



An Empirical Investigation of the Role of Mobile Information Literacy in the Acceptance of Mobile Social Commerce

Jafar Ali^{a*}, Shoaib Imtiaz^b, Dae Wan Kim^c

^a Department of Business Administration, Yeungnam University, South Korea. Email: jafarisali110@gmail.com

^c Department of Marketing and International Business, Institute of Business Management and Administrative Sciences, The Islamia University of Bahawalpur, Pakistan. Email: shoaib.imtiaz@iub.edu.pk

^c Department of Business Administration, School of Business, Yeungnam University, South Korea. Email: c.kim@ynu.ac.kr

*Correspondence: jafarisali110@gmail.com

Received: 25 April 2025 **Revised:** 15 September 2025 **Accepted:** 20 September 2025 **Published:** 25 September 2025

Keywords

Location-Based Service
Mobile Social Commerce
Mobile Information Literacy
Mobility
UTAUT

Abstract

The rapid growth of smart mobile devices and enhanced utilization of social media platforms encourage people to use them for commercial purposes. This study explores individual intention towards mobile social commerce and actual use behavior. In the context of mobile social commerce, a modified UTAUT model which integrates location-based service, mobility, ubiquity and mobile information literacy, is developed and validated. Data was collected from 425 respondents, conveniently available, from South Korea and structural equation modeling using smart PLS was applied. Results revealed that performance expectancy, facilitating conditions, location base service and mobility play significant role in formulating individual behavioral intention. This study also reveals that performance and effort expectancy are influenced by mobile information literacy. Hence, this study is useful for mobile social commercial users because it provides evidence for the factors influencing behavioral intention and consequently use behavior. Conclusively, this study has various theoretical and practical applications.

Introduction

The invention and proliferation of smart mobile devices have introduced several types of mobile services without limitations of place and time. The increased utility of mobile devices has led to mobile social commerce (MSC onwards), a way of conducting social commerce in mobile environments, becoming popular among mobile users (Hew et al., 2016; Imtiaz, 2018; Imtiaz, Ali, & Kim, 2020; Imtiaz & Kim, 2019). MSC referred to “a range of e-commerce activities facilitated by mobile technology and enhanced by user content” (Kucukcay & Benyoucef, 2014). Sun and Xu (2019) extensively reviewed the literature available on MSC and postulated that the scholarly work and academic publications in the domain of MSC is scarce because of its nascent development in recent years. Prior studies on MSC examined the privacy paradox consumer purchase intention using the TAM model (Ooi, Hew, & Lin, 2018), how readiness for technology affects user behavioural intention to adopt MSC using the TRAM model (Han & Park, 2016). This study uses UTAUT framework if it refers to technology acceptance (Venkatesh, Thong, & Xu, 2012). The adoption of a wide range of information systems (IS onwards), such as mobile learning (Chao, 2019), mobile payments (Al-Saedi et al., 2020), online banking (Alalwan et al., 2018), mobile marketing (Shareef et al., 2017), e-commerce (Uzoka, 2008), and mobile

commerce (Min, Ji, & Qu, 2008) has been explored by various researchers. This study used UTAUT in order to identify the antecedents that impacts MSC users’ behavioral intention and actual use behavior. In this study, UTAUT model is employed to determine the pivotal constructs of mobile information literacy, ubiquity, location-based services and mobility to explore user behavioral intention and actual usage in relation to MSC. Pertaining to MSC, users depend heavily on mobile devices to execute online shopping, and transactions. Information and communication technology (ICT onwards) literacy skill is one of the important factor among others that facilitate users to successfully interact with and understand the vast amount of data available on e-commerce platforms (Adam & Alhassan, 2021). Therefore, this study considers mobile information literacy (MIL), an ICT skill, that needs to be incorporated to better understand MSC adoption. Moreover, ubiquity is a unique characteristics of mobile technology that enables users to access MSC platforms anywhere, anytime, and has been studied by several researchers Altay and Yaprakli (2024) and Rashid et al. (2022) providing a strong basis to take this feature in the MSC context. In addition, mobile technology-based platforms provide location based service to their users, including location based discounts, advertisements, and contextual recommendations Kurtz, Wirtz and Langer (2021) and Huh and Seo (2021) thereby including location based

How To Cite: Ali, J., Imtiaz, S., & Kim, D. W. (2025). An Empirical Investigation of the Role of Mobile Information Literacy in the Acceptance of Mobile Social Commerce. *International Journal of Contemporary Business Literature* 5(1), 28-39. <https://doi.org/10.70890/IJCBLL.2025.5103>

services (LBS) in our study. Finally, mobility is considered the best quality of mobile technology, which gives freedom to its user to access services globally (Mallat et al., 2009). Mobility features have been analyzed and studied in various mobile technology based acceptance studies (Schierz, Schilke, & Wirtz, 2010; Sun & Xu, 2019). Therefore, mobility is a noteworthy construct that should be investigated in MSC commerce. Indeed, incorporating these four variables in the UTAUT is prodigious in the socioeconomic context of South Korea.

The primary objectives of this study are (1) to explore determinants that impacts users' behavioral intention to use MSC; (2) to extend and develop the UTAUT model incorporating mobile information literacy, ubiquity, location-based service, and mobility; (3) to empirically examine the association between mobile information literacy and performance expectancy, effort expectancy, and users' behavioral intention; and (4) to evaluate the resultant model empirically. This research contributes to and advances the understanding of mobile-based technology adoption literature by (1) identifying the unexplored constructs including mobile information literacy, ubiquity, location-based services, and mobility as antecedents of MSC usage, (2) advancing theoretical conceptualization to use MSC, and (3) demonstrating through empirical evidence the affect of mobile information literacy on effort expectancy, performance expectancy and behavioral intention in relation to MSC.

Theoretical Background

We live in an era of information technology that provides multiple opportunities for individuals and businesses. It is argued that a person who is information-literate can get more value from information technology as compared to those who are information-illiterate. Information literacy refers to *"the skill to recognize our need for information, find and use it efficiently"* (Zimmerman & Ni, 2021). It is observed that evolution and growth of ICT facilitated mobile commerce (Khan et al., 2022; Zahir & Imtiaz, 2019) and empowered the customers (Imtiaz et al., 2018). With the advancement of mobile technology, we rely on mobile devices like smartphones among others to access and manage information. To use mobile technology, a person should be mobile literate. Mobile information literacy has been introduced as a new term in context of Mobile technology. Mobile information literacy is a concept centered on competencies of information literacy in a mobile environment. According to Matula (2020), mobile information literacy includes the skill set enabling user to effectively interpret, apply, navigate and exchange information in mobile environment, distinguished from desktop environment because of device limitation, for prompt and relevant information access.

Social media platforms such as Twitter, Facebook and Instagram help to operate Social commerce in order to make ease for online exchange of goods and services (Hairudin et

al., 2019). People can participate in online sales and marketing activities with the help of these platforms (Hajli et al., 2017). The usage of social media applications, ubiquitous internet facility and mobile devices combine together to create a new business model called as MSC apart from the collection of information.

MSC is conceptualized as individuals buying and selling experience shared by means of social commerce channels through mobile devices in temporally synchronous fashion. The simultaneous use of m-commerce (conducting e-commerce in mobile environments using mobile devices) Chong, Chan and Ooi (2012) and s-commerce (using social media platforms in conducting e-commerce) Liang et al. (2011) stated that MSC has become popular among smart mobile device users, following the extensive proliferation of smartphones and applications (Hew et al., 2016). Businesses use MSC platforms for payment transactions, promotions and marketing (Hew et al., 2016). Social commerce sites for instance Amazon, eBay, Facebook, Instagram, and Twitter have designed their own mobile applications to make it convenient for consumers to access them on the move, anytime, anywhere, and to explore information, reviews, and comments about products that would help them make purchase decisions (Ooi et al., 2018).

Although MSC has recently been introduced, and literature on it is rare, few researchers have studied the emerging MSC phenomenon. Hew et al. (2019) studied mobile social media users' resistance factors and privacy concerns to use MSC among Asian MSM users through artificial neural network analysis and found a positive relationship between privacy concern and resistance factors, including risk barriers, tradition barriers, value barriers and usage barriers except image barriers. Ooi et al. (2018) explained the privacy paradox among the consumers of MSC drawing on the theories of perceived value and planned behavior. Zhang and Wang (2019) investigated social factors, such as social influence and social tie strength, on consumers' buying intentions using MS-commerce. Choi and Yang (2018) analyzed the effect on sales of MSC organizations on the basis of differences in consumer perceptions of 14 characteristics of MSC. Liu et al. (2023) explored the role of interactivity, usefulness, entertainment, and authenticity employing (S-O-R) framework on consumer emotions, and their influence on impulse buying and social participation in the MSC context. The study found that among MSC content characteristics, interactivity, authenticity, usefulness and entertainment positively influenced the arousal and pleasure of Generation Y consumers. On the other hand, arousal and pleasure further positively impact impulse buying and social participation of Generation Y consumers.

Research Model and Hypothesis

Research Model

Several studies have been conducted worldwide on user's acceptance and application of technology. Researchers have

used different technology acceptance theories (Davis, 1989; Fishbein & Ajzen, 1975). After analysis of earlier models, Venkatesh et al. (2003) introduced a cohesive and a very thorough perspective on user's acceptance of information technology. Since its introduction, UTAUT has captured the attention of scholars and has been used to determine individual/user behavioral intentions and the use of various information technologies (Al-Saedi et al., 2020; Baishya & Samalia, 2020). It was observed that UTAUT exhibited 70% variance in user acceptance of technology and proved to be superior to existing models when tested empirically.

UTAUT, to optimize model's theoretical predictive scope, can integrate with different external variables depending on

the context of the technology to be adopted, as recommended by Venkatesh et al. (2003). Thus, this research uses UTAUT framework as a theoretical base and integrates three external variables related MSC like location-based service (LBS), mobility, and ubiquity with core variables (performance expectancy, effort expectancy, social influence and facilitating conditions). The three external variables (LBS, mobility, and ubiquity) studied empirically in the present study are considered to be important characteristics of mobile technology, and consumers consider them an essential factor (Schierz et al., 2010; Tsikriktsis, 2002). In addition, a new variable, mobile information literacy, was incorporated into this model. (see Figure 1).

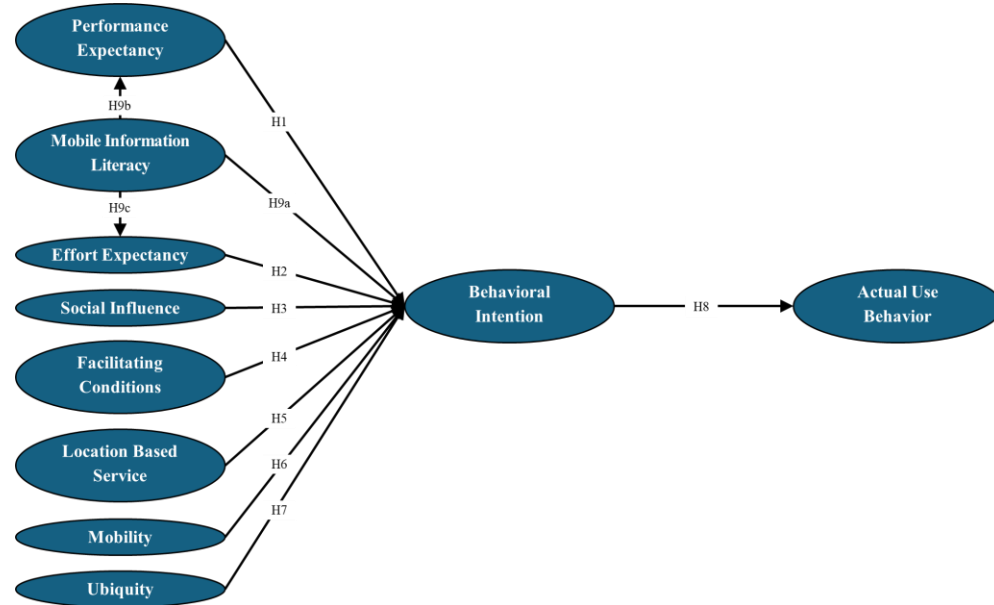


Figure 1: Research Model.

Hypothesis Development

Performance Expectancy

Performance expectancy can be defined as “the extent to which individual perceive that a system adoption will enhance his or her work performance” (Venkatesh et al., 2003). The customers’ behavioural intention to accept new technological products and services is influenced by their perception to accept the advantages and utility of these things (Shareef et al., 2018). Several studies have been conducted on performance expectancy in relation to various IS such as Mobile payment (Al-Saedi et al., 2020) and self-service parcel services (Zhou et al., 2020). Earlier studies have illustrated that performance expectancy has positive impact on user behavioral intention. Hence, this research hypothesizes as follows:

H1: Performance expectancy has a positive influence on behavioral intention to use MSC.

Effort Expectancy

Effort expectancy is defined as “the degree of effortlessness associated with the use of system” (Venkatesh et al., 2003). It is estimated that almost all smartphone users have

downloaded and installed social media applications, and they spend a reasonable amount of time on these platforms to obtain information and share ideas. Users of smartphones with internet connections might prefer to access social commerce channels such as Instagram or Facebook through their mobile devices instead of personal computers (PCs).

Prior research findings highlighted that individuals are more prone to adopt innovation services or products if these services can be used easily (Tarhini et al., 2019). Effort expectancy has been vastly studied previously. The results of previous studies have shown that effort expectancy also positively affects behavioral intention in context of IS, for instance, adoption of Mobile health app (Duarte & Pinho, 2019), internet banking adoption (Rahi & Abd.Ghani, 2019). Regarding MSC, we postulate that mobile devices with 5G technology have made it easy for individuals to access social media platforms in order to perform commercial activities. Thus, we propose following hypothesis:

H2: Effort expectancy positively influences behavioral intention to use MSC.

Social Influence

Social influence is defined as “the degree to which an individual perceives that important others believe he or she should use the new system” (Venkatesh et al., 2003). Social influence plays a significant role in the acceptance of new systems (Althuizen, 2018). Individuals make behavioral intentions on the basis of their culture, values, and norms (Jeon, Lee, & Jeong, 2018). According to many prior studies’ findings, social influence is also a critical factor in the world of technologies (Raza, Shah, & Ali, 2018). It is revealed by virtue of friends and family friends that social media is a pivotal factor to create a positive impact if it refers to mobile social commerce. **H3:** Social influence has a positive influence on behavioral intention to use MSC.

Facilitating Conditions

Facilitating conditions can be characterized as “the degree to which an individual believes that an organizational and technical infrastructure exists to support use of the system” (Venkatesh et al., 2003). It is also described as human and technological resources to use technology. To adopt MSC, an individual needs mobile devices, mobile operating skills, and Internet connection. Facilitating conditions significantly influence the adoption of IS technology. IS and digital marketing researchers have found facilitating conditions to be crucial influencer in designing an individual’s behavioral intentions. The previous study of Alalwan (2020) regarding acceptance of IS, demonstrated that facilitating conditions is a positive factor affecting significantly the user’s behavioral intentions to use these systems. MSC platforms demand mobile users to have up-to-date digital skills, including online mobile shopping store surfing and credit card/debit card use for payment among others. Individuals tend to use MSC, provided that they are equipped with necessary resources. Thus, we hypothesize as follows: **H4:** Facilitating conditions have a positive influence on behavioral intention to use MSC.

Location Based Service (LBS)

Junglas and Watson (2008) defined location-based service as “any service that takes into account the geographic location of an entity”. The introduction of mobile devices into businesses has blurred geographical boundaries (Kumar, 2018). Mobile devices embedded in a global positioning system enable consumers to obtain pertinent information based on their current location (Choi, 2018). Location-based services are services that MSC organizations offer to users based on user profiles that includes their demographics, personal preferences and their context information (i.e., user activities, time, location, weather) (Dhar & Varshney, 2011). Previous research support the use of location based services in information system technologies such as websites when targeting online international consumers (Fink & Laupase, 2000). From this observation it is implied that LBS is an important construct in adoption of online IS. MSC is based on

online mobile social applications. Therefore, we predict that LBS will have positive influence on users’ intention to use MSC. Thus, we hypothesize:

H5: The location-based services provided by organizations have a positive influence on behavioral intention to use MSC.

Mobility

Mobility refers to the propensity to access mobile services anywhere and at any time (Coursaris & Hassanein, 2002). The mobility feature of MSC brings great convenience to the users. Mobility is considered as major benefit of mobile technology that influences individual’s behaviour to accept it (Liébana-Cabanillas, Marinković, & Kalinić, 2017). Mobility construct rarely studied in MSC context. There are no previous studies which prove conclusively that there is a significant correlation between mobility and bahavioral intention. For example, the study of Mallat et al. (2008) reveals that consumer use bahavioral is influenced positively by mobility in relation to mobile ticketing. However, the findings of Batkovic and Batkovic (2015) have shown insignificant direct effect of mobility on bahavioral intention to use mobile retail systems. Based on past research findings and to better understand the correlation between mobility and behavioral intention to use MSC we hypothesize as follows:

H6: Mobility has positive effect on behavioral intention to use MSC.

Ubiquity

The invention of portable devices, including smartphones, PDAs and internet connection enables the ubiquitous use of mobile devices (Anwar, Thongpapanl, & Ashraf, 2021). Junglas and Watson (2006) conceptualized ubiquity as the ability to retrieve information without time and space limitations. Mobile devices are useful for ubiquitously targeting users because of their universal connectivity. Mobile devices being ubiquitous in nature helps consumers access real-time information and services anytime, anywhere (Kim, Lee, & Li, 2020). The results of past studies have highlighted that there is a positive association between ubiquity and users’ bahavioral intention to employ mobile technologies (Kim & Garrison, 2009). Keeping in view the critical relationship between ubiquity and user intention to use mobile technologies. We predict that ubiquity will have a positive direct effect on users’ intention to use MSC. Thus, we hypothesize as follow:

H7: Ubiquity has a positive impact on behavioral intention to use MSC.

Behavioral Intention

Behavioral intention refers to a significant factor for individuals to adopt novel technology readily (Tsai, 2012). It has a paramount importance in the adoption of technologies (Irani, Dwivedi, & Williams, 2009). It is proved from previous research that behavioral intention has been considered as a trivial role to

determine the use of technology (Park, 2009). According to past study of Venkatesh et al. (2003), it is believed that behavioral intention has a positive relationship with the usage of technology. Furthermore, the findings of prior studies have described that behavioral intention has a pivotal role in the usage of information system technology (Alam et al., 2020). Therefore, we propose following hypothesis:

H8: Behavioral intention has significant effect on actual usage of MSC.

Mobile Information Literacy

Leveraging mobile technology, one should possess knowledge and skills. The knowledge and skills needed to use mobile technologies introduce new term “Mobile Information Literacy,” which itself and its definition is novel and not get into mainstream of discipline in scientific research (Havelka, 2013). Matula (2020) conceptualizes mobile information literacy as the digital proficiency skills of information literate person in the mobile environment. Pinto et al. (2020) has determined the function of mobile information literacy with the help of mobile applications in relation to teacher mastering and training. Havelka (2013) incorporated mobile information literacy in student education through mobile devices. Research shows that information literacy is significant factor in the adoption of IS (van Biljon et al., 2015). In line with these observations, we imply that mobile information literacy is an important factor that influences user behavior in adopting mobile technologies. In addition, we presume that mobile information literacy enables users to accomplish the required tasks with ease. So, we hypothesize that:

H9a: Mobile information literacy significantly affects behavioral intention in the usage of MSC.

H9b: Mobile information positively influences performance expectancy to employ MSC.

H9c: Mobile information literacy has positive correlation with effort expectancy to use MSC.

Research Methodology

The current study targeted MSC users to collect primary survey data from South Korea. A quantitative survey methodology was used in this investigation. Purposive sampling technique was used to collect responses. Survey instrument was distributed using google form and paper print approach (Evans & Mathur, 2005). Respondents were asked to proceed with the survey if they had used MSC apps to buy or sell products. The study used 5-point Likert scale to gather data. The survey instrument is comprised of two sections. In first section, respondents were asked about their demographic characteristics. The second section comprised of measurement items selected from available literature on technology adoption. The study used pilot study to see the validity and reliability of scales (Bhattacharjee, 2012). In order to do this, the questionnaire was translated in Korean language by two Korean who were academic experts and also had an English-

speaking expertise. The results found no issues of validity and reliability. A questionnaire written in English was distributed to foreigners residing in South Korea through online platforms. In contrast, printed questionnaires in the Korean language were distributed among Koreans manually.

Measurement items were adapted from the prior studies available on technology adoption and modified in the perspective of MSC. Based on the UTAUT model, measurement items for performance expectancy (four items), effort expectancy (four items), social influence (three items), facilitating conditions (four items), and behavioural intentions (three items) were adapted from Venkatesh et al. (2012). Five items were used to measure use behavior adapted from Tak and Panwar (2017). Location-based services were measured by three items adapted from Lee, La and Song (2009) and Zhou (2013). Three adopted measurement items were used to measure mobility were drawn from Kim, Mirusmonov and Lee (2010). Three measurement items were used to measure Ubiquity adapted from Okazaki and Mendez (2013). Three measurement items adapted from the study of Kennedy et al. (2008) to measure mobile information literacy.

Results and Analysis

The results section starts with an analysis of the demographic statistics followed by evaluation of measurement models. Finally structural model was tested by employing structural equation modelling (Henseler, Ringle, & Sarstedt, 2015). Smart PLS was used for analysis.

Descriptive Statistics

To collect data, 1500 questionnaires printed online were distributed and 951 responses were collected, with response rate of 63.4 % during survey period of two months (September 2025-October 2025). The collected data were further examined for repetitive and incomplete responses; 526 responses were eliminated. Finally, 425 responses were finalized for the empirical analysis. According to demographic characteristics, among 425 respondents 232 (54.6 %) were male and 193 (45.4%) were female. As for age categories, majority portion of respondents lies in aged range of 31 – 40 years (40.0 %), followed by 21–30years (36.5%), followed by over 40 years (23.3%). Regarding education, most of the respondents were university graduates (48.7%), 23.3% were Ph.D. degree holders. survey also collected occupational data of respondents, and results showed that among 425 respondents, 58 were public servants (13.6%), 122 were company salaries employees (28.7%), 37 were working as entrepreneurs (8.7%), 53 were students (12.5%), 30 were housewives (7.1%), 50 respondents were working in academia (11.8%), 39 were working as a researcher (9.2%), and 12 respondents were unwilling to reveal their occupation (2.9%). As for the experience of using MSC platforms majority of respondents have an experience of more than 7.1 years (30.6%), followed by 3.1 – 5 years (32.0%), and followed by 1.1 – 3 years (20.0%).

Measurement Model

This study employed three tests, including standardized factor loadings, composite reliability, and average variance extracted (AVE) to evaluate the convergent validity of latent constructs (Anderson & Gerbing, 1988). The required cut off 0.50 is lower than the parameters for uniform factor loadings (Gefen, Straub, & Boudreau, 2000). The internal reliability of

Table 1. Furthermore, Fornell Larker method was used for the investigation of the discriminant validity of the underlying constructs. In the Fornell Larker method, the square root of the AVE value of each underlying construct must be higher than the

the underlying variables is mainly determined by composite reliability parameters. The cut-off value for CR is above 0.70 (Hair et al., 2012; Nunnally, 1978). Lastly, AVE (≥ 0.50) is measured to assess the variability clarified by the underlying variable (Fornell & Larcker, 1981). The recommended threshold is lower than the parameters established by the convergent validity of constructs (Anderson & Gerbing, 1988), as shown in association values of the underlying latent variables as exhibited in **Error! Reference source not found.** Thereby, establishing discriminant validity.

Table 1: Measurement Model Results.

Constructs	Factor Loadings	Composite Reliability	AVE
Use Behavior			
UB1	0.794	0.852	0.591
UB2	0.762		
UB3	0.762		
UB4	0.756		
Performance Expectancy			
PE1	0.834	0.871	0.628
PE2	0.826		
PE3	0.779		
PE4	0.726		
Effort Expectancy			
EE1	0.840	0.880	0.647
EE2	0.769		
EE3	0.803		
EE4	0.804		
Social Influence			
SI1	0.636	0.772	0.532
SI2	0.789		
SI3	0.755		
Facilitating Conditions			
FC1	0.754	0.831	0.553
FC2	0.763		
FC3	0.814		
FC4	0.631		
Location Based Service			
LBS1	0.832	0.852	0.658
LBS2	0.836		
LBS3	0.763		
Mobility			
MOB1	0.699	0.788	0.556
MOB2	0.849		
MOB3	0.678		
Mobile Information Literacy			
MIL1	0.786	0.803	0.576
MIL2	0.766		
MIL3	0.723		
Behavioral Intention			
BI1	0.831	0.860	0.673
BI2	0.814		
BI3	0.815		

Table 2: Discriminant Validity (Fornell & Larcker Criterion).

	BI	EE	FC	LBS	MIL	Mob	PE	SI	UB	Ubq
BI	0.82									
EE	0.402	0.804								
FC	0.428	0.42	0.743							
LBS	0.399	0.395	0.359	0.811						
MIL	0.404	0.572	0.433	0.302	0.759					
Mob	0.415	0.322	0.374	0.374	0.322	0.746				
PE	0.427	0.572	0.362	0.297	0.584	0.315	0.792			
SI	0.358	0.369	0.424	0.241	0.26	0.362	0.407	0.729		
UB	0.659	0.221	0.247	0.257	0.174	0.304	0.228	0.226	0.768	
Ubq	0.307	0.284	0.284	0.259	0.404	0.333	0.328	0.188	0.228	0.734

Structural Model Evaluation

Following validation of the measurement model, subsequent analysis continued to evaluate the structural model that includes determining the path coefficients and R^2 values. The association between external variables and internal variables are indicated through path coefficient values, whereas R^2 values estimate the predictive capability of the structural model. R^2 represents the variance caused by external variables. Path coefficients and t-statistics of the proposed hypothesized relationships are measured by running the bootstrapping technique in Smart PLS., and the findings are indicated in Figure 2. The R^2 for behavioral intention (BI) is 0.359, for actual use behaviour (UB) is 0.434, for performance expectancy (PE) is 0.341, and for effort expectancy (EE) is 0.328. Path estimates and t-statistics are

calculated using a structural model. A repeated sampling method with 425 cases and repeated sampling of 5000 at a 0.05 level of significance ($p < 0.05$) (two-tailed) (Efron & Tibshirani, 1994) is used to determine t-statistics and hypothesized relationships. Error! Reference source not found., presents the findings of the path coefficient (β), t-statistics, and p-values for the corresponding hypotheses. As presented in Error! Reference source not found., the SEM findings revealed that the proposed hypotheses H1 (PE \rightarrow BI), H4 (FC \rightarrow BI), H5 (LBS \rightarrow BI), H6 (MOB \rightarrow BI), H8 (BI \rightarrow UB), H9b (MIL \rightarrow PE), and H9c (MIL \rightarrow EE) were accepted, whereas the proposed hypotheses H2 (EE \rightarrow BI), H3 (SI \rightarrow BI), H7 (Ubq \rightarrow BI), and H9a (MIL \rightarrow BI) were not backed.

Table 3: Results of Hypothesis Testing.

Hypothesis	Constructs Relationship	(β)	STDEV	t-statistics	p value	Support
H1	PE \rightarrow BI	0.145	0.062	2.662	0.008	Yes
H2	EE \rightarrow BI	0.043	0.058	0.774	0.439	No
H3	SI \rightarrow BI	0.091	0.055	1.638	0.101	No
H4	FC \rightarrow BI	0.148	0.050	2.984	0.003	Yes
H5	LBS \rightarrow BI	0.164	0.048	3.442	0.001	Yes
H6	MOB \rightarrow BI	0.159	0.051	3.134	0.00	Yes
H7	Ubq \rightarrow BI	0.060	0.053	1.139	0.255	No
H8	BI \rightarrow UB	0.659	0.035	19.057	0.00	Yes
H9a	MIL \rightarrow BI	0.082	0.063	1.264	0.206	No
H9b	MIL \rightarrow PE	0.584	0.037	15.912	0.00	Yes
H9c	MIL \rightarrow EE	0.572	0.044	12.979	0.00	Yes

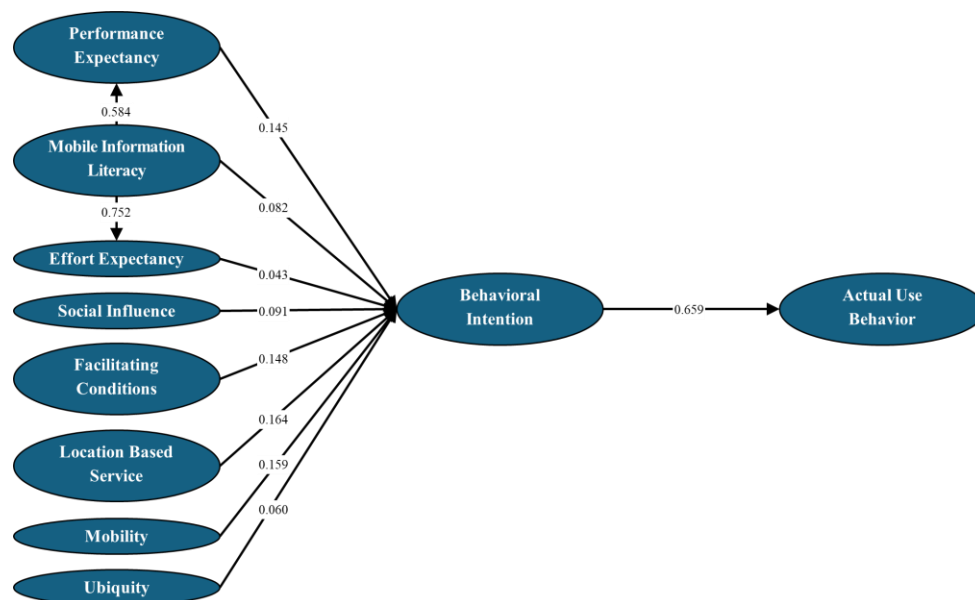


Figure 2: Structural Model.

Results shown in Table 4, reveals that the independent variable (mobile information literacy) used in study can explain 34.10% variation in performance expectancy, and 32.80% variation in effort expectancy that impact on the individual behavioral intention to use MSC with R^2 values of .341 and 0.328 respectively. Moreover, the independent variables including social influence, facilitating condition, ubiquity, mobility and location-based services account for

35.90% variation in behavioral intention with R^2 value of 0.359. About 43.4% of variance can be explain by behavior intention that influence individual use behavior to utilize MSC with R^2 value of 0.434. To estimate the forecasting relevancy of proposed framework, blindfolding employing the cross-validated redundancy approach was run. Q^2 value greater than 0 represents predictive relevance for reflective endogenous

variable. Table 4 shows good Q^2 values for the inner model. Thus, constructs prediction is significant.

Table 4: R^2 and Q^2 .

Variables	R^2	Q^2
Behavioral intention	0.359	0.224
User behavior	0.434	0.247
Performance expectancy	0.341	0.211
Effort expectancy	0.328	0.208

Discussion and Conclusion

This research aimed to determine the variables influencing user behavioral intention that influence actual use behavior in the context of MSC in South Korea. More research on this information system would help practitioners to obtain more insight into important aspects of MSC that help create customer perceptions and motivate users to use this technology. Statistical results reflected that the model had sufficient forecasting power for both behavioral intention $R^2 = 0.359$ and actual use behavior ($R^2 = 0.434$). The research model is theoretically grounded in UTAUT model, which is extended by integrating location-based services, mobility, ubiquity, and mobile information literacy. The compiled data were examined through SEM technique with Smart PLS. The examination demonstrated statistically significant favourable association of performance expectancy with behavioral intention to use MSC. This findings are coherent with previous studies Chong (2013) and could be clarified by the evidence that the increase the performance and productivity of MSC platforms, the increase the user behavioral intention to utilize the system. Hence, it is recommended that developers of MSC platforms should focus on making systems more effective and useful, including transaction safety, product discount rates, and lower prices. Therefore, users can perform the required activities. The analysis demonstrates that effort expectancy and social influence are insignificant variables and thus do not influence users' behavioral intention to use MSC. This result contradicts most earlier research, including Tarhini et al. (2019) and Chao (2019). These findings could be connected to the evidence that the South Korean population is technologically well-educated. They are more prone to technological systems and are not concerned with the ease of use (effort expectancy) of MSC platforms. They could easily overcome the difficulties encountered in the system. Earlier researches have demonstrated that increasing the employ and experience of technology diminishes the significance of effort expectancy (Venkatesh et al., 2003). Moreover, with increased use and knowledge of the system, users are smaller likely to rely on the nearby social environment. Mobile technology is widespread and individuals are independent of searching and exploring new business platforms. This ease of accessing immense information and the availability of online reviews restrict social influence from social groups. Therefore, social influence has not effect on users' behavioral intentions to apply MSC.

Moreover, findings indicate that facilitating conditions are influential variable in driving users' behavioral intention to utilize MSC. This is in accordance with prior study of IS (Abed, 2018). which could be clarified by the notion that participants are more likely to utilize MSC if they possess the essential resources, such as instant internet connectivity, availability of mobile devices with them, product information, convenience after purchase, post-purchase services, and knowledge of the required digital skills to perform shopping activities.

Findings indicate that location-based services and mobility have a favourable association with behavioral intention to utilize MSC. The relationship between location-based services and behavioral intention has not yet been explored by researchers. However, current research found a favourable relation among location-based services and behavioral intention, which could be clarified by the evidence that the user perceives the structure as more useful if it offers location-based services, such as location-based discounts, sale offers on local cultural events, and location-based advertisements. Additionally, the results show that mobility has positive impact on behavioral intention, which is consistent with the study of Mallat et al. (2008). This implies that mobility has a ubiquitous nature considered distinctive by the users. As a result, individuals exhibit stronger behavioral intention to use MSC because they can access MSC platforms on the move. However, the results indicate that ubiquity has an insignificant relationship with behavioral intention. These results contradict with prior studies on the adoption of technology (Khan, Al Raja, & Al-Shanfari, 2019). This insignificant relationship could be explained by the evidence that people no longer consider ubiquity as a unique feature of mobile technologies because of their high penetration in society. Everyone considers its omnipresence as normal, which reduces its effect on shaping their behavioral intention toward MSC.

This study also empirically investigated the association between mobile information literacy with behavioral intention, performance expectancy, and effort expectancy. The findings reveal that mobile information literacy has significant relationship with performance expectancy and effort expectancy but an insignificant correlation with behavioral intention. These findings could be explained by the notion that users in South Korea believe that knowing and understanding mobile systems will help them accomplish their task on MSC channels with ease. However, South Korea is a technologically advanced country, and people have knowledge of how to use mobile technology. Users in South Korea are well educated and have used and experienced shopping activities on MSC channels. Thus, they do not consider mobile information literacy as an influencing variable in developing users' behavioral intention to utilize MSC.

Theoretical Implications

The current study contributes significantly by proposing the UTAUT structure to empirically investigate user adoption

of the new innovative MSC technology. This research confirms that two UTAUT variables, namely PE and FC, have a positive role in shaping users' behavior toward accepting new technology. In contrast, two UTAUT variables, EE and SI, play insignificant roles in formulating users' behavioral intention to use MSC. The study integrates constructs pertaining to the features and characteristics of mobile technology, including location base service, mobility, ubiquity, and mobile information literacy, and examines their impact on users' behavioral intention to accept MSC. This research revealed a positive correlation of PE, Mob, ubiquity, and MIL with user behavioral intentions. In addition, it is also found that users' mobile information literacy (MIL) has a direct positive correlation with PE and EE, while it has a negative correlation with behavioral intention. A positive linkage is shown between user behavioral intention and actual use behavior while performing the hypothetical analysis of the study, representing $R^2 = 0.434$.

Practical Implications

The research has shown that two constructs of UTAUT, namely performance expectancy and facilitating conditions significantly affect users' behavioral intention to use mobiles social commerce. Mobile commerce providers should provide products/services according to the needs of users so that they can get what they are looking for. Sometimes, users are only looking for product information, such as price, features, and warranties, so it is better for MSC practitioners to display product information in an eye-catching way. It is suggested that MSC platforms should be user-friendly, with an interactive user interface to increase PE and EE. Moreover, the interface with quick help options in real time, enabling users to interact with online agents with the capability to engage users in multiple languages, would increase PE and FC, which consequently impacts user behavioral intention to accept MSC platforms. In addition, MSC practitioners should use targeted advertising campaigns to facilitate quick purchases, offer personalized product suggestions and recommendations, and ensure a safe payment method. AI-based Chatbot can be used on MSC platforms for customer support round the clock to help users resolve issues quickly. It is recommended for MSC practitioners to offer online offline shopping services to its users, such as QR code scanning for product information, buying online, and pickup at store services like Walmart etc (Pietri et al., 2021).

In addition, MSC providers would give free coupons or discount price sales on location-based traditional/cultural events, such as offering sales deals within a specific radius of user location, or offer GPS-based sales notification when the user is near the place of interest or shopping mall, resulting in greater behavioral intention to accept MSC by users. This behavioral intention can be further enhanced by facilitating users to pay using multiple payment modes accessible through mobile devices anytime and anywhere. Mobility appears to be a significant motivating factor for users of MSC. Thus, MSC

practitioners are urged to develop mobile applications on their sites that can be accessed by users through their smartphones. Most MSC practitioners have developed mobile applications, but these apps still lack important features, and users are giving negative online feedback. This negative feedback can be changed to positive feedback by removing user complaints, thereby providing more effective and efficient mobile applications. Moreover, MSC practitioners may offer payments through mobile apps such as Starbucks.

Limitations and Future Research

The current research has multiple valuable outcomes; however, it has some drawbacks. Firstly, it did not explore the moderating effects of age, gender, voluntariness of use and experience used in UTAUT. Therefore, future researchers should use these moderators. Moreover, research outcomes revealed that FC and LBS have no effect on behavioral intention, thus, it is suggested to analyse these factors using moderators, such as knowledge sharing, trust, and social interaction. Second, this study investigated limited factors to predict user behavioral intention to use MSC platforms. Other important elements may have a notable influence on the implementation of MSC platforms, such as personalization, social shopping, rating and reviews and social forums. It would be interesting to explore the impact of these variables on user behavioral intention. Third, this study did not include cultural factors that are important in shaping an individual's behavioral intentions to adopt MSC. Future studies may explore cultural factors, including attitudes, values, norms, and human behaviours, among others, involved in MSC adoption across countries. Finally, the data were collected from South Korea, which restricts the generalizability of the research results; therefore, subsequent studies may investigate other countries and accompanying cultures to grasp the utilization of MSC.

Acknowledgement

The authors are grateful to the respondents of this study.

CRedit Authorship Contribution Statement

Jafar Ali: Conceptualization, data curation, formal analysis, funding acquisition. Shoaib Imtiaz: Investigation, methodology, writing original draft. Dae Wan Kim: Project administration, resources, software, supervision, validation, visualization, writing review & editing.

Declaration of Competing Interest

The authors declare no competing interests. They declare the absence of any relevant financial or non- financial conflicts of interest.

Fundings

The authors confirm that this research received no funding from external sources.

Ethical Statement

This study adhered to ethical standards, and ethical approval was unnecessary as no human tissue or biological samples were used.

Data Availability Statement

Upon reasonable request, respondents' data without confidential information are available for academic purposes only.

Artificial Intelligence/ Language Module Statement

The authors confirm that no artificial intelligence or Large Language Models (LLMs) were employed in the writing, analysis, or editing of this research, and they collectively assume full responsibility for its content.

References

- Abed, S. (2018). An empirical examination of Instagram as an s-commerce channel. *Journal of Advances in Management Research*, 15(2), 146-160. <https://doi.org/10.1108/jamr-05-2017-0057>
- Adam, I. O., & Alhassan, M. D. (2021). Social Media and E-Commerce at the Global Level: Do ICT Access and ICT Skills Matter? *International Journal of E-Business Research (IJEER)*, 17(4), 1-18. <https://doi.org/10.4018/IJEER.2021100101>
- Al-Saedi, K., Al-Emran, M., Ramayah, T., & Abusham, E. (2020). Developing a general extended UTAUT model for M-payment adoption. *Technology in Society*, 62, 101293. <https://doi.org/10.1016/j.techsoc.2020.101293>
- Alalwan, A. A. (2020). Mobile food ordering apps: An empirical study of the factors affecting customer e-satisfaction and continued intention to reuse. *International Journal of Information Management*, 50, 28-44. <https://doi.org/10.1016/j.jinfomgt.2019.04.008>
- Alalwan, A. A., Dwivedi, Y. K., Rana, N. P., & Algharabat, R. (2018). Examining factors influencing Jordanian customers' intentions and adoption of internet banking: Extending UTAUT2 with risk. *Journal of Retailing and Consumer Services*, 40, 125-138. <https://doi.org/10.1016/j.jretconser.2017.08.026>
- Alam, M. Z., Hoque, M. R., Hu, W., & Barua, Z. (2020). Factors influencing the adoption of mHealth services in a developing country: A patient-centric study. *International Journal of Information Management*, 50, 128-143. <https://doi.org/10.1016/j.jinfomgt.2019.04.016>
- Altay, S., & Yaprakli, T. S. (2024). The Relationship Among U-Constructs, Trust and Satisfaction: Evidence from Mobile Banking Users. *International Journal of Management Studies (IJMS)*, 31(1), 171-208. <https://doi.org/10.32890/ijms2024.31.1.7>
- Althuizen, N. (2018). Using structural technology acceptance models to segment intended users of a new technology: Propositions and an empirical illustration. *Information Systems Journal*, 28(5), 879-904. <https://doi.org/10.1111/isj.12172>
- Anderson, J. C., & Gerbing, D. W. (1988). Structural Equation Modeling in Practice: A Review and Recommended Two-Step Approach. *Psychological Bulletin*, 103(3), 411-423. <https://doi.org/10.1037/0033-2909.103.3.411>
- Anwar, A., Thongpapanl, N., & Ashraf, A. R. (2021). Strategic imperatives of mobile commerce in developing countries: the influence of consumer innovativeness, ubiquity, perceived value, risk, and cost on usage. *Journal of Strategic Marketing*, 29(8), 722-742. <https://doi.org/10.1080/0965254X.2020.1786847>
- Baishya, K., & Samalia, H. V. (2020). Extending unified theory of acceptance and use of technology with perceived monetary value for smartphone adoption at the bottom of the pyramid. *International Journal of Information Management*, 51, 102036. <https://doi.org/10.1016/j.jinfomgt.2019.11.004>
- Batkovic, I., & Batkovic, R. (2015). Understanding Consumer Acceptance of Mobile-Retail: An Empirical Analysis of the Revised Technology Acceptance Model. *MSc Marketing and Consumption*, 1-14. <https://gupea.ub.gu.se/handle/2077/39846>
- Bhattacharjee, A. (2012). *Social Science Research: Principles, Methods, and Practices*. University of South Florida. https://scholarcommons.usf.edu/oa_textbooks/3
- Chao, C.-M. (2019). Factors Determining the Behavioral Intention to Use Mobile Learning: An Application and Extension of the UTAUT Model. *Frontiers in Psychology*, 10, 1652. <https://doi.org/10.3389/fpsyg.2019.01652>
- Choi, B.-N., & Yang, H.-C. (2018). A Study on Revitalization of Revenue through Difference of Consumer Perception of Characteristics of Mobile Social Commerce. *The Journal of Business, Economics, and Environmental Studies*, 8(1), 31-38. <https://scholar.kyobobook.co.kr/article/detail/4010026119484>
- Choi, S. (2018). What promotes smartphone-based mobile commerce? Mobile-specific and self-service characteristics. *Internet Research*, 28(1), 105-122. <https://doi.org/10.1108/IntR-10-2016-0287>
- Chong, A. Y.-L. (2013). Predicting m-commerce adoption determinants: A neural network approach. *Expert Systems with Applications*, 40(2), 523-530. <https://doi.org/10.1016/j.eswa.2012.07.068>
- Chong, A. Y.-L., Chan, F. T. S., & Ooi, K.-B. (2012). Predicting consumer decisions to adopt mobile commerce: Cross country empirical examination between China and Malaysia. *Decision Support Systems*, 53(1), 34-43. <https://doi.org/10.1016/j.dss.2011.12.001>
- Coursaris, C., & Hassanein, K. (2002). Understanding m-Commerce: A Consumer - Centric Model. *Quarterly Journal of Electronic Commerce*, 3(3), 247-272. <https://www.researchgate.net/publication/228936046>
- Davis, F. D. (1989). Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. *MIS Quarterly*, 13(3), 319-340. <https://doi.org/10.2307/249008>
- Dhar, S., & Varshney, U. (2011). Challenges and Business Models for Mobile Location-Based Services and Advertising. *Communications of the ACM*, 54(5), 121-128. <https://doi.org/10.1145/1941487.1941515>
- Duarte, P., & Pinho, J. C. (2019). A mixed methods UTAUT2-based approach to assess mobile health adoption. *Journal of Business Research*, 102, 140-150. <https://doi.org/10.1016/j.jbusres.2019.05.022>
- Efron, B., & Tibshirani, R. J. (1994). *An Introduction to the Bootstrap*. Chapman and Hall/CRC. <https://doi.org/10.1201/9780429246593>
- Evans, J. R., & Mathur, A. (2005). The value of online surveys. *Internet Research*, 15(2), 195-219. <https://doi.org/10.1108/10662240510590360>
- Fink, D., & Laupase, R. (2000). Perceptions of Web site design characteristics: a Malaysian/Australian comparison. *Internet Research*, 10(1), 44-55. <https://doi.org/10.1108/10662240010312084>
- Fishbein, M., & Ajzen, I. (1975). *Belief, Attitude, Intention and Behavior: An Introduction to Theory and Research*. Addison-Wesley.
- Fornell, C., & Larcker, D. F. (1981). Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *Journal of Marketing Research*, 18(1), 39-50. <https://doi.org/10.1177/00224378101800104>
- Gefen, D., Straub, D., & Boudreau, M.-C. (2000). Structural Equation Modeling and Regression: Guidelines for Research Practice. *Communications of the Association for Information Systems*, 4(1), 7. <https://doi.org/10.17705/1CAIS.00407>
- Hair, J. F., Sarstedt, M., Ringle, C. M., & Mena, J. A. (2012). An assessment of the use of partial least squares structural equation

- modeling in marketing research. *Journal of the Academy of Marketing Science*, 40(3), 414-433. <https://doi.org/10.1007/s11747-011-0261-6>
- Hairudin, H., Mohamed Dahlan, H., Selamat, M. H., & Che Hussin, A. R. (2019). Follower's Quality Factor in Social Commerce. *Journal of Physics: Conference Series*, 1196(1), 012002. <https://doi.org/10.1088/1742-6596/1196/1/012002>
- Hajli, N., Sims, J., Zadeh, A. H., & Richard, M.-O. (2017). A social commerce investigation of the role of trust in a social networking site on purchase intentions. *Journal of Business Research*, 71, 133-141. <https://doi.org/10.1016/j.jbusres.2016.10.004>
- Han, S.-L., & Park, H.-J. (2016). Effects of Technology Readiness on User Perceptions and Use Intention of Mobile Social Commerce. *Asia Marketing Journal*, 18(2), 2. <https://doi.org/10.15830/amj.2016.18.2.25>
- Havelka, S. (2013). Mobile Information Literacy: Supporting Students' Research and Information Needs in a Mobile World. *Internet Reference Services Quarterly*, 18(3-4), 189-209. <https://doi.org/10.1080/10875301.2013.856366>
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43(1), 115-135. <https://doi.org/10.1007/s11747-014-0403-8>
- Hew, J.-J., Lee, V.-H., Ooi, K.-B., & Lin, B. (2016). Mobile social commerce: The booster for brand loyalty? *Computers in Human Behavior*, 59, 142-154. <https://doi.org/10.1016/j.chb.2016.01.027>
- Hew, J.-J., Leong, L.-Y., Tan, G. W.-H., Ooi, K.-B., & Lee, V.-H. (2019). The age of mobile social commerce: An Artificial Neural Network analysis on its resistances. *Technological Forecasting and Social Change*, 144, 311-324. <https://doi.org/10.1016/j.techfore.2017.10.007>
- Huh, J.-H., & Seo, Y.-S. (2021). A Location-Based Solution for Social Network Service and Android Marketing Using Augmented Reality. In J. J. Park, S. J. Fong, Y. Pan, & Y. Sung (Eds.), *Advances in Computer Science and Ubiquitous Computing* (pp. 569-573). Springer Singapore. https://doi.org/10.1007/978-981-15-9343-7_80
- Imtiaz, S. (2018). The Studies of Unified Theory of Acceptance and Use of Technology (UTAUT) in M-Commerce Context. *International Journal of Information Communication Technology and Digital Convergence*, 3(1), 42-56. <https://www.earticle.net/Article/A340339>
- Imtiaz, S., Ali, J., Siddique, M. A., & Tanveer, M. A. (2018). Internet-based brand loyalty in male and female: "It is difficult to attain male customers but easier to retain, female customers are easier to attain but difficult to retain". *International Journal of Information Communication Technology and Digital Convergence*, 3(2), 38-49. <https://www.earticle.net/Article/A349348>
- Imtiaz, S., Ali, S. H., & Kim, D. J. (2020). E-Commerce Growth in Pakistan: Privacy, Security, and Trust as Potential Issues. *Culinary Science & Hospitality Research*, 26(2), 10-18. <https://doi.org/10.20878/cshr.2020.26.2.002>
- Imtiaz, S., & Kim, D. J. (2019). Digital Transformation: Development of New Business Models in the Tourism Industry. *Culinary Science & Hospitality Research*, 25(4), 91-101. <https://doi.org/10.20878/cshr.2019.25.4.010>
- Irani, Z., Dwivedi, Y. K., & Williams, M. D. (2009). Understanding consumer adoption of broadband: an extension of the technology acceptance model. *Journal of the Operational Research Society*, 60(10), 1322-1334. <https://doi.org/10.1057/jors.2008.100>
- Jeon, M. M., Lee, S., & Jeong, M. (2018). e-Social Influence and Customers' Behavioral Intentions on a Bed and Breakfast Website. *Journal of Hospitality Marketing & Management*, 27(3), 366-385. <https://doi.org/10.1080/19368623.2017.1367346>
- Junglas, L., & Watson, R. T. (2006). The U-Constructs: Four Information Drives. *Communications of the Association for Information Systems*, 17(1), 569-592. <https://doi.org/10.17705/1CAIS.01726>
- Junglas, L. A., & Watson, R. T. (2008). Location-Based Services. *Communications of the ACM*, 51(3), 65-69. <https://doi.org/10.1145/1325555.1325568>
- Kennedy, G., Dalgarno, B., Bennett, S., Judd, T., Gray, K., & Chang, R. (2008). Immigrants and Natives: Investigating Differences Between Staff and Students' Use of Technology. In R. Atkinson & C. McBeath (Eds.), *Hello! Where Are You in the Landscape of Educational Technology?* (pp. 484-492). ASCILITE. <https://www.ascilite.org/conferences/melbourne08/procs/kennedy.pdf>
- Khan, M., Parvaiz, G. S., Bashir, N., Imtiaz, S., & Bae, J. (2022). Students' key determinant structure towards educational technology acceptance at universities, during COVID 19 lockdown: Pakistani perspective. *Cogent Education*, 9(1), 2039088. <https://doi.org/10.1080/2331186X.2022.2039088>
- Khan, M. A., Al Raja, M. N., & Al-Shanfari, S. S. A. (2019). The effect of Effort expectancy, Ubiquity, and Context on intention to use online applications. In *2019 International Conference on Digitization (ICD)* (pp. 123-128). IEEE. <https://doi.org/10.1109/ICD47981.2019.9105662>
- Kim, C., Mirusmonov, M., & Lee, I. (2010). An empirical examination of factors influencing the intention to use mobile payment. *Computers in Human Behavior*, 26(3), 310-322. <https://doi.org/10.1016/j.chb.2009.10.013>
- Kim, D. W., Lee, S., & Li, W. (2020). Factors influencing continued use intentions in mobile shopping: the case of South Korea. *International Journal of Business and Emerging Markets*, 12(1), 66-93. <https://doi.org/10.1504/ijbem.2020.106203>
- Kim, S., & Garrison, G. (2009). Investigating mobile wireless technology adoption: An extension of the technology acceptance model. *Information Systems Frontiers*, 11(3), 323-333. <https://doi.org/10.1007/s10796-008-9073-8>
- Kucukcay, I. E., & Benyoucef, M. (2014). Mobile Social Commerce Implementation. In *Proceedings of the 6th international conference on Management of Emergent Digital EcoSystems* (pp. 1-8). Association for Computing Machinery. <https://doi.org/10.1145/2668260.2668276>
- Kumar, V. (2018). Transformative Marketing: The Next 20 Years. *Journal of Marketing*, 82(4), 1-12. <https://doi.org/10.1509/jm.82.41>
- Kurtz, O. T., Wirtz, B. W., & Langer, P. F. (2021). An Empirical Analysis of Location-Based Mobile Advertising—Determinants, Success Factors, and Moderating Effects. *Journal of Interactive Marketing*, 54(1), 69-85. <https://doi.org/10.1016/j.intmar.2020.08.001>
- Lee, T.-M., La, S., & Song, S. Y. (2009). MOBISQUAL: Dimensionalizing and Measuring Mobile Internet Service Quality. *Journal of Korean Marketing Association*, 24(1), 145-179. https://www.kci.go.kr/kciportal/landing/article.kci?arti_id=ART001332190
- Liang, T.-P., Ho, Y.-T., Li, Y.-W., & Turban, E. (2011). What Drives Social Commerce: The Role of Social Support and Relationship Quality. *International Journal of Electronic Commerce*, 16(2), 69-90. <https://doi.org/10.2753/JEC1086-4415160204>
- Liébana-Cabanillas, F., Marinković, V., & Kalinić, Z. (2017). A SEM-neural network approach for predicting antecedents of m-commerce acceptance. *International Journal of Information Management*, 37(2), 14-24. <https://doi.org/10.1016/j.ijinfomgt.2016.10.008>
- Liu, Y., Li, Q., Edu, T., Fam, K.-S., Zaharia, R., & Negricea, C. (2023). Mobile social commerce content, consumer emotions and behaviour. *International Journal of Consumer Studies*, 47(4), 1315-1334. <https://doi.org/10.1111/ijcs.12908>

- Mallat, N., Rossi, M., Tuunainen, V. K., & Öörni, A. (2008). An empirical investigation of mobile ticketing service adoption in public transportation. *Personal and Ubiquitous Computing*, 12(1), 57-65. <https://doi.org/10.1007/s00779-006-0126-z>
- Mallat, N., Rossi, M., Tuunainen, V. K., & Öörni, A. (2009). The impact of use context on mobile services acceptance: The case of mobile ticketing. *Information & Management*, 46(3), 190-195. <https://doi.org/10.1016/j.im.2008.11.008>
- Matula, K. (2020). Mobile Information Literacy: More Skills for Users of Information? *Qualitative and Quantitative Methods in Libraries*, 9(4), 601-609. <https://www.qqml-journal.net/index.php/qqml/article/view/605>
- Min, Q., Ji, S., & Qu, G. (2008). Mobile commerce user acceptance study in China: A revised UTAUT model. *Tsinghua Science and Technology*, 13(3), 257-264. [https://doi.org/10.1016/S1007-0214\(08\)70042-7](https://doi.org/10.1016/S1007-0214(08)70042-7)
- Nunnally, J. C. (1978). *Psychometric Theory*. McGraw-Hill.
- Okazaki, S., & Mendez, F. (2013). Perceived Ubiquity in Mobile Services. *Journal of Interactive Marketing*, 27(2), 98-111. <https://doi.org/10.1016/j.intmar.2012.10.001>
- Ooi, K.-B., Hew, J.-J., & Lin, B. (2018). Unfolding the privacy paradox among mobile social commerce users: a multi-mediation approach. *Behaviour & Information Technology*, 37(6), 575-595. <https://doi.org/10.1080/0144929X.2018.1465997>
- Park, S. Y. (2009). An Analysis of the Technology Acceptance Model in Understanding University Students' Behavioral Intention to Use e-Learning. *Journal of Educational Technology & Society*, 12(3), 150-162. <https://www.jstor.org/stable/jeductechsoci.12.3.150>
- Pietri, N. O., Chou, X., Loske, D., Klumpp, M., & Montemanni, R. (2021). The Buy-Online-Pick-Up-in-Store Retailing Model: Optimization Strategies for In-Store Picking and Packing. *Algorithms*, 14(12), 350. <https://doi.org/10.3390/a14120350>
- Pinto, M., Sales, D., Fernández-Pascual, R., & Caballero-Mariscal, D. (2020). Attitudes, perceptions and prospectings on mobile information literacy training: Design and validation of the MOBILE-APP questionnaire. *Journal of Librarianship and Information Science*, 52(1), 208-223. <https://doi.org/10.1177/0961000618788726>
- Rahi, S., & Abd.Ghani, M. (2019). Investigating the role of UTAUT and e-service quality in internet banking adoption setting. *The TQM Journal*, 31(3), 491-506. <https://doi.org/10.1108/tqm-02-2018-0018>
- Rashid, R. M., Rashid, Q. U. A., Jiang, C., & Pitafi, A. H. (2022). Role of ubiquity in m-commerce shopping intentions: a comparative study. *International Journal of Mobile Communications*, 20(2), 220-241. <https://doi.org/10.1504/ijmc.2022.121434>
- Raza, S. A., Shah, N., & Ali, M. (2018). Acceptance of mobile banking in Islamic banks: evidence from modified UTAUT model. *Journal of Islamic Marketing*, 10(1), 357-376. <https://doi.org/10.1108/jima-04-2017-0038>
- Schierz, P. G., Schilke, O., & Wirtz, B. W. (2010). Understanding consumer acceptance of mobile payment services: An empirical analysis. *Electronic Commerce Research and Applications*, 9(3), 209-216. <https://doi.org/10.1016/j.elerap.2009.07.005>
- Shareef, M. A., Baabdullah, A., Dutta, S., Kumar, V., & Dwivedi, Y. K. (2018). Consumer adoption of mobile banking services: An empirical examination of factors according to adoption stages. *Journal of Retailing and Consumer Services*, 43, 54-67. <https://doi.org/10.1016/j.jretconser.2018.03.003>
- Shareef, M. A., Dwivedi, Y. K., Kumar, V., & Kumar, U. (2017). Content design of advertisement for consumer exposure: Mobile marketing through short messaging service. *International Journal of Information Management*, 37(4), 257-268. <https://doi.org/10.1016/j.ijinfomgt.2017.02.003>
- Sun, Q., & Xu, B. (2019). Mobile Social Commerce: Current State and Future Directions. *Journal of Global Marketing*, 32(5), 306-318. <https://doi.org/10.1080/08911762.2019.1620902>
- Tak, P., & Panwar, S. (2017). Using UTAUT 2 model to predict mobile app based shopping: evidences from India. *Journal of Indian Business Research*, 9(3), 248-264. <https://doi.org/10.1108/jibr-11-2016-0132>
- Tarhini, A., Alalwan, A. A., Shammout, A. B., & Al-Badi, A. (2019). An analysis of the factors affecting mobile commerce adoption in developing countries: Towards an integrated model. *Review of International Business and Strategy*, 29(3), 157-179. <https://doi.org/10.1108/ribs-10-2018-0092>
- Tsai, W.-C. (2012). A study of consumer behavioral intention to use e-books: the Technology Acceptance Model perspective. *Innovative Marketing*, 8(4), 55-66. https://www.businessperspectives.org/images/pdf/applications/publishing/templates/article/assets/4968/im_en_2012_04_Tsai.pdf
- Tsikriktsis, N. (2002). Does Culture Influence Web Site Quality Expectations?: An Empirical Study. *Journal of Service Research*, 5(2), 101-112. <https://doi.org/10.1177/109467002237490>
- Uzoka, F.-M. E. (2008). Organisational influences on e-commerce adoption in a developing country context using UTAUT. *International Journal of Business Information Systems*, 3(3), 300-316. <https://doi.org/10.1504/ijbis.2008.017287>
- van Biljon, J., Traxler, J., van der Merwe, R., & Van Heerden, D. (2015). Curriculum Development for Mobile Digital Literacy Skills Acquisition Using a Design Science Approach. *The Journal of Community Informatics*, 11(3). <https://doi.org/10.15353/joci.v11i3.2703>
- Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User Acceptance of Information Technology: Toward a Unified View. *MIS Quarterly*, 27(3), 425-478. <https://doi.org/10.2307/30036540>
- Venkatesh, V., Thong, J. Y. L., & Xu, X. (2012). Consumer Acceptance and Use of Information Technology: Extending the Unified Theory of Acceptance and Use of Technology. *MIS Quarterly*, 36(1), 157-178. <https://doi.org/10.2307/41410412>
- Zahir, S., & Imtiaz, S. (2019). Towards the Digitalized Bank in the Age of Digital Convergence: Focusing on Pakistan Case. *Journal of Information Communication Technology and Digital Convergence*, 4(2), 1-12. <https://www.earticle.net/Article/A370782>
- Zhang, Z., & Wang, H. (2019). How online social ties and product-related factors influence purchasing intention in mobile social commerce context? *International Journal of Mobile Communications*, 17(2), 191-212. <https://doi.org/10.1504/ijmc.2019.098063>
- Zhou, M., Zhao, L., Kong, N., Campy, K. S., Xu, G., Zhu, G., et al. (2020). Understanding consumers' behavior to adopt self-service parcel services for last-mile delivery. *Journal of Retailing and Consumer Services*, 52, 101911. <https://doi.org/10.1016/j.jretconser.2019.101911>
- Zhou, T. (2013). An empirical examination of user adoption of location-based services. *Electronic Commerce Research*, 13(1), 25-39. <https://doi.org/10.1007/s10660-013-9106-3>
- Zimmerman, M. S., & Ni, C. (2021). What we talk about when we talk about information literacy. *IFLA Journal*, 47(4), 453-467. <https://doi.org/10.1177/0340035221989367>