
An empirical study on consumer attitude and behavioural intention to adopt mobile wallet in India

Rashi Banerji* and Animesh Singh

Department of Management and Commerce,

Manav Rachna University,

Faridabad (Haryana), India

Email: rashi.banerji@yahoo.co.in

Email: animesh.hrd@gmail.com

*Corresponding author

Abstract: Indian economy has witnessed growth in digital payments attributed to growing millennial population, high smartphone usage, cheaper internet connectivity, competitive 4G pricing and supporting regulatory policies. Amongst digital payments, mobile wallets have emerged as a convenient payment mode for consumers. The purpose of the research paper is to examine the adoption of mobile wallets by extending technology adoption model (TAM) with variables adopted from innovation diffusion theory (IDT). We analysed the relationship of perceived usefulness and perceived ease of use adopted from TAM and compatibility, observability and triability adopted from IDT using structural equation modelling (SEM). Our findings suggest that perceived usefulness, perceived ease of use, compatibility and observability showed significant relationship with attitude and behavioural intentions. While triability does not significantly influence the attitude and behavioural intentions to adopt mobile wallets, the findings of the study could be helpful for mobile wallet providers to formulate managerial policies.

Keywords: mobile wallet; TAM; innovation diffusion theory; IDT; TAM-IDT integrated framework; digital payment; India.

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Biographical notes: Rashi Banerji is presently working as Assistant Professor in Department for Management and Commerce, Manav Rachna University, Faridabad. She is a PhD (Management) from Centre for Management Studies, Jamia Millia Islamia (Central University), New Delhi. She is recipient of Junior Research Fellowship from UGC-NET. She has over 13 years of experience in industry, research and academics. She has publications in international and national journals including *International Journal of Financial Services*, Inderscience Publishers, and national and international conferences. She is currently guiding four PhD scholars. Her research interest area includes digital payments, loyalty programs, service quality.

Animesh Singh is presently working as Associate Professor in Department of Management and Commerce, at Manav Rachna University, Faridabad. He has over 18 years of experience including industry, academics and research. He has published papers in national and international journals and presented seven papers in national and international conferences and also attended various workshops and FDPs. He has guided one PhD and currently guiding four PhD scholars.

1 Introduction

Government of India's policies like Digital India, Jan Dhan Yojna, data protection bill, demonetisation, etc. have progressed the economy towards digital payments (Memdani, 2020). According to the RedSeer Consulting Report (2020) digital payments in India will increase from USD 29.07 trillion in 2019–2020 to USD 95.36 trillion by 2025. The number of consumers using mobile payment will also increase from 160 million in 2019–2020 to 800 million in 2025. Mobile wallets are expected to play a key role in leading the economy towards digital payments with an increase in the number of users and frequency of usage. Mobile wallets are expected to have higher penetration by 2025 with small amount transactions by lower income groups (RedSeer Consulting Report, 2020). Social distancing norms due to covid pandemic have also pushed small kirana stores, unorganised retailers and consumers to adopt mobile wallets (Buch, 2020). Lockdown due to COVID-19 pandemic resulted in technology adoption by small stores and consumer behaviour has witnessed a rapid shift (Buch, 2020). According to the RedSeer Consulting Report (2020), COVID-19 has acted as an impetus for adoption of digital payments in India. Digital payment providers have leveraged the situation by providing various measures like COVID-19 related insurance and facilities to donation to the Prime Minister relief fund through mobile wallets. Also, the importance of public hygiene, demand for online shopping, and donations through various social causes during covid pandemic has led to adoption of mobile wallets (Yao, 2020). Digital payments like mobile wallets have brought a digital disruption in banking during the pandemic and service providers have expanded their services. Features like convenience, ease of use, partner tie-up, fingerprint lock for safety, additional one-time password authentication for enhanced safety, etc. have made mobile wallets a unique product offering. Mobile wallet providers offer an 'Integrated Financial Service' model where consumers get multiple solutions in a single mobile wallet app. For example, leading mobile wallet company in India, Paytm is providing multiple services such as lending, wealthtech, insurtech, payment banks and e-commerce facility in its mobile wallet app. These features make the mobile wallet a one-stop solution for digital payments, fund transfer, m-commerce, bill payments, recharges, etc. with additional benefits of attractive cashbacks and promotional offers. Mobile wallet providers have also integrated unified payment interface (UPI) based payment facility into their app so that consumers can easily transfer money from their bank account.

Boston Consulting Group Report (2016) claimed that for Indian consumers a major barrier to adoption of mobile wallets is their habit of using cash for payments. Many e-commerce sites have thus provided an option of cash on delivery specially for Indian consumers (Boston Consulting Group Report, 2016). But there is a falling trend in cash on delivery due to non-delivery of the shipment due to unavailability of the recipient and unnecessary burden of management of cash (Sarkar, 2019). Also, RBI had urged the consumers to use digital payment facilities amid COVID-19 outbreak as a control measure to prevent the spread of virus due to usage of infected currency notes (Dubey, 2020; Shukla, 2020). Both of these factors have helped the Indian consumers to adopt digital payment facilities like mobile wallets instead of cash-based payments. Despite several advantages of digital payments their adoption is still low in India (Aggarwal, 2016; Boston Consulting Group Report, 2016). The purpose of the paper is to understand the factors that influence the attitude and intentions of consumers while adopting mobile

wallets. This will help various stakeholders like smartphone manufacturers, mobile wallet providers and regulatory bodies to frame policies accordingly. This will create a conducive environment for adoption of digital payments and will lead the economy towards digital payments.

This article is organised as follows. First, an overview of the concepts of perceived usefulness, perceived ease of use, compatibility, triability, observability with hypotheses is provided. Next conceptual model adopted for the study is presented. Then we elaborate data collection, analysis and discussion. Finally, findings, implications and avenues for future research are discussed.

2 Literature review

The review of literature reveals that there are many theoretical frameworks related to adoption of information technology. Many of the studies related to adoption of mobile banking and mobile wallets have used different framework like theory of reasoned action (TRA) (Fishbein and Ajzen, 1975), technology adoption model (TAM) (Davis, 1989), theory of planned behaviour (TPB) (Ajzen, 1991), innovation diffusion theory (IDT) (Rogers, 1995); unified theory of acceptance and use of technology (UTAUT) (Venkatesh and Davis, 2000) but there is no standard framework (Chawla and Joshi, 2020; George and Kumar, 2013; Kumar et al., 2017; Madan and Yadav, 2016; Shin, 2009; Yang et al., 2012). Out of these frameworks literature suggest that TAM is a robust model for adoption of IT related services such as m- banking, internet banking, e-commerce, etc. and numerous researchers have modified TAM model to suit the context (Aydin and Burnaz, 2016; Baabdullah et al., 2019; Saji and Paul, 2018). According to TAM perceived usefulness and perceived ease of use influence consumer's attitude and intention of adoption. Both of these variables are related to consumers' perception related dimensions. On the other hand, IDT Rogers (1995) insists that adoption of new technology is dependent on product specific dimensions like compatibility, complexity, observability, relative advantage and trialability. These attributes highlight the characteristics of innovation which influence behavioural intentions to adopt (Rogers, 2003). Many studies have used the IDT model to understand the adoption in context of mobile banking and mobile wallets (Khraim et al., 2011; Lin, 2011). Individually TAM and IDT each model has limited predictive ability and both the models complements the other (Koeing-Lewis et al., 2010).

Thus, for our study we propose a TAM-IDT integrated model with perceived usefulness and perceived ease of use adapted from TAM and compatibility, trialability and observability from the IDT model. We have adopted only 3 factors from the IDT model as relative advantage had similar attributes as perceived usefulness and complexity is similar to perceived ease of use (Moore and Benbasat, 1991). Several studies have been conducted on the TAM-IDT integrated framework to study the adoption of mobile banking, internet banking, wallets, IT related products, etc. but very few studies have been conducted in context of mobile wallets especially in emerging economy like India (Giovanis et al., 2012; Koeing-Lewis et al., 2010; Lee et al., 2011; Puschel and Mazzon, 2010; Su et al., 2017). Puschel and Mazzon (2010) studied an integrated TAM-IDT framework and concluded that it provides deeper understanding of behavioural intention of adoption of mobile banking. Giovanis et al., (2012) extended TAM with IDT and

privacy risk and concluded that compatibility, TAM constructs and perceived security influenced adoption of internet banking. Also, there are limited studies on adoption of mobile wallets in Indian context and thus our study fills this research gap (Bansal, 2019; Chawla and Joshi, 2018; Kumar et al., 2017; Madan and Yadav, 2016; Singh and Srivastava, 2019; Singh and Sinha, 2020; Singh et al., 2018; Sinha, 2016). Since, Indian digital payment industry and consumer preferences are rapidly evolving and there is a need to study the behavioural intentions to adopt mobile wallets.

3 Research constructs and hypothesis

3.1 Perceived usefulness

Perceived usefulness is defined by Davis (1989) as “the extent to which a person perceives that using a system would help him improve his performance”. Several researchers have found out that perceived usefulness influenced attitude and behaviour intention to adopt technology (Akturan and Tezcan, 2012; Cheah et al. 2011; Madan and Yadav 2016; Koeing-Lewis et al. 2010; Oliverira et al. 2016; Singh and Sinha 2020; Wong et al., 2012). Shatskikh (2013) reported that lack of clear understanding of the benefits of mobile payments is a barrier to its adoption. Perceived Usefulness results in formation of positive attitude towards adoption and user is able to fully utilise the benefits (Kim et al., 2010; Leng and Lada, 2011; Madan and Yadav 2016; Natarajan et al., 2017; Liebana-Cabanillas et al. 2018). The following hypothesis was formulated:

H1 Perceived Usefulness significantly positively influences attitude of using mobile wallets

3.2 Perceived ease of use

Perceived ease of use is defined as “degree to which a person believes that using a particular system will be free of effort” Davis (1989). Ease of use has been studied in context of mobile banking and several studies has reported it as an effective dimension for intention to use (Aydin and Burnaz, 2016; Cheah et al., 2011; Koksall, 2016; Liébana-Cabanillas et al., 2014; Lin, 2011; Mortimer et al., 2015; Phonthanikitithaworn et al., 2015; Singh et al., 2018). Perceived ease of use has similar attributes as the factor complexity in IDT (Rogers, 1995). In mobile wallets many factors affect the perceived ease of usage such as screen size, configuration of mobile, transaction issues, navigation, etc. as it will impact the transaction on mobile wallets. Hence, we propose the hypothesis:

H2 Perceived ease of use significantly positively influences attitude of using mobile wallets

3.3 Compatibility

Compatibility is the “degree to which an innovation is consistent with users’ existing values, needs, experiences” (Rogers 1995, 2003). Several studies reported compatibility significantly influenced behavioural intentions of adoption of mobile banking and mobile wallets (Ehrenhard et al., 2017; Khraim et al., 2011; Koeing-Lewis et al., 2010; Lee et al.,

2011; Lin, 2011; Yang et al., 2012; Singh and Srivastava, 2014). Compatibility construct explains how the making payment using a mobile wallet is compatible with existing values of the customer. Thus, we propose the following hypothesis.

H3 Compatibility significantly positively influences attitude of using mobile wallets

3.4 Observability

Rogers (1995, 2003) defined observability as “the degree to which the results of an innovation are visible to others”. In studies which combined TAM and IDT users reported that easily observable technology was perceived useful by consumers (Lee et al., 2011; Yang et al., 2012). When customers observe their family/friends making payment easily they are influenced to adopt mobile wallets. Thus, the following hypothesis was formulated for the study.

H4 Observability significantly positively influences attitude of using mobile wallets

3.5 Trialability

Trialability is defined as “The degree to which an innovation may be experimented with on a limited basis” Rogers (1995, 2003). Several studies reported a positive relationship between trialability and behavioural intention (Lee et al., 2011; Khraim et al., 2011; Yang et al., 2012). According to the Boston Consulting Group Report (2016) significant barrier to adoption of mobile wallets for Indian consumers is the habit of using cash. This habit can be changed if mobile wallets providers can motivate the consumer to try making payment using the wallet. Once a consumer tries the mobile wallet then there are greater chances of adoption. Trialability of mobile wallets can be enhanced by offering free rewards/cashbacks to first time users. Following hypothesis was formulated for the study:

H5 Trialability significantly positively influences Attitude of using mobile wallets

3.6 Attitude and behavioural intention

Intentions based models have reported attitude as an antecedent to behavioural intentions. Attitude towards adoption is result of individual’s salient beliefs about consequence of adopting and is reported to influence intentions in mobile banking and mobile wallet context also (Chawla and Joshi, 2019; Kumar et al., 2017; Lin, 2011; Puschel et al., 2010).

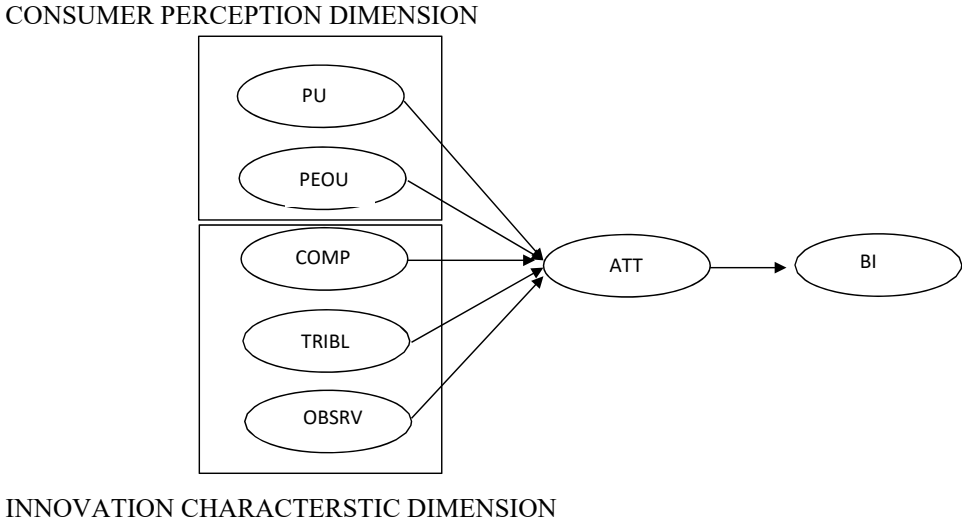
“Behavioural intention refers to the degree of intensity of an individual’s intention to perform a specific behaviour” (Fishbein and Ajzen, 1975). Various studies have measured behavioural intentions for adoption of IT related services (Amoroso and Magnier-Watanabe, 2012; Madan and Yadav 2016; Schierz et al., 2010; Yang et al., 2012). Thus, following hypothesis was formulated for the study:

H6 Attitude significantly positively influences behavioural intentions of using mobile wallets

3.7 Conceptual model

The conceptual model adopted for our study is presented in Figure 1.

Figure 1 TAM-IDT integrated model



4 Data collection

4.1 Research instrument

The research instrument consisted of two sections. The first section collected information on demographic variables such as age, income, education and gender. The second section obtained information on consumers' perception through 5-point Likert's scale. The factors perceived usefulness and perceived ease of use were adopted from the TAM model proposed by Davis (1989). The factors of the IDT model namely, compatibility, observability and trialability were adopted from studies conducted by Lee et al. (2011), Moore and Benbasat (1991), and Wu and Wang (2005) respectively. The items for the factors attitude and behavioural intentions were adopted from studies conducted by Ajzen (1991) and Venkatesh and Davis (2000) respectively. Initially, a pilot study was conducted on 60 respondents to pre-test and refine the questionnaire. Suggestions of industry professionals and academicians with relevant experience were also taken into consideration while framing the questions. The result of the pilot study showed the acceptability and understanding of the questionnaire among the respondents.

4.2 Sampling

Considering the research problem, lack of proper sampling frame and social distancing norms due to Covid 19 pandemic data was collected online through convenience sampling method. Previous studies related to adoption of IT enabled services have also adopted convenience sampling techniques (Amoroso and Magnier-Watanabe, 2012; Madan and Yadav, 2016; Schierz et al., 2010; Yang et al., 2012). Data of 450 respondents was collected and after initial scrutiny of incomplete and unengaged responses a total of 371 responses was deemed fit for analysis.

Table 1 Descriptive profile of respondents

| <i>Gender</i> | | | |
|----------------------------------|------------------|----------------|---------------------------|
| | <i>Frequency</i> | <i>Percent</i> | <i>Cumulative Percent</i> |
| Male | 197 | 53.1 | 53.1 |
| Female | 174 | 46.9 | 100 |
| Total | 371 | 100 | |
| <i>Age</i> | | | |
| | <i>Frequency</i> | <i>Percent</i> | <i>Cumulative percent</i> |
| Below 20 Years | 106 | 28.6 | 28.6 |
| 21–30 Years | 111 | 29.9 | 58.5 |
| 31–40 Years | 82 | 22.1 | 80.6 |
| 41–50 Years | 45 | 12.1 | 92.7 |
| 51 Years above | 27 | 7.3 | 100 |
| Total | 371 | 100 | |
| <i>Family's annual income</i> | | | |
| | <i>Frequency</i> | <i>Percent</i> | <i>Cumulative percent</i> |
| Below USD 3,500 per annum | 79 | 21.3 | 21.3 |
| USD 3,500–13,500 per annum | 152 | 41 | 62.3 |
| USD 13,500–33,500 per annum | 89 | 24 | 86.3 |
| Above USD 33,500 per annum | 51 | 13.7 | 100 |
| Total | 371 | 100 | |
| <i>Educational qualification</i> | | | |
| | <i>Frequency</i> | <i>Percent</i> | <i>Cumulative percent</i> |
| Under graduate | 81 | 21.8 | 21.8 |
| Graduate | 143 | 38.5 | 60.4 |
| Post graduate | 102 | 27.5 | 87.9 |
| Other | 45 | 12.1 | 100 |
| Total | 371 | 100 | |

Table 2 Factor loading and Cronbach's alpha values

| <i>Measurement variables</i> | <i>Factors</i> | <i>Cronbach's alpha</i> |
|---|----------------|-------------------------|
| PU1: Using mobile wallet improves work efficiency | 0.577 | 0.818 |
| PU2: Using mobile wallet makes my transaction easier | 0.718 | |
| PU3: Overall, Mobile wallet are useful | 0.71 | |
| PEOU1: Learning to use mobile wallet is easy | 0.84 | 0.923 |
| PEOU2: It is easy to access the mobile wallet on my phone and make transaction | 0.874 | |
| PEOU3: Overall, using mobile wallets is easy | 0.76 | |
| CP1: Hard to use mobile phone for purchasing things | 0.81 | 0.796 |
| CP2: It is hard to navigate apps for mobile payments | 0.646 | |
| CP3: Mobile wallet makes it hard to read credit/debit cards, coupons and receipts information | 0.768 | |
| OB1: I learn how to purchase products through mobile wallet from my friends/family/others | 0.829 | 0.731 |
| OB2: I observe people using mobile wallet for buying products | 0.743 | |
| OB3: Purchasing products through mobile wallet is a practice that I have seen before | 0.669 | |
| TB1: It is easy to use mobile wallet more frequently after trying them out | 0.567 | 0.743 |
| TB2: A trial would convince me that using mobile wallet is better than using credit/debit cards | 0.8 | |
| TB3: It is better to experiment with mobile wallet before adopting it | 0.825 | |
| ATT1: Using mobile wallets is a good idea | 0.786 | 0.893 |
| ATT2: My attitude towards mobile wallets is favourable | 0.812 | |
| ATT3: I think using mobile wallets is beneficial to me | 0.582 | |
| BI1: I am likely to use/continue using mobile wallet services in the near future | 0.855 | 0.884 |
| BI2: I am willing to use/continue using mobile wallet services in the near future rather than not use it. | 0.864 | |
| BI3: I intend to use / continue using mobile wallet at least as often within the next month as I have previously used | 0.85 | |

5 Data analysis and discussion

Table 1 elaborates the descriptive profile of the respondents.

Overall, 53.1% of survey respondents were male and 46.9% were female. The respondents were also equally divided among different age groups. Only the age category 51 years and above had 7.3% respondents emphasising that the adoption of mobile wallets is low at older age as people at this age are less tech savvy. 41% of the respondents had income from 10–25 Lakhs per annum and 38% of the respondents were graduate degree holders.

The data was checked for normality by analysing the skewness (-0.473 to -1.586) and kurtosis values (-0.759 to 3.070) which were in acceptable range Hair et al. (2013). The value obtained for KMO was 0.887; Bartlett’s Test of Sphericity was significant; and communalities values ranged from 0.638 – 0.892 all values were in acceptable range (Hair et al., 2008, 2013; Tabachnick and Fidell, 2007). Exploratory factor analysis (EFA) was conducted with principal component analysis and varimax rotation for TAM-IDT integrated model and total variance explained for TAM-IDT model was 77.926% The factor loading and Cronbach’s alpha obtained from exploratory factor analysis is reported in Table 2. Since the Cronbach’s alpha values are greater than 0.7 it showed reliability of the data (Cronbach, 1951).

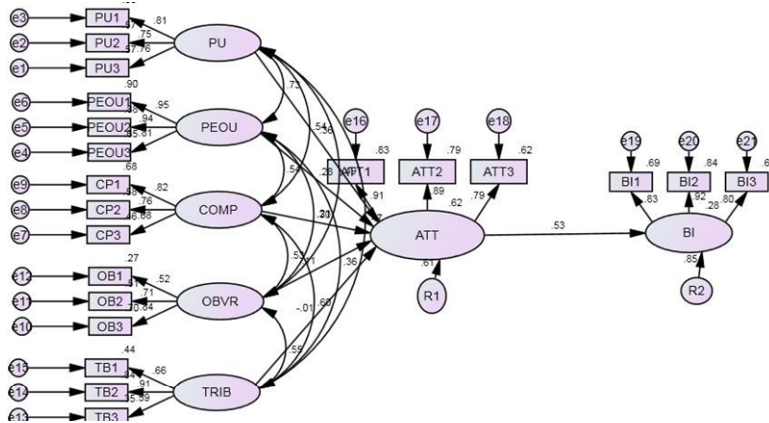
The validity of the model was tested through average variance extracted (AVE) using AMOS 21.0 and was more than 0.5 which established convergent validity (Hair et al., 2013; Tabachnick and Fidell, 2007). The data was checked for discriminant validity checking SQRT(AVE) > inter construct correlation as reported in Table 3.

Table 3 Validity analysis

| Factors | AVE | DV=sqrt(ave) |
|------------------------|-------|--------------|
| Perceived usefulness | 0.601 | 0.7752 |
| Perceived ease of use | 0.81 | 0.9000 |
| Compatibility | 0.572 | 0.7563 |
| Observability | 0.5 | 0.7071 |
| Triability | 0.542 | 0.7362 |
| Attitude | 0.75 | 0.8660 |
| Behavioural intentions | 0.722 | 0.8497 |

The measurement model and structural equation model were analysed through AMOS 21.0. The goodness of fit for TAM-IDT SEM Model were: CMIN/df 3.279, CFI 0.919, RMSEA 0.078 were in acceptable range (Hair et al. 2013; Tabachnick and Fidell, 2007). Figure 2 demonstrates the SEM model for the TAM-IDT model.

Figure 2 TAM-IDT integrated model in SEM (see online version for colours)



The results of the present study were tested with the help of p-values obtained from the structural model. Table 4 below shows the path estimates, standardised estimates (SE), composite reliability (CR) and p values and if the hypothesis are supported/ not supported.

Table 4 Hypothesis testing using path analysis in TAM-IDT model

| <i>Hypotheses</i> | <i>Path</i> | <i>Estimate</i> | <i>S.E.</i> | <i>C.R.</i> | <i>P</i> | <i>Supp/not Supp</i> |
|--|----------------|-----------------|-------------|-------------|----------|----------------------|
| H1: Perceived usefulness significantly influences attitude of using mobile wallets | ATT <--- PU | 0.348 | 0.078 | 4.446 | 0.000 | Supported |
| H2: Perceived ease of use significantly influences attitude of using mobile wallets | ATT <--- PEOU | 0.249 | 0.064 | 3.915 | 0.000 | Supported |
| H3: Compatibility significantly influences attitude of using mobile wallets | ATT <--- COMP | 0.186 | 0.061 | 3.064 | 0.002 | Supported |
| H4: Observability significantly influences attitude of using mobile wallets | ATT <--- OBSRV | 0.163 | 0.091 | 1.799 | 0.007 | Supported |
| H5: Trialability significantly influences attitude of using mobile wallets | ATT <--- TRIAB | -0.007 | 0.04 | -0.183 | 0.855 | Not supported |
| H6: Attitude significantly influences behavioural intentions of using mobile wallets | BI <--- ATT | 0.521 | 0.051 | 10.208 | 0.000 | Supported |

The study was conducted to find the antecedents of consumer attitude and behavioural intention of using mobile wallet. Results of the structure equation modelling (Table 4) confirms the acceptance of our study hypotheses H1, H2, H3, H4 and H6, i.e., perceived usefulness, perceived ease of use, compatibility and observability significantly impact the attitude and which in turn influence the behavioural intentions to use mobile wallets. These results are in line with the findings of earlier studies conducted by various researchers in Indian and different cultures (Cheah et al., 2011, Koeing-Lewis et al., 2010, Singh and Sinha, 2020, Mortimer et al., 2015, Singh and Srivastava, 2014). Trialability is the only variable that is not a significant influencer of consumers' intentions of using mobile wallets. This result also confirms the Boston consultancy report (2016) findings about Indian consumers that because of their cash using habits, i.e., they are less willing to trial mobile wallets.

6 Conclusions and managerial implications

The aim of this paper was to analyse consumers' adoption of mobile wallets and to identify the factors influencing it. The study successfully extended the TAM model with

variables adopted from the IDT model. The result indicated that TAM factors perceived usefulness and perceived ease of use influenced attitude and behavioural intentions of mobile wallet adoption in accordance with previous literature (Aydin and Burnaz, 2016; George and Kumar, 2013; Giovanis et al., 2012; Leng and Lada, 2011; Kumar et al., 2017; Saji, and Paul, 2018). To increase the perceived usefulness the mobile wallet providers should highlight the advantages of using mobile wallets like convenience, no unnecessary burden of carrying cash, rewards, cashback, discount, etc. They should emphasise on the disadvantages of cash-based payments with hassles of management of cash, time spent in handling cash, provision of change, theft, etc. This will help break consumers' habit of using cash which has been attributed as the barrier to adoption of digital payments by Boston Consultancy Report (2016). Managers must also highlight that consumers can follow social distancing norms during COVID-19 pandemic with digital payments as RBI has also appealed the consumers to use digital payments during the pandemic. The perceived ease of use of mobile wallets can be increased with better configuration phones, 4G connectivity, large screen size, etc. Further, advancement in technology will boost the perceived ease of use of mobile wallets in future also.

In the present study compatibility and observability adopted from IDT model influenced the attitude towards adoption of mobile wallets in accordance with previous literature (Ehrenhard et al., 2017; Giovanis et al., 2012; Lee et al., 2011; Lin, 2011; Singh and Sinha, 2020). Mobile wallets are compatible with the lifestyle of today's consumer as they are already using many m-commerce and m-banking apps and thus don't find much difficulty in using user-friendly mobile wallets apps. Further, increasing usage of mobile wallets especially due to covid 19 social distancing norms has increased the observability of mobile phones. Not only consumers but small merchants/vendors have adopted mobile wallets payments after observing their peers getting benefitted from mobile wallet payments. In this study triability was observed to be insignificant in influencing consumers' attitude and behavioural intentions to adopt mobile wallets as today's consumer is already mobile app savvy and is exposed to mobile banking and mobile commerce apps. Today's consumer doesn't feel the need to try the mobile wallet app before adoption as the consumer is already aware of advances in digital payments and mobile banking.

7 Limitations and future research

The study has some limitations which need to be considered when analysing the results. The data collection was collected through online survey and hence may suffer from selection bias. The study was restricted to TAM-IDT construct and various other variables like trust, social norms, perceived value, etc. can be added to the model. The adoption of mobile wallets not only depends upon the consumers but also from adoption of merchants and support of Government policies and the impact of the same can also be measured in future studies.

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Appendix

Questionnaire

Dear respondent,

Greetings for the day! Kindly choose the correct/relevant option in the questionnaire regarding your attitude and intention of mobile wallet usage.

Please indicate your gender

Male

Female

Please indicate your age

Below 20 years

21–30 years

31–40 years

41–50 years

51 years above

Please indicate your family’s annual income

Below USD 3500 per annum

USD 3500– 13500 per annum

USD 13500– 33500 per annum

Above USD 33500 per annum

Please indicate your educational qualification

Undergraduate
 Graduate
 Post graduate
 Other

Please tick your preference for usage of mobile wallets

| <i>Statements</i> | <i>Tick only one option</i> | | | | |
|------------------------------|---|-----------------|----------------|--------------|-----------------------|
| | <i>Strongly disagree</i> | <i>Disagree</i> | <i>Neutral</i> | <i>Agree</i> | <i>Strongly agree</i> |
| | <i>1</i> | <i>2</i> | <i>3</i> | <i>4</i> | <i>5</i> |
| <i>Perceived usefulness</i> | | | | | |
| PU1 | Using mobile wallet improves work efficiency | | | | |
| PU2 | Using mobile wallet makes my transaction easier | | | | |
| PU3 | Overall, Mobile wallet are useful | | | | |
| <i>Perceived ease of use</i> | | | | | |
| PEOU1 | Learning to use mobile wallet is easy | | | | |
| PEOU2 | It is easy to access the mobile wallet on my phone and make transaction | | | | |
| PEOU3 | Overall, using mobile wallets is easy | | | | |
| <i>Compatibility</i> | | | | | |
| CP1 | Hard to use a mobile phone for purchasing things. | | | | |
| CP2 | It is hard to navigate apps for mobile payments. | | | | |
| CP3 | Mobile wallets make it hard to read credit/debit cards, coupons and receipts information. | | | | |
| <i>Observability</i> | | | | | |
| OB1 | I learn how to purchase products through mobile wallets from my friends/family/others. | | | | |
| OB2 | I observe people using mobile wallets for buying products. | | | | |
| OB3 | Purchasing products through mobile wallets is a practice that I have seen before. | | | | |

| <i>Statements</i> | | <i>Tick only one option</i> | | | | |
|------------------------------|--|-----------------------------|-----------------|----------------|--------------|-----------------------|
| | | <i>Strongly disagree</i> | <i>Disagree</i> | <i>Neutral</i> | <i>Agree</i> | <i>Strongly agree</i> |
| | | <i>1</i> | <i>2</i> | <i>3</i> | <i>4</i> | <i>5</i> |
| <i>Triability</i> | | | | | | |
| TB1 | It is easy to use mobile wallets more frequently after trying them out. | | | | | |
| TB2 | A trial would convince me that using a mobile wallet is better than using credit/debit cards. | | | | | |
| TB3 | It is better to experiment with mobile wallets before adopting it. | | | | | |
| <i>Attitude</i> | | | | | | |
| ATT1 | Using mobile wallets is a good idea | | | | | |
| ATT2 | My attitude towards mobile wallets is favourable | | | | | |
| ATT3 | I think using mobile wallets is beneficial to me | | | | | |
| <i>Behavioural intention</i> | | | | | | |
| BI1 | I am likely to use/continue using mobile wallet services in the near future | | | | | |
| BI2 | I am willing to use/continue using mobile wallet services in the near future rather than not use it. | | | | | |
| BI3 | I intend to use / continue using mobile wallet at least as often within the next month as I have previously used | | | | | |