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MODERATING EFFECT OF TECHNOLOGY READINESS ON ADOPTION OF GEOTAGGING TECHNOLOGY AMONG SOCIAL NETWORKING SITES (SNSS) USERS FOR SMART TOURISM

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Abstract: More recently social networking sites (SNSs) users are extensively using the emerging geotagging technology for tourism motivation. The study aims to examine the relationship between determinants of geotagging technology and intention to adopt geotag technology as well as the extent to which technology readiness moderates the link between determinants of geotagging technology and intention to adopt geotag technology. Data were collected from a sample of 356 university students by using convenience sampling technique. Partial least square structural equation modelling has been used to measure the results. The empirical outcome uncovers that social influence, performance expectancy and facilitating condition are the factor that have direct impact on SNSs user's willingness to adopt geotag for smart tourism experience. The present paper enriches UTAUT model by understanding the association between two variables namely effort expectancy and performance expectancy as well as the moderating role of the technology readiness. The findings of the study will assist to SNSs service providers by understanding the moderating role of technology readiness in the relationship between determinants of geotagging technology and intention to adopt geotag technology.

Key words: Geotagging technology, SNSs, UTAUT, technology readiness, tourism

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INTRODUCTION

Though the information exchange was unidirectional in traditional internet systems, the flow of information is bidirectional in recent years (Öz, 2015). By the advent of Web 2.0 technology, social media has exploded as a modern, innovative and creative aspect of human life. Recently, the amount of people who are unceasingly using the internet has touched to 4.39 (57% of total population) billion in the world. 3.48 billion people are using social media actively that represent 79% of total internet users in the world. Around 94% active social media users use mobile phone to access different social networking sites (SNSs) that accounts for 3.26 billion people in the world (World Digital Report, 2019). Predominantly, the developing countries are experiencing significant usage of social media. The figure is 310 million for India, 34 million for Bangladesh, 47 million for Iran, and 6.2 million for Sri Lanka (World Digital Survey Report, 2019). This clearly means that in the developing countries such as Bangladesh, there are mere possibilities to exploit and implement the geotagging service among social network users (SNSs). In addition, social media providers offer a range of options attributable to a number of social media services such as text messenger, location-based services (LBS), social media games and social media payments. The four categories for these services are connectivity, information, entertainment and transactions. Location providers can also obtain a user site and push the related resources and information to the user depending on the customer's position across different social media services (Zhou, 2017). It will lead to better customer experience and encourage the plan to conduct (Zhou, 2013). LBS means "any operation that recognizes an entity's geography" (Junglas and Watson, 2008). A survey from Pew revealed that nearly 74% of matured mobile owners have ever utilized LBS for information such as getting road directions, using maps, and other related data (Pew Research Center, 2019).

Users of the technologies like social networking sites, location-based tracking and GPS (global positioning system) are commonly used to add or identify geolocation data with images and tags (Luo et al., 2011). More common tagging sites for location information for any user are Facebook, Instagram which are associated with their social network understanding of location (Haffner et al., 2018). Facebook, as well as a venue for improving tourist experience by presentation and self-identity, has been recognized as the biggest and fastest site for posting and sharing pictures (McLaughlin and Vitak, 2012; Rainie et al., 2012). Moreover, location becomes a commodity of its own in geo-surveillance (Rzeszewski and Luczys, 2018). In addition, there are currently no experiments in nature to examine the moderating impact of traveler technology readiness to use technology on their geographical experience. The aim of this paper is to examine the moderating impact of technology readiness and to store the research gap by using the well-known UTAUT model for embracing new technology. In this way, the research pursued two goals: to study the moderating impact of technology readiness on different connections between various constructs of a well-known theoretical model, namely UTUAT, and to define the effect of different UTUAT factors on the application of geotagging technologies among users of social networking sites. The following are the distinct parts of this study: the next section discusses literature followed by creation of hypotheses. This is accompanied by the data interpretation and discussion section. Afterward, this study offers implications for future scholars and practitioner for ongoing expansion and research of geotags. Finally, the paper ends with conclusions.

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LITERATURE REVIEW

Reviews on geotagging in social networking sites use

The websites for social networking allow users to share different content created by users, such as photography, video, email and other electronic term, these generates positive word-of-mouth. Geotagging is a service which allows the users to publish physical locations and objects that are connected through a digital process (Amitay et al., 2004; Erickson, 2009). Geographical identification metadata information (e.g. images, photos, rich site description (RSS) data, text messages, quick response (QR) codes, etc.) are incorporated into social media data by geotagging strategies (Chong et al., 2018). By the use of geo-tagging technologies, individuals will upload images to SNSs, the location of the tag and the destination of the photo to notify peer groups (Kurashima et al., 2013). Information plays a vital role to minimize the risk significantly and to make decision effectively (Lewis and Chambers, 1999). SNSs would greatly improve the data discovery expertise that help users to conduct the searching process more rapidly and efficiently, optimize and distribute the appropriate shots (Chung et al., 2017). Additionally, geotag usefulness is recognized in order to track global occurrences (Rattenbury et al., 2007) or spatial visualization of tags (Crandall et al., 2009). With the increased use of GPS monitoring systems, users can identify the position and events similar to the user's nearby locations (Zheng et al., 2010). Using SNSs, in general Facebook, users can monitor, personalize, upload and arrange their digital images using geo-tagging technologies (Hampton et al., 2012). It also enhances the exposure of posted images and provides opportunities for further distribution of visual content (Besmer and Lipford, 2010). To create a bridge between this gap, the current research selected users of SNSs using geo-tagging technologies as the target group. Moreover, the Internet has been the most powerful marketing tool for tourism businesses, as tourism has traditionally been considered the leading online retail market (Akehurst, 2009). More recently, social media offers effective and immersive tourism advertising and networking facilities (Zeng and Gerritsen, 2014). Chin et al., (2020) explored that perceived value has appropriately moderated the relationship of destination attractiveness resources and destination images. As a result, the sharing of image and location data using geo-tagging schemes has resulted in new experiences for users of social networking sites. Due to the generation of vast user-generated content (UGC) by geo-tagging technology and its close association with the tourism industry, it is clear that the adoption of geo-tagging technology for tourism experience is being investigated, in particular among users of social networking sites.

This topic is being studied in many information systems and spatial studies owing to emerging technologies. Several researcher from a range of backgrounds focused on spatial photography and the ability to inspire student study in the post-field area (Welsh et al., 2012), population and voluntary location-based information in social media (Haffner et al., 2018), position information in daily life (Rzeszewski and Luczys, 2018), the role of geographical information attainment (Tussyadiah and Zach, 2012). In comparison to other studies , the authors found some studies that investigated the effect of apparent enjoyment, the way users perceive that how easily these technologies can be used, readiness of travelers to incorporate geotagging technologies using the technology adoption model (TAM) (Allam et al., 2012; Chung et al., 2017). Hasan et al. (2020) used theory of planned behavior and explored that the assertiveness, subjective standards and enthusiasm pointedly influence the traveler contentment and domestic tourist behavioral goal. Besides, Haque et al. (2020) integrated personal innovativeness of IT (PIIT) in Unified Theory of Acceptance and Use of Technology (UTAUT) to search the geotagging technology implementation among social networking sites users. They found PIIT accurately describes the personal features of social networking sites users and all constructs except effort expectancy of UTAUT have significant influence on the adoption of geotagging technology among social networking sites users. Haque and Khan (2020) unveiled that technology readiness is an influential element of UTAUT model and the use of geo-tagging technologies has an important effect on users of social networking sites. In comparison, however, the user intention of the SNS users is specifically related to geotagging technology, to the knowledge of the authors. Based on the viewpoints of SNSs users, this broad research vacuum in assimilating the application of geotagging is filled by the current review.

Technology readiness (TR)

Parasuraman (2000) introduces and describes the conception of technological readiness. This means that, in their everyday social and economic lives, people want to use modern technology. The crucial importance of fashion technology is perceived in business life. Therefore, the technical availability of travelers needs to be assessed using geographic identification techniques. Geotagging technologies enhance the traveler's experience and embrace the vision of travelers for use on different journeys. The importance of technical preparation has become a fundamental phenomenon in the use of innovation and has been studied in several studies. For this reason, Liljander et al. (2006) has confirmed the beneficial effects of the technical preparation using the latest aviation technology. In addition, Kim et al. (2012) examined the importance of technology readiness in hospitality and tourism environments, where customers can be separated from services and services typically depend on service providers. Although some studies have focused on user technology readiness in different contexts, Chen and Li (2010), Mady (2011) and Chung et al. (2017) highlight the availability of travelers, in order to regulate the substantial impact of technological readiness on geotagging conditions of acceptance. This study introduces the technology readiness as a moderator in the UTUAT framework and aims to explore the significant moderation effect of TR in the acceptance of geotagging technology among users of social networking sites.

Research framework and hypotheses

When travelers enjoy the novel technology and consider it useful for their travel purpose, they will adopt the new technology to enhance their smart tourism experience. Earlier researchers suggested different conceptual models to review relevant to IT/ARE adoption, as well as the Technology Acceptance Model (Davis et al., 1989), IS success Model (DeLone and McLean, 1992), Theory of planned behaviour (Ajzen, 1991), Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh et al., 2003). Among these, UTAUT devised by Venkatesh et al (2003) acknowledged being one amongst the foremost effective model to explain the perceptions of consumers towards the introduction of emerging technologies (Qingfei et al., 2008). In view of UTAUT's robustness, this paper followed it as an overarching philosophical construct in order to examine and replenish the void on top of research queries. Four basic constructs are hypothesized by the theoretical model (Figure 1) developed during this research: Performance Expectancy (PE), Effort Expectancy (EE), Social Influence (SI) and Facilitating Condition (FC). In certain instances, however, only a subset of the UTAUT constructs were implemented by researchers and the possible moderating variables were overlooked (Al-Gahtani et al., 2007; Armida, 2008). Since the primary UTAUT comprises the constructs of PE, EE, SI and FC and offers a comprehensive description to predict the adoption of technology such as SNSs users, additional variables may be needed depending on the particular context of technology usage outside the four key constructs (Marchewka, 2007; Venkatesh et al., 2012; Dwivedi et al., 2017; Hoque and Sorwar., 2017).

Performance expectancy (PE), Effort expectancy and social influence (SI) to Intention to adopt geotagging technology (IAGT)

Venkatesh et al. (2003) has described that PE is the the extent to which a person feels that using the method would encourage him or her to make improvements in organizational effectiveness and work performance. Venkatesh et al. (2003) has further defined that EE is the

extent to which a person can easily use the system effectively. The social influence illustrates how a person is influenced to assess by one's own peer groups and the behavior of his or her colleagues or other leading experts of organizations. The social influence controls the way of human behavior to a great extent. A number of researchers found PE, EE and SI are prominent factors of users' behavioral intentions (BIs) in various contexts, i.e. in the implementation of technology in work settings (Venkatesh et al., 2003); adoption of health based information systems (Pai and Huang, 2011); adoption of health (Hoque and Sarwar, 2017), mobile banking adoption (Oliveira et al., 2014); and also acceptance of SNSs for sharing user generated content (UGC) (Herroero et al., 2017). In the case of the implementation of web-based training programs by workers in Jorden, Alrawashdeh et al. (2012) anticipated that EE has a critical effect on the PP. Furthermore, another study (Herrero et al., 2017) projected that Effort Efficiency has substantial influence on Performance expectancy in implementation of SNSs for sharing UGC. The following theory, then, is suggested:

H1: There is a positive impact of Performance Expectancy on the Social Networking Sites users' willingness to accept geotagging technologies.

H2: There is a positive impact of Effort Expectancy on the Social Networking Sites users' willingness to accept geotagging technologies.

H3: Effort Expectancy has a positive influence on the Performance Expectancy of SNSs users to use geotagging technologies

H4: Social Influence has a positive impact on the Social Networking Sites users' intention to adopt geotagging technology.

Facilitating conditions (FC) to Effort expectancy and Intention to adopt geotagging technology (IAGT)

The degree to which a person assumes that there is an organizational and technological framework to facilitate the use of the system is specified by facilitating conditions (FC) (Venkatesh et al., 2003). FC is the valid indicator of use behavior and has been developed by IS/IT research in a number of settings, including adoption of information resources (McKenna et al., 2013); acceptance and use of digital whiteboards (Tosuntas et al., 2015); acceptability of smartphones for health-related services (Oliveira et al., 2014); e-health adoption (Bhattacherjee and Hikmet, 2008). "FC is a direct indicator of EE in the context of e-government" (Dwivedi et al., 2017). This association is also asserted in Australian occupational therapists embracing and using ICTs (Schaper and Pervan, 2007), in Jordanian training programs which were based on the internet (Alrawashdeh et al., 2012) and in Indonesian airlines, e-services were also investigated (Urumsah et al., 2011). We also consider FC to help users quickly comprehend and discover geotagging technologies through these assertions. The hypotheses that can be developed based on this discussion are:

H5. FC has a positive effect on the SNSs users' intention to adopt geotagging technology.

H6. FC has a positive effect on the SNSs users EE of geotagging technology use.

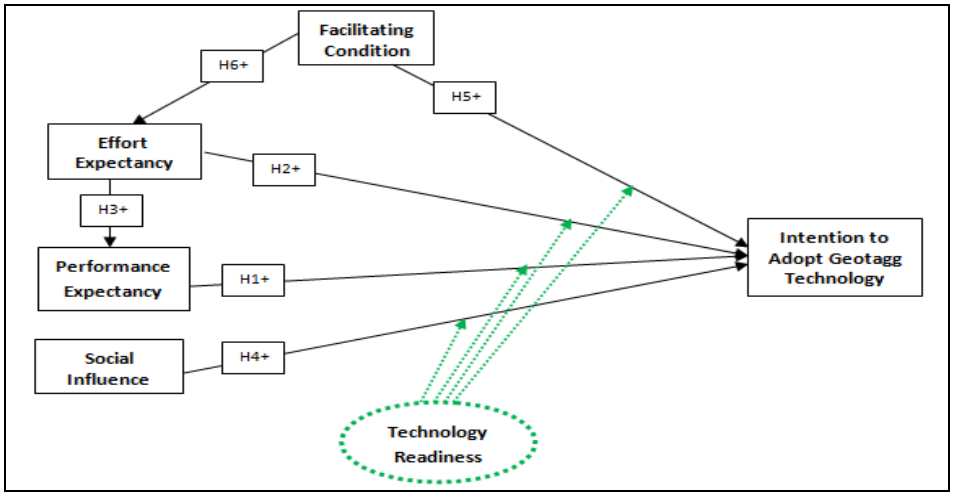

Figure 1. Research Model

The moderating influence of technology readiness

Thus consumers of technology will convey differing views about products and services dependent on technology (Dabholkar, 1996). These paradoxical viewpoints will go along with those from a technical to a technological spectrum (Mick and Fournier, 1998). The word "Technological Readiness" (TR), defined by Parasuraman (2000) as a tendency of using modern technologies to achieve home as well as work objectives. It is a general state of mind composed of multiple workers and intellectual inhibitors who collectively decide if modern technology is appropriate for use (Parasuraman, 2000). The TR model was used in many contexts such as self-service technology (Elliot and Meng, 2009); in construction sectors (Jaafar et al., 2007); in wireless technology (Chor and Kannan, 2006); in internet applications (Taylor et al., 2002). Parasuraman and Colby (2001) observed, owing to their technological preparedness, that technology-based commodity markets are broken down into five segments and that at various times each TR segment entered the industry. In the current research, TR is a key factor in that segments of technology-aided activists can be created for SNS users for tourism with the implementation of geography technology. A significant clarification of why a particular segment of SNS users assigns greater (or lesser) value to a specific function of overt turnout can be found in the values behind any TR segment. TR is a key moderator for the connection between UTAUT variables and the plan to implement geo-tagging technologies. It is proposed that in these partnerships we assume respondents with low or high TR to differ, which indicates the following hypotheses:

H7: The relationship of performance expectancy, effort expectancy, social influence and facilitating condition with intention to adopt geotagging technology exhibited in H1, H2, H4 and H5 will be moderated by Technology readiness of SNSs users for adoption of geotagging technology.

METHODOLOGY

Research setting

In this research, the target demographic for this empirical review is SNS users' especially the younger citizen of Bangladesh. Since convenience sampling provides cost efficiency, it is commonly used in research into IT systems (Eze et al., 2011). The research even employed a screening

method for convenience. A substantial part of the study is made up of the younger Bangladeshi people, who are students of various universities (Table 2). They were ideal for tasks such as knowledge seeking and gaming as well as basic communication because of their comfortable use of technology. In addition, respondents were told at all points during the analysis of their rights to revoke their participation (Hoque, 2016).

Measurement

Earlier reports involve all calculation elements in this study. In order to adapt this study to geotagging technologies in tourism context, the calculation metrics have been tailored. Scales developed by Venkatesh et al. (2003) and Herrero et al. (2017) are adopted to measure the performance expectancy and effort expectancy with three and four items respectively. Social influence and facilitating condition are measured three items each adopted from Venkatesh et al. (2003). Five things developed by Lee et al. (2012) and Parasuraman (2000) have been adapted for calculating technology readiness. The geo-tagging technology intention to adopt is assessed across three objects from Lin and Hsieh (2006) and Davis et al. (1989). Details of the measuring elements and the literature source for each constructs are given in Table 1.

Table 1. Summary of Measurement Items

Construct	Corresponding Items	Items Sources
Performance expectancy (PE)	PE1: Geotagging is incredibly useful in distributing smart tourism material in SNSs PE2: The use of geotagging facilities would increase my performance in the use of intelligent tourism SNSs. PE3: I can accomplish what is essential to me for intelligent tourism with the geotagging facility of the SNSs.	Venkatesh et al., 2003 Herrero et al., 2017
Effort expectancy (EE)	EE1: Geotagging is an easy method to report material for intelligent tourism in SNSs. EE2: Geotagging is convenient for me that can be used to publish material for intelligent tourism on SNSs. EE3: It is convenient for me to be able to use geo-tagging technologies EE4: The use of geo-tagging to report material for the smart tourist activity in SNSs is transparent and easy to understand.	Venkatesh et al., 2003 Herrero et al. (2017)
Social influence (SI)	SI1: People who affect my actions are of the view that I should use the geo-tagging service for the smart tourism experience in SNSs. SI2: People that holds importance in my life believe that I can use geotagging to smart tourist SNSs SI3: People whose views I respect choose to use geotagging services in SNSs for the intelligent tourism experience	Venkatesh et al., 2003
Facilitating conditions (FC)	FC1: I have the tools required to use geotagging technologies in SNSs for intelligent tourism experience. FC2: I have the requisite expertise to use geotagging technologies in SNSs for intelligent tourism experience. FC3: When I have trouble using geotagging for intelligent tourism experience in SNSs, I can get help from others.	Venkatesh et al., 2003
Technology Readiness (TR) Driver	TR1. In general, as it happens, I am the first to learn geotagging technology for intelligent tourism experience in my circle of friends. TR2. Without support from others for a smart tourism experience, I will typically find high-tech devices and new facilities. TR3. I notice that I have fewer issues using geotagging technologies in SNSs for smart tourism experience than other citizens. TR4. For Smart Tourism experience in SNSs, I recommend using the most advanced geotagging technology available. TR5. The technology of geotagging allows me greater freedom of mobility.	Parasuraman, 2000 Lee et al., 2012
Intention to adopt geotagging technology (IAGT)	IAGT1. During SNSs usage, I have high intentions to use geotagging service for smart tourism experience. IAGT2. I would suggest to my friend the geotagging technology to publish material on SNSs for intelligent tourism experience IAGT3. I assume that I will use the geotagging service to publish information on SNSs for smart/intelligent tourism experience.	Davis et al., 1989 Lin and Hsieh, 2006

Questionnaire design and data collection

The study used a two-part structured questionnaire. Part A includes information on the population, internet and SNSs use, while part B includes measurement elements for the various structures previously validated. The construction indicators are measured by a 7-point Likert scale, with response choices ranging from (1) 'strongly disagree' to (7) 'strongly agree.' The study confirms the recommendation (Roscoe, 1975) that the sample size in the structural equation modeling should be more than 10 times the measurements. The study therefore employed 356 sample sizes, more than ten times that of the measuring elements. The collection of data was carried out between April and May 2019. 370 of the 450 questionnaires distributed, representing an answer rate of 82.22 %, were returned. Some 14 questionnaires were excluded because of a lack of information, leading to a total of 356 usable responses.

Data analysis

Data was compiled into Smart PLS (3.0) applications and entered in Microsoft excel. A computational methodology for interpreting data and a commonly used tool for evaluating the relevance of all proposed model-specific studies with empirical data (Haque et al., 2019) is structural equation modeling (SEM). It gives comprehensive representation of multivariate regression. The relationships between latent constructions and estimation, calculated by various metrics, is typically discussed. " The path model is a large version of multiple regression model where different multiple regressions are concurrently measured." (Cohen et al., 2013).

RESULTS AND DISCUSSIONS

Demographic profile of sample

Demographics represent the male are major part of sample 60 % (215) than female 40 % (141). It exhibits the socio-economic aspect of Bangladesh where males are more active participant to survey than female. Considering the academic data of the survey, it is explored that in terms of the academic qualifications 320 (90%) attained bachelor degrees; 22 (6%) attained Higher secondary degree; 5 (1%) attained master degrees; 5 (1%) attained below higher secondary degrees, 2 (1%) attained Ph.D. and 2 (1%) attained others degree. Based on age group, 282 (79%) of them were between 20 and 30 years years old, 50 (14%) under 20 years old, 20 (6%) between 31 and forty years old, and 3 (1%) between 41 and 50 years old. As far as social networking sites (SNSs) use experience, 41 % has 1- 3 years SNSs use experience which is followed by 34% who have 4- 6 years SNSs use experience. On the other hand, 15 % have more than 7 years SNSs use experience and 10 % have less than one-year use experience. One or more SNS channels may be used by each participant and hardware in the case of SNSs and their hardware. Therefore, the column frequency is greater than the sample. A majority of people interviewed in the survey used Facebook (38%) in Bangladesh, followed by YouTube 28%, and Google+ 11%. In case of hardware use most of respondents use (60%) use smartphone followed by laptop 20 % and desktop 12 % (Table 2). While interpretating the data, demographic variables were viewed as control variable.

Measurement model

Bagozzi et al. (1991) claimed that before the hypothesized relationship was investigated internal reliability and convergent significance of the measurement model must be checked. In order to test internal reliability, composite reliability and Cronbach alpha have been commonly used. In order to meet the internal reliability, composite reliability and alpha Cronbach should have a value above 0.70.

"Convergent validity is considered to be satisfactory when measurement constructs have an average variance extracted (AVE) of at least 0.50 and items loading are above 0.70" (Hair et al., 1995). Table 3 depicted the alpha of Cronbach, the average variance extracted (AVE) and the composite reliability, while Table 4 for each construct indicated the item loading in bold format.

Table 2. Profile of the Respondents

Variable	Description	Frequency	Percentage
Gender	Male	215	60%
	Female	141	40%
Age(years)	Below 20 years	110	31%
	20 - 30 years	222	62%
	31 - 40 years	20	6%
	41 - 50 years	3	1%
	51-60 years	0	0%
	Above 60 years	1	0%
Education level	Below Higher Secondary	5	1%
	Higher secondary	22	6%
	Bachelors	320	90%
	Masters	5	1%
	Ph.D.	2	1%
	Others	2	1%
Social Networking Platform	Facebook	470	38%
	You tube	348	28%
	Google+	136	11%
	LinkedIn	31	3%
	Twitter	105	8%
	Pinterest	8	1%
	All	50	4%
	Other	89	7%
Hardware use	Smartphone	511	60%
	Laptop	173	20%
	Desktop	102	12%
	Tablet	11	1%
	All	29	4%
	Other	23	3%
SNSs use Experience (Years)	Less than 1 year	37	10%
	1- 3 years	145	41%
	4 - 6 years	122	34%
	7 - 9 years	46	13%
	More than 9 years	6	2%

Table 3. Measurement Model

Constructs	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
Intention to adopt geotagging technology	0.921	0.950	0.864
Effort Expectancy	0.932	0.952	0.831
Facilitating conditions	0.906	0.941	0.842
Performance Expectancy	0.931	0.956	0.879
Social Influence	0.930	0.956	0.878

Table 4. Cross Loadings

	IAGT	**EE**	**FC**	**PE**	**SI**
IAGT1	**0.931**	0.536	0.518	0.581	0.573
IAGT2	**0.921**	0.526	0.517	0.595	0.537
IAGT3	**0.936**	0.569	0.542	0.608	0.572
EE1	0.544	**0.922**	0.734	0.747	0.684
EE2	0.522	**0.914**	0.678	0.753	0.673
EE3	0.573	**0.907**	0.706	0.726	0.694
EE4	0.494	**0.904**	0.710	0.708	0.683
FC1	0.522	0.733	**0.920**	0.637	0.630
FC2	0.501	0.717	**0.919**	0.595	0.640
FC3	0.534	0.684	**0.913**	0.640	0.656
PE1	0.604	0.734	0.616	**0.936**	0.687
PE2	0.625	0.754	0.644	**0.943**	0.700
PE3	0.571	0.775	0.652	**0.934**	0.703
SI1	0.554	0.678	0.671	0.685	**0.930**
SI2	0.552	0.722	0.632	0.689	**0.938**
SI3	0.588	0.706	0.661	0.714	**0.942**

Legend: IAGT= Intention to adopt geotagging technology; EE= Effort Expectancy;
FC= Facilitating conditions; PE= Performance Expectancy; SI= Social Influence

Cronbach's alpha values were between 0.906 and 0.932, and their composite reliability ranged between 0.941 and 0.956, which satisfy internal reliability requirements. The load value is between 0.904 and 0.943, and the AVE is between 0.831 and 0.879, which mean the load value is above the mentioned level. The apparent variables thus follow the convergent criterion for validity (Biswas et al., 2020).

On the other hand, the discriminant validity was tested using two measures. First, "the correlations among constructs should be below the cut-off of 0.85" (Biswas, 2005). Second, "the square root of AVE should exceed the correlations of a construct with other latent constructs in the model" (Fornell and Larcker, 1981). The program values show that the square root of AVE was higher than the respective correspondence and that all the correlations between latent structures were below the cut-off point of 0.85 (Table 5). This indicated that the requirements for discriminant validity should be achieved and that the study model follows the requirements for the measurement model.

STRUCTURAL MODEL

Assessment of variance explanation through research model

The study found that research model significantly explains the variance. Figure 2 shows the (R^2) explanation power for each dependent variable. R^2 value implies the percentage of total variance of the dependent variable explained by the independent variable. This research found that the predicting power (R^2) of dependent variable such as intention to adopt geotagging technology was 0.458, performance expectancy 0.647 and effort expectancy was 0.601. All R^2 value exceeds the recommended cut of criterion of 10% proposed by Falk and Miller (1992). So our model explains 45.8 % of the variance in the intention to adopt geotagging technology, 64.7 % variance in performance expectancy and 60.1 % of variance of effort expectancy in adoption of geotagg among SNSs users for smart tourism experience. Furthermore, we also checked predictive relevance (Q2) to examine the substantive effect of our research model.

Table 5. Correlation matrix, Square root of AVE

	IAGT	EE	FC	PE	SI
IAGT	**0.930**				
EE	0.585	**0.912**			
FC	0.566	0.775	**0.918**		
PE	0.640	0.804	0.680	**0.938**	
SI	0.603	0.750	0.699	0.743	**0.937**

Table 6. Predictive Relevance

	SSO	SSE	Q^2 (=1-SSE/SSO)
IAGT	1,071.000	668.318	0.376
EE	1,428.000	747.681	0.476
FC	1,071.000	1,071.000	
PE	1,071.000	488.405	0.544
SI	1,071.000	1,071.000	
TR	1,785.000	1,785.000	

Legend: IAGT= Intention to adopt geotagging technology; EE= Effort Expectancy; FC= Facilitating conditions; PE= Performance Expectancy; SI= Social Influence

Other statistical analysis was conducted to explore its statistical significance (Q2). Cohen's (1988) indicated 0.02 is a 'tiny,' 0.15 represented a 'medium,' and 0.'35 was a 'large' impact. The intention to adopt geotagging (Q2 = 0.376), the performance expectancy (Q2=0.5434 and the effort expectancy (Q2 = 0.476) was suggested in our model to be high in effect. The predictive validity of this model has also been verified (Table 6). Furthermore, we investigated the significant impact of our test model for Cohen's (1988) effect size (f2). It is defined as “the degree to which the phenomenon is present in population.” Cohen’s (1988) suggested f2 values of 0.02, 0.15, and 0.35 are small, medium, and large, respectively. Thus, our model suggests that intention to adopt geotagging technology (f2 = 0.125), had small effect sizes, whereas performance expectancy (f2 = 1.834) and effort expectancy (f2 = 1.508) had a large effect size.

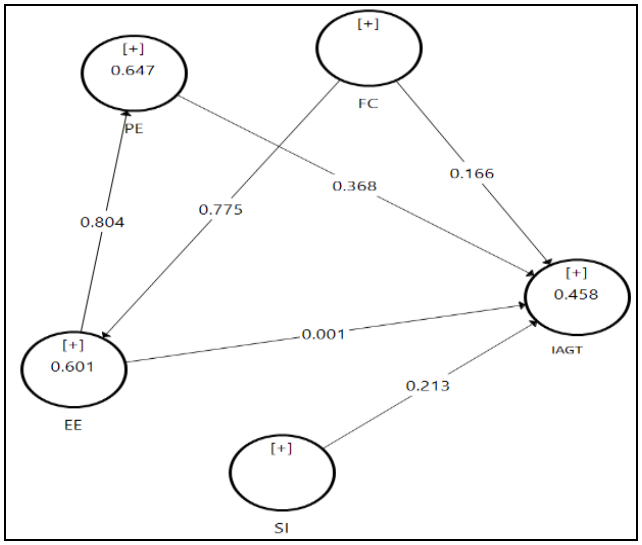

Figure 2. Validated research model for Geotagg adoption

Hypotheses results and discussion

The thesis used Smart PLS 3.0 to evaluate the connections between the various components of the proposed models of research. Figure 2 displays both trajectory coefficients. The findings in hypotheses suggest that the performance expectancy of the geotagging technology is a good impact ($\beta = 0.368$, $t = 4.681$, $p < 0.001$) on intention to adopt geotagging technology, so H1 can not be dismissed. While geotagging technology uses much of the time to upload images and exchange locations with users of SNSs, it focuses more on the useful aspects. This conclusion is close to other analyses of technology adoption, such as adoption of geotagging technology (Haque et al., 2020; Haque and Khan 2020). Hypothesis 4 is known because the social influence also suggest significant impact on intention to adopt geotagging technology ($\beta = 0.213$, $t = 2.508$, $p < 0.05$). This data reflects Bangladesh's socio economic situation, with the bulk of the population affected by their employers, peers and others. This finding was decided on with UTAUT's SNS sharing application (Herrero et al., 2017). This finding was accepted.

Facilitating condition has a favorable effect on the intention to adopt geotagging technology because statistically meaningful effects are obtained with the program ($\beta = 0.166$, $t = 2.358$, $p < 0.05$), so we acknowledge H5. These results are relevant to the Haque et al. (2020) findings, which showed that facilitationg condition are directly affected to adopt geotagging technology. The research suggested two new directions among explanatory UTAUT variables (e.g. pefromance expectancy to effort expectancy (H3) and effort expectancy to facilitating condition (H5), separate from orginial UTAUT model (Venkatesh et al., 2003). For both proposed relationships ($\beta = 0{,}804$; $t = 26{,}653$; $p < 0{,}001$; and $\beta = 0{,}765$, $t = 24{,}500$; $p < 0{,}001$) methodological research resulted in statistically relevant values. Then hypothesis 3 and hypothesis 5 are firmly endorsed. Interestingly, new proposed path between the predictor variables such as facilitating condition to effort expectancy was significant in adoption of geotagging technology among the SNSs user for tourism experience. This finding is consistent with other IT adoption studies in different contexts (e.g. Alrawashdeh et al., 2012; Dwevedi et al., 2017; Urumsah et al., 2011 Schaper and Pervan, 2007). More interestingly, the acceptance of the geotagging technologies among SNS users is also important in the other proposed route between two explanatory UTAUT variables, such effort expectancy to performance expectancy. These findings are similar to Chung et al. (2017), where performance expectancy of use has an impact on perceived utility (root variable of perfromance expectancy). But the

predicted effect of effort expectancy on geotagging purpose was not explicitly optimistic (β = 0.002, t = 0.010, p < 0.05). H2 has not however been sponsored. However, this has indirectly influenced the purpose of geotagging technology by success standards (Table 7 for details). The findings indicate that performance expectancy has a greater impact than effort expectancy on the decision to adopt geotagging technology. This result, which coincides with the acceptance of the UTAUT application (Hoque and Sarwar, 2017), typically has greater repercussions than effort.

Table 7. Structural relationships

Hypothesis	Relationship	Std. Beta	T Statistics	P Values	Comments
H1	PE -> BI	0.368	4.681***	0.000	Supported
H2	EE -> BI	0.001	0.010	0.992	Not Supported
H3	EE -> PE	0.804	26.653***	0.000	Supported
H4	SI -> BI	0.213	2.508*	0.012	Supported
H5	FC -> BI	0.166	2.358*	0.019	Supported
H6	FC -> EE	0.775	24.500***	0.000	Supported
Legend: p: significance: *p<0.05; ** p<0.01 ; ***p<0.001					

Table 8. Moderating effect of Geotags use frequency

Path	Std. Beta	t-statistics	Decision
PE* TR-> IAGT	0.095	2.694	Moderated
EE* TR -> IAGT	0.055	1.967	Moderated
SI* TR -> IAGT	0.098	2.372	Moderated
FC* TR -> IAGT	-0.013	0.397	Not Moderated

Moderating effect of SNSs users Technology Readiness

In the analysis the moderation impact of the metric variables was tested using Smart PLS 3.0. In order to do so, we analyzed the association effect on the outcome variable of the moderating variable and the independent one. For PE, EE, SI, and FC the analysis was carried out separately as the preparation for SNS's users to take geotagging technologies differently moderates their relationship. The interaction effect of performance expectancy and SNSs user technology readiness (PE × TR) on intention to adopt geotagging technology is statistically significant (β = 0.095, t =2.694, p < 0.05). The product effect of effort expectancy and SNSs user's technology readiness (EE × TR) on intention to adopt geotagging technology is also statistically significant (β = 0.055, t =1.967, p < 0.05). Significant interaction effect of SI and SNSs user's technology readiness (SI × TR) on intention to adopt geotagging technology (β = 0.098, t= 2.372, p < 0.05) was also attained. Finally, the interaction effect of facilitating condition and SNSs user's technology readiness (FC × TR) on intention to adopt geotagging technology is not statistically significant (β = -0.013, t= 0.397, p > 0.05) (Table 8 for details).

Most importantly, SNSs users' technology readiness significantly moderates the different interrelationship of PE, EE and SI with willingness to adopt geotagging technology. These results are concurrent with many other research findings Borrero et al. (2014) where they found technology readiness moderates the social and psychological factors to adopt SNSs for student's movement. These findings also confirm the outcome of (Lin and Chang, 2011; Dabholkar and Bagozzi, 2002) where they found moderating effect of TR in different IS/IT adoption studies. Therefore, technology readiness can be conceptualized as a moderator of UTAUT to adopt the technology at individual level and adoption of geotagging technology for smart tourism experience.

Theoretical and managerial contributions

This research has important implications for philosophy and management. In the first instance, the research extended SNS's users technology readiness as moderator in the Unified theory of acceptance and use of technology. The study introduced association between two explanatory variables of UTAUT namely effort expectancy and performance expectancy and found strong empirical evidence regarding this association. Moreover, it also proved that there is an interrelationship between two predicting variables of UTAUT model namely FC and EE. These will enrich the model and add new aspect for future knowledge. This strengthens the model and introduces additional elements of future awareness. This study, on the other hand, will direct decision makers from the tourism industry regarding the numerous geotagging factors that impact SNS users in smart tourism experiences. Finally, this study will provide appropriate policy making indications to SNSs service providers regarding the acceptance and use of geotagging for smart tourism experience.

LIMITATIONS, FUTURE RESEARCH DIRECTIONS AND CONCLUSIONS

This research is not free from weaknesses. The research employed non-random sampling methods, including convenience sampling. Random sampling methods may be used in forthcoming studies. The study used cross-sectional details. For prospective investigators, longitudinal evidence may be used to clarify the phenomenon in greater detail. The students were the target demographic of the study. Future studies will combine both classes of individuals, which further generalizes findings. After all, this study used the Unified theory of acceptance and use of technology (UTAUT) paradigm to clarify the purpose of SNS users to implement geotagging technology for intelligent tourism. It analyzed the performance expectancy; social influence and facilitating conditions are significant precedents for the implementation among SNS users of geotagging technology for tourism purposes.

It also found that facilitating condition prominently affect the effort expectancy and effort expectancy properly affect the performance expectancy of UTAUT model for adoption of geotag technology among the SNSs users. It presents the socio-economic status of Bangladesh where people believe that proper infrastructure of information technology will enhance the uses of technology. It also discussed readiness to use technology as a vital moderator for SNSs users' smart tourism experience for implementation of geotagging technology. The outcome of this study will offer significant itinerary for future scholars. It also guides the decision makers of tourism industry in designing the appropriate policy for adoption of geotagging technology for smart tourism experience.

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