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Factors Reducing Credit Card's Perceived Risk in Retail Payment: An Approach to Consumer Traits

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Abstract

Purpose: The study is focused on understanding consumer behaviour related to credit card use in retail payment or identifying factors that influence risk perception. **Research design, data and methodology**: Based on data collecting from structured self-administered questionnaires of 247 Vietnamese bank account payers, this study uses the Cronbach alpha analysis, the factor analyses, the structural equation modeling to assess the research's measurement model and structural model with the presence of knowledge, propensity to trust, self-efficacy, risk perception, intended use and their complex, intertwined relationships. **Results**: The results reveal that customer's perceived risk, which is affected by their self-efficacy and propensity to trust, negatively impact on their intended use of credit cards in retail payment. However, there is no evidence of the significant influence of consumer knowledge on how they assess potential losses of credit card. **Conclusions**: These findings provide a better understanding of consumer risk perception, its antecedents and consequence in a direction of credit card adoption. Bank managers or marketers should focus on increasing the information about credit cards and issues related to credit card use in retail payment, promoting mechanisms to encourage customers to participate in the credit card experience.

Keywords: Retail payment, Credit card, Perceived risk, Consumer traits

JEL Classification Code: D12, D14, E42, G21

1. Introduction

In recent years, along with the boom of retail e-commerce and online payment, the credit card market in Vietnam has become active with the appearance of international card brands such as VISA, Master, JCB, and CUP. Banks spend a part of their budget to invest, develop card products and services, including debit cards, credit cards, prepaid cards. In particular, credit cards are electronic financial instruments with two principal functions: retail payments and consumer loans (Laudon & Traver, 2021). With outstanding advantages, credit cards are expected to become the most popular non-cash payment instrument for consumer retail in Vietnam. By the end of 2022, Vietnam's bank card market has about 4.9 million credit cards in circulation (penetration rate is 0.08 card/person), with total credit card payment revenue for the whole year 2022 reaching $10 billion (average sale is $2.200/card/year). However, Vietnam's credit card market is still inferior to other countries in Southeast Asia with penetration rate of 0.22 card/person and average sale of $4.050/card/year, or in worldwide with penetration rate of 0.81 card/person and

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average sale of $6.550/card/year. Faced with the fact that the quality of credit card development is not high in both issuance and payment activities, it is necessary for banks to find out why do consumers not choose credit cards as a retail payment channel or what are their concerns about this convenient payment method?

In a constantly developing society, there are always many unforeseen situations and risks can be only reduced but cannot be eradicated. Rational consumers (Fishbein & Ajzen, 1975) care about both benefits and losses in decision making (Namahoot & Jantasri, 2023). These losses or risks will only affect consumers' intended behavior when they consider their existence with different perceptions (Humbani, 2021). Some studies on adoption of e-commerce argued that consumer's risk perception is based on their propensity to trust, knowledge, and self-efficacy (Bartol et al., 2023; Kaur & Arora, 2020, Shaheen et al., 2020). However, an approach of perceived risk antecedents is still unfamiliar in previous research on credit cards adoption (Ozturk, 2016; Tseng, 2016; Trinh et al., 2020), even if this kind of bank cards is becoming more and more popular in the world (Laudon & Traver, 2021).

Differs from prior studies, this paper proposes and examines how consumer propensity to trust, knowledge, and self-efficacy can reduce their risk perception on credit cards, then encourage them to adopt this kind of digital instruments in daily retail payment. In order to achieve this goal, the work starts with a quick review of risk perception and its applications in consumer behavior literature. Next, this paper recommends a research model and testable hypotheses, which is followed by the research methodology, and collected data. Finally, the study discusses the findings before providing some conclusions, limitations, and managerial implications.

2. Literature Review

2.1. Risk Perception

Bauer (1960) introduced the concept of perceived risk in theory of perceived risk. This scholar suggested that perceived risk is the consumer's assessment of uncertainty and unfavorability compared to their expectations. Continuing Bauer's ideas, in research on individual behavior, Roselius (1971) argued that perceived risk is a combination of the potential harm of a specific behavior and the severity of that harm. With goods purchasing behavior, Derbaix (1983) revealed that customer may feel uncertain about the product's features and consequences arising from that feeling of uncertainty. Similarly, Featherman and Pavlou (2003) proposed that observed risk refers primarily to the customers' subjective expectations for incident losses when they intend to use a particular service in electronic environments. Although Bauer was the founder of perceived risk, he did not show how to measure this concept. Cox and Rich (1964) firstly proposed that perceived risk is not a single component, it is an overall perception about consumer's uncertainty of a specific buying's situation. Later, Roselius (1971) provided the measurement of perceived risk as a combination of financial, performance, physical, social, psychological and time risks. By introducing residential Internet in early 1990s, privacy and security risks appeared as two new components of perceived risk (Featherman & Pavlou, 2003).

Many empirical studies have found that consumer risk perception strongly effects on their intention to use e-commerce (Munikrishnan, 2023), e-payment (Namahoot & Jantasri, 2023) as well as e-banking (Widyanto et al., 2022), which are closely related to credit card (Aida, 2021). However, this consensus is not present in credit card studies. Tan et al. (2014), Tseng (2016) failed to prove the relationship between consumers' risk perception and their intended use of credit card. One explanation could be the age of the respondents, with the majority being young users, and thus they may not understand the risks of using credit cards (Tan et al., 2014). Other possible reason is the users' trust in the credit card security system might reduce their risk perception and alleviate the negative effects of perceived risks on individual credit card use processes (Tseng, 2016). In other side, Phan et al. (2019), Trinh et al. (2020) pointed out that consumer adoption of credit cards depends negatively on perception of losses, which affects individual's attitude in the same way. Oppositely, Varaprasad et al. (2013), Aida (2021) stated that consumers with higher perceived risk on credit card are more likely to use it, and vice versa. These authors revealed that the possible reason for this result may be because of the efforts taken by banks in making the credit card transactions more secure or the willingness make customers overcoming the potential losses and then encourage them to use credit card as their daily payment method.

Although there are many perspectives on risk perception, but perceived risk exists only in the human sense and the risks they perceive affect individuals, even if they are real or not (Humbani, 2021). Consumers, however, have different perceptions of uncertainty and potential losses associated with a particular purchase situation (Zhu et al., 2022). Only a few studies on e-commerce adoption mention the difference in perceived risk and its causes, with inconsistent findings (Wei et al., 2018; Yadav et al., 2023). These studies examine consumers' perception of risk under their knowledge of e-commerce, their self-efficacy to purchase on the website and their propensity to trust on others, whom they do not know well or even never meet before. They describe these concepts as follows:

2.2. Knowledge

Some scholars revealed that consumer with certain knowledge about a behavior may overcome the potential losses related to performing that behavior (Lee & Lee, 2022; Yadav et al., 2023). Knowledge is human capital, which is achieved and developed through formal and informal education, training, workshops, or on-the-job learning (Ratchford, 2001). Consumers seek to change their perception of a particular behavior by enhancing their understanding of that (Ventre & Kolbe, 2020). Empirical studies reveal that, when consumers have more knowledge about the Internet, they may perceive a less risk of online shopping (Hanif et al., 2022; Jamshidi & Kuanova, 2022; Lin et al., 2019). They can foretell the outcome of the Internet purchasing behavior based on their experiences in similar situations (Zhu & Deng, 2020). Inconsistent with these findings, Kaur and Arora (2020) argued that consumers' understanding of how to use online banking does not make them feel more certainties about achievements; it only shows banks' ability to guide customers to buy their products or services. Similarly, Yadav et al. (2023) reveal that consumers gain knowledge through online reviews to reduce risk and uncertainty, thereby influencing behavioral intentions

2.3. Self-efficacy

Baber et al. (2022), Chang (2021) stated that consumers may underestimate the risk when they are self-efficacy in the area associated with that risk. Self-efficacy is an individual's self-confidence in ability to organize and carry out the activities necessary to produce certain accomplishments (Bandura, 1999). He argued that self-efficacy influences the way people think and react. It may help her or him adjust personal emotions in difficult or threatened situations. Baber et al. (2022), Chang (2021) confirmed that Internet self-efficacy may help consumers overcome the fear of losses when conducting e-commerce transactions, which requires high accuracy and punctuality. Gu (2023), Lu (2023) supposed these results. They believed that, when consumers believe in their ability to solve potential problems, so they may be less concerned about whether the problem arises. Similarly, Bartol et al. (2023), Limbu and Sato (2019) found evidence to suggest that consumers, who are confident in their ability, perceive certainty and comfort in purchasing online.

2.4. Trust Propensity

Another factor, which may have negative correlation with perceived risk, is trust propensity (Alarcon & Jessup, 2023; Sadiq et al., 2022). Trust propensity refers to one's willingness to depend on or become vulnerable to others rather than in a particular area or behavior, which is formed and developed in the social relationship based on mutual trust between people (McKnight et al., 2004). Shaheen et al. (2020) suggested that human's life will be better if people trust each other even if this belief is reasonable or not. Consumers tend to under estimate losses in performing a particular behavior when they believe that parties involved have no reason to cause harms to them (Alarcon & Jessup, 2023). They feel comfortable and safe in making electronic financial transactions, even if they have less knowledge of such transactions (Chan, 2022). Unlike to these findings, some empirical studies confirmed that there is no significant relationship between trust propensity and risk perception on e-commerce, a way that consumers perceive risk in mobile shopping do not depend on how they trust in human beings (Wei et al., 2018).

Therefore, the constant development of information and communication technology brings consumers many benefits and conveniences but also makes them facing with potential losses. Prior studies found that risk perception of purchase online depends on consumer's knowledge, self-efficacy and trust propensity. However, this perspective does not present in previous studies on intended use of credit card, in which the relationship between perceived risk and credit card adoption is also inconsistent.

3. Research Model Development

3.1. Risk Perception and Intention to Use Credit Card

In digital society, consumers are gradually shifting their purchases from brick-and-mortar stores to virtual stores (Laudon & Traver, 2021). They may enhance their performance in this channel of shopping, which also makes them facing some uncertainties caused by their dependency on electronic devices (Widyanto et al., 2022). Next, consumers consider both profit and loss of e-services (Lucas et al., 2023). Many empirical studies have found consumers may adopt e-services when they perceive fewer uncertainties relevant to these services (Namahoot & Jantasri, 2023; Phan, 2019; Trinh et al., 2020; Zhu et al., 2022). Therefore, the impact of risk perception on intention to use a credit card may be as below:

H1: Consumer perceived risk negatively affects their intention to use a credit card.

Credit card is a kind of plastic money or stored value card that consumers can use for paying bills through automatic teller machines, point of sales or online payment terminals (Laudon & Traver, 2021). As a means of electronic payments, consumers' risk perception on credit

card can depend on their knowledge, self-efficacy as well as how they trust in human beings. The following hypotheses focus on these causal relationships.

3.2. Knowledge and Perceived Risk on Credit Cards

Jamshidi and Kuanova (2022), Lin et al. (2019) found that consumers' knowledge is constantly being fostered in many areas, but they have limited understanding of credit card. They do not read or understand terms of using credit card; they also have less knowledge about credit line, service fees, credit fees and penalties on over debt. Next, they may bear losses from ineffective usage of credit card (Rahmafitria et al., 2021; Zainudin et al., 2019). The lack of understanding how to use credit card on electronic devices also makes consumers face to potential stealing or misusing their personal and financial information (Lee & Lee, 2022; Yadav et al., 2023). Thus, the relationship between consumer knowledge and their perceived risk is:

H2: Consumer knowledge negatively affects their risk perception on credit card.

3.3. Self-efficacy and Perceived Risk on Credit Cards

Cardholders use credit cards on electronic devices in a process of exact and punctual operations, otherwise a payment fails (Laudon & Traver, 2021). Therefore, some cardholders are worried about paying bills by credit cards (Ozturk, 2016; Trinh et al., 2020). However, most of them who believe in their ability to use credit cards can make quick decisions with no regard to whether such decisions will lead to expected outcomes (Baber et al., 2022; Chang, 2021; Gu, 2023). Similarly, Shiau et al. (2020) reveal that when customers have enough confidence in finance and technology, they are willing to adopting FinTech services even if they are completely new to them. From the conclusions of Bartol et al. (2023), Hanif et al. (2022), Limbu and Sato (2019), the following hypothesis is about a relationship between consumer self-efficacy and their risk perception on credit card:

H3: Consumer self-efficacy negatively affects their risk perception on credit card.

3.4. Trust Propensity and Perceived Risk on Credit Cards

Once consumers conduct credit card payments, transaction data is exchanged and handled automatically with different components of the payment system (Laudon & Traver, 2021). This process is invisible to consumers and they do not know what happens to their personal data and payment transaction until receiving a notice of even if this transaction is successful or not (Laudon & Traver, 2021). However, such issues are not important to consumers in propensity to trust, who deliver their credit cards to cashiers at point of sales or providing their information on mobile financial services with no worry about undesirable consequences (Chen et al., 2012; Gbongli et al., 2020). Similar to some empirical studies (Alarcon & Jessup, 2023; Sadiq et al., 2022), the following hypothesis is about a relationship between consumer propensity to trust and their risk perception on credit card:

H4: Consumer propensity to trust negatively affects their risk perception on credit card.

In summary, e-society contains many undesirable risks. Consumers try to adjust their behaviors based on their perception of risks, which are determined by knowledge, self-efficacy and propensity to trust. These three constructs play an important role in risk perception on credit card as proposed research model (Figure 1).

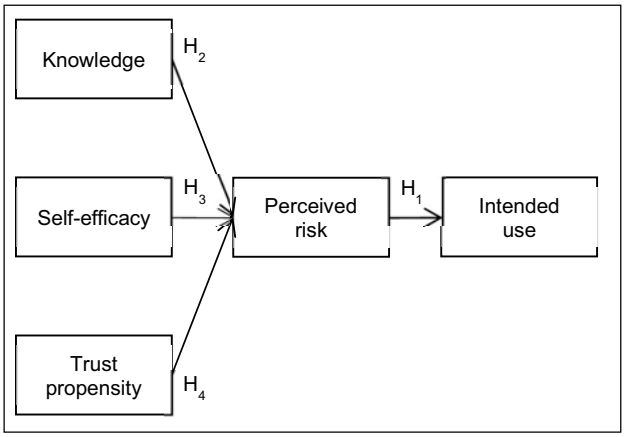

Figure 1: Proposed research model

4. Methodology

This study conducted an online survey of Vietnamese consumers receiving salaries via bank accounts. These people can easily apply for a new credit card, or use it when they already have at least one. Each respondent answered a questionnaire with 20 questions focusing on 5 factors in the research model. They are including perceived risk (Bauer, 1960), consumer knowledge (Ratchford, 2001), self-efficacy (Bandura, 1999), propensity to trust (McKnight et al., 2004), and intention to use credit cards (Fishbein & Ajzen, 1975). Items for measuring these constructs come from Bartol et al. (2023), Shaheen et al. (2020), Tan et al. (2014), and Zhu and Deng (2020).

This study used the convenient sampling method, the most common non-probability sampling strategy used

within developmental science, where participants are selected in an ad hoc fashion based on their accessibility and/or proximity to the research (Bornstein et al., 2013). The results of the online survey collect 326 responses, of which 247 answered questions with full information. Hair et al. (2014) suggested that the sample size, which is suitable for factor analysis and structural equation modeling, must be 5 times greater than the number of observed variables used to measure those factors. With 20 observed variables, the required sample size must be over 100. Then, the data from 247 respondents meets the study's requirement. Table 1 describes the descriptive statistics of respondents.

Table 1: Characteristics of Data Sample

Variable	Frequency	Percentage
Gender		
Female	117	47.4
Male	130	52.6
Age		
Under 29	124	50.2
29 - 45	91	36.8
Above 45	32	12.9
Income (USD)		
Under 500	54	21.9
500-900	117	47.4
900-1.600	52	21.1
Above 1.600	24	9.7
Marital status		
Single	87	35.2
Married	160	64.8
Education		
High school	13	5.3
College	102	41.3
University	132	53.4
Occupation		
Industries	17	6.9
Trading services	54	21.9
Financial services	95	38.5
Public services	81	32.8

Based on the collected data, the author performed Cronbach's Alpha analysis to test the reliability of the scale by determining the ability of observed variables to measure concepts in the model (Bland & Altman, 1997). The measurement is reliable and usable when the Cronbach's Alpha coefficient has a value of 0.6 or higher (Peterson, 1994). The contribution of each observed variable to each concept in the model is expressed through the variable-total correlation coefficient (Nunnally & Bernstein, 1994). Observed variables with variable-total correlation coefficients less than 0.3 are inappropriate, so they should be out of the study (Hair et al., 2014).

Next, the author performed exploratory factor analysis (EFA) to look for associations between observed variables used in measuring latent factors (Fabrigar et al., 1999). On that basis, observed variables with high correlation levels appear in the same factor, corresponding to the concept in the proposed research model (Byrne, 2010). According to Hair et al. (2014), EFA analysis is only suitable for research data when the KMO coefficient (KaiserMeyer-Olkin coefficient) is between 0.5 and 1.0, combined with a significant Barlett test. statistics (Sig. < 0.05). Besides, an observed variable is usable when the Factor Loading Coefficient is 0.5 or higher (Hair et al., 2014). The results of EFA factor analysis are acceptable, the latent factors are identified and measured through observed variables, when the latent factors have explained over 50% of the variation of the data. This explanatory power is determined by the total variance extracted of the factors (Anderson & Gerbing, 1988). After that, the authors perform the confirmatory factor analysis method CFA (Confirmatory Factor Analysis) to evaluate the measurement model from the results of the EFA. A fit of the model with market information is determined by fitting indicators, including CMIN/df, CFI index, TLI index, and the RMSEA index. The model is suitable for market data when TLI, CFI ≥ 0.9, CMIN/df ≤ 3.0, RMSEA ≤ 0.08 (McDonald & Ho, 2002). The concepts identified by the CFA are suitable for structural equation model analysis (SEM) when they meet the reliability standards of the scale (Schumacker & Lomax, 2006), unidimensionality and discriminant validity (Steenkamp & Trijp, 1991), and convergent validity (Anderson & Gerbing, 1988). Finally, the authors use the SEM to test the hypotheses in the proposed research model with complex and flexible relationships between research concepts (Byrne, 2010). Test results using the SEM are only suitable for market data when TLI, CFI index ≥ 0.9, CMIN/df ≤ 3.0, RMSEA ≤ 0.08 (McDonald & Ho, 2002).

5. Findings

5.1. Cronbach's Alpha Analysis

Cronbach's alpha analysis provides the internal consistency reliability of the items in measuring factors in the proposed model. Table 2 shows that reliability coefficients of Propensity to trust (PT), Self-efficacy (SE), Knowledge (KN), Perceived risk (PR), Intention to use Credit card (IU) are 0.910, 0.893, 0.908, 0.863, and 0.945, irrespectively. This means the measurements are reliable and acceptable (Hair et al., 2014). Next, the corrected item-total correlations exceed 0.3 for all observed variables. According to Hair et al. (Hair et al., 2014), all observed variables are eligible for factor analyses.

5.2. Factor Analyses

Applying Exploratory Factor Analysis to data collected from survey questionnaires, 16 observed variables combined with 4 factors all loading factors exceed 0.5 with the KMO coefficient is 0.829, and a total extracted variance of variables is 65.436% (Table 2). These extracted factors are suitable for the proposed model and this factor analysis is appropriate (Hair et al., 2014). Observed variables in the intended use of credit card have high loading coefficients and its data variation is well explainable. Therefore, the measurements are acceptable for Confirmatory Factor Analysis (Byrne, 2010).

Next, this study conducts Confirmatory Factor Analysis to examine the model-data fit of the proposed model. Some absolute indices are available for evaluating the proposed model. There are some empirical results, including Chi-square/df=1.431, GFI=0.917, CFI=0.979, TLI=0.976 and RMSEA=0.042. So, the suggested model is appropriate, as recommended by (McDonald & Ho, 2002). The validity of convergence is also achievable because all factor loadings are greater than 0.5 (Table 3). The overall reliability coefficient is greater than 0.6 and the values of corrected item-total correlation are greater than 0.3 for all observed variables (Schumacker & Lomax, 2006). It reveals the acceptance of the internal consistency reliability of measurements. The AVE values show that each construct is a distinct construct, and discriminant validity is acceptable (Fornell & Larcker, 1981). Therefore, these measurements are model-data fit, discriminant validity, unidimensionality, convergence validity and internal consistency reliability.

Table 2: Reliability and Factor Analyses

Constructs	Corr. item total	EFA	CFA
		Loading coefficients	
***Intention to use credit card (IU): Cronbach's α* = 0.945, Eigenvalues = 3.252; AVE = 0.813**			
I wish to use a CC	.868	.901	.903
I use CC as soon as I can	.903	.943	.944
I will often use CC	.862	.893	.893
I invite my friends to use CC	.840	.868	.865
***Propensity to trust (PT): Cronbach's α* = 0.910, Eigenvalues = 2.888; AVE = 0.772**			
I think people are honest	.816	.896	.868
I think people keep the promises	.836	.922	.896
I think people are ready to help	.807	.811	.871
***Self-efficacy (SE): Cronbach's α* = 0.893, Eigenvalues = 1.157; AVE = 0.747**			
I can find place to pay by card	.723	.704	.772
I can make payments myself	.855	.993	.938
I can fix the problem myself	.797	.851	.875
***Knowledge (KN): Cronbach's α* = 0.908, Eigenvalues = 1.625; AVE = 0.770**			
I know how to use my CC	.773	.764	.818
I know information about CC	.846	.923	.92
I used to pay by credit card	.830	.916	.892
***Perceived risk (PR): Cronbach's α* = 0.863, Eigenvalues = 4.8; AVE = 0.505**			
CC are not secured properly	.614	.653	.667
I will lose my personal details	.518	.573	.603
Bill cannot be paid by CC	.687	.738	.741
I will pay more to use CC	.591	.648	.652
It takes time to use credit cards	.668	.722	.717
I look foolish by using CC	.560	.645	.637
I feel depressed when using CC	.825	.897	.911

5.3. Structural Equation Modeling

This work conducts Structural Equation Model to test the proposed model, including perceived risk antecedents from the consumer perspective and its impact on the intended use of a credit card. These factors come from 20 observed variables in the above factor analyses. All indicators (Chi-square/df=1.476, GFI=0.913, CFI=0.977, TLI=0.973 and RMSEA=0.044) show that the proposed model is appropriate for data collected from the market (McDonald & Ho, 2002). Table 3 shows the result of SEM. Whereby perceived risk depends significantly on self-efficacy and propensity to trust, with coefficients of -0.153 and -0.174, respectively. However, such a relationship does not exist between consumer's knowledge and their risk perception. Finally, consumers' perceived risk accounted for 25.1 percent of the variance in their intended use of credit card with a coefficient of -0.501. Thus, all hypotheses are acceptable, except H2.

Table 3: Results of the Structural Equation Modeling

	Relationship	Estimate	p. value	Result
H1	PR→IU	-.501	.000***	Accepted
H2	KN→PR	-.016	.840	Declined
H3	SE→PR	-.153	.058*	Accepted
H4	PT→PR	-.174	.023**	Accepted

6. Discussions

Some prior studies considered consumer risk perception as a determinant of their intention to use a credit card. However, there are some inconsistent findings. These studies focused only on the consequences of perceived risk, without mentioning its antecedents. Whereby risk antecedents may be important when consumers are interested differently in potential losses relevant to credit card. The study aims to fill this gap by examining a determinant of perceived risk on credit card from a

consumer's perspective. They are consumer's knowledge, self-efficacy and propensity to trust.

A result of SEM analysis shows a negative impact of perceived risk on intention to use (β = -0.501; p = 0.000), which confirms that consumers' perceived potential losses may discourage them from using credit card or H1 hypothesis is acceptable. With the rapid development of information and communication technology, people are increasingly reliant on electronic devices and their abuse can cause them much damage. Similarly, an expansion of credit card market may bring many benefits and convenience to Vietnamese consumers but also make them to be at risk; they may lack of security, loss of privacy, loss of personal image, nervous tension, waste of time, failed or uncontrolled transactions, and unexpected cost. These results are consistent with prior studies on intention to use credit card (Ozturk, 2016; Trinh et al., 2020; Munikrishnan, 2023; Phan et al., 2019).

Differ from the significant effect of self-efficacy and propensity to trust, the SEM results confirm an insignificant relationship between consumer knowledge and their risk perception on credit card (β = -0.016, p = 0.840). So, the result refuses the H2 hypothesis, which is inconsistent with empirical studies of Rahmafitria et al. (2021), Zainudin et al. (2019), Lee and Lee (2022) who argued that online consumers try to change their perception of potential losses related to a behavior by increasing their understanding of that behavior. To find out the reason for this result, the study conducted in-depth interviews with some respondents. Some of them assert that knowledge about credit card will make them overcoming losses in thought, which is determined by different components, including general information about credit card, how to use credit card, and experience on paying by credit card. Meanwhile, the others think that a thorough understanding of disadvantages and negative experiences may increase their sense of potential losses relevant to credit card.

The SEM results reveal that consumer's self-efficacy has a negative impact on their risk perception on credit card (β = -0.153, p = 0.058). So, H3 hypothesis is acceptable. Vietnamese consumers are likely to dismiss the losses when they believe in their ability to use a credit card for daily expenses. With experiences of using computers, mobile phones, Internet, consumers believe they can conduct credit card payments without others' help. They are confident in their ability to act well based on the system's responses to paying the process by credit card. Finally, they are also sure about of finding a store, which accepts credit card in an increasingly expanded payment network. Bartol et al. (2023), Limbu and Sato (2019), Shiau et al. (2020) supposed these findings when they found perceived losses are unlikely to arise when actions are under their confidence in success.

The SEM results also assert the negative impact of propensity to trust on risk perception about credit card (β = -0.174, p = 0.023). So, H4 hypothesis is acceptable. This outcome refers that Vietnamese consumers are less concerned about losses with their faith in human beings, who are honest and kindness. Credibility is especially important because consumers have to provide personal information on an online payment gateway or give their cards to cashiers, who swipe them on devices. They expect their payments will not interrupt or reject until completed successfully with the exact amount and cost (if any) as announced by sellers. They also appreciate sellers' attention and support to solve unforeseen issues. These results are consistent with prior studies on propensity to trust and perceived risk of electronic services (Chen et al., 2021; Gbongli et al., 2020; Sadiq et al., 2022).

7. Conclusion, Limitation, Recommendation

7.1. Conclusion

This study introduces antecedents of consumer risk perception in relation to their intention to use a credit card in retail payments, which is measured by 20 observed variables. Some of them inherit from previous studies on e-commerce adoption. Some others are new born on characteristics of credit card as a retail payment instrument. The results of factor analysis reveal that the measurement model is consistent with market data, convergent, unique, distinct and reliable. A structure equation model shows that knowledge, self-efficacy, and propensity to trust influence perceived risk. The last factor has a negative effect on intention to use a credit card as a retail payment method.

7.2. Limitation

Despite of identifying negative effect of perceived risk on intention to use and its antecedents from consumer perspective, this study has some limitations. It considered risk perception as a single constructor instead of a synthesis of many risk dimensions. It only concentrated on consumer characteristics, such as knowledge, self-efficacy, propensity to trust in explaining their risk perception on credit card. However, their perceived risk on credit card may also be come from cognitive characteristics of credit card and its providers or sellers. These shortcomings may be available in future studies in this area.

7.3. Recommendation

Although there are some limitations, this study has some managerial implications for credit card service providers.

They should create favorable beliefs in consumers regarding their goodness and being more self-confident in using credit card in daily retail payments. This may come from organizing training courses on credit card to help customers conducting payments and handling basic issues during use. Next, credit card companies should offer a mini guide about credit card, which is easy to reach whether online in retail ecommerce website or offline at payment merchant. They should also disclose their credit card policies, maintain 24/7 customer service on the perspective of respecting and protecting customer interests. These policies may reduce consumer's risk perception, and then encourage them using a credit card in their retail payments.

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