ORIGINAL CONTRIBUTION

Impact of Mobile Application Compatibility, Online Shopping and Payment on the User Satisfaction in Pakistan Context: Mediating role of Social Networking Site Adoption

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Abstract— This study aims to examine the adoption of mobile commerce in Pakistan by specifically considering the impact of mobile application compatibility, online shopping and online payment on its user satisfaction. This study is also an informative source to critically examine the mediating role of social media networking site adoption within these variables' relationship by covering the previous studies' gaps. To fulfill this aim, an online survey-based quantitative research design approach was used with a sample size of 427 (M = 237, F = 190) and a simple random sampling strategy was adopted. The sample consisted of people who actively used social media sites and mobile apps for online shopping. After collecting their reliable outcomes, the SPSS and smart PLS software utilized in analysis the reliable outcomes of which depicted that there is a significant impact of mobile application compatibility, online shopping and online payment on the user satisfaction for adopting mobile commerce under the mediating role of Social Networking Sites (SNS) adoption in Pakistan context. The study at hand is an authentic and reliable source of information because of its managerial and theoretical implications in the field of m-commerce. In addition to this, there is also an opportunity in front of upcoming scholars to cover its methodological and contextual gap in their future studies.
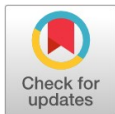
Introduction

Internet-based technologies in today's world have transformed power, speed and connectivity. It had redefined the ways how people would work, grow or handle their routine works and activities (Rauniar, 2013). The most popular technological invention is the social media networking sites which have gained popularity among all the people or communities all around the world. Nowadays the use of mobile technology is a prime interest in comparison to various technology devices as these are equipped with various social networking websites, application (Capatinaa, 2020). Through which the people can perform their routine task easily which they have to perform on

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the laptops and PC'S. However, the use of these technologies has urged the organization to use SNS to advertise the products and services. Mobile commerce had emerged because of the mobile technologies used in the business as a new thing. M-commerce is different from traditional e-commerce because it provides more advantages as it provides personalization, identification and communication with the consumers (Zheng, 2019). The increase in mobile commerce in the world is because the internet users are increasing in the world day by day as modern mobile devices are featured with mobile applications for web browsing, websites for online shopping and paying online makes enable the users to be more efficient in their activities (Mishra, 2015). However, many factors have led people not to use social media networking sites for adopting mobile commerce. Because of the lack of trust, risk of fraud, and the risk in the online transaction and payments. These factors have not led to its growth in many developing counties. In Pakistan, the use of mobile technology is huge as Pakistan telecommunication authority had reported growth in tele density from 2002 to 2017 which has been increased from 4.2% to 72.4%. Due to this development, the increase in the use of mobile phones had been observed more. There is an estimate of more than 100 million users of mobile phones. But the mobile commerce market is still emerging in Pakistan (Rind, 2017). Globally the mobile commerce usage percentage had been grown by 13.4% as the countries internationally such as China, India, Japan, Korea are adopting mobile commerce. In Kenya and Ghana, the widely accepted phenomenon by businesses, institutions and consumers is mobile commerce (Lamptey, 2018).

However, its acceptance is disturbed in developing countries. So, the developing countries like Pakistan had to work on the promotion of M-commerce is now globally this the need of current era to be technologically equipped. Online shopping is associated with mobile commerce as the traditional form of shopping and commerce had transformed the mobile shopping environment. Online shopping is the way how in which consumers search and browse for the products they want and use the platforms for payment. The change in the Pakistan financial transaction ways has increased the mobile commerce transaction by the people in their routine life. In the current digital era, the majority of online shopping, electricity bills, mobile bills, mobile charges or other related payments occurred by utilizing mobile technology. It is an efficient source to transfer via mobile without using any check, credit card or cash (Humbani, 2017).

According to a Danish study investigating the behavior of teenagers and digital purchasing many features of present day mobile technology has significantly impacted the attraction in teenagers towards SNS, mobile applications in addition to online shopping and online payment practices (Mainali, 2017). In the past various studies have been conducted to study the consumer adoption of mobile commerce (Anckar & Walden, 2003).

A study conducted by (Sair, 2018) to check the impact of the performance expectancy and effort expectancy on behavioral intentions of the Pakistani consumers towards the M-commerce adoption with the mediating role of personal innovativeness explaining, that these factors positively affect the user adoption. But the researcher provides the gap to study the pre and post-adoption of the mobile application or SNS. Moreover, another study studying the online shopping adoption by the consumers through the technology acceptance model by (Mijoska, 2017) had explained the positive role of perceived usefulness and perceived ease of using mobile technology on attitude and intentions of online shopping with the mediating role of consumer trust. Thus providing the insights to study other factors such as satisfaction, anxiety that can hinder the adoption of mobile commerce. The gaps in the previous literature and related studies focusing on the acceptance of mobile commerce have discounted the need to understand user satisfaction in adopting mobile commerce by using SNS (Ghobakhloo, Tang, & Zulkifli, 2013).

This study is aimed to study the adoption of mobile commerce in Pakistan by having the following research objectives. 1) To study the impact of mobile application compatibility on user satisfaction for adopting mobile commerce 2) To study the impact of online shopping on user satisfaction. 3) To study the impact of online payment on user satisfaction for adopting mobile commerce in the Pakistan context. 4) To examine the mediating impact of SNS adoption among the variables. Considering the importance of studying the adoption of mobile commerce raised by various researchers in their studies. A study conducted by Liyi Zhang (2012) to analyses the adoption of M-commerce with moderating impact of culture explained that it will beneficial for the providers and operators of m-commerce who want to promote the acceptance of m-commerce among consumers. Furthermore, the importance of using the SNS for mobile commerce had been raised by the researchers in their studies that social media sites use with mobile help to develop the trust of consumers (Benson, 2015; Moustakas, 2015). Considering the significance raised by the researchers in their studies. The paper is organized in the following sections Section 2 literature review explaining the theoretical relationship among the variables. Section 3 methodology adopted including analysis, collection of data. Section 4 presents the statistical analysis and results of the study. However section 5, 6 includes the discussion and conclusions.

Recently a meta-analysis study was conducted by Sarkara, Chauhanb, and Kharea (2020) that examined the impact of technology acceptance factors (perceived usefulness and perceived ease of use), quality factors (system quality, information quality, service quality, and user interface), risk factors (structural assurance, perceived security, perceived risk, and perceived privacy), mobile factor (ubiquity), and individual factor (disposition to trust) on trust in m-commerce. All the hypothesized antecedents of trust in m-commerce were significant except perceived privacy. Added, the study found that trust in m-commerce influences various behavioral outcome such as attitude, user satisfaction, behavioral intention and loyalty.

Literature Review

Uses and Gratification (U&G) Theory

The theory is related to understand the consumers or users' needs and satisfaction that they get through the use of social media. As the study is related to user satisfaction in adopting SNS for, mobile commerce. The theory is related to study the motives of the consumers to use the particular social media (Griffin, 2019). The researchers suggest that the motivation and the positive influence in the social media content creating can fulfil the users' needs thus, providing them satisfaction. The theory had been started from the use of the traditional means of electronic media such as radio, television newspaper. However, many studies have used the U&G theory for studying why people use the social media sites such as Facebook and others as well (Tanta, 2014). Many researchers in the past have utilized the theory from different perspectives such as for social satisfaction, of the users or the pleasure or entertainment satisfaction. But this study is related to user satisfaction based on adopting SNS for mobile commerce. So, this theory will act as a theoretical base to provide insights to the researcher.

Mobile Application Compatibility (MA) and US of Adopting Mobile Commerce

Social media applications in mobile phones provide access to the people or users to communicate, share information related to the products they purchase through social media networking sites (Drakopoulou, 2017). These applications provide them with compatibility to browse the websites for doing mobile shopping. The studies suggest that social media usage affects the consumers or uses behaviours and allows the greater involvement in the SNS. The social media application in mobile phones has led to the increase in mobile commerce. Many studies have explained that social media applications affect consumers buying intentions and create trust among them (Hajli, 2014). Conferring to the studies of (Ye, 2017) conducted to know about Chinese user satisfaction towards mobile commerce explained that, wireless technologies and the compatibility of the social media used for mobile shopping positively affect the user satisfaction for adopting mobile commerce. However, to study the effect of (MA) compatibility on the user satisfaction of adopting mobile commerce had not been studied. But according to an empirical study by Lee, Tsao and Chang, (2015) a relationship between consumer satisfaction and mobile application was found. Keeping this in view in addition to the discussion above following can be hypothesized;

H1: Mobile application compatibility had a significant relation with user satisfaction for adopting M-commerce

Online Shopping and US of Adopting Mobile Commerce

Online shopping is becoming popular among consumers globally as it provides an ease to people. Various studies have been conducted to know about the online consumer's behavior how it is affected. Several factors have been studied in the form of demographical factors or cultural factors which cast an impact on the consumer acceptance of online shopping (Zhou, 2017). As studies relating to the acceptance of online shopping among consumers through the technology acceptance model had been widely studied. A study relating to consumer acceptance of mobile technologies for online shopping had explained that the mobile technologies equipped with features of online shopping affect user acceptance (Shukla, 2018). However, another study conducted to know about the factors that help to create user satisfaction through mobile commerce and mobile marketing explained that Online shopping through mobile commerce affects user satisfaction positively. However, many studies have reported that because of the risk factor in online shopping the consumer loses their trust thus they feel unsatisfied and are reluctant to shop online. Thus, explaining that the factor of risk can affect the user satisfaction of adopting mobile commerce (Rind, 2017). So based on the above literature it is proposed that;

H2: Online shopping had a significant relation with user satisfaction (US) of adopting M-commerce

Online Payment and User Satisfaction for Adopting Mobile Commerce

The technology of mobile is growing at an incredible speed in all countries of the world through accommodating individuals and organizations with online payment. Mobile payment services, also known as online payment can be defined as the type of combinative technologies use which enables the users to carry out a financial transaction successfully by transferring the monetary value of the transaction over the mobile terminals to the main recipient and this process is essentially carried out using a mobile device (Jarrett, 2016). The studies relating to how the factors affect the online payment acceptance among the consumers in the mobile commerce using technology acceptance model had been studied (Humbani, 2017). As different studies revealed that the demographic factors and higher education level influence the consumer's acceptance of online payment (Barkhordari, 2017; Song, 2017). However, no studies have been conducted to examine the impact of online payment on user satisfaction for accepting mobile commerce. So based on the above discussion the proposed hypothesis is as;

H3: Online payment had a significant relation with the user satisfaction for adopting M-Commerce

Mediating Impact of SNS among Mobile Application Compatibility and User Satisfaction

Consumers are involved in social interaction through the use of SNS that are available in mobile applications (Hajli, 2014). The consumers interact with each other by sharing information, reviews and comments. Mobile application use provides the platform to consumers to adopt social, media networking sites. This has led to the increase in social commerce as well as the development of mobile commerce in which the consumers purchase and interact with other consumers (Pelet, 2015). Through the social media apps in mobile phones and their use by the users have led to the increase in mobile commerce as the consumers or users of the mobile phones use the (SNS) for doing buying or sharing information. As the information shared on the (SNS) increases customer trust and thus, enhance user satisfaction. So based on the discussion above the following hypothesis is proposed;

H4: SNS adoption had a significant mediating impact between (MA) and User Satisfaction for adopting M-commerce.

Mediating impact of SNS among online shopping and user satisfaction

The use of SNS by the users has led to the increase in shopping online thus enhancing mobile commerce growth. However, we can say that online shopping allows the users of social media to adopt social media networking sites as it provides them with vast ease of shopping. As in online shopping, the use of social media and mobile commerce is affected by several factors as the customers have trust issues relating to the use of the product (Yanga, 2018). Moreover, the reputation of the product is dependent upon social media. It is found by the studies that (SNS) allows the users to be on the specific page or website for online shopping thus enhancing user satisfaction of mobile commerce adoption. As the consumers want to save time through (OS) so, the (SNS) provide them with relevant information thus enhancing their experience of (OS). Many organizations advertise or use social media marketing to urge online shopping and gain the trust of consumers (Bekmagambetov, 2018). So, based on the discussion the proposed hypothesis is as follow;

H5: SNS had a significant mediating impact between (OS) and user satisfaction for adopting m-commerce

Mediating Impact of SNS among Online Payment and User Satisfaction

Online payment is done in online shopping and it has been emerged because of the technological advancement in the banking transaction. Consumers who use mobile phones to shop online have the concern of risk associated with online payment. But the mobile application used for online payment is the primary marketing tool used by organizations to gain the trust of their customers (Malik, 2017). OP provides ease and access to the consumers that help them to make payments in online shopping anywhere or at a convenient time. The security of the transaction provided by the organization that is doing the mobile marketing or are involved in the online shopping business will affect consumers buying behaviours and thus, affects the consumer's experience and trust issues (Martins, 2019). For making online payment the consumers are encouraged to adopt the (SNS) which provide them with the security of doing transactions. Many studies claim that consumers hesitate to buy online because of the mode of the payments systems (Song, 2017). Concluding on the discussion above the proposed hypothesis is as;

H6: SNS had a significant mediating impact between online payment and the user satisfaction for adopting M-commerce.
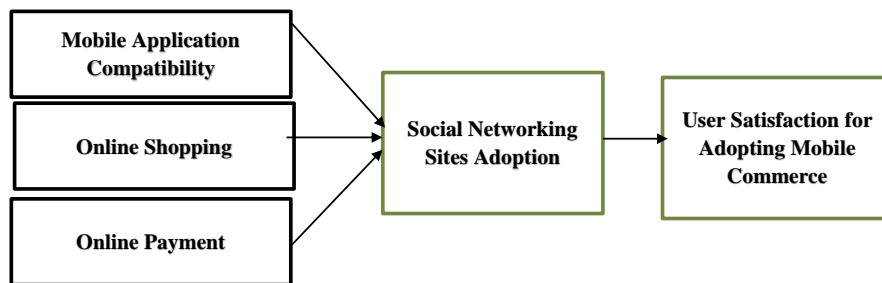

Fig. 1. Uses and gratification-based framework

Methodology

Research Design and Data Collection

To fulfill the aim of this research study, a quantitative research design approach is specifically considered. A quantitative research design is a process of collecting and analyzing the numerical data that majorly used to find averages, test the casual relationship, made predictions,

and implement the outcomes to a wider population (Dannels, 2018; Goertzen, 2017). In this descriptive research design, different online surveys were conducted with social media users in Pakistan.

Sampling and Respondents Demographics

In its data collection mechanism, a simple random sampling technique has been adopted so that more authentic and highly acceptable respondent outcomes have been generated. As this research study majorly focused on Pakistani consumer market so online questionnaires were widely distributed among the target audience in which 427 out of 550 respondents gave their valid outcomes. As far as considering its demographic analysis-based authentic outcomes, it becomes clear that the frequency of male active respondents was 237 (56%), while 190 (45%) of them were females. While, in their age-based segregation, it becomes clear that 31% of respondents were less than 25 years old (133 in frequency), 43% were from 25 to 35 years old (182 in frequency), 23% were from 35 to 45 years old (96 in frequency), and only 4% were within the age group of more than 45 years old (16 in frequency). Last, but not the least, demographic factor is based on social media usage in which 70 respondents spent less than 30 hours on social media sites, while 180 of them spent 4 to 7 hours, 137 spent 7 to 10 hours, and only 40 respondents spent more than 10 years on such websites. This shows that majority of the active respondents were based on young Pakistani males who actively participate in social media sites.

Measures

In order to critically measure the tested variables, authentic studies have been considered. Like within this framework, there are three independent variables i.e., mobile application compatibility, online shopping and online payment, while one dependent i.e., user satisfaction for adopting mobile commerce and one mediator i.e., social networking site adoption. The mobile application compatibility variable was measured through four measuring indicators, developed by Chiu, Cheng, Huang, and Chen (2013); after this, online shopping was measured through four measuring indicators (Teas & Agarwal, 2000) and online payment was measured through three measuring indicators (Lin & Lu, 2011). While, these independent variables have already been utilized by (Hossain, Xi, Nurunnabi, & Hussain, 2020) in their research study. The user satisfaction for adopting mobile commerce was critically measured through three indicators (Lin, Fan, & Chau, 2014) and social networking site adoption was analyzed through three measuring factors (Lin, 2007) which has already been considered by (Shao, Zhang, Chen, & Zhang, 2020) in their research study. To significantly measured the tested variables, the five-point Likert scale (from strongly disagree = 1 to strongly agreed = 5) has been considered in data collection.

Statistical Tests

After collecting the reliable outcomes from Pakistani respondents, both SPSS and Smart PLS software implemented in its analysis portion. Like SPSS software has been considered for demographic analysis while smart PLS software has been used for reliability, validity and hypotheses testing purposes. The tests utilized for such testing are based on KMO and Bartlett's Test, Convergent and Discriminant Validity Test, Confirmatory Factor Analysis (CFA) and Structural Equation Modeling (SEM).

Results and Analysis

The current study adopted a two-step approach of critical analysis by first implementing the factor analysis to explore the validity and reliability outcomes of each tested variable, and then testing the hypotheses through utilizing the technique of SEM. After implementing such two-step analysis, the descriptive statistics of its tested variables are mentioned below;

Table I
Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error
MAC	427	1.00	5.00	3.2084	1.05102	-.181	.118
OLSHOP	427	1.00	5.00	3.2607	1.00114	-.267	.118
OLPLAY	427	1.00	5.00	3.1991	1.20540	-.252	.118
SocNS	427	1.00	5.00	3.4211	1.15666	-.396	.118
UserSatis	427	1.00	5.00	3.3802	1.09910	-.444	.118
Valid N (listwise)	427						

According to above-mentioned descriptive statistics, it becomes clear that online shopping (OLSHOP) variable was least deviated from its mean position, while online payment (OLPLAY) variable highly deviated from its mean. This shows that the influence of online shopping

was much higher on user satisfaction (UserSatis)-based dependent variable which was also less deviated from its mean, as compared to online payment. While, the mediator, social networking site adoption (SocNS) was considered as the second highly deviated variable within this framework which means, this variable was not strongly influenced the dependent variable. The remaining one is mobile application compatibility (MAC) which also deviated less from its mean position. While, the standard error of these 427 respondents' outcomes was 0.118. After this, it's KMO and Bartlett's Test based authentic outcomes are mentioned below;

Table II
KMO and Bartlett's test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.915	
Bartlett's Test of Sphericity	Approx. Chi-Square	5958.366
df	153	
Sig.	.000	

KMO & Bartlett's Test of Sphericity majorly explores the sampling adequacy's measure that considered to inspect the scenario to variable ratio for conducted analysis. A Kaiser-Meyer-Olkin (KMO) Test is utilized to explore the sampling data adequacy considered for factor analysis. While, Bartlett's Test is such a statistical test that majorly determines whether or not the variance among several groups is equivalent. According to above-mentioned statistical outcomes, the KMO value is 0.915 (greater than 0.7) which means within the threshold range. Also, the significance value is 0.000 (lower than 0.05) with a difference value of 153, which means that this testing model is a good fit. After this, the rotated component matrix-based statistics are given below;

Table III
Rotated component matrix

	Component				
	1	2	3	4	5
MC1		.831			
MC2		.879			
MC3		.844			
MC4		.800			
OS1					.742
OS2					.799
OS3					.808
OP1			.841		
OP2			.875		
OP3			.868		
SNS1	.835				
SNS2	.818				
SNS3	.810				
SNS4	.828				
SNS5	.850				
US1				.803	
US2				.810	
US3				.812	

The rotated component matrix is also known as loading that is the major output of principle component evaluation. It is based on critically estimate the correlation factor among the tested variables and the inspected components. As mentioned above, the rotated component matrix value of each measuring indicator is more than 0.7 which means all their values are within their threshold range and effectively loaded on the tested model. As far as considering its reliability and validity testing based authentic outcomes, the following table shows the reliable and authentic outcomes;

Table IV
Convergent and discriminant validity

	CR	AVE	MSV	SNS	MC	OS	OP	US
SNS	0.936	0.746	0.327	0.864				
MC	0.918	0.738	0.384	0.497	0.859			
OS	0.815	0.597	0.384	0.519	0.620	0.772		
OP	0.920	0.793	0.396	0.502	0.344	0.329	0.890	
US	0.887	0.723	0.396	0.572	0.437	0.524	0.629	0.850

Convergent and discriminant validities are considered as two major aspects of construct validity where convergent validity explores how closely new scale is associated with other variables and other measures of similar construct. While, the discriminant validity test is such concept or measurement that is predicted to be unrelated that are unrelated. As far as considering the above table's outcomes, it becomes clear that average variance extracted values of each tested variable are more than 0.5, and also the composite reliability values are greater than 0.7, which means no convergent validity issue has been seen in the tested variables. While, the bold letters based diagonal values depicted that no discriminant validity issue has been seen in the tested variables outcomes. So, it becomes clear that all the measuring indicators-based variables outcomes are reliable and valid, and no more confusion has remained. After this, the CFA-based model fit indexes has been shown below;

Table V
Model fit indices

CFA Indicators	CMIN/DF	GFI	IFI	CFI	RMSEA
Threshold Value	≤ 3	≥ 0.80	≥ 0.90	≥ 0.90	≤ 0.08
Observed Value	2.340	0.930	0.972	0.972	0.056

Confirmatory factor analysis is such kind of factor analysis which mostly used in social researches to accurately measure a construct that consistent with the scholars' understanding of that construct's nature. The major aim of CFA is to test either the analyzed data fit a hypothesized measurement model or not. According to above table outcomes, all the observed values of CMIN/DF, GFI, IFI, CFI and RMSEA are within the threshold range. Like the observed value of CMIN/DF is 2.340 (less than 3), GFI value is 0.930 (greater than 0.80), RMSEA value is 0.056 (less than 0.08), while IFI and CFI values are 0.972 (greater than 0.90). It means all variables along with their measuring indicators are effectively loaded for implementing the SEM in testing model. The graphical representation of CFA has been mentioned below;
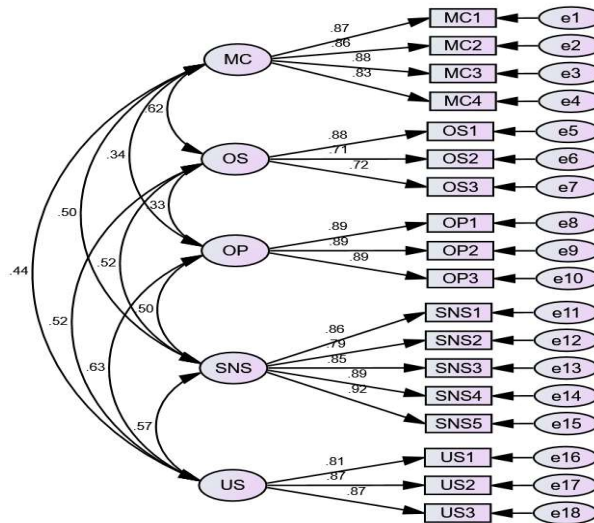

Fig. 2. CFA

Now, it's time to implement the structural equation modeling which is based on testing and estimating the causal relationship among the tested variables i.e., independent, dependent and mediator by using a combination of qualitative casual assumptions and statistical data. It is also considered as a comprehensive statistical approach to test the hypotheses by justifying the relationship between latent and observed variables. Its related outcomes have been shown in the following table;

Table VI
SEM

Total Effect	OLPLAY	OLSHOP	MAC	SocNS
SocNS	.330**	.225**	.244**	.000
UserSatis	.467**	.238**	.120*	.200**
Direct Effect	OLPLAY	OLSHOP	MAC	SocNS
SocNS	.330**	.225**	.244**	.000
UserSatis	.401**	.193**	.071	.200
Indirect Effect	OLPLAY	OLSHOP	MAC	SocNS
SocNS	.000	.000	.000	.000
UserSatis	.066**	.045**	.049**	.000

The above table shows that one percent change in Mobile Application Compatibility (MAC) caused 24% deviation in social networking site adoption (SocNC) and 12% deviation in user satisfaction for adopting mobile commerce (UseSatis). While online shopping (OLSHOP) caused 23% deviation in SocNS and 24% in UserSatis, and online payment (OLPLAY) caused generated 33% deviation in SocNS and 47% deviation in UserSatis. After this mediator, SocNS caused 20% deviation in dependent variable (UserSatis). This shows that the hypotheses have been justified and there is a significant relationship between online payment and user satisfaction; online shopping and user satisfaction; and mobile application and user satisfaction. Also, the social networking site adoption acted as significant mediator within these relationships. Its graphical representation has been mentioned below;
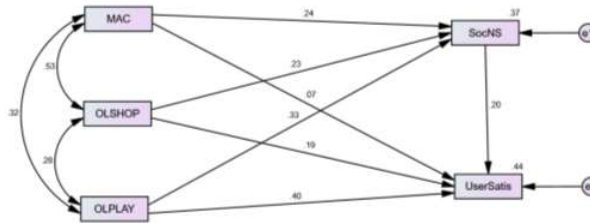

Fig. 3. SEM

Discussion and Conclusion

Discussion

After critically evaluate the above statistical outcomes, it becomes clear that there is a significant relationship between online payment and user satisfaction for adopting mobile commerce in the Pakistan context. This argument has also been justified by previous scholars and analysts in their research studies like (Chen & Li, 2017) stated that user satisfaction with mobile payment services caused a positive impact on the continuation intention with related services, also the disproving of perceived usefulness about online payment service caused a positive impact on user satisfaction. In the same year, (Chen & Wu, 2017) stated that online payment is an easy, secure and time-saving activity that ensures the fast, reliable and convenient payment of users, and result in their satisfaction. While, Ye and Liu (2017) confirmed that service quality, mobile device performance and M-commerce App caused a significant impact on user satisfaction. Also, a significant impact of online shopping and mobile application compatibility has been seen on the user satisfaction for adopting mobile commerce within the Pakistan state. This already been justified by (Hossain et al., 2020; McLean, Osei-Frimpong, Al-Nabhani, & Marriott, 2020) who confirmed that over time the positive attitude of users towards app result in enhancing the purchase frequency of consumers towards such app that result in creating loyalty and positive attitude towards brand. Also, the adoption of a digital payment mode is majorly influenced by the education level among consumers towards mobile phone apps and their related compatibility. While Tandon, Kiran, and Sah (2017) confirmed that users' perception towards online shopping like its website functionality and perceived usefulness caused a positive impact on their satisfaction, but perceived usability caused a negative impact. Also, the community users generated their own content towards online shopping when they satisfied with the services which show that their social and economic satisfaction caused a major influence on their participation (Wang, Huang, Davison, & Wu, 2017). While, the web design attributes i.e., structure, personalization, layout, navigation, performance and search majorly enhanced the user satisfaction level towards using mobile commerce (Dianat, Adeli, Jafarabadi, & Karimi, 2019). While, in Pakistan context, it becomes clear that majority of its educated users are willing to adopt the mobile commerce activities for online payment and online shopping purposes by utilizing the mobile app features.

As far as considering the mediating role of social networking site adoption, it becomes clear that this variable played a significant role in strengthening the impact of mobile application compatibility, online shopping and online payment on Pakistani user satisfaction

for adopting mobile commerce. According to Tien, Rivas, and Liao (2019), SNS played a major role to enhance electronic Word-of-Mouth (eWOM) among cosmetic consumers by promoting a strong Customer-to-Customer (C2C) relations which enhanced their purchase intention. While, the ubiquitous role of social networking in the mobile commerce context was considered by (Hossain et al., 2020) who also stated that consumers involved in the social interactions through internet sites generate more opportunities for business and consumers by creating trust, perceived value of mobile phone and related app compatibility. In the same year, Shao et al., (2020) justified that social networking site-based technology affordance caused a diverse impact on user satisfaction. Especially, the high-experience users are majorly influenced by the information affordance and interactivity as compared to low experienced users in mobile commerce. So, it becomes confirmed that social networking site adoption boosts m-commerce related satisfaction among young Pakistani users.

Conclusion

Hence, it becomes concluded that all the hypotheses of this study have been justified, and a strong and significant relationship has existed between mobile application compatibility, online shopping, online payment and user satisfaction for adopting mobile commerce under the efficient mediating role of SNS adoption within the Pakistan consumer market. To fulfill this aim, an online survey-based quantitative research design approach was specifically considered where only those people were considered who actively used social media sites and mobile apps for online shopping. According to the respondents' demographics, majority of active respondents were young males in Pakistan context. While, in its analysis portion, the CFA and SEM based tests have been performed.

Future Implications

Overall, this research study is an authentic and reliable source of information whose data can be considered by Pakistani e-commerce businesses and related business communities to critically understand the consumer market intention towards mobile usage and SNS. Like its managerial implications in the field of online shopping arena will ensure the Pakistani companies to develop a secure payment for buyers to gain their satisfaction. Also, they can adopt advanced technology and marketing campaigns to enhance the mobile app compatibility and purchase intention of consumers within this state. In addition to its managerial implications, there are also some theoretical ones like its important data can be re-used by future scholars, analysts and researchers for their literature review, discussion and hypotheses development purposes. Also, they can extend the contribution of (U&G) theory in the online purchase context of trust. It means this authentic research study will add value to the previous research outcomes along with giving new directions of research. Its authentic data can also be used by general public of Pakistan to understand their responsibility towards m-commerce.

Limitations and Future Researches

No doubt, this study is a constructive source of information in the field of e-commerce, but some major limitations may impact the acceptability and authenticity of its outcomes. Like first one is its methodological gap i.e. only quantitative source of data collection has been considered for consumers' data collection. But no psychological understanding-based interviews were conducted in its methodology portion that may impact the authenticity of its outcomes. In addition to this, only Pakistan state and its consumer market is considered within this study as compared to considering the other state-related information. So, there is ample opportunity in front of upcoming scholars, analysts and researchers to work on its weakness and derive more constructive research in the related field. Like they can work on a qualitative or mixed method of research design in their data collection and analysis portion. Also, they can consider the other Asian state's demographics and their social media users' intention towards mobile commerce activities, or may develop a comparative analysis-based authentic and highly acceptable outcomes.

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