

Factors influencing switching intention from bank card to digital wallet payment among e-marketplace in Vietnam

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Abstract: *Following many initiatives to exclude cash from payment systems in e-commerce, bank card is now the most common payment option in Vietnam (2021). Because consumers must pay first before receiving their purchased products, conducting internet transactions through banking institutions may provide better protection for firms. However, from a financial standpoint, a digital wallet would alleviate the liquidity problem in online firms because consumers must pay before a transaction occurs. Thus, the goal of this article is to investigate the reasons why the use of e-wallets is still limited, and to provide remedies based on the results of the chosen conceptual model.*

Keywords: *Bank payment, E-wallet payment, Digital wallet payment, Push Pull Mooring model*

1. Introduction

1.1 General concept

When a merchant accepts a payment from a customer, they incur fees. When accepting card payments, companies are generally charged a 'merchant service fee' by their banking institution for each transaction. These costs may vary based on the kind of card used by the client and the card network through which the transaction is handled.

The word "e-wallet" refers to a type of digital wallet that allows a person to link their debit or credit cards to the digital wallet in order to conduct any transactions (Digital Wallet, 2019). Aside from debit and credit cards, electronic cards allow customers to save the information from their physical cards as well as their bank account numbers in order to conduct certain payment actions (Ray, 2017).

1.2 Research problem

It is stated that payments made with an e-wallet are more convenient and faster than payments made through a traditional banking system since they save time and money (Blockchains, 2018). The cellular-based payment system is commonly utilized for transactions, and payments are made via mobile

applications because consumers find this approach to be advantageous (Gokilavani et al., 2018). Payment via ewallet not only provides convenience and speed, but also provides consumers with a sense of security and confidence in transactions conducted anywhere and at any time (Liébana-Cabanillas et al., 2014). The usage of an e-wallet allows for small-scale transactions that are simple to carry out (Punwatkar, et al., 2018).

Customers in Vietnam, on the other hand, prefer to pay for goods and services with bank cards, therefore digital wallets are rarely used. In Vietnam, e-wallet payments were found to account for just about 15% of all payments (E-Wallet Providers Fighting for Survival in Vietnam, 2021). As a result, despite the multiple payment choices available, the card still reigns supreme. All of this shows that a better understanding of the determinants of users' switching intentions (SI) from bank card to e-wallet in our country is required.

1.3 Research objective and research gap

As a result, the focus of this research is on the characteristics that impact SI to digital wallet payment. The adoption of digital wallets by users has been the subject of numerous research in the past (Loh et al., 2020). However,

according to this research, such studies have severe flaws. This is because such research imply that customers will only consider e-wallet payment in the absence of card-related barriers. As a result, previous research has failed to account for the impact of cards in the context of digital wallet payments.

2. Research framework

The push-pull-mooring (PPM) framework would be used as the principal framework since it can answer queries about switching intention (SI). As a result, PPM is an integrated framework that looks at SI from the standpoints of push, pull, and anchoring aspects as it moves from incumbent to alternative (Bansal et al., 2005). Because of its widespread use (Nielsen, 2019), the bank card is the preferred payment option in this study, whereas digital wallet payment is an alternative. The PPM paradigm in this study includes monetary value (MV) as a push component, alternative attractiveness (AA) as a pull factor, and trust (TR) and perceived security and privacy (PSP) as anchoring considerations. In the switching literature, MV in the form of price has been cited as one of the major push factors (Bansal et al., 2005; Wieringa and Verhoef, 2007). As a result, if the price looks to be too high or unfair, one is more likely to switch to an alternative (Keaveney, 1995). In addition, digital wallet payment service providers tout the numerous features and advantages. As a result, the appeal of e-wallet payment is thought to be a key component of the draw effect. TR has also been proven as a crucial element (Wang et al., 2019), despite the fact that privacy and security are among the top concerns for users when it comes to forecasting switching behavior (Cheng et al., 2019).

3. Hypothesis development

3.1 Monetary value (MV)

MV is largely acknowledged as a significant influencer of customer behavior and decision-making (Chang, 2009). The term MV

has been adopted in this study to describe to the consumers' perceptions of the financial benefits they will receive by switching to e-wallet payment (Liu et al., 2015; Zhang et al., 2015). Furthermore, there are financial advantages to using a digital wallet payment system, such as cheaper rates in the form of price, discounts, rebates, cashback, and so on (Gazi, 2020b). As a result, the following hypothesis emerges:

H1. MV has a significantly positive relationship with SI to e-wallet payment.

3.2 Alternative attractiveness (AA)

AA is defined as the extent to which consumers perceive that viable competing alternatives are available in the marketplace (Jones et al., 2000). In this study, AA refers to the attractiveness of e-wallet payment as an alternative to cash. When consumers perceive that digital wallet payment is better than bank card, there is a higher tendency of switching to e-wallet payment. Thus, the following hypothesis is derived:

H2. AA has a significantly positive relationship with SI to e-wallet payment.

3.3 Trust (TR)

When it comes to moving to e-wallet payment, it's inevitable that users will have to trust the payment method to some extent in order to use it. This is due to the fact that using a digital wallet for payment involves transactions between unknown parties, which entails a variety of uncertainties and hazards (Chandra et al., 2010). As a result, the following hypothesis emerges:

H3. TR has a significantly positive relationship with SI to e-wallet payment.

3.4 Perceived security and privacy (PSP)

PSP represents a person's level of concern about digital wallet payment features linked to personal information and payment transactions (Gao et al., 2015; Kim, et al., 2011). The characteristics are designed to preserve the individual's privacy and transaction security, whereas the fears include

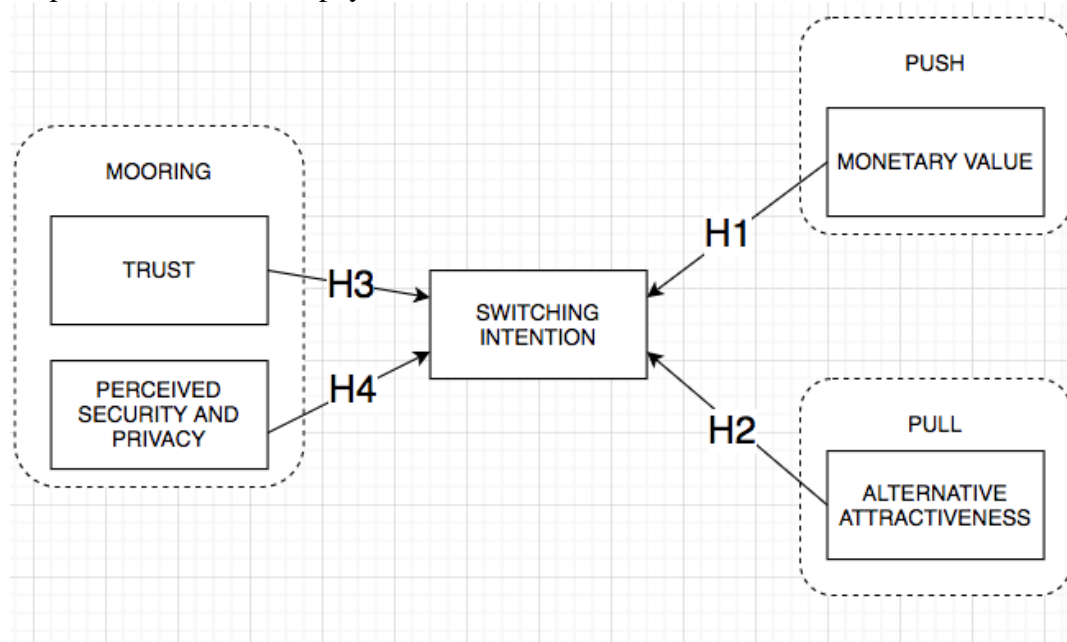
improper access and transaction failures. As a result, privacy and security issues may deter SI to digital-wallet-payment, as consumers may have doubts about the ability, integrity, and goodness of digital-wallet-payment to secure their personal information and transaction security (Gao et al., 2015). As a result, the following hypothesis emerges:

H4. PSP has a significantly positive relationship with SI to e-wallet payment.

4. Conceptual model

From all the hypotheses developed, the conceptual framework of this study is shown in Figure 1.

Figure 1. Conceptual Model



5. Research methodology

5.1 Sampling and procedure

In order to confirm the research model, an electronic-based survey was conducted from June 2021 to July 2021 at **three top e-marketplaces** in Vietnam, including Shopee, Lazada, and Tiki. Such leading e-commerce platforms could ensure that payment methods in those sites are good enough for the research.

Regarding the population of this research, respondents need to meet following requirements

- To be familiar with e-wallet payment and card payment over the Internet
- Have purchased products at least once a month in the past one year

Besides, the minimum sample size was decided. Particularly, G*Power version 3.1 with a statistical power of 0.8, margin error of 0.05, impact size of 0.15, and three predictors were also used. A minimum sample size of 103 is recommended for the outcome. Overall, 343 questionnaires were available and reaching the required sample size expected to affirm or deny the presence of a minimum impact.

5.2 Questionnaire design

The aim of the study is to examine the cause-and-effect associations between the independent variables and the dependent variables. Hence, causal research is the best option to achieve this objective.

Table 1. Constructs and adapted sources of survey items

| Constructs | Measurement items | Sources |
|--------------------------------|--|--------------------------------------|
| Switching intention | SI1: I am considering switching from bank card to e-wallet payment | Developed from Cheng et al. (2019) |
| | SI2: I intend to switch from bank card to e-wallet in the future | |
| | SI3: The chance of me to switch from bank card to e-wallet payment is high | |
| | SI4: I am determined to switch from bank card to e-wallet payment | |
| Monetary value | MV1: By paying with bank card, it would not help me save more money than compared to e-wallet payment | Developed from Thakur (2016) |
| | MV2: By paying with bank card, it would not give me better deals than compared to e-wallet payment | |
| | MV3: By paying with bank card, it would not give me more exclusive time-bound offers than compared to e-wallet payment | |
| | MV4: Overall, by paying with bank card, I would not spend less than compared to e-wallet payment | |
| Alternative attractiveness | AA1: If I need to switch to e-wallet payment, there are good e-wallet payment services to choose from | Developed from Cheng et al. (2019) |
| | AA2: E-wallet payment would benefit me more than bank card | |
| | AA3: I would probably be happy with the features and services of digital wallet payment | |
| | AA4: Compared to bank card, I would probably be more satisfied with e-wallet payment | |
| Trust | TR1: I believe e-wallet payment is trustworthy | Developed from K€oster et al. (2016) |
| | TR2: I believe e-wallet payment keeps customers' best interests in mind | |
| | TR3: I believe e-wallet payment keeps its promises and commitments | |
| | TR4: I believe e-wallet payment is reliable | |
| Perceived security and privacy | PSP1: I think using e-wallet payment is financially secure | Developed from Lai et al. (2012) |
| | PSP2: I am not worried about the transaction security of e-wallet payment | |
| | PSP3: I think e-wallet payment has the ability to protect my privacy | |
| | PSP4: I think using e-wallet payment does not put my privacy at risk | |

6. Data analysis

6.1 Assessing outer model

Measurement model (outer model)'s evaluation should be conducted to assess the usefulness and suitability of this model before using the structural model (inner model) to test the hypotheses. The statistical analyses for

evaluation outer model were performed relating to reliability and validity assessment to test for internal consistency reliability, indicator reliability, convergent validity and discriminant validity.

For testing **internal consistency reliability**, Cronbach's Alpha and Composite reliability should be higher than the threshold value of 0.7. The results in the table revealed that

the value of **Cronbach's Alpha** and **Composite reliability** were all higher than 0.7. Therefore, the internal consistency reliability is confirmed.

Table 2. *Quality criterion (AVE, composite reliability, Cronbach's Alpha) and factor loadings.*

| | Cronbach's Alpha | rho_A | Composite Reliability | Average Variance Extracted (AVE) |
|----------------------------|------------------|-------|-----------------------|----------------------------------|
| MONETARY VALUE | 0.815 | 0.858 | 0.861 | 0.614 |
| ALTERNATIVE ATTRACTIVENESS | 0.89 | 0.901 | 0.924 | 0.752 |
| SWITCHING INTENTION | 0.913 | 0.915 | 0.939 | 0.793 |
| TRUST PERCEIVED | 0.931 | 0.934 | 0.951 | 0.829 |
| SECURITY AND PRIVACY | 0.921 | 0.936 | 0.944 | 0.807 |

Moreover, **convergent validity-the degree** to which measures of constructs are similar to each other in concept will be examined by using **factor loading** and **average variance extracted**. For factor loading, just only indicators have scores higher than 0.7 will be kept and below will be removed from the final

model (MV4) to **assess the good fit**. As a result, the results in the Table 2 of factor loading indicate a good indicator of reliability. The table shows that all factor loadings were above 0.7. The averages above showed that the AVE values are within the recommended range of 0.5.

Table 3. *Quality criterion (AVE, composite reliability, Cronbach's Alpha) and factor loadings.*

| | ALTERNATIVE ATTRACTIVENESS | MONETARY VALUE | PERCEIVED SECURITY AND PRIVACY | SWITCHING INTENTION | TRUST |
|------|----------------------------|----------------|--------------------------------|---------------------|-------|
| AA1 | 0.811 | | | | |
| AA2 | 0.881 | | | | |
| AA3 | 0.893 | | | | |
| AA4 | 0.881 | | | | |
| MV1 | | 0.746 | | | |
| MV2 | | 0.897 | | | |
| MV3 | | 0.88 | | | |
| MV4 | | 0.568 | | | |
| PSP1 | | | 0.897 | | |
| PSP2 | | | 0.89 | | |
| PSP3 | | | 0.889 | | |
| PSP4 | | | 0.917 | | |
| SI1 | | | | 0.862 | |

| | | |
|-----|-------|-------|
| SI2 | 0.893 | |
| SI3 | 0.913 | |
| SI4 | 0.894 | |
| TR1 | | 0.894 |
| TR2 | | 0.912 |
| TR3 | | 0.919 |
| TR4 | | 0.918 |

A new approach to test discriminant validity in PLS-SEM was considered. (Henseler et al., 2014) proposed a modern approach for determining the validity of discriminants through the discriminant validity - heterotrait-monotrait (HTMT) correlation method ratio. When the HTMT value is similar to 1, the absence of discriminant validity is implied. Comparing it to a pre-defined threshold means utilizing the HTMT as a

criterion. If the value of the HTMT is greater than this threshold, it can be inferred that discriminant validity is a problem. Some scholars have indicated that it is possible to accept the 0.85 mark (Ab Hamid et al., 2017). Table 4 thus provides the findings of the HTMT criteria. The result shows us that there couldn't be an overlapping concept between independent variables, Friendly and Security, respectively.

Table 4. Discriminant validity - heterotrait-monotrait (HTMT) criterion

| | ALTERNATIVE ATTRACTIVEN ESS | MONETA RY VALUE | PERCEIVED SECURITY AND PRIVACY | SWITCHI NG INTENTIO N | TRUST |
|--------------------------------------|-----------------------------------|-----------------------|---|--------------------------------|-------|
| ALTERNATIVE ATTRACTIVEN ESS | | | | | |
| MONETARY VALUE | 0.581 | | | | |
| PERCEIVED SECURITY AND PRIVACY | 0.204 | 0.22 | | | |
| SWITCHING INTENTION | 0.359 | 0.226 | 0.372 | | |
| TRUST | 0.336 | 0.311 | 0.735 | 0.387 | |

6.2 Examining inner structural model

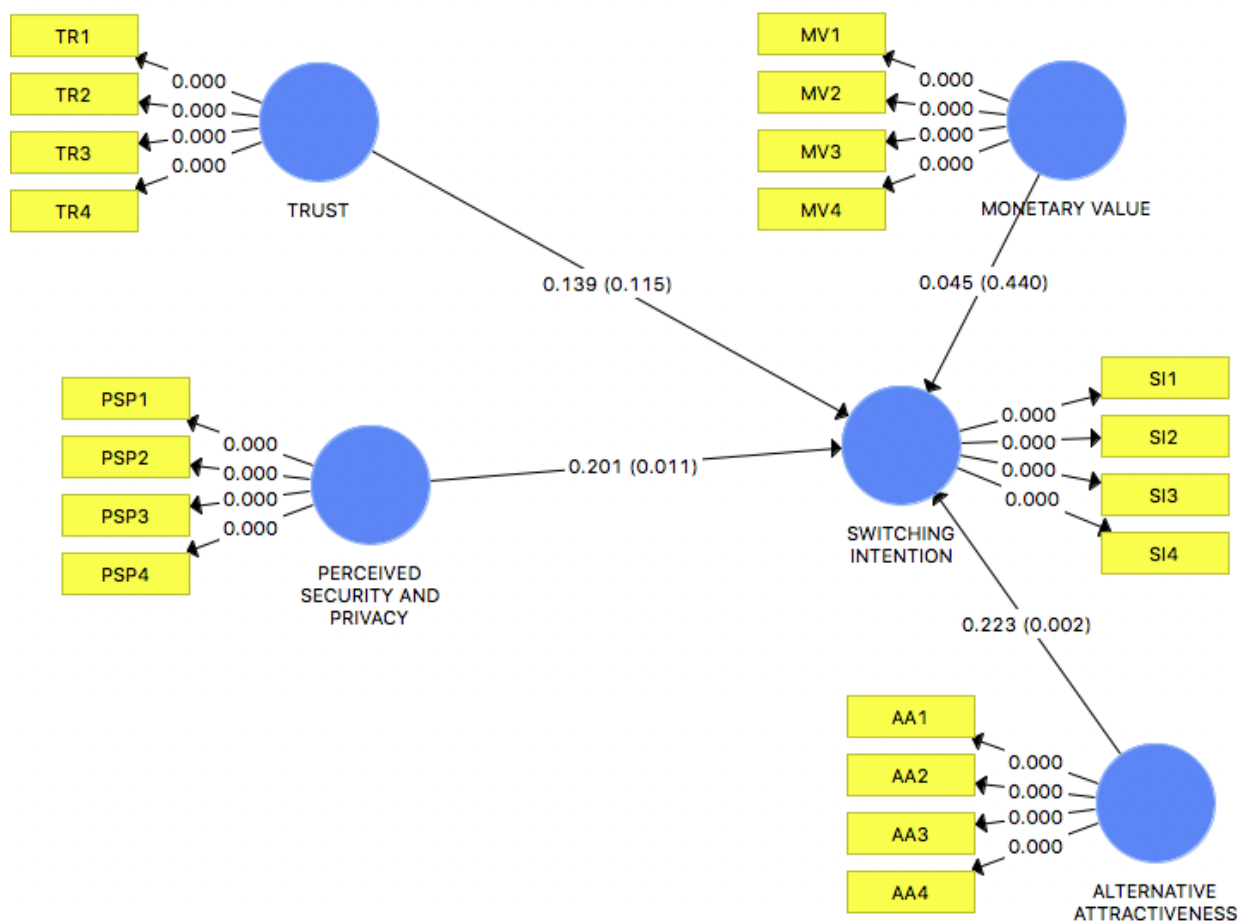
The structure of the model has been revised after validating the measures model. This requires calculations of coefficient of determination, path coefficients and bootstrapping 5000 samples. As shown in table

4 and figure 2, the hypothesis testing has been assessed. The findings indicated that Trust, and Monetary Value have insignificant relationships with Switching Cost. On the opposite side, H2, H4, are all supported.

Table 5. Hypothesis testing results

| | Original Sample (O) | Sample Mean (M) | Standard Deviation (STDEV) | T Statistics (O/STDEV) | P Values |
|---|------------------------|--------------------|----------------------------------|-----------------------------|-------------|
| ALTERNATIVE ATTRACTIVENESS -> SWITCHING INTENTION | 0.223 | 0.221 | 0.07 | 3.196 | 0.001 |
| MONETARY VALUE -> SWITCHING INTENTION | 0.045 | 0.049 | 0.064 | 0.703 | 0.483 |
| PERCEIVED SECURITY AND PRIVACY -> SWITCHING INTENTION | 0.201 | 0.2 | 0.076 | 2.655 | 0.008 |
| TRUST -> SWITCHING INTENTION | 0.139 | 0.141 | 0.089 | 1.56 | 0.119 |

Figure 12. Structural model testing



7. Discussion

H2. AA has a significantly positive relationship with SI to e-wallet payment [supported]

H1. MV has a significantly positive relationship with SI to e-wallet payment [not supported]

The results show us that AA would be the reasons motivating people to switch from bank card to e-wallet payment. Since MV is not the right approach, promotion to attract more e-wallet clients may not work properly. That is, operating budget should be used for improving services offered for digital wallet users.

H4. PSP has a significantly positive relationship with SI to e-wallet payment.

H3. TR has a significantly positive relationship with SI to e-wallet payment.

Instead of telling clients about our company's trustworthy day after day, businesses should find out effective way to show their customers how safe their e-commerce system could provide for each online transaction. To achieve this, collaborating with leading security may work.

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