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# An Empirical Study of Customers' Satisfaction and Repurchase Intention on Online Shopping in Vietnam

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## Abstract

This study aims to examine the factors that affect customer satisfaction and repurchase intention of online shoppers in Vietnam. We used the anklet method to collect information by sending the online questionnaire to Vietnamese people via social media like Facebook, Zalo, and instructed participants to fill out the survey. This study collected data randomly from 597 Vietnamese individuals who have experienced online shopping. Applying both qualitative and quantitative methods, we investigated the impacts of factors (responsiveness, trust, convenience, delivery, information quality and perceived website usability) on customer satisfaction and repurchase intention. The results revealed that: (1) Information quality, delivery, convenience, and perceived website usability have the most significant impacts on customer satisfaction and intention, (2) Trust moderately affects satisfaction and repurchase intention, (3) Responsiveness has no significant influence on repurchase intention and (4) Control variables, included gender and marital status also impacted satisfaction and repurchase intention because the study found that male customers are more satisfied than female customers and single people tend to repurchase at familiar websites more than the other people. The findings suggested that six mentioned factors have different levels of impacts on customer satisfaction and repurchase intention; moreover, the demographic factors also affect satisfaction and intention to repurchase.

**Keywords:** Customer Satisfaction, Repurchase Intention, Online Shopping

**JEL Classification Code:** C12, C83, L83, Z32

## 1. Introduction

The noticeable development of technology has recently led to accelerated growth in online shopping. Evidence on e-commerce provided by the IMF shows that global retail e-commerce sales rocketed from US\$1.3 trillion in 2014 to US\$2.3 trillion in 2017 (Kinda, 2019). Besides, Asia's e-commerce retail sales surpassed the rest of the world,

accounting for 12 percent of global sales in 2016 (Kinda, 2019). Developing in line with Asia, Vietnam online shopping market has become more vibrant. The growth rate of national e-commerce was higher than 32 percent in 2019 and predicted to be over 30 percent this year (Vietnam E-Commerce Association, 2020). Vietnam E-Commerce Association (VECOM) also predicted that our e-commerce sales in 2019 will increase to more than US\$15 trillion, up 10 percent in total GDP in 2020 (Vietnam E-Commerce Association, 2020). Obviously, online shopping is becoming more important in the economy. Hence, it is crucial for companies to know how to satisfy the customers to gain market shares and improve performance.

Prior studies have revealed that customer satisfaction is critical to business performance (Anderson & Sullivan, 1993; Loveman, 1998; Reichheld & Teal, 1996) and customer loyalty leads to better firms' performance (Reichheld & Teal, 1996). Regarding satisfaction, it is directly associated with firm's financial performance (Williams & Naumann, 2011), profits (Hallowell, 1996), and decreased operating costs (Reichheld & Sasser, 1990). Satisfaction is also one of the primary marketing goals that the enterprise wants to

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achieve (Erevelles & Leavitt, 1992). Likewise, Gruca and Rego (2005) state that increasing customer satisfaction will decrease cost of capital. It means that the higher level of satisfaction would lead to better performance. Therefore, enhancing satisfaction helps organizations with higher market value. In terms of repurchase intention, it is crucial for the performance as it is one of the three forms of customer loyalty that contributes to an increase in profit by boosting revenues, decreasing costs and price sensitivity (Reichheld & Sasser, 1990). Chow and Holden (1997) also demonstrated the essential role of customer loyalty in the growth of a company.

While there are numerous studies on satisfaction and repurchase intention, not many studies identify which factors affect both satisfaction and repurchase intention. Our research aims to fill this gap by measuring the impacts of the mentioned factors (responsiveness, information quality, delivery, trust, convenience, perceived website usability) on satisfaction and repurchase intention in Vietnam's online shopping market. We find that satisfaction is affected by all six factors, especially information quality and delivery. The findings also reveal that trust is of least importance to customer satisfaction. Regarding repurchase intention, the results indicate that all factors affect retention except responsiveness. More importantly, our paper contributes to current online shopping literature by proposing implications on improving customer satisfaction and increasing the chance of the customers repurchasing goods via e-commerce channels in Vietnam.

Our paper is organized as follows. Section 2 presents a review of related studies and current theories. Section 3 develops hypotheses, proposes an empirical model and describes the collected sample and analyzes the data. The next section reports the study results, while section 6 discusses the findings of this study, makes recommendations for further research and points out some drawbacks of the research.

## 2. Literature Review

Customer satisfaction is one of the most important contributions to the success of a business. Indeed, customer satisfaction is defined as the difference between pre-shopping expectations and post-shopping performance (Duarte et al., 2018; Jun et al., 2004; Kim & Stoel, 2004; Oliver, 1980; Giao et al., 2020). Simultaneously, it appears after finishing a transaction, that is, once consumers have purchased their products (Choi et al., 2013; Duarte et al., 2018; Jun et al., 2004; Kim & Stoel, 2004; Pham, 2011). Once customers are more satisfied with the products or services, it will help companies gain market shares and profitability in the future (Anderson et al., 1994; Rust & Anthony, 1993). Likewise, Liao et al. (2017) point out that satisfaction is positively

correlated with profitability and competitive advantages. This is because the more customers are satisfied, the better outcomes the company can achieve. These outcomes help the company strengthen its reputation, develop its image, and save marketing costs (Fornell, 1992; Liao et al., 2017; Oliver, 1980).

Besides customer satisfaction, this study also tests the correlation among factors and repurchase intention. According to Copeland (1923), repurchase intention is defined as repeatedly purchasing goods or services over time. In other words, repurchase intention means the willingness to buy again at the shop where a consumer had a purchasing experience previously. Repurchase intention is important since the cost of retaining customers is much less than finding new customers; therefore, repeatedly buying behaviors of existing customers create more profit for companies (Chiu et al., 2009; Spreng et al., 1995; Zhang et al., 2011, Maharani et al., 2020). When customers are retained, they are likely to recommend the service to new buyers such as friends or relatives, which can help firms reduce the cost of finding new customers, leading an increase in profit (Pham & Ahammad, 2017; Ho et al., 2020).

In this research, we discuss customer satisfaction and repurchase intention in online shopping. As life is busier, more people tend to purchase online (Duarte et al., 2018). One of the advantages of shopping online is convenience, which allows the consumers to purchase products anytime and anywhere (Beauchamp & Ponder, 2010). Another advantage is being able to stay remote without having to go to the physical store. Thus, convenience helps us save time and transportation costs, and explains why people may prefer online shopping instead. Also, previous studies demonstrate that online convenience is the factor that promotes consumer's tendency to buy online (Jiang et al., 2013). Therefore, it is necessary to identify factors that affect satisfaction and retention in online shopping to build a suitable business strategy, contributing to a firm's success. However, most of the previous studies performed have no consensus on the factors that impact online customer satisfaction and retention.

Indeed, many authors indicate that trust (security/privacy) and information quality are the most important factors, which affect satisfaction and continuance intention (Chiu et al., 2009; Kim & Stoel, 2004; Kim et al., 2012; Liu et al., 2008; Wu, 2013). Others believe that responsiveness has a positive and very close correlation with satisfaction and repurchase intention in e-commerce (Nusair & Kandampully, 2008; Pham & Ahammad, 2017; Rita et al., 2019), whereas this idea is opposite to the findings of Liu et al. (2008). Convenience is also one of the factors that has a significant effect on satisfaction and retention (Berry et al., 2002; Duarte et al., 2018; Gupta & Kim, 2007; Pham, 2011). Furthermore, delivery and perceived website usability are

demonstrated to positively affect consumer satisfaction (Hsu et al., 2014; Khalifa & Liu, 2007; Liu et al., 2008). Though no existing papers mention the correlation between repurchase intention and delivery, we have determined that delivery is, in fact, also a factor that may impact online retention.

This research will identify the impact of six dimensions that focus on online consumer satisfaction and repurchase intention based on literature reviews. These factors are responsiveness, trust, convenience, delivery, information quality, and perceived website usability. There are some reasons why we chose these six factors to put them into the regression models. Firstly, responsiveness is regarded as a crucial factor repeatedly used in previous studies when researching online satisfaction and retention (Parasuraman et al., 2005; Pham & Ahammad, 2017; Rita et al., 2019; Tran et al., 2018;). Beside responsiveness, many previous authors mention trust (security/ privacy) in their empirical model as a necessary factor in the research field of online satisfaction and repurchase intention (Pee et al., 2018; Pham & Ahammad, 2017; Rita et al., 2019). Next, convenience is the factor that motivates retention as it helps customers save time and decline hassle (Gupta & Kim, 2007; Hsu et al., 2014). Simultaneously, convenience is one of the dimensions required in the model as it has a significant impact on satisfaction (Berry et al., 2002; Duarte et al., 2018; Pham, 2011). Finally, delivery, information quality, and

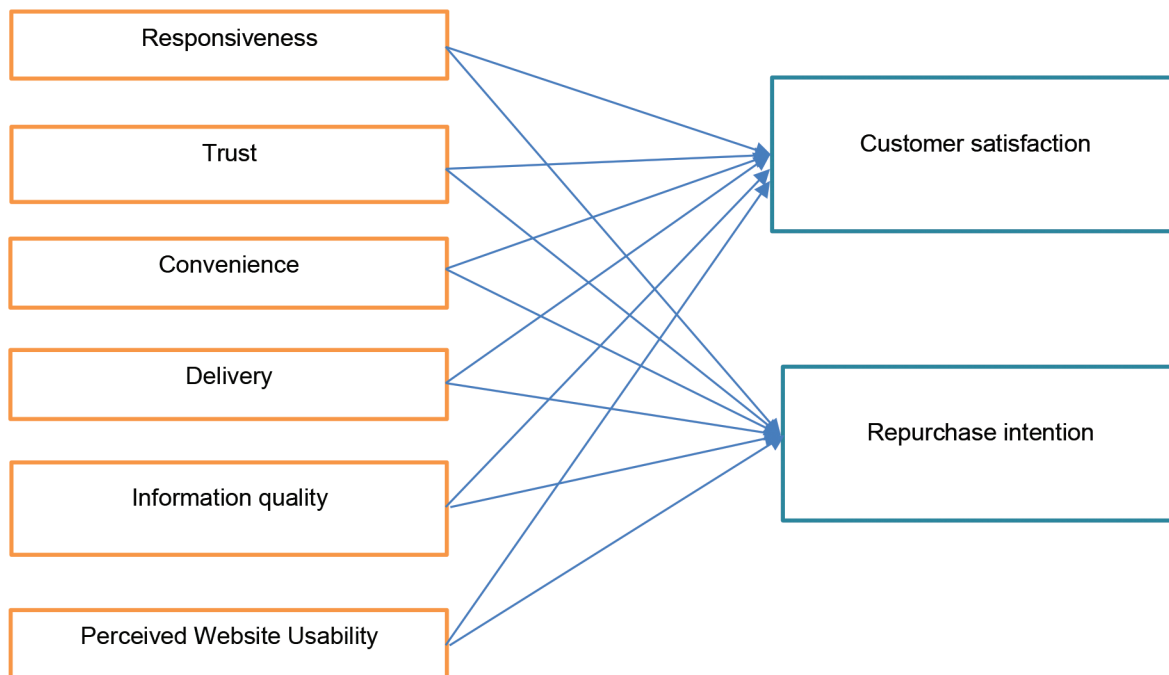
perceived website usability are referenced in several past studies that relate to customer satisfaction and continued intention (Khalifa & Liu, 2007; Lin et al., 2011; Liu et al., 2008; Zhang et al., 2011).

### 3. Methodology

#### 3.1. Hypotheses

Parasuraman et al. (2005) define responsiveness as “the effective ability to handle problems and returns through the website”. Nurdani and Sandhyaduhita (2016) found that responsiveness is one dimension of the express delivery service quality that is associated with online buyers’ satisfaction, which positively impacts the repurchase intention. In a similar vein, Pham and Ahammad (2017) examined the link between responsiveness and satisfaction of online shoppers in the UK, then they concluded that this is one of the three factors in post-purchase stage that affects satisfaction. Moreover, post-purchase experience is posit to have a positive impact on customers’ intention in the future (Kotler, 1997a; Kotler, 1997b). Existing research has also further found the link between responsiveness and retention (Pappas et al., 2014; Rose et al., 2012).

**H1:** *Responsiveness is positively correlated with customer satisfaction (repurchase intention).*



**Figure 1:** The determinants of customer satisfaction and repurchase intention

Trust is described as the belief that the trustors' expectations will be fulfilled and its vulnerabilities will be not exploited by trustee (Pavlou & Fygenson, 2006). Chiu et al. (2009), Kim and Stoel (2004), and Kim et al. (2012) have the same idea of the direct effect of trust on satisfaction. Pappas et al. (2014) also agree with the hypothesis when they find that trust is the second most important driver for the satisfaction of Greek online shoppers by applying structural equation modelling (SEM) and multi-group analysis. There is also evidence of the relationship between trust and customer loyalty (Jarvenpaa et al., 2000; Rose et al., 2012). More importantly, some authors further found that trust is an important factor for customer loyalty (Jarvenpaa et al., 2000; Rose et al., 2012).

**H2:** Trust is positively correlated with customer satisfaction (repurchase intention).

Convenience includes the amount of time and effort needed to buy a product (Copeland, 1923). It is found to have a positive effect on customer purchasing in Hong Kong (Jiang et al., 2013). In a similar vein, previous studies have found that convenience is of great importance to customer satisfaction (Duarte et al., 2018; Koo et al., 2008; Pham et al., 2018). In the research conducted by Jiang et al. (2013), it is indicated that three dimensions of convenience (search, transaction, possession/post purchase convenience) directly affect the behavioral intentions of customers in Hongkong. Moreover, Mpinganjira (2015) provides evidence on the impact of service convenience and future intentions, stating that customers will intend to shop more if they are pleased by e-vendors.

**H3:** Convenience is positively correlated with customer satisfaction (repurchase intention).

Sharma et al. (1999) stated that delivery is “the activity of providing the promised goods and services on time to the customer”. Existing studies found that delivery is important to customer satisfaction (Hsu et al., 2014; Khalifa & Liu, 2007; Liu et al., 2008) as these studies agree that delivery positively affects satisfaction. Having the same viewpoint with those authors, Liu et al. (2008) found that the influence of delivery on customer satisfaction is in positive direction after examining the link between delivery and satisfaction. Previous research also supports the view that satisfaction strongly influences retention (Duarte et al., 2018; Khalifa & Liu, 2007) and stated that customers will return to purchase from the same e-vendors if they are more satisfied.

**H4:** Delivery is positively correlated with customer satisfaction (repurchase intention).

Nusair and Kandampully (2008) suggested that information quality includes “the amount, accuracy, and the form of information about the products and services offered on a website”. Previous studies indicate that information quality strongly links to satisfaction (Kim & Stoel, 2004; Nusair & Kandampully, 2008). Likewise, DeLone and McLean (2003) state that higher information quality will lead to a higher level of satisfaction. Besides, satisfaction is found to stimulate retention of consumers (Tran et al., 2018). Similarly, information quality is indicated to be vital to satisfaction; however, it is less important to satisfaction than other variables (product quality, delivery quality and system quality) (Lin et al., 2011).

**H5:** Information is positively correlated with customer satisfaction (repurchase intention).

Casaló et al. (2008) describe perceived website usability as “the effort needed to use a computer system”. Flavián et al., (2006) state that perceived website usability is vital to shopping behaviors and associated with higher level of satisfaction after using the WAMMI scale. In this research, it is also indicated that usability positively affects customer loyalty and this correlation is moderated by trust and satisfaction. It seems that there are relationships between website usability, satisfaction and customer loyalty. More importantly, previous research examined the determinants of website usability and then found out that website usability is one of the most important factors of website quality (Ranganathan & Ganapathy, 2002). Previous studies has also found that usability is positively correlated with customer loyalty (Cyr, 2008).

**H6:** Perceived website usability is positively correlated with customer satisfaction (repurchase intention).

### 3.2. Empirical Models

Previous researches used quantitative method with regression models to identify the factors impact on online customer satisfaction (Duarte et al., 2018; Lin et al., 2011; Pham & Ahammad, 2017) and repurchase intention (Hsu et al., 2014; Kim et al., 2012; Zhang et al., 2011). In this paper, we have also build two regression models with two dependent variables to test the relationship between six factors and satisfaction and repurchase retention as follow:

$$\text{Model 1: SAT} = \alpha_1 + \beta_1 * \text{RES} + \beta_2 * \text{TRU} + \beta_3 * \text{CON} + \beta_4 * \text{DEL} + \beta_5 * \text{IQ} + \beta_6 * \text{PWU} + \mu_1$$

$$\text{Model 2: REP} = \alpha_2 + \gamma_1 * \text{RES} + \gamma_2 * \text{TRU} + \gamma_3 * \text{CON} + \gamma_4 * \text{DEL} + \gamma_5 * \text{IQ} + \gamma_6 * \text{PWU} + \mu_2$$

Where:  $\alpha_1, \beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6, \alpha_2, \gamma_1, \gamma_2, \gamma_3, \gamma_4, \gamma_5, \gamma_6$  are coefficients

$\mu_1, \mu_2$  are errors

SAT: Customer satisfaction, REP: Repurchase intention, RES: Responsiveness, TRU: Trust, CON: Convenience, DEL: Delivery, IQ: Information quality, PWU: Perceived Website Usability.

### 3.3. Data Collection and Research Method

Primary data has been used in this study. To collect data, we used a survey method through a questionnaire. The objects of this survey are the Vietnamese inhabitants who have made online purchases at least once. About the questionnaire content, we divided it into two parts. The first part is about personality information (gender, age, education level, marital status, and online shopping frequency). However, the second part is about factors that affect online buying satisfaction and repurchase intention. Simultaneously, we used a 5-point Likert scale for those questions in this part, with one denoting completely disagree and five denoting completely agree.

After the questionnaire is finished, we used the anklet method to collect information by sending the online questionnaire randomly to Vietnamese people via social media like Facebook, Zalo, and instructed participants to fill out the survey. As a result, 652 people completed this survey in 3 weeks. Next, the semi-structured interview is implemented through Zoom with five random people who participated in our survey. The purpose of the interviews is to find a deeper explanation for customers' choices in the survey and their perceptions toward online buying in Vietnam.

After entering the data from Google form into Excel, we started processing and analyzing data. Firstly, we translated the data from Vietnamese into English. Subsequently, we imported the data into softwares like RStudio and SPSS, which we used to analyze data. Next step, the software RStudio version 4.0.2 is adopted to filter and remove samples that are not valid. Those unusable samples include the questionnaires that have only one answer for all the individual questions. If those samples were not deleted, it would not ensure the reliability of the study. This is because selecting only one answer in the survey reflects that the respondents may read the questions cursorily.

**Table 1:** List of dependent and independent variables of the regression model

Variable	Meaning	Determined by	Role	Model
SAT	Satisfaction	Overall satisfaction	Dependent variable	SAT
REP	Repurchase intention	Overall repurchase intention	Dependent variable	REP
RES	Responsiveness	Quick response question	Independent variable	RES1
		Promptly support problem	Independent variable	RES2
		Return/Repay policy	Independent variable	RES3
TRU	Trust	Payment System Security	Independent variable	TRU1
		Information privacy	Independent variable	TRU2
		Third-party trust	Independent variable	TRU3
CON	Convenience	Accessibility	Independent variable	CON1
		Ease of search	Independent variable	CON2
		Payment methods	Independent variable	CON3
DEL	Delivery	Receive right package	Independent variable	DEL1
		Speed of delivery	Independent variable	DEL2
		Intactness of products	Independent variable	DEL3
IQ	Information quality	Accuracy	Independent variable	IQ1
		Completeness	Independent variable	IQ2
		Understandability	Independent variable	IQ3
		Timeliness	Independent variable	IQ4
PWU	Perceived website usability	Clear website design	Independent variable	PWU1
		Initial ease of use	Independent variable	PWU2
		Speed of search	Independent variable	PWU3
		Control	Independent variable	PWU4
		Ease of navigation	Independent variable	PWU5

Consequently, 55 samples are deleted from data, and the final sample size remains 597 valid responses. And finally, the software SPSS version 22 is used to test Cronbach’s alpha which reflects the reliability of the measurement indicators. Simultaneously, analyzing data by the software SPSS to test correlation and regression in the empirical model.

In summary, out of 597 respondents, there are 501 females in proportion 83.92 percent; the remaining 16.08 percent is male. The number of female respondents is larger than the number of surveyed men by 405, equivalent to 67.84 percent of the total voters. For marital status, most respondents are single, and make up 94.47 percent. However, only 29 people are married, constituting a small proportion of 4.85 percent. The other groups account for a total of an insignificant proportion, which is only 0.68 percent. Most survey respondents are single. Concerning education level, there are 507 undergraduates, making up a large proportion, 84.93 percent of survey’s total participants. However, the number of postgraduates is only 27 (4.52%), accounting for half of the “high school or below” group’s quantity.

## 4. Results

### 4.1. Descriptive Analysis

Figure 2 shows a comparison of the average values of six factors between males and females. The figure indicates that females have a higher degree of responsiveness and trust than males while males have higher figures for the other indicators than their counterparts. Concerning responsiveness, it is accounted for approximately 3.37 for females, which is slightly higher than the figure for males by 0.07. Similarly, the average point of females makes up 4.11 compared to that of males (4.04). Concerning information quality and website usability, females have lower points of information quality and website usability than males. For information quality, it scores at 3.58 for females, which is lower than the figure for males by 0.04. Likewise, website usability is ranked at 3.80

for females, which is lower than males by 0.07. Strikingly, both convenience and delivery are scored at 3.75 for males and 3.73 for females. Obviously, each gender has the same evaluation of convenience and delivery; moreover, females have a higher degree of convenience and delivery than their counterparts by 0.02.

Figure 3 provides data on factors affecting satisfaction and repurchase intention among different academic levels. Overall, the effects of mentioned dimensions vary between academic levels. In the criterion of education levels, the “after university” has the highest figure of responsiveness (3.43), and the “university” with the lowest level of 3.35. Similarly, convenience amounts to 3.85 for the “after university” group, which is higher than “high school or lower” group and “university” group by 0.07 and 0.13 respectively. On the contrary, “after university” ranked at 3.90 in terms of trust, showing slightly lower points than the “university” group, which scores at 4.11. Turning to information quality and perceived website usability, the “high school or below” leads the other groups with a score of 3.65 and 3.90 respectively. As regards trust, the “after university” group has the lowest points of 3.90 as against the highest point of responsiveness. Interestingly, there are no differences between convenience and delivery levels as each group has the same points of these indicators.

Moreover, the levels of satisfaction and repurchase intention vary with customers’ gender. The surveyed women are less satisfied than surveyed men; however, they repurchase more than their counterparts. For satisfaction, surveyed women and men have a level of nearly 3.70 and 3.84 correspondingly. Concerning retention, it is ranked at 3.87 for females, which is higher than males by nearly 0.03. Interestingly, surveyed women ranked their satisfaction higher than their retention although the gap between females’ satisfaction and retention is insignificant (only 0.17). Besides, males’ satisfaction is ranked at the same level as males’ intention to repurchase (3.84). In other words, when a male is satisfied, he is more likely to make a repurchase.

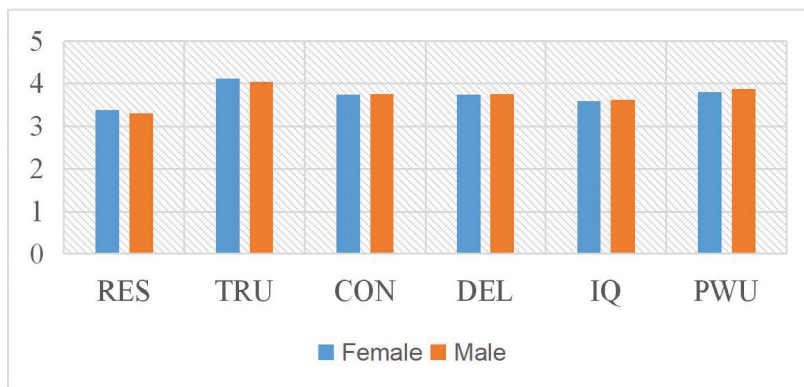
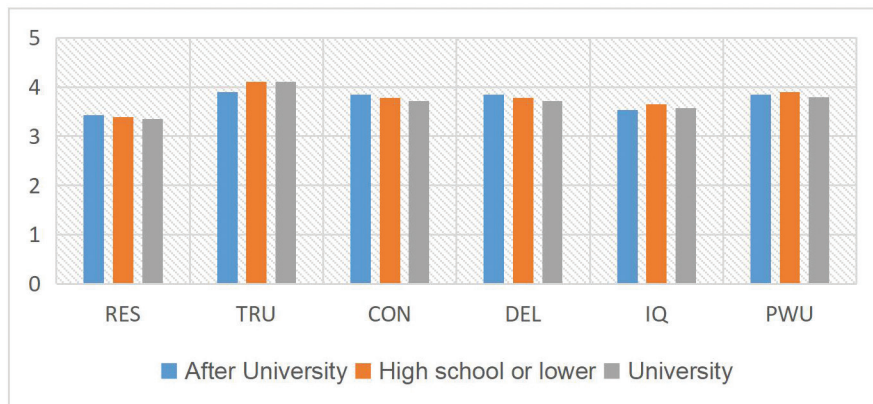


Figure 2: A comparison of factors influencing customer satisfaction and repurchase intention between two genders



**Figure 3:** A comparison of factors influencing customer satisfaction and repurchase intention among academic levels

## 4.2. Cronbach Alpha And EFA

**Cronbach's alpha:** The test results show that Cronbach Alpha coefficients are higher than 0.7, indicating that the scale has the high degree of reliability. Besides, all these coefficients are lower than 0.95, which means that there are no variables that overlap on the scale (Nunnally, 1978). **Exploratory Factor Analysis EFA:** The results of the analysis of EFA indicate that there are five factors extracted at Eigenvalue: 1.022. Whether the model uses the fifth factor, the Eigenvalue is 0.735, which is lower than 1. Basing on the criteria of one or more, we stop at the fifth factor. Moreover, the total variance extracted has a value of 62.586 that is higher than 50%. It shows that those five factors explain the variability of the observations. From the Rotation Matrix results, variable IQ4 is excluded from the model because it loads in component 1 and component 2. This violates the distinction in the rotation matrix. Moreover, the load factor in component 1 and component 2 are 0.599 and 0.356, respectively, and the difference between these load factors is 0.234, less than 0.3.

## 4.3. Pearson Correlation Analysis

The correlation among independent variables is based on SPSS's result. Obviously, all the Sig values are less than 0.05, and it means that independent variables correlate with each other. Although Pearson Correlation values are different, they are generally quite high, and most of them are more than 0.4. Remarkably, the correlation between ID and other independent variables is relatively strong since the Pearson Correlation between ID and CON, PWU, TRU, RES is 0.568; 0.666; 0.494, and 0.592, respectively. Likewise, PWU with CON, TRU, RES, and TRU with RES also closely correlate. It is a lower level of correlation between CON and TRU, RES with 0.353 and 0.368. Therefore, the chances for the multi-collinear phenomenon

to happen among these five independent variables is high, especially between PWU and ID, CON. However, this is only the prediction that we still do not know exactly whether this phenomenon arises or not; moreover, we can see that all the independent variables are positively correlated with each other.

## 4.4. Regression Analysis

### 4.4.1. The SAT Model

The regression analysis of the correlation between six factors and customer satisfaction is presented in table 2. The SAT model's R-squared is 0.501297, indicating that the changes in customer satisfaction can be explained by 50.1297 % of the changes of six independent variables. With the confidence level of 95%, it can be said that ID, TRU, CON, PWU, GENDER, and FREQUENCY are all statistically significant. By contrast, because the P-value of responsiveness (RES) is 0.0648, which is higher than 0.05, RES is not statistically significant at the confidence level of 95% but statistically significant at 90%. They remaining factors comprising EDU, AGE, SINGLE, DIVORCED, and MARRIED, they are not statistically significant in the regression model since their P-values are larger than 0.1. It means that educational level, age, and marital situation is not correlated with customer satisfaction.

More specifically, for those variables that are significantly correlated with online customer satisfaction, they account for a significant positivity. This result is not only like what is expected in the hypotheses but also is confirmed by a number of previous studies such as Duarte et al. (2018); Hsu et al. (2014); Kim and Stoel (2004); Nusair and Kandampully (2008). Particularly, information and delivery quality (ID) has the most significant impact on online customer satisfaction with a coefficient of 0.334211.

**Table 2:** Regression in the SAT model

<b>Dependent Variable: SAT</b>				
<b>Method: Least Squares</b>				
<b>Sample: 1 597</b>				
<b>Included observations: 597</b>				
<b>Variable</b>	<b>Coefficient</b>	<b>Std. Error</b>	<b>t-Statistic</b>	<b>Prob.</b>
RES	0.069381	0.037504	1.849960	0.0648
ID	0.334211	0.051571	6.480640	0.0000
TRU	0.064512	0.027566	2.340254	0.0196
CON	0.245171	0.040029	6.124878	0.0000
PWU	0.212084	0.051265	4.137001	0.0000
GENDER	0.155143	0.063283	2.451585	0.0145
EDU	-0.045890	0.068059	-0.674264	0.5004
AGE	-0.003007	0.008615	-0.349052	0.7272
SINGLE	0.090563	0.197796	0.457859	0.6472
DIVORCED	-0.062998	0.479224	-0.131458	0.8955
MARRIED	-0.094315	0.267928	-0.352015	0.7250
FREQUENCY	0.105227	0.028044	3.752185	0.0002
R-squared	0.501297	Mean dependent var		3.726968
Adjusted R-squared	0.491920	S.D. dependent var		0.784172
SE of regression	0.558956	Akaike info criterion		1.694403
Sum squared resid	182.7725	Schwarz criterion		1.782683
Log-likelihood	-493.7793	Durbin-Watson stat		1.904139

The more quickly the delivery process can take, the more satisfied the customers can be. Besides information and delivery quality (ID), convenience (CON) also plays a crucial role in increasing online customer satisfaction with a coefficient of 0.245171. This result contrasts with the findings of the research conducted by Shin et al. (2013), whereas it is the same as that of most other studies such as Duarte et al. (2018); Berry et al. (2002). On the other hand, trust has the lowest impact level on customer satisfaction because the coefficient is only 0.064512. Furthermore, it is remarkable that the gender variable’s coefficient is 0.155143, implying that male customers are more satisfied than the female customers. In conclusion, to increase online customer satisfaction, online shops need to improve ID, CON, PWU, TRU, and RES.

In this study, besides using the quantitative method to analyze the relationship between customer satisfaction and its drivers, we also look for authenticity in some qualitative data gathered during five interviews with five randomly chosen participants. The interviewees stated that customers are more interested in online buying because they can save a lot more time than traditional buying. Furthermore,

online shopping is also easy for customers to compare the prices among providers and access the feedback of previous consumers on the websites, as Trong and Khanh mentioned. From the interview, we can see that trust has a less significant effect on customer satisfaction. More specifically, this can be explained that most interviewees answered that they use the cash payment method when shopping online to avoid risks such as: leaking out privacy and credit card information, receiving the wrong products, or not even receiving anything.

Other interviewees who use the non-cash payment method via credit card indicated that the websites where they buy products are so prestigious. For example, “This is the prestigious website in Vietnam and its security and privacy policies are good. The voice of virtual community in Vietnam is stronger and stronger, if Shopee shares customer information or credit card information to the third party, Shopee won’t hold the biggest market share in electric commercial until now and it will be ostracized immediately.”, Trang said. Therefore, the website’s information security and privacy policy are excellent, which is why risks are impossible.



**Table 3:** Regression in the REP model

<b>Dependent Variable: REP</b>				
<b>Method: Least Squares</b>				
<b>Sample: 1 597</b>				
<b>Included observations: 597</b>				
<b>Variable</b>	<b>Coefficient</b>	<b>Std. Error</b>	<b>t-Statistic</b>	<b>Prob.</b>
RES	0.051236	0.038791	1.320841	0.1871
ID	0.162557	0.053340	3.047571	0.0024
TRU	0.083270	0.028512	2.920518	0.0036
CON	0.299900	0.041402	7.243635	0.0000
PWU	0.198477	0.053024	3.743166	0.0002
GENDER	0.003012	0.065453	0.046022	0.9633
EDU	0.052310	0.070393	0.743117	0.4577
AGE	-0.004986	0.008911	-0.559520	0.5760
SINGLE	0.487302	0.204581	2.381952	0.0175
DIVORCED	0.283247	0.495662	0.571452	0.5679
MARRIED	0.435974	0.277119	1.573240	0.1162
FREQUENCY	0.127930	0.029006	4.410449	0.0000
R-squared	0.406679	Mean dependent var		3.867672
Adjusted R-squared	0.395522	S.D. dependent var		0.743592
SE of regression	0.578129	Akaike info criterion		1.761858
Sum squared resid	195.5267	Schwarz criterion		1.850138
Log-likelihood	-513.9146	Durbin-Watson stat		2.041676

Besides, we identify that males are more satisfied than females through the interview since the female often purchases cosmetic and clothes, and they are stricter and more careful in choosing products than males. Trang said that she had ever bought a lipstick on Facebook, it had made her lips dry and allergic. Even though the website provides the product's information completely, those products depend much on women's skin types. While males often buy technology products, they just focus on the product's features and quality. Males are willing to accept the product with a different form as a different color, compared to what they ordered. "Sometimes, I choose the color of my goods. But somehow they arranged the incorrect color and sent it to me. But it's ok. For me, the most important comes from the quality", Duc said. Additionally, the other reason is that the females are less patient than the males. In case the response or delivery time of online retailers exceed a female's allowed time, these female customers are more likely to buy from another shop. In contrast, male customers are willing to wait until receiving products.

#### 4.4.2. The REP Model

Like the SAT model's analysis result, table 3 below highlights the correlation between six factors and the repurchase intention. The REP model's R-squared is 0.406679, indicating that the changes in retention can be explained by 40.6679 % of the changes of six independent variables. With the confidence level of 95%, it can be said that ID, TRU, CON, PWU, SINGLE, and FREQUENCY are all statistically significant since P values are less than 0.05. The remaining factors comprising RES, GENDER, EDU, AGE, DIVORCED, and MARRIED, they are not statistically significant at the confidence level of both 90%, and 95% since their P-values are all larger than 0.1. It means that responsiveness, gender, education level, age, and marital status do not impact repurchase intention.

Especially, for those statistically significant variables in the REP model have a positive correlation with retention. This result is not only similar to what is expected in the hypotheses but is also confirmed by many previous studies

such as Gupta and Kim (2007); Hsu et al. (2014). According to the SAT model, ID has the highest impact on the dependent variable. However, according to the REP model, ID has only the fourth-highest impact on retention. By contrast, SINGLE, whose coefficient is 0.487302, is the factor that has the highest impact on retention, whereas this factor is not statistically significant in the SAT model. With coefficients of 0.2999 and 0.198477, CON and PWU are the second and third most significant factors that affect retention, respectively. Like the SAT model, trust is a statistically significant factor and has the lowest impact on the dependent variable, with a coefficient of 0.08327. However, several previous studies demonstrate that trust strongly correlates with retention (Chiu et al., 2009; Rita et al., 2019). In conclusion, to raise repurchase intention, online shops should improve ID, CON, PWU, and TRU. Moreover, online shops should focus on a single customer group because the REP model's result shows that single people have retention more than others.

Through the interview, four out of five interviewees believed that responsiveness does not affect their retention. These people explained that they only use prestige and reputation websites in which the product information is provided accurately and completely. Thus, consumers rarely have questions or problems in the purchase process. For example, when asked about how responsiveness affects repurchase intention, Trang answered that "Shopee which I am using is a prestigious website, staffs work professionally and answer promptly. Moreover, I rarely have questions or complain about products because the product information appears on the website completely with feedbacks from previous customers.". Besides, all of the interviewees agreed that being single impacts significantly affects repurchase intention. This can be explained as single people having different spending habits from those that are in a relationship. As commodities are bought just for themselves, single people are more likely to remain loyal to one shop out of laziness.

In comparison, those who shop for their families are more likely to purchase from various shops. People tend to buy at many shops because different members comprising the family unit may have individual needs and preferences. Furthermore, trust has less effect on retention, which is similar to what is explained in the SAT model.

## 5. Conclusions

In conclusion, we investigate the effects of six mentioned factors on customer satisfaction and repurchase intention. We find that all factors mentioned in Hypotheses are positively correlated with customer satisfaction. In more detail, information quality and delivery have the strongest impacts on satisfaction. Besides, responsiveness is found to have the least effect on satisfaction. Just as responsiveness, both frequency of online shopping and gender moderate

satisfaction. To be specific, the more people shop online, the more they are satisfied. Also, females tend to be less satisfied than males. For repurchase intention, except responsiveness, all factors positively influences satisfaction. More importantly, single is positively associated with retention. It means that single customers repurchase more than the other types of customers.

From the results of this study, we advise firms trading in online commodities to increase their customer satisfaction levels. Firstly, these firms should ensure the accuracy, understandability, completeness, and timeliness of the product information. Secondly, e-vendors should cooperate with prestigious delivery companies. This co-operation will be based on an agreement that delivery companies must be responsible for shipping the correct ordered product, on time, and safely packaged from online trading firms to customers. Thirdly, the payment methods should be expanded to include the cash payment method and the non-cash payment methods such as credit cards and mobile payments. Although the study results indicate that trust has less effect on satisfaction, consumers will be more satisfied if firms combine the diversification of payment methods with the security policy of consumer's private information. Finally, it is necessary to design a user-friendly website where customers can search for the product information or move to other pages easily.

Therefore, further studies will collect many observations to guarantee the representativeness of the sample. Besides, researchers should expand the sample and measure the effects of more independent variables on customer satisfaction and repurchase intention, such as price and promotion. Finally, the qualitative method should be implemented more in further research to explore customer satisfaction and retention.

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