An Empirical Study On Analyzing A User's Intention Towards Using Mobile Wallets; Measuring The Mediating Effect Of Perceived Attitude And Perceived Trust

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Abstract: Researchers wants to drive the impact of factors like perceived usefulness, perceived se of use, perceived benefits, perceived risk, perceived security, company image and social influence where perceived trust and perceived attitude are mediating variables determining theuser'sintention to use mobile wallet application. Here researcher measures the direct and indirect effects of various factors while also introducing and investigating the impact of categorical moderator of gender- male and female. Design/methodology/approach-An instrument has been designed under the guidance of five eminent researchers. Appropriate seven-point scale has been applied with the descriptive cross sectional research design. 314 valid responses are considered. Multiple regression and path analysis performed with SPSS and PLS-SEM analysis.In the process of developing structural model on mobile wallets, reliability, convergent and discriminant validity established. Here researcher confirmed significant direct impact of factors like: social influence, perceived usefulness, perceived ease of use, perceived benefits, perceived risk, and perceived security, company image on user's attitude andtheir trust ultimately leads to intention to use mobile wallet application. Research also ensures the moderating effect of gender. The major limitation of this paper is that the study is conducted with regard to user's attitude and intention towards mobile wallets in major cities of Gujarat region only. This is unique effort of researchers for developing structural model for mobile wallet application. This study will help in understanding the concept of interrelation amongst various factors directly and indirectly related to mobile wallets. This research is useful for all mobile wallet companies like Paytm, Google, Amazon to understand the intra relationships amongst the various factors of mobile wallets and ultimately help these companies to understand the attitude of mobile wallet users.

Keywords- Mobile Wallet services, Paytm, company image, social influence, innovativeness, security, risk, digital wallets

1. Introduction

Mobile phones, smart-phones, etc. allow us to perform transactions through mobile payment for goods and services. Variety of payments like ticketing and paying fees and fares electronically can be made through such wireless communication technologies. Various financial transactions can be performed through mobile wallet. Users are provided with greater convenience since mobile payment services provide multiple offers to users as it brings a wide range of technology innovations (Price and Pilorge, 2009). In emerging economies, larger population having no bank account but having a mobile phone gets targeted since mobile applications provide a uniform platform (Cox, 2013).

New mobile technologies like mobile wallets, etc. attracts the Indian youth (Varghese, 2012), because all their banking needs are fulfilled and they actually enjoy using it. Since it is convenient and easy to use, the mobile payment services are growing significantly from the last few years in India. India is considered to be one of the biggest markets in terms of mobile users (Rowland and Shrauger, 2013).Various facilities like loyalty benefits, minimum interest rates, review sale and purchase options, receipts management, cash benefits, with greater convenience and ease as well as for transferring money, various payments of bills/cards, stored money services, shopping, availing discounts, etc. are the various facilities provided by mobile wallets.(Rowland and Shrauger, 2013).An integrated UTAUT model has been proposed by Shin(2009), which is considered as an extension of the TAM model to study consumer behaviour on mobile wallet usage. The basic expectation of consumers is for the wallets to optimise payment options to save time and cost to be convenient, safe, userfriendly. Real benefits of time and cost saving through mobile wallets can be availed by consumers was established based on previous studies (Light, 2013; Clark, 2005; Kumar and Seri, 2014).When consumers own, experience and sustainthe use of mobile payment applications on daily basis for all transactions, mobile wallet acceptance can be enhanced as suggested by Hodiwalla et al., (2016) . Every individual must have wallets, In order to perform all his banking transactions, every individual need to have wallets and provide more options to the consumers. This will develop a positive image in the mind of consumers about m-wallets, will be developed which will make them feel more satisfied.

2. Review of literature and hypothesis development

Behavioral intention is defined as a measure of the strength of one's intention to perform a specified behavior [M. Fishbein and I. Ajzen] and has consistently been found to predict actual usage of a technology [F. D. Davis, R. P. Bagozzi, and P. R. Warshaw, H. Sun and P. Zhang, V. Venkatesh]. While studying consumer's

user intention of mobile payment systems PousttchiandWiedemannfound thatin addition to performanceexpectancy,effortexpectancy,facilitatingconditions, socialinfluenceassignificantfactorsaffectingtheir usageintention.

TheTAMconstructseaseofuseandperceivedusefulnesshavesignificanteffectsonusers'attitudestowardsmobilewa lletsin addition toperceivedsecurity,socialinfluenceandtrust(Shin,2009). LiébanCabanillas(2014)concludedthat significantfactorsaffectingattitudesanduseintentionsofmobilepaymentsystems areexternalinfluences,usefulness,trustandrisk,easeofuse,costs.

The mostpopularmodelsexplainingtheattitudesandbehaviourare thetheoryofreasonedaction(TRA)byFishbeinandAjzen(1975),theTheoryof(TPB)byAjzen(1991)andtheTechno yAcceptanceModel(TAM)byDavis(1989). Attitudeis defined as 'thedegreeofaperson'sfavourableorunfavourableevaluationorappraisalofthebehaviourinquestion'thebehaviourso findividualsareassumed considering them to be rational decision makers, istobedeterminedby theirintentiontoperformtheparticularbehaviour under theory of planned behaviour(Ajzen,1991).

Major factors determining individual's attitude toward using technology were assumed to be perceived usefulness and perceived ease of use by Davis. Attitude toward using was positively related to perceived usefulness, perceived ease-of-use, behavioral intention to use facilitating conditions,perceived value, trust and perceived security and privacy as per the previous research byJ. H. Cheong, M-C. Park, and J. H. Hwang, Z. Deng, Y. Lu, and Z. Chen, T. Lee, D. H. Shin,P. A. Pavlou, H. Liang, and Y. Xue. As such, the following hypothesis is proposed:

H.1: Perceived attitude has positive impact on usage intention of using mobile wallet application

In case of consumer-based technology, user's perception is significantly affected by the benefits offered through adoption of new technology.Various benefits are offered by companies such as cash rewards, coupon codes, cash discounts, loyalty points and other freebies.Perceivedbenefits are going to play a key role due to entry of new players and cut throat competition.Consumers are interested in technology enabled services when they get relative benefits out of it (Walker & Johnson, 2006). In one of the studies, conducted by Viral Bhatt, Keyur kumar Nayak and Jigar Nagvadia(2021) they concluded that in case of online shopping perceived benefits and perceived trust have a mediating effect on perceived usefulness, perceived quality and buying intention. Consumers are highly inspired by rewards,in theformoftangiblebenefits(monetaryincentives,coupons,freesamplegifts,sweepstakesetc.).It is calledextrinsic motivation(Davisetal.,1992)and usuallyappliestocertain behaviour ofindividualswhoaimstoachieve certainparticularoutcomes.Kim&Han,2014;Varnali,Yilmaz,&Toker(2012) observed that in order to obtain tangible incentives/rewards consumers are willing to make required efforts.Kim&Han, (2014) observedthatcustomers'concentrationonadsincreasewhenthemessageincludesbenefits in terms of advertisements and communication.As such the following hypothesis is proposed:

H.1.a1: Perceived benefits has positive impact on perceived attitude of using mobile wallet application

H. 1.b1: Perceived benefits has positive impact on perceived attitude and hence usage intention on using mobile wallet application

Davis (1989) established that theperceivedeaseofusereferstо the degree to which anindividualbelievesthatusingascertainsystemiseffortlessoreasytodo.Ifasystemisperceivedaseasytouse,italsoprov idesmoreusefulnesstoitsusers according to theTAMdevelopedbyDavisetal. (Davisetal.,1992; Davis,1989). Variousresearchersinmobileservicescontexthad approved and is related to the attribution of the ease-ofuseconstruct. (Liébana-Cabanillasetal.,2014; Phonthanikitithawornetal.,2015; Wang, Wang, Lin, &Tang,2003).

Bhatt and Parekh (2020), established that ease of use is one of the major factors influencing the overall service quality of online banking. Chau found in his study that perceived ease of use did not significantly affect intention to use but significantly affected near-term usefulness. Dr. Viral Bhatt and Jigar Nagvadia(2020) established that perceived ease of use, confirmation, satisfaction, trust and enjoyment have direct influence on the online repurchase intention. F.D.Davissuggested that perceived ease of use influences usefulness, attitude, intention, and actual use based on his previous studies. The significant secondary determinant of people's intentions to use computers is found to be perceived ease of use which directly and indirectly affects usage through its impact on perceived usefulness by way of their Internet using attitude. (Davis, et al.)Raval H. and Bhatt V. (2020) found that companies need to focus on e service dimensions like prompt/quickly response, ease of use,attentiveness, this will directly leads to increase in overall service quality and leads to customer satisfaction. As such the following hypothesis is proposed:

H.1.a.2: Perceived ease of usehas positive impact on perceived attitude of using mobile wallet application
H.1.b.2: Perceived ease of use has positive impact on perceived attitude and hence on usage intention on using mobile wallet application

PerceivedusefulnesswasoriginallydefinedbyDavis(1989)as"thedegreetowhichapersonbelievesthatusing aparticularsystem/technologywouldenhancehisorherperformance". He also found that it is one of the most important among other factors, which influences use of information technology.

Anotherdefinitionmorerelevanttothepresentstudyisthat"theuseofagiventechnologyshouldbeusefulforsomeonei na chievingaparticularresult"(Vijayasarathy,2004).Indifferentcontexts, various researchers,

Davis,1989;Jackson,Chow,&Leitch,1997;Kim&Lee,2011;Leng&Lada,2011;Malhotra,Galletta,&Kirsch,2008 ;T aylor&Todd,1995found that
usefulnessofasystem/servicewasamongthekeyfactorsshapingattitudesandalsoexplaininguseintentions. A stronger andmore consistent relationship between perceived usefulness and usage than between other variables reported in priorstudies done by Davis, et al.P.K.Y.Chau the individuals evaluated theirbehavioralconsequences in terms of perceived usefulness and based their behavioral choice onusefulness desirability. Usefulness emerged as the most important factor affecting user acceptance With few exceptions, H.Sun established that the most important factor affecting user acceptance of variety of technologies is usefulness. Perceivedusefulness and self-report usagehave a significant relationship between them as found by Szajna.

A strong relationship exists between perceived usefulness and attitude was found in one of their studies by Carey and Day.Chong et al., 2010, found that it is consistently shown that PU has a strong influence on attitude and intention to adopt online banking and mobile banking (Mohammadi, 2015). There exists a positive relationship between PU and attitude toward mobile banking in India(Deb and David 2014). Aboelmaged and Gebba, 2013; Krishanan et al., 2016 have demonstrated the direct relationship between PU and attitude in their studies. As such the following hypothesis is proposed:

H.1.a.3:Perceived usefulness has positive impact on perceived attitude on using mobile wallet application
H.1.b.3:Perceived usefulness has positive impact on perceived attitude and hence on usage intention on using mobile wallet application

D. Gefen, P. A. Pavlou and D. W. Straub defined perceived trust as the belief that service providers will perform the concerned activity in accordance with customers' expectations. Pham and Ho, (2014) established that the degree of mutual trust existing between them relationship between marketer and customer. Perceived trust is the major factor determining success of various new IT/IS introduced in the recent past. How much security and privacy policies are followed by the mobile wallet companies determines consumer perception in context of their trust worthiness. In case of intention to adopt similar technologies, trust was found to be an important factor. (Chong *et al.*, 2012; Zhang *et al.*, 2012; Chong, 2013a, 2013b).

Building on Jarvenpaa and Tractinsky's noted that in uncertain environments such as the Internet-based electronic commerce, consumer's behavior can be influenced with the help of trust. In addition, T.Lee argues that it is also likely to be a critical factor in mobile payment system adoption. Previous research of T.Lee, X. Luo, H. Li, J. Zhang, and J. P. Shim, D.H.Shin has shown that trust is negatively related to perceived security and privacy and to perceived risk and positively related to behavioral intention to use, attitude and perceived usefulness.

Basedon positive expectation toward the service provider's future behaviour, the willingness to be loyal to a service provider can be defined as trust (Zhou, 2013). Ability, integrity and benevolence are the three dimensions of belief which determines trust. (Susanto et al., 2016; Zhou, 2011). For the continuance of a service or product, trust has proven to be an important determinant. (Gao et al., 2015; Hsu et al., 2015; Thominathan and Ramayah, 2015). As such the following hypothesis is proposed:

H.2: Perceived trust have positive impact on usage intention onusing mobile wallet application

Company image is the reputation of the company in the market that indirectly creates trust and influences the mind of the users for using its products and services (self-derived). So, unlike any previous study we have included this new variable in the model in order to understand its indirect relationshipon usage intention of mobile wallet users through creating perceived trust. Here we try to understand that how the user's preferences towards a particular brand of mobile wallet is framed due to the fact that company has a good image, higher ratings, is financially sound which ultimately leads to trust in products and services offered by that particular brand of company.As such the following hypothesis is proposed:

H.2.a.1: Company image has positive impact on perceived trust of using mobile wallet application
H.2.b.1: Company image has positive impact on perceived trust and hence usage intention on using mobile wallet application

M. S. Featherman and P. A. Pavlou defined perceived risk as the subjective belief of suffering a loss in pursuit of a desired outcome. Luo, Li, Zhang,andShim noted thattransaction's security risk or privacy risk is most important in Internet banking and in dealing with perceived risk, trust can be helpful. Previous studies by X. Luo, H. Li, J. Zhang, and J. P. Shim, S. Okazaki, H. Lee, and M. Hirose, P. A. Pavlou, H. Liang, and Y. Xue suggest that perceived risk ispositively related to perceived security and privacy and negatively related to trust, perceivedusefulness, attitude and behavioral intention to use.As such the following hypothesis is proposed:

H.2.a.2: Perceived risk have negative impact on perceived trust on using mobile wallet application
H.2.b.2: Perceived risk has negative impact on perceived trust and hence on usage intentionof mobile wallet application

D.H.Shin established that perceived security is the degree to which a user believes that using a particular online mobile payment channel will be secure. Enck et al. (2009) defined PS as while doing online transactions; a consumer's feeling that his/her personal credentials will not be viewed, stored, or manipulated by unauthorized users. V. Bhatt and D. Nagar established that perceived security has a significant impact on mobile banking. B. Suh and I. Han Security concerns involve authentication (data exchanged during the transactionrestricted to legitimate users only), confidentiality (data exchanged during the transaction read and understood onlyby intended users), non-repudiation (participants of the transaction unable to deny their participation in thetransaction), and data integrity (accurate data exchanged during the transactions). According to A. Westin, Privacy and Freedom (5th Ed.) information privacy is that whichdeals with the rights of those people whose information is shared and can be described as "the claim of individuals,groups, or institutions to determine for themselves when, how, and to what extent information about them iscommunicated to others". V.Bhatt and J.Nagvadia (2020), security plays an important role in influencing virtual retail store selection criteria among online shoppers. L. Chen, M. Gillenson and D. Sherrell, S. Okazaki, H. Lee, and M. Hirose established that perceivedsecurity and privacy with trust shows a negative relationship and perceived risk and of a positive relationship with behavioralintention to use and attitude.Perception of user about the expected security threats of M-wallet use may be defined as perceived security (Belanche-Graciaet al., 2015; Suh et al., 2015; Yang et al., 2015).Raval.H and Bhatt.V established thatsecure transactions and overall data privacy is a universal and critical component of the customer experience and business communication strategy. As such the following hypothesis is proposed:

H.2.a.3: Perceived security has positive impact on perceived truston using mobile wallet application
H.2.b.3: Perceived security has positive impact on perceived trust and hence on usage intentionof mobile wallet application

V. Venkatesh, M. G. Morris, G. B. Davis, and F. D. Davis established that social influence is the degree to which an individual perceives that it is important others believe he or she should use the new system.What others are of the opinion that they have to, and will be, able to use the technology implies the influence on the behaviour of the people depending on how such they believe it(Verkasalo et al.,
2010).Thisconceptinitsclassicalformwasdefinedby Fishbein&Ajzen(1975,p.302)as"theperson'sperceptionthat mo stpeoplewhoareimportanttohimthinkheshouldorshouldnotperformthe behaviour inquestion".

H.Triandis and Y. S. Wang, Y. M. Wang, H. H. Lin, and T. I. Tang found that in innovation diffusion literature, in order to make a certain behavioral decision, social influences, or perceived pressures from social networks are recognized as a critical element because individuals are generallyuncomfortable with uncertainty, they will tend to consult with the social network on their adoption decisions. V. Venkatesh and F. D. Davis, in their study noted that one of the four prescriptive factors of behavioral intention to use underUTAUT model is social influence. J. Lu, J. Yao, and C. S. Yu,determined that four moderators of gender, age, voluntariness and experience is contingent on social influence.A direct positive effect on behavioural intention to use technology is that of social influence as per earlier studies (Ajzen,1991; Venkatesh and Davis, 2000; Riemenschneider et al., 2003; Celuch et al., 2011; Lee et al., 2003). As such the following hypothesis is proposed:

H.3: Social influence has positive impact on usage intention on using mobile wallet application

2.2 Conceptual Structural Model

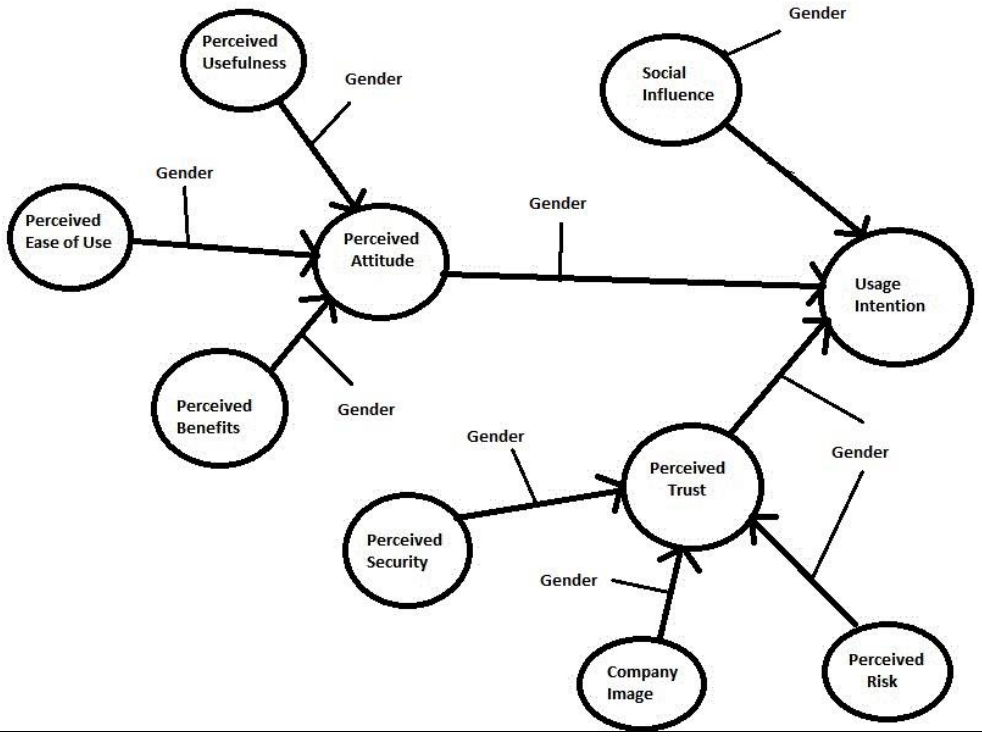

Table 1 Summary of Measurement Scales

Construct	Variable	Cronbach's Alpha
Perceived Attitude	ATT1: I perceive mobile payment app is a smart and useful technology. ATT2: Mobile payment app is advantageous in every domain of transactions. ATT3: Mobile payment app provides convenience and it is very trendy. ATT4: Use of mobile payment app is really exciting experience. ATT5:Mobile wallet services is very fast and reliable	**0.927**
Perceived Benefits	PB1: I have/would like to benefit from promotions offered by the mobile payment apps PB2: The associated promotions motivate me to use mobile payment apps PB3: I would like to use/continue to use mobile payment app as long as promotions are offered PB4: Mobile payment app allows to avail several benefits to me in the form of rewards, cash-backs, discounts etc. PB5:I think that using mobile payment can offer me a wider range of financial products, services, and investment opportunities.	**0.910**

Perceived ease of use	PEOU1: It is easy for me to learn various facilities provided bymobile payment app PEOU2: It is easy to remember how to use various features ofmobile payment app PEOU3: My interaction with the mobile payment apps is understandable PEOU4: I find mobile payment app useful for my various types of payment needs PEOU5:I like the fact that payments done through mobile wallets require minimum effort PEOU6:I believe step by step navigation of mobile wallet apps are easy to understand	**0.923**
Perceived Usefulness	PU1: I think using mobile payment app would enable me to complete transactions more quickly as compared to other traditional methods PU2: I believe mobile payment app would be useful for conducting online transactions PU3: I believe using mobile payment app would improve my efficiency of online transactions PU4: I think using mobile payment app would make it easier for me to make online payments. PU5: I believe mobile payment app improves the quality of online transaction PU6: Overall, I think using a mobile payment app would improve my performance	**0.927**
Perceived Trust	PT1: I trust transactions happening through mobile payment app PT2: I trust that the providers of mobile payment app will not divulge any of my information to third party PT3: I believe mobile payment app keeps customers' interests best in mind PT4: I believe mobile payment app keeps its promises and commitments PT5: I believe that in case of any issue the service provider will provide me assistance PT6: I believe that the mobile payment app service providers follow consumer laws	**0.929**
Company Image	CI1: I prefer using the mobile wallet of a particular brand because it is very reliable in current scenario CI2: I prefer using the mobile wallet of a particular brand because it is launched by a popular company CI3: I prefer using the mobile wallet of a particular brand because I feel safe	**0.912**

	using it CI4: I prefer using the mobile wallet of a particular brand because it has the highest user rating CI5: I prefer using the mobile wallet of a particular brand because the company is financially sound CI6: I prefer using the mobile wallet of a particular brand because the company is competitive	
Perceived Risk	PR1: I believe my personal information is safe while using mobile payment apps PR2: I have never faced an error while making payment bymobile payment apps PR3: I have never faced any fraud and lost money while usingmobile payment app PR4: I have never faced an unauthorized access to my personal data by hackers while using mobile payment apps PR5: I have never faced any delays in payment confirmation while using mobile payment apps	**0.911**
Perceived Security	PS1: I am quite confident making payments through mobile payment apps PS2: I believe technology used in mobile payment apps is very secure PS3: I believe mobile payment apps has a potential to be safer than traditional payment options (such as credit cards, cashetc) PS4: I believe that transactions conducted through mobile payment apps are secure PS5: I believe the chances of losing money stored in mobile wallet are low	**0.924**
Social Influence	SI1: Peer influence motivates me to use mobile paymentapp SI2: People who influence my behaviour think I should use mobile payment app. SI3: Using mobile payment app would reflect my personality to others. SI4: I would use mobile payment app because my family and friends do so. SI5: I will use mobile payment app if the service is widely used by people in the society.	**0.938**
Usage Intention	INT1: I expect my use of the mobile payment app to increase in the future INT2: I intend to continue to use the mobile payment app in the future INT3: I will recommend the use of the mobile wallet to friends INT4: I always learn new features of the mobile payment app INT5: I plan to use the mobile wallet frequently	**0.935**

2.3 Research Gap

Considerable research from the literature review has focused on individual factors' impact on

userintention on mobile wallet application. However, a few has concentrated on combining all the factors such as perceived ease of use , perceived usefulness, perceived benefits, perceived security, company image, perceived risk and perceived attitude and perceived trust as mediating variables together with a factor of social influence as a new variable as well as an attempt on establishing that company image leads to perceived trust with categorical variable of gender-male and female as a moderating variable and evaluating their impact on user intention of mobile wallet application. This study emphasis on the combination of all such variables and evaluated the direct and indirect relations amongst them. **2.4 Research Objective**

- To study the factors, those that are affecting usage intentions of userstowards using mobile wallet application.
- To measure the direct and mediating effect of perceived attitude and perceived trust in determining the usage intentions of users towards using mobile wallet application.
- To analyse the impact of categorical moderator gender- male and femaleon usage intentions of users towards using mobile wallet application.
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3. Research process

To achieve the above objectives an empirical study was conducted to test the relationship amongst the

constructs. Here researcher developed structured questionnaire based on the contributions of previous related studies. A group of three experts reviewed the methodology and measurement scales to ensure content, face validity and appropriateness of structure of questionnaire. Researcher has appliedseven-pointlikert scale moving from strongly disagree to strongly agree for perceived ease of use, perceived usefulness, perceived benefits, perceived attitude, usage intention. From least important to most important for perceived trust, company image, perceived security and perceived risk and from least influential to most influential for social influence. Here researcher has considered appropriate scale for different variables in order to reduce the method biasedness.

The researcher had ten constructs with 44 statements namely perceived ease of use (6), perceived usefulness (6), perceived benefits (5), perceived attitude (5), perceived security (5), company image (6), perceived risk (5),and perceived trust (6), social influence (5) and usage intention(5).Moreover, the questionnaire also has content related with some demographic factors like gender, age, income, education and qualification and basic questions related to purpose, frequency and method of using mobile wallet application. The pilot testing was carried out with 40 users with individual interactions to check the articulation and suitability of questionnaire.

The structured questionnaire was distributed and following non probability purposive sampling design, to

encourage the regional online users, the questionnaire was translated in to regional language. The structured questionnaires distributed in the major cities of Gujarat such as Ahmedabad, Vadodara, Surat, Rajkot, Anand, Jamnagar, Mehsana, Gandhidham, and Valsad. The entire data was collected through survey with non-probability purposive sampling method. Researcher collected 400 questionnaires during December 2019 to February 2020, out of these 314 complete questionnaires was considered for the study. The sample is considered sufficient to evaluate research model (32*5=160)(Hair), since the ratio of the sample size to number of parameters to be estimated exceed the minimum threshold for normal distribution (Bentler and Chou ,1987).

Table 1

Demographic statistics of Respondents			
		Frequency	**Percent**
Gender	**Male**	167	53.2
	Female	147	46.8
	Total	314	100
Family Size	**Less than 2**	37	11.8
	2 to 4	184	58.6
	More than 4	93	29.6
	Total	314	100
Age	**16-25**	133	42.3

	26-40	115	36.6
	More than 40	66	21.1
	Total	314	100
Marital Status	**Married**	162	51.6
	Unmarried	152	48.4
	Total	314	100
Monthly Income	**Less than 20000**	105	33.4
	20,001-50,000	80	25.5
	50,001-100000	72	22.9
	More than 1,00,000	57	18.2
	Total	314	100
Education	**Under graduate**	38	12.1
	Graduate	83	26.4
	Post graduate	159	50.6
	Professional cou	34	10.8
	Total	314	100
Type of Bank	**National**	153	48.7
	Private	161	51.3
	Total	314	100

3.4 Tools and Techniques for data analysis procedure

The data collected through the questionnaire was coded in to SPSS 25 and MS excel program for descriptive statistical analysis in which the value of mean, standard deviation, percentage, frequency have been calculated before running available on PLS- SEM analysis. The hypothesis have been derived with the use of SMART PLS- 3.0. The path analysis is applied in structural model and significance of direct and moderating relationships evaluated through the bootstrap (5000 size) techniques.

3.5 Measurement Model: reliability and validity

3.5.1 Reliability

In order to check the reliability, first step is to evaluate the internal consistency of structured questionnaire by checking whether respondents understand the meaning of the statements and they are consistent while responding to the various statements.

Reliability of the scales was checked with cronbach's alpha, a measure of reliability which found to be satisfactory. All the variables' coefficient of alpha was above 0.7 specifying a satisfactory internal consistency.

	Loadings Max- Min	**Cronbach's Alpha**	**Composite Reliability**	**Average Variance Extracted (AVE)**
Perceived Attitude	0.949-0.929	0.927	0.934	0.883
Perceived Benefits	0.961-0.904	0.910	0.936	0.892
Company-Image	0.929-0.769	0.938	0.912	0.769
Perceived Ease-of-use	0.929-0.858	0.923	0.932	0.808

Perceived-Risk	0.951-0.940	0.911	0.927	0.895
Perceived-Trust	0.962-0.688	0.929	0.918	0.837
Perceived Security	0.953-0.898	0.924	0.912	0.875
Social-Influence	0.967-0.953	0.938	0.933	0.921
Usage-Intention	0.964-0.923	0.935	0.920	0.889
Perceived Usefulness	0.965-0.933	0.927	0.921	0.896

Here, measurement model and factor loading has been checked. The major motive of evaluating factor loading is to check convergent validity. More than 0.7 is considered as excellent loading, table 2 represent each factor has more than the standard range. Majority of the factors have more than 0.7 factors loading which depicts that all the indicators are convergent to the said latent variables.

AVE (Average Variance Extracted) was also evaluated for the convergent validity. It is essential to find out internal consistency of the measurement prior to further analysis. Cronbach's alpha coefficient of reliability was used to find out the reliability of the scale. Value of AVE greater than 0.5, is considered as excellent convergent validity. Table 2 indicates that all the latent variable has higher than 0.5 value which also confirm that model possesses excellent convergent validity.

Cronbach's alpha coefficient of reliability was used to find out the reliability of the scale. Here, all Cronbach's alpha values are more than 0.7 which indicated excellent internal consistency, and good construct reliability for constructed scale.

Further, convergent reliability (CR) was measured and the threshold value for convergent reliability is more than 0.7 that indicates reliability of the data collected.

3.5.2 Discriminant Validity

In order to evaluate the Discriminant validity, square root of AVE must be higher than the correlations of the constructs with all other constructs in the structural model. It means individual construct showing the greater strength and correlated with other constructs moderately. Here in each case the square root is greater than construct correlation. Therefore, in this case researcher did not violate assumption of discriminant validity. Following table depicts the square root values of AVE, which have been calculated and placed diagonally.

Discriminant validity indicates how one variable is discriminated from the other variable. Fornell-Larcker criterion shows inter latent variable correlation and acceptable cut of point of the highest correlation between variables shown in the table 3. Diagonal values must be greater than the corresponding row and column correlation value (Fronell&Larcker, 1981). Table 3 indicates that all the correlation values are less than respective diagonal values. Hence Fornell- Larcker criterion concludes for excellent level of the discriminant validity for the model.

Further, HTMT ratio is considered as the ratio between the unexplained variance and explained variance. The valu

e of HTMT, when less than 1, is acceptable and less than 0.85 is desirable. So far as our research is concerned, 0.847 is slightly less than 0.85 which means that the average variable explained by construct indicates higher strength of construct.

Table- 3
Discriminant ty Validi

	Perceived Attitude	Perceived Benefits	Company image	Perceived Ease of Use	Perceived risk	Perceived trust	Perceived security	Social influence	Usage intention	Perceived Usefulness
Fornell-Larcker										

Criterion										
Perceived Attitude	0.940									
Perceived Benefits	0.664	0.945								
Company-Image	0.263	0.163	0.877							
Perceived Ease-of-use	0.175	0.114	0.107	0.899						
Perceived-Risk	-0.374	-0.210	-0.581	-0.198	0.946					
Perceived-Trust	0.696	0.438	0.510	0.098	-0.574	0.915				
Perceived Security	0.224	0.132	0.613	0.105	-0.532	0.481	0.935			
Social-Influence	0.539	0.376	0.229	0.072	-0.309	0.514	0.136	0.959		
Usage-Intention	0.804	0.519	0.412	0.062	-0.446	0.817	0.301	0.654	0.943	
Perceived Usefulness	0.711	0.553	0.036	0.026	-0.200	0.460	0.032	0.532	0.561	0.947
HeterotraitMonotrait Ratio (HTMT)										
Perceived Attitude										

Perceived Benefits	0.684									
Company-Image	0.274	0.167								
Perceived Ease-of-use	0.176	0.115	0.109							
Perceived-Risk	0.386	0.216	0.598	0.203						
Perceived-Trust	0.728	0.461	0.520	0.098	0.589					
Perceived Security	0.232	0.136	0.639	0.106	0.548	0.492	0.140			
Social-Influence	0.554	0.386	0.234	0.071	0.317	0.536	0.310	0.670		
Usage-Intention	0.828	0.533	0.429	0.063	0.458	0.847	0.041	0.544	0.574	
Perceived Usefulness	0.731	0.567	0.051	0.037	0.205	0.482				

4. Data **analysis**

4.1 Structural Model/ Path Analysis (On screen results)

Researchers have used PLS- SEM to analyse the hypotheses framework. Measurement model and structural model has been carried out andmultiple regression and path analysis has been established. Earlier researches suggest that PLS- SEM has an edge over other analysis techniques because it does not require multivariate normal distribution of data, large sample size and interval scales (shin, et al., 2013).

PLS only requires a sample size of 10 times the most complex relationship within the research model that is the larger value between,

1) The construct with the largest number of formative informative indicators if there are formative constructs in the research model (LME) and

2) The dependent latent variable (LV) with the largest number of independent LVs influencing it (LSE)

Data analysis was conducted using two step approach. First researcher has authenticated validity and internal consistency (reliability) of the data and then hypothesis were estimated, using structural model.

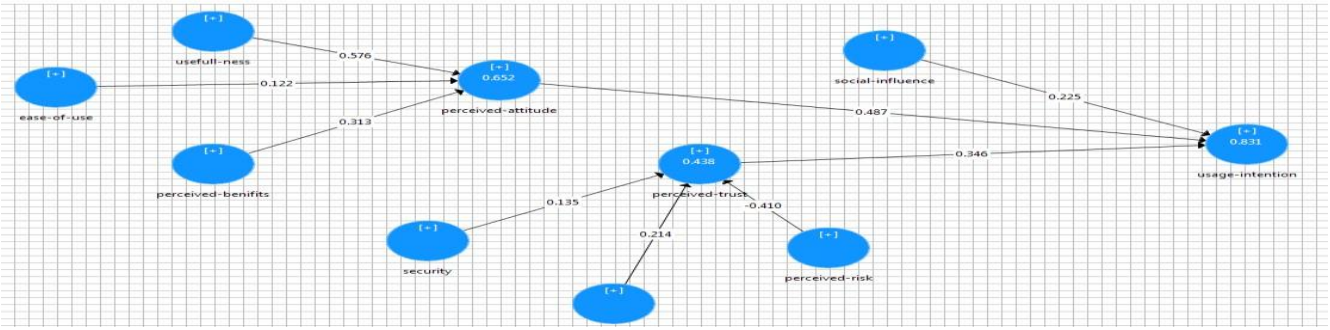

Figure 1- Structural Model

4.2 Hypothesis

4.2.1 Simple Hypothesis & Testing Research Hypothesis

Table – 4					
Testing Research Hypothesis					
	Mean, S.T. Dev, t-Value, P-Values				
	Original Sample (O)	**Sample Mean (M)**	**Standard Deviation (STDEV)**	**T Statistics (|O/STDEV|)**	**P Values**
Perceived Attitude -> Usage-Intention	0.377	0.376	0.066	5.694	0.000
Perceived Benefits -> Perceived Attitude	0.373	0.372	0.056	6.673	0.000
Perceived Benefits -> Perceived Attitude -> Usage-Intention	0.141	0.140	0.032	4.364	0.000
Perceived Ease-of-use ->Perceived Attitude	0.120	0.121	0.031	3.803	0.000
Perceived Ease-of-use >Perceived Attitude -> Usageintention	0.045	0.046	0.014	3.159	0.002
Perceived Usefulness -> Perceived Attitude	0.502	0.501	0.056	8.951	0.000
Perceived Usefulness -> Perceived Attitude -> UsageIntention	0.189	0.189	0.040	4.755	0.000
Perceived-Trust -> Usage-Intention	0.439	0.440	0.068	6.497	0.000
Company-Image -> Perceived-Trust	0.191	0.195	0.069	2.783	0.005
Company-Image -> Perceived-Trust -> Usage-Intention	0.084	0.086	0.035	2.423	0.015
Perceived-Risk -> Perceived-Trust	-0.376	-0.374	0.070	5.381	0.000
Perceived-Risk -> Perceived-Trust -> Usage-Intention	-0.165	-0.164	0.037	4.466	0.000
Perceived Security -> Perceived-Trust	0.164	0.164	0.072	2.289	0.022
Perceived Security -> Perceivedtrust -> Usage-Intention	0.072	0.072	0.034	2.131	0.033
Social-influence -> Usageintention	0.226	0.224	0.042	5.394	0.000

H.1 is accepted hence perceived attitude has positive impact on usage intention of using mobile wallet application. While evaluating the relationship it shows positive impact of 0.377. So it depicts that for every 10% increase in perceived attitude there is 3.77% increase in usage intention. Researcher stimulates the boot strapping process with sample of 314, which indicates average of impact 0.376, which is marginally lower than the original impact between the two variable and average variations 0.066 with t- statistics 5.694 and having significant value 0.000.

Firstly, H.1.a.1 is also accepted so perceived benefitshave positive impact on perceived attitude of using mobile wallet application. Here theperceived benefits have positive impact on perceived attitude of mobile wallet application. While evaluating the relationship it shows positive impact of 0.373. So, it depicts that for every 10% increase in perceived benefits there is 3.73% increase in perceived attitude. Researcher stimulates the boot strapping process with the sample, which indicates average of impact 0.372, which is marginally lower than the original impact between the two variable and average variations 0.056 with t- statistics 6.673 and having significant value 0.000.AlsoH.1.b.1 is accepted. Hence perceived benefits have positive impact on perceived attitude and hence usage intention on using mobile wallet application. Hereperceived benefit has positive impact on perceived attitude and hence usage intention on using mobile wallet application**.** While evaluating the relationship it shows positive impact of 0.141. So, it depicts that for every 10% increase in perceived benefits there is 1.41% increase in perceived attitude and hence usage intention. Researcher stimulates the boot strapping process with the sample, which indicates average of impact 0.140, which is marginally lower than the original impact between the three variable and average variations 0.032 with t- statistics 4.364 and having significant value 0.000. Secondly, H.1.a.2 is accepted therefore perceived ease of use has positive impact on perceived attitude of using mobile wallet application.Here perceived ease of use has positive impact on perceived attitude of using mobile wallet application. While evaluating the relationship it shows positive impact of 0.120. So, it depicts that for every 10% increase in perceived ease of use there is 3.77% increase in perceived attitude. Researcher stimulates the boot strapping process with the sample that indicates average of impact 0.121, which is marginally higher than the original impact between the two variable and average variations 0.031 with t- statistics 3.803 and having significant value 0.000. Also H.1.b.2 is accepted hence perceived ease of use has positive impact on perceived attitude and hence on usage intention on using mobile wallet application. Here perceived ease of use has positive impact on perceived attitude and hence on usage intention on using mobile wallet application. While evaluating the relationship it shows positive impact of 0.045. So it depicts that for every 10% increase in perceived ease of use there is 0.45% increase in perceived attitude and hence usage intention. Researcher stimulates the boot strapping process with the sample, which indicates average of impact 0.046, which is marginally higher than the original impact between the three variable and average variations 0.014 with t- statistics 3.159 and having significant value 0.02.Thirdly, H.1.a.3 is accepted soperceived usefulness has positive impact on perceived attitude on using mobile wallet application. Here, perceived usefulness has positive impact on perceived attitude on using mobile wallet application. While evaluating the relationship it shows positive impact of 0.502. So, it depicts that for every 10% increase in perceived usefulness there is 5.02% increase in perceived attitude. Researcher stimulates the boot strapping process with the sample, which indicates average of impact 0.501, which is marginally lower than the original impact between the two variable and average variations 0.056 with t- statistics 8.951 and having significant value 0.000. H.1.b.3 is also accepted thereforeperceived usefulness has positive impact on perceived attitude and hence on usage intention on using mobile wallet application. Here perceived usefulness has positive impact on perceived attitude and hence on usage intention on using mobile wallet application. While evaluating the relationship it shows positive impact of 0.189. So, it depicts that for every 10% increase in perceived usefulness there is 1.89% increase in perceived attitude and hence usage intention. Researcher stimulates the boot strapping process with the sample, which indicates average of impact 0.189, which is similar as the original impact between the three variable and average variations 0.040 with t- statistics 4.755 and having significant value 0.000.

The second H2 major hypothesis of mediating factor is also accepted. Hence,perceived trust has positive impact on usage intention on using mobile wallet application.Here, perceived trust have positive impact on usage intention on using mobile wallet application. While evaluating the relationship it shows positive impact of 0.439. So, it depicts that for every 10% increase in perceived trust there is 4.39% increase in usage intention. Researcher stimulates the boot strapping process with the sample, indicates average of impact 0.440, which is marginally lower than the original impact between the two variable and average variations 0.068 with t- statistics 6.497 and having significant value 0.000. Further, H.2.a.1 is also accepted so,company image has positive impact on perceived trust of using mobile wallet application. Here company image has positive impact on perceived trust of using mobile wallet application. While evaluating the relationship it shows positive impact of 0.191. So, it depicts

that for every 10% increase in company image there is 1.91% increase in perceived trust.Researchers stimulates the boot strapping process with the sample thatindicates average of impact 0.195, which is marginally higher than the original impact between the two variable and average variations 0.069 with t- statistics 2.783 and having significant value 0.005. Therefore, H.2. b.1 is also accepted andcompany image has positive impact on perceived trust and hence usage intention on using mobile wallet application.Here, company image has positive impact on perceived trust and hence usage intention on using mobile wallet application. While evaluating the relationship it shows positive impact of 0.084. So, it depicts that for every 10% increase in company image there is 0.84% increase in perceived trust and hence usage intention. Researcher stimulates the boot strapping process with the sample, which indicates average of impact 0.086, which is marginally higher than the original impact between the three variable and average variations 0.035 with t- statistics 2.423 and having significant value 0.015. H.2.a.2 is accepted as perceived risk have negative impact on perceived trust on using mobile wallet application. Here perceived risk has negative impact on perceived trust on using mobile wallet application. While evaluating the relationship it shows negative impact of -0.376. So, it depicts that for every 10% increase in perceived risk there is -3.76% decrease in perceived trust. Researcher stimulates the boot strapping process with the sample, indicates average of impact -0.374, which is marginally lower than the original impact between the two variable and average variations 0.070 with t- statistics 5.381 and having significant value 0.000. Additionally, H.2.b.2 is also accepted as perceived risk has negative impact on perceived trust and hence on usage intention of mobile wallet application. Here perceived risk has negative impact on perceived trust and hence on usage intention on using mobile wallet application. While evaluating the relationship it shows positive impact of -0.165. So, it depicts that for every 10% increase in perceived risk there is -1.65% decrease in perceived trust and hence usage intention. Researcher stimulates the boot strapping process with the sample, which indicates average of impact -0.164, which is marginally lower than the original impact between the three variable and average variations 0.037 with t- statistics 4.466 and having significant value 0.000. H.2.a.3 is also accepted andperceived security has positive impact on perceived truston using mobile wallet application. Here perceived security has positive impact on perceived trust on using mobile wallet application. While evaluating the relationship it shows positive impact of 0.164. So, it depicts that for every 10% increase in perceived security there is 1.64% increase in perceived trust. Researcher stimulates the boot strapping process with the sample, which indicates average of impact 0.164, which is similar as the original impact between the two variable and average variations 0.072 with t- statistics 2.289 and having significant value 0.022. H.2.b.3 is also accepted as perceived security has positive impact on perceived trust and hence on usage intention of mobile wallet application. Here, perceived security has positive impact on perceived trust and hence on usage intention of mobile wallet application. While evaluating the relationship it shows positive impact of 0.072. So it depicts that for every 10% increase in perceived security there is 0.72% increase in perceived trust and hence usage intention. Researcher stimulates the boot strapping process with the sample, which indicates average of impact 0.072, which is similar as the original impact between the three variable and average variations 0.034 with t- statistics 2.131 and having significant value 0.033.

Lastly, H.3 is accepted as social influence has positive impact on usage intention on using mobile wallet application. Here social influence has positive impact on usage intention on using mobile wallet application. While evaluating the relationship it shows positive impact of 0.226. So, it depicts that for every 10% increase in social influence there is 2.26% increase in usage intention. Researcher stimulates the boot strapping process with the sample, which indicates average of impact 0.224, which is marginally lower than the original impact between the two variable and average variations 0.042 with t- statistics 5.394 and having significant value 0.000. Here in all the above-mentioned cases, researcher has considered 5% level of significance, all t statistics are greater than 1.96 and significance value is less than 0.05, which indicates significant mediating effect

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4.3. Path coefficient of Permutation-Gender

TABLE 5

	Path Coefficients Original (male-1)	**Path Coefficients Original (female-2)**	**Path Coefficients Original Difference (male-1 - female-2)**	**Path Coefficients Permutation Mean Difference (male-1 - female-2)**	**Permutation pValues**
Perceived Attitude -> Usage-Intention	0.364	0.388	-0.023	0.006	0.856

Perceived Benefits -> Perceived Attitude	0.383	0.353	0.030	0.000	0.810
Company-Image -> Perceived-Trust	0.169	0.241	-0.072	0.009	0.606
Perceived Easeof-use -> Perceived Attitude	0.142	0.107	0.035	0.002	0.598
Perceived-Risk -> Perceived-Trust	-0.307	-0.442	0.135	-0.002	0.328
Perceived-Trust > UsageIntention	0.445	0.444	0.001	-0.007	0.996
Perceived Security -> Perceived-Trust	0.226	0.096	0.130	-0.009	0.368
Social-Influence -> UsageIntention	0.239	0.203	0.035	0.002	0.666
Perceived Usefulness -> Perceived Attitude	0.574	0.428	0.146	-0.001	0.205

Here in Table 6, the researcher has introduced gender- male and female as categorical moderator in order to test and understand its impact and relationship between various variables taken up under the current study.

The relationship between perceived attitudes leading to usage intention depicts that in case of females the beta is 0.388 which is marginally higher than males which is 0.364 and p value of difference of two betas 0.856 which is less than 1. It means that the difference is quite insignificant however it also highlights the fact that a female's attitude is more aggressive in determining their usage intention towards using mobile wallet application as compared to males. The relationship between perceived benefits leading to perceived attitudes depicts that in case of females the beta is 0.353 which is marginally lower than males which is 0.383 and p value of difference of two betas 0.810 which is less than 1. It means that the difference is quite insignificant however it also highlights the fact that for males, perceived benefits is a bigger motivation determining their attitude towards using mobile wallet application as compared to females. The relationship between company image leading to perceived trust depicts that in case of females the beta is 0.241 which is marginally higher than males which is 0.169 and p value of difference of two betas 0.606 which is less than 1. It means that the difference is quite insignificant however it also highlights the fact that a female's perceived trust towards using mobile wallet application is more influenced by the image of the company as compared to males. The relationship between perceived ease of use leading to perceived attitudes depicts that in case of females the beta is 0.107 which is marginally lower than males which is 0.142 and p value of difference of two betas 0.598 which is less than 1. It means that the difference is quite insignificant however it also highlights the fact that more the easier to use determines a male's attitude towards using mobile wallet application as compared to females.

The relationship between perceived risk leading to perceived trust depicts that the relationship between the two variables is negative hence in case of females the beta is -0.442 which is marginally higher than males which is -0.307 and p value of difference of two betas 0.328 which is less than 1. It means that the difference though negative, is quite insignificant however it also highlights the fact that a female's trust is inversely proportional to the level

of perceived risk towards using mobile wallet application when compared with males. The relationship between perceived trust leading to usage intention depicts that in case of females the beta is 0.444 which is marginally lower than males which is 0.445 and p value of difference of two betas 0.996 which is less than 1. It means that the difference is quite insignificant however it also highlights the fact that regardless of gender, for both male and female, perceived trust plays a primary role in determining their usage intention towards mobile wallet application. The relationship between perceived security leading to perceived trust depicts that in case of females the beta is 0.096 which is marginally lower than males which is 0.226 and p value of difference of two betas 0.368 which is less than 1. It means that the difference is quite insignificant however it also points out the fact that perceived security offered plays a very important role for males in determining their trust towards using mobile wallet application as compared to females.

The relationship between social influences leading to usage intention depicts that in case of females the beta is 0.203 which is marginally lower than males which is 0.239 and p value of difference of two betas 0.666 which is less than 1. It means that the difference is quite insignificant however it also highlights the fact that social influence affects in determining their usage intention towards using mobile wallet application more in case of males as compared to females. The relationship between perceived usefulness leading to perceived attitude depicts that in case of females the beta is 0.428 which is marginally lower than males which is 0.574 and p value of difference of two betas 0.205 which is less than 1. It means that the difference is quite insignificant however it also leads to the fact that in determining their attitude towards using mobile wallet application, perceived usefulness affects males more as compared to females.

4.4 R square and Adjusted R square

R square is coefficient of determination that indicates variance explained by independent variable on dependent variable. Researcher has come across the data as mentioned in table- 5 which is explained below.

Table- 6

R square and Adjusted R square of all variables

	R Square	R Square Adjusted
Perceived Attitude	0.625	0.622
Perceived-Trust	0.392	0.386
Usage-Intention	0.810	0.808

R Square	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Attitude	0.625	0.629	0.044	14.334	0.000
perceivedtrust	0.392	0.402	0.053	7.361	0.000
usageintention	0.810	0.814	0.020	39.655	0.000

R Square Adjusted	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Perceived Attitude	0.622	0.625	0.044	14.114	0.000
PerceivedTrust	0.386	0.396	0.054	7.181	0.000
Usage-Intention	0.808	0.812	0.021	39.186	0.000

Perceived attitude shows 62.5% increase due to perceived usefulness, perceived ease of use and perceived benefits, whereas perceived security, company image and perceived risk has a vital impact on perceived trust which is 39.2%. Other than these two factors, social influence and the categorical moderating variables of gender-male and female and high and low user innovativeness has contributed 81% cause of increase in usage intentions of

mobile wallet application users for using it. Hence, all the variables are having significant positive effect on dependent variable.

Moreover, adjusted R square of all the constructs are marginally less than R square, which shows that all the independent variables are contributing significantly.

5. Discussion of results, theoretical and practical contribution

5.1 Discussion of result

The main purpose of this study was to analyse the dimension of mobile wallet usage intentions. Previous studies mostly contributed regarding the direct effect of various variables on usage intention; however, the current study aims on direct relationship as well as the moderating effect of gender- male and female in determining their intention to use towards mobile wallet application. Hence the empirical analysis reported that perceived attitude and perceived trust has a direct effect on usage intention ofmobile wallet application users.

Further, it has been established that perceived benefits, perceived usefulness and perceived ease of use has a positive impact in determining the perceived attitude. In addition, it has been determined that perceived security and company image has positive impact whereas perceived risk has a negative impact in forming the perceived trust of mobile wallet application users towards their intention to use the same. Apart from this, a direct variable called social influence is also found to have a positive impact in determining the usage intention of mobile wallet application users.

Another contribution of the current work is to test and investigate, the role of categorical moderator called gendermale and female between the various constructs under study. The additional analysis revealed thatthe attitude of female is more of an important factor in determining their usage intentions as compared to their counterparts whereas in case of trust, regardless of gender it is equally important for both in determining their intention to use a mobile wallet application. While determining their attitude it was found that perceived benefits, perceived ease of use and perceived usefulness, influences males more as compared to females. Further, the study found that company image is important for females as compared to males in forming their trust whereas perceived security is more important for males as compared to their counterparts in determining their trust which ultimately impacts their intention to use a mobile wallet application. Further it was found that perceived risk has a significant negative impact in leading to trust in case of females as compared to males.

So from the above results, it is quite clear that perceived benefits in form of coupons, discounts, rewards, cash-backs are more important for deciding their attitude towards a determining their usage intention of a particular brand of mobile wallet application. Similarly, the fact that the mobile wallet application is easy to use and is quite useful in day-to-day life allowing them to do faster online transactions of various payments, holds equal importance in forming their attitude and in turn their intention to use a particular mobile wallet application. This is quite likely in case of males as compared to their counterparts. Further it has also been observed that a financially sound, popular and a company with higher user ratings increases a user's trust significantly in their usage intention towards mobile wallet of that particular company and the likelihood of happening thisis more in case of females as compared to males. Though important for both the genders, the opposite holds true in case of perceived security, where males are more prone to form their trust based on security as compared to females. In case of perceived risk, it has been observed that females are more of risk averters as compared to males and hence more the risk ,less the trust and eventually less the intention to use mobile wallet. Lastly, based on observations it seems that a male's intention to use mobile wallet application is quite affected by the social influence as compared to females in general.Hence, the investigation of moderator role of gender on various constructs is quite important for mobile wallet companies to determine effective strategies in increasing their usage intention towards mobile wallet application.

5.2 Theoretical Contribution

This empirical study offers some important theoretical contributions. This is a unique attempt of researchers for developing model for analyzing user's attitude and intention towards using mobile wallet application in Gujarat state. This study will help in understanding the concept of interrelation among perceived attitude and other factors which directly or indirectly leads to the increased user intentions for usingmobile wallet applications. While previous studies include factors like perceived attitude, perceived usefulness, perceived ease of use, perceived benefits, perceived trust, perceived risk, perceived security; however, few have attempted to understand individual impact of variables like social influence,company image and further provides a new perspective on the potential moderating mechanism of categorical moderator of gender- male and female in order to test their effect on

relationship between various constructs.It represents the first attempt to examine the moderator role of gender. Henceforth, this study provides some of the fine-grained insights into how a user's trust and attitude are formed under various variables while focusing on moderating effect of gender.

The structural model shows two separate paths, the first path that depicts – perceived usefulness, perceived ease of use and perceived benefits motivating user's attitude towards determining their usage intentions towards using mobile wallet application for performing online transactions. Another path indicates that perceived security, perceived risk and company image leads to perceived trust in users for determining their usage intentions towards using mobile wallet applications where perceived risk holds an inverse proportion, less the risk is perceived, more is the perceived trust and vice versa. Apart from that, the current study has also included and established that social influence plays a direct role in determining their usage intention. Few studies attempt to derive relationship of factors but none of the previous structural model applies all the constructs with categorical moderator of gender-male and femaleas moderating variable together in the model.

Here, the study is early contributor to separate the construct –social influence and company image and testing the relationship with a categorical moderator of gender- male and female in determining usage intentions of mobile wallet application users. Hence, this empirical study bridges the research gap and extends the current knowledge by developing the conceptual framework that has illustrated previously mentioned relationships.

The increased usage of online service-posts pandemic 2019, enhance the importance of studying these variables and examine the relationship among them with respect to their usage intention towards mobile wallet application.

5.3 Practical Contribution

This model is useful for all giant mobile wallet companies like paytm, amazon, google, phonepe and various other such companies, providing them with valuable inputs for their future planning and formulating effective business marketingstrategies. It would also aid to the strategy formulators of these companies as well as our government, in order to frame the strategies to enhance the increased intention of users towards using mobile wallet application by offering more benefits in form of cash backs, rewards, coupons etc. The mobile wallet application developer should also focus on developing easy to use and understandable technical aspects in applications so that a layman can also use it without any barriers. Besides, company should promote their mobile wallet by highlighting its usefulness and convenience especially currently in covid times where social distancing and staying indoors is highly preferred and suggested in order to avoid the spread of the virus. The companies should focus on establishing a good image in the market in order to develop positive attitude of public towards their products and services which is in our case the mobile wallet application. Trust plays a significant role in determining the usage intention so companies should make an attempt in developing their application which is fail safe secured protecting the user's funds as well as their privacy and at the same time the companies need to work on minimizing the risk component to avoid unauthorized access, errors and frauds by online hackers.Also the companies can en-cash the social influence that people have on each other especially that is prevalent in family and friends and society in general in increasing the user's intention towards mobile wallet application.

Additionally, future studies may extend the conceptual framework with including other factors to achieve additional insights by introducing various categorical moderators, testing their impact on various variables of perceived attitude and perceived trust in determining their intention to usea particular mobile wallet application for performing their various online transactions.

6. Conclusion, limitation & future research

6.1 Conclusion

The purpose of this study was to evaluate the relationship between various variables as well as gender'smoderating effect on usage intentions of mobile wallet application users. In this study, researcher tested various direct relationships together with moderating effectand determined their effects on usage intentions of mobile wallet application users. The structural model and path analysis help us to understand and analyse effects among various variables like perceived attitude, perceived usefulness, perceived ease of use, perceived benefits, perceived trust, perceived risk, perceived security, company image, social influence and categorical moderator of gender-male and female. In addition, researcher has used bootstrapping (5000 size) to test the significance of these relationships. In this study, researcher observed the positive impact of factors- perceived attitude, perceived usefulness, perceived ease of use, perceived benefits, perceived security, company image, social influence and

insignificant effect of categorical moderator of gender- male and femalein addition to negative impact of perceived risk leading to perceived trust on usage intentions of mobile wallet application users. Results of the study have also found to be significant and supportive to the previous related contributions.

This research strongly recommends mobile wallet companies to rethink and redesign their techniques focusing on benefits –offers and discounts strategies and also long-term planning by introducing various innovative yet easy to use features and at the same time by highlighting usefulness of applications. In Indian perspective, this study provides important insight of how to use a higher attitude and good amount trust in order to build increased intention of use towards mobile wallet application users.

6.2 Limitation of Research and Future Scope

The major limitation of this paper is that the study is conducted with regard to usage intentions from mobile wallet applications in major cities of Gujarat region only.Hence, to generalize the results, subsequent research should be applied in wider regions to enhance the representation of the findings. Here, researcher adopted the cross-sectional data collection techniques, which does not allow analysis of the evaluation of mobile wallet users. Gujarat is a diverse state and each segment of the state represent distinguished characteristics like north Gujarat, south Gujarat, Saurashtra and central Gujarat. Researcher also suggests including new variables in proposed future research and structural model can be strengthened. The future recommendation of this study is to also include psychological and geographical factors as categorical moderators.

Moreover, in future studies, negative factors which are having adverse effect on usage intentions should be included in study in order to understand what to avoid while strategizing. Findings from such kind of study would provide insight on mobile wallet user's usage intentions and the factors which positively or negatively affecting it, which will provide significant contribution in this area of study.

Future research can be done on the impact of various categorical moderators like age, family size, income, generation x, y and z as well as with high and low innovativeness. The hypothesis can be tested to find out whether they play a role in determining the usage intentions of various mobile wallet application users.

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