchers to identify and explain the user behaviour towards acceptance of new technology. TAM is mainly used to explain user’s intention to adopt the smartphone adoption by tourists, adoption of smartphone apps by tourists, internet adoption, e-commerce adoption, adoption and usage of tourism websites.

Performance expectancy, according to Venkatesh et al. (2012), is the extent to which a user of a technology believes that employing that technology would enhance his overall performance. (Venkatesh et al., 2012)

described Effort expectancy is the extent to which a user thinks that using a technology would be free of effort. (Venkatesh et al., 2003) defined social influence as “the degree to which an individual perceives that relevant people believe he or she should use a system”. This definition corresponds to the definition of Subjective norms, a variable given by Ajzen, 1991 in Theory of planned behavior.

Facilitating conditions is described as users think that existing support and resources are available to him to perform any behavior (Venkatesh et al., 2003).

(Venkatesh et al., 2012) defined Hedonic motivation as a degree in which user of the technology receives great enjoyment. (Zhang et al., 2012) stated that the user’s intention to adopt any technology enhances only if the perceived enjoyment is more. It is one of the major determinants of adoption of technology as described by Brown and Venkatesh (2005).

Price value is defined as the difference between using a given technology at a particular set price and the benefits arising out of using that particular technology (Dodds et al. 1991). If the benefits arising out of given technology outweigh its monetary cost then the price value is positive and this results in the substantial impact on the adoption of technology (Venkatesh et al., 2012).

(Limayem et al. 2007) defined habit as “the extent to which people tend to perform behaviours automatically because of learning”. Habit is similar with compatibility, a construct of IDT. (Venkatesh et al., 2012) defined habit as outcome of the prior experiences or use behaviors. Previous studies suggested that habit is one of the important determinants of the adoption of technology (Dogra, 2017; Gupta et al., 2017; Lu et al., 2015; Ozturk et al., 2021).

(Mills & Morrison, 2003) defined Travel Website Interface (TWI) as the user’s overall experience as a result of the interaction with travel website. TWI includes the following first order constructs like loading, access, Navigation, appearance, search, interactivity and security.

Perceived quality of travel website (PQTW) is defined as the consumer’s point of view towards the service quality of travel website. PQTW includes first order constructs like feedback, incentive and information Reliability.

(Mills & Morrison, 2003) defined Perceived value of travel website (PVTW) as the user’s evaluation of the usefulness of travel website. Following are the constructs of PVTW involvement, transaction utility, shopping convenience and price.

Perceived risk is defined as uncertainty of consumers and believes that performing any specific behavior results in uncertainty and negative outcomes (Bauer, 1960).

People undergo eagerness when they don’t have mobile phones on use, although it is an intimacy of correlation-based formation that throwback a relation between living person and a physical object that may be considered as a functional or epicurean value according to Licoppe and Heurtin (2001).

Perceived Cost Saving (Monetary value, Time, Emotional effort)

Perceived cost savings can be defined as “the degree to which a person thinks that use of the specific system has helped her/him realize significant cost savings” (Rathnam, 2005).

To fulfill the objective of current study, however, cost saving indicates the savings in emotional efforts, monetary value and time. Kim (2010) stated that perceived cost savings in terms of monetary value could be the leading factor for a business or association in their decision-making process to accepting new technology. However, other researchers give more importance to efforts and time in comparison to monetary savings. In

financial service sector monetary savings factor is not as much remarkable than time and efforts in terms of the acquisition of mobile technology according to Jing, Hsu, Klein, and Lin (2000).

Davis' TAM took prior technology use into account as a predictor of adoption. It demonstrates a strong correlation between technological experience and technology's perceived utility. According to (M. Kim & Kim, 2013), students' connection with applications had a favorable impact on their perspective of the application.

Perceived Value (Effort expectancy, Perceived fee, Perceived Risk, Overall value)

According to Wang (2014), perceived value is significantly affected by perceived utility, security, and mobility. These factors in turn have a big effect on satisfaction and confidence in technology, faith in agents, and trust in government.

In the context of MHS (Mobile Hospitality Services), (H. Wang & Wang, 2010) define perceived value as “a customer’s overall value perception of MHR based on the comparison of its benefits and sacrifice factors when using it.” According to the research model put forward by H. Wang and Wang (2010), behavioral intention to use MHR is strongly predicted by perceived value.

When the users feel secure while they are doing business online is considered as perceived security as stated by (Yenisey et al., 2005).

Perceived security is a significant factor that working towards the evasion of participation in online business because people are conscious about their personal data is being stolen, sorted and possibly used for unsolicited purposes (Nusair et al., 2017).

Self efficacy (ability to use apps)

Computer self-efficacy is used to acknowledge individual behavior towards information technology (Laurin and Lin, 2005). Therefore, in case of health apps, it is necessary to examine that mobile phone users supposed to have the requisite skills, knowledge and capacity to use. According to Laurin and Lin (2005), self-efficacy is describing as the capability of individual while using health application. The desire to use such apps will escalate, if the users think that they have capability to use these apps.

Social norms defined as opinion of the individual against any person who thinks he/she should or should not perform any given behaviour. According to the theory of planned behaviour (TPB), a person's behavioural intentions are influenced by subjective standards (Ajzen, 1991).

Definition of Constructs

Factor	Definition of Constructs	Root constructs
Performance Expectancy	“degree to which a person believes that using a particular system would enhance his or her performance”	Perceived Usefulness(TAM and DPTB), Job Fit(MPCU), Outcome Expectations (SCT) Relative advantage(IDT), Extrinsic Motivation(MM)
Effort Expectancy	“degree to which a person believes	Perceived Ease of Use(TAM), Ease

	that using a particular system would be free of effort”	of Use(IDT) and Complexity(MPCU)
Social Influence	“the degree to which an individual perceives that relevant people believe he or she should use a system”	Social Image(ICT), The social factors(MPCU) and Subjective Norms(TPB and DTPB)
Facilitating Conditions	“the degree to which an individual believes that an organizational and technical infrastructure exists to support the use of the system”	Perceived Compatibility(IDT), Perceived Behavioral Control(DTPB)

Source: Jeon, H., Ali, F., & Lee, S. (2018)

Performance expectancy is one of the four major constructs of UTAUT model developed by Venkatesh that defined as a degree in which user of the technology believes that by using a particular technology would improve his overall performance. Performance expectancy is similar with other constructs like perceived usefulness a major construct of TAM and DPTB model, job fit a significant construct of MPCU, Outcome expectations a useful construct of SCT, Relative advantage an important construct of IDT and Extrinsic Motivation which is highly useful construct of MM.

Effort expectancy is another important variable of UTAUT model. Perceived ease of Use (TAM), Ease of Use (IDT) and Complexity (MPCU) are variables similar with Effort expectancy widely used by the researchers identifying the intention of consumer’s adoption of smartphone technology. Similarly, Social influence (ICT), Social factors (MPCU), and Subjective norms (TPB and DPTB) variables are similar with Social influence variable of UTAUT model. Likewise Perceived Compatibility (IDT) and Perceived Behavioral Control (DPTB) are the root constructs of Facilitating Condition variable of UTAUT model.

Results and Discussion

Since the development of ICT in hospitality and tourism industry, it has played a fundamental role in the rapidly developing, changing and evolving this industry. As part of ICT, consumers access the Internet through the use of smartphone, tablets and mobile apps. Tourists use internet to access the travel related information by using their smartphones at any time and at anywhere. Most of the tourists are booking their hotel rooms and purchasing airline tickets through their smartphone. ICTs not only enable customers to find, personalize, and purchase tourism products, but they also help the industry go global by giving suppliers efficient tools for creating, managing, and distributing their products globally (Buhalis, 1998).

Now the academic researchers focus their research on the adoption of mobile technology especially in the context of hospitality and tourism industry. Therefore, this study reviews the already existing studies on the factors affecting adoption of smartphones by consumers. Factors were analyzed from various technological adoption models including IDT, SCT, TRA, TAM, UTAUT & UTAUT-2.

The result of the study revealed that Performance expectancy, Effort expectancy, Social influence, Hedonic motivation and facilitating condition are the most relevant factors that affect the adoption of smartphones by the consumers. Performance expectancy found to be one of the strongest determinants of technology adoption among the users followed by the effort expectancy. After performance expectancy and effort expectancy,

Social influence and hedonic motivation are also other major determinant affecting the adoption. Apart from the above mentioned determinants Perceived trust, Habit, and Customer Innovativeness are the important factors that were determined in the earlier researches as significant factors affecting the adoption of smartphone by users.

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