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Article

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Inspecting the Relationship among E-service Quality, E-trust, E-customer Satisfaction and Behavioral Intentions of Online Shopping Customers

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ABSTRACT

The purpose of this study is to clarify whether there are relationships among the four key factors contributing to the success of e-business: e-service quality, e-trust e-customer satisfaction and behavioral intentions, thus make a conclusion and provide better understanding in the field of e-service and e-marketing. This study method used to evaluate and test the scale and theoretical model in the study is quantitative research with sample size N = 476 through the survey to deliver questionnaire directly to subjects. This study examined the scale by confirmatory factor analysis (CFA) and the model of theoretical research by structural equation modeling (SEM). The results of analysis and verification of measurement scales and theoretical research models show that the research scales achieve unidirectional, reliability, convergent validity and high discriminant validity. The hypotheses are accepted at 95% reliability. The study has discovered the new indirect and positive impact of e-service quality on behavioral intentions through mediators e-trust and e-customer satisfaction, as well as other sub relationships, which can be used as foundation for future researches. At the end, managerial implications and recommendations plus contributions are proposed for e-commerce firms, e-marketers and researchers.

Keywords: E-Service Quality, E-Trust, E-Customer Satisfaction and Behavioral Intentions

1. Introduction

Digital retailing gives consumers more ways to shop and more access to products and services than ever before. It's clear that consumers are embracing the freedom of shopping whenever and wherever they please, as online sales are capturing a double-digit share of retail dollars in some markets. Service quality, customer satisfaction, trust and behavioral intentions

have been proven to have significant impacts on traditional businesses since the dawn of service industry. In the new era of the Fourth Industrial Revolution, with the burst of technological advancement in the late 1990s and the early 2000s allowing more and more people to gain access to the Internet, new forms of business were shaped in the online environment, which latter are well known as electronic commerce activities (e-Commerce). Compared with traditional face-to-face commerce, e-Commerce, or more specific -online shopping- possesses a great deal of unique advantages for the customers, such as: incredible convenience, better prices, a great variety of products,

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infinite choice, easy access to consumer reviews, no pressure sales and so on.

As e-Commerce grows, electronic service quality has been positively influenced the success of online businesses (Yang & Fang, 2004; Zeithaml, Parasuraman & Malhotra, 2002). This success also often includes the contribution in service of the following factors: electronic service quality of the businesses (1); electronic trust of the customers (Windham & Orton, 2000) (2); electronic satisfaction of the customers (Kim & Stoel, 2004) (3); and behavioral intentions of customers (Chao Wen, 2012) (4). These literatures mainly propose and prove the relationships that occur between the dimensions of electronic service quality and its impact on separate factors of successful e-Commerce. In spite of the provided literatures and proofs, there are few studies that have examined the relationships among dimensions of e-Service Quality (ESQ), e-Trust (ET), e-Customer Satisfaction (ECS) and Behavioral Intentions (BI) all together. As Vietnam's e-Commerce is rapidly developing, it is crucial to conduct, investigate and clarify this study so that digital marketers and e-business runners can have a reliable basis and further understanding in the e-service market. Therefore, author choose to inspect the relationship among E-Service Quality, E-Trust, E-Satisfaction and Behavioral Intentions of online shopping customers in Vietnam.

II. LITERATURE REVIEW

A. E-Service Quality

As technological advancements are forwarding, there has been a great variety of new products and services coming out in order to fulfill the needs and further improve human's living standard. The human race, to an extent, has surpassed the stage of filling the stomach and warming the body. Living standard has upgraded to a point where people demand quality in every aspect, and quality has somewhat become a key factor in terms of considering buying decision

rather than price tags. In addition, There are various definitions of service quality, depends on each approach that service quality is defined differently, based on reliable scientific basis that aim to resolve specific problems in particular fields. In this research, authors choose to define service quality as the level of fulfilling needs of customers. A few typical definitions of service quality related to the authors approach are from Parasuraman et al., (1988) defined service quality as a measure of how well the service level delivered matches customer expectations, considered service quality as an overall judgment similar to attitude towards the service, or also the ability of the organization to meet or exceed customer expectations. Feigenbaum (1991) indicated that service quality is customers decision based on their realistic experience with the product/service, measured by customer requests. Lee (2018) tested an integrative framework that not only analyzes the positive personal outcome of ESQ (e-service quality), but also predicts it at both individual and organizational level. Based on a survey of employees in the front offices of hotels in Korea, this research highlights the job efficacy, or the self-confidence in the capability to perform job effectively, as a crucial consequence of ESQ. Chung and Park (2017) The results show that the perception of deep acting has a positive effect on rapport, and rapport is fully mediated. Finally, the present study shows that rapport can be changed by the amount of encounter time, even if medical service providers express inauthentic emotions. These requests, given or not, were aware of or simply perceived, totally subjective or professional, always represent changing targets in a competitive market.

By emergence of e-money and possibility of conducting financial interactions through electronic and online tools, e-commerce increasingly spreads and penetrates into more and more areas of global economy and a new type of business i.e. e-business has been founded on the basis of this technology (Kamal Ghalandari, 2012). As a consequence, wherever business grows, there will be customers and problems concerning both parties, e-commerce comes along with e-service quality. For an organization to gain

competitive advantage it must use technology to gather information on market demands and exchange it between organizations for the purpose of enhancing the service quality (Seth and Deshmukh et al., 2005). More specific, e-service quality, according to Santos (2003), is the consumers' overall evaluation and judgement of the delivery of service in a virtual market. The Internet considered as a primary channel for delivering e-service (Lu et al., 2010; Parasuraman et al., 2005).

B. E-Trust

The relation is supposed to be grounded on the trustor's beliefs about the trustee's capabilities and about the context in which the relation occurs" (Gambetta, 1988). In an online environment, trust is even more required as its complexity far exceeds the traditional one. Petrovic et al., (2003) addressed that online transactions and exchange relationships are not only characterized by uncertainty, but also by anonymity, lack of control and potential opportunism, making risk, and trust crucial elements of electronic commerce. E-trust, as a causality, occurs in environments where do not present any sign of direct and physical contacts, interactions are only mediated through electronic devices. E-Trust is an intangible tool that is effective in reducing uncertainty and complexity of transactions and relationships in electronic markets.

These are the basic differences between trust and e-trust. Trust in digital environments is mostly associated with trust over the Internet and especially with that of e-commerce. In these cases, e-trust is often reduced to a matter of security (Taddeo, 2011). However, recent innovations and developments of web developers and authorities have made it possible to fulfill the requirements of trust in the digital area. Identity confirmations, chats, logs, IP addresses... all contributing to the foundation of electronic trust in such uncertain environments. Petrovic et al., (2003) demonstrated a figure explaining the phases of a transaction and the trust level of each phase. There are three main phases during a transaction: information, agreement, and settlement.

C. E-Customer Satisfaction

It was not until the mid-70s of the twentieth century that customer satisfaction and concerning parties became highly anticipated as organizations increasingly attempt to measure it. Annual conferences have been held on customer satisfaction (Hunt, 1977). Customer satisfaction can be experienced in variety of situations and connected to both goods and services. It is a highly personal assessment that is greatly affected by customer expectations. In the customer service aspect, Oliver (1980) defined customer satisfaction as the customers' post-purchase comparison between pre-purchase expectation and performance received. According to Zeithaml et al., (1990), customer satisfaction is based on the balance between customers' expectations and customers' experiences with the products and services. Seolwoo Park (2018) Satisfaction was found to have a major effect on trust and commitment and was shown to have a positive effect on trust and affective commitment. From both theoretical and empirical perspectives, customer satisfaction is the key to companies' competitiveness and can be considered the essence of success in today's highly competitive world of business (Bitner and Hubbert, 1994).

Although there are many convenient features of online shopping mentioned and the substantial increase in number of e-customers, plenty of e-stores and e-retailers are still going out of business or on the verge of bankruptcy. It seems quite simple to change e-retailers because of having an unsatisfactory e-service quality, high price of products and e-store design and etc. Moreover, there is no switching cost from one e-retailer to another one. If managers of e-stores hope to attract and retain e-customers, they need to know what evaluative criteria e-customers use while selecting an e-store (Lim and Dubinsky, 2004) and which factors are driving e-customer satisfaction (Barutçu, Süleyman, 2010). Prior studies in the field of e-customer satisfaction have indicated plenty of different drivers, based on different concepts or aspects viewed to examine.

D. Behavioral Intentions

Studies about how service quality affect the success of businesses are undeniable. However, the real value of service quality is based on its decision-making implications. Date back in the late 80s and early 90s of the twentieth century, during the emergence of service industry and findings related to service quality, reseachers began to examine marketing strategies and distinguish them as defensive and offensive tactics (Rust and Zahorik, 1993). Offensive marketing strategies focus on capturing new customers whilst defensive refer to retaining existing customers. At first, they thought it was service quality that takes responsible for the purchase intention, soon after that they realized service quality is not the only factor manipulating it. Therefore, investing on service quality alone does not guarantee winning new customers or keeping old ones. No matter what strategies a company follows, customers' reactions to service quality are consequential. Those reactions are grouped and called "behavioral intentions" by numerous researchers. Intended behavior is closely related to actual behavior and has diagnostic value. Thus, behavioral intentions are important indicators for management to understand whether customers would remain with or defect from the company (Parasuraman et al., 1996). Behavioral intentions in traditional setting and virtual setting are quite similar (Janda et al., 2002), which normally include repurchase intentions, positive word-of-mouth (Parasuraman et al., 2005). Parasuraman et al., (1996) presented a more specific group of behavioral intentions in a deeper study, including five factors: loyalty, switch, pay more, external response, and internal response.

III. HYPOTHESIS

In order to establish further knowledge and better understanding in the field of e-service, many researchers have been conducting theses proving the relationship

among the key factors influencing e-businesses' success, mostly between e-service quality and others. According to Zeithaml et al., (2000), service quality in online shopping is a significant strategy to achieve success, even more than low prices and web presence. Service quality reflects the idea of customers comparing their expectations concerning the performance of service (Gronroos, 1984).

Concerning the effects of e-service quality on consumer e-trust and e-satisfaction, Al-Nasser et al., (2013) conducted a study to clarify the relationships between e-service quality, culture, trust and risk. A quantitative research design was adopted to collect data and multiple regression analysis method was used. In this study, the researcher adopted Parasuraman et al., (2005) E-S-QUAL four dimensions and E-RecS-QUAL three dimensions as a scale for measuring e-service quality. The result shows that e-service quality has significant positive direct impact on customer trust in virtual environments. This leads to the first hypothesis:

H1: E-Service Quality has a direct positive impact on E-Trust

Shu-Chiung et al. (2011) tested the significance of relationships among e-service quality, satisfaction, trust, and purchase intention, the comparison effect of culture on e-service quality, satisfaction, trust and purchase intentions between online retailing websites of Taiwan and Malaysia. His study found that e-service quality of Taiwan model has significant effects on satisfaction and trust. While on the other hand, e-service quality of Malaysia model has significant effects on satisfaction but not for trust. Also, the effects of e-service quality on e-trust and e-customer satisfaction were identified and reported by Ghalandari (2012) through a survey by collecting data from 382 online buyers. A linear regression model was performed, the result indicated that e-service quality determined consumer trust and satisfaction, thereby directly influenced e-loyalty in the virtual concept. From these results, the second hypothesis about e-service quality and e-customer satisfaction is formed as below:

H2: E-Service quality has a direct positive impact

on E-Customer satisfaction

Chuang and Fan (2011) in a study, gathered a sample from 325 members of e-bookstore in Taiwan, found that service quality determined trust and service quality delivered by e-retailer which satisfied customer's expectations encouraged trust belief. According to Gounaris et al., (2010), examined the effects of service quality and satisfaction on three consumer behavioral intentions, namely word-of-mouth, site revisit, and purchase intentions in the context of internet shopping. The result revealed that e-service quality has a positive effect on e-satisfaction, while it also influences, both directly and indirectly through e-satisfaction, the consumer's behavioral intentions, namely site revisit, word-of-mouth communication and repeat purchase. Sysmanski and Hise (2000) summarized that convenience, product offerings and product information, site design and financial security are the antecedents of e-customer satisfaction by using focus-group interview. The empirical results of the study found that convenience, site design and financial security have significant influences to e-customer satisfaction. This indicates that some features of e-service quality and e-trust influence e-customer satisfaction in the online environment. Within the presented studies, the findings are consistent with prior findings concerning the positive relationship between e-service quality, e-trust and e-customer satisfaction. The third hypothesis proposed to test the relationship among e-trust and e-customer satisfaction:

H3: E-Trust has a direct positive impact on E-Customer satisfaction

Customer satisfaction is viewed as a complex determinant with both cognitive and affective components (Oliver, 1997). In many studies, satisfaction has been proven to have correlation with service quality and behavioral intentions, both direct and indirect.

According to Hu et al., (2009) in today's world of intense competition, satisfying customers is only the base line and may not be sufficient for survival. Management should focus on gaining customer loyalty by enhancing customer perceptions of service

quality and increasing as perceived by the consumer value. Examining relationships and impacts of service quality, perceived value, customer satisfaction, and image, the results found that that delivering high quality service and creating superior customer value can result in achieve high customer satisfaction, thus effecting the firm's corporate image, and ultimately leading to consumer retention. Yu et al., (2006) also pointed out that service quality affects behavioral intentions through customer satisfaction in his study in Taiwanese leisure industry. Lien et al., (2011) examined the relationships among e-service quality, perceived value, satisfaction, and behavioral intentions for Taiwanese online shoppers. The testing results show that, for the direct path, electronic service quality has a significant, positive influence on perceived value, satisfaction, and behavioral intentions. Also, perceived value directly influences customer satisfaction and behavioral intentions and satisfaction is an antecedent of behavioral intentions. Indirectly, electronic service quality has a significant, positive influence on behavioral intentions through satisfaction and perceived value.

Based on the literatures above, the fourth hypothesis is proposed to examine the relationship among e-service quality, e-customer satisfaction and behavioral intentions:

H4: E-Service quality impacts Behavioral Intentions indirectly through E-Customer satisfaction

Trust is important for fostering successful relationships, reducing uncertainty and risk, and increasing willingness to purchase. In spite of numerous studies being focused on the critical role of trust in recent decades, the relationships between trust and other e-service factors, especially behavioral intentions in the online environment have yet to be deeply discussed. However, there are several studies mentioned the effect of trust on some aspects of customer intentions, both in online and offline environment. Verhagen et al., (2006) examined the relationships between consumer perceptions of risk and trust and the attitude towards purchasing at a consumer-to-consumer electronic marketplace. It was revealed in Verhagen study that e-trust has a positive effect on customer's online

shopping intentions. Gefen (2002) conducted an empirical study to examine the effects of overall online customer trust in the web vendor on shopping intentions among online customers. Trust in this study was referred to as perceptions regarding the ability, integrity and benevolence of the party being trusted. Results showed that the overall trust consumers had on the online vendor maximized their inclination to purchase from the seller online. In a different study, Lynch et al., (2001) investigated the key predictors of consumers' intention to shop online. Results from the experiment showed that trust had a positive effect on buying intention. The results suggested that trust positively led to purchase intention for the case of

T-shirts. Therefore, e-service quality is expected to have adequate effect on behavioral intentions through e-trust. This led to the final hypothesis:

H5: E-Service quality impacts behavioral intentions indirectly through E-Trust

IV. RESEARCH METHOD

A. Research Design

The questionnaire is designed based on the Likert's measurement scale. According to Likert Rensis

Table 1. Final Draft Questionnaire

Factors	Code	Statement	Author
E-Service Quality	ESQ1	I get what I ordered from this online retailer	Lee and Lin, 2005;
	ESQ2	This online retailer provides in-depth information of the product/service	
	ESQ3	My order was delivered by the time promised by this online retailer	
	ESQ4	Transactions with this online retailer are error-free	
	ESQ5	I feel safe in my transaction with this online retailer	
	ESQ6	This online retailer has adequate security features	
	ESQ7	I feel like my privacy is protected at this online retailer	
	ESQ8	I think this online retailer answers inquires quickly	
E-Trust	ET1	This online retailer has the skills and expertise to perform transactions in an expected manner	Pennington et al., (2004); Singh et al., (2015)
	ET2	This online retailer has access to the information needed to handle transactions appropriately	
	ET3	This online retailer is fair in its conduct of customer transactions	
	ET4	This online retailer is fair in its customer service policies following a transaction	
	ET5	This online retailer is open and receptive to customer needs	
	ET6	This online retailer keeps its customers' best interests in mind during most transactions	
	ET7	This online retailer makes good-faith efforts to address most customer concerns	
	ET8	Overall, this online retailer is trustworthy	
E-Customer Satisfaction	ECS1	Based on all of my experience with this online retailer, I feel very satisfied	Janda et al., 2002
	ECS2	Overall, I am satisfied with the decision to purchase from this online retailer	
	ECS3	My choice to do business with this online retailer was a wise one	
	ECS4	I feel very pleasant about my decision concerning this online retailer	
Behavioral Intentions	BI1	Say positive things about this online retailer to other people	Parasuraman et al., (1996; 2005)
	BI2	Recommend this online retailer to someone who seeks my advice	
	BI3	Encourage friends and relatives to do business with this online retailer	
	BI4	Consider this online retailer to be my first choice if I buy the same product/service again	
	BI5	Do more business with this online retailer in the next few years	
	BI6	Continue to do business with this online retailer if its prices increase somewhat	

(1932), it is a kind of question form that respondents rate the level of their agreement on statements or questions. Likert surveys are quick, efficient and inexpensive methods for data collection. Therefore, to be easier for collecting and having more accurate data, the questionnaire will be designed in the form of Likert 7-point-scale, which is a scale from 1 (Extremely Disagree) to 7 (Extremely Agree). The final draft questionnaire is presented in Table 1.

B. Description of Population and Sample

An online survey-using questionnaire in Ho Chi Minh City was conducted to collect the data. 526 responds collected and 476 of them are valid. The invalid responds are the ones with less than 50% of the questions answered. Among the respondents, 35.6% of them are males and the same figure for females are 64.4%. In terms of age, those who above 18 to fewer than 25 years old accounted for 89.2% of the sample, ranked the highest. The same figure for those aged 26 to under 35 and above 35 are 9.8% and 1%, respectively. Most of the respondents are university students in Ho Chi Minh City, with 79.7% of the sample, the rest are employees (10.8%) and business owners (9.5%). Explaining why there are so many university students in the sample, university students are believed to be important online shoppers and are likely to be a more homogeneous sample group than a sample from the general population (Burns and Lutz, 2006).

V. DATA ANALYSIS

A. Reliability

Cronbach's alpha values range from 0.871 (E-Customer Satisfaction) to 0.920 (E-Service Quality), with no item deleted. Furthermore, all Cronbach's alpha values are below 0.95, meaning that there is no significant multicollinearity. In conclusion, the

scales for measuring E-Service Quality, E-Trust, E-Customer Satisfaction and Behavioral Intentions are trustworthy and this research is worth for further study.

B. Exploratory Factor Analysis - EFA

Exploratory Factor Analysis (EFA) is a technique to evaluate interdependence. It studies all interrelationships without defining variables to be dependent or independent. In this study, EFA is applied to test the model with The Kaiser-Meyer-Olkin (KMO) and Bartlett's test by using the Principal Axis Factoring with Promax rotation. Twenty-six items of four variables are put into the exploratory factor analysis process. KMO value is 0.966, which satisfied the regulation $0.5 < \text{KMO} < 1$ (Tabachnick & Fidell, 2007). Likewise, Bartlett's test of sphericity is significant with sig. level being 0.000 ($p < .001$), presenting significant correlation between the variables to proceed with the analysis. Beside, total Variance Explained value is at 59.072% $> 50\%$, which prove the appropriateness of factor analysis. The result showed that none of the items are deleted. 26 items are grouped into 4 components, exactly the same as the original scale. The components' names remain unchanged. This result will be kept as the final format of the questionnaire.

C. Confirmatory Factor Analysis - CFA

Confirmatory Factory Analysis is a better method to assess the validity and reliability of measures (Bagozzi & Foxall, 1996). The goodness-of-fit of CFA is used to further assess the convergent validity among the constructs. To measure the overall relevance of the model with market information, the author uses the criteria: Chi-square, Chi-square/df, Comparative Fit Index (CFI), Tucker & Lewis Index (TLI), Root Mean Square Error Approximation (RMSEA). The goodness-of-fit for each model was assessed by examining the Chi-square statistic, the

comparative fit index (CFI), and the root-mean-square error of approximation (RMSEA). NFI, IFI, and CFI have to be greater than 0.90 (Hair et al. 2010). GFI and AGFI index must exceed 0.8. Chi-square/df should be equal or lower than 2 (Chi-square/df \leq 3 can be accepted in some cases) and RMSEA ought to be equal or lower than 0.08 (RMSEA \leq 0.05 is deemed excellent) (Hair et al, 2010). Those estimates are the precedents for the reliability of all factors for the next analyzing steps in this research.

CFA result indicated that there are 293 degrees of freedom, goodness-of-fit stats of the model are: Chi-Square = 335.309 ($p = 0.045$), $df = 293$, CMIN/df = $1.144 < 2$. GFI = 0.950; CFI = 0.994; TLI = 0.994 (all > 0.9) and RMSEA = 0.017 (< 0.08) prove the validity and reliability of measurements.

D. Reliability and Validity

1. Composite Reliability

This measures the Composite Reliability of a set of conceptual variables (observations). In Confirmatory Factor Analysis (CFA), composite reliability is a better indicator than Cronbach's alpha because it does not make the mistake of assuming the reliability of variables is equal (Gerbing and Anderson, 1988). According to Hair et al. (2010), the scale ensures reliability when $CR > 0.7$.

Convergent Validity: Convergent Validity represents the value of measuring a concept closely related to each other after repeated measurements. Convergent Validity is evaluated based on regression coefficients of each variable of the underlying concept if it is unidirectional. If the underlying concept is omnidirectional, the convergence value of the underlying concept will be satisfactory when the convergence value for each component is reached. The scale achieves convergent values when the standardized weights of all scales are high (> 0.5) and statistically significant ($p < 0.05$) (Gerbing and Anderson, 1988).

Discriminant Validity: Express the difference between concepts in the research model. There are two levels

of discriminant validation, including within - construct discriminant validity and across - construct discriminant validity (Bagozzi and Foxall, 1996). Besides, another method to evaluate the discriminant validity of a scale is to compare AVE of the concept with the squared correlation between each pair of concepts together (Fornell and Larcker, 1981). The scale achieves discriminant validity when AVE of the concept larger than the squared correlation of the relationship between the concept and other concepts in the research model.

The results showed the CFA fitting indices. According to Hair, J., Black, W., Babin, B., and Anderson, R. (2010), Composite Reliability (CR) must be greater than 0.7, which should be more reliable. In this research, all CR values exceed 0.7, ranged from 0.888 to 0.917, show high reliability. AVE values calculated also higher than the obligatory value of 0.50, from 0.576 to 0.665, suggesting adequate convergent validity. Thus, all factors in the measurement model had adequate reliability. Another important task is to test Discriminant Validity by comparing the average variance extracted (AVE) with the squared correlation between constructs (Fornell and Larcker, 1981).

From Table 2 it is perceived that: The AVE values were greater than the squared inter-construct correlation between any pair of constructs, which supports the Discriminant Validity of the constructs. To sum up, there are positive and strong relationships between E-Service Quality, E-Trust, E-Customer Satisfaction and Behavioral Intentions. Moreover, this research model has appropriated reliability, convergent validity, and discriminant validity of the constructs.

Table 2. AVE and Squared Correlations between the constructs

Item	AVE	SQUARED CORRELATION			
		ESQ	ET	ECS	BI
ESQ	0.58	0	0	0	0
ET	0.576	0.561	0	0	0
ECS	0.665	0.424	0.368	0	0
BI	0.623	0.555	0.536	0.602	0

E. Structural Equation Modeling - SEM

Structural Equation Modeling is applied to test hypotheses about the relationships between E-Service Quality, E-Trust, E-Customer Satisfaction and Behavioral Intentions. In this analysis, Chi-square, Chi-square/df, Comparative Fit Index (CFI), Tucker & Lewis Index (TLI), and Root Mean Square Error Approximation (RMSEA) are used to test the model. A model well fits the sample data if GFI, TLI and CFI are equal or above 0.9 ; Chi-square/df is equal or lower than 2 (Chi-square/df ≤ 3 can be accepted in some cases) (Carmines & McIver, 1981), and RMSEA is equal or lower than 0.08 (RMSEA ≤ 0.05 is excellent) (Hair et al, 2010).

SEM analysis result points out that there are 299 degrees of freedom (df) in the model, Chi-square = 703.357 with $p = 0.000$; CMIN/df = $2.352 < 3$. GFI = 0.904, CFI = 0.946, TLI = 0.941 (all higher than 0.9) and RMSEA = $0.053 < 0.08$ prove that the model's fit as indicated by these indexes is deemed satisfactory.

The results indicated that the relationship between E-Service Quality, E-Trust, E-Customer Satisfaction and Behavioral Intentions are not only positive but also statistically significant as all estimates are at reference point (unstandardized regression weight). Standardized regression weight also shows positive (+) and statistically significant at $p = 0.000 < 0.05$. Next, it is essential to examine the path coefficients of the structural model. The standardized regression weight of the relationship between E-Service Quality and E-Trust is 0.708, ranked the highest, which means E-Service Quality has the largest positive impact on E-Trust. It can be explained that when E-Service Quality goes up by 1 standard deviation, E-Trust goes up by 0.708 standard deviations, supporting the hypothesis H1. The second-highest standardized regression weight is of the relationship between E-Customer Satisfaction and Behavioral Intentions, at 0.645, explained that when E-Customer Satisfaction goes up by 1 standard deviation, Behavioral Intentions goes up by 0.645 standard deviations. The third one is the standardized regression weight of the relationship

between E-Trust and E-Customer Satisfaction, at 0.485. The value is positive and significant, meaning that when E-Trust goes up by 1 standard deviation, E-Customer Satisfaction goes up by 0.485 standard deviations, supporting hypothesis H3. The fourth biggest coefficient is the standardized regression weight of the relationship between E-Service Quality and E-Customer Satisfaction, at 0.343. The value is positive and relatively significant, meaning that E-Service Quality goes up by 1 standard deviation, E-Customer Satisfaction goes up by 0.343 standard deviations, supporting hypothesis H2. Finally, the smallest coefficient is the standardized regression weight of the relationship between E-Trust and Behavioral Intentions, at 0.313. The value is positive and relatively significant, meaning that E-Trust goes up by 1 standard deviation; Behavioral Intentions goes up by 0.313 standard deviations. In the literature review, E-Service Quality is mentioned to have direct or indirect impact, sometimes in both ways. In some cases, direct positive impacts are found between the two constructs. Else, they are often found having indirect positive impacts through mediators, in this case, are E-Trust and E-Customer Satisfaction. It is important to review the SEM result in both direct and indirect effect, and using total effect to conclude.

Standardized direct and indirect Effect Tables 3 show that there is positive indirect relationship between E-Service Quality and Behavioral Intentions. E-Service quality poses a positive impact with behavioral intentions through mediators E-Trust and E-Customer satisfaction with the coefficient value at 0.664, supporting hypotheses H4, H5.

It can also be seen that the relationship between E-Service quality and E-Customer satisfaction and the one between E-Trust and behavioral intentions possess both direct and indirect effects as well. The indirect effect between E-Service quality and E-Customer satisfaction is caused through mediator E-Trust, and the indirect effect between E-Trust and behavioral intentions is caused through mediator E-Customer satisfaction.

In summary, it is concluded that all the initial hypotheses including H1, H2, H3, H4, and H5 are

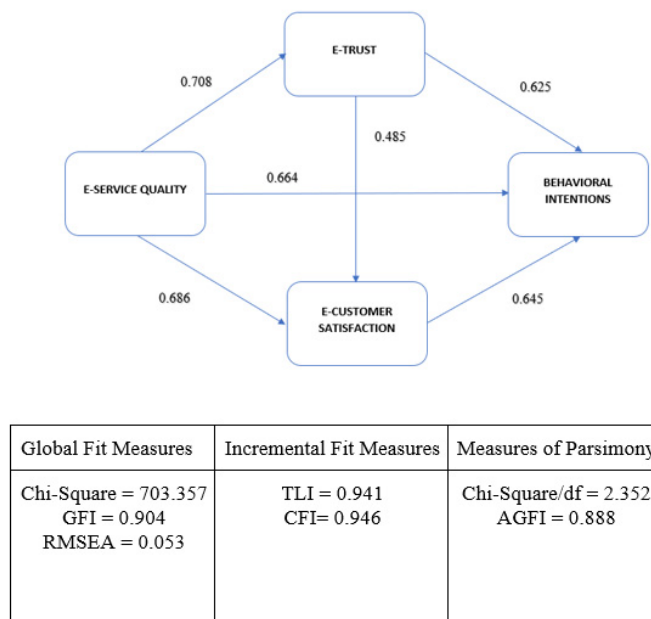


Figure 1. The total effect of research model is presented as follow:

Table 3. Standardized Total Effect

	ESQ	ET	ECS	BI
ET	0.708	0	0	0
ECS	0.686	0.485	0	0
BI	0.664	0.625	0.645	0

accepted and are statistically significant. In other words, there are positive impacts of E-Service Quality, E-Trust, E-Customer satisfaction on behavioral intentions. Not only direct impacts but also indirect impacts are found contributing to the relationships between factors. Total effects of both direct and indirect impacts in Figure 1 are statistically significant and are eligible to be used as the final result of the model.

VI. CONCLUSION AND DISCUSSION

A. Discussion

The aim of this research from the beginning is

to investigate and clarify the relationship between ESQ, ET, ECS and BI so as to propose managerial implications and recommendation for future studies and practice. From the result of this study, it can be determined that the objectives are achieved. There are positive and significant relationship between ESQ, ET, ECS and BI. In particular, ESQ has positive direct impact with ET, ECS. Indirectly, ESQ positively impacts BI through mediators ET and ECS. Indirect relationships are also found between ESQ and ECS through ET, as well as ET and BI through ECS. The scale constructing this model has appropriate reliability since all construct measures are kept and the result is statistically significant, proposing valuable findings that contribute greatly in the field of marketing and human behavior.

With 476 samples were put for diagnostic, SEM result indicates all five hypotheses are accepted at over 95% reliability (p value is less than 0.05), which means that ESQ has direct positive effects on ET and ECS; ET is found to have direct positive effects on ECS and BI, and ECS has a direct positive effect on BI. Indirectly, ESQ is proven to have positive

effect on BI, through mediators ET and ECS; ESQ also has indirect positive effect on ECS through ET, as well as ET has indirect positive effect on BI through ECS. Total effects of the relationships are presented and deemed statistically significant. Especially the relationship between ET and BI, direct and indirect effect between the two factors are confirmed, which has never been proposed or mention before. This is also an important novelty in this subject, creating a reliable basis for future research. From this result, managerial implications are proposed to help business administrators of E-Retailer and marketers for better understanding and reducing uncertainty in this particular emerging market.

In addition, from the result, ESQ has direct positive impacts on ET ($\lambda = 0.708$) and ECS ($\lambda = 0.343$), also an indirect effect on ECS ($\lambda = 0.343$) through mediator ET. ET has a direct positive effect on ECS ($\lambda = 0.485$). Shu-Chiung et al., (2011) proposed this relationship in a 2011 research in Taiwan and Malaysia online retailing websites, his study found that e-service quality of Taiwan model has significant effects on satisfaction and trust while on the other hand, e-service quality of Malaysia model has significant effects on satisfaction but not for trust. Within the presented studies, the findings of this study are consistent with prior findings concerning the positive relationship between ESQ, ET and ECS.

Moreover, as hypotheses are proven, the relationships between ET, ECS and BI are clarified. ET has a direct and an indirect positive impact on BI, with $\lambda = 0.313$ and $\lambda = 0.313$, respectively. The indirect impact happens through mediator ECS. ECS has a direct positive impact on BI ($\lambda = 0.645$). Behavioral intentions are a group of behaviors demonstrated in the literature as a consequential and crucial factor in e-service context. It depends on how customers perceive the online firm through their experiences. Often when customers experience aspects of service quality or receive satisfaction during using the firm product/service, they show traits of behavioral intentions. This has been indicated in the literature (Hu et al., 2009; Yu et al., 2006; Lien, et al., 2011). ECS has been confirmed to have positive effect on

BI, but ET is a different story. Only a few studies have examined the relationship between aspects of trust and partial behavior factors. In this study, a full scale of ET and a full scale of BI is brought in for evaluation, and the correlation is significant, meaning that e-trust actually has powerful impact on all aspects of behavioral intentions. In conclusion, it can be understood that when customers trust an e-firm, their satisfaction toward the firm is lifted and lead to positive behavioral intentions. ET is now considered as a precedent for ECS and BI

Finally, one of the most notable findings of this thesis is the indirect impact of ESQ to BI ($\lambda = 0.664$) through mediators ET and ECS. In many cases, such impact is regularly found between the two constructs through ECS, but now, in this case, through ET as well. As all the relationships are brought into day light, the result can now be applied in future researches without reinvestigation.

B. Managerial Implications and Theoretical Contributions

From the managerial point of view, this thesis offers insight regarding that e-service quality and e-trust are important precedents to other e-services aspects. As seen from the final research model, ESQ has the largest impact to all three other factors: ET, ECS and BI in a descending order, which means that the better the service quality, the better the outcomes. E-trust also affects ECS and BI significantly. It can be comprehended that ESQ and ET are impactive factors while ECS and BI are the results of the impact. Firms can actively improve ESQ and ET, but ECS and BI are the ones that firms cannot control directly since it mainly comes from customer's feelings and experience with the firm. In this section, author will provide managerial implications regarding e-service quality and e-trust so that firms and marketers can consult and apply.

In order to generate excellent e-service quality, vendors should put effort in enhancing website design, reliability, security (trust), and customer service

(personalization). Online retailers should improve their order handling procedure by investing in web interface by building app-based web interface and mobile interface, making it easier to place order, providing multiple payment methods and a variety of shipping options, thus creating best comfort in the purchasing experience. Website and mobile application must have smooth and fast interaction.

Additionally, credit management should be focused on, where goods and services must be of high quality and guaranteed exactly as product/service description, this can be achieved by carefully checking and monitoring vendors, suppliers and partners for their authenticity and credit, as well as logistics to assure that customers get what they ordered timely.

Responsiveness is also a key determinant. E-retailers should operate an effective customer service team, with inquiries answered immediately and carefully, also joyful, warm-voiced, friendly people should be used in contact center to take care of customers. This will elevate both service quality and customer satisfaction.

In terms of E-Trust, result indicates that e-trust influences e-customer satisfaction and behavioral intentions directly and indirectly. Therefore e-trust should be focused and elevated. Author recommends that online firms should set up partnership with credited banks and financial institutes. These entities are capable of helping firms perform transactions in an expected manner, with their names and capability. A well-known bank means that customers of the bank can also trust the firm. They also have access to the information needed to handle transactions, and their policy is assured by the trust they had built over the years. Not only banks or financial institutes, authentic logistics provider must also be strictly considered.

C. Limitations and Recommendation for Future Studies

First of all, due to the time and budget constraints of the study, the author only surveyed 526 respondents (476 valid responses) who had been purchasing from

major online retailers in the area of Vietnam, not representative for the research crowd. The generalizability of the study would have been more significant if the survey is conducted in many provinces and cities, not only major retailers but also small and medium ones, and the research should be expanded to foreigners living and working in Vietnam in light of significant regional gaps in consumer attitudes and behaviors. Thus, it is suggested that future researchers should explore potential participants in the whole of Vietnam in order to have a more accurate and more general view of customers' mindset about e-services.

The next limitation is that respondents for this research are almost students and officers who are in middle-level income group. The author could not interact with ones in high-income class. They can have other opinions about experiencing many kinds of e-retailers and concerning authentic products/services. Those opinions can make a contribution to the more objective observations of customer behaviors about e-service aspects.

Finally, the author did not investigate the direct relationship between E-Service Quality and Behavioral Intentions, as the main point of the study is to examine whether there is a relationship between them through mediators E-Trust and E-Customer Satisfaction. Future research should examine both direct and indirect as well.

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