Factors affecting on consumers' trust in shopping online for technology and electronic products

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Abstract

This article examines the effect of six factors on consumers' trust in online shopping for technology and electronic products: Reputation, Business size, Website Quality, Security, Reference Group, and Perceived service quality. The curent research applied the desk research methodology and quantitative methodology and the results showed that all the hypothesese are supported but with diferrent levels, in which the Business size has highest impact to the trust of consumers and then reputation, reference group, website, perceived service quality and information security. Beside, the research also consider the impact of demographic variables to the consumers' trust and proposed some implications to increase the consumers' trust in technology and electric products in online shopping

Key words: *trust, online shopping, reputation, business size, perceived service quality, website, information security, reference group.*

Introduction

According to the E-commerce and Information Technology Agency's 2017 report, Vietnam has 30% of the population (about 27 million people) shopping online with average purchase value of 350 USD/person/year. Total online B2C sales reach $10 billion in 2016, counting for 5% of total sales of consumer goods and services nationwide. This figure is impressive, but it has not really met the potential when the trend of telecommunication services, online payment, business support platforms, online sales are increased and improved. While the trend is increasing but many people still suspicious because they do not have enough trust and confidence in online shopping over traditional shopping.

The question for businesses is what factors affect to the trust of consumers, and how to improve and enhance the trust of consumers in online selling channels? The concept of trust is simply understood as accepting the risk of believing in someone or something. While the trust plays an important role in the buying decision process but until now in Vietnam there are not many research on consumer trust, especially in online environment.

Technology and electronic products are the most frequently purchased online by consumers, and this is also the group of products commonly traded on e-commerce websites, so the current research selected technology and electronic products as the product samples of the research.

The significant role of trust, the popularity of online purchase for technology and electronic products as well the lack of research on this area are the main reasons for the author to select the topic "Factors affecting on consumers' trust in shopping online for technology and electronic products". The six independent factors include: reputation, business size, perceived service quality, website, information security, reference group. Applying the quantitative methodology, the current research aims to reach three main objectives: (1) specify which factors that influence consumers' trust in online shopping; (2) find out the importance of each factor to the trust of consumers in online shopping behavior; (3) propose the implications to increase consumers' trust in online shopping.

2. Literature review

2.1. Shopping online

2.1.1. Shopping online definition

There are many different concepts of online shopping. Online shopping is the act of buying goods or services through the Internet. The definition of online shopping is complementary: online shopping is the activity of purchasing goods or services through the internet rather than the traditional stores. "Online shopping is a form of e-commerce that allows customers to directly buy goods or services from sellers over the Internet using a web browser". This definition confirms that online shopping is a form of e-commerce by "using a web browser". However, "using the web browser" through internet access is true but not enough. Other academic studies define online shopping as the process by which consumers purchase goods or services through the internet (Hasslinger et al., 2007; Li and Zhang, 2002). According to these studies, online shopping is more than just an action/activity, this is the process - from the moment consumers make the purchase decision to buy on the internet. The author chooses this view for the current research because successful online shopping needs a series of different activities such as product search, selection, evaluation, order placement, payment, delivery. This shopping process is done by the customer with virtual shops/online stores. During this shopping process, buyers and sellers do not meet face to face, all transactions are made through Web site (Kolesar and Galbraith, 2000; Lester et al., 2005). These online stores are available 24 hours a day, 7 days a week (Abbad et al., 2011), so customers can shop anytime (Lester et al., 2005; Monsuwé et al., 2004). When you want to buy a product, customers simply select by clicking on the product and the product will be delivered to the address set by the customer. The goods at these stores are usually described in writing, image, audio, video (Kolesar and Galbraith, 2000; Lohse and Spiller, 1998). Therefore, customers can only feel and evaluate products through the messages (images, text, audio, video) that the seller posted

on the website, but cannot be evaluated same as traditional shopping. Shopping online environment is more risky than traditional one (Laroche et al., 2005). Although risky but online shopping also brings benefits to consumers: consumers access many booths at the same time (Nguyen Thanh Do and Ha Ngoc Thang, 2014) so they are easy find the products that best meet their needs, most reliable, most reasonable price.

2.1.2. Features of online purchases

According to Nguyen Thanh Do and Ha Ngoc Thang (2014), the characteristics of online shopping differ from traditional shopping: Technically necessary to carry out procurement; The way buyers and sellers approach each other; How to evaluate before buying; The ability to access sales points at the same time.

In terms of the technical conditions require to make the purchase, it is clear that customers need to have a computer or mobile device connected to the Internet. In some cases, retailers do not accept cash on delivery (COD), customers are required to have a bank account or pay. While in the traditional form of buying, sellers and buyers meet directly each other at the place of sale (shops, supermarkets…) and buyers can look at the product and perform buying behavior. In online shopping, customers can make transactions, communicate with sellers anywhere through a computer or a mobile device.

2.1.3. Advantages of Online Shopping

Online shopping has the some advantages: *(1) Convenience:* convenience demonstrates that customers can buy anywhere and anytime with a computer or internet-enabled smartphone (Ho and Chen, 2014; Nguyen Thanh Do and Ha Ngoc Thang, 2014). Geographic distance is no longer an obstacle for customers (Abbad et al., 2011); *(2) Time saving:* customers do not have to wait for payments as in traditional supermarkets or stores (Monsuwé et al., 2004): *(3) Better shopping:* many booths can be accessed at the same time, online shopping can easily compare features and prices of products/services between different suppliers in a very short time, which is difficult to do with traditional shopping, so that customers can choose suppliers with the most competitive prices (Lester et al., 2005): *(4) Many choices of goods:* from the ability to access multiple booths at the same time, customers can find many alternatives to best meet their needs (Nguyen Thanh Do and Ha Ngoc Thang, 2014); *(5) Customers are not under pressure from the seller:* buyers and sellers do not have to meet face to face so in online shopping customers are not pressured by the seller, but on the other hand they also protect their own right when buying sensitive products *(6) Customers can be easily consulted by other people when making decisions:* Customers can completely share product information on the online site for relatives, friends and get   advise easily.

2.1.4. Limitations of online shopping:

In addition to the above advantages, online shopping has some limitations: *(i) Customers do not see the real product* and do not try the product before buying and feel worry. *(ii) Online shopping is*

more risky than traditional shopping: The risks associated with online shopping may include product risk, privacy risk, supplier risk, financial risk (Chang, 2008; Corbitt et al., 2003; Doolin et al., 2005; Lim, 2003). Products are not tested and tried before buying, make customers suspicious about the product through the pictures posted in the website; *(iii) Lack of social interaction:* buyers do not have direct contact with the sellers, all their transactions are made through a website (Albesa, 2007) thus, people who have high social interaction are less likely to buy online.

2. 2. Trust in buying behavior:

2.2.1. Concept of trust (belief):

There are different definitions of trust and each has a different view. Lewis and Weigert (1985) defined trust as "the insight into a series of risky actions with the confidence that all participants to act properly and responsibly." According to Mayer, Davis and Schoorman (1995), trust was defined as the willingness of one party (party A) to be influenced by the action of another party (party B) with the expectation that the Party B will carry out specific actions exact and independent without controlling from Party A. This definition is widely recognized and is often cited in many other studies. However, in this study, the author choses the definition of Hosmer's (1995) - trust is the expectation that other behave in accordance with commitments, negotiate honestly and do not take benefit of the situation even if there are opportunities. This is the definition closest to the subject that the author is conducting and it also covers the definition of trust in other studies.

2.2.2.Trust in Online Shopping:

2..2.2.1. The role of online shopping trust:

Without trust, business transactions will not succeed. Online shopping is the purchase and sale transaction between the consumer and the seller through the internet. And these transactions can only be successful if the consumer trusts the virtual environment. In business dealings online, consumers are unaware the quality of the goods before buying, so the risk to consumers in online shopping is higher than traditional purchase. In addition, malicious programs spreading through internet environments such as spyware, adware, viruses, etc. can interfere the online shopping process to steal personal information and harm to customers. Clients perform their online buying behavior based on information, product illustrations of the service on the seller's website without the presence of the seller face to face.

#### 2.2.2.2. Factors affecting online shopping trust:

Many studies mentioned about the importance of trust in general shopping and especially online shopping. The reputation of a business contributes to the credibility of buying behavior. Reputation is seen as a source of information to reduce uncertainty when making purchases. Trust depends not only on external factors, but also on the individuality of each customer. Some factors effect to the consumers' trust: Cognition-based; Experience-oriented and Personality-oriented were recognized by Dan J. Kim, Donald L. Ferrin, H. Raghav Rao (2008). In the course of conducting research on

trust in online shopping, some scholars have also added the notable features of the online environment such as: oder fullfilment (Iakov Y. Bart, Venkatesh Shankar, Fareena Sultan, Glen L. Urba (2005), website design (Kim, Xu, and Koh (2004); Koufaris and Hampton-Sosa 2004), Lee and Turban (2001), Mei-Jane Chan (2008). With many similarities in geography and culture with Taiwan, by Ding Mao (2010) consumers buying through online in China were influenced of risk worrying. For the e-commerce market in Vietnam, research articles on trust in online shopping inherited previous research and the latest research on this topic is by Bui Van Vien (2013). The research has shown that the factors that directly affect the online purchasing confidence of the Vietnamese people are: reputation of the sales unit, perception of service quality, reference group.

3. Research model and hypotheses

3.1.1. Research model

Throughout overview of previous research, the author realized some limitations and created the own research model to analyze the factors effect to the Vietnamese consumers' trust in shopping online which mentioned in the following research model. Note that the research model based on the foundation of *trust model in online shopping* of Ding Mao (2010) with some adjustments and includes six independent variables: reputation, business size, perceived service quality, reference group, information security and website (refer figure 1).
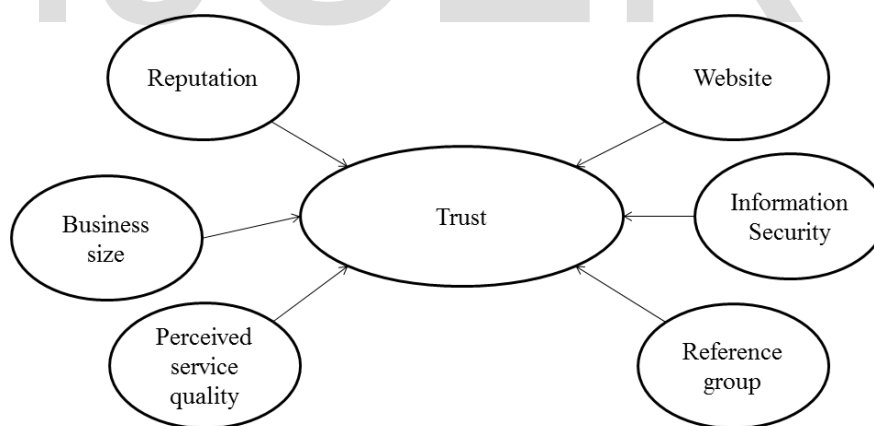
Figure 1: Research model

3.1.2. Hypotheses

The relationships between independent variables and dependent variable to be tested are expressed through the following hypotheses:

H1: Reputation has a positive impact on consumers' trust in online shopping in Vietnam.

H2: Business size has a positive impact on consumers' trust in online shopping in Vietnam.

H3: Perceived service quality has a positive impact on consumers' trust in online shopping in Vietnam.

H4: Website has a positive impact on consumers' trust in online shopping in Vietnam.

H5: Information security has a positive impact on consumers' trust in online shopping in Vietnam.

H6: Reference group has a positive impact on consumers' trust in online shopping in Vietnam.

3.1.3. Operationalization

To measure each factor in the research model, the research uses Likert 5 scales in which 1 indicates quite dissagree and 5 indicates quite agree. Reference the previous research, the questionaires were used to measure the independent factors which is expressed by the following table:

Table 1: Operationalization of the variables

Factor	Observed variable	Question	Author
Reputation	1. The website is famous (DT1)	1. The websites that you have purchased are famous	Ding Mao (2010)
	2. The website is popular (DT2)	2. That website is popular	
	3. The website has a good reputation (DT3)	3. The website has good reputation	
Business size	4. The company owns that website is a big company (QM1)	4. The company owns that website is a big company	Ding Mao (2010)
	5. The company that owns the website is a large company in the online business market (QM2)	5. The company that owns the website is a large company in the online business market	
Perceived service quality	6. Products on the website are always available (DV1)	6. Products on the website are always available	Ding Mao (2010)
	7. Delivery speed (DV2)	7. The company has a fast delivery speed	
	8. Payment reliability (DV3)	8. The company has high payment reliability	
	9. Product qualities are guaranteed (DV4)	9. Product qualities are guaranteed	
	10. They provide good after sale services□ (DV5)	10. They provide good after sale services	
Website	11. Website's appearance is friendly (WS1)	11. Website's appearance is friendly	Mak Wing Ka, Freda (2005)
	12. The website layout is designed properly (WS2)	12. The website layout is designed properly	
	13. The website is easy to use (WS3)	13. The website is easy to use	
	14. It's easy to find information on the web (WS4)	14. It's easy to find information on the web	Ding Mao (2010)
	15. Company contact information is clearly showing	15. Company contact information is clearly	

	on the web (WS5)	showing on the web	
Information security	16. The website explains how it will use consumer personal information (BM1)	16. The website explains how it will use consumer personal information	Mak Wing Ka, Freda (2005)
	17. The website is dedicated to protect the privacy of consumer's personal information and account information (BM2)	17. I feel that the site is dedicated to secure my personal information and account information	
	18. The privacy of consumer's information is protected on the site (BM3)	18. The privacy of consumer's information is protected on the site	
	19. Customers are afraid that their information is misused (BM4)	19. I am afraid that my information is used incorrectly	
Reference group	20. The opinions and experiences of the family members help consumers become more confident when shopping online (TK1)	20. The opinions and experiences of the family members help me become more confident when shopping online	Anders Hasslinger, Selma Hodzic, Claudio Opazo (2007)
	21. The opinions and experiences of friends help consumers more confident when shopping online (TK2)	21. The opinions and experiences of friends help me more confident when shopping online	
	22. The opinions and experiences discussed in the forums help consumers become more confident when shopping online (TK3)	22. The opinions and experiences discussed in the forums help me become more confident when shopping online	
Trust	23. Consumers feel that the site will bring them the best benefits (LT1)	23. I feel that the site will bring me the best benefits	Ding Mao (2010)
	24. The website is reliable to proceed transaction (LT2)	24. The website is reliable to proceed transaction	
	25. Customers believe the site	25. Customers believe the site	

	will keep the commitment (LT3)	will keep the commitment	

4. Research methodology

4.1. Research design

The current research was conducted by using the combination of quantitative and qualitative method. The data collected from market reports (secondary data) in conjunction with a consumer survey (primary data). SPSS 20.0 (Statistical Package for Social Scieneces) was the main software to use in processing and analyzing data from survey. Below are steps in processing and analyzing:

- Step 1: Frequency and Descriptive analysis

- Step 2: Reliability test (Cronbach Alpha)

- Step 3: Analyze the impact of independent variables on dependent variable

- Step 4: Analyze the impact between independent variables

- Step 5: Analyze the relationship between demographic variables and dependent variables

4.2.Sample size

The research use the convenient sampling technique, and the minimum sample size propose 50 + 8k where k is number of independent variable (Newton and Rudestam, 1999). In this research, there are 6 independent variables, so the minimum sample size to perform multivariate regression analysis is $50 + 8\times6 = 98$. In fact the author sent online questionaires and the collected answers is 155 after cleaning the data. The number of respondents is mainly young people age from 19 to 25, count 54.19%; followed by the age 26-35, count 28.39%, age 36-45 count 9.03% and over the age of 46 count 8.39%.

5. Research results and discussion

5.1. **Reliability test (Cronbach Alpha)**

Cronbach's alpha analysis gave the result of Cronbach's alpha coefficients were greater than 0.7 and Corrected Item-Total Correlation were greater than 0.3. Therefore, the reliability of the scale is satisfied, no need to reject any observed variables.

5.2.**The impact of independent variables on dependent variable**

Pearson correlation analysis between dependent variable LONGTIN (trust) and independent variables: Reputation (DT), Business size (QM), Perceived Service Quality (DV), Website (WS), Security (BM), the reference group (TK) with a significant level of 5%, the result showed that all 6 independent variables have positive impact on the dependent variable, so all of 6 hypotheses from H1 to H6 were accepted. (see the below table):

Table 2: Correlations

		LONG TIN	DT	WS	TK	BM	DV	QM
LONG TIN	Pearson Correlation	1	.446**	.522**	.503**	.487**	.557**	.370**
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.000
	N	155	155	155	155	155	155	155

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

The research result also shows that independent factors influencing trust in online shopping with different levels and arranged from strongest to weakest as follows: Business size (QM), Reputation (DT), Reference Group (TK), Perceived Service Quality (DV), Website (WS), Information Security (BM) (see the figure 2).
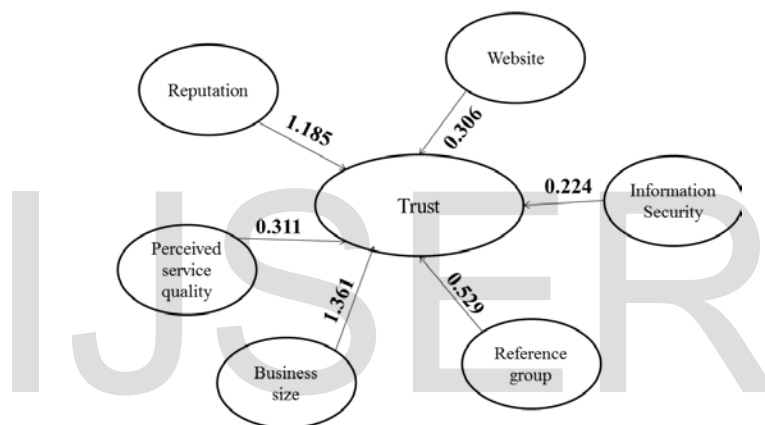
Figure 2: The impact of independent variables on dependent variable's result.

5.3.The relation between demographic variables to dependent variable

Apply mean comparison test, the results of examine the relationship between demographic variables and dependent variable is described as the below table:

Table 3: Summary the impact of demographic variables on dependent variable's result

Demographic variables	Dependent	Result	Meaning
GENDER	LONGTIN (Trust)	No statistically different Sig = 0.172	There is no difference in trust between male and female with technology and electronic product through online shopping.
AGE	LONGTIN (Trust)	No result	Cannot conclude

JOB	LONGTIN (Trust)	Statistically different Sig = 0.000	There are differences in trust between occupations.
INCOME	LONGTIN (Trust)	Statistically different Sig = 0.015	There are differences in trust between levels of income.
RECENT REPEAT PURCHASE	LONGTIN (Trust)	Statistically different Sig = 0.000	There are differences in trust between levels of income.

Hereunder is the detail discussion of the above table's results: (1) There is no difference in trust between male and female in technology and electric products in online shopping; (2) There are differences between occupations in customers' trust: Office Staff and Engineering occupation groups have higher level of trust than students, physicians and other groups when shopping online for technology and electronic products. The reason is these 2 occupational groups have more opportunity to use technology and electronic products so their trust in online shopping is generally higher than that of other groups, especially when this is not the field of their interest. Moreover, physician's occupation requires careful, meticulous, high accuracy requirements, can lead to online shopping behavior very cautious, trust will not be high. For the students, the group is not financially self-sufficient, so it will be cautious to spend some money on online shopping, which won't lead to high confidence; (3) Among the groups of income segment, the higher the income, the higher the trust in online shopping for technology and electronic products. This can be explained by the following reasons: higher income people would accept more risk of unsuccessful purchasing and under expected product quality. Furthermore, the high-income groups have more options when shopping online because they can afford higher costs for better products and more reliable services**; (4)** There are different levels in trust between the number of recent repeated purchase. The higher number of repeated purchase, the higher level of trust in technology and electronic products in online shopping.

6. Conclusion

The study demonstrated six factors that influence online shopping trust: reputation, website, business size, information security, reference group, and perceived service quality. Among six factors, Business size has highest impact on trust and then Reputation, Group reference, Perceived service quality, Website and lowest is Information security.

Doing the current research, the author faced with some limitations: the survey method was mainly web-based with the sample size is 155 in Hanoi only. The future research should overcome these limitation by doing survey and deep interview face to face with larger sample in different places. Eventhough, the research has some contributions: This research would help businesses to understand the psychology, buying behavior of the Vietnamese consumers from which to come up with the appropriate business strategies.

Through the research results we can suggest the online shopping business can increase the level of awareness of customers' trust in online shopping by the following ways: (1) Although business size is the most powerful factor influence on customers' trust when shopping online, however, in Vietnam there is not so many big enterprises so we should also pay attention to the medium and small enterprises and encourage them to increase the quality of the remain factors to raise customers' trust in online shopping; (2) In order to boost the reputation, online businesses need to increase their brand identity and reputation through communication channels; (3) Reference group factor is also important for customers' trust so training Vietnamese people to be honest is necessary; (4) in order to increasing Perceived service quality, online shopping business should ensure that the provided products must be fast and the quality must be the same as described on the website.

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