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Factors Affecting Retailers' Adoption of the Cash on Delivery (COD) Payment Model for e-Commerce Transactions: Case of Vietnam

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Abstract:

Along with the development of the commercial e-commerce market, Cash on Delivery has been increasingly used by many retailers. According to the International Finance Corporation in 2014, COD is accepted by 24 of the 33 (73%) of the surveyed e-commerce companies in Vietnam. Through the evaluation and analysis of retailers' opinions, the study has learned to clarify the factors that influence a retailers' intention to use the COD payment method and intention to use COD services. Research results show that perceived risks (TPR model) such as Financial risks, Performance risks, Time risks, and Psychological risks with Attitude towards behavior, Subjective Norms (TRA model) significantly affect the retailers' intentions in electronic trading transactions. Based on these results, our study gives an answer to the question of why COD is still a payment method with wide coverage despite many potential risks. Our work also points out solutions and recommendations towards the development of cash payment in particular and Vietnam's e-commerce market in general.

Keywords: E-commerce, COD, cash-on-delivery, cash payment, online payment methods

1. Introduction

Nowadays, with the rapid development of online shopping in developed and developing countries, the payment methods are also increasingly diversified, which helps customers participating in online purchases have more options when choosing a form of payment. Overcoming the diversity of payment methods in the market, CODs are still gaining popularity in recent years in countries such as India, Saudi Arabia, Jordan, and the UAE (Gangeshwer, 2013; Makki& Chang, 2015; Yaseen et al, 2016; Halaweh, 2017;). Specifically, in India, COD accounts for 50% - 80% of online payment transactions (Ernst and Young, 2013), while in the United Arab Emirates (UAE), it is around 60% (Hamid, 2014). In Indonesia, COD was also the most popular payment method (around 65%) for digital purchases in February 2017 (eMarketer, 2017).

In Vietnam, although the infrastructure for online payment has been quite developed, 86% of orders on e-commerce still use the form of payment after receiving goods (Data from the Ministry of Industry and Trade in 2019). What makes COD so popular? There have been many previous studies showing shoppers' motivations for purchasing behavior using COD (SafiaAnjum and Junwu Chai, 2020 and Halaweh, 2017) or analyzing the correlation between consumers and retailers. While using COD (MohanadHalaweh, Al Falah University, Dubai, UAE, 2018), but only qualitative and in the author's subjective point of view, most of the topics have not yet been exploited. Factors affecting a seller's decision to use the COD payment method. Therefore, it is essential to fill this research gap. Our research aims to investigate and verify the factors influencing the decision to accept COD as a form of payment for online sales by retailers in Vietnam.

2. Literature review

According to Investopedia's definition in 2013, COD stands for Cash on Delivery or Collect to Delivery, which means the form of Cash on Delivery, COD allows customers to pay in cash at the time of products delivered to a location of their choice. This is sometimes called a 'postpay' system because the customer receives the item before making a payment (Rouiba, 2015).

COD is characterized by its wide coverage (Copenhagen Economics, 2013; Hamid, 2014; International Finance Corporation, 2014; Rouibah, 2015; Nair, 2016); fast and convenient transactions (Halaweh, 2018); high security (Halaweh, 2017); requires a collection fee from the seller (Linh Duong, 2019); Buyer fraud is more likely to occur because the buyer is more empowered in this method (MohanadHalaweh, 2018). COD's characteristics not only contribute to its own advantages but also present unique drawbacks. And the decision to use COD by the seller - the user of the COD service is determined based on perceptions of the consumer benefit and the risks that need to be considered. This study uses the Theory of Reasoned Action (TRA) and Theory of Perceived Risk (TPR) to explain retailers' decisions to use the COD form. Theory of Reasoned Action explains the behavior of an e-commerce retailer based on two main factors: subjective norms and attitudes towards behavior. In particular, subjective norms refer to the retailers' beliefs and efforts to conform to crowd standards. That means that direct competitors use a variety of forms of payment, including COD, which is the driving force for retailers' behavior. The attitude to behavior here refers to the retailer's belief that COD can help them reach a wider range of customers due to its conveniences such as ease of use and reliability, confidentiality for customers.

Theory of Perceived Risk adds four explanatory factors to a retailer's decision to use COD: Financial risk - the likelihood of a monetary loss (Jacoby and Kaplan, 1972); Performance risks - the possibility that products and services are not being performed as expected (Jacoby and Kaplan, 1972); Time risk - the likelihood of loss in terms of time (Featherman and Pavlou, 2003) and Psychological risk - the ability to lead to a negative effect on self-awareness (Maignan and Lukas, 1997; Jacobs, 1997; Benassi, 1999). The 'perceived risk' in consumer behavior theory helps to explain why consumers often move from a desired stage to an action stage, that is, making actual buying decisions. Appropriate theories and practices can be used to identify strategies marketers can use to fix this problem.

Numerous studies have been conducted to investigate the impact of perceived risk on consumer decisions. However, previous research (Forsythe and Shi, 2003; Pavlou, 2003; Naiyi, 2004; Forsythe et al., 2006; Zhou et al., 2008; Demirdogen, 2010; Zhang et al., 2012; Hong dan Yi, 2012; Hong and Cha, 2013; Masoud, 2013; Vos et al., 2014; Dai et al., 2014; Almousa, 2014) have not found the inconsistencies in the test results. Furthermore, such studies only examined risks for research subjects who were consumers, while the preceding explanation stressed the importance of market risks to retailers and companies. As a result, the potential threats in the existing e-commerce context must be investigated and considered. Finally, we categorize perceived risk into the document's variables and empirically examine each of the factors affecting the intentions of a commercial business operator in Vietnam. This study applies a perceived risk approach to explain consumers' purpose for using the cash payment method when receiving goods. Based on data collected from a structured self-management questionnaire for retailers in Vietnam to find analytical results showing that the intention to use the cash payment method when receiving goods is negatively affected by risk perception, aggregated from psychological risk, financial risk, operational risk, security risk, privacy risk, social risk and time risk.

The concept of risk has been accepted as one of the main factors in the client's decision-making process. Bauer (1960) asserts that it is not 'real world' risks that affect customer behavior but their subjective perception of risks that may occur. Users begin to realize that when they are faced with two factors: uncertainty and consequences (negative) (Cox and Rich, 1964). The higher the uncertainty and negative consequences, the higher the perceived risk (Hong and Cha, 2013). The greater the perceived risk motivates the user to need more information about the product, so the decision to use will tend to be more complex and permanent, and it will cause them to cancel the delivery. Consequently, perceived risk becomes one of the most important and powerful concepts in explaining user behavior.

Customer perceived risk has been studied as a topic over the past four decades (Mitchell, 1999). In traditional business, some previous studies have focused on only 5 risk aspects, such as financial risk, product risk, psychological risk, social risk and time risk (Roselius, 1971; Jacoby & Kaplan, 1972; Stone and Gronhaug, 1993). However, the rise of new commerce, the Internet, invites experts to discuss the risk further and figure out how to eliminate or minimize it. In this case, retailers are delivery service consumers.

Customer perception of risks in e-commerce is quite higher than that of offline businesses (Lee and Tan, 2003). They cannot see, touch, or try the products or services they will buy. For example, shipping over the internet requires delivery, so damage, error, delay or loss is most likely to occur during shipping (Hong and Cha, 2013). In addition, customers may face transaction safety and privacy risks due to concerns about the possibility that their personal data when purchasing products will be abused by other irresponsible parties (Zhou et al., 2008). Another skeptical customer is that when they manage social purchases, they have difficulty resolving complaints regarding damaged products, warranties and promotional fraud (Zhang et al., 2012). Previous explanations have shown a theoretical evidence that perceived risk on the internet can be related to distribution, security and privacy as well as after-sales risk. Therefore, along with traditional transaction risk, this study proposes seven literature-based trade risk dimensions (Stone and Gronhaug, 1993; Forsythe and Shi, 2003; Bansal and Chen, 2011; Zhang et al., 2012; Hong and Cha, 2013; Kim and Park, 2013; Hajli, 2014; Almousa, 2014). Financial risk is defined as the likelihood of a financial loss resulting from high selling prices, online fraud or additional costs. While time risk is defined as the possibility of losing time due to various inconveniences in the trading process. A social risk is the ability of a product purchased to affect the views of others about consumers. The possibility that a purchased product is not performing as expected represents product risk. A security and privacy risk are the potential for loss of personal data to be misused or misused without the consent of the owner. The

after-sales risk is the likelihood of a loss that the customer will incur after the purchase (such as damaged product, fraud, and the request for service guarantees).

3. Methodology

3.1. Data

The survey sample has a total of 215 sellers. The sellers under the age of 21 include 66 people, accounting for 30.7%; The sellers at the age from 21 - 30 include 102 people, accounting for the highest proportion, 47.7%; The vendors from 31-40 years old include 42 people, accounting for 19.5%; the vendors at the age from 41 to 50 include 2 people, accounting for the lowest percentage, 0.9%; Sellers aged 51 - 60 include 3 people, accounting for 1.4%. Through the above data, the sellers' age may be quite young, mainly from under 21 to 40 years old (accounting for 97.5% of the research sample). 138 respondents are saying that they trade in products in the price range below 500 thousand dong, accounting for the highest rate, 65.7%; 82 respondents answered that they trade in commodities in the price range from VND 500,000 to less than VND 2 million, accounting for 38.9%; 22 respondents answered that they trade in products in the price range from VND 2 million to under VND 10 million, accounting for 10.4%; 4 respondents answered that trading in goods with a price range of over VND 50 million, accounting for 1.9%; None of the respondents answered that they trade in items in the price range from 10 million to less than 50 million dong.

Respondents surveyed mainly trade fashion and accessories, including 94 people, accounting for 43.7%; followed by cosmetics, makeup, with 75 people, accounting for 34.9%; 36 people answered trading in technology, electronics, and home appliances, accounting for 16.7%; 29 people said that they did business in consumer goods, housing, and living, accounting for 13.5%; 28 people trade in food and health care products, accounting for 13%; stationery items with 26 dealers, accounting for 12.1%; 26 respondents trade in other products, accounting for 12.1%.

Social networks are the most commonly used by retailers to sell their products, including 168 people, accounting for 78.1%; trading floors ranked second with 119 users, accounting for 55.3%; 75 respondents are selling directly at the store, accounting for 34.9%; 8 people are using other technology platforms, accounting for 3.7%.

3.2. Method

In this research paper, our team has carried out the research process based on 3 main phases:

- Understanding and summarizing the hypothesis theory related to customers behavior.
- Preliminary research and official research: The research team conducted a sociological survey (research, build, drop survey then remove and verify the results), quantitative research (Alpha coefficients), ANOVA, t-test, correlation method, factor analysis (homogeneity) and research quality verification (Cronbach's Alpha).
- Based on the collected data, the research team has given recommendations and solutions for the payment method in accordance with the development direction of the State.

Based on the above analysis, the research team found that the factors affecting the decision to choose the form of COD payment include: financial risk, performance risk, time risk, psychological risk., subjective norms, attitudes towards behavior. The authors propose the research model and research hypotheses as follows:

Figure 1: Proposed Model of the Research 'Factors Affecting Retailers' Adoption of Cash on Delivery (COD) Payment Model for E-Commerce Transactions: Case of Vietnam'

3.3. Research Hypothesis

The model is based on the theory of reasoned action (TRA) according to Ajzen and Fishbein (1975) and the theory of perceived risk (TPR) of Bauer (1960). The authors inherit variables consistent with the research scope from the previous models: Subjective Norms (Ajzen and Fishbein (1975); Attitude towards behavior (Ajzen and Fishbein (1975); Performance Risk, Financial risk, Time risk, and Psychological risk (Bauer, 1960).

3.3.1. Financial Risk

Financial risk is defined as the risk that a product or service is not worth financial value or the possibility of monetary loss occurring when using that product or service (Jacoby and Kaplan - 1972). Or according to Maignan & Lukas, 1997, financial risks are identified as money that can be lost or needed to be spent in order for a product to work properly. In the research context, financial risk is the possibility that the retailer, when using COD, is likely to bear two-way delivery costs in case the buyer refuses to accept the goods and/or logistics costs to cover or pay a third party (MohanadHalaweh 2018; Linh Duong 2019).

The COD method makes it much more difficult to solve the problems of buyer fraud than pre-delivery payment methods. This also stems from the main advantages of the COD method that helps it be used by the buyer: COD helps to create a firm trust for the buyer because the customer is checked product quality before payment; Buyers' privacy and confidentiality are protected because personal information is not disclosed (MohanadHalaweh, Al Falah University, Dubai - 2018). COD causes high delivery failure rates (Linh Duong, 2019) because the buyer has almost no damage when canceling the order voluntarily meanwhile the retailer has to bear the full shipping costs when this happens.

- *H1: Financial risk has a negative impact on a-retailer's behavior of adopting COD payment method*

3.3.2. Performance Risk

Acceptance of COD transactions in online sales exposes retailers to suffer risks from the COD service providers. COD delivery service providers may commit fraud in the shipping process that prevents the order from being completed as agreed as the retailer's expectations.

In the process of receiving and transporting goods to the buyer, the shipper can perform the acts or cause some mistakes such as: shuffling; damage to the goods during transportation; lost orders; causing the order to not be delivered on time as promised (Forsythe et al., 2003), ... These may come from the COD company's system error resulting in the transaction not being completed; the delivery company's internal systems cannot control the operation and there is delivery staff's fraud. That is when the retailer suffers from the Performance risk of COD service.

- *H2: Performance risk has a negative impact on a-retailer's behavior of adopting COD payment method*

3.3.3. Time Risk

Time risk roots from the surprised inconvenience that arises in transactions, often leading to difficulty navigating and submitting orders, or delays in the transaction cycle (Forsythe et al., 2003),... The two leading causes of dissatisfaction in this experience can be mentioned: delay and disorganization or logistical failure (GVU's 9 - User Survey, 1998) or it may be due to the incapacities of the service users themselves.

All of these time-wasting processes according to Featherman and Pavlou (2003) can lead to the uncertainty of the time it takes to learn to operate using the procedures to be followed when a product cannot be traded. or discontinue selecting these services when their performance is below expectations. This can be inconvenient for the user.

Time risk also includes the situation where retailers take longer to complete the delivery cycle, or master how to apply COD to business. It also takes longer for money to be returned to the retailer than for non-cash payment methods.

- *H3: Time risk has a negative impact on a-retailer's behavior of adopting COD payment method*

3.3.4. Psychological Risk

Mitchell (1992) defined psychological risk as the risk that the user's choice or performance would have a negative effect on peace of mind or self-awareness. Besides, Maignan and Lukas, 1997; Jacobs, 1997; Benassi, 1999 said that that mentality can be fear, insecurity when using the service; get bored, have difficulty using it, and feel ashamed if your personal information is disclosed. The lack of control over the execution of a trade is a psychological risk that prevents many users from providing information in exchanges (Jacobs & Kaplan 1997; Hoffmam et al., 1999). When COD is chosen by the retailer as the form of payment, the process of transporting the goods to the retailer causes many psychological risks such as: feeling worried, disappointed if the customer does not accept the ordered item; request for return, obstacles in procedures, valid verification evidence to have the benefits resolved. In addition, the logistics side - the shipper can also cause psychological pressure on the retailer with their non-credibility, or sometimes accidentally or intentionally disclosing their own personal information and the buyers (Halaweh, 2017).

- *H3: Psychological risk has a negative impact on a-retailer's behavior of adopting COD payment method*

3.3.5. Attitude towards Behavior

In this case, our research object which is businesses or retailers is considered customers of COD service providers. Attitude towards behavior is a factor that directly affects consumers' willingness to use services. Attitudes toward a discovered behavior are closely related to a particular behavior (Ajzen and Fishbein, 1980).

In particular, trust strongly influences a customer's decision whether to continue using or discontinue using a product or service (Chung and Shin, 2010). The belief that using the COD payment method will expand their market share by increasing their trust, convenience, security and targeting the customers who do not use credit cards for online shopping. There are plenty of studies that have mentioned factors related to the convenience that makes COD popular and the preferred choice of many customers (Gangeshwer, 2013; Makki and Chang, 2015; Yaseen et al., 2016). When a merchant uses COD payments, their customers don't need to open an online account, download apps, and perform complicated money transfers. e-commerce platforms, place orders, and pay when products are received. Increasing customer trust can help with the rates of loyal customers and the long-term expansion of the customer base of online stores (Chen et al., 2012) as well as product acquisition intentions. of customers (Yiu et al., 2007)

- *H5: Attitude towards behavior has a positive impact on a-retailer's behavior of adopting COD payment method*

3.3.6. Subjective Norms

Attitude toward behavior), which expresses the individual's positive or negative perceptions about the performance of an act, can be measured by the combination of believe and value of this belief (Hale, 2003). If the results are personally beneficial, they may intend to engage in the behavior (Fishbein & Ajzen, 1975, p.13).

Suls (1977) argues that under a few stereotypes, people judge their actions in relation to the actions of others. As part of the market, retailers will tend to try to conform to the standards of the majority. If most of the merchant community has a positive bias or belief in choosing a service, a retailer also tends to be affected by this. Researchers have found that sometimes business people rely on information about competitors when making business decisions as well as profit-maximizing, performance-oriented by competitors (Armstrong & Collopy, 1996).

The Subjective Norms here include the fact that most online retailers, direct competitors, use a variety of forms of payment, including COD. This is the motivation for every retailer to use this method to expand their market share and keep a competitive advantage with other peer-to-peer merchants (Tandon et al 2016).

- *H6: Subjective Norms has a negative impact on a-retailer's behavior of adopting COD payment method*

4. Analytical Results

The model assumes the factors affecting the decision to use the delivery service (COD) of retailers including 6 independent scales (criteria) and 1 dependent scale with a total of 29 observing variables.

Confidence assessment 6 independent criteria with α coefficients of Cronbach from 0.79 to 0.83, the variable correlation coefficient - adjusted total of 26 variables from 0.51 to 0.70. For the dependent scale: the coefficient α of Cronbach = 0.83, the variable-total correlation coefficient of the variables from 0.67 to 0.77, allowing the confirmation of a good scale and guaranteed variables.

	Items	Cronbach α	Correlation Coefficient
Financial Risk	TC1, TC2, TC3, TC4	0,81	0,60 → 0,65
Performance Risk	HS1, HS2, HS3, HS4, HS5	0,83	0,59 → 0,68
Time Risk	TG1, TG2, TG3, TG4, TG5	0,81	0,53 → 0,65
Psychological Risk	TL1, TL2, TL3, TL4, TL5	0,79	0,51 → 0,67
Subjective Norms	CCQ1, CCQ2, CCQ3	0,79	0,56 → 0,70
Attitude towards behavior	HV1, HV2, HV3, HV4	0,79	0,59 → 0,61
COD method using behavior	QD1, QD2, QD3	0,83	0,67 → 0,77

Table 1: Cronbach's Alpha Analysis

Source: Analytical Results of the Research

After testing the reliability with Cronbach's Alpha test of the dependent variable 'COD method using behavior', we analyze EFA factors as independent variables.

Pearson correlation coefficient (symbol r) is a test statistic measuring the statistical relationship or the association between the dependent variables and the continuous variables. The Pearson correlation is known as the best method for measuring the relationships between the variables of interest because it is based on the covariance method.

		COD Adopting Behavior	Financial Risk	Performance Risk	Time Risk	Psychological Risk	Subjective Norms	Attitude towards Behavior
COD Adopting Behavior	Pearson Correlation	1	-.223**	-.365**	-.210**	-.193**	.423**	.341**
	Sig. (2-tailed)		.001	.000	.002	.005	.000	.000
	N	215	215	215	215	215	215	215
Financial Risk (TC)	Pearson Correlation	-.223**	1	.053	.038	-.064	.097	.103
	Sig. (2-tailed)	.001		.443	.583	.347	.154	.132
	N	215	215	215	215	215	215	215
Performance Risk (HS)	Pearson Correlation	-.365**	.053	1	.001	.151*	-.128	.024
	Sig. (2-tailed)	.000	.443		.991	.027	.061	.722
	N	215	215	215	215	215	215	215
Time Risk (TG)	Pearson Correlation	-.210**	.038	.001	1	-.024	.024	.091
	Sig. (2-tailed)	.002	.583	.991		.731	.728	.184
	N	215	215	215	215	215	215	215

		COD Adopting Behavior	Financial Risk	Performance Risk	Time Risk	Psychological Risk	Subjective Norms	Attitude towards behavior
Psychological Risk(TL)	Pearson Correlation	-.193**	-.064	.151*	-.024	1	.065	-.083
	Sig. (2-tailed)	.005	.347	.027	.731		.343	.225
	N	215	215	215	215	215	215	215
Subjective Norms (CCQ)	Pearson Correlation	.423**	.097	-.128	.024	.065	1	-.036
	Sig. (2-tailed)	.000	.154	.061	.728	.343		.602
	N	215	215	215	215	215	215	215
Attitude towards Behavior	Pearson Correlation	.341**	.103	.024	.091	-.083	-.036	1
	Sig. (2-tailed)	.000	.132	.722	.184	.225	.602	
	N	215	215	215	215	215	215	215

Table 2: Correlation Analysis

Source: Analytical Results of the Research

According to the analysis results, correlation coefficient is significant at 0.01 (equivalent to 1%) and the dependent variable 'decision to use' with Sig is less than 5%, confirming that the dependent variable and the above independent variables are correlated with each other. Therefore, it is eligible to conduct the next regression analysis.

R	R square	Adjusted R Square	Std. Error of the Estimate	Durbin - Watson
0,76	0,58	0,57	0,45214	1,825

Table 3: Model Summary

Source: Analytical Results of the Research

We have linear regression analysis performed to confirm how many factors in the model actually affect the retailer's decision to use COD service and measure the intensity of the impact of each factor.

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	VIF
	B	Std. Error	Beta			
Constant	3,788	0,394		9,61	0,000	
TC	0,32	0,05	- 0,30	-6,49	0,000	1,03
HS	0,38	0,05	- 0,27	-5,90	0,000	1,05
TG	0,05	0,04	- 1,90	-4,11	0,000	1,05
TL	0,39	0,04	- 0,23	-5,14	0,000	1,01
CCQ	0,24	0,04	0,45	9,78	0,000	1,04
HV	0,25	0,05	0,40	8,75	0,000	1,03

Table 4: Coefficient of Regression Model of Factors Affecting Retailers' Adoption of Cash on Delivery (COD) Payment Model for E-Commerce Transactions

Source: Analytical Results of the Research

The data testing results demonstrate that the adjusted R-squared value in the model summary table is 57%, meaning 57% of the variation in the decision to use the cash on delivery service (COD) of the retailers in the North of Vietnam is explained by the factors included in the model, the remaining factors have not been studied; Sig value of F-test in ANOVA table = 0.000. It means that the regression model statistically significantly predicts the outcome variable; The variance-inflation factor (VIF) ≈ 1 (Table 12), allows the authors to confirm that the data is suitable for Multi linear

regression analysis. The analytical results indicate that there are 6 factors which affect the decision to use cash on delivery service (COD) of retailers in the North in decreasing-level orders: CCQ (subjective norms), HV (attitude towards behaviours), TC (financial risk), HS (performance risk), TG (time risk), TL (psychological risk).

To conclude, we have the following multiple linear regression:

$$HL = 3,79 + 0,45 \text{ CCQ} + 0,40 \text{ HV} - 0,30 \text{ TC} - 0,27 \text{ HS} - 0,23 \text{ TL} - 0,19 \text{ TG}$$

5. Discussion and Conclusion

This paper's model is based on the Theory of reasoned action (TRA) (Ajzen and Fishbein, 1975) and the Theory of perceived risk (TPR) (Bauer, 1960). This paper inherits the preceding factors that are relevant to the research scope: Subjective standards (Ajzen and Fishbein (1975); Attitudes towards behavior (Ajzen and Fishbein (1975); Financial risk, Performance risk, Time risk, and Psychological risk (Bauer, 1960).

This paper focuses on the factors that influence the retailer's decision to use the COD payment method instead of the buyer's decision, so the influencing factors will be tackling other problems.

The result has shown all factors are consistent with the scope of the study, and at the same time, the research hypotheses are accepted. Specifically, the results of testing the factors affecting the retailer's decision to use the COD payment method are shown as follows: The strongest impact is Subjective Norms (0.45), followed by Attitude towards behavior (0.4), Financial risk (0.3), Performance risk (0.27), Psychological risk (0.23) and lastly, Time risk (0.19).

The results showing these variables indicate that there is still a lot of risk surrounding the use of cash payment on receipt of goods. From there, it helps improve the retailer's understanding, helps the retailer to consider and minimize these risks to improve service quality, and increases the number of customers.

From the research results, the authors give two recommendations:

The first one is to propose solutions to minimize risks in sales transactions using the COD payment methods. For example, Smart Contract (SC) is considered to be one of the best options to ensure fraud-free transactions with the cash-on-delivery payment method. According to Ngoc Tien Thanh Le et al (2019), with dual Smart Contracts, the shipper will have to participate in the system to ensure reliability. The buyers also have to deposit a certain amount of money upon order. This process not only guarantees the benefits of a retailer but also prevents a fraudulent shipper.

In addition to dual smart contracts, the Government also has a great impact in minimizing transaction risks through the introduction of protection policies for retailers on the e-commerce market. Measures such as strictly sanctioning the fraudulent acts of the buyer and the shipper; encouraging retailers with sales tax incentives, training retailers on how to use COD payment methods properly; the retailers and buyers' information security policy, etcetera. It is necessary to have strict regulations and ensure it covers all the inadequate risks that the retailer may have to face.

The second is to direct the retailers/e-retailers to switch to non-cash payment methods. This is based on the advantages of these methods and their contribution to economic development. There are positive aspects such as the use of non-cash payment shields to help control money laundry, avoid tax losses (because income or expenses are all performed on the account at the Bank), accelerating the process of goods rotation, contributing to creating conditions for the smoother production and business process. Non-cash payment also helps credit institutions to exploit and use capital resources of the economy effectively in the process of cash flow for the economy, performing well the function of intermediary payment.

However, completely switching from using cash on delivery (COD) to non-cash payment still faces many difficulties. The reason is largely due to the habit of spending with cash has deeply ingrained in the Vietnamese people's subconscious, in addition to the fact that credit cards, payment via credit cards or wallets are not popular in rural areas is quite complicated for many people. Currently, only about 30% of the Vietnamese population has a bank account, 70% of the people who do not have an account are in rural, remote, and isolated areas.

This requires the Government and the National Bank to improve the legal framework and complete monitoring mechanism in non-cash payments. For macro policies, there should be a balance between the policies that encourage the development of financial technology and the policy of the management and monitoring of modern financial services. Continuing to review and study the legal framework to acknowledge the existence and development of digital currencies is important while there should be a strict legal framework to handle transaction risks.

6. Limitation and Further Study

Although certain results have been achieved alongside supporting the hypotheses of the proposed model in the context of Vietnam, there are still some limitations are as follows:

Firstly, the sample is unevenly distributed about the gender characteristics of the surveyed subjects. Specifically, the female sex accounts for the majority (75%) while the male gender is only 23.6% and the other sex is 1.4%.

Secondly, due to time and budget constraints, the sampling technique chosen by the research team is convenient sampling, on a small scale, leading to limitations in proposing models and doing research.

Thirdly, the study has not shown how the control variables (the retailer's financial capacity, the geographical distance between the retailer and the buyer,) affect the retailer's decision to use the form of payment on receipt of the goods.

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