

Customer Loyalty In M-Payment Services: The Roles of Customer Satisfaction, Engagement, Trust and Wellbeing

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ABSTRACT

M-payment is getting attention as a new standard payment mode on over the world. The current research suggests a conceptual model analyzes the loyalty of customers to use M-payment services in developing countries. Data was gathered in Vietnam, one of the most developing countries with a high rate of population use smartphones. Data has been analyzed using SmartPLS 3.3 confirmed that seven over eight hypotheses were to be supported. The findings of this study explain that up to 63 percent loyalty of customers uses M-payment services. The results offer support that engagement, trust, and wellbeing of use influence the loyalty of customers use mobile payment services. Subsequently, the study reveals that customer satisfaction only has an indirect effect via the customer's engagement and trust in the loyalty of the customer. From visions to practical, we draw some concludes with managerial implications and future directions regarding online payment systems and customer services management.

Keywords

Mobile payment, trust, satisfaction, engagement, loyalty

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Introduction

The motivation to use of digital technologies due to the social distancing norms and nationwide lockdowns has led to an inevitable surge in by Covid-19 pandemic. Many people around the world have had to adjust to new ways of work and life. The lockdown has resulted in most people taking to the Internet and internet-based services to communicate, interact, and continue with their job responsibilities from home. Nearly 50% of global shoppers were using digital payments more than before the pandemic, and the majority plan continues doing so after the virus is contained (Researchandmarkets.com, 2020). The rise of mobile technology, in particular, of the mobile Internet, has changed human lives and behaviors significantly. Mobile services (e.g., banking, payment, messaging, games) continue to spread rapidly, gaining more importance (Polydoropoulou et al., 2020). Mobile payment (M-payment), now a major channel for conducting financial transactions and the natural evolution of online payment, refers to a combination of mobile technology and payment system that facilitates payment for goods and services via mobile devices (Tumminaro et al., 2007). M-payment is the top digital payment methods benefitting from this change, as consumers use less cash and make more purchases online. However, notwithstanding these high numbers, many people have been forgotten or removed the mobile applications after they used the first time (Kang, Mun, & Johnson, 2015). Among the reasons why users do not install or reuse mobile apps, users' cares about security and privacy risks are found to be the most salient and merit further investigation (Mombeuil, 2020). With the speedily increasing worldwide economy and pandemic, smartphones are becoming an essential commodity for a citizen. Mobile banking defines as "the use of mobile terminals such as smartphones and tablets to access banking networks via the internet connection"

Mobile banking, if adopted, could have a notable impact in developing, Asian countries where abundances of users cannot access to traditional banking services or the cost of such services are restrictive (Husain, 2013). Despite exceptional advantages, the usage penetration of m-banking services by traditional banking establishments is still limited in many nations (Oliveira, Thomas, Baptista, & Campos, 2016). Many scholars have explored several factors to try and explain the slow diffusion of mobile banking all over the world, including customers' doubt of the safeness of banking transactions through mobile devices, lack of trust in m-banking providers, aversion to or confusion with innovations and specific characteristics relating to the Smartphone (Kang et al., 2015; Oliveira et al., 2016). Customer loyalty, as described by (Oliver, 1999), is "a deeply held commitment to rebuy or repatronize a preferred product/service consistently." Compared with non-loyal users, loyal users are much less affected by negative information (e.g., poor reviews or unflattering news reports) about their favored products or services (Donio, Massari, & Passiante, 2006). However, customer loyalty may not be explained fully by these affective factors, which tend to be highly transient in contrast to the long-term commitment implied by the term "loyalty" (Zins, 2001). It is, therefore, imperative to determine the antecedents of user loyalty and develop strategies to cultivate it (Luarn & Lin, 2003). However, although empirical studies on mobile application adoption and usage have increased in recent years (Hsu, Lu, & Hsu, 2007; Mombeuil, 2020), specific research on M-payment loyalty remains scarce (Yuan, Liu, Su, & Zhang, 2020). The pursuit of greater market share and a sustainable competitive advantage may entail considerable risk for M-payment providers. Thus, our objective here is to determine the antecedents of users' loyalty towards M-payment services from cognitive and affective perspectives. The study offers several implications that can help practitioners,

researchers, and M-payment providers to evaluate users' customer loyalty behavior to mobile payment services in the context of an emerging market. This research will contribute to the current literature on M-payment services by investigating the relationships between several key constructs (e.g. customer's satisfaction, customer's trust, customer's engagement, customer's wellbeing) and service loyalty of M-payment services in an emerging market (i.e., Vietnam). This will provide an indirect comparison with factors influencing the loyalty behaviour to M-payment services in developing and developed countries. Previous literature and practical studies have conducted research using the classical models of technology adoption (i.e., TAM, TPB, etc.). However, our research proposes two novelties: on the one hand, the generation of a holistic model that integrates the main variables so far reviewed and, on the other hand, its application in an emerging market such as Vietnam, with the great potential use of these M-payment services systems. In addition, extant studies have emphasized the importance of user trust and satisfaction as keys to long-term relationships between users and mobile application services (Lee, Moon, Kim, & Mun, 2015; Yuan et al., 2020). Although satisfaction and trust are found to be important for the success of online transaction (Fang et al., 2014; Sadeghi, Ghujali, & Bastam, 2019), the relationship among trust, satisfaction, and M-payment loyalty has not yet been sufficiently investigated. The conclusions of the study will be beneficial for practitioners as well. It will help M-payment service providers by showing key antecedent factors to predict the loyalty of customers in M-payment services. Understanding these factors would help the service providers in allocating their limited resources better. It would also help to create a better marketing strategy for M-payment providers looking to enter an emerging market. Moreover, this research was conducted in Vietnam, a developing country with a young and active population with limited research about this topic.

The rest of our research is structured as follows. Part two reviews the related pieces of literature that describe the theoretical background and suggests the hypotheses; part three explains the research method; part four analyzes the data and summarizes the outcomes of research; the final part conducts the related discussion, limitations, and future research extensions.

Literature review and hypotheses

Customer Engagement

Early literature defines customer engagement behavior as is the emotional connection between customers and providers that iterative psychological state. This state begins from the interaction between customers and providers via satisfying each other demands (Brodie, Hollebeek, Jurić, & Ilić, 2011; Fehrer, Woratschek, Germelmann, & Brodie, 2018). Customers interact and cooperate with providers to generate values that satisfy their needs (Habibi, Laroche, & Richard, 2014). Social exchange theory suggests that firms and consumers regularly engage in interchange values, the most basic of which is transactional; for instance; a company create or delivery valuable products or services to exchange for payments with consumers interchange values (Jaakkola

& Alexander, 2014). Based on the social exchange theory, engagement formed by co-created and initiated between organization and customer (Harrigan, Evers, Miles, & Daly, 2018; Tyler & Blader, 2000). Empirical researchers look at customer engagement from the view of the organization and describe it as activities enabling "repeated interactions that strengthen the emotional, psychological or physical investment a customer has in a brand" (Vivek, Beatty, & Morgan, 2012). In social commerce, customer engagement is a vital factor because social media can enrich the relationships between customers and providers (Itani, Kassar, & Loureiro, 2019). Research studies addressing the importance of firms' efforts to stimulate engagement (Carlson, Rahman, Voola, & De Vries, 2018), of course, make a valuable contribution. In terms of business, this process starts with communication and encompasses the point of purchase (Araujo, Copulsky, Hayes, Kim, & Srivastava, 2020). There are many methods to engage with customers via social media, websites, applications, online games, or any other space where they are interactive or sharing content (Wrigley & Straker, 2019). Whenever the customers involved and engaged to organization, they will fuller recognizing the organization values proposition, which influences positively to customer behavior as purchasing and spending (Lv, Jin, & Huang, 2019). Thus, we hypothesize:

H1: Customer engagement has a positive impact on service loyalty

Customer Satisfaction

In general, customer satisfaction of particular services is "an evaluation of customers between the performance of provided services and the expected performance evaluation of the services" (Park, 2019). When customers are provided with specific services that satisfy their predictable calculations, they will have definite convictions and feel positive emotions. Consequently, the impact of customer satisfaction on customer behavior, such as an intention to repurchase, services revisit, but also the influence of customer trust (Fauzi & Suryani, 2019). Some researchers who study online loyalty have been confirmed satisfaction as a vital determinant of the loyalty of the online customer (Woratschek, Horbel, & Popp, 2020). In this research, the authors suggest that satisfaction has a positive relationship with customer loyalty. Customers who have been satisfied with services, using services more extensively and possess higher loyalty than those who were not satisfied (Yuan et al., 2020). M-payment service providers should promote loyal users as well as perform competitive advantages by satisfying customer needs; otherwise, the customers will likely find the alternatives (Jiang & Rosenbloom, 2005). Whenever retail customers use online services, they view purchase value as a significant attribute in ranking satisfaction, and they are more satisfaction-sensitive when making repurchase decisions compare to the traditional market (Singh, Sinha, & Liébana-Cabanillas, 2020). Thus, the current study offers the following hypothesis on the relationship between customer satisfaction and loyalty:

H3: Customer satisfaction has a positive impact on service loyalty

Customer Trust

Trust has been considered as "confidence that [one] will find what is desired [from others] rather than what is feared" (McKnight & Chervany, 1996). Trust has become known as an essential factor in online sales and a useful forecast of purchase intention in the online payment (Talwar, Dhir, Khalil, Mohan, & Islam, 2020). Prior studies have confirmed that consumer attitudes (Lien & Cao, 2014), purchase intention (Chiu, Hsu, Lai, & Chang, 2012), and loyalty (Yuan et al., 2020) are formed by trust.

In term of consumer-brand relationships, how to understand the behavioral intention of customers is the core to predict real behavior. (Shen, Wu, Yi, & Xue, 2020) indicated that online customers tend to assess positively to online service providers when they have a higher level of trust in the providers. Moreover, they will ready to do more transaction with the provider. Trust is vital in developing long-term online business-to-consumer relationships and influences behavioral intentions (Al-dweeri, Obeidat, Al-dwiry, Alshurideh, & Alhorani, 2017). Therefore, construction purchaser trust is critical for service providers because trust points to cooperative consumer consequences (Ozdemir, Zhang, Gupta, & Bebek, 2020). We, therefore, believe that the essential foundation for the sustainable of successful customer-to-provider relationships is trust. Thus, it is hypothesized that:

H2: Trust has a positive impact on service loyalty

Subjective Wellbeing

Wellbeing mentions to optimum psychological functioning and experience (Deci & Ryan, 2008). In social psychological theory, wellbeing has been largely divided into two primary facets: (a) "Subjective Wellbeing refers to the extent to which a person accepts as true or feels that his or her life is going well and is considered as one of the best available proxies for a broader, more canonical form of well-being" (Diener, Lucas, & Oishi, 2018); and (b) "psychological well-being, emphasizing eudemonic perspectives such as personal growth, meaning, and purpose in life" (Diener, Suh, Lucas, & Smith, 1999; Ryan & Deci, 2001). Prior studies have examined the relationship between the use of online services and individuals' wellbeing (e.g., (W. Chen, Fan, Liu, Zhou, & Xie, 2016; J. Kim, LaRose, & Peng, 2009; Steel, Schmidt, & Shultz, 2008). Nevertheless, those researchers focus on satisfaction with real life, such as customer satisfaction with new technology or healthcare services. Limited research has been completed from the perspective of service loyalty about M-payment services. In this research, subjective wellbeing is customer assessment about their happiness and satisfaction whenever using M-payment services (Kopsov, 2019). In the view of customers, happiness as a paramount life goal prioritizes that they set priority to pursuit in daily life (Chiu, Cheng, Huang, & Chen, 2013), and as a result, buyer choice influenced by the positive or negative of interactive activities (M. J. Kim, Lee, & Preis, 2020). If buyers are satisfied with the online service interaction, they likely will loyalty to this services (M. J. Kim et al., 2020). Based on above arguments to subjective wellbeing with M-payment services, we posit that customers who experience connectedness and feeling happier about

using M-payment services are more likely actively to loyalty with the services.

H6: Subjective wellbeing has a positive impact on service loyalty

M-payment service loyalty

In the customer behavior literature, e-service accomplishment is to guarantee that online customers keep using an e-service provider, an application or e-commerce website, buying, payment, and without changing to another e-service provider, which is also termed 'e-loyalty' (Al-Adwan & Al-Horani, 2019). The vital of loyalty in the online service context that made this topic increasingly attractive to scholars. Mobile context also is becoming choose of many empirical types of research from a cognitive perspective as mobile commerce, social commerce, online banking, online game (Al-Adwan & Al-Horani, 2019; Al-dweeri et al., 2017; Woratschek et al., 2020). Previous studies indicate customer loyalty as one of the most crucial consequences of their satisfaction (Fauzi & Suryani, 2019; Sadeghi et al., 2019; So, King, Sparks, & Wang, 2016; Woratschek et al., 2020). The intention to repurchase and recommendation are two main types of customer loyalty by many original studies (Molinillo, Anaya-Sánchez, & Liébana-Cabanillas, 2020). The terms 'intention to continuous use', 'intention to reuse', and 'repurchase' all have implications similar to 'loyalty' (J. V. Chen, Yen, Pornpriphet, & Widjaja, 2015). This study takes customer loyalty behavior as a vital consequence variable, signifying M-payment services. The above literature reviews could be summarized into a conceptual framework as per picture and into the research hypothesis as follows:

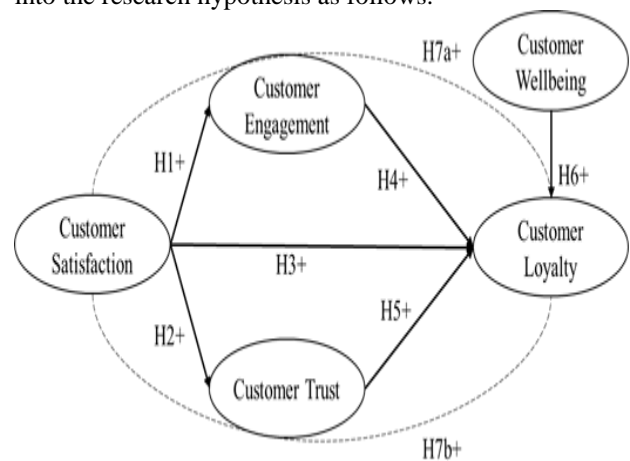


Figure 1: Model research

Methodology

Procedure and sample

This study was empirically based on primary data collecting from the study participants living in Vietnam who had previously used any mobile payment services. The data are collected through convenience sampling via surveys distributed in 2 common forms - Google Form and paper survey. The questionnaire was distributed in the various online platform as forums and Facebook groups, email, and

direct survey. With more than 300 responses after a 3-month survey (from April to August 2020), after removing all disqualified responses, the author has collected 220 eligible responses for the next analysis.

Measures

The data from respondents was collected using an appropriate questionnaire. The factors were built based on recent research on new technology and online services. Firstly, the dimensions of the customer engagement that were referenced and modified from (Itani et al., 2019). Secondly, we used an our-item scale adopted by (Diener et al., 1999) and (M. J. Kim et al., 2020) to measure subjective wellbeing. Next, measures of customer satisfaction and customer trust were taken and modified from (Ribbink, Van Riel, Liljander, & Streukens, 2004; Yuan et al., 2020). Finally, customer loyalty was taken and modified from (Yuan et al., 2020). Besides, some demographic variables are also collected (e.g., gender, age, and educational level). The scale used in this paper is the seven-point Likert-type scale for attitude measurement, where (1) strongly disagrees, and (7) strongly agrees. Any item that receives a high score (agree or strongly agree) shows that the participant shows a higher level of perception and approval toward the item in the questionnaire. Based on the context of the research in Vietnam, items were adapted to suit the M-payment service and interpreted the use of Vietnamese using standard back translation practices. Table 2 detail items for each construct in the model research.

Data analysis

This study applied partial least squares–structural equation modeling (PLS-SEM) administered by SmartPLS 3.3 (Ringle, Da Silva, & Bido, 2015). According to (Hair Jr, Hult, Ringle, & Sarstedt, 2016), PLS-SEM standards are slightly less demanding in terms of measurement scales, small sample size, and residual distributions compare with Covariance-Based SEM. Following the guideline of (Hair Jr, Sarstedt, Ringle, & Gudergan, 2017), data analysis was performed in two main stages. Firstly, the validity and reliability of the measures used to assess the model (including discrimination validity and convergence validity). Secondly, the structural model was estimated by exploratory collinearity, variance inflation factor (VIF), R^2 explanation of endogenous latent variables, and the significance and relevance of path coefficients. Some descriptive analyses were completed to summary data using IBM SPSS 25.

Result

Descriptive analysis

Beginning the analysis process, we conduct a summary of data. In summary, the number of respondents who joined the research was dominated by the male (61 percent, $n=134$). In terms of ages, between the ages of 20 and 25 (61 percent, $n=135$). Lastly, most of them are students or graduated (81 percent, $n=178$). The detailed demographic information of the respondents is exhibited in Table 1.

Table 1: Sample Demographics

| Characteristics | Frequencies (N=220) | (%) |
|------------------------|---------------------|-----|
| Age | | |
| Under 20 | 31 | 14% |
| From 20 - 25 | 135 | 61% |
| From 26 – 40 | 43 | 20% |
| Over 40 | 11 | 5% |
| Gender | | |
| Female | 86 | 39% |
| Male | 134 | 61% |
| Education Level | | |
| No Degree | 20 | 9% |
| Student | 75 | 34% |
| Graduated | 103 | 47% |
| Post Graduate | 22 | 10% |

Measurement model evaluation

In PLS-SEM, convergent validity indicates to the model's ability to interpret the indicator's variance. The convergent validity and discriminant validity use to measure the measurement model; this study examines the outer loadings, average variance extracted (AVE), Cronbach's α , composite reliability (CR), and discriminant validity applying the strategies of (Hair Jr et al., 2016). As summarised in Table 2, almost all factor loadings ranged over 0.7 for significantly high items (an exception was $ENG1=0.627$). The AVE values confirmed convergent validity (Fornell & Larcker, 1981). (Bagozzi & Yi, 1988) indicated that the AVE threshold level of 0.5 as confirmation of the convergent validity of the model. All factors met these requirements, thus indicating convergent validity for all constructs. The Cronbach's α coefficients of all constructs were acceptably high, greater 0.70 which means all measures gained high levels of internal consistency reliability (Hair Jr et al., 2016). Besides, the values of Dijkstra–Henseler's ρ was also significantly high, over 0.7 (Dijkstra & Henseler, 2015). Discriminant validity has been evaluated through Discriminant Validity and Heterotrait–Monotrait (HTMT) ratios of correlations (Hair Jr et al., 2017). Table 3 presents the diagonal (in bold) values, which depicts the AVE and the squared correlations of reflective constructs according to Fornell Larcker approach. Ordinarily, the square roots of the AVEs for the reflective were higher than the correlations of these constructs. HTMT criterion supports an alternative and preferred way for assessing discriminant validity. When the value of HTMT is lesser 0.90, discriminant validity has been established between two reflective constructs (Henseler, Ringle, & Sarstedt, 2015). As data are displayed in Table 3, HTMT output between two reflective constructs was below 0.90, confirming discriminant validity.

Structural model

The VIF use to verify potential collinearity Before assessing the structural model. The results showed all VIF values

between 1.227 and 2.910, being much lower than 5, implying that there is no issue related to collinearity (Hair Jr et al., 2017). PLS algorithm procedures were implemented to analyze the hypothesized relationships in our research model after verifying VIF values (details in Figure 2). Using 5,000 subsamples to test the significance of hypothesized relationships (bootstrapping algorithm). The table 5 describes the detailed result of hypotheses testing.

Firstly, the paths from positive Customer Satisfaction to Customer Engagement and Customer Trust were statistically and positively significant ($\beta_{SAT \rightarrow ENG} = 0.699, t=12.671,$

$p<0.000$) and ($\beta_{SAT \rightarrow TRU} = 0.565, t=10.301, p<0.000$). These findings support H1 and H2. Secondly, however, there is no evidence to support the effect of Customer Satisfaction on Consumers' loyalty ($\beta_{SAS \rightarrow LOY} = 0.113, t=1.161, p<0.246$); the hypothesis H3 was not statistically significant. Thirdly, three hypotheses from H4 to H6 that directly affect to customer loyalty having the output as (H4: $\beta_{ENG \rightarrow LOY} = 0.208, t=3.97, p<0.00$), (H5: $\beta_{TRU \rightarrow LOY} = 0.316, t=6.364, p<0.000$) and (H6: $\beta_{WEL \rightarrow LOY} = 0.356, t=2.886, p<0.004$), which proposed that customer engagement,

Table 2: Construct Reliability and Validity

| Constructs | Item | Item Loading | VIF | Cron's Alpha | rho_A | CR | AVE |
|---------------------|------|--------------|-------|--------------|-------|-------|-------|
| Engagement | ENG1 | 0.627 | 1.227 | 0.765 | 0.782 | 0.851 | 0.590 |
| | ENG2 | 0.790 | 1.669 | | | | |
| | ENG3 | 0.812 | 1.661 | | | | |
| | ENG4 | 0.827 | 1.706 | | | | |
| Loyalty | LOY1 | 0.863 | 2.798 | 0.814 | 0.826 | 0.878 | 0.644 |
| | LOY2 | 0.870 | 2.906 | | | | |
| | LOY3 | 0.712 | 1.453 | | | | |
| | LOY4 | 0.754 | 1.388 | | | | |
| Satisfaction | SAS1 | 0.869 | 2.254 | 0.822 | 0.868 | 0.878 | 0.645 |
| | SAS2 | 0.705 | 1.982 | | | | |
| | SAS3 | 0.757 | 2.177 | | | | |
| | SAS4 | 0.868 | 2.335 | | | | |
| Trust | TRU1 | 0.833 | 2.207 | 0.810 | 0.819 | 0.875 | 0.636 |
| | TRU2 | 0.746 | 1.910 | | | | |
| | TRU3 | 0.777 | 1.561 | | | | |
| | TRU4 | 0.831 | 1.850 | | | | |
| Wellbeing | WEL1 | 0.806 | 2.084 | 0.747 | 0.749 | 0.840 | 0.568 |
| | WEL2 | 0.751 | 1.925 | | | | |
| | WEL3 | 0.708 | 1.346 | | | | |
| | WEL4 | 0.746 | 1.315 | | | | |

Table 3: Discriminant Validity (Fornell and Lacker's criterion)

| Construct | Engagement | Loyalty | Satisfaction | Trust | Wellbeing |
|--------------|--------------|--------------|--------------|--------------|--------------|
| Engagement | 0.768 | | | | |
| Loyalty | 0.593 | 0.803 | | | |
| Satisfaction | 0.699 | 0.664 | 0.803 | | |
| Trust | 0.474 | 0.633 | 0.565 | 0.798 | |
| Wellbeing | 0.437 | 0.654 | 0.634 | 0.429 | 0.753 |

Table 4: Discriminant Validity (HTMT criterion)

| Construct | Engagement | Loyalty | Satisfaction | Trust | Wellbeing |
|--------------|--------------|--------------|--------------|--------------|-----------|
| Engagement | | | | | |
| Loyalty | 0.744 | | | | |
| Satisfaction | 0.840 | 0.759 | | | |
| Trust | 0.593 | 0.765 | 0.624 | | |
| Wellbeing | 0.576 | 0.821 | 0.839 | 0.522 | |

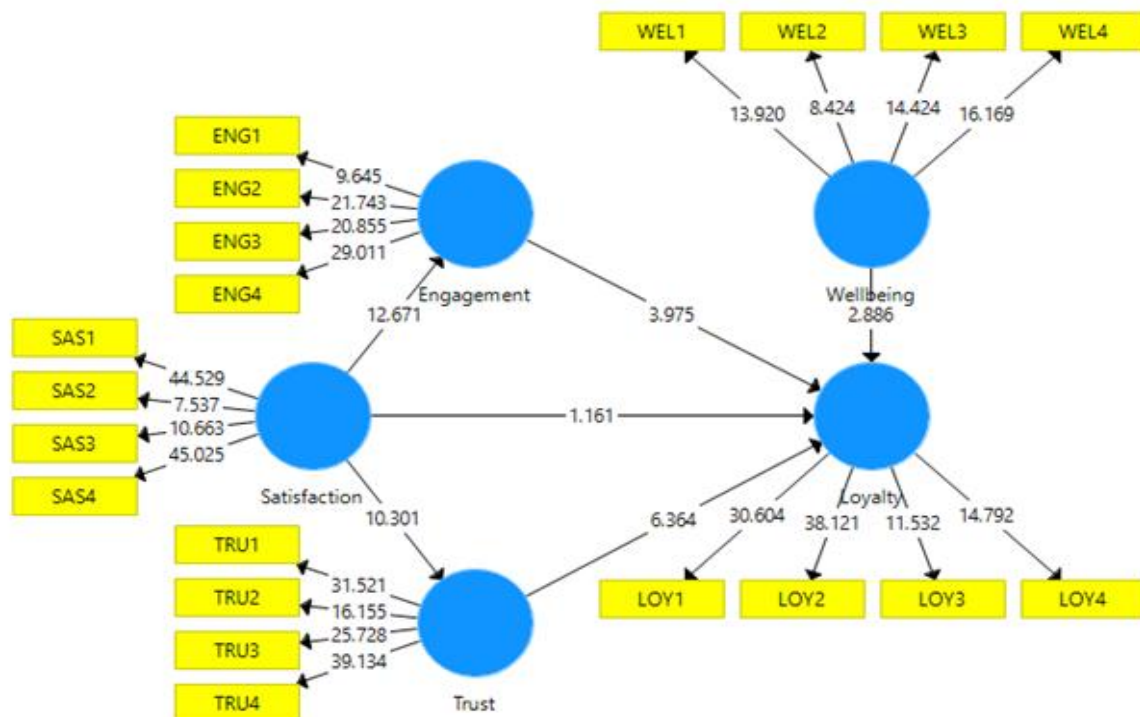


Figure 2: Model results

Table 5: Hypothesis results

| Hypotheses | Original β | Mean β | STDEV | T Statistics | P Values | Result |
|---|------------------|--------------|-------|--------------|----------|-----------|
| H1 Satisfaction \rightarrow Engagement | 0.699 | 0.697 | 0.055 | 12.671 | 0.000 | Supported |
| H2 Satisfaction \rightarrow Trust | 0.565 | 0.567 | 0.055 | 10.301 | 0.000 | Supported |
| H3 Satisfaction \rightarrow Loyalty | 0.113 | 0.103 | 0.097 | 1.161 | 0.246 | Rejected |
| H4 Engagement \rightarrow Loyalty | 0.208 | 0.203 | 0.052 | 3.975 | 0.000 | Supported |
| H5 Trust \rightarrow Loyalty | 0.316 | 0.309 | 0.050 | 6.364 | 0.000 | Supported |
| H6 Wellbeing \rightarrow Loyalty | 0.356 | 0.373 | 0.123 | 2.886 | 0.004 | Supported |
| H7a Satisfaction \rightarrow Engagement \rightarrow Loyalty | 0.145 | 0.142 | 0.041 | 3.579 | 0.000 | Supported |
| H7b Satisfaction \rightarrow Trust \rightarrow Loyalty | 0.179 | 0.176 | 0.036 | 5.016 | 0.000 | Supported |

trust and wellbeing positive and significant influence on customer loyalty. Finally, the results of this moderation model revealed that both customer engagement and customer trust mediated the customer satisfaction-loyalty relationship. The indirect impact of customer trust on the customer satisfaction-loyalty relationship was higher (0.176) than that of customer engagement (0.142).

Discussion

Cash and coins are falling in usage for years, and pandemic COVID-19 is making this trend faster. From both providers' and customers' perspective, traditional payment methods are more costly to manage, are easy theft targets, a lot slower, and easy to infect viruses via hand than using M-payments services. However, how the banking providers can keep their customers' loyalty to their service after this period that is the outstanding question at the moment, this study suggests a simple model to investigate what are the core reasons of customer loyalty in the context of M-payment in Vietnam. In the online banking services domain, the relationship between customer satisfaction and loyalty has been attracted by many research (Fauzi & Suryani, 2019; Lee et al., 2015). In the context of M-payment services, however, there are limited studies on how customer satisfaction that combines with other loyalty antecedents. (Yuan et al., 2020). Hence, this study developed the customer satisfaction literature by investigating the bridge between customer satisfaction and M-payment services loyalty as well as including the mediating roles of customer engagement and trust. As expected, these empirical findings confirmed that M-payment services loyalty was not affected by customer satisfaction directly. Moreover, as suggestion, customer wellbeing also a positive effect on customer loyalty. Both customer engagement and customer trustfully mediated the influence of customer satisfaction on M-payment services loyalty. Specifically, customer trust in the customer satisfaction-loyalty relationship was closer than customer engagement-loyalty. Both theoretical and practical suggestions of these findings will be discussed below.

Theoretical implication

As the theoretical contribution, this is the first study that confirms the influence of the different predictors on the M-payment services loyalty, proposing a conceptual model of online mobile banking services providers which can be operationalized using customer perception data for customer satisfaction, trust, engagement, wellbeing and M-payment services loyalty. From the theoretical analysis, subjective wellbeing characterizes a supplementary key determinant of user loyalty towards M-payment services that has been overlooked in many M-payment study. In the result, the path coefficients ($\beta_{WEL \rightarrow LOY} = 0.356$) imply that subjective wellbeing and customer satisfaction are among the most vital factors that affected to user loyalty towards the M-payment services.

From the M-payment services view, customer satisfaction is under-researched because many different findings confirmed without agreement (Harrigan et al., 2018). Thus, our research responds to that call by inspecting the impact of customer satisfaction on loyalty in the M-payment services

context. However, our findings are not consistent with previous research that the satisfaction boosts loyalty (Yuan et al., 2020). The study found that M-payment service loyalty did not directly affected by customer satisfaction. This can be explained since M-payment services lack of security and intangibility (Choi, Park, Kim, & Jung, 2020). Besides, compared with the services of actual products, customers display low loyalty to virtual providers. Hence, to enhance consumer loyalty in the online context, it is necessary to organize a sustainable connection between buyers and providers as well as to reinforce customers' engagement and trust toward the service providers. In other words, customer engagement and customer trust cannot be neglected when elaborating that customer satisfaction links to online services loyalty. Thus, this study provides a crucial explanation of how customer satisfaction affects loyalty in the M-payment domain and supplements this nomological framework of customer satisfaction. This is the first study about M-payment services loyalty revealed this point. In addition, this study supplements the literature about satisfaction by including the roles of customer engagement and customer trust. The findings showed that both customer engagement and customer trust mediated how customer satisfaction connected with M-payment services loyalty. Therefore, customer engagement and customer trust can be preserved as a bridge that links the association between customer satisfaction and loyalty in the M-payment services. These findings also seem to accompaniment the literature that treats customer engagement and customer trust as mediators (Islam & Rahman, 2017; Wongkitrungrueng & Assarut, 2018). Compared with the mediating effect of customer engagement, customer trust has a more mediating influence on the customer satisfaction-service loyalty relationship. Moreover, this research extended the research of (Wang, 2020) that helps to explain more about the role of customer engagement in newer technologies and services. Previous studies have recognized that customer satisfaction boosts brand loyalty through customer trust in the online service domain (Popp & Woratschek, 2017). Our findings complement this line of research by highlighting that besides undeniable the role of customer trust, the mediating role of customer trust cannot be ignored when investigating satisfaction customers' service loyalty, especially for M-payment services. However, to demonstrate the effects of this proposal, we should extend some more researches. By examining the influence of these factors on M-payment services loyalty, other researchers can better understand why individuals decide to loyalty or not to loyalty M-payment services as well as extend some more researches about this topic.

Management implication

This research offers a reasonable enrichment to industry related to M-payment adoption. The COVID-19 pandemic shows a turning point for the payment service providers, as those companies that have invested heavily in digital and M-payment thrive. Regarding industry, the outcome of the study can potentially help banking providers to understand better consumers' expectations and factors that affect their decision to loyalty M-payment services. As a result, better services can be provided, and better strategies for promoting

M-payment can be devised. Any businesses, especially online businesses, need to spend more money and effort to promote customers' loyalty. Our findings unveil that, compared with identification and interaction, absorption has more impact on customer satisfaction. Therefore, marketers must concentrate on tactics that cultivate customer absorption in M-payment services platforms. For instance, online customers often use social networks to explore, gather, and share their experience and knowledge about their transactions. Providers can give vouchers, refunds, or gifts to promote users as a signal of acknowledgment, and highly engaged customers ultimately become M-payment services advocates. Our findings indicate that brand attachment and customer trustfully mediate the customer satisfaction-services loyalty relationship, especially the mediating role of brand attachment. Based on these results, marketers should be considered about customer engagement and customer trust. Compared with customer engagement, the role of customer trust should receive much attention in the customer satisfaction-service loyalty relationship. Therefore, marketers should prioritize and propose to improve customers' emotional attachment with their offerings. Managers must make investments to engender emotional connections with M-payment services. For example, they can design some engagement activities for establishing a closer and more sustainable relationship between their brands and consumers to build connectivity with customers. Additionally, subjective wellbeing plays an essential role in shaping members' loyalty.

Subjective wellbeing is a pleasure and emotion-oriented conceptions in different service domains. Using some supporting tools (e.g., chat support, video support, virtual assistant), social interaction, and games are among the harmonizing services that can reinforce gratifying effects in service loyalty. The M-payment ecosystem should continue to develop novel and fun supporting tools and services to satisfy customer needs. These findings could be utilized by practitioners in the industry to improve their services and communicate with the public the benefits of using M-payment services in increasing wellbeing. Furthermore, managers on the social media platform need to enhance services trust among customers. Finally, data mining can be considered to effectively analyze each company's promotional information and online comments to maintain the credibility of all reviews and ratings on the platform.

Limitation, and extensions

Our study is also limited to some degree due to the relatively small sample size participant living in Vietnam because online surveys often have low response rates and variety. Further research in this area should strive to enlarge the sample size realized if at all possible. Moreover, only customers who have been used M-payment were chosen as the respondent. Others without the practice of using M-payment have not been included in this research. It would be useful to include non-users in future studies to investigate further the reasons for not using M-payment. Furthermore, the reality that other external constructs, such as customer innovation, customer engagement in a particular country that could affect consumer loyalty. Hence, future researches should consider these constructs to expanding our

perception of innovation perception and perceived service quality

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Appendix

| M-Payment Services Loyalty: Research Constructs and Operational Definitions | | | |
|--|-----------------------------|-------------|---|
| ID | Scale Items | | Indicators |
| 1 | Satisfaction | SAS1 | I am generally pleased with M-payment service provider. |
| 2 | | SAS2 | I am very satisfied with M-payment service provider. |
| 3 | | SAS3 | M-payment service provider are good to do business with. |
| 4 | | SAS4 | Overall, I am satisfied with M-payment service provider. |
| 5 | Trust | TRU1 | I am prepared to give private information to M-payment service provider. |
| 6 | | TRU2 | I am willing to give my credit card number to M-payment service provider. |
| 7 | | TRU3 | It is not a problem to pay in advance for purchased products/services over M-payment service provider. |
| 8 | | TRU4 | E-Payment service providers intend to fulfill their promises. |
| 9 | Engagement | ENG1 | Customer purchases - I will continue using from these m-payment services in the near future |
| 10 | | ENG2 | Customer Referrals - I enjoy referring these m-payment services to my friends and relatives whether there are referral incentives or not. |
| 11 | | ENG3 | Customer social influence - I love talking about my experience with these m-payment services |
| 12 | | ENG4 | Customer knowledge sharing - I provide feedback about my experiences with these m-payment services. |
| 13 | Subjective Wellbeing | WEL1 | Using M-payment services is part of my ideal life. |
| 14 | | WEL2 | My life is excellent when I use M-payment service. |
| 15 | | WEL3 | I am satisfied with my life when I am using M-payment services |
| 16 | | WEL4 | So far, I have gotten the important things I want by using M-payment services |
| 17 | Customer Loyalty | LOY1 | Say positive things about these M-payment services to other people? |
| 18 | | LOY2 | Encourage friends and others to do business with these M-payment services? |
| 19 | | LOY3 | Consider these M-payment services to be your first choice for future transactions? |
| 20 | | LOY4 | Do more business with these M-payment services in the coming months? |