# CUSTOMERS SATISFACTION AND LOYALTY THROUGH E-COMMERCE.

## The case of Company X

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# ABSTRACT

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Due to the rapidly increasing number of Internet users, the attractive benefits and spreading popularity of online shopping all over the world and in Viet Nam particularly, more and more Internet vendors have been concerned about how to push sales and grow beneficially in such a fruitful but really competitive e-commerce market. Apart from aggressively focusing on online advertising and exclusive promotional offers, e-satisfaction and e-loyalty have been regarded as the determinants of long-term development and sustainable advantages of any Internet vendor. This research seeks to answer the questions of what the influencing factors to e-satisfaction and e-loyalty of online shoppers are and how important they are as well as testing the relationship between e-satisfaction and e-loyalty upon the case study of Company X's ecommerce website.

Upon critical analysis of literature review, the testing model of five elements which may determine e-satisfaction and e-loyalty with site system quality, information quality, usefulness, perceived value and trust was proposed. Survey method with a sample size of 154 respondents who have ever made purchases via the company's online store http://www.x.com/ was conducted to use for regression analysis, ANOVA analysis and t-test using SPSS (Statistical Package for the Social Science ) version 18.0. In addition, an interview with Company X's manager was also implemented to collect information about Company X's ecommerce situation and the company's beliefs and opinions about e-satisfaction and e-loyalty.

As a result, the findings indicated that all of five elements under investigation (i.e. site system quality, information quality, usefulness, perceived value and trust) significantly impact both e-satisfaction and e-loyalty although each of them may consists of different measurement items and not all these measures significantly affect e-satisfaction and e-loyalty such as the colour of the website, the operation of linked pages, easy to understand information, etc. The study also revealed that the relationships between demographic factors such as gender or age, e-satisfaction and e-loyalty do exist. Specificially, male customers are more satisfied with and more loyal to Company X's online store. Besides, the older the customers are, the less satisfied and loyal they are towards shopping at Company X's ecommerce website. The research indicated that there is a significant and positive relationship between Company X's online customers' e-satisfaction and their e-loyalty. The study also drew some helpful implications for Company X and academia as well as identified areas for further research.

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# 1 INTRODUCTION

## 1.1 Background of the research problem

### 1.1.1 Global & Vietnam's ecommerce market

Nowadays, e-commerce or online shopping has become more and more popular. It is estimated that by 2015, global e-commerce sales will reach $1.7 trillion and by 2018, the number will increase to 2.3 trillion, a growth rate of 38.6%. (Emarketer: Worldwide Ecommerce... 2014). Therefore, it could be said that e-commerce is promising for businesseses.

Vietnam e-commerce and information technology agency (VECITA) forecasted that by 2015, Vietnam will have 40 - 45% of Internet users with the estimated population of 90.73 million (VECITA: Worldwide Ecommerce... 2014). E-commerce sales is projected to go up from $2.2 billion in 2013 to $3.7 billion in 2015, an increase of approximately 68% (VECITA: Vietnam e-commerce report 2013). However, sales goes up so does competition. Over the years, e-commerce field has also become increasingly competitive with more and more players entering the market. The number of registration websites to Vietnam's E-commerce Administration Portal (legally operate as e-commerce websites) rose from 344 in 2013 to 1112 in 2014 (VECITA: Worldwide Ecommerce... 2014).

### 1.1.2 Case company X

Head office located in Ho Chi Minh City, Company X has established an e-commerce website selling and distributing electronic products including: digital devices (cameras, camcorders, voice recorders, etc); computers – laptops (PC, laptops, tablets, etc) ; telephone – telecommunications equipments (telephones, mobile phones, GPS navigation devices, etc); office equipments (fax machines, copy machines, printers, money counting machines, etc); electronic audio-visual devices (TV, speakers, projectors, karaoke system, etc); refrigeration (washing machines, refridgerators, etc)

and household facilities (microwave, oven, etc). Most of the transactions/operating affairs are implemented through the online shopping site whose target customers are both consumers and businesses. Company X earns trust from the customers and businesses since it guarantees the genuine quality of products and services delivering to the customers. Besides the head office in Ho Chi Minh city, Company X has seven branches that are open at strategic locations in Vietnam: Ha Noi, Da Nang, Can Tho, Vung Tau, Hai Phong, Nha Trang and Ninh Thuan. Trading activities of Company X is essentially undertaken on the trading website which is designed in line with international and professional standards. The website provides sufficient product information to users, such as details and features of a product, reviews for a product from last buyers, payments method and delivery services, etc.

### 1.1.3 Logic behind the research

In traditional business context, the increase of customer satisfaction has a positive influence on long term financial performance (Anderson, Fornell & Lehmann 1994, 63). Customer's loyalty is also considered as an indicator of profitability (Reichheld & Sasser 1990, 106). Besides, customer satisfaction has a positive effect on customer's loyalty (Grempty, Martensen & Kristensen 2000, 512). It could be said that relationship among customer's satisfaction, loyalty and company's profitability is quite straightforward. In order to be profitable, businesses need to keep their customers satisfied which will lead to customer's loyalty and the company's finiancial sucess. In the e-commerce context, this relationship is a bit more complicated since online customers have a lot of choices, easily compare alternatives and thus they can switch to another competitor easier compared to offline customers. In addition, the driving factors of satisfaction and loyalty of online and offline customers are not the same. Online customers do not deal with vendor-related factors alone but also deal with website-related factors. Therefore, one of the founding reasons for the existence of this research is for Company X to learn more about the factors that influence the loyalty of their customers, what makes the customers satisfied and to test the relationship between the customer's e-satisfaction and their e-loyalty.

### 1.2 Research objectives & research questions

This research aims to get a better understanding of online consumer insights of e-satisfaction and e-loyalty in the context of online shopping via Company X's ecommerce site http://www.x.com/ . More specifically, the purpose of this study is to identify determinant factors of online customers' e-satisfaction and e-loyalty upon their shopping experience at Company X's website, how they are important and test the relationship between their satisfaction and their loyalty as well as the relationship between demographic characteristic (age, gender) and e-satisfaction, e-loyalty. Based on the findings, the study will draw some helpful implications for Company X's e-commerce activities and relevant academia.

In more details, the study seeks to answer the following questions:

1. Does site system quality (i.e. easy to use, website layout, operation of website and its linked pages, colour combination, speed, whether the site system can deliver orders) positively impact e-satisfaction and e-loyalty?

2. Does information quality (i.e. easy to understand, up-to-date, sufficient) positively impact e-satisfaction and e-loyalty?

3. Does perceived usefulness (i.e. wide selection, ability to evaluate alternatives, get what ordered) positively impact e-satisfaction and e-loyalty?

4. Does trust (i.e. not share personal information, protect bank card information, keep services as promised, keep promotions as promised) positively impact e-satisfaction and e-loyalty?

5. Does perceived value (i.e. time saving, cost saving, customer service that provides information, customer service that responds to complaints) positively impact e-satisfaction and e-loyalty?

6. Is there any relationship between e-satisfaction and e-loyalty?

7. Is there any difference between male and female customers in their e-satisfaction and e-loyalty's level? How is it different?

8. Is there any difference between age group (i.e. 16-24, 25-34, 35-44 and more than 44 years old) and e-satisfaction and e-loyalty's level? How is it different?

## 1.3  Structure of the study

The thesis is divided into six main chapters. It begins with the background section that introduces the e-commerce activities worldwide and Vietnam, the case company and the

reasons for the research. Following the background chapter, this research will analyze a critical literature review on e-satisfaction and e-loyalty as well as their determinants so as to build hypotheses and the research model. Next, chapter 3 will present the research methodology beginning with research instrument, then sampling and data collection method; interview and survey construction as well as statistical analysis methods. Finally, in chapters 4,5,6, findings and analysis will be presented followed by discussion, implications and conclusions.

## 2 LITERATURE REVIEW & HYPOTHESIS DEVELOPMENT

### 2.1 E-satisfaction

Anderson and Srinivasan (2003, 125) defined e-satisfaction as "the contentment of the consumer with respect to his or her prior purchasing experience with a given electronic firm". The perception of satisfaction online and offline have a lot of differences. While offline business's satisfaction comes directly from the company, its service and products, an online customer might be satisfied with not just the company itself, but also the website, the order and delivery process, the product's quality and value they received after the purchase. Therefore, in this research the author will test not only vendor-related factors such as value and trust but also website-related factors of site quality and usefulness.

Some customer satisfaction models have been introduced and tested in the past. For example, some empiritical research has been made based on the concepts of expectation and disconfirmation (Alam & Yasin 2010, 72). In the context of e-commerce, a few frameworks have been considered to be useful such as cumulative approach, end-user satisfaction with computing (EUCS) and the SERVQUAL model (Zeng, Hu, Chen & Yang 2009, 955). Additionally, somes research has been conducted in the field of online customer's purchase decision-making. For example, Karimi (2011, 19-20) conducted a research proposing a model for online purchase processes and analyzed the decision-making behaviour of the customers while choosing among retailers.

This thesis scrutinizes the factors which can determine the level of customers' e-satisfaction and customers' e-loyalty through the case study of Company X. In the following section, the author will examine essential factors that might have strong impact on customers' e-satisfaction and e-loyalty based on previous studies. Testing hypotheses will be formulated after discussing the related theories.

### 2.1.1   Information and system quality

Site quality as one of the technological factors is an important determinant of e-satisfaction (Schaupp & Bélanger 2005, 96). It is alternatively explained as the factor used by the consumers/website visitors to judge the general performance of the website. Several authors such as Rodgers, Negash and Suk (2005, 327) and Muylle, Moenaert and Despontin (2004, 543) believe that the quality of a website is one of the satisfaction's dimensions.

According to the updated IS Sucess model introduced by Delone and Mclean (2003, 24), there are three primary components to assess the site quality: information, system and service. This model as well as the first created model has been used by multiple researchers as an evaluation framework of information system (Urbach & Müller 2012, 11). This thesis will concentrate on two components of site quality which are site information quality and system quality. McKinney, Yoon, and Zahedi (2002, 299) defined these two conceptions as follows: information quality is  "the customers' perception of the quality of information presented on a Web site" while the system quality is "the customers' perception of a Web site's performance in information retrieval and delivery". As usual, the customers who visit an online website to purchase products would have several criteria, for instance relevance and sufficiency. These two criteria representing for information quality imply that an online shopping website should provide relevant information and sufficient amount of information to its customers. For example, a customer who is finding menswear would need price, material, country of making, size, etc. information, but not the information of the model wearing that piece of clothing. In different aspect of quality, system quality means a little bit different as it measures how good the information is delivered to and retrieved from customers. These two components of site quality are important because of the special nature of online shopping which does not allow the customers to physically examine the purchasing items. As a result, content shown on the website, design, layouts, etc. play an important role in helping the customers to evaluate the products on a website. Consequently, qualified information quality and system quality might increase the satisfaction of customers with the website. Past literature review has proven the system quality aspects; such as ease of use or navigation can increase customer satisfaction since the customers feel convenient when using the website (Yoon 2002, 47-48). Therefore, the first two hypotheses are constructed as follows:

*H1: The system quality of Company X website positively impacts e-satisfaction.*

*H2: The information quality of Company X website positively impacts e-satisfaction.*

### 2.1.2   Perceived usefulness

Perceived usefulness is expected to have strong relationship with site quality and e-satisfaction. O'Cass and Fenech (2003, 90) argued and proved that online customer's satisfaction and perceived usefulness has a strong relationship. Other authors alternatively have different view on the relationship of usefulness and e-satisfaction. For example, McKinney et al (2002, 300-307) did not consider perceived usefulness as a antecedent of e-satisfaction, but as one of the component of site quality. This thesis however disagrees with McKinney et al (2002, 300-307) and argues that perceived usefulness can determine the level of e-customers' satisfaction, similar to the findings from Rai, Lang and Welker (2002, 65).

Regarding the relationship between perceived usefulness and satisfaction, the link between the two are highly supported by marketing literature. Oliver (1997, 166) defines perceived usefulness as "the ability of the product or service to "serve" the consumers' needs". Therefore, the usefulness of a website can determine whether the customers are satisfied or dissatisfied with the website because it can show that the needs of the consumers whether have been fulfilled. Consequently, the following third hypothesis is developed:

*H3: Perceived usefulness of Company X's website positively impacts e-satisfaction.*

### 2.1.3   Trust

Another factor related to e-satisfaction is trust which was defined by Gabarino and Johnson (1999, 71) as "customer confidence in the quality and reliability of the service offered". Based on the research and findings of Kumar, Scheer and Steenkamp (1995, 55-56), trust could be understood as a belief that the online retailer will highly fulfill its promises in a dependable and competent manner. Empirical findings have different views on a relationship between trust and satisfaction. For example, based on the

research from Kim, Jin and Swinney (2009, 243), the results showed that e -trust has a positive influence on e-satisfaction. Kim and Stoehl (2004, 114-116) proposed trust as one of the preditors of shopper's satisfaction. However, the empirical findings showed insignificant results.

Despite there are different arguments about the relationship amongst trust and satisfaction, this paper believes that a consumer's trust will have remarkable impact on customers' satisfaction, as discussed by Chiou and Pan (2004, 336). Thus, the fourth hypothesis is formulated as follows:

*H4: Trust of Company X's website positively impacts e-satisfaction.*

### 2.1.4  Perceived value

There have been quite many definitions for value in the business context. For example, Zeithaml (1988, 14) defined value as "a consumer's overall assessment of the utility of a product or service based on perceptions of what is received and what is given", or "a trade-off between received benefit and cost" (Chiou 2004, 687). In fact, the concept of value in e-commerce is closely related to the quality concept. Value has been seen as "a quality received at a particular price or outlay" (Oliver 1997, 166). Regarding the relationship betwen value and e-satisfaction, some research has been conducted and proven that this relationship does exist (Lin 2003, 38). Thus, the fifth hypothesis is formulated as folows:

*H5: Perceived value of Company X's trading website positively impacts e-satisfaction.*

### 2.2  E-Loyalty

As discussed above, there are several determinants such as site quality, perceived value, trust, perceived usefulness which are hypothesised to positively impact e-satisfaction. Past literature however has given the argument that these determinants also play a role in predicting e-loyalty. This section continues discussing the relationship between e-loyalty and each of these determinants. In order to determine this relationship, it is necessary to understand the concept of e-loyalty. According to Anderson and Srinivasan

(2003, 125), e-loyalty is defined as "the customer's favorable attitude toward an electronic business resulting in repeat buying behavior". In addition, several academic authors have found that a customer's stickiness to the website can represent e-loyalty. Luna, Peracchio, and de Juan (2002, 406); Bucklin and Sismeiro (2003, 264) argued that stickiness ( the customers stay longer on the website) is due to the fact that they want to explore and experience new things. Alternatively, other authors such as Bansal et al (2004, 293) and Luna et al (2002, 406) have indicated another idea on stickiness which is the motivation of customers to revisit the website caused by their e-loyalty towards the site. Then, the intention to re-visit the site will lead to more transactions in the future. This research will apply the second idea into the conceptualization of e-loyalty, which is contributed by two factors: revisit and repurchase intention. The customers firstly are expected to revisit the website and to have strong intention to repurchase. In other words, when the customers want to purchase a product or service, the website is expected to come to their mind first.

### 2.2.1   Information and system quality

It is argued that site quality elements including information quality and system quality positively impact the level of e-loyalty. Oliver (1999, 35-36) and Delone and McLean (1992, 69) demonstrated that the information quality and system quality might increase the customers' perception on cost-benefit, hence the quality would lead to customers' loyalty. Some emperical results also support the relationship between e-loyalty and site quality such as that of Hsu, Wang and Chih (2011, 1041) or relationship between site quality and customer retention (Heshan 2010, 102-103). Regarding Company X's trading website, without the consideration of e-satisfaction, if Company X's website provides good quality of information and system, it would increase the possibility that customers might revisit the website in the future. And the more the customers return to the website, the more likely those customers would purchase the products. In the absence of e-satisfaction, the next two hypotheses are formulated:

*H6: Perceived system quality positively impacts e-loyalty.*

*H7: Perceived information quality positively impacts e-loyalty.*

### 2.2.2 Perceived usefulness

In the absence of customer's satisfaction, this paper continues examining the relationship between perceived usefulness and e-loyalty. It is believed that there is a positive and direct relationship amongst perceived usefulness and e-loyalty. The argument is supported by the empirical evidence studied by Gefen, Karahanna and straub (2003, 72) and Gefen and Straub (2000, 16) who find that perceived usefulness impacted directly intended purchase. Considering Company X's case, the customers may revisit the website regardless of the service quality they received. Or in another case, they might not be satisfied with the quality of Company X's website; such as the relevance of information, loading speed of displayed content, etc. However, they may continue revisiting Company X's website because the website provides usefulness to them, for example when they are seeking product information or comparing product prices. In other words, the customers may continue visiting Company X website because of its related advantages without regarding whether the customers are satisfied or not satisfied. Therefore, the next hypothesis is formulated as follows:

*H8: Perceived usefulness of Company X's website positively impacts e-loyalty.*

### 2.2.3 Trust

As discussed above, trust is defined as creditibility earned by the online website because it provides to the customers the services or products in a competent and reliable manner. Past literature has discussed that trust in e-commerce context is a significant antecedent which can determine firstly the customers' purchasing behaviour and site usage intentions.   Hence it influences directly on e-loyalty regardless of customers' satisfaction. This argument is suppported by Salehnia, Saki, Eshaghi & Salehnia (2014, 107-109), Gefen et al (2003, 72). The relationship between trust of Company X's website and e-loyalty can be explained as follows: If the website earns trust from

customers, there would be a high chance that the customers will revisit Company X trading website without considering others determinants of the website quality. Therefore, the next hypothesis is developed:

*H9: Trust of Company X's website positively impacts e-loyalty.*

### 2.2.4    Perceived value

In marketing context, there are some supporting arguments that value delivering to the customers would increase customers' purchase intention and customer loyalty (Yang & Peterson 2004, 815; Sirdeshmukh, Singh & Sabold 2002, 29). Alternatively, according to Oliver (1999, 36), a customer could become disloyal to a company or a brand if they find competitors' product value to be more fulfilled of their needs. This research expects that Company X's customers will increase their loyalty to the company's website if it provides value to the customers, such as saving time, saving money after purchasing products regardless if they are satisfied with the website itself and other aspects or not. Therefore, the relationship between value and e-loyalty is hypothesized as follows:

*H10: Perceived value of Company X's website positively impacts e-loyalty.*

### 2.3   Relationship between e-satisfaction and e-loyalty

Past literature provides a number of theories which support the argument that if the customers are more satisfied with the service or products offered by the website, the level of customers' loyalty will be higher and the chance of customers repurchasing products will increase as well. The relationship between satisfaction and site stickiness or e-loyalty is supported by empirical support (Anderson & Srinivasan 2003, 131; Yang and Peterson, 2004, 812). The final hypothesis is formulated as follows:

*H11: E-satisfaction of Company X's customers positively impacts e-loyalty.*

### 2.4 The research model

The research model for this study is based on the framework of Polites, Williams, Karahanna and Seligman (2012, 7) as the author found it to be quite comprehensive and suitable framework for this study. Polites et al (2012, 7) grounded their framework in Bagozzi's 1992 framework. Bagozzi's framework is proposed as a theoretical framework of self-regulation of attitudes, intentions and behaviour. The framework is expected to explain and demonstrate the link of: appraisal-emotional responses-behavior. According to Bagozzi's framework, the customers will likely to make an appraisal (for example perceived value or usefulness). Based on this appraisal, the customers will experience an emotional response (i.e., e-satisfaction) which in turn will lead to reponses ( for example e-loyalty) to cope with the emotion. Polites et al (2012, 7) developed further the framework by including 5 proposed antecedents of e-satisfaction to the Bagozzi's appraisal process, e-satisfaction to the emotional reaction. This study's model includes e-loyal as the coping response. Figure 1 shows the model that will be used in this research.
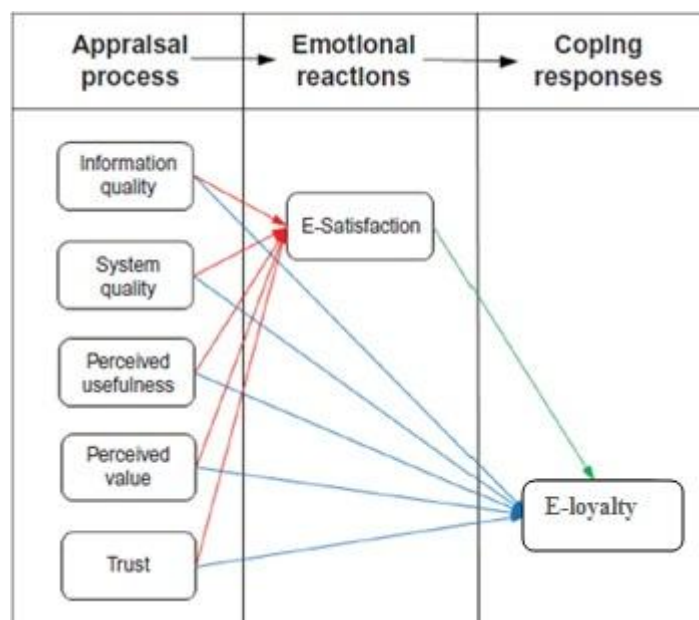


FIGURE 1. The research model

# 3   RESEARCH METHODOLOGY

## 3.1  Research instrument

According to Malhotra, Hall, Shaw and Oppenheim (2007, 64), marketing research approaches could be devided into two types: conclusive research and exploratory research. Since the purpose of this study is to test specific hypotheses and verify the relationships between different variables, it is more suitable to apply conclusive research method. In addition, the study aims to make generalized conclusions based on examining a relatively large sample, the data used is well-defined and well-structured, conclusive research is more appropriate (Malhotra et al, 2007, 66).

To achieve research objectives and answer research questions, descriptive research design will be employed. More specifically, the descriptive research design will be used to specify determinants of e-satisfaction and e-loyalty as well as the relationship between these two variables with age and gender factors. Descriptive research is suitable in this case because the study is "preplanned", "structured", "typicially based on a large representative sample" (Malhotra et al, 2007, 70). Moreover, the author seeks to find the influence of one variable rather than the cause-effect relationship between them. Hence, descriptive research is more fitting.

This study will use survey as the main research strategy since a survey can help to make conclusions from the data gathered from a sample of a larger population. Survey instrument used in this study is a questionnaire which was designed to collect primary quantitative data. Questionaire is the main form of data collecting instrument in descriptive research (Silver, Stevens, Wrenn & Loudon, 2012, 138). In this thesis particularly, the questionnaire was designed to measure each possible determinant of e-satisfaction and e-loyalty (i.e. site system quality, information quality, usefulness, perceived value and trust), level of e-satisfaction and e-loyalty as well as capture some basic demographic information such as age and gender. In designing the questionnaire, the 'Flowerpot' approach was applied in which survey  questions' order were arranged from general information requirement to specific information requirement before ending at identification information requirement with basic demographic questions.

In addition, an interview with Company X's manager was also conducted in order to collect information on Company X's ecommerce activities as well as the company's beliefs and opinions about e-satisfaction and e-loyalty.

## 3.2  Sampling and data collection

Collecting data for this empirical study was conducted between 23$^{rd}$ October and 5$^{th}$ November, 2014. The target population in this study are online customers who have ever made purchases on Company X's ecommerce website which is http://www.x.com/ . The questionnaire was sent to the customers via email. More specifically, each prospective respondent received an invitation email showing the purpose of the study, benefits of the respondents and the link to the online survey. The respondents also received reminding messages per week. As all participants answered the questionnaire when they were online, they were supported by the suitable environment which aids retrieval of "episodic memory" about online shopping (Tulving 1972, 398) and this helped reducing response inaccuracy.

Non-probability sampling technique with quota sampling was employed. Non-probability sampling is a sampling technique that "does not involve the selection of sample elements by chance" (Lawrence et al 2012, 157). Even though this technique is not as objective as probability sampling, it is convenient, less expensive and faster. Based on the customer dabase provided, the customers' profile information was accessed and filtered for recruiting participants. Age range and gender are two main quotas in selecting sampling units. The population size was 320 participants upon which eight subgroups with equal initial sample size were drawn as bellows:

TABLE 1. Initial sample quotas by age and gender

| Quotas | 16-24 | 25-34 | 35-44 | More than 44 |
|--------|-------|-------|-------|--------------|
| Male   | 40    | 40    | 40    | 40           |
| Female | 40    | 40    | 40    | 40           |

A pilot fieldwork had been conducted before the questionnaire was sent out massively to all participants. During the pilot test, twenty male and female participants aging from

16 to more than 44 were invited to try answering the questionnaire before joining an interview for giving comments about the questionnaire upon the criteria of "comprehension" (i.e. do the questions make sense as intended?); "language and phraseology" (i.e. Is there any word that is difficult to fully understand); "ease of answering" (i.e. Are the answers possible to answer?); "practicality" (i.e. Is the formatting easy to follow?); and length of the survey (i.e. Does it take too long to finish the questionnaire?) (Brace 2013, 196-197). Upon the results of the individual interview, the questionnaire's structure, length and wording were adjusted accordingly.

## 3.3  Survey construction and development

In the questionnaire, a range of closed-ended questions and scale measurements were employed as an instrument to efficiently measure the customers' perception about each possible determinants for customers' e-satisfaction and e-loyalty as shown in the research framework. The measures for the variables were based on the the scale from Poties et al (2009, 10). Some constructs such as information quality, perceived usefulness, value were added with a few more items based on the feedback and opinions received from the interview with the company's manager. The questionaire follows the format of 'Flowerpot'  in which questions are arranged from general information requirement (i.e. whether customers has made purchases via Company X's online store ) to more difficult and specific information requirement (i.e. opinions and perception about the site's system quality, information quality, trust, usefulness and value) and finally, identification information requirement (i.e. basic demographic questions about age range and gender (See Appendix 1).

The questionnaire aims to collect the score of each determinant and the level of e-satisfaction and e-loyalty. Therefore, non-comparative scales with 5 point Likert scale which are strongly agree, agree, neutral, disagree and strongly disagree was employed to measure the extent to which customers evaluate each determinants, their own satisfaction and loyalty upon their real shopping experience at the website.

The following table summarizes measurement items for each of the site system quality, information quality, usefulness, perceived value and trust as well as overall e-satisfaction and e-loyalty upon 5 point Likert's scale:

TABLE 2. Measurement items and descriptions

| Determinants of e-satisfaction and e-loyalty/constructs | Measurement name/Item name | Item Wording |
|---|---|---|
| Site system quality | Easy of use | The website can be used easily |
| | Layout | I like the layout of the website |
| | Linked pages | The website and all of its linked pages work well |
| | Colour combination | This website uses good colour combinations |
| | Speed | The website performs at high speed when browsing its pages |
| | Deliver orders | The website system can deliver the order when I confirm the transaction. |
| Information quality | Up-to-date | The website provides up-to-date product/service information. |
| | Easy-to-understand | The website presents product/service information that is easy to understand. |
| | Sufficient | The website provides sufficient product/service information. |
| Perceived usefulness | Selection | The website offers a large selection of products. |
| | Alternative evaluating | The website enables me to adequately evaluate each product's alternatives. |
| | Get what ordered | I got what I ordered from this website. |
| Trust | Bank card security | This website will protect my bank cards' information and my online payment. |
| | Personal information privacy | This website will not share my personal information with other websites. |
| | Service promise | The online store has kept its |

| | | |
|---|---|---|
| | | services as promised. |
| | Promotion promise | The online store has kept its promotions as promised. |
| Perceived value | Time saving | It saved me a lot of time in shopping for certain products. |
| | Cost saving | It saved me costs for shopping for certain products. |
| | Customer service | The items sent by the website were well packed and in good condition. |
| | Complain handling | Customer service was helpful to provide any additional information requested. Customer service responded to my complaints without any delay. |
| E-satisfaction | Satisfaction | Overall I feel satisfied with shopping on the company's trading website. |
| E-loyalty | Loyalty | I intend to shop at the website in the future. |

### 3.4 Interview preparation

An appointment with Company X's manager was arranged for individual interview upon prior approval. The interview took place on 21st October, 2014 and lasted about 30 minutes.

The interview consisted of questions about the company's business activities, the e-commerce situation at the moment, the manager's opinions about the company's own website and the customers. Some questions about the company's stragetries and future plans were also raised during the interview. As part of the interview's objective, the

questionnaire which had been designed in advance (See Appendix 2) were presented for feedback and comments.

Although the interview results were not used for answering research questions, they supported much in providing background information, designing appropriate research framework and questionnaire for the study.

## 3.5  Data analysis method

The collected quantitative data upon survey method was analyzed with regression analysis, independent sample t-test and One way ANOVA test using SPSS version 18.0. Regression analysis is "a powerful tool to analyze whether the independent variables explain a significant variation in the dependent variable (i.e. whether a relationship exists) as well as how much of the variation in the dependent variable can be explained by the independent variables (i.e. strength of the relationship)" (Malhotra et al 2007, 377). In this study, it is used to test the impact of each of site system quality, information quality, trust, usefulness and perceived value on e-satisfaction and e-loyalty in which e-loyalty or e-satisfaction plays a role of dependent factor and the possible determinants are independent variables. Besides, the regression analysis's results will indicate whether there is a relationship between e-satisfaction and e-loyalty in which e-loyalty is regarded as the dependent variable.

In addition, Independent Sample T-test was adopted to test the difference between male and female's e-satisfaction and e-loyalty as well as the variation in their perception about each determinant of e-satisfaction and e-loyalty to see what factors make such a difference. The t test for independent samples is used to test if the means of two groups are significantly different or not. It is called a t test for independent samples because the groups in research composed of different people (i.e., groups that are independent of each other).  (Salkind 2008, 170-172). T-test should be used when examining differ-ences between groups and not to test the relationship between two variables and when there are two groups such as male and female. Based on t-test, it could be seen whether the difference between the two groups is a true difference or whether it is just a random effect caused by sampling error.

Finally, analysis of variance or one-way ANOVA test was used to test the differences between four age groups (i.e. 16-24, 25-34, 35-44 and more than 44 years old) in e-satisfaction and e-loyalty as well as the variation in their perception about each determinant of e-satisfaction and e-loyalty to see what factors make such a difference.

ANOVA is also known as analysis of variance. According to Malhotra et al (2007, 359), ANOVA is used as a method to test the means of two or more populations. ANOVA allows the researcher to determine if the differences between the samples are simply due to random error (sampling errors) and not type I error (Silver, Stevens, Wrenn & Loudon (2012, 211). Type I error means falsely rejects a null hypothesis while in fact it is true. If multi t-test are conducted instead of ANOVA test, the possibility of type I error will increase. In ANOVA test, if the difference does not come from sampling error, it can be said that there are systematic treatment effects that causes the mean in one group to differ from the mean in another. There are two types of ANOVA test: one way ANOVA and two-way ANOVA. One-way ANOVA only involves one independent variable and one dependant variable. In this research, the author wants to know if there are differences between age group and their e-satisfaction and e-loyalty level. There are one independent variable (age group) and one dependent variable (e-loyalty or e-satisfaction). Therefore one-way ANOVA is the suitable method to use.

### 3.6  Important measures

### 3.6.1  Statistical significance (P-value)

A very important concept in statistics is significance level measured by P-value. Statistical significance is used to assess how confident a research is with the result from their study. This concept is quantified by P-value that ranges from 0 to 1. Within business and managerial research, the accepted P-value is usually $< 0.05$. That means the researcher accepts the possibility that there are up to 5 chances out of 100 that the sample reflects the relationship when in fact there is no relationship in the population (Bryan & Bell 2011, 354). In the research, the author applies the p-value of 0.05 as statistical significance. In other words, if $p < 0.05$, the relationship between two variables are statiscially significant and therefore the hypothesis is accepted.

### 3.6.2 Regression coefficients (beta)

The regression coefficient or beta shows the direction and how much of the independent variable compared to another independent variable in explaining the variation of the dependent variable (Nardi 2005, 97). The standardized beta put all independent variables in the same unit of measure. Hence, in this study, standardized beta will be used to explain the weighting of different independent variables in relation to the dependent variable.

# 4   FINDINGS

## 4.1  Respondent distribution by gender and age range

The questionnaire was sent to 320 online customers of Company X's online store and there were 154 questionnaires completed that made the response rate of 48.1 percent With regard to gender, male respondents accounted for 51.9 per cent of total respondents while female responsdents represented 48.1 per cent (see Appendix 3). The age range distribution of the participants was: 22.7 per cent for age range between 16 to 24 years old; 27.3 per cent for age range between 25 to 34 years old; 26.6 per cent for age range between 35 to 44 and 23,4 per cent for age range of more than 44 years old (see Appendix 4).

## 4.2  Determinant factors of e-satisfaction

Based on the extent of agreement or disagreement with each opinion regarding each of the five possible dimensions of e-satisfaction (i.e. site system quality, information quality, usefulness, perceived value and trust) and overall satisfaction, the score for each factor of these dimensions and overall satisfaction were defined ranging from 1 to 5 (1-Strongly Agree, 2-Agree, 3-Neutral/ Either Agree or Disagree, 4- Disagree, 5-Strongly disagree). Numeric data was accordingly input into SPSS for regression analysis for testing the relationship between overall e- satisfaction and each of site system quality, information quality, perceived usefulness, perceived value and trust.

### 4.2.1   Site system quality

There are six measurement items of site system quality which are easy to use, website layout, colour combination; site speed, whether the site system can deliver orders and operation of linked pages.

Regression analysis was run with "e-satisfaction" as the dependent variable and the other elements (easy to use, website layout, colour combination; speed and the ability to

deliver orders) as independent variables. Operation of linked pages was excluded due to collinearity problem found during regression analysis. It was removed and the model with other independent variables was re-run (Hair 2011, 375). Based on the first table (see Appendix 5), it can be seen that site system overall significantly influences e-satisfaction with P-value of 0.001, less than the significance level of 0.05. Therefore, hypothesis 1 is accepted.

On examining more closely the coefficient table (see Appendix 6), it could be seen that the relationship between the website colour's combination and e-satisfaction is the weakest with the beta value of 0.012. That means the customers' liking towards colour's combination just explain for 1,2% of their overall satisfaction and this relationship is not significant (p=0.589>0.05). On the other hand, the relationship between each of easy to use, website layout; site speed, the ability to deliver orders and overall e-satisfaction are significant with high and positive beta value, especially the relationship between site speed and satisfaction with beta value of 0.431, meaning that a change in e-satisfaction can be predicted by site speed at the rate of 43.1%.

### 4.2.2   Information quality

There are three measurement items of information quality which are easy to understand, up-to-date and sufficient.

The results from running regression analysis to test the second hypothesis which is the effect of information quality on e-satisfaction are represented in Appendix 7 & Appendix 8. The statistical significance is less than 0.05 therefore it could be concluded that information quality impacts e-satisfaction (Appendix 7). Hypothesis 2, therefore, is accepted.

Among measured elements of informationn quality, the relationship between easy-to-understand and e-satisfaction is the weakest with beta value of only 0.002. That means easy-to-understand information just made up for 0.2% of overall e-satisfaction and this relationship is not significant (p=0.979>0.05). On the other hand, the relationship between each of up-to-date and sufficient and overall e-satisfaction are positively strong and significant with high and positive beta values (see Appendix 8). The results show a

likelihood that a change in e-satisfaction could be predicted by 59.8% of sufficient information, which is a relatively high percentage and that shows the importance of this variable on satisfaction.

### 4.2.3   Perceived usefulness

There are three measurement items of usefulness which are wide selection, ability to evaluate alternatives and getting what ordered.

The results of regression analysis to test the relationship between the independent variable of usefulness and dependent variable of e-satisfaction as well as component items of site-usefulness and overall satisfaction are shown in Appendix 9 & 10. Appendix 9 shows p-value is less than 0.05 which is at acceptable level. Thus, it could be said that website's usefulness has a positive impact on e-satisfaction. This result supports hypothesis 3.

All of the measurement items including wide selection, evaluate alternatives ability and get what ordered are strong predictors of satisfaction as their beta values are significant at 0.239; 0.525 and 0.204, respectively (Appendix 10).

### 4.2.4   Trust

There are four determinants of trust which are not sharing personal information, protecting bank card information, keeping services as promised and keeping promotions as promised.

Upon the results of regression analysis (see Appendix 11& Appendix 12), it can be seen that the statisical significance p value <0.05. In other words, the trust independent variables do predict the customer's e-satisfaction level. Therefore, hypothesis 4 is accepted.

Among the measurements items or determinants of trust, the relationship between "protecting bank card information" and "keeping promotion as promised" and e-

satisfaction are the weakest with very low beta values and these relationships are not significant (i.e. p values are greater than 0.05). On the other hand, the relationship between each of "not sharing personal information" and "keeping services as promised" and overall e-satisfaction are positively strong and significant with high and positive beta values at 0.371 and 0.554, respectively (see Appendix 12)

### 4.2.5   Perceived value

There are four determinants of perceived value which are time saving, cost saving, customer service that provides information, customer service that responds to complaints.

The result from running regression anaysis to test the relationship between e-satisfaction and value is represented in Appendix 13 & Appendix 14. Since p value of the regression model of perceived value & e-satisfaction is less than 0.05, hypothesis 5 is accepted (Appendix 13).

In addition, p value of each of these determinants is less than 0.05 and beta value for each of them is positive. That means the relationship between each of time saving, cost saving, customer service that provides information, customer service that responds to complaints and overall e-satisfaction are statiscially significant. Among all measurement items, customer service that responds to complaints is the most important since it can explain 36.3% of customer's satisfaction compared to other items (see Appendix 14).

### 4.3  Determinants of e-loyalty

Based on the extent of agreement or disagreement with each opinion regarding each of of five possible dimensions of e-loyalty (i.e. site system quality, information quality, usefulness, perceived value and trust) and overall e-loyalty, the score for each factor of these dimensions and overall e-loyalty were defined ranging from 1 to 5 (1-Strongly Agree, 2-Agree, 3-Neutral/ Either Agree or Disagree, 4- Disagree, 5-Strongly disagree). Numeric data was accordingly input into SPSS for regression analysis for testing the

relationship between overall e- loyalty and each of site system quality, information quality, perceived usefulness, perceived value and trust.

### 4.3.1   Site system quality

There are six measurement items of site system quality which are easy to use, website layout, colour combination; site speed, whether the site system can deliver orders and operation of linked pages.

The regression model for site system quality and e-loyalty is satistically significant with p<0.05 (see Appendix 15). The model includes five determinants of site system quality which are easy to use, website layout, colour combination; speed and the ability to deliver orders. Operation of linked pages was found to have collinearity problem and therefore was removed from the model. Hypothesis 6 is accepted after the test.

Among the five independent variables, the relationship between website colour's combination, website layout and the ability to deliver orders with e-loyalty is weakest with p > 0.05 and the beta value of 0.027, 0.074 and 0.051, respectively. That means the customers' liking towards colour's combination and web layout just explain for 2,7% , 7,4% and 5.1% of their overall e-loyalty and these relationship are not statiscally significant (p values of 0.29,  0.313 and 0.257 are all greater than 0.05). On the other hand, the relationship between easy to use, site speed and overall e-loyalty are positively strong and significant with high and positive beta values (see Appendix 16).

### 4.3.2   Information quality

There are three measures of information quality which are easy to understand, up-to-date and sufficient.

Upon the results of regression analysis (see Appendix 17, Appendix 18), the regression model that can be used to predict e-loyalty from information quality is satistically significant with p > 0.05. Thus, hypothesis 7 is supported.

Information quality overall can predict e-loyalty. However, the relationship between the easy-to-understand information and e-loyalty is the weakest with beta value of only 0.052. That means easy-to-understand information just explains for 5.2% of the overall e-loyalty. On the other hand, the relationship between each of up-to-date, sufficient and overall e-loyalty are positively strong and significant with high and positive beta value (see Appendix 18).

### 4.3.3   Perceived usefulness

There are three measures for usefulness which are wide selection, ability to evaluate alternatives and getting what ordered.

The regression model for usefulness and e-loyalty is statistically significant with $p < 0.05$ (see Appendix 19). In addition, p value of each of the measures are less than 0.05 and beta value for each of them are positively high that means the relationship between each of wide selection, ability to evaluate alternatives, getting what ordered and overall e-loyalty are positively strong and significant. (See Appendix 20). Hypothesis 8 is therefore accepted.

### 4.3.4   Trust

There are four measurement items of trust which are not sharing personal information, protecting bank card information, keeping services as promised and keeping promotions as promised.

The result of running regression analysis on the model of trust and e-loyalty (see Appendix 21) showed that trust is predictive of e-loyalty. Hypothesis 9 is supported. However, weighting of each of the independant variables in explaining the variation of e-loyalty are not the same. Specifically, the relationship between "protecting bank card information" or "keeping promotions as promised" and e-loyalty is the weakest with very low beta values and this relationship is not significant (i.e. p values are greater than 0.05). On the other hand, the relationship between each of "not sharing personal

information" , "keeping services as promised " and overall e- loyalty are positively strong and significant with high and positive beta values (see Appendix 22).

### 4.3.5   Perceived value

There are four measures of perceived value which are time saving, cost saving, customer service that provides information, customer service that responds to complaints.

Based on the results of regression analysis (see Appendix 23, Appendix 24), perceived value is a strong predictor of e-loyalty with p-value is less than 0.05 and each of the measures all have accepted level of p-value and positive beta value. In other words, perceived value of the website measured by time saving, cost saving, customer service that provides information, customer service that responds to complaints positively and significantly impact e- loyalty. Hypothesis 10 is accepted.

### 4.4   Relationship between e-satisfaction and e-loyalty

The result of running regression analysis to test the impact of e-satisfaction on e-loyalty is represented in Appendix 25 & Appendix 26. As can be seen from Appendix 25, the statistical significance is less than 0.05. Therefore, e-satisfaction influences e-loyalty. Hypothesis 11 is accepted. From the analysis, it can also be concluded that e-satisfaction is a strong predictor of e-loyalty with the beta value of 0.968. That means customers' overall e-satisfaction can explain for 96.8% of their overall e-loyalty (See Appendix 26). In other words, e-satisfaction has a great impact on e-loyalty.

### 4.5   Gender, e-satisfaction and e-loyalty

The result in Appendix 27 reveals that there are significant differences between male and female customers' e-satisfaction and e-loyalty level (p<0.05) due to the significant differences between male and female customers in how they perceive each determinant of system quality, information quality, trust, usefulness and value of Company X's online store. Generally, male customers have more positive perception about each de-

terminant of e-satisfaction and e-loyalty and overall, male customers are more satisfied with and more loyal to shopping at Company X's online store compared to female customers.

## 4.6  Age groups, e-satisfaction and e-loyalty

ANOVA was run to test if there are significant differences among different age groups , their e-satisfaction and e-loyalty level. The result is respresent in Appendix 28. Since the statistical significance levels are all less than 0.05, it could be concluded that the difference between age group and the level of satisfaction and loyalty does exist. The result shows the mean of 35-44 and > 44 age groups in general are lower than that of 16-24 and 25-34 age groups. Therefore, it could be seen that the older the customers are, the less positive perception they have about each determinant of e-satisfaction and e-loyalty. As a result, the less satisfied and less loyal they are towards shopping at Company X's online store.

# 5   DISCUSSION

## 5.1      Summary of key findings

This chapter summarizes key findings that answer the study's research objectives and questions presented in the beginning of the thesis.

*Question 1: Does site system quality (i.e. easy to use, website layout, operation of website and its linked pages, color combination, speed, whether the site system can deliver orders) positively impact e-satisfaction and e-loyalty?*

Overall, Company X's website system quality positively influences both customers' e-satisfaction and e-loyalty. This finding aligns with the results from previous studies about the relationship between e-satisfaction and e-loyalty with system quality (Rodgers, Negash & Suk 2005, 327; Muylle, Moenaert & Despontin 2004, 543; Heshan 2010, 102-103).

However, among features of website system quality, only easy to use, website layout, speed and whether the site system can deliver orders significantly impact customers' e-satisfaction while colour combination was found to have no relationship with e-satisfaction. In terms of e-loyalty and its determinants, easy to use and speed significantly affect customers' e-loyalty while other measures such as layout, colour combination and whether the site system can deliver orders do not have an impact on e-loyalty. Site speed is the stronger predictor compared to the other dimensions.

*Question 2: Does information quality (i.e. easy to understand, up-to-date, sufficient) positively impact e-satisfaction and e-loyalty?*

Overall, Company X's website information quality positively influences both customers' e-satisfaction and e-loyalty. This finding appears to be consistent with the study of Yoon (2002, 47-48). However, among features of website's information quality, only being sufficient and up-to-date significantly impact customers' e-

satisfaction and e-loyalty. Easy-to-understand information as an measure does not impact the level of online customer's satisfaction and loyalty.

*Question 3: Does perceived usefulness (i.e. wide selection, ability to evaluate alternatives, get what ordered) positively impact e-satisfaction and e-loyalty?*

Overall, all features of customers' perceived usefulness towards Company X's website positively influence both customers' e-satisfaction and e-loyalty. Among three measurement items, the ability to evaluate alternatives was found to be the strongest predictor of e-satisfaction and e-loyalty. That means the customers find this ability to be most useful and therefore it can greatly decide their level of satisfaction and the stickiness to the site.

*Question 4: Does trust (i.e. not share personal information, protect bank card information, keep services as promised, keep promotions as promised) positively impact e-satisfaction and e-loyalty?*

Overall, customers' trust on Company X's website positively influences both customers' e-satisfaction and e-loyalty. However, among the measurements of trust, only "not sharing personal information" and "keeping services as promised" significantly impact customers' e-satisfaction and e-loyalty with the latter one as the stronger predictor. More explicitly, the better the company is at keeping services as promised to the customers, the more satistified the customers are and the more likely they will come back.

*Question 5: Does perceived value (i.e. time saving, cost saving, customer service that provide information, customer service that responds to complaints) positively impact e-satisfaction and e-loyalty?*

Overall, all measures of customers' perceived value towards Company X's website positively influences both customers' e-satisfaction and e-loyalty. However, all of the measurements are considered relatively weak predictors.

*Question 6: Is there any relationship between e-satisfaction and e-loyalty?*

There is a strong relationship between Company X customers' e-satisfaction and e-loyalty. This finding support previous empirical studies of Anderson and Srinivasan (2003, 131) & Yang and Peterson (2004, 812).

*Question 7: Is there any difference between male and female customers in their e-satisfaction and e-loyalty levels? How is it different?*

There are significant differences between male and female customers 'e-satisfaction and e-loyalty levels due to differences in their evaluation of each determinant of system quality, information quality, trust, usefulness and value of Company X's online store. In more details, male customers have more positive perception about each determinant of e-satisfaction and e-loyalty, thereby, are more satisfied with and more loyal to shopping at Company X's online store.

*Question 8: Is there any difference among age groups (i.e. 16-24, 25-34, 35-44 and more than 44 years old) and e-satisfaction and e-loyalty? How is it different?*

There are significant differences among people of different age groups in terms of their e-satisfaction and e-loyalty level due to differences in how they perceive each determinant of system quality, information quality, trust, usefulness and value of Company X's online store. In more details, the older customers are, the less positive perception they have about each determinant of e-satisfaction and e-loyalty, and thereby, the less satisfied and less loyal they are towards shopping at Company X's online store.

## 5.2 Implications for Company X's managers and Academia

The finding of this research confirms the validity of the determinant model of e-satisfaction and e-loyalty which consists of five elements: site system quality, information quality, trust, perceived usefulness and perceived value. Moreover, each of the above determinant is measured by specific dimensions and the study has shown that the influence of such measurement items on e-satisfaction and e-loyalty are different in which, some of them have significant and strong impact while others do not have significant impact. That means when building a model that is used to predict e-

satisfaction and e-loyalty; researchers should investigate various aspects of site system quality, information quality, trust, perceived usefulness and perceived value for more accuracy. The determinants and the scales depend on the industry and the field of business. Therefore, before developing and using a research model, the researcher should test if the model's elements are representative of the industry's specific characteristics or not.

The study confirms the importance of site system's quality, information quality, trust, perceived usefulness and perceived value on customers' satisfaction and loyalty in the e-commerce context. In addition, the study indicated which measurement items have strong implact and which elements have weak impacts. The result shows suggestions to the company in allocating their resources when striving to influence satisfaction and loyalty.

Explicitly, to improve site system quality, the company's coding and design  team should pay more attention on how to make the site easy to use, simplify website layout for more attraction and convenience, especially accelerate browsing speed and make sure the site system can deliver orders fast and promptly since it is a strong predictor of satisfaction. After all, the company operates in electronics and appliances industry, where customers usually compare a lot of alternatives before deciding which product or which model they would purchase. Therefore, if the website loads slowly or couldn't load, the customers will soon lose patience and go somewhere else. On the other hand, a fast website will increase the customer's satisfaction level.

In addtion to improving site system's quality, information presented on the website should be frequently updated and be sufficient. According to the report from Vietnam ecommerce and information technology agent (VECITA),  one of the biggest reasons for people not shopping online is "not enough information" (46% of the respondents) (VECITA, Worldwide Ecommerce... 2014). Besides, in electronics category, the model and other technical information are very important. Thus, the company should present the information sufficiently and clearly so that the customers know in advance what they will get and therefore will not have any dissapointment caused by physical products are different from what they thought.

Trust has always been an important factor in business. In many cases, it can actually make or break a deal. In fact, 57% of the respondents from the survey conducted by VECITA considered "not having trusty seller" is the reason for not buying online (VECITA, Worldwide Ecommerce... 2014). As a result, buiding trust with the customers are highly necessary. Customers' trust can be achieved and enhanced in different ways but the company should keep in mind that trust is a process and gainning trust is difficult. It should not be considered as a short time aim but a long term one. The company should let the customers know how their personal privacy will be protected and show that the company will stick to such policies upon all business transaction. The website can also present some evidences of real customers who have made purchases on the website and shown their trust and satisfaction in online shopping at Company X's online store through a testimonial page, for example.

At the end of the day, the customers come to the website for purchasing goods. Therefore, value and usefulness are important factors that should not be neglected. To make the customers perceive online shopping at Company X's online store as useful and bring good value, the company should improve customer service quality by instantly supporting the customers with any enquiry or complaint they have. For example, the company could integrate an instant messaging application on their website so that the customers could interact with the company's staff faster. At the moment, the company does provide phone and yahoo messenger options. However, phone line might be busy, especially during some seasons (New year festival) or some customers do not have yahoo messenger. Therefore, an instant messaging application could be considered. Apart from value, the customers also place importance on usefulness, particularly wide selection and the ability to compare alternatives when they consider purchasing goods from a website. For that reason, the company should offer a wider selection of goods, making it easy and convenient to compare alternatives and choosing wisely. For instance, the company could integrate the code or buy an appication so that when the customer chooses a product, the website could automatically find and suggest alternatives and supplementary products. This way the customers will have a lot of choices and can choose the one that fits their needs and preferences.

As there are differences between female and males customers' perception and evaluation of the website's system quality, information quality, trust, usefulness and value that lead to differences in their satisfaction level and loyalty, the company should

have different online marketing strategies aimed at male and female customers separately. This could be done via promotions and gifts. The company could design gift or promotion packages separately for male and female customers based on their preference differences, for example.

As there are variances between male and female customers, there are also differences among people of different age groups in their perception and evaluation of the website's system quality, information quality, trust, usefulness and value that lead to differences in their satisfaction level and loyalty. Thus, the company could create different advertising and promoting strategies aimed at different age groups: the younger group and the older group.

# 6 CONCLUSION

The study has found five determinants of e-satisfaction and e-loyalty which are site system quality, information quality, trust, perceived usefulness and perceived value as well as the strong relationship between e-satisfaction and e-loyalty. Moreover, there are significant differences between male and female customers as well as among people of different age groups in their e-satisfaction and e-loyalty level.

There are a few limitations of this thesis. The first limitation of the study comes from data collection method. This study used survey method as the only technique to collect quantitative data about customers' perception towards site system quality, information quality, trust, perceived usefulness and perceived value of Company X's online store so as to answer the question of "what" determinants of e-satisfaction and e-loyalty are and "how" strong their impact on e-satisfaction and e-loyalty are. However, this quantitative method cannot be used to answer the question of "why" these factors have significant impact on e-satisfaction and e-loyalty while the others have not. For example, although the customers' belief that their bankcard information are protected upon making purchase at Company X's website contribute into their trust on the website, this factor does not have significant impact on e-satisfaction. However, the study with quantitative research methodology cannot find out the reason why for this result. Moreover, the study also cannot find the detailed reason of why female customers have less satisfaction of and loyalty to shopping at Company X website than male customers and why the older customers are, the less satisfied and less loyal they are towards shopping at Company X's online store. Therefore, a recommendation for further research is the combination of both quantitative methods and qualitative methods. For example, further research could use in-depth interview, observation, focus group, questionaire with open-ended questions, etc.

As this study used quota and non probibility sampling method, the sampling error can not be calculcated and projection to the population is risky (Lawrence et al, 2012, 158). In the study, the author used a framework developed and proven by a previous research with additional measurement items added based on the author's knowledge and the opinions from the company's manager. Before the questinonaire was sent out, a pilot field work was also conducted to make sure the questions can measure what they are

intended to measure. Therefore, the results are useful for the company. However, further test for validity and reliability of the measurement items are recommended for future research. Finally, future research should test the relationship between more basic demographic factors rather than age and gender as well as Internet usage habits and e-satisfaction and e-loyalty to draw more helpful implications for market segmentation and targeting strategy.

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**APPENDICES**

Appendix 1. Questionnaire for survey method

1. Have you ever made purchases at Company X's website?

    - Yes

    - No

If your answer is yes, please continue the below sections and answer the questions

If your answer is no, thank you for your time

2. Please answer the below questions by selecting the extent to which you agree/ disagree with the following opinions

| | Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree |
|---|---|---|---|---|---|
| The site can be used easily | | | | | |
| I like the layout of the website | | | | | |
| The web site and all of its linked pages work well | | | | | |
| This website uses good color combinations | | | | | |
| The website performs at high speed when browsing its pages | | | | | |
| The site system can deliver the order when I confirm the transaction | | | | | |
| The site provides up to date product/service information | | | | | |
| The site presents easy to understand product/service information | | | | | |
| The site provides sufficient product/service information | | | | | |
| The site offers a large selection of products | | | | | |
| The site enables me to adequately evaluate each product's alternatives | | | | | |
| I get what I ordered from this site | | | | | |
| This site will not share my personal information with other sites | | | | | |
| This site will protect my bankcard information and my online payment | | | | | |
| The online store has kept it services as promised | | | | | |
| The online store has kept its promotions as promised | | | | | |
| It saved me a lot of time in shopping for certain products | | | | | |
| It saved me costs for shopping for | | | | | |

| certain products | | | | | |
|---|---|---|---|---|---|
| The items sent by the site were well packed and in good condition | | | | | |
| Customer service was helpful to provide any additional information requested | | | | | |
| Customer service responded to my complaints without any delay | | | | | |
| Overall I feel satisfied with shopping on the company's trading website. | | | | | |
| I intend to shop at the website in the future. | | | | | |

3. Your Gender
   - Male
   - Female

4. Age group
   - 16 to 24 years old
   - 25 to 34 years old
   - 35 to 44 years old
   - More than 44 years old

Thank you for your time and valuable information!

Appendix 2. Interview with the company's manager

Greetings,

It is a pleasure to have a small discussion with you, Mr……………., Chief Executive Officer of Company X Electronic Company. I really appreciate your present and valuable time that you have devoted for this interview today.

Shall we start the discussion?

**Question 1: Would you please discuss key information related to Company X's performance since the established date?**

*Answer:*

**Question 2: Would you please define your current business philosophy and business strategy?**

*Answer:*

*Question 3: What types of customers are you serving for?*

*Answer:*

**Question 4: The market analysts have found that demands of Vietnamese customers for electronics are absolutely increasing in recent years, despite the economic downturns' influence. How do you criticize on this statement?**

*Answer:*

**Question 5: Vietnam Electronic distribution channel is comprised lots of key prevalent players; such as Nguyen Kim, Pico, The Gioi Di Dong, Cho Lon Electronic, etc., how do you position Company X Electrics amongst these players?**

*Answer:*

**Question 6: How can you compete against other players in the market? What strategies are you applying (including marketing strategy, sales strategy, etc)?**

*Answer:*

**Question 7: Your trading activities mostly are performed over your trading website? How do you reckon your trading website against other trading websites of other competitors?**

*Answer:*

**Question 8: Please give a ranking point for your company's trading website with a scale from 1 to 10 (1 is the lowest and 10 is the highest)**

*Answer:*

**Question 9: Would you think your trading website is one of the key factors can influence your customers' attraction and sales performance? Are you willing to invest money to upgrade your online trading website if it has not been effectively and efficiently designed?**

*Answer:*

**Question 10: Which part of your trading website you think will need to be improved?**

*Answer:*

**Question 11: What key factors do you think essentially contribute to the success of an online trading website? Why?**

*Answer:*

**Question 12: You are given five key dimensions of customers' satisfaction over the online trading website comprising of: information quality, system quality, usefulness, value and trust. Please rank these five dimensions in a range from 1 (least important) to 5 (most important).**

*Answer:*

**Question 13: Refer to question 10, would you please explain why you have chosen the order that you already answer in question 11.**

*Answer:*

**Question 14: How do you define the customer loyalty? Do you think customer loyalty increase because of the five factors that I have mentioned in question 10?**

*Answer:*

**Question 15: Have you planned to establish any campaigns for loyal customers? Will these campaigns relate to your online trading website, would you explain in details?**

*Answer:*

**Question 16: Have you think any other factors besides five factors I have mentioned above that you think they will affect to the satisfaction of customers? Why?**

*Answer:*

Appendix 3. Respondents' gender distribution

|  |  | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
|  | Female | 74 | 48.1 | 48.1 | 48.1 |
| Valid | Male | 80 | 51.9 | 51.9 | 100.0 |
|  | Total | 154 | 100.0 | 100.0 |  |

Appendix 4. Respondents' age distribution

|  | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| | >44 | 36 | 23.4 | 23.4 | 23.4 |
| | 16-24 | 35 | 22.7 | 22.7 | 46.1 |
| Valid | 25-34 | 42 | 27.3 | 27.3 | 73.4 |
| | 35-44 | 41 | 26.6 | 26.6 | 100.0 |
| | Total | 154 | 100.0 | 100.0 | |

Appendix 5. ANOVA result for relationship between satisfaction and site system quality

| Model | Mean Square | F-value | Significance |
|---|---|---|---|
| Regression Residual Total | 17.787 .035 | 511.358 | <0.001* |

Note: Dependent Variable: Satisfaction

Predictors: (Constant), Quality_deliver_order, Quality_color, Quality_speed, Quality_layout, Quality_easy

*significant at 95% confidence interval

Appendix 6.Coefficients between e-satisfaction and site system quality

| Model | Unstandardized Coefficients | | Standardized Coefficients | t-value | Significance |
|---|---|---|---|---|---|
| | B | Std. Error | Beta | | |
| (Constant) | -.738 | 0.233 | | -3.169 | 0.002* |
| Quality_easy | 0.313 | 0.072 | 0.332 | 4.353 | <0.001* |
| Quality_layout | 0.167 | 0.060 | 0.166 | 2.785 | 0.006* |
| Quality_color | 0.022 | 0.040 | 0.012 | 0.542 | 0.589 |
| Quality_speed | 0.543 | 0.052 | 0.431 | 10.525 | <0.001* |
| Quality_deliver_order | 0.115 | 0.044 | 0.101 | 2.619 | 0.01* |

*significant at 95% confidence interval

Appendix 7. ANOVA result for relationship between satisfaction and site information quality

| Model | Sum of Squares | df | Mean Square | F value | Significance |
|---|---|---|---|---|---|
| Regression | 77.185 | 3 | 25.728 | 228.362 | <0.001* |
| Residual | 16.900 | 150 | .113 | | |
| Total | 94.084 | 153 | | | |

Note: Dependent Variable: Satisfaction

Predictors: (Constant), Info_sufficient, Info_easy_understand, Info_updated

*significant at 95% confidence interval

Appendix 8. Coefficients between e-satisfaction and information quality

| Model | Unstandardized Coefficients | | Standardized Coefficients | t value | Significance |
|---|---|---|---|---|---|
| | B | Std. Error | Beta | | |
| (Constant) | -.787 | .225 | | -3.505 | 0.001* |
| Info_updated | .363 | .077 | .355 | 4.684 | <0.001* |
| Info_sufficient | .715 | .067 | .598 | 10.648 | <0.001* |
| Info_easy_understand | .002 | .090 | .002 | .026 | 0.979 |

*significant at 95% confidence interval

Appendix 9. ANOVA result for relationship between satisfaction and usefulness of the website

| Model | | Sum of Squares | df | Mean Square | F value | Significance |
|---|---|---|---|---|---|---|
| 1 | Regression | 71.740 | 3 | 23.913 | 160.529 | <0.001* |
| | Residual | 22.345 | 150 | .149 | | |
| | Total | 94.084 | 153 | | | |

Note: Dependent Variable: Satisfaction

Predictors: (Constant), Useful_get_what_order, Useful_selection, Useful_alternative

*significant at 95% confidence interval

Appendix 10. Coefficients between e-satisfaction and usefulness of the webiste

| Model | Unstandardized Coefficients | | Standardized Coefficients | t value | Significance |
|---|---|---|---|---|---|
| | B | Std. Error | Beta | | |
| (Constant) | -2.236 | 0.427 | | -5.233 | <0.001* |
| Useful_selection | 0.461 | 0.109 | 0.239 | 4.232 | <0.001* |
| Useful_alternative | 0.577 | 0.073 | 0.525 | 7.901 | <0.001* |
| Useful_get_what_order | 0.322 | 0.092 | 0.204 | 3.502 | 0.001 |

*significant at 95% confidence interval

Appendix 11. ANOVA result for relationship between satisfaction and trust

| Model | | Sum of Squares | df | Mean Square | F value | Significance |
|---|---|---|---|---|---|---|
| 1 | Regression | 74.465 | 4 | 18.616 | 141.381 | <0.001* |
| | Residual | 19.619 | 149 | 0.132 | | |

| | | | | | |
|---|---|---|---|---|---|
| Total | 94.084 | 153 | | | |

Note: Dependent Variable: Satisfaction

Predictors: (Constant), Trust_promotion, Trust_service, Trust_not_share, Trust_bankcard

*significant at 95% confidence interval

Appendix 12. Coefficients between e-satisfaction and trust

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Significance |
|---|---|---|---|---|---|
| | B | Std. Error | Beta | | |
| (Constant) | -1.161 | .362 | | -3.202 | 0.002 |
| Trust_not_share | 0.407 | .098 | 0.371 | 4.161 | <0.001* |
| Trust_bankcard | 0.105 | .106 | 0.101 | .986 | 0.326 |
| Trust_service | 0.912 | .093 | 0.554 | 9.856 | <0.001* |
| Trust_promotion | -0.146 | .118 | -0.080 | -1.234 | 0.219 |

*significant at 95% confidence interval

Appendix 13. ANOVA result for relationship between satisfaction and perceived value

| Model | | Sum of Squares | df | Mean Square | F value | Significance |
|---|---|---|---|---|---|---|
| 1 | Regression | 71.826 | 4 | 17.957 | 120.204 | <0.001* |
| | Residual | 22.258 | 149 | 0.149 | | |
| | Total | 94.084 | 153 | | | |

Note: Dependent Variable: Satisfaction

Predictors: (Constant), Value_complaints, Value_cost_saving, Value_time_saving, Value_info

*significant at 95% confidence interval

Appendix 14. Coefficients between e-satisfaction and perceived value

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Significance |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | -2.122 | 0.471 | | -4.506 | <0.001* |
| | Value_time_saving | 0.343 | 0.133 | 0.191 | 2.579 | 0.011* |
| | Value_cost_saving | 0.211 | 0.084 | 0.134 | 2.525 | 0.013* |
| | Value_info | 0.450 | 0.148 | 0.272 | 3.030 | 0.003* |
| | Value_complaints | 0.402 | 0.099 | 0.363 | 4.070 | <0.001* |

*significant at 95% confidence interval

Appendix 15. ANOVA result for relationship between e-loyalty and site system quality

| Model | Mean Square | F-value | Significance |
|---|---|---|---|
| Regression | 15.564 | 366.148 | <0.001* |
| Residual | 0.043 | | |
| Total | 15.564 | 366.148 | <.001* |

Note: Dependent Variable: Loyalty_more_transaction

Predictors: (Constant), Quality_deliver_order, Quality_color, Quality_speed, Quality_layout, Quality_easy

*significant at 95% confidence interval

Appendix 16. Coefficients between e-loyalty and site system quality

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t-value | Significance |
|---|---|---|---|---|---|---|

| | B | Std. Error | Beta | | |
|---|---|---|---|---|---|
| (Constant) | -0.410 | 0.257 | | -1.595 | 0.113 |
| Quality_easy | 0.400 | 0.080 | 0.449 | 5.034 | <0.001* |
| Quality_layout | 0.070 | 0.066 | 0.074 | 1.061 | 0.290 |
| Quality_color | 0.045 | 0.044 | 0.027 | 1.013 | 0.313 |
| Quality_speed | 0.522 | 0.057 | 0.438 | 9.149 | <0.001* |
| Quality_deliver_order | 0.055 | 0.049 | 0.051 | 1.137 | 0.257 |

*significant at 95% confidence interval

Appendix 17. ANOVA result for relationship between e-loyalty and site information quality

| Model | Sum of Squares | df | Mean Square | F value | Significance |
|---|---|---|---|---|---|
| Regression | 64.693 | 3 | 21.564 | 166.582 | <0.001* |
| Residual | 19.418 | 150 | 0.129 | | |
| Total | 84.110 | 153 | | | |

Note: Dependent Variable: Loyalty_more_transaction

Predictors: (Constant), Info_sufficient, Info_easy_understand, Info_updated

*significant at 95% confidence interval

Appendix 18. Coefficients between e-loyalty and information quality

| Model | Unstandardized Coefficients | | Standardized Coefficients | t value | Significance |
|---|---|---|---|---|---|
| | B | Std. Error | Beta | | |
| (Constant) | -.410 | 0.241 | | -1.703 | 0.091 |
| Info_updated | 0.324 | 0.083 | 0.335 | 3.899 | <0.001* |
| Info_sufficient | 0.618 | 0.072 | 0.546 | 8.579 | <0.001* |

| | Info_easy_understand | 0.069 | 0.096 | 0.052 | 0.721 | 0.472 |
|---|---|---|---|---|---|---|

*significant at 95% confidence interval

Appendix 19. ANOVA result for relationship between e-loyalty and usefulness of website

| Model | | Sum of Squares | df | Mean Square | F value | Significance |
|---|---|---|---|---|---|---|
| 1 | Regression | 63.450 | 3 | 21.150 | 153.559 | <0.001* |
| | Residual | 20.660 | 150 | 0.138 | | |
| | Total | 84.110 | 153 | | | |

Note: Dependent Variable: Loyalty_more_transaction

Predictors: (Constant), Useful_get_what_order, Useful_selection, Useful_alternative

*significant at 95% confidence interval

Appendix 20. Coefficients between e-loyalty and usefulness of website

| Model | Unstandardized Coefficients | | Standardized Coefficients | t value | Significance |
|---|---|---|---|---|---|
| | B | Std. Error | Beta | | |
| (Constant) | -1.728 | 0.411 | | -4.204 | <0.001* |
| Useful_selection | 0.426 | 0.105 | 0.234 | 4.067 | <0.001* |
| Useful_alternative | 0.575 | 0.070 | 0.553 | 8.187 | <0.001* |
| Useful_get_what_order | 0.255 | 0.088 | 0.171 | 2.882 | 0.005* |

*significant at 95% confidence interval

Appendix 21. ANOVA result for relationship between e-loyalty and trust

| Model | | Sum of Squares | df | Mean Square | F value | Significance |
|---|---|---|---|---|---|---|
| 1 | Regression | 64.574 | 4 | 16.143 | 123.120 | <0.001* |
| | Residual | 19.537 | 149 | .131 | | |
| | Total | 84.110 | 153 | | | |

Note: Dependent Variable: Loyalty_more_transaction

Predictors: (Constant), Trust_promotion, Trust_service, Trust_not_share, Trust_bankcard

*significant at 95% confidence interval

Appendix 22. Coefficients between e-loyalty and trust

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Significance |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| | (Constant) | -.798 | .362 | | -2.207 | 0.029* |
| | Trust_not_share | .524 | .098 | .505 | 5.365 | <0.001* |
| | Trust_bankcard | -.012 | .106 | -.013 | -.117 | 0.907 |
| | Trust_service | .746 | .092 | .479 | 8.077 | <0.001* |
| | Trust_promotion | -.063 | .118 | -.036 | -.534 | 0.594 |

*significant at 95% confidence interval

Appendix 23. ANOVA result for relationship between e-loyalty and perceived value

| Model | | Sum of Squares | df | Mean Square | F value | Significance |
|---|---|---|---|---|---|---|
| 1 | Regression | 61.811 | 4 | 15.453 | 103.254 | <0.001* |
| | Residual | 22.299 | 149 | .150 | | |
| | Total | 84.110 | 153 | | | |

Note:      Dependent Variable: Loyalty_more_transaction

Predictors:   (Constant),   Value_complaints,   Value_cost_saving, Value_time_saving, Value_info

*significant at 95% confidence interval

Appendix 24. Coefficients between e-loyalty and perceived value

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Significance |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | -2.018 | .471 | | -4.281 | <0.001* |
| | Value_time_saving | .468 | .133 | .276 | 3.524 | 0.001* |
| | Value_cost_saving | .217 | .084 | .146 | 2.594 | 0.010* |
| | Value_info | .376 | .149 | .241 | 2.529 | 0.012* |
| | Value_complaints | .302 | .099 | .288 | 3.050 | 0.003* |

*significant at 95% confidence interval

Appendix 25. ANOVA result for relationship between e-loyalty and e-satisfaction

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 78.884 | 1 | 78.884 | 2293.976 | <0.001* |
| | Residual | 5.227 | 0152 | 0.034 | | |
| | Total | 84.110 | 153 | | | |

Note; Dependent Variable: Loyalty_more_transaction

Predictors: (Constant), Satisfaction

*significant at 95% confidence interval

Appendix 26. Coefficients between e-loyalty and e-satisfaction

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 0.341 | 0.073 | | 4.674 | <0.001* |
| | Satisfaction | 0.916 | 0.019 | 0.968 | 47.895 | <0.001* |

*significant at 95% confidence interval

Appendix 27. Independent sample t-test for e-satisfaction and e-loyalty between male and female customers

| | | Mean | Std. Deviation | F value | Significance |
|---|---|---|---|---|---|
| Quality_easy | Male | 4.30 | 0.461 | 0.052 | <0.001* |
| | Female | 3.19 | 0.753 | 0.087 | |
| Quality_linked_page | Male | 4.21 | 0.412 | 0.046 | <0.001* |
| | Female | 3.34 | 0.476 | 0.055 | |
| Quality_layout | Male | 4.29 | 0.455 | 0.051 | <0.001* |
| | Female | 3.34 | 0.763 | 0.089 | |
| Quality_color | Male | 3.48 | 0.503 | 0.056 | <0.001* |
| | Female | 4.00 | <0.001 | <0.001 | |

| | | | | | |
|---|---|---|---|---|---|
| Quality_speed | Male | 4.21 | 0.412 | 0.046 | <0.001* |
| | Female | 3.34 | 0.476 | 0.055 | |
| Quality_deliver_order | Male | 5.00 | 0.000 | <0.001 | <0.001* |
| | Female | 3.86 | 0.557 | 0.065 | |
| Info_updated | Male | 4.06 | 0.401 | 0.045 | <0.001* |
| | Female | 2.77 | 0.424 | 0.049 | |
| Info_easy_understand | Male | 5.00 | <0.001 | <0.001 | <0.001* |
| | Female | 4.09 | 0.686 | 0.080 | |
| Info_sufficient | Male | 3.86 | 0.347 | 0.039 | <0.001* |
| | Female | 2.93 | 0.253 | 0.029 | |
| Useful_selection | Male | 5.00 | <.001 | <0.001 | <0.001* |
| | Female | 4.57 | 0.499 | 0.058 | |
| Useful_alternative | Male | 4.46 | 0.502 | 0.056 | <0.001* |
| | Female | 3.45 | 0.500 | 0.058 | |
| Useful_get_what_order | Male | 5.00 | <0.001 | <0.001 | <0.001* |
| | Female | 4.09 | 0.295 | 0.034 | |
| Trust_not_share | Male | 4.13 | 0.432 | 0.048 | <0.001* |
| | Female | 2.91 | 0.295 | 0.034 | |
| Trust_bankcard | Male | 4.29 | 0.556 | 0.062 | <0.001* |
| | Female | 3.00 | 0.001 | <0.001 | |
| Trust_service | Male | 4.26 | 0.443 | 0.050 | <0.001* |
| | Female | 3.81 | 0.394 | 0.046 | |
| Trust_promotion | Male | 4.46 | 0.502 | 0.056 | <0.001* |
| | Female | 4.00 | <0.001 | <0.001 | |
| Value_time_saving | Male | 5.00 | <0.001 | <0.001 | <0.001* |
| | Female | 4.47 | 0.503 | 0.058 | |
| Value_cost_saving | Male | 3.85 | 0.359 | 0.040 | <0.001* |
| | Female | 3.00 | <0.001 | <0.001 | |
| Value_info | Male | 5.00 | <0.001 | <0.001 | <0.001* |
| | Female | 4.30 | 0.460 | 0.053 | |
| Value_complaints | Male | 4.00 | <0.001 | <0.001 | <0.001* |
| | Female | 2.95 | 0.680 | 0.079 | |
| Satisfaction | Male | 4.25 | 0.436 | 0.049 | <0.001* |
| | Female | 3.18 | 0.690 | 0.080 | |
| Loyalty_more_transact | Male | 4.24 | 0.428 | 0.048 | <0.001* |

| ion | Female | 3.24 | 0.658 | 0.077 | |

*significant at 95% confidence interval

Appendix 28.  ANOVA test for e-satisfaction and e-loyalty between age groups

| | | Mean | Std.Deviation | F-value | Significance |
|---|---|---|---|---|---|
| Quality_easy | 16-24 | 4.69 | 0.47 | 176.408 | <0.001* |
| | 25-34 | 4 | < 0.001 | | |
| | 35-44 | 3.78 | 0.42 | | |
| | >44 | 2.58 | 0.5 | | |
| Quality_linked_page | 16-24 | 4.49 | 0.51 | 118.41 | <0.001* |
| | 25-34 | 4.1 | <0.001 | | |
| | 35-44 | 3.68 | 0.471 | | |
| | >44 | 3.12 | <0.001 | | |
| Quality_layout | 16-24 | 4.66 | 0.48 | 239.077 | <0.001* |
| | 25-34 | 4.14 | <0.001 | | |
| | 35-44 | 4.02 | <0.001 | | |
| | >44 | 2.64 | 0.49 | | |
| Quality_color | 16-24 | 3.46 | 0.51 | 30.002 | <0.001* |
| | 25-34 | 3.45 | 0.5 | | |
| | 35-44 | 4.12 | <0.001 | | |
| | >44 | 4.08 | <0.001 | | |
| Quality_speed | 16-24 | 4.49 | 0.51 | 118.41 | <0.001* |
| | 25-34 | 4.01 | <0.001 | | |
| | 35-44 | 3.68 | 0.47 | | |
| | >44 | 3.03 | <0.001 | | |
| Quality_deliver_order | 16-24 | 4.98 | <0.001 | 168.294 | <0.001* |
| | 25-34 | 4.92 | <0.001 | | |
| | 35-44 | 4.24 | 0.435 | | |
| | >44 | 3.53 | 0.51 | | |
| Info_updated | 16-24 | 4.26 | 0.44 | 220.45 | <0.001* |
| | 25-34 | 3.98 | 0.15 | | |
| | 35-44 | 3.02 | <0.001 | | |

| | >44 | 2.53 | 0.51 | | |
|---|---|---|---|---|---|
| Info_easy_understand | 16-24 | 4.98 | 0.13 | 127.91 | <0.001* |
| | 25-34 | 4.94 | 0.18 | | |
| | 35-44 | 4.59 | 0.5 | | |
| | >44 | 3.61 | 0.49 | | |
| Info_sufficient | 16-24 | 4.01 | <0.001 | 169.828 | <0.001* |
| | 25-34 | 3.81 | 0.4 | | |
| | 35-44 | 2.97 | 0.12 | | |
| | >44 | 2.86 | 0.35 | | |
| Useful_selection | 16-24 | 4.98 | 0.11 | 306.494 | <0.001* |
| | 25-34 | 4.93 | 0.13 | | |
| | 35-44 | 4.87 | 0.14 | | |
| | >44 | 4.11 | 0.319 | | |
| Useful_alternative | 16-24 | 4.97 | 0.1 | 568.714 | <0.001* |
| | 25-34 | 4.05 | 0.22 | | |
| | 35-44 | 3.88 | 0.33 | | |
| | >44 | 3.02 | 0.13 | | |
| Useful_get_what_order | 16-24 | 5 | <0.001 | 200.303 | <0.001* |
| | 25-34 | 5 | <0.001 | | |
| | 35-44 | 4.24 | 0.43 | | |
| | >44 | 4.02 | 0.14 | | |
| Trust_not_share | 16-24 | 4.37 | 0.49 | 233.361 | <0.001* |
| | 25-34 | 4.08 | 0.16 | | |
| | 35-44 | 3.1 | 0.19 | | |
| | >44 | 2.81 | 0.4 | | |
| Trust_bankcard | 16-24 | 4.77 | 0.43 | 566.362 | <0.001* |
| | 25-34 | 3.98 | 0.15 | | |
| | 35-44 | 2.99 | 0.13 | | |
| | >44 | 2.98 | 0.14 | | |
| Trust_service | 16-24 | 4.6 | 0.5 | 52.273 | <0.001* |
| | 25-34 | 4 | <0.001 | | |
| | 35-44 | 4 | <0.001 | | |
| | >44 | 3.61 | 0.49 | | |

| | 16-24 | 5 | <0.001 | | |
|---|---|---|---|---|---|
| Trust_promotion | 25-34 | 4,05 | 0.216 | 687.898 | <0.001* |
| | 35-44 | 4.02 | 0.19 | | |
| | >44 | 4 | <0.001 | | |
| | 16-24 | 5 | <0.001 | | |
| Value_time_saving | 25-34 | 5 | <0.001 | 473.71 | <0.001* |
| | 35-44 | 4.93 | 0.264 | | |
| | >44 | 4 | <0.001 | | |
| | 16-24 | 4 | <0.001 | | |
| Value_cost_saving | 25-34 | 3.79 | 0.415 | 218.503 | <0.001* |
| | 35-44 | 3.01 | 0.11 | | |
| | >44 | 2.99 | 0.19 | | |
| | 16-24 | 5 | <0.001 | | |
| Value_info | 25-34 | 5 | <0.001 | 126.513 | <0.001* |
| | 35-44 | 4.61 | 0.494 | | |
| | >44 | 3.99 | 0.1 | | |
| | 16-24 | 4 | <0.001 | | |
| Value_complaints | 25-34 | 3.98 | 0.14 | 150.562 | <0.001* |
| | 35-44 | 3.44 | 0.502 | | |
| | >44 | 2.47 | 0.506 | | |
| | 16-24 | 4.57 | 0.502 | | |
| Satisfaction | 25-34 | 4.02 | 0.19 | 134.845 | <0.001* |
| | 35-44 | 3.68 | 0.471 | | |
| | >44 | 2.67 | 0.478 | | |
| | 16-24 | 4.54 | 0.505 | | |
| Loyalty_more_transaction | 25-34 | 4.02 | 0.19 | 129.076 | <0.001* |
| | 35-44 | 3.73 | 0.449 | | |
| | >44 | 2.75 | 0.439 | | |

*significant at 95% confidence interval