



Proposing a Research Model on Factors Affecting Customers' Trust in E-Commerce Transactions in Binh Dinh

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ABSTRACT: Although online shopping is convenient, has many advantages, and is the trend of the times, consumers still have not put their whole trust in these goods and service providers. It is essential to study the factors affecting customer trust in e-commerce transactions. To have the basis to carry out this study, the authors have analyzed relevant research at home and abroad. On that basis, propose a model to study the factors affecting the trust of customers in e-commerce transactions in Binh Dinh province, which are: website reputation, website design, information quality, transaction safety, and social impact.

KEYWORDS: E-commerce, Proposed model, Reliability.

1. INTRODUCTION

According to the European Union (EU), e-commerce includes commercial transactions through telecommunications networks and using electronic means. In e-commerce, transactions are carried out through the internet, buyers and sellers do not know each other, customers know products sold on e-commerce sites through descriptions, and pictures provided by the seller, and customers do not directly experience the products before making a purchase. For most online shopping sites, when the customer and the seller close the transaction, the buyer cannot receive the goods immediately, which increases the occurrence of factors of uncertainty. Customers who have not verified the quality of goods and do not trust sellers are also the reasons why many people are still hesitant to participate in online shopping. Thus, the trust of customers in e-commerce transactions plays an important role.

Although online shopping is convenient, has many advantages, and is a trend of the times, especially in the post-Covid-19 period, consumers still do not fully trust these goods and service providers. Thus, studying the factors affecting customers' trust in e-commerce transactions in Binh Dinh is necessary to enhance the quality of e-commerce transactions, promoting e-commerce activities in Binh Dinh in particular and Vietnam in general, and proposing a research model is also the first key turning point to conduct this study.

2. RESEARCH OVERVIEW

2.1. Research overview around the world

In the world, there have been many studies on the factors affecting the trust of customers in e-commerce transactions. The authors have studied related studies and summarized them in the following table:

Table 1: Summary of studies related to the topic in the world

Author	Objective	Method	Result
Man (2006)	Study examines factors affecting trust in Internet Banking in Hong Kong.	Qualitative and quantitative research, data collection through survey by questionnaire.	Structure assurance has the most powerful relationship to reliable faith, followed by familiarity, perceived website quality, and situational normality.
Chen (2007)	Study the basic trust in the exchange relationship between customers and e-commerce retailers	Qualitative and quantitative research, data collection through survey by questionnaire.	All four factors: Website design, Responsiveness/Reliability, Security/Secure payment and Customer Service all have an impact on customer trust in e-retailers.



Author	Objective	Method	Result
Joseph-Vaidyan (2008)	Study on factors that increase customers' trust in E-commerce websites.	Qualitative and quantitative research, data collection through survey by questionnaire.	Four factors: Utility Interface, Organizational structure, Infrastructure, and Security/Secure payment all have powerful impacts on customers' trust when doing online transactions.
Ran (2014)	Investigate the determinants of trust in Internet shopping and its relationship with online purchase intention.	Qualitative and quantitative research, data collection through survey by questionnaire.	Research outcomes show: Ease of use; Security; Website design quality and Reputation of e-commerce website have an impact on consumers' trust when buying online.
Hidayat et al (2016)	Study on determinants of satisfaction, trust and loyalty of online customers in Indonesia for an e-commerce website.	Qualitative and quantitative research, data collection through survey by questionnaire.	Research results show that the user interface quality, information quality, customer service, security and privacy have a positive impact on online customer satisfaction and trust in Indonesia

Source: Compiled by the group of authors

In summary, the research works related to the topic have been published around the world, the group of intrinsic factors that are interested in research includes objects related to purchasing transactions: characteristics of the website (design, functionality, content) and the nature of the individual or enterprise operating that website (reputation, size, quality, service).

2.2. Research overview in Vietnam

In the country, there are also studies mentioning the factors affecting the trust of customers in e-commerce transactions. The following table summarizes the research related to the topic in the country in which the authors compiled.

Table 2: Summary of studies related to the topic in the country

Author	Objective	Method	Result
Tran Minh (2012)	Research on factors affecting customers' trust in online shopping in Vietnam	Qualitative and quantitative research, data collection through survey by questionnaire.	Research results show two factors: Protection of personal information and the Obtained benefit have a positive impact on customers' trust. The other two factors are: website safety and security risk have a negative impact on customer trust.
Hoang Thi Phuong Thao and Nguyen Minh Thong (2013)	Research on Vietnamese consumers' trust in online shopping.	Qualitative and quantitative research, data collection through survey by questionnaire.	The findings show that there are two main factors affecting trust: perception of the website's reputation and the quality of products/services on the website
Tran Ha Minh Quan and Tran Huy Anh Duc (2014)	Research on factors affecting customers' trust in e-commerce in Vietnam	Qualitative and quantitative research, data collection through survey by questionnaire.	The results show all four factors: website design; link of the website; company policy and the existence of the company that owns the website have a positive impact on the trust of customers in e-commerce in Vietnam.
Hoang Thi Phuong Thao and	Research on factors affecting consumer's trust	Qualitative and quantitative research,	Four factors have a strong impact on consumer trust: the reputation of the TV



Author	Objective	Method	Result
Nguyen Hoang Minh (2016)	and intentions to purchasing via the shopping television channels	data collection through survey by questionnaire.	Shopping Channels, products of the TV Shopping Channels, the service of TV Shopping Channels, and the impact of reference groups on consumers. Two factors: Celebrity guests and advertising hosts also have an impact on trust.
Pham Thi Mai Quyen (2021)	Research on factors affecting consumer confidence in online business in Vietnam.	Qualitative and quantitative research, data collection through survey by questionnaire.	The research results show that three factors: The size of a company, website quality, and design have a significant positive impact on Vietnamese consumers' trust

Source: Compiled by the author group

In a nutshell, for domestic studies, besides the group of intrinsic factors, the group of supporting factors in the transaction process is also interested in research, including factors such as policy (terms of operation, business principles, business ethics) and technology (safety, confidentiality of personal information).

3. RESEARCH HYPOTHESIS AND PROPOSED MODEL

3.1. Research hypotheses

3.1.1. The theoretical model of acceptance and use of extended technology – UTAUT2

The UTAUT2 model was developed by Venkatesh, Thong, and Xu (2012) from the extended technology acceptance model – UTAUT1 (Venkatesh, Morris, Davis, and Davis, 2003). The goal of the UTAUT2 model is to predict the technology adoption and use behavior of an organization or individual. With the addition of three more factors: hedonic motivation, price value, and habit compared to the old model UTAUT1. The UTAUT2 model overcomes the shortcomings of the previous TRA model (Ajzen and Fishbein, 1975), TAM (Davis, 1989), TPB (Ajzen, 1991), and UTAUT1 model and has also been applied by many researchers in their new technology acceptance models. Based on the UTAUT2 model, researchers can handle the original model or add a few new variables to suit the actual research conditions.

3.1.2. Website reputation

Doney and Cannon (1997) define the reputation of a company as the degree to which buyers believe that the company is honest and concerned about its customers. Reputation perception is also defined as a customer's recognition of a seller based on information collected indirectly from friends, relatives, and colleagues, etc. (Li et al., 2007).

For e-commerce activities, reputation is an important metric when looking at the level of interaction between consumers and business units. The focus of e-commerce businesses on enhancing their reputation is a prominent trend in recent times (Chen and Barners, 2007). Previous studies have shown that consumers tend to think that websites with a favorable reputation are more focused on providing a superior user experience (Koufaris and Hampton-Sosa, 2004). A good reputation tends to have a positive effect on consumer confidence (Doney and Cannon, 1997; Jarvenpaa, Tractinsky, and Vitale, 2000). The higher the reputation of the business, the more those businesses try to build their reputation; therefore, the compensation for customers will be higher, if they do not fulfill their engagement, making customers more trusting (Jarvenpaa, Tractinsky, and Saarinen, 1999). In Vietnam, research by Le Thanh Tai (2015) also found a positive impact of reputation perception on customer trust. Therefore, the first proposed research hypothesis is:

Hypothesis H1: Website reputation has a positive impact on customer trust in e-commerce transactions.

3.1.3. Website design

Feng et al. (2004) argue that websites are trusted by consumers if they provide actual contact information for a company's office, or the organization's interactive environment to strengthen personal trust, and allow communication between the customer and the company. Feng et al (2004) concluded that providing evidence to help customers know the reviews of other customers,



especially those with experience will help build consumer trust in "online sellers", Website design is one of the issues to be concerned about because it affects how consumers evaluate the Website and whether they trust the e-commerce activities of the Website or not.

Wolfenbarger and Gilly (2003) also pointed that website design affects consumers' satisfaction when participating in e-commerce activities, reflected in factors such as: presentation and organization of information, product image, information search function, the technology used, and completeness of the information (Ranganathan and Ganapathy, 2002). Therefore, the second proposed research hypothesis is:

Hypothesis H2: Company website design has a positive impact on customer trust in e-commerce transactions.

3.1.4. Quality of information

Information quality is a common measure in previous studies because it is a feature that helps customers orient products, compare, and make purchasing decisions (Park and Kim, 2003). Shih (2004) believes that the quality of information is reflected in the fact that the content is presented accurately, usefully, and regularly updated.

When a customer has never done a transaction with an e-commerce website, trust does not form based on previous transactional experiences and relationships. Therefore, trust is formed initially based on the available information (Meyerson et al., 1996). In the e-commerce environment, customers cannot see the business, the website is the first thing customers come into contact with and create the first impression. Thus, if customers perceive the supplier's website to be of high quality, customers will have high confidence in the ability, honesty, and commitment of the business' promises to be fulfilled. Research by Fung and Lee (1999) cited in McKnight et al. (2002) believe that high website information quality and effective interface design enhance the formation of consumer trust. Therefore, the third proposed research hypothesis is:

Hypothesis H3: Information quality has a positive impact on customer trust in e-commerce transactions.

3.1.5. Safe transaction

In the e-commerce environment, customers who transact at the website will be at risk of losing access to their personal information or credit information if the website has low levels of security and reliability (Teo and Liu, 2007). Especially, for an unfamiliar business/website, feeling safe when transacting is key for customers to trust that website (McKnight et al., 2002).

Teo and Liu (2007) define "The assurance system as the reliability and safety of the supplier's online transaction system, allowing the Internet transaction to be safe and successful". Studies in Vietnam such as Phung Kim Dung (2008) evaluate the safety factor when transacting affects the trust of customers; Tran Huy Anh Duc (2012) considers the operational policies that positive impact on trust when buying online. All these factors revolve around what policies and technologies the business or website performs to protect information for customers. In general, consumers will tend to prefer to buy products or services on websites that have high-quality security systems and privacy policies to protect their information. Therefore, the fourth proposed research hypothesis is:

Hypothesis H4: Transaction safety has a positive effect on customer trust in e-commerce transactions.

3.1.6. Social impact

Social impact is defined as the influence of family, friends, colleagues, or people around them based on their opinions, reviews, and advice. Meskaran et al (2010) found that the recommendation of friends has a positive impact on reputation perception and thereby affects customer trust. The study was executed in Iran, a cultural environment with high collective scores. Vietnam is also a developing country with a highly collectivist culture scoring 20 out of 1004. Kim and Prabhakar (2004) point out that social influence has a positive effect on the intention to use. Specifically, the impact of people around and reviews will have a strong impact on consumer confidence.

Cheung and Lee (2000) argue that external factors such as third-party authentication and the legal framework also affect consumers' trust in online shopping. Besides, reference groups such as the opinions of family, relatives, friends, and colleagues about their online shopping experience have a direct or indirect influence on the beliefs and attitudes of new customers (Kotler et al. and Armstrong, 2010).

In the study of Le Thanh Tai (2015), the adjusted model after qualitative surveys through experts in the field of market research has introduced the Social Impact factor to be defined as the impact aspect of the people around like family, friends. Therefore, the sixth proposed research hypothesis is:

Hypothesis H5: Social impact has a positive impact on customer trust in e-commerce transactions.

3.2. Research models

Based on a theoretical overview of customer trust in e-commerce transactions along with relevant research analysis at home and abroad, especially with the research model (Ran, 2014) and local e-commerce characteristics, the authors propose the following research model for identifying factors that affect customer trust in e-commerce transactions in Binh Dinh:

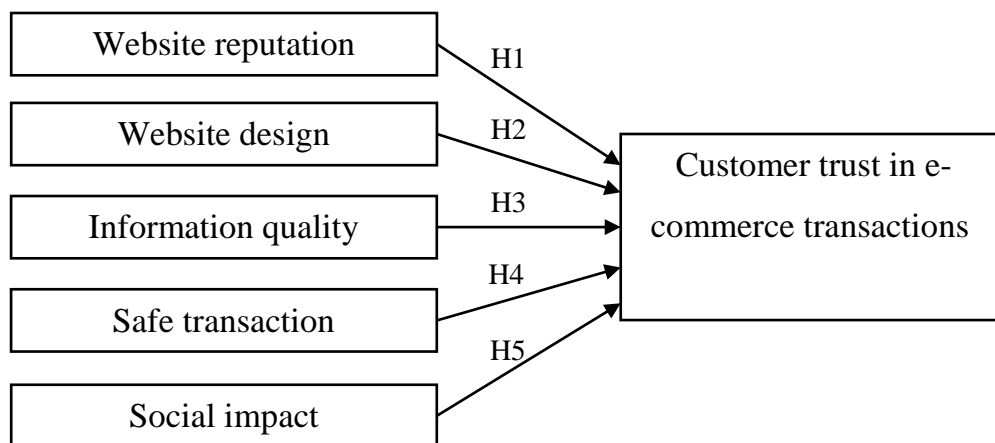


Figure 1: Proposed research model
 Source: Proposal of authors

The regression equation is written as:

$$TC = \beta_0 + \beta_1DT + \beta_2TK + \beta_3TT + \beta_4AT + \beta_5XH + \epsilon_i$$

In which:

The dependent variable

TC: The trust of customers in e-commerce transactions

The independent variable

DT: Website reputation

TK: Website design

TT: Information quality

AT: Safe transaction

XH: Social Impact

β_j : Regression coefficient

ϵ_i : Random error

After the regression results are available, the research team will execute testing of the model's defects to consider the reliability of the regression results.

4. CONCLUSION

Trust is a complex aspect, especially in the context of e-commerce. When consumers cannot directly approach the seller or check the quality when making a purchase. Trust is an important reason to motivate consumers to shop online. For consumers to fully trust suppliers of goods and services, it is necessary to study the factors affecting customer trust in e-commerce transactions. Therefore, based on an overview of related studies, the authors have proposed the research hypotheses and boldly suggest a model to study the factors affecting the trust of customers in e-commerce transactions in Binh Dinh. However, to be able to draw accurate conclusions, a quantitative study needs to be done to test this proposed model. In the future, this will be the direction of the authors' research.



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