

Online Shopping Intention: Research on the Period of the Third Covid-19 Outbreak in Vietnam

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Abstract: The purpose of the study is to explore the factors affecting online shopping intention during the 3rd outbreak in Vietnam. With data collected from 200 consumers who have purchased online, using SEM Structural Equation Modeling analysis method. Research results show that there are four relations that have a positive impact on online shopping intention, namely Perceived Usefulness, Attractiveness of the Website, Perceived Ease of Use and Security. With the data survey conducted during the third covid-19 outbreak, the study theoretically fills a research gap on consumers' online shopping intention, at the same time, the results of the study also contribute academically as a measuring scale with the adjustment of 6 observed variables in the situation of the third Covid-19 pandemic in Vietnam. In addition, the study contributes in terms of practice, which is a management implication to support retail enterprises to realize the importance of the above factors in order to have an appropriate business strategy in the business environment of Vietnam.

Key words: Covid-19, Online Shopping, Intention.

JEL Codes: L81, E 21, M31

I. Introduction

According to the Vietnam E-Commerce Association, in the past 2020, Vietnam's e-commerce reached approximately \$13.2 billion in scale, with a growth rate of about 15% and it is estimated that it will continue to grow sustainably in this 2021, as well as the upcoming 2021 – 2025 period. This shows that B2C (Business to Customer) e-commerce in Vietnam has become a popular shopping channel and a new development trend in consumer shopping (Ho Trong Nghia, 2018). Besides, Vietnam's retail market is currently ranked 6th out of 30 countries with potential and attractiveness for investment in the global retail sector. Vietnam is also in the group of 20 countries with the highest number of internet users in the world with more than 68 million users, is evaluated as a country with a very good Internet – Telecommunications infrastructure for digital transformation (Huong Loan, 2020 & Van Trinh, 2021).

Digital transformation has also rapidly changed the way consumers participate in purchases from in-person to online shopping, especially this change is very evident and has grown rapidly during the Covid-19 pandemic is still complicated and we don't know when it will end. However, the Covid-19 pandemic has changed daily life habits, including consumer trends, which is an extremely reasonable catalyst for the online shopping environment to explode, opening up opportunities for online businesses. The risks from the Covid-19 pandemic have created an extremely reasonable, random, even compulsive reason for consumers to come to online commerce.

According to information from the Website of the Ministry of Health, Vietnam has been experiencing 4 outbreaks of Covid-19, the first time from 23/1/2020, the second from 25/7/2020, the third from 28/1/2021 and the most serious is the fourth pandemic from 27/4/2021 so far, which is still very complicated. In which, the third period starts from 28/1/2021, some areas with complicated pandemics during this period are considered to return to the "new normal" from 15/4/2021 and until 26/4, the whole country recorded a total of 1.570 Covid-19 infections due to domestic transmission (Ministry of Health, 2021). Compared to the world, the situation of the third Covid-19 pandemic in Vietnam is still low level, but the characteristic of this third period is the risk of community transmission and failure to trace F0 (Le Hiep, 2021), causing concern about psychological insecurity for people when dealing with the outside society. Especially foods and necessities to meet the essential needs of life at this time, there has been a strong change from traditional transaction to online transaction due to fear of contagion in the community and losing track of F0. Starting from the above fact, the authors choose to research the factors affecting the online shopping intention of consumers during the period of the 3rd outbreak of the Covid-19 pandemic in Vietnam, then giving management implication for retail enterprises that can determine the appropriate strategy for the journey to catch up with the panorama of the 4.0 revolution that is taking place on a global scale, in the immediate future is to develop and stand firm in the Covid-19 pandemic that has not been known when to end.

II. Literature review and research model

Background theory

On the basis of research is consumers' online shopping intention, Theory of Planned Behavior (TPB) and the Technology Acceptance Model (TAM) have been experimentally verified in many studies used as the background theory for this study.

Intention is considered to include motivational factors that influence an individual's behavior, these factors indicate the level of readiness with which the individual will perform the behavior (Ajzen, 1991).

Theory of Planned Behavior TPB (Ajzen, 1991) is an improvement and development of Theory of Reasoned Action (TRA). The Theory of Reasoned Action, developed by Ajzen & Fishbein in 1975, is considered a pioneer theory in social psychology research, this theory shows that people's actual actions are determined by the intention to perform that behavior. The relations between intention and behavior has been tested in many studies in different fields (Ajzen, 1991). The two main factors in the Theory of Reasoned Action (TRA) that influence intention are the Attitude toward Behavior and the Subjective Norms, in which the Attitude toward Behavior is measured by belief and evaluation with the results of performing that behavior (Ajzen & Fishbein, 1975) and Subjective Norms is the perception of involved people who will think that individual should perform or not perform the behavior (Ajzen, 1991). The birth of the Theory of Planned Behavior (TPB) when Ajzen (1991) added a third factor, Ajzen (1991) suggested that the third factor that affects people's intention is Perceived Behavioral Control, Perceived Behavioral Control reflects the ease or difficulty of performing the behavior and whether the performance of that behavior is controlled or restricted.

The emergence of online shopping is considered a new type of technology-based purchasing service in Vietnam and one of the useful theories for explaining the intention to accept a new information system containing the technology factor is the Technology Acceptance Model (TAM) developed by Davis (1985) based on the Theory of Reasoned Action (TRA). The TAM model successfully predicted about 40% of the use of a new system (Paul et al., 2003). According to TAM theory, there are two factors, Perceived Usefulness and Perceived Ease of Use, that affect people's intention to use. In which the Perceived Usefulness factor is the level to which the individual believes that using a particular, new system will improve results compared to the previous system, the Perceived Ease of Use factor is the level to which an individual who believes that using a particular, new system should be effortless.

The relations between research concepts

In Vietnam, according to Decree No. 52/2013/ND-CP dated 16/5/2013, e-commerce activities are the conduct of a part or the whole process of commercial activities by electronic means connected to the Internet, mobile telecommunications networks or other open networks. Thus, it can be understood that e-commerce is a form of online business that uses an information technology platform with the support of the Internet to carry out online purchase, sale and payment transactions. Research by Pavlou & Fygenson (2006) shows that the motivation for consumers to buy online includes Perceived Usefulness of online shopping, Attractiveness of the Website, Perceived Ease of Use and Security. Research by Comegys et al., (2009) suggests that Perceived Risk is factor that prevents consumers from online shopping.

Online Shopping Intention: According to the Wikipedia dictionary, online shopping is the process of purchasing a product or service over the Internet. Before consumers make a purchase decision, the purchase intention has been formed after having information about the product or service to buy, the purchase intention has an important influence on the consumer's purchase decision (Nguyen Quang Thu & Luu Thi Kim Tuyen, 2018). In this study, the authors support the view of Delofrooz et al., (2011), which defines online shopping intention as the certainty of a consumer's decision to purchase over the Internet.

Perceived Usefulness of online shopping: The comfort and enjoyment of online shopping comes from new experiences under the influence of technology factors, especially information technology and the Internet, which have changed the current rules of the business world (Bui Thanh Trang & Ho Xuan Tien, 2019). Traditional shopping often faces many difficulties (Javadi et al., 2012), online shopping helps to reduce the daily difficulties encountered by traditional shopping such as increasing convenience, saving costs, reducing the risk of traffic accident, protecting the environment, safety and reducing traffic jam, saving time for traffic congestion in big cities, especially Ho Chi Minh City, being tired of waiting for parking at big malls. Using online shopping will easily compare prices between items of the same type, be convenience and low cost, saving for consumers (Pavlou & Fygenson, 2006). In addition, the risk, danger, complexity and spread of the Covid-19 pandemic is still happening without knowing the end time, unintentionally making consumers aware of the benefits of online shopping. On that basis, hypothesis H₁ is stated as follows:

H₁: Perceived usefulness of online shopping has a positive impact on consumers' online shopping intention.

Attractiveness of the Website: E-commerce prominence, personal feelings about transparency of online products have a significant positive influence on online shopping intention (Wirtz et al., 2013; Sauro, 2013). The interface of the Website is friendly to mobile devices, desktop computers, easy to integrate with third-party applications such as Facebook, easy to track orders at any time, customers can actively control orders, can cancel or change orders within a permissible period of time, showing respect to customers when making transactions through Website. Besides, during the Covid-19 pandemic, the demand for essential goods tends to increase dramatically, the design of these items is rich, aesthetic, and makes a good impression for consumers, they will tend to decide to buy those Websites more. On that basis, hypothesis H₂ is stated as follows:

H₂: Attractiveness of the Website has a positive impact on consumers' online shopping intention.

Perceived Ease of Use: The main factor motivating customers to choose an online shopping channel is to maximize convenience with minimal physical and mental effort required to complete a shopping task (Hansen, 2006; Pavlou & Fygenson, 2006). Many studies also conclude that in the period of technology discovery and use, the behavior of learning about and using an information technology component directly affects online shopping intention (Venkatesh et al., 2003). The psychology of shopping experience motivates consumers to decide to make online shopping behavior instead of going to stores or shopping centers in the traditional way. On that basis, hypothesis H₃ is stated as follows:

H₃: Perceived ease of use of the Website has a positive impact on consumers' online shopping intention.

Perceived Risk: Perceived Risk is closely related to the characteristics of e-commerce compared with traditional commerce, customers may perceive uncertainty about possible consequences (Forsythe et al., 2006; Nguyen Thu Ha, 2019). Due to the characteristics of online transactions, buyers do not see the real image of the product and do not directly interact with the sales staff, so in the factors affecting the consumers' online shopping intention, perceived risk is considered an important factor (Pavlou, 2003). Online shoppers often have fear of losing money, not getting delivery, even having delivery but delivery is not as shown on the Website (Chen et al., 2010). According to a study by the Organization for Economic Cooperation and Development (OECD), up to 61% of consumers are influenced by social media when making purchase decisions. They draw inspiration from social media or refer to the positive reviews on it, but many of those positive reviews are often fake or intentionally arranged by the supplier. Therefore, shopping has never been so convenient since the appearance of online shopping, but also because of such convenience, shopping has never been so risky, the problem of taking advantage of social media to swindle is increasing and sophisticated as it is today. On that basis, hypothesis H₄ is stated as follows:

H₄: Perceived risk when shopping online has a negative impact on consumers' online shopping intention.

Security: Online interactions involve uncertainty and dependence, especially the risk of losing personal information, so perceived safety as an important factor (Chen et al., 2010; Lee & Huddleston, 2010). In the context that personal information is stolen and sold on the Internet is increasingly complex, but the law to handle these violations is still not strict, even lack of attention, so this type of crime appears more and more. Besides, the situation of stealing personal information and bank account to appropriate consumers' money has happened a lot in the past and present. On that basis, hypothesis H₅ is stated as follows:

H₅: Security when shopping online has a positive impact on consumers' online shopping intention.

On the basis of research hypotheses, the research model of online shopping intention is shown as follows:

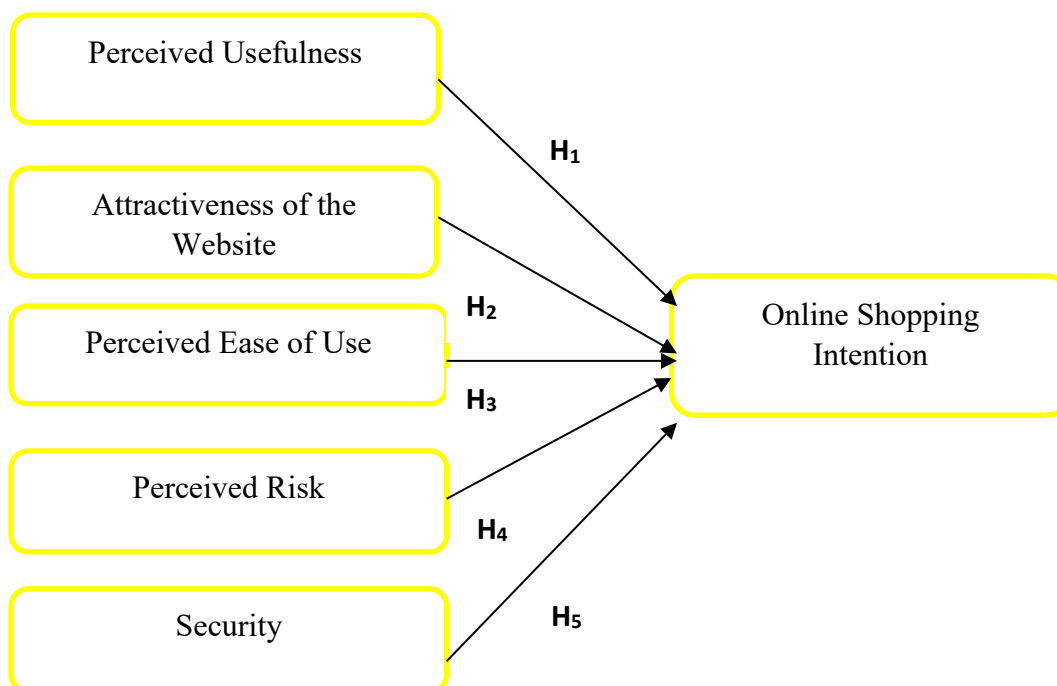


Figure 2.1: Proposed research model

III. Research methods

The mixed research methods used, including quantitative research combined with qualitative research, consists of three steps: qualitative preliminary, quantitative preliminary and official quantitative.

Preliminary research: including qualitative preliminary research exploring the factors affecting online shopping intention in Vietnam, qualitative preliminary research adjusting the scale from available scales of previous studies and quantitative preliminary research to build survey questionnaires for official research.

For a qualitative preliminary research exploring factors, 7 questions discussion board with factors of online shopping Intention, Perceived Usefulness of online shopping, Attractiveness of the Website, Perceived Ease of Use, Security and Perceived Risk when shopping online to discuss with 6 experts with in-depth research on e-commerce.

For the qualitative preliminary research on adjusting the scale from the available scales, the author actively took out 28 questions that were the original scales that were translated, consult experts on the content and suitability of the statements to adjust to the business environment of Vietnam. In particular, in the discussion with experts, the issue of the Covid-19 pandemic was emphasized as a basis for adjusting the scale to suit the circumstances of the ongoing Covid-19 pandemic in Vietnam.

Results of exploratory qualitative preliminary research and qualitative preliminary research on adjusting the scale have 1 statement excluded, 27 remaining statements measuring 5 factors (Table 4.1). In which, there are 6 adjusted statements (U1, U2, U4, Y1, Y2, Y3) related to the impact of the Covid-19 pandemic on consumers' online shopping intention.

For quantitative preliminary research, after the survey questionnaire has been formed. Research conducting preliminary quantitative investigation and analysis has been carried out by asking directly or sending survey questionnaires via email or Zalo to 80 individuals with at least one online shopping, selected according to the convenience and non-probability sampling.

Official quantitative research

The main data analysis method used for this study is Structural Equation Modeling analysis (SEM), 432 questionnaires were sent for the survey by asking directly or sending survey questionnaires via email or Zalo to customers who have made at least one online shopping.

The survey period was during the third Covid-19 outbreak in Vietnam from 1/3/2021 to 26/4/2021. The sample for the official quantitative study was selected by a convenience, non-probability sampling method. Data were processed by SPSS 16.0 software to evaluate cronbach's alpha coefficient and exploratory factor analysis EFA. Then, confirmatory factor analysis CFA and structural equation modeling SEM analysis were performed via analysis of moment structures AMOS version 20.0 software with maximum likelihood ML estimation method is used to test hypotheses and research models.

IV. Research results and discussion

4.1 Preliminary research results

Preliminary research result is a 4.1 survey questionnaire including 27 observed variables:

Table 4.1: Scale of research concepts

Variable Code	Observed variables	The origin of the scale
Perceived Usefulness of online shopping		Pavlou & Fyngenson (2006); Qualitative research
U1	I think online shopping is the best option during the Covid-19 pandemic	
U2	I think online shopping is safe during the Covid-19 pandemic	
U3	I think online shopping has a comfortable choice	
U4	I think online shopping contributes to effectively anti-pandemic support	
U5	I think essentials should be purchased online	
U6	I think online shopping will be very fast delivery	
The Attractiveness of the Website		Wirtz et al., (2013); Sauro (2013); Qualitative research
A1	I am shopping online when the Website is easy to access	
A2	I am shopping online when the Website is trustworthy	
A3	I am buying necessities online when the Website content provides full product images	
A4	I am buying essentials online when the Website content provides full item information	
A5	I am shopping online when the Website provides a wide range of essential items	
A6	I am shopping online when the Website has a friendly interface	
Perceived Ease of Use		Pavlou & Fyngenson (2006) Qualitative research
EA1	I find online shopping very simple	
EA2	I find the payment very convenient	
EA3	I find there's a lot of product choices	
EA4	I find it very easy to compare prices when shopping on the Website	
Security		Corbitt et al.,(2003); Lee & Huddleston (2010);
S1	I'm worried about being terrorized by text messages when I give my phone number	
S2	I'm worried that my credit card details might be stolen	
S3	I'm worried because online shopping fraud has not been dealt with as a deterrent	
S4	I'm worried that my personal information may be misused by other parties	

		Qualitative research
Perceived Risk		Corbitt et al., (2003); Forsythe et al., (2006) Qualitative research
R1	I perceive it difficult to exchange item	
R2	I perceive that I may not receive the item when I am shopping online	
R3	I perceive that I can receive the item that are not as promised on the Website	
R4	I perceive it very difficult to review the product quality when viewing it on the Website	
Online Shopping Intention		Forsythe et al., (2006); Sin et al., (2012)
Y1	I intend to shop essentials online during the Covid-19 pandemic	
Y2	I intend to shop online often after Covid-19 pandemic	
Y3	I intend to advise relatives to shop online during the Covid-19 pandemic	

Source: The author's preliminary research result

4.2 Official quantitative research results

4.2.1 Descriptive Statistics

Total number of questionnaires issued was 432. However, because the number of survey questionnaires sent via e-mail or Zalo had a low response rate, the total number of questionnaires collected was 230, reaching a rate of 53.24%. In the process of data entry and processing, there are 30 error questionnaires, the error questionnaires are mainly those that have not been answered all the questions, 200 remaining questionnaires have enough valid information to form the research sample for the official research program. Statistical results show that women shop online more than men with the proportion of women account for 74.5%, men account for 25.5%; shoppers aged 18 to 30 account for 42.5%, from 31 to 40 account for 31.5%, from 41 to 50 account for 15.6%, and over 50 account for only 10.4%.

4.2.2 Evaluate the reliability of the scale

When evaluating the scale, we need to use Cronbach's alpha coefficient to eliminate inappropriate variables before using EFA, this way to overcome the situation that trash variables can create dummy factors. Cronbach's alpha is the most commonly used coefficient to evaluate the reliability of the scale. This coefficient measures the consistency of observed variables in the same scale to measure the same research concept (Nguyen Dinh Tho & Nguyen Thi Mai Trang, 2011). Many researchers believe that Cronbach's alpha coefficient from 0.8 or more close to 1 is a good scale, from 0.7 to close to 0.8 is usable (Peterson, 1994). Cronbach's alpha coefficient of 0.6 or more is usable in case the research concepts are new concepts in new markets (Slater, 1995). When testing each observed variable, using Corrected Item - Total Correlation, if this correlation coefficient is greater than or equal to 0.3, then that variable is satisfactory (Nunnally & Bernstein, 1994).

Table 4.2: Scale reliability results

Latent variable	Number of observed variables		Cronbach's Alpha	Corrected Item - Total Correlation
	Before	After		
Perceived Usefulness (U)	6	6	0,945	0,657- 0,905
Attractiveness of the Website (A)	6	6	0, 899	0,677 – 0,753
Perceived Ease of Use (EA)	4	4	0,788	0,504 – 0,673
Security (S)	4	4	0,808	0,615 – 0,656
Perceived Risk (R)	4	3	0,501	0,339 – 0,342
Online Shopping Intention (Y)	3	3	0,897	0,721 – 0,850

Source: Result of survey data processing

The factor " Perceived Risk " has corrected item - total correlation is from 0.339 – 0.342, but Cronbach's Alpha is 0.501<0.6 so the observed variables in the scale are not kept to measure this research concept.

4.2.3 Exploratory Factor Analysis EFA

The process of exploratory factor analysis EFA, because the following will analyze the confirmatory factor CFA and structural equation modeling SEM, the scale structure will be very interested. Therefore, this study has applied the principal axis factoring with promax rotation.

The EFA results of the dependent variable 'Online shopping intention' with three observed variables are satisfactory. In which, the KMO coefficient = 0.715 and Bartlett test (Sig=0.000<0.05) are suitable for the data, the variables are correlated with each other in the population. Factor loading of the variables in the scale of online shopping behavior are all greater than 0.75; Eigenvalue is >1 and extracted variance is 75.82% (greater than 50%) (Table 4.3).

The results of EFA analysis with 20 observed variables of the scale of 4 independent variables met the requirements. In which, the test coefficient KMO = 0.905 and the Bartlett's Test with the result is sig = 0.000 < 0.05, suitable for the data, the variables are correlated with each other in the population. The factor loading of the variables in the scale of online shopping intention are all greater than 0.5, these observed variables are still kept to continue using for the next analysis, CFA and SEM; Eigenvalue >1, and extracted variance is 61.466% (greater than 50%). The number of extracted factors is 5 factors consistent with the hypothesis about the relations between factors (Table 4.3). Thus, the scale of research concepts is accepted, reliable and used next for confirmatory factor analysis CFA and structural equation modeling SEM.

Table 4.3: EFA results of independent and dependent variables

Value	Factors				
	Perceived Usefulness	Attractiveness of the Website	Security	Perceived Ease of Use	Online Shopping Intention
Extracted variance (%)	43.210	50.735	57.615	61.466	75.822
Eigenvalue	9.980	1.865	1.808	1.218	2.498
KMO	0,905				0.715
Bartlett's test	0,000				

Source: Survey data processing results

4.2.4 Confirmatory factor analysis CFA

In testing the scale, the CFA method has many advantages over traditional methods such as the correlation coefficient method, the EFA exploratory factor analysis method. Because the CFA method allows us to test the theoretical structure of the scales such as the relations between a research concept and other concepts without bias due to measurement error. In addition, with the confirmatory factor analysis method (CFA), we can test the convergent and discriminant validity of the scale better than the traditional methods (Bagozzi & Foxell, 1996). To measure market relevance, commonly used indicators such as Chi-square (CMIN), Chi-square adjusted to degrees of freedom (CMIN/df); Good of Fitness Index (GFI); Comparative Fit Index (CFI); Tucker & Lewis Index (TLI); RMSEA index (Root Mean Square Error Approximation).

Saturated model

The model is considered suitable for market data if the Chi-square test has a P-value > 0.05, however, Chi-square has the disadvantage that it depends on the sample size. If a model gets CMIN/df =< 2, some cases CMIN/df can be =< 3 (Carmines & McIver, 1981); GFI, TLI, CFI >= 0.9 (Bentler & Bonett, 1980); However,

according to the recent view of researchers, the GFI index is still acceptable when it is less than 0.9 (Hair et al., 2010); RMSEA = < 0.08 (Steiger, 1990), then the model is considered suitable for market data. The relevance of the model to the market data gives us the necessary and sufficient conditions for the set of observed variables being unidimensionality (Steenkamp & Trijp, 1991), unless the errors of the observed variables are correlated with each other. The CFA results of the saturated model are presented in Figure 4.1. The saturated model has 164 degrees of freedom, Chi-squared = 363,831, P value = 0.000. However, because Chi-squared has disadvantage depending on the sample size, considering other indicators: GFI = 0.849; TLI = 0.916; CFI = 0.927; RMSEA = 0.078, this model is consistent with market data. There is no correlation between the errors, so the components in the saturated model are unidimensionality.

And when performing the confirmatory factor analysis method CFA, some other assessments should be performed such as assessment of the reliability of scale through composite reliability, variance extracted; convergent validity and discriminant validity of research concepts (Hair et al., 2010). The unstandardized weights have statistical significance (Sig. = 0.000), the standardized weights all meet the allowable standards (≥ 0.5) the concepts in the saturated model acquire convergent validity (Gerbring & Anderson, 1988). The unstandardized weights have statistical significance (Sig. = 0.000), the standardized weights all meet the allowable standards (≥ 0.5). Therefore, the concepts in the saturated model acquire convergent validity.

The correlation coefficient between the concepts with the accompanying standard deviation are less than 1, Sig. = 0.000 are statistically significant, the concepts in the saturated model gain discriminant validity (Steenkamp & Trijp, 1991). The correlation coefficient between the concepts with the accompanying standard deviation shows us that these coefficients are less than 1, Sig. = 0.000 are statistically significant (Table 4.4). Therefore, the concepts in the saturated model gain discriminant validity.

The composite reliability, variance extracted must meet the requirements from 0.5 or more for the scale to be reliable (Hair, 1998). The composite reliability, variance extracted of all research concepts are > 0.5 (Table 4.5), so the scale of research concepts is reliable.

Table 4.4: Relations between critical model research concepts

Relations			r	Se	Cr	P
Usefulness	↔	Attractiveness	0.677	0.052	6.18	0,000
Usefulness	↔	Ease of Use	0.566	0.059	7.41	0,000
Usefulness	↔	Security	0.493	0.062	8.20	0,000
Attractiveness	↔	Ease of Use	0.714	0.050	5.75	0,000
Attractiveness	↔	Security	0.484	0.062	8.30	0,000
Ease of Use	↔	Security	0.453	0.063	8.63	0,000

Source: Survey data processing results

Table 4.5: Summary of the scale test results

Latent variable	Number of observed variables	Composite reliability	Variance extracted
Perceived Usefulness (U)	6	0.95	0.75
Attractiveness of the Website (A)	6	0.89	0.61
Perceived Ease of Use (EA)	4	0.65	0.56
Security (S)	4	0.67	0.58

Source: Survey data processing results

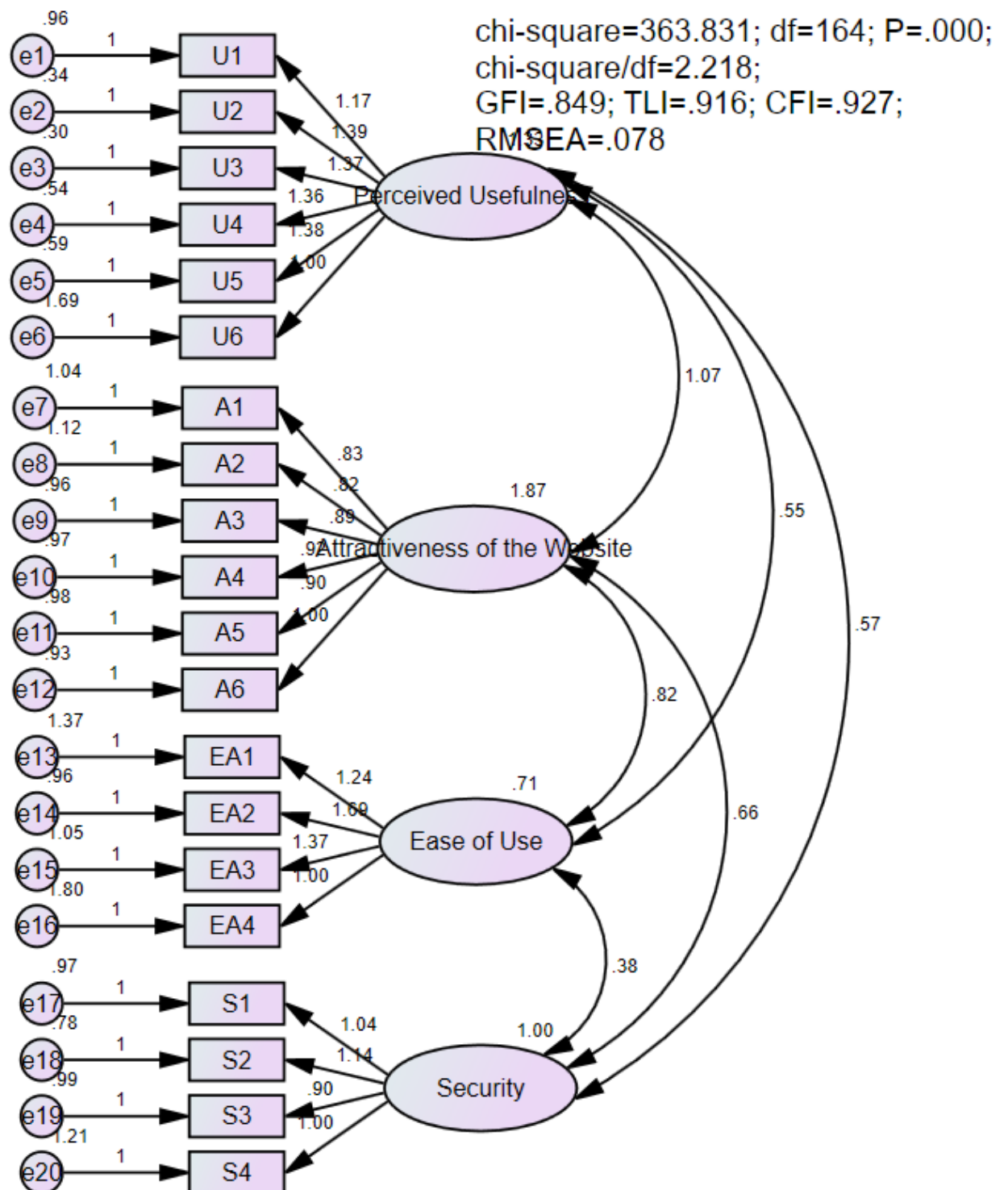


Figure 4.1. CFA Saturated model results

4.2.5 Hypothesis testing by SEM

Table 4.5, shows the relations of 3 independent variables: Perceived Usefulness of online shopping, Attractiveness of Website and Security with the dependent variable being the online shopping intention are $\text{Sig} < 0.05$. Except the relation of the independent variables Perceived Ease of Use is $\text{Sig} = 0.052 > 0.05$. The data in Figure 4.2 and Table 4.5 allow to conclude that the model fits the data and the three independent variables are statistically significant at the 5% level of significance. Based on the analysis results, it can be concluded that the hypotheses H_1 , H_2 , H_5 are accepted, and H_3 is not accepted.

The results of SEM analysis show that the factor that has the greatest impact on online shopping intention is Perceived usefulness (standardized coefficient: $\beta = 0.464$), second is the Attractiveness of the website ($\beta = 0.339$), next is Security ($\beta = 0.142$).

Table 4.5: Regression coefficient of the proposed theoretical model

Relations				Estimation		SE	CR	P
				Standardi zed	Unstandard ized			
Online Shopping Intention	←	Perceived Usefulness		0,464	0,521	0,076	6,842	0,000
Online Shopping Intention	←	Attractiveness of the Website		0,339	0,320	0,070	4,552	0,000
Online Shopping Intention	←	Perceived Ease of Use		0,135	0,204	0,105	1,945	0,052
Online Shopping Intention	←	Security		0,142	0,184	0,068	2,719	0,007

Source: Processing results from the author's survey data

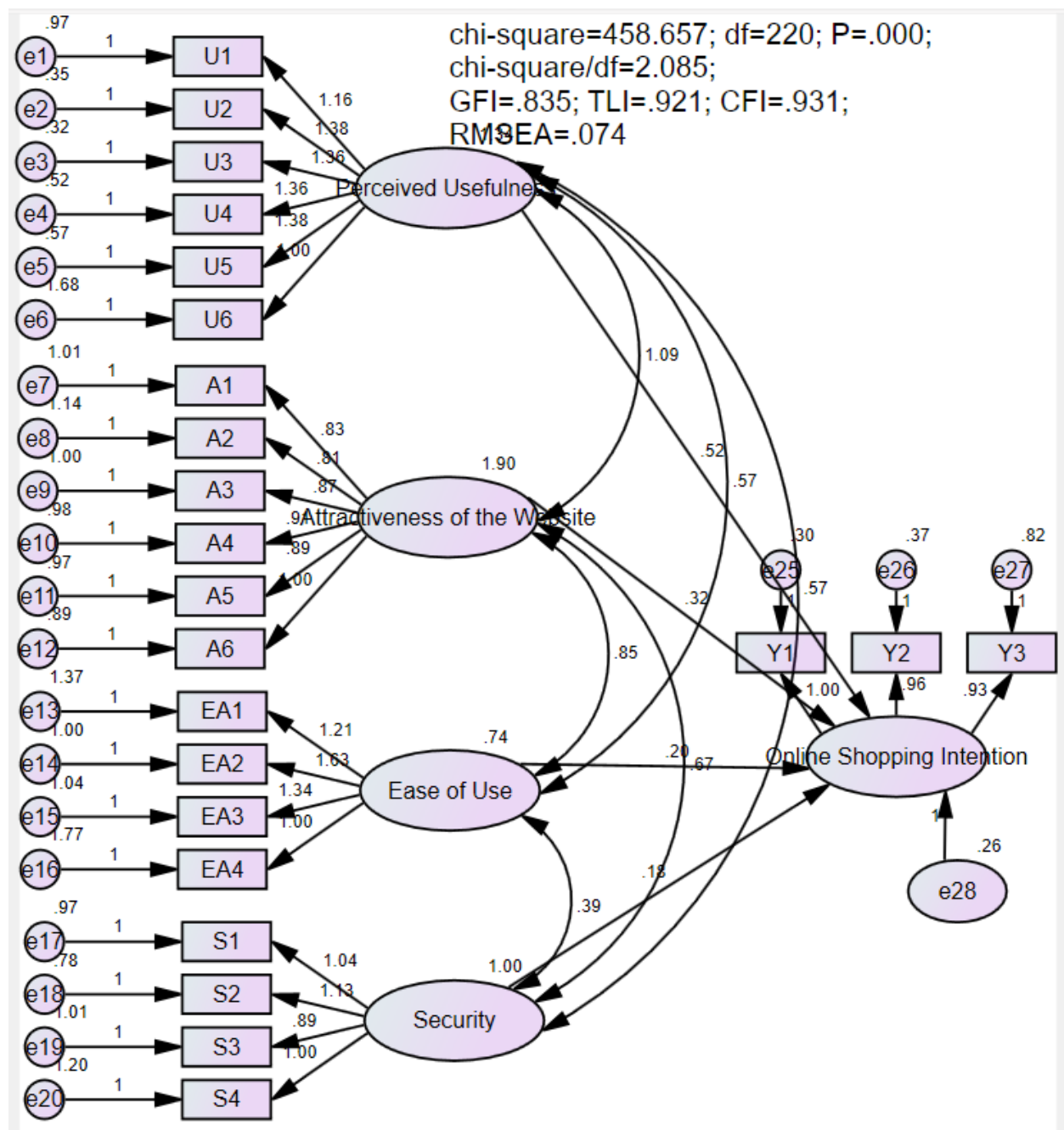


Figure 4.2. SEM results of the proposed theoretical model (standardized)

4.3 Discussing research results

The Perceived Usefulness factor has a positive impact on the online shopping intention factor (0.464) and has the largest weight among the factors. This shows that with the development of Internet infrastructure in Vietnam, online shopping has become a trend of consumers. Especially the Covid-19 pandemic has had a strong impact on consumers' perception of the usefulness of online shopping, consumers have never found online transaction as useful as now. The research results are also consistent with the results of Nazir et al. (2012), Rehman et al., (2011), Nguyen Minh Ha & Bui Thanh Khoa (2019).

The Attractiveness of the Website has a positive impact on the online shopping intention (0.339). This factor has the second largest weight after the Perceived usefulness factor, proving that consumers choose online shopping websites that have been beautifully designed, aesthetically pleasing, and attractive to information seekers to make decisions about choosing an online shopping website. The research results are also consistent with the research of Childers et al., (2001); Bui Thanh Trang & Ho Xuan Tien (2019).

The Security has a positive impact on online shopping intention (0.142). This could explain that under the impact of the Covid-19 pandemic, online shoppers may have found the usefulness of online shopping outweighed the ease of use or safety of online shopping. Information security refers to the confidentiality, authentication and non repudiation of the e-transaction and online data. The research results are also consistent with the research of Chen et al., (2010).

V. Conclusion and management implications

5.1 Conclusion

Approaching according to the Theory of Planned Behavior (TPB) and Technology Acceptance Model (TAM), the research results show that there are 3 factors affecting consumers' online shopping intention, in order of influence including three factors that have the same positive impact as Perceived Usefulness, Attractiveness of the Website and Security when shopping. The research results show that during the period of the 3rd outbreak of the Covid-19 pandemic in Vietnam, although this pandemic period has not been serious compared to other countries in the region and the world, it has had a very strong impact on the consumers' online shopping intention with the largest influence weight of 0.464 proving it.

With the data survey conducted during the third covid-19 outbreak, the study theoretically fills a research gap on consumers' online shopping intention, strengthens the Theory of Planned Behavior (TPB) and Technology Acceptance Model (TAM) in the context of Vietnam's unique political and economic environment. At the same time, the research results also contribute academically as a measuring scale with the adjustment of 6 observed variables in the context of the third Covid-19 pandemic in Vietnam.

In addition, the research contributes in terms of practice to support retail enterprises to realize the importance of the above factors to have an appropriate business strategy, helping them to have enough competitive ability in the explosive digital technology environment, which is to survive and develop during the Covid-19 pandemic in the immediate future.

5.2 Management Implications

Based on the research results, a number of implications are proposed for retail enterprises to refer to overcome challenges as well as seize opportunities in the digital transformation process that is taking place strongly on a global scale due to the impact of the Covid-19 pandemic.

Firstly, retail enterprises need to quickly focus resources to continue deploying, perfecting and urgently developing online business, especially essential items. Implement special and unique promotional, public relations (PR) programs of businesses attached to the community so that consumers can see during the Covid-19 pandemic with the mindset of living with the pandemic, then shopping online is the safest and most appropriate option. This job not only contributes to society in the fight against the Covid-19 pandemic, but also takes advantage of opportunities in business risks.

Secondly, businesses need to invest in a well-designed website that is beautiful, attractive to consumers, full of information, easy to access and easy to remember to create comfort for consumers. It is advisable to make a thoughtful investment once, to avoid the situation of changing the interface that makes consumers lose their familiar image and brand.

Thirdly, online retail enterprises must publish a clear policy, make a strong commitment and take responsibility for the privacy of consumers' personal information when participating in the company's website.

Moreover, there must be a transparent and consistent exchange & return policy to create peace of mind for online consumers as well as to build an increasingly strong company reputation.

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