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Consumers' Digital Wallet Adoption:
Integration of Technology Task Fit and UTAUT

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ABSTRACT

This empirical study aims to examine what drives consumers' behavioral intention to adopt digital wallet by integrating task technology fit theory into UTAUT model. For this purpose, 700 samples were approached through emails, out of which 479 valid responses were solicited. To test and validate the proposed research model, CFA and SEM were performed using AMOS 20. The results of this study highlighted that task technology fit emerged as one of the significant factors among all factors included in the model with direct and indirect effect on behavioral intention. More interestingly, effort expectancy, hedonic motivation, and cost are found to be other significant predictors of consumers' digital wallet adoption. The outcomes of this study provide valuable insights for digital wallet service providers, system developers, and governments for their strategic decision to enhance the adoption of digital wallet in the upcoming digital era. This study contributes specifically in the area of digital wallet adoption and information system acceptance in general.

KEYWORDS

Adoption, Confirmatory Factor Analysis (CFA), Digital Payment, Structural Equation Modeling (SEM), TTF, Unified Theory of Acceptance and Use of Technology

INTRODUCTION

Rapid expansion and penetration of the Internet and smartphones has provided new dimensions to the banking and financial services industries. Digital transactions across countries are increasing due to the high rate of adoption of smartphones, high availability of low-cost Internet, and favorable government policies. Mobile phones have evolved from primarily tools for making calls to multi-tasking devices that take care of routine tasks for individuals. The banking and financial industry is experiencing change, including sliding from digital payments to mobile payments. This change is

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mainly fueled by mobile-wallet technology. According to Manikandan and Chandramohan (2016), a mobile wallet is an application that links a user's bank account with their mobile phone to carry out a digital payment. According to the Zion Market Research Report (2018), the "market share of mobile wallets in the digital transaction is expected to reach $3,142.17 billion by 2022."

According to the Reserve Bank of India (2018) report, there are more than 50 mobile-wallet service providers in India. This indicates that there is growth in terms of mobile-wallet adoption. Based on the payment system indicators used by the Reserve Bank of India (2019), there has been a growth of 21% in the number of digital transactions. In India, mobile-wallet growth has still not reached its full potential. This raises the questions: What drives users to adopt mobile wallets? What factors influence mobile wallet adoption? These questions require scientific inquiry and are addressed in the present study.

Recently, mobile-wallet adoption has been one of the developing areas of study across social science research. It has been studied from various dimensions, including consumer, technology, financial and socio-economic perspectives, but the root of all these studies is in information system (IS) science domain—technology adoption. The IS literature has identified the common drivers of technology adoption. These are performance expectancy, effort expectancy, facilitating condition, social influence and habit (Dahlberg, Mallat, & Öörni, 2003; Ondrus & Pigneur, 2006).

There are several reasons behind the selection of the unified theory of acceptance and use of technology (UTAUT) theoretical model. First, it provides a unified view of theory. Second, it integrates eight dominant theoretical models, which were used to check technology adoption. Third, it has covered all the common factors that drive the behavioral intention to adopt technology (Venkatesh et al., 2003).

According to Apama et al. (2015), unavailability of stable Internet and scant knowledge of technical aspects among consumers in many places in India are the major issues that adversely impact the adoption of digital wallets among Indian consumers. Prior research also indicates that India's socio-economic environment and culture plays a very important role among consumers in deciding to adopt technology (Erumban & Jong, 2006). Issues related to technology adoption in the Indian context have been highlighted with limited scope and context.

The pandemic accelerated the use of contactless mobile payment systems and laid a foundation for continued adoption of these systems even post pandemic. However, in a post-pandemic world, users that used a mobile payment system during the pandemic may opt to return to using traditional payment methods after the pandemic. Retaining these consumers as continual mobile payment system users is vital for contactless mobile payment service providers (Bhattacherjee, 2001) as contactless mobile payment technology has become a vital part of business growth (Al-Qudah et al., 2022).

The main objective of the present paper is to identify the factors that influence Digital-wallet adoption. A second objective is to integrate the drivers form other theoretical models into the UTAUT model. Third, we aim to enhance the body of knowledge of technology adoption by testing the UTAUT theoretical model. Finally, we empirically test the UTAUT model specifically in the Digital-wallet context.

In the first section of the paper, the literature review is carried out. The second section develops the relevant hypotheses. In the third section, we discuss the research methods and design, and we present the results of a confirmatory factor analysis and path analysis. This is followed by a discussion of the limitations of the study and future directions for research.

THEORETICAL BACKGROUND

UTAUT is one of the most widely accepted theoretical models in the domain of IS. It was developed by combining eight theories of information systems. To summarize, UTAUT includes:

A review and synthesis of eight theories/models of technology use, namely, Innovation Diffusion Theory (IDT) adopted by Moore and Benbasat (1991); Theory of Reasoned Action (TRA) by Fishbein

and Ajzen (1975); Theory of Planned Behavioral (TPB) by Ajzen (1991); Decomposed Theory of Planned Behavior (DTPB) by Taylor and Todd (1995); Technology Acceptance Model (TAM) by Davis (1989); Model of PC Utilization (MPCU) by Thompson et al. (1991); Motivational Model (MM) of computers in the workplace, adopted by Davis et al. (1992); and Social Cognitive Theory (SCT) of computer utilization, adopted by Compeau and Higgins (1995). (see Venkatesh et al., 2003, and Tak & Panwar, 2017, p. 4)

The literature suggests that UTAUT can explain 70% of the variance in intentions to adopt IS and 50% of the variance in user behavior (Venkatesh et al., 2003; Kripanont, 2007, Dulle, Minishi-Majanja & Coloete, 2010; Venkatesh et al., 2012; Samaradiwakara & Gunawardena, 2014; Chi-Yo Huang & Yu-Sheng Kao, 2015). Considering the above theoretical background, the UTAUT model is used for the present study. According to Venkatesh, Xon and Thong (2016), theory development in technology adoption needs a new direction, such as integrating other theoretical models into the UTAUT model.

To bring contextual dimension to the study, changes in the UTAUT model are suggested, as highlighted by Venkatesh et al. (2003). Moreover, it has been further stated by van der Heijden (2004) that a model's explanatory power can vary based on the context of testing IS adoption and usage. This is also important considering the demand for a theoretical model that can be applicable in the Indian context to better understand the adoption of IS.

CONCEPTUAL FRAMEWORKS AND HYPOTHESIS

In the conceptual framework, the definition of the construct is carried out and relevant hypotheses are developed. The constructs used in this study are operationalized as described below.

Performance Expectancy

Generally, performance expectancy is conceptualized as the degree to which it helps users to increase performance associated with, or helping users in, carrying out digital payment tasks that can be completed easily using a mobile wallet. In other words, it provides required help to users so they can complete the task easily (Wei et al., 2009). Performance expectancy is defined as "how easily or effortlessly an individual can use technology in order to get their work done using technology. Does the use of technology provide any ease of use to the user?" (Venkatesh et al., 2012; Luo et al., 2010).

It has been argued that a system's perceived usefulness can be explained as the degree to which people believe that new technology and its utilization will improve the overall performance of a certain task (Davis, 1989). Performance expectancy is the efficacy of a system utilized by users to perform their task (Morosan & Defranco, 2016; Yang, 2009).

Studies have found that the UTAUT model is applicable across cultures. Specifically, across all constructs, performance expectancy highly influences Internet banking consumers in Korea and the USA (lm, Hong, & Kang, 2011). According to Sok Foon and Chang Yin Fah (2011), performance expectancy highly influences the intention to adopt Internet banking among Malaysian consumers.

Table 1. Overview of UTAUT used in mobile payments and Digital-wallet payments

Theoretical Model	Mobile Payment	Mobile Wallet
UTAUT	Baptista and Oliveira (2015); Bhatiasevi (2015); Tan and Leby Lau (2016); Alalwan, Dwivedi and Rana (2017); Choudrie et al. (2018); Singh and Srivastava (2018); Rahi, Ghani and Alnaser (2018); Sharma and Sharma (2019); Raza, Shah and Ali (2019); Baadhullah et al. (2019)	Singh, Srivastava and Sinha (2016); Cao and Niu (2019)

Source: Compiled by the authors

Likewise, a study conducted to examine the intentions to adopt mobile banking among consumers in Jordan city empirically tested the UTAUT model. The researchers showed that performance expectancy influenced behavior significantly ($\beta = 0.469$, $t = 9.060$, $p < .001$), thus performance expectancy uniquely explained 8.4% of the variance in behavioral intention (Urumsah, 2015). A study of the adoption of mobile banking among consumers in Serbia showed that performance expectancy is the most important factor in predicting the behavioral intentions of consumers (Savic & Pesterac, 2018).

During and post covid literature suggest that Convenient and efficient processing and fulfilment are major advantage to consumers, these benefits have increased popularity of services and push the consumers move for online food delivery services (Zhao and Bacao, 2020). Similar findings were reported on performance (Zhao and Bacao, 2021) that could help them achieve faster and less costly services (Yang *et al.*, 2021). The finding that the perceived positive performance of m-payment promotes a positive evaluation of m-payment corroborates prior literature (Jouda, 2020).

Based on the above literature, we propose the following hypothesis:

Hypothesis 1: Performance expectancy positively influences the behavioral intentions of digital-wallet consumers in Gujarat.

Effort Expectancy

According to Oliveira et al. (2016), when users feel that mobile payment technology is easy to use and does not require much effort, they have higher expectations toward acquiring the technology. Effort expectancy is defined as "the degree of ease associated with use of the system" (Venkatesh et al., 2003, p. 27). According to Miltgen et al. (2013), it contributes to a precise prediction of the intention to adopt a new technology.

Researchers have empirically tested effort expectancy in their respective domains of work. According to Chiu, Fang and Tseng (2010), effort expectancy significantly influenced the behavioral intentions of users and potential users of mobile payment systems. Effort expectancy directly influences the intention to adopt mobile services among consumers of Finland. Likewise, the adoption of Internet banking among users in Kuala Lumpur has been empirically tested with the UTAUT model; in this case, the study found that effort expectancy is a statistically significant factor that predicts behavioral intentions (Sok Foon & Chan Yin Fah, 2011). Performance expectancy plays an influential role while predicting behavioral intentions to adopt mobile banking, internet banking and mobile payments (Chong, 2013; Barbosa & Zilber, 2013; Oye et al., 2014; Martins et al., 2014).

The contradicting finding about effort expectancy is negatively influence behavior intention is reported by (Zhao and Bacao (2021)

Based on this literature, we propose the following hypothesis:

Hypothesis 2: Effort expectancy positively influences behavioral intentions to adopt digital-wallet technology among consumers of Gujarat.

Social Influence

Social influence is associated with individual social status. *Social influence* is defined as "the degree to which an individual perceives that important others believe he or she should use the new system. Social influence is a direct determinant of behavioral intention" (Venkatesh et al., 2012; Luo et al., 2010).

A recent study examining Internet and mobile-banking adoption found that social norms of behavior are stronger determinants among women than among men (Lukkanen, 2016). An exploration of technology adoption in education found that social influence predicts behavioral intentions (Khechine & Lakhal, 2018). Social influence is the third-strongest predictor of mobile-banking adoption among consumers of Malaysia (Rahi et al., 2018).

During the pandemic of Covid-19 social influence is not able to generate any positive impact on adoption of mobile payment (Upadhyay et al., 2022).

Thus, we propose the following hypothesis.

Hypothesis 3: Social influence positively influences the behavioral intentions of digital-wallet consumers in Gujarat.

Facilitating Conditions

Facilitating conditions capture the support aspect of organizations and service providers. Research has considered the technology and organizational environment to conceptualize the construct.

In the current study, facilitating condition is defined as "the degree to which an individual believes that an organizational and technical infrastructure exists to support the use of the systems" (Venkatesh et al., 2003). A study conducted to examine the adoption of mobile banking found that facilitating conditions positively influence behavioral intentions (Yu, 2012). According to Oliveira et al., (2014), facilitating conditions influence the intention to adopt mobile banking among consumers of Portugal. A study conducted on the adoption of mobile banking among Jordanian consumers found that facilitating conditions significantly predict the behavioral intentions of consumers (Alawan et al., 2017).

Based on this literature, we expect the following:

Hypothesis 4: Facilitating conditions positively influence behavioral intentions of digital-wallet consumers of Gujarat.

Hedonic Motivation

Hedonic motivation captures the idea of enjoyment associated with technology adoption and use. In the current study, it is defined as "the enjoyment factor associated with information systems/ technology consumers. Hedonic motivation is related to the essence of an individual's psychological and emotive experience which can be triggered by both individual traits and cognitive state" (Brown & Venkatesh, 2005).

Hedonic motivation has been shown to determine technology acceptance and use (Brown & Venkatesh, 2015). According to ven der Heijden (2004) and Thong et al. (2006), hedonic motivation represents a motivational factor that encourages users to adopt and use technology. According to Alalwan et al. (2016), hedonic motivation influences the behavioral intention to adopt telebanking software. A meta-analysis of 53 studies using UTAUT models was carried out. The researchers found that hedonic motivation is one of the significant factors that influence users' decisions to adopt technology (Dwivedi et al., 2016).

Based on these findings, we propose the next hypothesis:

Hypothesis 5: Hedonic motivation positively influences the behavioral intentions of digital-wallet consumers of Gujarat.

Habit

Habit is based on repetitions of any activity. It is attached to the element of time—if the same activity or task is performed repeatedly, then a habit is formed. Habit is defined as "the experience of an individual which is built over the passage of time and determines an individual's behavior automatically" (Limayem et al., 2007). Habit is considered to be a "push" variable and it has a stronger association with satisfaction and behavioral intention (Polites & Karahanna, 2012; Amoroso & Ogawa, 2013).

According to Oliveira and Baptista (2015), who empirically tested the UTAUT model and extended it, habit moderates the effect of performance expectancy and directly influences the behavioral intention and use of mobile-banking users.

Based on the above literature, we offer the following hypothesis:

Hypothesis 6: Habit positively influences the behavioral intention to adopt digital-wallet technology among consumers in Gujarat.

Task-Technology Fit

The concept of task–technology fit (TTF) was developed to find the balance between user requirements and available technology. The underlying argument says that if users are not able to find a balance between their task requirements and the available technology, then they will not adopt that technology (Goodhue & Thompson, 1995). TTF captures one of the most important factors that explain how technology leads to performance improvement. It provides links between performance and developing better technology, which addresses IS adoption issues.

In the current study, TTF is defined as a "theoretical model which suggests that users will use that technology which suffices their requirement to carry out their task efficiently" (Goodhue & Thompson, 1995; Oliveira et al., 2014). According to Oliveira et al. (2014), the adoption of new IS is greatly dependent on the balance and fit between task and technology. Users will adopt a technology if they find that it fits the task they seek to accomplish. Mobile internet usage was also empirically tested along with the TTF construct to extend the rationality of adoption (Shin et al., 2009). In the mobile-banking context, the behavioral intention to adopt was significantly influenced by TTF (Oliveira et al., 2014).

Based on these findings, we propose the following hypothesis:

Hypothesis 7: Task–technology fit positively influences the behavioral intentions of digital-wallet consumers in Gujarat.

Cost

The concept of cost is derived from transaction cost theory (TCT) (Williamsons, 1998) used in information technology outsourcing decisions for organizations (Alaghehband et al., 2011). Direct cost and indirect cost are the two main dimensions of the concept. The intention to adopt digital payments and mobile banking is highly influenced by their costs. Transaction costs and service charges are two examples of direct costs that customers pay to carry out digital payments (Yang, 2009).

Cost also plays a significant role in the adoption of 3G mobile services in Malaysia (Carlsson, Walden, & Bouwman, 2006). It has a considerable negative impact on the intention to adopt technology (Chong et al. 2011; Wei et al., 2009; Luarn & Lin, 2005; Yu, 2012).

Thus, the following hypothesis was developed:

Hypothesis 8: Cost positively influences the intention to adopt digital-wallet technology in Gujarat.

RESEARCH METHODOLOGY

The multivariate technique of structural equation modeling (SEM) is used in the current study. SEM techniques check the latent variables using the covariance method. According to Oliveira et al. (2016), SEM researchers have recognized the potential of the method in that it has a distinct characteristic of checking a structural model by considering measurement error. According to Paul, Modi and Patel

(2016), SEM gives multiple indicators of latent variables, which helps in a detailed analysis of a measurement model and structural model.

Survey Instrument

The target population for the current study is young consumers, age 18 years and over. According to guideline of RBI(2019) "People younger than 18 years of age would not able to understand the complexity of the digital transactions".

Data Collection Procedure

A pilot study was conducted to get accurate responses. This pilot group consisted of academicians, working professionals and university students. The pilot group suggested a few changes, which were incorporated in the final version of the instrument.

Sample Selection

The ideal sample for this study consisted of adults, 18 years of age and older, as use of a mobile wallet for digital financial transactions requires users to be adults. A total of 700 respondents were contacted and asked to complete a drafted questionnaire, as per Zikmund (2000). A drafted questionnaire has a higher response rate compared to an online questionnaire.

Because a mobile wallet transaction is a digital financial transaction from one person to another person, from a person to a business entity, or from a business entity to another business entity, only respondents 18 years and older were invited to complete the survey (Alalwan et al., 2018; Baptista & Oliveira, 2015). Convenience sampling was used to collect the data, both online and in-person, from working professionals, students, business owners, and housewives residing in the four major cities of Gujarat, India -- Ahmedabad, Surat, Vadodara, and Rajkot.

High adoption of digital payments: Gujarat has one of the highest adoption rates of digital payments in India. According to a 2022 report by the National Payments Corporation of India (NPCI), Gujarat had a digital payments penetration of 42%, which was higher than the national average of 35%. This high adoption rate is due to a number of factors, including the state government's initiatives to promote digital payments, the availability of a wide range of digital payment options, and the increasing awareness of the benefits of digital payments among citizens. In other words, it mans that there are approximately 50% users who has bank accounts and mobile phone who are using mobile payments this is the first reasons why Gujarat state was considered.

Table 2. Details of scales for instrument development

Sr. No.	Name of Construct	No. of Items	Author
1	Performance expectancy	4	(Venkatesh et al., 2003)
2	Effort expectancy	4	
3	Facilitating condition	3	
4	Behavioral intention	5	
5	Habit	4	
6	Hedonic motivation	3	(Kim et al., 2005; Venkatesh et al., 2003)
7	Cost	4	(Yu, 2012)
8	Task–technology fit	9	(Klopping, 2004; Larson, 2009; Sorebo & Sorebo, 2009; McKinneys, 2013)

Source: Compiled by the authors.

Gujarat has a diverse economy, with a mix of agriculture, industry, and services. This diversity makes it a good representation of the Indian economy. The state's economy is also growing rapidly, which is creating new opportunities for digital payments.

Gujarat has a strong infrastructure, including a well-developed telecommunications network and a growing number of ATMs and POS terminals. This infrastructure makes it easy for businesses and consumers to adopt digital payments.

Overall, Gujarat is a good case study for research on digital payment methods because it has a high adoption rate of digital payments, a diverse economy, a strong infrastructure, and supportive government policies. These factors make it a good representation of the Indian economy as a whole and can help researchers to understand the factors that drive the adoption and use of digital payments.

The age of respondents was up to 45 years. After scrutinizing the data by eliminating responses with missing values, 479 usable questionnaires were retained. The overall responses rate was about 68%, which is well within the acceptable range (Zikmund, 2017). It is argued that technology adoption among students is highest compared to other age groups (Oliveria et al., 2016).

Prior to administering the formal survey, a pilot study was conducted with 25 respondents using the online survey instrument. The resulting construct reliabilities as measured by Cronbach's alpha were all greater than 0.70; therefore, no changes to the measurement items were made, however, the sequence and the length of the questions for promotional incentives, facilitating conditions and network externalities were altered slightly.

Demographic Profiles and Characteristics of Respondents

Table 3 shows the descriptive statistics for the consumers surveyed. Out of 479 respondents, 63% were male and 37% were female. The breakdown for age was: 64% were 18–23 years, 17% were 24–29 years, and 14% were 30–53 years. In terms of occupation, 37% of respondents were students, 19% fell under the private service category, 6% were government employees, 4% had their own business, 3% were self-employed and 1% were pensioners (or retirees). Among the respondents, 63% were high-school graduates, 25% had completed high school and joined an undergraduate program, 11% had earned a bachelor's degree, and 1% were research scholars.

DATA ANALYSIS

According to Oliveria et al. (2016), SEM is a technique for estimating causal relations that applies a combination of statistical data analysis techniques and qualitative causal hypothesis tests. Earlier researchers have recognized the potential of SEM in distinguishing measurement and structural models, and taking measurement error into consideration (Henseler et al., 2009). AMOS version 20 was used to perform SEM as it gives multiple indicators of latent variables (Schierz, Schilke, & Wirtz, 2010). SPSS 22.0 was used to evaluate the reliability and validity of the study construct. By using confirmatory factor analysis (CFA), effective questionnaire items were chosen for their strong reliability and validity in this study.

Reliability and Validity

To measure the reliability and validity of the construct, CFA was carried out on performance expectancy, effort expectancy, social influence, facilitating condition, hedonic motivation, TTF, cost and behavioral intention. Four items from the cost construct (C2, C5, C6 and C7) were deleted due to poor factor loading. Table 4 indicates the results for reliability and convergent validity. Values for all items of the construct are less than or equal to 0.7, and convergent validity (average variance extracted > 0.5) indicates that the standardized loading of all the variables is significant (Fornell & Larcker, 1981).

The CFA was carried out to ensure the reliability of the construct. The convergent and divergent validity was calculated using SEM. In each stage, the maximum likelihood estimation method was

Table 3. Frequency distribution for respondents' demographics (N = 479)

Demographic Characteristics	N	Valid Percentage
Gender		
Male	300	63
Female	179	37
Age		
18–23	327	68.3
24–29	83	17.3
30–34	32	7
35 and over	37	8
Education		
High-school graduate	301	63
Some college	120	25.1
Bachelor's degree	52	11
Ph.D. student	6	1.3
Occupation		
Student	319	66.6
Government service	28	5.8
Private service	93	19.4
Business	19	4
Self-employed	15	3.1
Pensioner and others	5	1

employed (Bryan, 2001). All the indicators of the model were achieved, (X^2 = X; df = 349; p < .001; X^2/df = 4.05; GFI; = .90; TLI = .87; CFI = .90; RMSEA = .04; see Han, Hsu, & Sheu, 2010).

Structural Model

A structural model was estimated using all independent variables—performance expectancy, effort expectancy, facilitating condition, social influence, hedonic motivation, TTF and cost—on behavioral intention. The results are summarized in Table 5.

Data analysis was carried out using SEM. The results for the theoretical model are a close acceptable and fit to the data (X^2 = strength of the relationship between the variables under examination). The standardized path and coefficients were measured using model fit indices (CMIN/df = 1.93; p < .001; CMIN = 881.83; df = 458; GFI = .90; TLI = .94; CFI = .94; IFI = .95; RMSEA = .04). These indicators are within the statistically expected limits (Han, Hsu, & Sheu, 2010).

Standardized coefficient estimates indicated the following for the path between performance expectancy and behavioral intention (β = 0.34; t = 5.21, p < .01), effort expectancy and behavioral intention (β = 0.14; t = 2.50, p < .01), TTF and behavioral intention (β = 0.39; t = 6.89, p < .01), social influence and behavioral intention (β = -0.04; t = -0.79, p < .431), hedonic motivation and behavioral intention (β = 0.24; t = 0.55, p < .01), facilitating conditions and behavioral intention (β = 0.02; t = 0.48, p < .01), cost and behavioral intention (β = 0.19; t = 3.96, p < .01), performance expectancy and effort expectancy (β = 0.47; t = 8.39, p < .01), and performance expectancy and TTF (β = 0.37; t = 7.13, p < .01).

Table 4. Reliability of scale

Variables	Items	Standardized Estimate	Cronbach's α	CR	AVE
Performance expectancy	PE1	0.76	0.84	0.85	0.59
Mean 3.72	PE2	0.79			
SD 1.08	PE3	0.79			
	PE4	0.72			
Effort expectancy	EE1	0.81	0.87	0.87	0.63
Mean 3.90	EE2	0.84			
SD 0.97	EE3	0.78			
	EE4	0.73			
Facilitating condition	FC1	0.62	0.77	0.77	0.53
Mean 3.89	FC2	0.82			
SD 0.981	FC3	0.73			
Social influence	SI1	0.75	0.81	0.81	0.59
Mean 3.38	SI2	0.78			
SD 1.04	SI3	0.78			
Hedonic motivation	HM1	0.84	0.89	0.89	0.74
Mean 3.32	HM2	0.94			
SD 1.15	HM3	0.79			
TTF	TTF1	0.72	0.84	0.84	0.56
Mean 3.77	TTF2	0.80			
SD 0.94	TTF3	0.74			
	TTF4	0.74			
Cost	C1	0.84	0.74	0.74	0.49
Mean 3.11	C2	0.62			
SD 1.13	C4	0.62			
Behavioral intention	BI1	0.73	0.86	0.86	0.56
Mean 7.72	BI2	0.74			
SD 1.04	BI3	0.82			
	BI4	0.74			
	BI5	0.69			

The model explains 68% of the variation in behavioral intention. Effort expectancy, TTF, hedonic motivation, facilitating condition, performance expectancy, and cost were found to be statistically significant in explaining behavioral intention. Social influence has a negative impact, so Hypothesis 3 is not supported. An interesting finding of the theoretical model is the indirect significant effects of effort expectancy and TTF on behavioral intention, which are 0.16 and 0.12, respectively.

Table 5. Discriminant validity

Construct	BI	HM	SI	FC	TTF	PE	Cost	EE
Behavioral intention (BI)	0.75							
Hedonic motivation (HM)	0.58	0.86						
Social influence (SI)	0.26	0.24	0.77					
Facilitating condition (FC)	0.53	0.42	0.25	0.73				
TTF	0.75	0.56	0.25	0.64	0.75			
Performance expectancy (PE)	0.66	0.45	0.45	0.51	0.62	0.77		
Cost	0.45	0.30	0.22	0.26	0.51	0.31	0.70	
Effort expectancy (EE)	0.62	0.51	0.27	0.66	0.70	0.64	0.21	0.79

Table 6. Explanatory power and fit indices of model

Paths	Coefficients (β)	t-Statistic	Hypothesis Supported?	Direct Effect	Indirect Effect	Total Effect
EE BI (+)	0.14	2.50*	Yes	0.14	0.16	0.29
TTF BI (+)	0.39	6.89*	Yes	0.39	0.12	0.51
SI BI (-)	-0.04	-0.79	No	-0.04	0.00	-0.04
HM BI (+)	0.24	5.46*	Yes	0.24	0.00	0.24
FC BI (+)	0.02	0.48*	Yes	0.02	0.00	0.02
COST BI (+)	0.19	3.96*	Yes	0.19	0.00	0.19
PE BI (+)	0.34	5.21*	Yes	0.34	0.00	0.34
EE PE (+)	0.47	8.39*	Yes	0.48	0.00	0.47
TTF PE (+)	0.37	7.13*	Yes	0.34	0.00	0.37

DISCUSSION

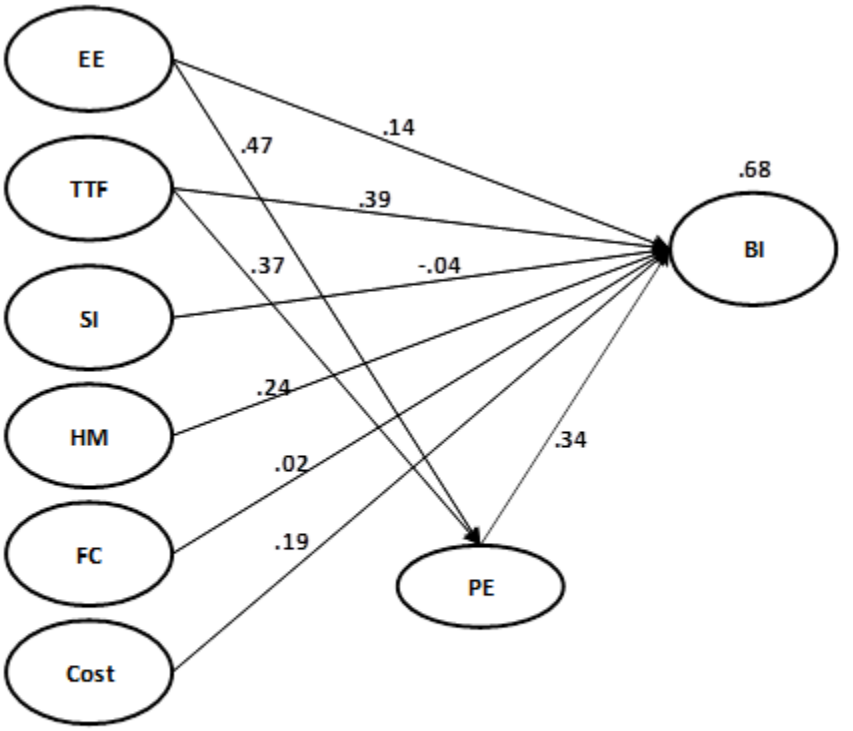
The contribution of the study is to find driving factors that impact the intention to adopt mobile-wallet technology among young consumers. The study finds that effort expectancy and TTF have direct and indirect significant effects on behavioral intentions. This is one of the most interesting findings of the study.

TTF emerged as one of the important predictors of behavioral intention, with the highest coefficient value of 0.39. This finding indicates that there is a need to enhance the model by adding more predictors on the technology side, as suggested by Venkatesh, Thong and Xu (2016). Task–technology fit has direct and indirect effects on behavioral intentions.

The study highlights that the variable for facilitating conditions is one of the weakest predictors of behavioral intentions of consumers. This finding suggests that consumers' perceptions about available resources that provide necessary help to adopt technology are decreasing. There can be two main reasons for such a low significance level. First, awareness about the basics of technology adoption among consumers has increased. Second, users are easily able to find resources that provide the necessary support and help.

In the present study, cost constructs also emerged as one of the predictors of behavioral intentions. One of the reasons for this is that consumers perceive that mobile phones do not have any associated

Figure 1. Structural model modified for UTAUT



Notes EE=Effort Expectancy; TTF=Task-Technology Fit;
SI=Social Influence; HM=Hedonic Motivation;
FC=Facilitating Condition; PE=Performance Expectancy; Bi=Behavioral

costs while they are in use. The results presented here suggest that users do consider the costs associated with every transaction carried out over a mobile-wallet app. Costs include transaction costs, internet costs, upgrades and the mobile-wallet technology itself.

Another interesting finding of the study is that social influence does not have any significant impact on behavioral intentions. One of the reasons for this is that young consumers perceived that mobile-wallet adoption is not socially acceptable (for similar findings, see Emad person & Setterstorm, 2011; Baptista & Oliveira, 2015).

IMPLICATIONS OF THE STUDY

This study has theoretical as well as managerial implications.

Theoretical Implications

One of the major contributions of this study is extending the UTAUT model by integrating constructs from other dominant theories. In the domain of IS, research using the TAM and an UTAUT model has reached its peak; considering this trend, a new direction of research is suggested by Venkatesh, Thong and Xu (2017). They argue that there are eight new dimensions on which theory building in IS should focus. One of the recommendations is to find new constructs that explain the acceptance

and use of technology. Considering this argument, this study has incorporated constructs from other dominant theories to provide a new dimension to IS theory building.

Another key contribution is the perception that consumers have shifted from basic adoption of technology to task-specific adoption; thus, TTF has emerged as one of the most significant factors among all that influence behavioral intentions. This fulfills the rationale of the study, which was to develop an inclusive theoretical model that covers significant drivers of mobile wallet adoption. Thus, this study contributes specifically in the area of digital wallet adoption and information system acceptance in general.

Managerial Implications

The interesting findings of this study are that task technology fit, performance expectancy, effort expectancy and cost are the significant predictors of consumers' adoption towards digital wallet. Based on these findings, this study offers valuable insights to digital wallet service providers to better understand the key factors affecting consumers' digital wallet adoption. Firstly, service providers should consider the inclusion of maximum services under the option of digital wallet so that the users can make the use of multiple services of digital payment from single window only. Secondly, service providers should put an emphasis on the product improvement with certain features viz. user-friendliness and ease to navigate that can enhance digital wallets adoption. Thirdly, they should attempt to develop such a system which can reduce overall cost associated the use of digital wallet. Furthermore, they need to improve technology which can assist the users to complete their majority of task through digital wallet.

LIMITATIONS AND FUTURE RESEARCH

One limitation of the study is that mobile-wallet technology is a new form of digital payment, so the findings may differ for more specific digital payment options. A second limitation is that relevant variables, such as personal innovativeness, risk, overall awareness of digital payments and government policy, should be included in future work. The study employed convenience sampling; thus, the limitations of this method are also implied, and should be considered when replicating the research. The study also did not use any demographic variables as moderators. Future research may need to exclude the facilitating-condition construct from the study. Considering the growth of mobile phones and the adoption of Internet, the facilitation condition construct needs to revisited or redefined. Finally, social influence does not have a significant influence over behavioral intentions; redefining or revisiting the social influence construct from the perspective of technology adoption will increase the explanatory power and theory development of future work.

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APPENDIX A

Table 7.

Did you install mobile wallet in your phone?	
Please mention the mobile wallet that you have installed	
Any other mobile wallet not mentioned above (write name)	
Effort Expectancy	Venkatesh et al., 2003; Venkatesh et al, 2012
I find mobile wallet is easy to use	
I can easily make payment using a mobile wallet	
I can easily receive payment using a mobile wallet	
I can easily install mobile wallet in my mobile phone	
I can easily uninstall mobile wallet from my mobile phone	
Use of mobile wallet is hassle free	
Mobile wallet services are sufficient as per my requirement	
Performance Expectancy	Venkatesh et al., 2003; Venkatesh et al, 2012
I find mobile wallet useful in my daily life	
I can quickly transfer money using a mobile wallet	
Mobile wallet has increased my convenience in making payment	
I can quickly make payment using a mobile wallet	
Use of mobile wallet has decreased use of cash	
Because of the mobile wallet, I am carrying less cash	
Task Technology Fit	Goodhue and Thompson, 1995, Lin and Huang, 2008, Zgou et al, 2010, Tam and Pliveira, 2016
I can quickly make payment at any time using mobile wallet	
Mobile wallet services are real time (immediate)	
Mobile wallet gives message of payment	
Mobile wallet gives message of balance	
I can pay for mobile recharge using mobile wallet	
I can book movie ticket using mobile wallet	
I can shop from mobile wallet	
I can pay for electricity, LPG, Etc. bill from mobile wallet	
I can transfer money to friends/relatives using mobile wallet	
I can transfer money from bank account to mobile wallet	
I can transfer money from mobile wallet to my bank account	
Social Influence	Venkatesh et al., 2003; Venkatesh et al, 2012; Martins, 2014
My friend thinks that I should use mobile wallet	
My family members think's that I should have mobile wallet	
People around me think I should have mobile wallet	
People whose opinion affect me thinks that I should have mobile wallet	
People who are important to me believe that I should have a mobile wallet	

continued on following page

Table 7. Continued

Hedonic Motivation	Yoo et al, 2000; Buil, Chernatony & Martinez,2013
I enjoy using mobile wallet	
It is fun to use mobile wallet	
Using mobile wallet is very entertaining	
Mobile wallet use is very exciting for me	
Facilitating Conditions	Venkatesh et al., 2003; Venkatesh et al, 2012
Mobile wallet is generally accepted by people/market	
I have 3G/4G internet speed in my mobile phone	
I have sufficient data pack for internet usage	
A hassle-free payment can be made using mobile wallet	
Mobile wallet can easily link with debit/credit card	
In case of problem in mobile wallet I can get help from my friends	
I can get help from customer care of mobile wallet	
Government promote mobile wallet payment like (BHIM, UPI- Applications)	
Cost	Srinivasan & Ratchford, 1991; Teo and Yu, 2005
There is no cost for mobile wallet	
I must pay for transaction cost for mobile wallet	
I do consider the cost of data pack while using mobile wallet	
Mobile wallet easily gives details of transactions	
If I use mobile wallet there is long term cost benefit	
I need to pay extra cost (GST, tax) If I use mobile wallet	
Slow internet connection/speed cost me more	
Behavioral Intention	Venkatesh et al., 2012
I plan to use mobile wallet in future	
I will use mobile wallet for my mobile recharge	
I will use mobile wallet for other payment like (movie ticket, food outlet, etc.)	
I will use mobile wallet for small payments	
I will use mobile wallet for online shopping.	

APPENDIX B

Demographics Details

My Gender is:
Female
Male
Education:
Up to Schooling
Graduation
Post Graduation/Masters
Ph.D
Other

My Age is between:
17-25
26-34
35-41
41-50
Above 51 Years
Occupation:
Student
Govt. Service
Private Service
Business
Self-Employed
Other
My Approx. Monthly income is:
0 to 10,000
11,000 to 20,000
21,000 to 30,000
31,000 to 40,000
Above 41,000

APPENDIX C

Mobile Wallet Transaction and Frequency Details

Approximately amount of my mobile wallet transaction for one month is...
Rs. 1 to 500
501-1,000
1,001-2,000
2,001-5,000
More than 5,000
I am using mobile wallet services. Please tick your reply:
Almost every day
Once in 2-3 days
Once in 4-5 days
Once in a week
More than once a week

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