The technology acceptance model revisited: empirical evidence from the tourism industry in Pakistan

Muhammad Junaid Shahid Hasni, Maya F. Farah and Ifraaz Adeel

Abstract

Purpose – *This paper aims to analyze the adoption of social media platforms by tourists in Pakistan. Based on an adaptation of the technology acceptance model (TAM), this study assesses the factors that lead users to adopt these platforms.*

Design/methodology/approach – *A survey was administered to a convenience sample of 399 travelers who use social media in Pakistan. A Confirmatory factor analysis was conducted using AMOS to evaluate convergent and discriminant validity as well as composite reliability. Structural equation modeling was applied to examine the causal relationship among all proposed constructs.*

Findings – *The findings reveal that the perceived usefulness (PU) and perceived ease of use (PEoU) of a social media platform positively impact the behavioral intention of its users. The proposed constructs of compatibility, enjoyment, user expertise and e-trust all demonstrated their crucial roles in the adoption of a social media platform for tourism-related activities by enhancing the platform's PEoU and usefulness.*

Originality/value – *This research validates the relationship between PEoU and PU of a social media platform in the hospitality industry. Interestingly, this study has expanded TAM by validating the addition of four more constructs, (1) compatibility, (2) enjoyment, (3) e-trust, and (4) expertise, to add worth to this model regarding the understanding of social media usage in this specific industry. The findings are valuable both for managers and policymakers in the tourism sector in Pakistan, as the latter can utilize the results to entice a larger segment of social media users to the tourism industry.*

Keywords *Social media, Tourism industry, Technology acceptance model, Pakistan*

Paper type *Research paper*

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1. Introduction

1.1 Background

In 2019, 3.48 billion people across the different corners of the world were identified as social media users that figure having grown by roughly 8% since the same time in 2018 (Kemp, 2019). Most marketers today believe that social media platforms have become a vital medium for their corporate and product strategies (Ramadan and Farah, 2017) as it has turned into a key constituent from of customers' everyday lives (Ramadan *et al.*, 2018). Particularly, these platforms have had a significant impact on the tourism sector (Jansson, 2018; Law *et al.*, 2009). This is due to the fact that internet sites have been providing a user-friendly medium for travelers to share their experiences, thus changing the patterns tourists use to look for information regarding their upcoming destinations (Sigala *et al.*, 2012). Moreover, marketers have acknowledged that for them to "acquire, retain or grow clients, they should allow customers to take a more active role in the service creation" (Ramadan and Farah, 2020). This has been further catalyzed by the ever-evolving technology sector, which has allowed for the rapid growth and advancement of various useful platforms.

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In the last decade, the tourism industry has been notably marked by the substantial growth of related consumer-generated content, including blogs, virtual communities, social networks, wikis and other media files shared on sites such as YouTube, Daily Motion and Flickr (Ambardar and Malik, 2019; Assaker, 2019; Buhalis and Law, 2008). Such platforms entice people to post and share their travel-related experiences in a readily available medium. Indeed, tourists use these social networks and other related sites to portray, cherish and relive their tour-related memories and experiences (Liu *et al.*, 2019). This in turn creates a vast amount of helpful firsthand information regarding tourist destinations, sights, culture, hotels and related costs (Creevey *et al.*, 2019). This material is even more valuable as it is available free of cost and offers potential travelers the chance to access the personal experiences of others in a manner that is not skewed by marketing and advertising messages.

Indeed, travel reviews on different social media sites have become a dominant source of information for vacationers in planning their trips (Chong *et al*., 2018). This is especially true for millennials as studies indicate that 89% of consumers within this group plan their vacations based upon images and reviews they have seen on social media (Statista, 2018). Accordingly, the ultimate decision is largely shaped by tourists' endorsements and testimonials on consumer-generated media; actually, users utilize the latter not only to decide upon their final destination but also to choose which hotel to book, landmarks to visit and foods to try (Fotis *et al.*, 2012; Gretzel and Yoo, 2008; Sparks *et al.*, 2013).

On a similar note, studies indicate that over 92% of travelers read an average of at least seven reviews, spending at least 30 min on online travel platforms and social media pages before deciding upon a travel destination and holiday package (Selligent, 2018). Indeed, online travel reviews of Trip Advisor – one of the world's most prominent travel review sites – have totaled 660 million reviews in 2018, with an average of 225 new additions per minute (World Bank Group, 2018). Likewise, over 67% of Facebook users employ the platform for travel advice and research prior to deciding upon a vacation spot (Facebook, 2019).

The above figures become even more important when noting that international tourist arrivals (i.e. overnight visitors) are forecasted to total an approximate 1.484 billion worldwide in 2019 alone, demonstrating a 4.0% growth per annum, while generating an expenditure of over 1.643 billion US dollars (World Travel and Tourism Council, 2019). In fact, this sector is expected to continue its exponential growth, with the World Travel and Tourism Council (2019) anticipating international tourist arrivals to reach 2.196 billion visitors worldwide with an overall expenditure of 2.483 billion US dollars by 2029.

This study focuses on the case of Pakistan due to its' yet to flourish tourism potential. In 2019, the tourism sector backed the overall economy of Pakistan with a figure of 5.9%, and to the GDP growth with 4.7% contribution (World Travel and Tourism Council, 2020). In fact, along with religious and cultural tourism, the diversity of Pakistan's topographical landscape includes lush green plains, mesmerizing scenic spots, snow-covered peaks, virgin sea beaches, vast dessert steppes and wide stretches of plateau, all of which also create vast appeal for many tourists (Baloch and Rehman, 2015). Despite these enticements, the tourism industry in Pakistan was ranked at 124 out of 136 countries on the travel and tourism competitiveness index in 2018; in 2019, it occupied the 121th position out of the 140 ranked countries (Travel & Tourism Competitiveness Report, 2019). In the past, visitors had faced two major barriers for visiting Pakistan: (1) Top destinations were not appropriately promoted and advertised on different channels, and (2) the security situations were not safe for international tourists (Aftab and Khan, 2019). The security situation has been improved in most parts of the country, which should in the future entice more significant numbers of international tourists. Recently, the Pakistani Tourism Ministry has been investing heavily in promoting the tourism sector so as to turn Pakistan into a top touristic destination. In this regards, online visa services have been launched and facilitated by the Pakistani government for 191 countries (Pakistan Online Visa System, 2021a), offering as well a "visa on arrival" option for 50 countries (Pakistan Online Visa System, 2021b). All these measures are likely to facilitate Pakistan's visit for international and domestic tourists in the future. Indeed, in

the last couple of years, tourism in Pakistan has improved by more than 300% (Torres, 2021). Ahmed (2019) said that Pakistan welcomed 3.2 million foreign travelers in 2018, and by 2030 this figure is expected to grow at 30%.

The Pakistani tourism sector is in dire need for understanding tourists' drivers and capitalizing on the role of social media in influencing this industry. In fact, Pakistan was ranked as one of the "coolest places to go in 2019" by Forbes (Abel, 2018). Furthermore, Pakistan has currently six world heritage sites and has updated a tentative list of 26 new sites for inclusion in World Heritage Sites (UNESCO, 2016). In this context, social media platforms can have a very constructive role in promoting tourism and allowing for the diffusion of positive related word of mouth (Aftab and Khan, 2019). Noor (2019) reported that international tour video bloggers showcased the natural beauty of top Pakistani tourist places to the rest of the world through their videos and social media channels.

The COVID-19 pandemic, along with various other economic and political crises, has had drastic effects on worldwide industries, with tourism being the most damaged sector of all (Shretta, 2020). Due to the spread of the virus, the United Nation World Trade Organization (UNWTO) has projected a decline of 1.1 billion international tourist arrivals, 100–120 million jobs loss and a decline in export revenues of US$910bn to US$1.1 trillion (Kumudumali, 2020). The travel restrictions and new related procedures, the recurrent flights and borders' closing in most countries, as well as the limited tourists' visit with strict tour policies within each country have bounded the tour lovers. The World Tourism and Travel Council in a "report on the future of the industry" stated that the COVID-19 pandemic has moved travelers' attention from international tours to domestic trips or nature and outdoor destinations (Behsudi, 2021). In particular, the Pakistani tourism industry was drastically hampered due to the pandemic, with a decrease of 60–70% tours' traveling in 2020 alone (Naeem, 2020, as cited in Hussain, 2020). Furthermore, the Asian Development Bank report of 2020 has disclosed that Pakistan tourism industry faced a significant loss of US$5.8m. Accordingly, the tourism sector is looking for a revised approach to ensure not only stability and survival but also potential for future growth. Technological advancement, coupled with artificial intelligence tools, appears as a sign of relief for the tourism industry in these critical times.

1.2 Gaps in the literature

Hussain *et al*. (2019) highlighted that social media is achieving on a daily basis a higher level of recognition and usage across the globe. In the travel and tourism context, besides the significant role as a customer service channel, social media is believed to assist users in the following decisions and tasks: (1) planning tours with the help of updated information available on social networking sites, and (2) sharing their tours' experiences with other social media users (Mir, 2017). On the other side, tour operators use social media to receive direct and prompt feedback from their clients and other social media users, so as to provide more targeted services (Zeng and Gerritsen, 2014). The continuous growth in the number of social media platforms, blogs, wikis, virtual communities and other related online forums have been having a significant impact on the tourism sector by significantly altering information distribution (Xiang and Gretzel, 2010) and the overall consumer decision-making process (Öz, 2015).

Nonetheless, an in-depth analysis of the extant literature indicates the presence of a large knowledge gap in relation to tourists' usage of social media. According to Öz (2015), social media use in the travel industry has a great value potential for both academics and practitioners. Hence, the dire need for studies on the subject to fill the yet existing gaps in the literature. Lee *et al.* (2015) highlight the lack of any substantial research effort to theoretically explain the relationship between social media and tourism, with little serious attempt made to apply the existing models or develop new frameworks related to this topic. Kim *et al.* (2017) emphasize the need for further studies to understand the role played by social media in the tourism industry. Rauniar *et al.* (2014) underscore the necessity to explore the factors that influence tourists in order to extend and customize existing models. Furthermore, Kaushik *et al.* (2015) suggest the specific use of adoption theories, such as the technology acceptance model (TAM), to examine tourists' online behaviors. Moreover, Hussain

et al. (2019) also stress the need to study the social media usage in the tourism sector from a theoretical perspective. Besides, these researchers recommend the testing and extension of their findings to additional touristic places in Pakistan for a better understanding of the usage of social media level across different destinations. Accordingly, this study aims to revisit and apply the TAM to bridge this knowledge gap.

In addition, the review of the extant literature on the subject indicates that only a limited number studies that assess consumer attitudes and intention toward the usage of a new technology have incorporated the roles of e-trust and enjoyment in this usage (Jain *et al.*, 2018). The review of the literature also indicates that very few studies, if any, have examined these variables in the context of social media adoption by tourists. Accordingly, the current study aims to expand this field by utilizing the TAM theory to explain tourists' attitudes in relation to social media for the specific context of Pakistan. This study incorporates the following constructs: (1) e-trust, (2) enjoyment, (3) perceived usefulness (PU) and (4) expertise, in order to determine the reasons behind tourists' attitudes and intentions. This study has remarkable practical implications on the tourism sector in Pakistan in light of the improved security conditions (Saeed and Shafique, 2019) and the renovated tourist service infrastructure (Travel & Tourism Competitiveness Report, 2019). These have led to a significant increase in touristic visits and a noticeable rise in related revenue generation based on the rebranding of Pakistan as a touristic destination across the world facilitated by the usage of social media. Indeed, this study expands on the relationship between social media usage and travelers' decision-making processes, generating important insights for practitioners and academics in the tourism industry.

2. Literature review and theoretical framework

2.1 Technology acceptance model (TAM)

The TAM, based upon the social psychology theories and proposed by Davis *et al.* (1989) is considered to be a valuable model for gauging the adoption process of a new technology by its potential users. The aim of TAM was to provide an understanding of the factors behind technology acceptance in general and to explain users' behavioral intention across a broad spectrum of end-user computing technologies (Davis *et al.*, 1989). TAM was one of the most influential extensions of Theory of Reasoned Action proposed by Ajzen and Fishbein (1980). Since the advent of TAM, a number of scholars have extended the model to study users' adoption across a wide range of information technologies, including e-mail, word processors, spreadsheets, graphical software and voicemail (Go *et al.*, 2020; Goh and Wen, 2020; Venkatesh and Davis, 2000).

TAM is intended to forecast and explain the usage of a technology by considering the two constructs, (1) PU and (2) perceived ease of use (PEoU), as the primary determinants of technology adoption (Davis *et al.*, 1989). In its pure form, the model explains the concept of PU as the degree to which a user believes that, through the adoption of a certain technology, his or her job performance will be enhanced. Likewise, the concept of PEoU is defined as the degree to which a user thinks that adoption of a certain technology is hassle free and easy (Davis *et al.*, 1989). The majority of the studies that employed this model have depicted PU as the key determinant of new technology adoption, while PEoU is considered less important over periods of sustained usage (Venkatesh *et al.*, 2003).

2.2 TAM and online travel platforms

2.2.1 Online travel platforms. This study aims to utilize TAM to understand users' acceptance and usage of online travel platforms and their subsequent impact on tourists' behavior. Online travel platforms are online communities in which people share their collective beliefs, experiences and impressions with regard to a certain travel destination (Hou *et al.*, 2019). These platforms include travel blogs, social networks, media-sharing portals, bookmarking sites and a variety of other participant platforms (Xiang and Gretzel, 2010). Such platforms, ICT development (Korak and

Shivendra, 2020) and websites, are driven by user-generated content and allow users to share photos and videos, discuss experiences and provide recommendations (Leung *et al.*, 2013).

These accounts are of great importance as studies indicate that the firsthand shared information about tourists' experiences can vary greatly from the official tourism advertisements used to promote a country across the traditional marketing channels (Al Rawadieh *et al.*, 2018). Studies indicate that consumers are much more likely to trust these accounts and platforms; hence, online travel platforms appear to be gradually replacing traditional travel advertisements and agents (Kim and Park, 2017). Indeed, studies indicate that tourists use social media and online platforms to collect what they deem to be reliable information prior to finalizing their bookings and travel itineraries in order to lower the perceived risks of traveling (Leung *et al.*, 2013). In addition, the popularity of these websites can be attributed to the fact that they allow users to obtain customized information that target their personal likes, needs and expectations (Muñoz-Levia *et al.*, 2012). Nonetheless, the authors argue that user acceptance of these online travel platforms is also subject to a number of variables: (1) compatibility, (2) enjoyment, (3) e-trust and (4) expertise.

2.2.2 Compatibility and online travel platforms. Compatibility is defined as the degree to which a new technology is in line with the potential users' existing values, past experiences and current needs (Sonnenwald *et al.*, 2001). It is deemed to be a significant determinant of innovation adoption and new technology acceptance (Moore and Benbasat, 1991). This is due to the fact that a consumer who believes that a certain technology is compatible with his/her needs is more likely to embrace it (Makanyeza, 2017). Indeed, compatibility aligns one's wants with the technology's offerings, thus enabling a consumer to cognitively highlight the perceived benefits of the given technology. Similarly, online travel platforms allow users to interact with like-minded travelers who share similar values, which in turn breeds a sense of compatibility and facilitates open communication (Kamboj and Rahman, 2017). This enhances a user's perception of such platforms' overall usefulness and ease of use (Shaltoni, 2017). Accordingly, the researchers hypothesize:

H1a. Compatibility has a significant positive effect on PU of online travel platforms.

H1b. Compatibility has a significant positive effect on perceived ease of online travel platforms.

2.2.3 Enjoyment and online travel platforms. Enjoyment is one of the most important factors that entice users to try a new technology (Davis *et al.*, 1989). It is defined as a positive source of internal hedonic motivation that encourages an individual to continue a given behavior (Kim and Han, 2011). In fact, studies have indicated that hedonic factors such as enjoyment are significant determinants of consumer attitudes and intentions, especially in relation to technology (Wang, 2018). Research also indicates that sharing experiences and discussions online tends to generate feelings of enjoyment and happiness among users as they allow for active social interactions in an entertaining setting (Di Pietro and Pantano, 2013). Accordingly, the positive emotions derived from the use of such platforms will in turn make a consumer more likely to utilize them as he/she will perceive them to be useful and worthwhile (Gao and Bai, 2014). Therefore, the researchers postulate the following:

H2a. Enjoyment has a significant positive effect on PU of online travel platforms.

H2b. Enjoyment has a significant positive effect on PEoU of online travel platforms.

2.3 E-trust and online travel platforms

E-trust is an individual's conviction that an online platform will meet his/her expectations, and it is considered to be a significant predeterminant of e-satisfaction and e-loyalty (Li *et al.*, 2015). In fact, e-trust has been shown to be a critical factor in online interactions due to the higher uncertainty caused by unique features of online platforms such as the lack of face-to-face communication and intangibility (Pavlou, 2003). Nevertheless, studies also indicate that tourists tend to display high

levels of trust with regard to the advice of individuals on online travel platforms, as they do not have ulterior motives the way sales staff or regular travel agents do (Kamis and Frank, 2014). Likewise, the mutual understanding between the various users of online platforms and their shared interests generates a feeling of belongingness and empathy that in turn facilitates e-trust (Lidija, 2018). This consequently highlights the PU of such platforms as they offer great benefit to the user. In accordance, the researchers propose the following:

H3a. E-trust has a significant positive effect on PU of online travel platforms.

H3b. E-trust has a significant positive effect on PEoU of online travel platforms.

2.4 Expertise and online travel platforms

Expertise is the degree to which a user of a system feels he/she is competent to perform various activities related to the system and is based upon the level of knowledge and practical experience a user holds (Hovland *et al.*, 1953). In online contexts, Sussman and Siegal (2003) have outlined a positive significant relationship between expertise and usefulness. This is due to the fact that user expertise enables the consumer to feel more confident with his/her skills using a given platform, making him/her more willing to utilize such sites and partake in online discussions (Zhu *et al.*, 2014). A consumer with high levels of user expertise is also more likely to perceive the relative advantages and usefulness of the said platform (Li *et al.*, 2011). Consequently, the researchers postulate the following:

H4a. Expertise has a positive significant effect on PU of online travel platforms.

H4b. Expertise has a positive significant effect on PEoU of online travel platforms.

2.5 Perceived usefulness and perceived ease of use

According to Davis *et al.* (1989), PU relates to the degree to which someone thinks that using a certain system will increase his/her performance. In the context of this study, PU is defined as the degree to which a user believes that using a certain online travel platform will increase his/her performance in tour planning. Accordingly, this increases a consumer's satisfaction level and thus makes him/her more likely to intend to use these technologies (Gao and Bai, 2014). Therefore, the researchers hypothesize the following:

H5a. PU has a significantly positive effect on behavioral intention with regard to online travel platforms.

PEoU is defined as the degree to which someone believes a technology's usage requires little to no effort (Davis *et al.*, 1989). It indicates the level of cognitive and physical effort that an individual perceives he/she must exert to utilize online travel platforms. The same is deemed to be a positive determinant of behavioral intention, as users are more likely to use a platform that they perceive to be effort free and easy to use (Gao and Bai, 2014). Accordingly, the researcher postulates the following:

H5b. PEoU has a significantly positive effect on behavioral intention with regard to online travel platforms.

PEoU has also been found to have a substantial impact on PU, as a consumer tends to have a favorable perception of a platform's benefits if he/she believes the platform to be easy to use (Jeon and Jeong, 2017). Studies show that users tend to favor systems and platforms that are easy to use, thus enhancing the PU and advantage of such portals (Tripathi, 2018). Hence, the researcher proposes the following:

H5c. PEoU has a significant positive effect on PU of online travel platforms.

2.6 Conceptual framework

The current study proposes a model that builds upon and extends the TAM assessing the impact of the ensuing four variables: (1) compatibility, (2) enjoyment, (3) e-trust and (4) expertise on each of the (1) PU and (2) PEoU of online travel platforms. The study also looks into the individual relationship of PU and PEoU each on consumer behavioral intention. The current paper also examines the relationship between the PU and PEoU of online travel portals. Figure 1 presents a visual summary of the proposed conceptual framework.

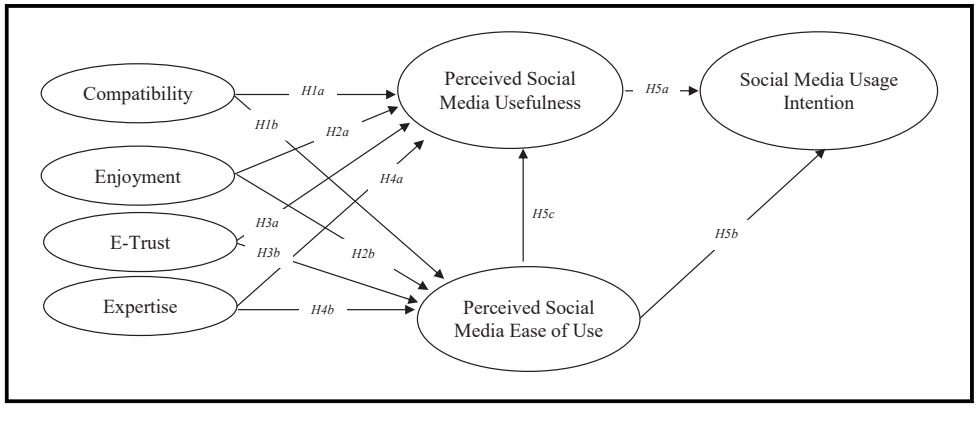
3. Methodology

To test the proposed hypotheses and identify the nature of the relationships between the variables presented in the aforementioned conceptual framework, a survey was utilized to collect empirical data. The unit of analysis in the study is the individual traveler who utilized the internet to perform a travel information search; in other words, the user of various online travel platforms. The sample of individual travelers was gathered by contacting a number of different tour operators in both Islamabad and Rawalpindi – two of the largest cities in Pakistan – both in person and through online communication. These operators were identified through an online search for "tour operators in Pakistan". Although there was no specific ranking for private tour operators provided by the government, tour operators were selected on the basis of their number of social network followers. Only tour operators that approved and certified by International Air Transport Association (IATA) and that count more than 20K followers were eligible for consideration. Accordingly, the top five tour operators and travel agencies that met these preset selection criteria were approached. The operators were requested to provide details regarding individual travelers who utilize online travel platforms and more specifically Facebook prior to their bookings. The survey was sent to the participants by the tour operators chosen for this study who selected the sample based on a snowball sampling procedure. These travelers were then contacted; and following a snowballing sampling technique, they were asked to recommend other Pakistani users of the same platform who would be willing to take part in the survey. Based on the snowballing sampling technique, the sample size in such studies can typically not be estimated ahead of the data collection stage. Based on the 384 sample size figure suggested by Sekaran (2006), and the minimum sample size recommended by Hair *et al.* (2010), the questionnaire was distributed both online and manually to reach a final sample size of 450 identified travelers. SPSS 24 and AMOS were used for data analysis.

3.1 Measures

The questionnaire consisted of two main sections. The first section comprised a series of demographic questions asking respondents to provide details related to their gender, age,

Figure 1 Proposed conceptual framework



education level and marital status. This section also included a question eliciting a yes or no response regarding whether the individuals utilize online travel platforms; if individuals answered "no", the survey was automatically removed from consideration. This particular question eliciting a yes or no response regarding whether the individuals utilize online travel platforms was added to reconfirm that the preselection criteria of their usage of the online platform was met. The second section incorporated seven sets of validated questions/scales adapted from the existing literature to assess each of the variables under study in the current manuscript, namely: (1) compatibility, (2) enjoyment, (3) e-trust, (4) expertise, (5) PU, (6) PEoU and (7) behavioral intention. All the questions were based on five-point Likert scale (1 = strongly disagree, 5 = strongly agree). The scales adopted were all extracted from the literature and adapted for the context of this study.

The first question consisted of a four-item scale adapted from Moore and Benbasat (1991) to gauge user compatibility. The scale evaluated whether the respondent believed online travel platforms to be compatible with his/her tour planning and current conditions.

The next question assessed user enjoyment based on a three-item scale adapted from the original Davis *et al.* (1992) scale. The scale was used to evaluate whether respondents considered the use of social media for tour planning is (1) enjoyable, (2) pleasant and (3) fun.

Third, a five-item scale questioned users on their levels of e-trust. This scale was based on an original scale developed by Grazioli and Jarvenpaa (2000) to measure the respondents' beliefs that online travel platforms are capable, dependable, caring, fulfilling and trustworthy.

This was followed by a five-item scale adapted from Ohanian (1990) that gauges user expertise. This scale examined users' expertise, experience, knowledge, qualifications and skills with using online travel platforms for tour planning.

The subsequent question measures user PU and consists of a four-item scale developed from an original scale developed by Davis *et al.* (1989). This scale examined whether respondents feel that online travel platforms improve their tour planning performance, productivity, effectiveness and overall usefulness.

This was followed by a four-item scale used to measure PEoU tailored from an original scale developed by Davis *et al.* (1989). This scale measured the extent to which the respondent finds online tour platforms easy to use and understand.

The final question within the questionnaire consists of a three-item scale based upon the scale developed by Agarwal and Karahanna (2000) to measure behavioral intention. This scale assessed users' willingness to use online travel platforms for tour planning in the future.

3.2 Sample profiling

A total of 450 surveys were distributed, of which 414 were completed and received back. Of these, 399 surveys were deemed fit for analysis due to missing values. The summary of the sample profiling is presented in Table 1.

4. Analysis

4.1 Constructs validation

The constructs at the base of the survey instrument were all based on multi-item scales. Table 2 summarizes the scale items for each construct, the mean, standard deviation and Cronbach's α tests to analyze the scales' internal consistency. All the construct-related scales were found to be strongly reliable as their Cronbach's alpha, credited for being a conservative estimate of reliability, was above the 0.7 recommended benchmark (Kamata *et al.*, 2003).

This was followed by a principal component analysis (PCA), performed to check any cross loading among items and their loading values. The purification of the initial items was carried out with factor

Table 1 Summary of the sample profiling

		Frequency	*Percentage*
Gender	Male	281	70.4
	Female	118	29.6
Age (in years)	15–20 years	62	15.5
	21–30 years	179	44.9
	31–50 years	153	38.3
	50 + years	5	1.2
Education	Undergraduate	150	37.6
	Master degree	150	37.6
	Doctoral degree	99	24.8
Marital status	Single	150	37.5
	Married	249	62.5

Table 2 General statistics and reliability analysis

Items	*Mean*	*Std. deviation*
Compatibility (alpha = 0.850): Using social media . . .		
C1: Is compatible with all aspects of my tour planning	3.879	1.01
C2: Is completely compatible with my current situation/circumstances	3.924	0.987
C3: Fits well with the way I like to plan my tours	3.867	0.969
C4: Fits into my style of tour planning	3.962	1.01
Enjoyment (alpha = 0.851)		
E1: I find social media enjoyable for tour planning	3.959	0.858
E2: It's pleasant to use social media for tour planning	3.907	0.976
E3: It's fun using social media for tour planning	4.07	0.905
e-Trust (alpha = 0.831): Social media platforms		
T1: Are capable for tour planning	3.964	1.006
T2: Keep their promises	3.827	1.094
T3: Care about its users	3.308	0.996
T4: Fulfill their jobs	3.944	0.993
T5: Are trustworthy	4.122	1.021
Expertise (alpha = 0.854)		
EX1: I am expert in using social media for tour planning	3.812	0.875
EX2: I am experienced in using social media for tour planning	3.799	0.935
EX3: I am knowledgeable in using social media for tour planning	4.04	0.959
EX4: I am qualified in using social media for tour planning	3.827	1.066
EX5: I am skilled in using social media for tour planning	3.928	1.012
Behavioral trust (alpha = 0.834)		
BI1: I will use these platforms for tour planning frequently in the future	4.107	0.883
BI2: I intend to use social media platforms for tour planning	4.218	0.948
BI3: I will use social media platforms for tour planning for a long time	3.997	0.928
Perceived usefulness (alpha = 0.846)		
PU1: Using the social media improves my performance of tour planning	4.115	0.734
PU2: Using the social media increases my productivity of tour planning	4.157	0.758
PU3: Using the social media enhances my effectiveness tour planning	4.125	0.912
PU4: I find social media useful for tour planning	4.245	0.839
Perceived ease of use (alpha = 0.849)		
PE1: Learning to use social media for tour planning is easy for me	3.987	0.787
PE2: I find it easy to get the required information using social media for tour planning	3.969	0.931
PE3: My interaction with social media is clear and understandable	3.995	1.002
PE4: I find social media easy to use for tour planning	4.165	0.939

analysis using PCA in SPSS. Two tests were performed to indicate the sampling adequacy and hence the suitability of the collected data for structure detection. Indeed, the Kaiser–Mayer–Olkin (KMO) and Bartlett's test of Sphericity, measures of sampling adequacy, were utilized to check the appropriateness of factor analysis to explore the data. KMO indicates the proportion of variance in the studied constructs that may be instigated by underlying factors; therefore, high KMO values (close to 1) generally suggest that a factor analysis may be useful with the data at hand. The approximate of chi-square of 6,130, with 378 degrees of freedom, was significant at 0.05 level of significance ($p = 0.000$). The obtained KMO statistic of 0.866, confirmed that the data were suitable for factor analysis application (Rauniar *et al.*, 2014). Principal component was deemed suitable for the data.

The cumulative variance explained by the factor analysis was 69% (see Table 3). Hair *et al.* (2010) suggest that a factor loading, which measures the relationship between an item and its core construct, greater than 0.40 is considered as fairly acceptable. Table 4 shows that all the items loaded above this cutoff point, and hence that the items of each of the seven constructs loaded homogeneously in their respective factor, with no cross loading among them.

Confirmatory factor analysis (CFA) was conducted through AMOS to examine the validity and unidimensionality of all construct-related scales. A CFA model was estimated to establish whether the items adequately measure the constructs to which they are related. Structural equation modeling (SEM) was performed to perform the analyses, verify the model fit and test all the proposed hypotheses. Indeed, following Gerbing and Anderson's (1988) guidelines for SEM testing, the measurement model was first checked, followed by a complete structural model of Figure 1. The data were hence first tested for validity through AMOS, and the measurement model showed good fit indices, with *CMIN/df = 2.633*, *GFI = 0.868*, *AGFI = 0.836*, *CFI = 0.910*, and *RMSEA = 0.064.*

4.2 Model estimation

All the hypotheses tested were statistically significant and statistically supported by the data. Based on the model estimation (see Figure 2 for the estimated standardized path coefficients), the findings showed that all the relationships were significant. Various criteria, such as CMIN/df, goodness of fit index (GFI), adjusted goodness of fit index (AGFI), comparative fit index (CFI) and the root mean square error of approximation (RMSEA) were determined to assess the fit of the model.

The CMIN/df (indicating the minimum discrepancy divided by its degrees of freedom) obtained was 3.233, and while the range for acceptance of CMIN/df varies across researches, a value of less than 5 is considered to reflect a fair fit between the hypothetical model and sample data (Schumacker and Lomax, 2004). Moreover, Hoyle (1995) indicates that a GFI value of less than 0.90 is deemed acceptable as it reflects a high degree to which the reproduced correlation matrix based on the proposed model accounts for the original sample correlation matrix. This allowed the

Table 3 Total variance explained

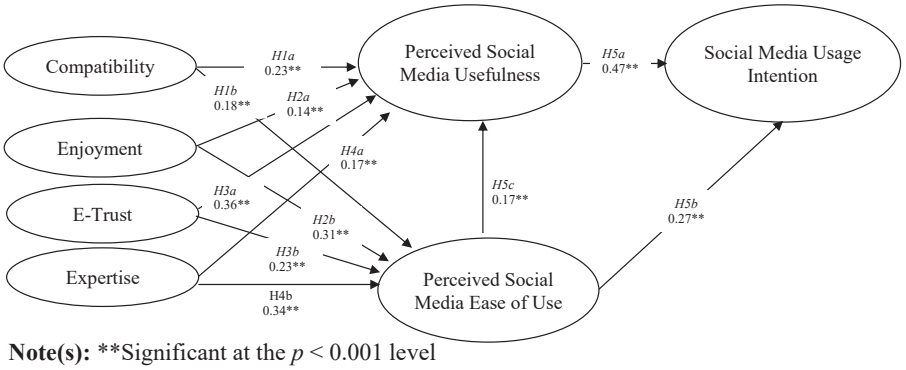
	Initial eigenvalues			*Extraction sums of squared loadings*		
Component	*Total*	*% of variance*	*Cumulative%*	*Total*	*% of variance*	*Cumulative %*
1	9.580	34.214	34.214	9.580	34.214	34.214
2	2.201	7.862	42.076	2.201	7.862	42.076
3	1.934	6.907	48.983	1.934	6.907	48.983
4	1.830	6.537	55.520	1.830	6.537	55.520
5	1.402	5.007	60.526	1.402	5.007	60.526
6	1.257	4.490	65.017	1.257	4.490	65.017
7	1.100	3.927	68.944	1.100	3.927	68.944
8	0.908	3.243	72.187			

Note(s): *Extraction method*: Principal component analysis

Table 4 Rotated component matrix

	Component					
	1	*2*	*3*	*4*	*5*	*6*	*7*
C1			0.726				
C2			0.824				
C3			0.840				
C4			0.769				
E1						0.815	
E2						0.798	
E3						0.858	
T1		0.759					
T2		0.646					
T3		0.628					
T4		0.794					
T5		0.753					
EX1	0.745						
EX2	0.707						
EX3	0.788						
EX4	0.787						
EX5	0.727						
BI1							0.743
BI2							0.771
BI3							0.766
PU1					0.712		
PU2					0.628		
PU3					0.751		
PU4					0.741		
PE1				0.673			
PE2				0.743			
PE3				0.801			
PE4				0.747			

Figure 2 Model estimation



obtained GFI value of 0.830 to reflect an acceptable fit. Also, the CFI value obtained (0.873) was considered to be acceptable as it was in line with Hair *et al.* (2010)'s recommended value of a CFI equal or above 0.90. Last but not least, the RMSEA measure reflected a reasonable fit (0.075) based on Byrne (2008) suggestion that an RMSEA between 0.05 and 0.08 is considered as fair, typically representing a reasonable error of approximation for this absolute measure of fit (Browne and Cudeck, 1993).

5. Results

Overall, the resulting indices suggested a fair model-to-data fit in this study. The results from the structural model in Figure 2 and Table 5 show that all the hypotheses were significant and statistically supported by the data. According to the first hypothesis, there is a positive relationship between compatibility and PU and between compatibility and PEoU. These relationships were found to be significant at $p < 0.001$, with standardized regression estimates of 0.25 and 0.179, respectively. The first part of the second hypothesis suggested a relationship between enjoyment and PU. This relationship was found to be significant at $p < 0.005$ with an estimate of 0.138. The result of the second part of second hypothesis, which proposed a relationship between enjoyment and PEoU, showed a highly significant relationship at $p < 0.001$ with an estimate of 0.308.

E-trust relationships were examined with PU and perceive ease of use in the first and second parts of the third hypothesis, respectively. According to the results, the relationships were found to be significant at $p < 0.001$, with standardized regression estimates of 0.360 and 0.226, respectively.

The first and second parts of the fourth hypothesis tested the relationships of expertise with PU and PEoU. The results, again, showed a significant relationship at $p < 0.001$ in both the cases, with standardized regression estimates of 0.166 and 0.342.

The fifth hypothesis presented three parts. The first and the second parts examined the relationships of PU and PEoU with behavioral intentions, respectively, whereas the third part tested the relationship of PEoU on PU. The results of the first and second part of the fifth hypothesis showed a significant relationship at $p < 0.001$, with standardized regression estimates of 0.466 and 0.268, respectively. However, the relationship of PEoU and PU, as proposed in the third part of the fifth hypothesis, was found to be significant at $p = 0.005$, with an estimate of 0.168.

6. Discussion

The number of social media subscribers has increased at an unprecedented rate in the past few years (Rauniar *et al.*, 2014). This development has motivated practitioners across all sectors to establish an effective social media presence. Like everywhere else in the world, this phenomenon is also vividly visible in Pakistan, as evident from the ever-increasing numbers of social media users and business units investing in an online presence. Of all of the industries, driven by this huge upsurge in the usage of social media in a number of ways, the current study aimed to understand the factors that lead an individual to use social media and online platforms for tourism activities. Using an extended version of TAM, this study has outlined some variables that drive people on social media to engage in tourism activities.

The current empirical results make theoretical contributions in the domain of social media acceptance and usage in the tourism industry. First, a number of works of research have suggested and emphasized the extension of past theories in different ways and contexts (Kaushik

Table 5 Standard estimation of the main model

No	*Hypothesis*	*Estimate*	*S.E*	P
H1a	Compatibility → Perceived usefulness	0.234	0.046	0.000
H1b	Compatibility → Perceived ease of use	0.179	0.051	0.000
H2a	Enjoyment → Perceived usefulness	0.138	0.046	0.003
H2b	Enjoyment → Perceived ease of use	0.308	0.050	0.000
H3a	E-trust → Perceived usefulness	0.360	0.048	0.000
H3b	E-trust → Perceived ease of use	0.226	0.049	0.000
H4a	Expertise → Perceived usefulness	0.166	0.046	0.000
H4b	Expertise → Perceived ease of use	0.342	0.050	0.000
H5a	Perceived usefulness → Behavioral intentions	0.466	0.069	0.000
H5b	Perceived ease of use → Behavioral intentions	0.268	0.060	0.000
H5c	Perceived ease of use → Perceived usefulness	0.168	0.060	0.005

et al., 2015). Accordingly, this study presents a new examination of TAM in the context of social media adoption in the tourism industry, using scales extracted from previous literature. The results from the current study can assist in delineating the important dimensions of the revised TAM for social media in the tourism industry. These results have clear implications for practitioners in the hospitality industry in terms of communication and marketing strategies on social media platforms. From a simple posting on social media site to its instructional design and development, the results of the current study can indeed help managers of the hospitality industry cater to tourists in unprecedented manners.

Second, the outcomes from the structural model of this study reconfirmed the relationships between the original TAM constructs, portraying significant relationships between each of PU and PEoU with behavioral intention as well as between PEoU and PU. The managers of social media sites in the tourism industry should thus focus on how to create value for social media and online platform users to increase their PU. They should also pay attention on creating easy-to-use platforms that appeal to users. This in turn will increase individuals' intention to use such online platforms in planning their future trips and travels. Indeed, enhancing PU for a targeted group of social media users would mean that the given value caters to the unique need of the user and increases his/her loyalty. Similarly, the ease of use of a social media platform is an important factor that affects both PU and behavioral intentions. User-friendly designs can enhance ease of use of a social media platform relating to the tourism industry for the user, thus driving more and more members of the target audience to it.

Third, the revised TAM in the current research work indicates the importance of four variables that, according to the results, contribute to PU and PEoU of a social media platform related to tourism industry: (1) compatibility, (2) enjoyment, (3) e-trust and (4) expertise.

H_1 indicates the positive relationship between compatibility and PU and PEoU. These results are in line with the work of other researchers on compatibility and TAM (Moore and Benbasat, 1991). This can be attributed to the fact that a user is more likely to harbor positive attitudes toward platforms that are congruent with his/her wants and needs (Wang *et al.*, 2017). As a consequence, this will make a user feel more comfortable with the given platform, perceiving it to be of greater benefit to him/her. Indeed, this suggests that tourism and hospitality practitioners must ensure that the designers of their social media platforms make a conscious effort to align with their prospective users' past, present and future values.

The second variable examined as a determinant of PU and PEoU was the factor of enjoyment. The results indicated that enjoyment was a significant factor in determining PU and PEoU of a social media platform in the hospitality industry. These results are in accordance with the previous literature (Venkatesh *et al.*, 2002; Venkatesh and Davis, 2000). In fact, enjoyment stimulates the hedonic pleasure of using a platform, thus overpowering any negative feelings an individual might have when using a platform and enhancing positive perceptions (Scholl-Grissemann and Schnurr, 2016). Therefore, attracting users to a social media platform related to the tourism industry will definitely need the factor of enjoyment in the usage of those platforms. This fact is also evident in the entertainment-seeking behavior of social media users who engage more in social media activities that are entertaining and enjoyable.

E-trust was the third investigated variable. Trust is an important factor in the business world, but when it comes to online context, the factor of e-trust becomes even more important because the user can never have a tangible experience with the product or service he is interacting with online. H_3 examined the impact of e-trust on PU and PEoU, and the results were found to be significant, thus revalidating the work of Pavlou (2003). This indicates that social media managers within the hospitality industry must ensure that they honor every single word that they communicate to their audience on a social media platform, as such care will cement user–provider trust.

The fourth and last variable examined in the context of this study was expertise. Like the three other variables under consideration, expertise portrayed a significant relationship with PU and PEoU. These results were in line with the previous literature (Sussman and Siegal, 2003). An easy-to-use

interface, with which a user feels he/she is competent enough to perform his/her desired functions, is more likely to boost user confidence, thus increasing usage intentions. Therefore, social media practitioners must focus on developing a user-friendly interface, as this is of vital importance for attracting and maintaining users.

Those in the tourism industry that consider online portals as serious marketing hubs and employed them in the best of ways have seen their business grow beyond others. The 1888 hotel in Sydney, Australia, is a huge success story of the hospitality industry on social media. Opened in early 2013, it is known as the "world's first Instagram hotel". The 90-room boutique hotel, eatery, and bar has built its marketing strategy on the photo-sharing platform. To portray itself as an "Instragrammable" business, the hotel has set up a selfie space – a space in which the guests can take selfies – in the lobby. It also includes a Pyro-Instawalk map that takes its users on a 45-min tour around the hotel and Darling Harbour for taking photos. As part of its marketing strategy, the hotel also offers a free night's stay to guests with over 10,000 followers. To entice its guests to share photos, the hotel also offers a free night to guests who share the best photo with the hashtag #1888hotel on Instagram. 1888 Hotel's Instagram account is a perfect example of successfully employing social media and online platforms in a tourism business for the growth and development of a business (Berthon *et al.*, 2012). Another example is that of the Gainey Suites Hotel in Scottsdale, which was labeled as a social media hotel, as it attracted hundreds of room occupants through its social media presence. Specifically, it generated a strong Twitter following, along with videos shared through YouTube featuring the hotel and its amenities. The hotel also strongly utilized Flickr to post photos that highlight the attractiveness of the location and surroundings. Promotions and information regarding special events at the hotel were also shared actively through Facebook. As a result, this hotel has received top rankings on Tripadvisor.com (Berthon *et al.*, 2012).

The tourism sector in Pakistan could employ such an idea to develop the rural mountain region and tourism in the northern areas of the country. The governmental and private tourist agencies should pay more attention to new visitors through customized and specialized tourist services. They can promote and spread positive and powerful promotional messages not only on social media but also on traditional media. The value co-creation that can result from the relationship between tour service providers and customers can lead to higher satisfaction and enhance the motivation loop with other stakeholders (tourism-allied businesses). In order to develop a sustainable sector and uplift the state's economy, Pakistani tourism stakeholders should also support the tourist allied trades such as airlines, transportation, food and beverages, accommodation, recreation and entertainment. Tailored strategic foresight and scenario planning, as well as the overall involvement and satisfaction of all key stakeholders in the travel and tourism sector, are crucial (Postma *et al.*, 2017) in order to guarantee the long-term sustainability of this "complex adaptive system with unpredictable behavior" (Postma and Yeoman, 2021, p. 74). This could be achieved through well-designed plans tailored to attract reputable international as well local tour operators, and tourists from various socioeconomic backgrounds.

In the midst of the current pandemic scenario, the tourism sector across the world and in Pakistan in particular is looking for fresh breath to recover and prosper quickly. The Pakistani Tourism Ministry and the various other related constituents find themselves compelled to work together in order to increase public awareness of historical and natural destinations, which can ultimately affect travelers' decisions. Furthermore, travelers are more than ever concerned about fulfilling their traveling needs through informed choices and wise decision-making with the assistance of social media platforms. Hence, travelers expect to find on the various social media platforms in Pakistan accurate, relevant and convenient information to help them in their choices. Relevant information about top destinations disseminated through traditional communication media (such as local TV and radio channels, print media and nonpopular online media) will complement information diffused through effective social media campaigns to target wider segments of the tourism industry population. Despite the drastic consequences that the pandemic had on the tourism and traveling sectors, Pakistan still yearns to attract tourists from other countries, to generate related jobs, and last but not least, to pursue the projects that were slowed down by the pandemic-related

unpredictable circumstances (Moshsin, 2021). The combined usage of these different platforms can enhance an image of Pakistan to be ranked amongst the best tourist places worldwide.

7. Conclusion: implications for research and practice

This research proposed a revised TAM to increase the understanding of social media usage in the tourism industry. The results show that PU and PEoU of a social media site significantly affect behavioral intentions among users. More importantly, as per the original TAM (Davis *et al*., 1989), the study validates the relationship between the constructs of PEoU and PU in the context of social media platforms in the hospitality and tourism industry. In addition, this study has proposed and examined four additional constructs, namely (1) compatibility, (2) enjoyment, (3) e-trust and (4) expertise, to enhance the usefulness of the TAM for a better understanding of social media and online platforms' usage in the tourism industry. In sum, this study indicates that an online travel platform must be aligned with users' values, have an element of fun, be informative, suggest trustworthiness and be easy to use for customers to perceive it as valuable, user-friendly and trustworthy.

On a scholarly level, the implications of this research are significant in as much as the literature lacks tourism studies in the Pakistani context. Furthermore, the results of this study provide a basic framework for managers and policy makers alike regarding the growth and development of the tourism sector of Pakistan. Not only at the micro level but also at the macro level, the managers and handlers of the tourism industry can utilize and implement the results of this study to entice a wider audience of social media to the tourism industry. Managers of the tourism industry in Pakistan should focus on the PU and PEoU of their media platforms, which in turn will drive increased traffic to their social media platforms, and thus lead to more business activity and revenue generation. The results of this study indicate four external variables that have direct positive effect on PU and PEoU. Hence, managers should keenly monitor the performance of their most commonly used social media platforms with respect to these four core aspects and manage them accordingly for the growth of their business. Indeed, they should ensure that tourism-related platforms are compatible with the existing values of social media users. Additionally, they should embed the element of enjoyment into these various platforms to drive more members of the targeted audience to use them. Moreover, managers should make sure that they honor and uphold every single word that appears on their platforms so as to maintain e-trust. They should keep their social media platform simple and easy to use in consideration for the expertise level of its users.

Moreover, on a macrolevel, private tourist enterprises can start new ventures with tourist allied businesses through bridging the gap between the tourists and the desired destinations through social media tools and platforms. The findings of this study can also be utilized other countries, which are lagging behind in the tourism sector and looking for revenue-generation through this key economic pillar. The intensive usage of various social media platforms that accompanied the COVID-19 pandemic, as well the increased ensuing investment in various artificial intelligence tools allowing for virtual-tourist-visits, can ultimately revamp the tourism industry as a whole across the world (Ruel and Njoku, 2021). Interestingly, the latter development can allow the less-favored people the chance to benefit from "static or non-movement tourism" in order to visit places from the comfort of their own homes. Nonetheless, the pandemic has also had substantial negative effects on the tourism-allied businesses, specifically the airline and other transportation industries, food and beverage segments and the accommodation and hotels sectors. Indeed, the lack of physical interaction and engagement between people, which has been fueled by the excessive mobile phone and social media usage for the past decade, has been exacerbated by the COVID-19 worldwide social distancing regulations.

8. Limitations and future research

This study is not without limitations. First, as the survey respondents were mostly highly educated individuals from one region in Pakistan, the results must be utilized with caution. Future studies will be needed to offer greater insight and improve the generalizability of these findings. Second, this

study considered social media (while focusing on Facebook users) and online travel platforms as one single unit, whereas future studies can assess the impact of separate websites and platforms for a deeper and more accurate appreciation of each. Indeed, more narrow unit of analysis, whereby different platforms are compared against each other, could depict different results in future studies as this research tackled online travel platforms in general. Moreover, this study focused on four external variables, whereas there are many other variables in behavioral theories that can be further investigated to enhance the understanding of social media usage and impact on the tourism industry. Future studies could specifically choose particular cities to assess related variations in customer perceptions. In fact, this study was conducted solely in one region of Pakistan, namely in Islamabad and Rawalpindi; accordingly, other regions, cities and tourist destinations could be explored in further studies (e.g. northern areas of Pakistan). Furthermore, this study focused on online communication channels specifically; future studies can hence tackle other marketing communication platforms to measure the difference of impact on the tourism sector. The effect of different disruptive technologies as well as the usage of artificial intelligence in the tourism sector could also be further measured in terms of consumers' perception, acceptance and future adoption intention.

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