THE INFLUENCE OF ELECTRONIC WORD OF MOUTH TO CONVERT INTENTION INTO ACTUAL PURCHASE BEHAVIOR

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THE INFLUENCE OF ELECTRONIC WORD OF MOUTH TO CONVERT INTENTION INTO ACTUAL PURCHASE BEHAVIOR

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ABSTRACT

The proliferation of Internet users has provided a huge opportunity for businesses to anticipate the increasing value of online retail. In Thailand, the number of Internet users shows promise for e-commerce, and yet success in revenues has not emerged. Understanding the behavior in performing the actual transaction will provide valuable information and help to remove the barriers that prevent consumers opting for online shopping. The purpose of the present study is to examine factors that turn consumer intention into actual purchase in the online context among Thai consumers. The theoretical framework in the present study was developed using Technology Acceptance Model (TAM) by incorporating trust, perceived informativeness and electronic word of mouth. Stratified random sampling was employed to select sample among students from selected universities in Thailand. Data were collected using questionnaires. A total of 826 effective samples were collected and the analyses were carried out using both descriptive analysis and structural equation modeling (SEM). The results indicate moderate level of intention and actual purchase in online context. Online purchase intention is found to be a significant determinant of actual online purchase. Perceived usefulness, perceived informativeness and trust are the factors that influence online purchase intention respectively. There were significant indirect influences of electronic word of mouth on purchase intention mediated by direct influences of perceived ease of use, perceived usefulness, trust, and perceived informativeness. The results are also beneficial for both business sector and government sector to understand Thai online consumer behavior and gain clearer picture of the factor driven behind the consumer's need that can be used to spur their demands to buy more online.

Keywords: online purchase, actual purchase, electronic word of mouth, perceived informativeness, Thailand

ABSTRAK

Peningkatan penggunaan Internet telah menyediakan satu peluang yang besar kepada syarikat perniagaan untuk meramalkan nilai runcit yang semakin meningkat dalam perniagaan secara atas talian. Di Thailand, bilangan pengguna Internet menunjukkan kemajuan dalam e-dagang, namun kejayaan dalam meningkatkan pendapatan masih belum dicapai. Memahami tingkahlaku pengguna dalam membuat pembelian akan memberikan maklumat yang berharga dan membantu menghapuskan jurang yang menghalang pengguna untuk membeli secara atas talian. Tujuan kajian ini dijalankan adalah untuk mengkaji faktor-faktor yang mempengaruhi niat pengguna untuk melakukan pembelian secara atas talian di kalangan pengguna Thai. Rangkakerja teori dalam kajian ini telah dikembangkan menggunakan Model Penerimaan Teknologi (TAM) dengan memasukkan elemen kepercayaan, penyampaian maklumat dan penyampaian secara elektronik. Persampelan rawak berstrata telah digunakan untuk memilih sampel di kalangan pelajar dari universiti terpilih di Thailand. Data dikumpul dengan menggunakan kaedah soal selidik. Seramai 826 sampel telah dikumpulkan dan analisis telah dijalankan dengan menggunakan kedua-dua analisis deskriptif dan Pemodelan Persamaan Struktur (SEM). Hasil kajian menunjukkan tahap niat yang sederhana terhadap pembelian sebenar dalam konteks atas talian. Niat untuk pembelian secara atas talian didapati merupakan penentu penting kepada pembelian sebenar. Tanggapan kegunaan, penyampaian maklumat dan kepercayaan adalah faktor-faktor yang mempengaruhi niat pembelian atas talian. Terdapat hubungan signifikan tidak langsung antara penyampaian secara elektronik dan niat pembelian yang dipengantarakan oleh faktor penggunaan yang mudah, tanggapan kegunaan, kepercayaan, dan penyampaian maklumat. Hasil kajian juga memberi manfaat kepada kedua-dua sektor perniagaan dan sektor kerajaan Thai untuk memahami gelagat pengguna atas talian dan mendapatkan gambaran yang lebih jelas daripada faktor yang mempengaruhi keperluan pengguna yang boleh digunakan untuk merangsang permintaan mereka untuk membeli lebih banyak secara atas talian.

Kata Kunci: pembelian atas talian, pembelian sebenar, perbincangan secara elektronik, penyampaian maklumat, Thailand

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LIST OF ABBREVIATIONS

AP	Actual online purchase
EWOM	Electronic word of mouth
INFO	Perceived informativeness
OPI	Online purchase intention
PEOU	Perceived ease of use
PU	Perceived usefulness
T	Trust
WOM	Word of mouth

CHAPTER 1

INTRODUCTION

1.1 Introduction

This chapter provides an overview of research background, a discussion of the research problems, research objectives, research questions and the scope of the study. The significance of the study and the definitions of key terms are also provided at the end of the chapter.

1.2 Research Background

Buying products/services via websites has become part of life nowadays. The rapid growth of digital markets has occurred through the advancement of technology, especially the accessibility of the Internet. Today, people can connect to the Internet not only from their own desktop but also from many other devices, such as smartphones and tablets, bringing a consequence of which has resulted in the rapid growth of Internet users worldwide. According to Internet World Stats (Miniwatts Marketing Group, 2013), as of December 31, 2012, there were 2.7 billion Internet users around the globe, accounting virtually for 40% of the world's total population. Internet users are potential customers for online business; however, not all Internet users have experience of online buying. Some surf the Internet for information, to chat, and for entertainment. Under this circumstance by turning these Internet users into online consumers would yields tremendous benefits to business operators at large. However, online buying consumer behavior is different from offline behavior.

Therefore, understanding which factors really influence consumer's decision to click on the purchase button on a website is crucial for companies of all sizes to turn Internet users into online consumers.

The Internet has changed the market pattern for conducting business, bypassing agents, and the colossal achievement of dot-com businesses, such as Amazon, Yahoo, and eBay, sending a great shockwave to traditional businesses (Kotler, Ang, Leong, & Tan, 2004). The efficacy of buying and selling products/services and information via the Internet, in term of an online perspective, is called electronic commerce (e-commerce) (Kalakota & Whinston, 1997). Butler and Peppard (1998) consider that Internet marketing will replace traditional marketing in three respects: communication, transactions, and distribution. This is an idea supported by Hart, Doherty, and Ellis-Chadwick (2000). By generating less expense than traditional businesses, selling products/services online can offer greater profit for each unit sold via a website. Online retailers require a small investment, as there is no need to rent an office or hire employees, and no utility expenses arisen from operation. The main expenses are the payment for running and maintaining the website and related transaction costs. Therefore, online sales have a greater margin for profit than selling products offline.

The proliferation of Internet users has provided an opportunity for companies of all sizes to conduct business in both domestic and international markets within their existing costs (Eid, 2005). As the number of Internet users is increasing every year,

the challenge for businesses is to reach potential online buyers and to anticipate the increasing value of online retail. In the United States, the business-to-consumer (B2C) e-commerce sales in 2013 amounted to 322 billion U.S. dollars, an increase of more than 154% from 2009 to 2013 (Statista, 2014).

In Thailand, e-commerce has also played an important role in enhancing economic growth. It has been established as one of the five strategies to boost economic growth in Thailand's master plan for information and communication technology. Similar to western countries, the number of Thai Internet users has also continuously increased year on year, as shown in Table 1.1.

Table 1.1
Number of Internet Users in Thailand and Population Statistics

Year	Internet users*	Population**	Penetration rate
2006	11,413,000	62,828,706	18.17%
2007	13,416,000	63,038,247	21.28%
2008	16,100,000	63,389,730	25.40%
2009	18,300,000	63,525,062	28.81%
2010	19,793,813***	63,878,267	32.88%
2011	25,090,000***	64,076,033	39.16%
2012	25,154,234***	64,456,695	39.02%
2013	26,140,473***	64,785,909	40.03%

Source: *National Electronics and Computer Technology Center (NECTEC); **Department of Provincial Administration; ***Truehits.net

As in western countries, the number of Internet users in Thailand shows promise for e-commerce, and yet success in e-commerce revenues has not emerged. According to a report from the Electronic Transaction Development, the value of e-commerce in Thailand in 2010 decreased for more than 13% compared to the previous year. Furthermore, of 2.3 million registered businesses, e-commerce registered companies numbered only 2,474, meaning that only 0.11% of companies were providing e-commerce transactions for their customers. As a result, the growth rate of e-commerce in terms of volume shows a decreasing trend (Table 1.2).

Table 1.2
The Value of E-Commerce Transactions in Thailand

Year	**Value*** ***(Million USD)****	**Growth Rate**
2006	6,831	N.A.
2007	9,095	33.14%
2008	10,205	12.21%
2009	12,489	22.38%
2010	10,815	-13.41%
2011	11,846	9.53%
2012	12,253	3.43%

Source: Electronic Transaction Development Agency
*excludes the value of business in government electronic commerce
**1USD = 33Thai Baht

Despite the increasing value of e-commerce transactions in Thailand, the business-to-customer (B2C) e-commerce value is quite low compared to the business-to-business (B2B) e-commerce value, as shown in Figure 1.1.

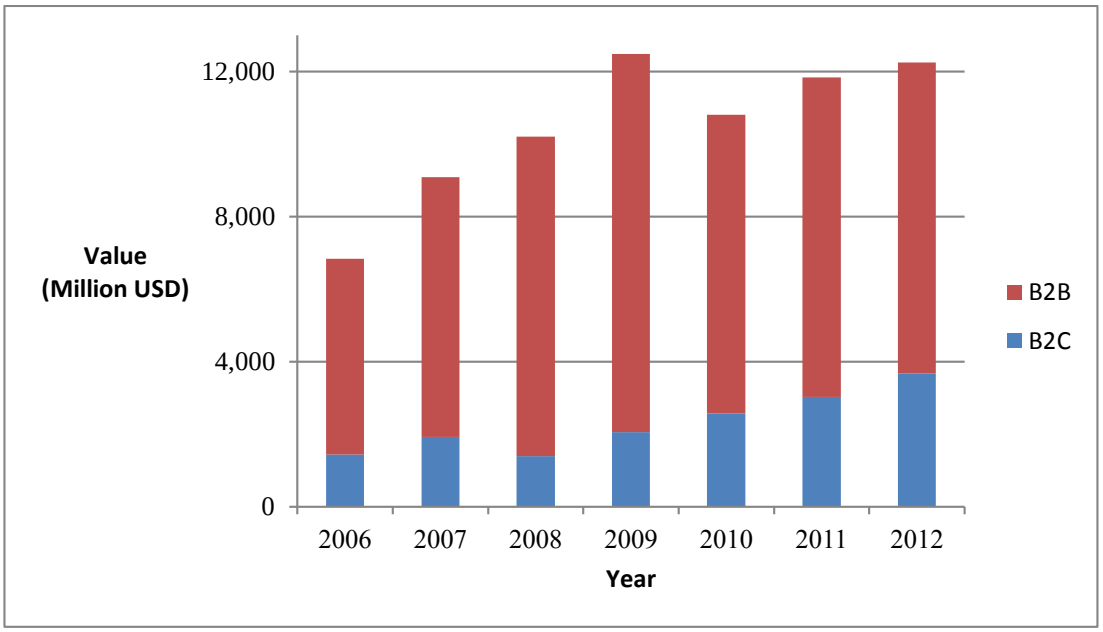


Figure 1.1
Proportion of the Business-to-Business (B2B) and the Business-to-Customer (B2C) E-Commerce Value in Thailand
Source: National Statistical Office
*excludes the value of business in government electronic commerce

However, Electronic Transactions Development Agency in Thailand (2013) indicates that only 17.5% of Thai Internet users have experience of buying products/services via websites, suggesting that most Thai people use the Internet for other purposes rather than as a shopping medium. This is confirmed by the results of Kearney's (2000) study on satisfying the experienced on-line customer, which shows that 82% of Internet users only view information for products or services and do not complete online transactions.

Competing in an online context is not only a matter of having a website, but crucially how to induce consumers to purchase online. Selling products/service in an online environment emphasizes the needs of the buyer rather than the needs of the seller as in traditional marketing (Eid & Trueman, 2002). Therefore, it is highly important for business marketers to understand what factors have the most influence on consumers' online purchase intention, turning this toward actual purchase behavior, so that they are able to develop appropriate strategies to help businesses to compete in the cyber market. To increase the volume of online purchases, attract more potential customers and succeed in dot-com business, the first step is to understand what the consumer wants and needs. Consistent with this view, Laosethakul and Boulton (2007) stress that shopping behavior is one of the major critical factors for the success of e-commerce in Thailand. Thus, businesses seeking success in online channels need to pay considerable attention to understanding consumer purchase behavior in the online context.

1.3 Research Problem

Several researchers have sought to explore the factors that induce consumers to buy products or services online to develop new knowledge, models and theories for furthering understanding of online consumer behavior. Most previous research has employed the attitude-intention-behavior relationship model to understand the factors that affect online purchase behavior, including the theory of reasoned action (TRA) (Ajzen & Fishbein, 1980), the theory of planned behavior (TPB) (Ajzen, 1991), and the technology acceptance model (TAM) (Davis, 1989). During the last

decade, the majority of online purchase behavior researchers have stopped their studies at purchase intention instead of actual purchase (Ahn, Ryn, & Han, 2004; Celik, 2011; Pang & Ji, 2007; Tseng & Hsu, 2010; Xie, Zhu, Lu, & Xu, 2011;Yoon, 2009). Consumers who have the intention to make an online purchase may nonetheless only browse and search for information, stopping short of making their transaction in the online context (Sooperamanien & Robertson, 2007). Stop the investigation at intention could be misleading in predicting online shopping behavior (Limayem, Khalifa, & Frini, 2000).

Buying product in online context is dealing with the acceptance of computer technology. Previous researchers have been widely adopted TAM as the underpinning theory to understand consumers' purchase behavior in online contexts (Ahn et al., 2004; Lin, Lin, Wang, & Hwang, 2010; Ruiz-Mafe, Sanz-Blas & Aldas-Manzano, 2009). However, the relationships between variables in TAM have showed inconsistency. For example, the relationship between perceived usefulness and online purchase intention, some found a positive relationship (Ha & Stoel, 2009; Lin, 2007) but some found insignificant relationship (Gefen et al., 2003; Heijden et al., 2001). In addition, the original TAM can only partially explain online shopping behavior in term of technology acceptance (Chiu, Chang, Cheng, & Fang, 2009; Ha & Stoel, 2009). The inclusion of exogenous variables in the original TAM, may improve the prediction of consumer purchase intention.

Nowadays, the increase in online communities has changed communication, not only increasing the speed with which information is transmitted, but also decreasing information asymmetry (Tseng & Hsu, 2010). The Internet has enabled new forms of

communication platforms, making it possible to share information concerning products and services, and to assess these by using the positive or negative signals from potential, actual, or former consumers about the attributes or experiences of a product or company; this process can be called electronic word of mouth (EWOM) (Hennig-Thurau, Gwinner, Walsh, & Gremler, 2004). Word of mouth (WOM) has been shown to play an important role in consumer behavior and to influence purchase decisions in the traditional context (Richins & Root-Shaffer, 1998). However, research on how EWOM influences online purchase intention is in its early stages. Discovering how EWOM influences online purchase intention will help those involved in marketing to develop appropriate strategies to attract new customers and retain existing customers. Therefore, the investigation of the factors that influence consumers' purchase behavior in the online context is needed.

1.4 Research Questions

To examine factors that turn consumer purchase intention into actual purchase behavior in the online context with Thai consumers, the following research questions are being formulated.

1. What is the level of online actual purchase among Thai consumers?
2. What is the level of online purchase intention among Thai consumers?
3. To what extend does purchase intention influence actual purchase in online channel among Thai consumers?

4. What are the factors that influence online purchase intention among Thai consumers?
5. To what extend does EWOM influence perceived ease of use, perceived usefulness, trust, perceived informativeness, and online purchase intention among Thai consumers?

1.5 Research Objectives

The specific objectives of this research are formulated as below:

1. To determine the level of online actual purchase among Thai consumers
2. To determine the level of online purchase intention among Thai consumers
3. To determine to what extend does purchase intention influence actual purchase in online channel among Thai consumers
4. To determine the factors that influence online purchase intention among Thai consumers
5. To determine to what extend does EWOM influence perceived ease of use, perceived usefulness, trust, perceived informativeness, and online purchase intention among Thai consumers

1.6 Scope of the Study

The main purpose of this study is to investigate influence of EWOM to convert an intention into an actual purchase. This study considers only Thai consumers who have bought products/services in the business-to-consumer (B2C) e-commerce because there is limited research studying online purchase behavior in Thailand

(Leelayouthayotin, 2004; Phatthana, 2011). All consumers who have used a website as the medium for buying a product or service from e-retailing are the Internet users who can be identified by an Internet Protocol address (IP address). However, it is difficult to identify who they actually are. The research then focused on the group of university students because Internet statistics for Thailand in 2011, provided by the Internet research center corporation (2012), indicate that the largest group of Internet users in Thailand are university students which accounting for 34.20% of all users followed by computer and internet working group accounted for 11.34% and education personnel accounted for 7.93%. Therefore, university students—both undergraduates and post-graduates—were selected as the sample for this study. A list of students from the selected universities including Mae Fah Luang University, Khon Kaen University, Kasetsart University, Nakhon Pathom Rajabhat University and Songkhla Rajabhat University was solicited from each university's registration office.

1.7 Significance of the Study

In terms of theoretical contribution, recent previous studies that applied TAM as their theoretical base theory have treated online purchase intention, rather than actual behavior, as the dependent variable (Celik, 2011; Liu, Chen, & Zhou, 2010; Tseng & Hsu, 2010). Since individuals' intentions may change over time (Liang & Hung-Jen, 2002; Vijayasarathy, 2002), it is doubtful that intention affects actual behavior (Cao & Mokhtarian, 2007). As this study changes the dependent variable from online purchase intention to actual online purchase behavior, its results will indicate how

well intention predicts actual behavior in an online context. Even though TAM has been proven to be a robust theory, some research has shown inconsistent findings. The results from this research may help to confirm the robustness of the theory, or it may provide another inconsistent case because this research has been undertaken in a different context.

Applying additional factors to the original TAM may provide a significant theoretical improvement when explaining consumers' online purchasing behaviors. There is little research to support adding perceived informativeness and trust into the proposed model as predicted factors. Moreover, this study attempts to examine the influence of a recent critical issue, a new form of communication called EWOM, on online consumers' intention and their antecedents. A few studies have shed some light on the influence of EWOM on the antecedents of TAM. This research will therefore fill these gaps and contribute to the body of knowledge regarding consumer behavior. Moreover, the results from this study will provide a better understanding of Thai consumers in an online context, because only a few studies have investigated online purchase behavior in Thailand.

From the managerial perspective, as of today, only 0.01% of the registered businesses in Thailand have provided e-commerce platforms to consumers, so the findings of this research will benefit businesses in Thailand. Understanding the level of online purchase intentions of Thai consumers will wake businesses up to the huge profits they have missed, and this will encourage them to build e-commerce

platforms for potential online customers. Increasing the number of online businesses will provide more options for Internet users when buying goods online, and this will accelerate the growth of Thailand's e-commerce sector. Understanding how various factors influence online purchase intention and behavior will help businesses to better understand which factors should be prioritized and how they can encourage online customers to complete their transactions. At present, only 17.5% of Thai Internet users have bought a product or service online. Understanding which factors enhance their intentions may encourage the remaining to make their first online purchases.

For marketing managers, understanding the predicted level of each factor will help them to pursue correct strategies for Internet consumers. Moreover, EWOM has become increasingly important in motivating other consumers, because consumers believe information that comes from independent people with experience of the product or service. Therefore, understanding the influence of EWOM can help marketers to build effective Internet marketing strategies and reach their potential consumers at a lower cost than by advertising in online and offline channels. For example, marketers can hire an expert or other person who has influence over the target group, such as a blogger or YouTube publisher, to communicate a product's benefits positively to cyberspace. For the Thai Government, a clear picture of the factors influencing online purchase intention will help them to develop appropriate policies and strategies to assist online business and drive the growth of e-commerce. For example, to encourage consumers to trust e-tailors, the government could provide a certificate for trusted e-tailors.

The results of this research will benefit not just Thai e-businesses—it may also be useful for foreign businesses, especially those in the ASEAN community, which will be formed in 2015. The ASEAN community will allow businesses from other community countries to conduct their business in Thailand. The policy of reducing the restrictions for product transfer, in both tariff and non-tariff terms, will increase the number of e-commerce businesses. The results from this research will help businesses to understand Thai online customers better, because they may act differently to online consumers in other countries.

1.8 Definition of Key Terms

Actual online purchase: Consumer has placed an order using the retailer's website and completed the transaction for the order.

Online purchase intention: Consumers intends to purchase a product or service from the retailer's website.

Trust: The belief of a potential customer that he or she can rely on the website or online retailer.

Perceived usefulness: The belief of a potential customer that using the Internet as a purchasing medium will enhance his or her shopping experience and efficiency.

Perceived ease of use: The belief of potential customers that using the Internet as a shopping medium will be easy.

Electronic word of mouth (EWOM): The sharing of positive or negative opinions over the Internet by potential, actual, and former consumers. These opinions convey their experiences with a product or company.

Perceived informativeness: The belief of potential customers that the information provided is adequate for making decisions (Ducoffe, 1996).

1.9 Organization of the Research

This research consists of five chapters. The first chapter contains the background of the study, the research problems, research objectives, research questions, and the scope of the study. The significance of the study and the definitions of key terms are also provided at the end of the chapter. The rest of the research is organized as follows;

Chapter 2 presents an overview of electronic commerce and the theories of online purchase behavior. Then, the electronic commerce in Thailand, the traditional purchase behavior and the online purchase behavior are discussed. Next, literature on the predictors of online purchase behavior and the variables relating to the study are reviewed. Finally, the theoretical model and the hypotheses are being discussed.

Chapter 3 presents the research design and methodology employed to collect and analyze the data of the study. The chapter provides details of data collection,

measurement development, analysis procedures, and the test instruments used to achieve the research's purpose.

Chapter 4 presents the results of analyzed data. First part provides the examination results for prerequisite of multivariate analysis. Descriptive analysis and Structural Equation Modeling are conducted to examine for the research model and hypotheses testing.

Chapter 5 presents the discussion of the results in each objective. Then, the theoretical contribution, methodological contribution and managerial implication are discussed. The chapter ends with the limitation of this research and the important concern for the future study.

CHAPTER 2
LITERATURE REVIEW

2.1 Introduction

In order to clearly understand online consumer purchase behavior and what have been found in previous studies, several areas of literature were reviewed and presented in six topics. The first section presents an overview of electronic commerce and electronic commerce in Thailand. Then the next topic introduces theories of online purchase behavior. Later sections describe traditional consumer behavior, online consumer behavior, and the predictors of online purchase intention and behavior. Finally, the selected variables, the theoretical framework, and hypotheses will be performed and discussed at the end of this chapter.

2.2 Overview of Electronic Commerce (E-Commerce)

The Internet has generate and exploit the opportunities to business as it changed the market pattern for conducting business with less expenses (Kotler, Ang, Leong, & Tan, 2004). Electronic commerce (e-commerce) has been defined by Kalakota and Whinston (1997) in term of an online perspective as "the capability of buying and selling products and information on the Internet and other online services". E-commerce is categorized into three types: business-to-business (B2B), business-to-customer (B2C), and customer-to-customer (C2C) e-commerce. This study attempts to gather information underlying factors influencing the adoption of consumer in the B2C e-commerce. In B2C e-commerce, the sellers are organizations, and the buyers

are individuals. Rise in online shopping has generated a growing body of research on online consumer behavior. The differences between online and offline purchasing context such as the adoption of computer technology make the obstacles hiding the development of online retailing (Limayem et al., 2000).

In the past, several researchers have tried to find out the predictors of online buying. Limayem et al. (2000) for example found that online purchase intention and behavioral control had equally effects on the actual behavior of purchasing online. Gefen et al. (2003) also found perceived ease of use, perceived usefulness, and trust to affect consumer's intention to buy online. Another research conducted by Ruiz-Mafe et al. (2009) indicated that perceived usefulness influences consumer's decision to buy online while risk in privacy, performance and psychological are the obstacle that prevent consumer from online shopping. Similarly to the study of Ha and Stoel (2009) that consumer's perception of usefulness and attitude influences consumer's adoption of e-shopping. Park and Kim (2008) conducted the research and found that EWOM has strong influence on online shopping users. Although the driving forces behind the online purchase have been assessed for a long period of time, there still be the hiding factors that prevent customer from submitting the transaction payment (Celik, 2011).

2.3 Electronic Commerce in Thailand

Thailand is a developing country in the Southeast Asian with a population of 64 million people. Currently, the number of Thai Internet users is increasing every year.

The data from National Electronics and Computer Technology Center (NECTEC) (2014) report the number of Internet users at the end of 2013 was 26 million in which the number was twice as the number of Internet users in 2007. There are variety purposes of using the Internet in Thailand such as searching for information, checking mail, and connecting with friends via social network. Besides these activities, the people of Thailand always use the Internet as the medium for shopping products/services. Nowadays, business companies need to focus on the Internet not only using the website as the medium to express information and public relation but also as the channel to sell products/services. NECTEC also indicated the product categories that consumers usually buy from the Internet are clothing and jewelry, e-ticket, and book which accounted for 30.8, 14.8 and 13.4 percent respectively. The age of people who shop online are in the range of 25-49 years old which accounted for 68.8 percent. National Statistical Office indicated Thai e-commerce value in 2012 is almost 22,558 million dollars including the value of business to government (B2G) for 10,305 million dollars, business to business (B2B) for 8,574 million dollars and business to customer (B2C) for only 3,678 million dollars.

Although the number of Thai Internet users has shown an interesting trend as the potential consumers in online business, however, only 17.5 percent are used the Internet as the shopping medium. The main reasons for the Internet users not to commit their transactions online are due to lack of trust in online vendor and lack of confidence on the products sold in the website (Electronic Transactions Development Agency in Thailand, 2013). Consistent with the result from the study by Laosethakul and Boulton (2007), trust and shopping behavior were the major

influences for the success of e-commerce in Thailand. Understanding Thai online shopping behavior and how trust influences their behavior will help business to be more successful online.

The Internet has emerged in Thailand since 1987, and there has been a lot of studies regarding the Internet in Thailand in various area such as Internet banking (Rotchanakitumnuai & Speece, 2003), online social networking (Wattanasupachoke, 2011) and Internet shopping (Jaturavith, 2006; Leelayouthayotin, 2004). In term of electronic commerce, some of them focused their studies on business perspective only. For example, Laosethakul and Boulton (2007) studied the key success factors for e-commerce in Thailand from the business perspective. However, only few researchers have focused on Thai online consumer's perspective (Jaturavith; Rotchanakitumnuai & Speece) which lead to less understanding in the Thai online consumer behavior.

Jaturavith (2006) conducted a study to examine the factors that influence Thai consumers' intention to adopt the Internet as the shopping medium. Data were collected via questionnaires from 300 Thai consumers. Pearson correlation was used to analyze the relationship among the independent variables and consumers' intention to use the Internet as the shopping medium. The results demonstrated the direct relationship among innovativeness, attitude, perceived usefulness, and perceived security risk, and the intention to use the Internet as the shopping medium. In the same vein, Leelayouthayotin (2004) conducted a study to identify the important factors that influence health food consumers' intention to buy the products in the online context. The study was extending TAM with other factors including

perceived risk, product and company attribute, and customer experience. Online surveys were used to collect the data from 786 consumers who had purchased health foods using Internet during the past 12 months. The results from SEM showed that product and company attributes, perceived ease of use, and perceived usefulness has a direct relationship with online purchase intention while perceived risk and customer experience has been found insignificantly related to online purchase intention for buying health food online.

Rotchanakitumnuai and Speece (2003) investigated the prospective of TAM in the context of Internet securities trading. Questionnaires were used to collect the data from 442 traders including both Internet trading users and non-Internet trading users. ANCOVA was used to analyze the data and the results indicated the direct influence of attitude, perceived usefulness and trust respectively on intention to use Internet trading service. Jaturavith (2006) studied online customer in general, while others focused their studies on specific groups. Rotchanakitumnuai and Speece focused on Internet traders and Leelayouthayotin (2004) selected the group of health food customer.

Previous research on online consumer in Thailand has stopped their studies at the intention instead of actual online purchase which could be the reason behind the low number of online purchases in Thailand. The results have also shown inconsistencies, For example, in term of the direct relationship between perceived ease of use and online purchase intention. While Leelayouthayotin (2004) indicated

the negative relationship, the result from the study by Rotchanakitumnuai and Speece (2003) showed that attitude and perceived usefulness mediate the relationship between perceived ease of use and online purchase intention. Thus, conducting this research will help to add value to understand Thai consumer in the online context.

2.4 Theories of Online Purchase Behavior

Shopping on the Internet is a voluntary individual behavior that can be explained by behavioral theories. The most widely used theories that previous research used as the fundamental to conduct the conceptual model for predicting an individual's intention to perform an online purchase behavior are the Theory of Reasoned Action (TRA) by Ajzen and Fishbein (1980), the Technology Acceptance Model (TAM) by Davis (1989) and the Theory of Planned Behavior (TPB) by Ajzen (1991).

These three theories are based on the same relationship pattern; belief-attitude-intention-behavior. The Theory of Reasoned Action (TRA) as shown in Figure 2.1 proposed that an individual's intention to perform the behavior is determined by personal attitude and subjective norm. Attitude is defined as the overall evaluation of a particular concept. Subjective norm is the influence consumer's behavior as consumers usually follow the recommendations from people who share the same social value.

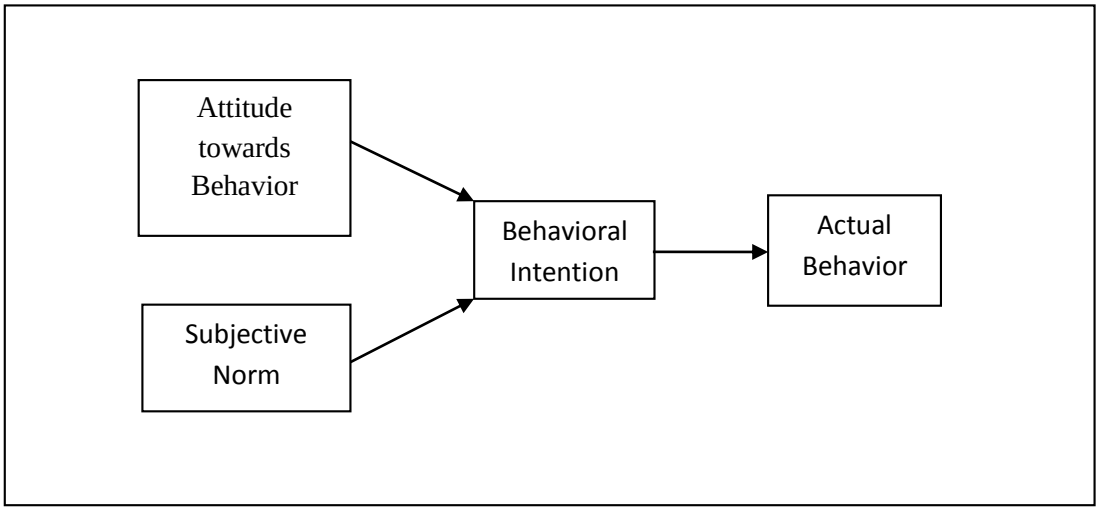


Figure 2.1
Theory of Reasoned Action (TRA) by Ajzen & Fishbein (1980)

However, the study on online purchase behavior not only related to the behavior of product/service consume, but also to the acceptance of computer technology. The Technology Acceptance Model (TAM) has been developed by Davis (1989) as shown in Figure 2.2. TAM originated from the Theory of Reasoned Action (TRA) to explain the technology usage behavior. The goal of TAM is "to provide an explanation of the determinants of computer acceptance that is general capable of explaining user behavior across a broad range of end-user computing technologies and user population, while at the same time being both parsimonious and theoretically justified" (Davis 1989, p.985). TAM has been widely adopted in the information system research and marketing research since 1989. TAM presented the two major beliefs about the new technology; Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) to determine personal attitude towards using the technology which lead to behavioral intention and in turn determines behavior.

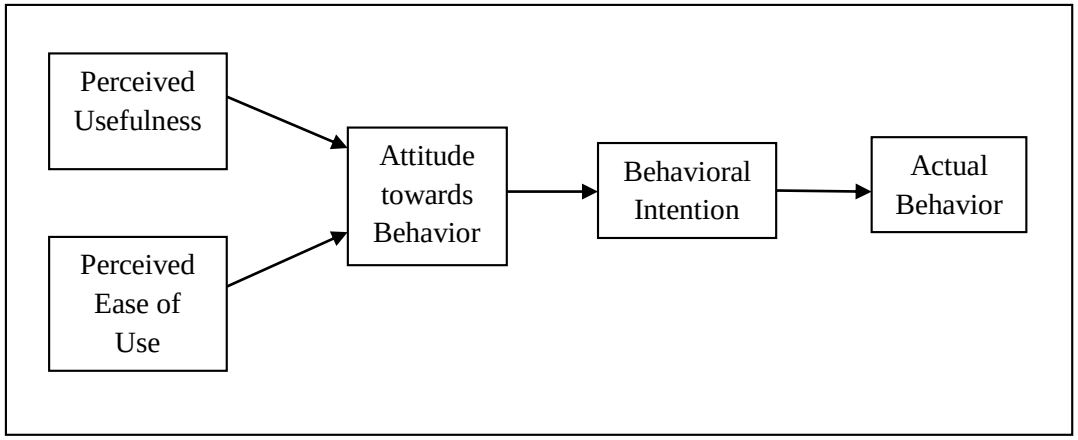


Figure 2.2
Technology Acceptance Model (TAM) by Davis et al. (1989)

PU is defined as "the degree to which a person believes that using a particular system would enhance his or her job performance" while, PEOU refers to "the degree to which a person believes that using a particular system would be free of effort" (Davis 1989, p.320). TAM has received substantial support from previous studies as a theoretical foundation for the adoption of online purchase (Ahn et al., 2004; Ha & Stoel, 2009). Ha and Stoel, for example explained consumer acceptance of e-shopping by TAM. The results confirmed the robustness of TAM, explaining technology acceptance behavior for users within the context of online shopping. Similarly to the study of Ahn et al. (2004) adopted TAM to study consumer acceptance of Internet shopping mall, the results indicated highly consistent results on the behavioral intention toward the use of Internet shopping mall.

Although TAM has been widely used to study online consumer behavior but it reflects only the influence of technology usage on consumer behavior. Therefore,

Ajzen (1991) developed the Theory of Reasoned Action (TRA) by adding a third antecedent of behavioral intention called Perceived Behavioral Control to be more comprehensive in explaining online consumer behavior. The adjusted theory was named the Theory of Planned Behavior (TPB) as shown in Figure 2.3. Perceived behavioral control is the perceived sense of control over performed behavior. In TPB, the antecedents of attitude, subjective norms, and perceived behavioral control have influence behavioral intention, and in turn, actual usage.

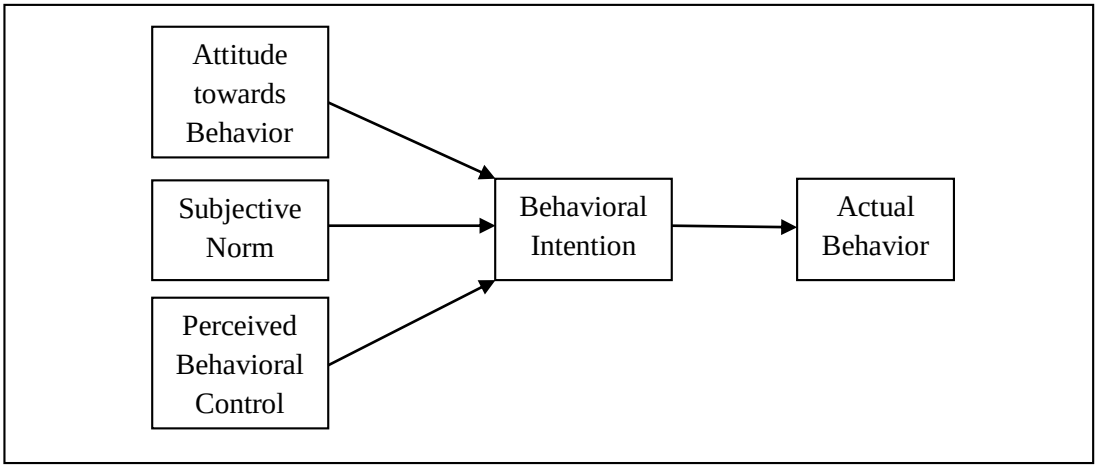


Figure 2.3
The Theory of Planned Behavior (TPB) by Ajzen (1991)

TPB has been proven by previous research as one of the most influential theories in explaining online consumer behavior (Laohapensang, 2009; Limayem et al., 2000). Limayem et al. conducted the longitudinal study to investigate the factors affecting online shopping. The model was developed based on TPB with two additional variables, personal innovativeness and perceived consequences. The data were collected by the questionnaire distributed to 705 consumers of four internet-based directories. The result showed a strong support of TPB in explaining factors that

motivate online shopping. The study also posited that intentions and behavioral equally control influence on online shopping behavior. Similarly, Laohapensang conducted the study to explore factors influencing the Internet shopping behavior in Thailand context. The results from a survey of 263 graduate students from four leading universities in Thailand showed that Theory of Planned Behavior (TPB) was valid, but only subjective norms and perceived behavioral control had significant effect to intention to shop online.

TAM and TPB have been widely used to explain intention and behavior in recent years. Some researchers compared the effectiveness of both theories in predicting consumer's intention. Mathieson (1991) for example found out that both TAM and TPB predicted intention to use an information system quite well. However, TAM has more advantage because it is easier to apply. Chau and Hu (2002) indicated that in examining physical acceptance of telemedicine technology, TAM was superior than TPB. Gentry and Calantone (2002) compared the ability in predicting consumer's purchase intentions of the frequently use theories such as TAM, TPB, and TRA. Their findings indicated that TAM was superior to the other theories. Confirming with the recent results from the study of Lin (2007) who compared TAM and two variations of TPB, TPB and the decomposed theory of planned behavior (DTPB) in terms of how well they predict consumer intention to shop online. DTPB was proposed by Taylor and Todd (1995). The model identified several factors that influence the three beliefs of TPB; attitude, social norm and perceived behavioral control. The results indicated that DTPB fully explained behavioral intention. However, TAM was more preferable than the other two models in term of predicting

actual online shopping usage and it showed more parsimonious than the others. Thus, the theoretical model of this study will base on the Technology Acceptance Model (TAM) with the final version in 1996 that eliminated the attitude construct from the model as shown in Figure 2.4. Some theoretical research in recent years delete attitude from the model as they believed that the moderating effect of attitude can explain only small portion of variation in the consumer's intentions to shop in online context (Celik, 2011; Chiu et al., 2009; Faqih, 2011; Ruiz-Mafe et al., 2009; Tseng & Hsu, 2010; Xie et al., 2011; Yeh et al., 2011; Yoon, 2009).

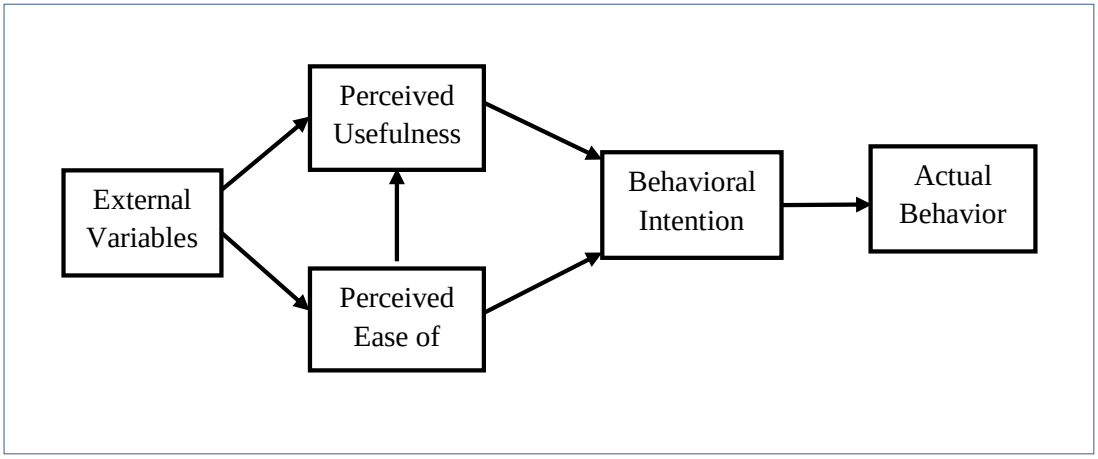


Figure 2.4
The Final Version of TAM by Venkatesh and Davis (1996)

Previous studies have proved TAM as a useful foundation for understanding consumer technology acceptance of online shopping (Ahn et al., 2004; Ha & Stoel, 2009). Moreover, this theory has received substantial empirical support in information systems and online marketing context (Celik, 2011). Ahn et al. conducted a study to explore online and offline features of Internet shopping malls

and their relationships with the acceptance behavior of customers. The study employed a Web survey of 932 online customers of six Internet shopping malls based in Korea. The results highlighted the significance of information quality as the main antecedent of perceived usefulness and behavioral intention to use Internet shopping mall. Moreover, online quality has a positive influence on perceived ease of use and usefulness, while offline quality has a positive influence on perceived usefulness only. Ha and Stoel (2009) conducted the study to integrate e-shopping quality, enjoyment, and trust into a Technology Acceptance Model (TAM). The data were collected via online surveys and distributed to 298 students at a large Midwestern university. The respondents had experienced browsing and purchasing product online. The results from SEM indicated that intention to e-shop has been affected by usefulness and attitude. While trust, ease of use and enjoyment affect usefulness, only trust and enjoyment affect attitude. E-shopping quality affects trust, ease of use, and enjoyment. Yoon (2009) built a TAM based research model with the inclusion of trust and culture values. The empirical testing of the model indicated that TAM can be used as the online purchase acceptance model in the developed country like China.

Thus, this study will based on TAM as the underpinning theory by adding external factors in order to test the exploratory power of the framework in prediction online purchase intention toward actual behavior of Thai consumers.

2.5 Traditional Consumer Behavior

Conventional buying behavior that places much emphasis on an individual's decision making process and influencing factors have been taken into account not only the money, time and effort spent in purchasing products required, but also including the issues; what they want to buy, how to buy, when to buy, where to buy, and, how often the buying has been made (Schiffman & Kanuk, 2000). Kotler (2000) stated that consumer behavior is the study of individuals, groups, or organizations and a process they use to select, secure, use, a dispose of products, services, experiences and ideas to satisfy their own needs. For conventional marketing approach, an understanding of process in which the consumer makes a buying decision will enable marketer to determine who poses a real power in making decision. Marketing campaigns have been designated for a specific target group involved in buying process including a persuader, an influencer, a decision maker, a buyer or a consumer.

Engel, Blackwell, & Miniard (1995) defined consumer behavior as all activities relating to securing, using, and disposing of products and services, and also extends to cover a process of decision making before and after an occurrence of those activities. Consumer behavior in conventional notion blends around four crucial elements including culture, sociology, personal characteristics and psychology (Zeithaml, 1988). Since the Internet has been created, the new channel of shopping has occurred as an alternative to brick-and-mortar stores and it also affect the change in consumer behavior (Dijk, Laing, & Minocha, 2005).

2.6 Online Consumer Behavior

Online purchase describes transactions from consumers in order to get the products or services from websites (Monsuwe, Dellaert, & Ruyter, 2004). There are some differences between online and offline buying context. The two main issues are technology acceptance and the uncertainty feeling. Regarding to the first issue, the perspective of technology acceptance, it involved as the traditional brick and mortar shops have been replaced by the virtual shop on the website. There are no face-to-face communications between consumers and salespersons. Instead, consumers who performed the online commerce have to interact with the technology as the medium to complete a transaction. Secondly, the uncertainty feelings of consumers arise when buying products or services in online context. The uncertainty feeling arise as the unknown vendors, unobvious product and the risk in payment or delivery (Heijden et al., 2001).

Not only are the changes in the context, but in term of consumer behaviors could be noticed. There are differences between online and traditional offline behaviors. Thus, understanding consumer behavior is still crucial for marketing management even in the cyber world (Butler & Peppard, 1998). In terms of consumer's psychological factors, real consumer behaviors are influenced not only by stimulations from substantial environment but also by the behavioral intention from the consumer. Most of previous researches have utilized the attitude-intention-behavior relationship model including the theory of reasoned action (Ajzen & Fishbein, 1980), the theory of planned behavior (Ajzen, 1991), and the technology acceptance model (Davis,

1989) in order to understand the factors that affect online purchase behavior. These theories indicated the same relationship between intentions and behavioral which means that people who have intention will perform the behavior. Therefore, during the last decade, a majority of online purchase behavior researchers has stopped their work at the intention level (Ahn et al.; Celik, 2011; Chiu et al., 2009; Gefen et al., 2003; Ha & Stoel, 2009; Heijden et al.; Liu et al., 2010; Pang & Ji, 2007; Tseng & Hsu, 2010; Xie et al., 2011; Yoon, 2009).

Since a large number of previous researches have stopped their study on online purchase intention, the idea that online purchase intention will predict actual purchase in online context is rather questionable. Limayem et al. (2000) cautioned from the result of longitudinal study of online shopping that stop the investigation at intention could lead to misleading in predicting online shopping behavior. This supported the argument why empirical evidence of the influence of the Internet on consumer shopping behavior remains inconclusive (Kamarulzaman, 2007). Consumers who have the intention to conduct on online purchase may only browse and search for information and may not actually commit their transaction in online context (Sooperamanien & Robertson, 2007). As indicated from the results by Zhang, Prybutok, & Koh (2006), while 78% of variation in online purchase intention is explained by web usage, impulsive and subjective norms, only 18% of variation in actual purchase is explained by the intention. Therefore, this research will investigate the factors affecting online purchase intention and behavior in order to provide an understanding on how variables are constructed to explain online purchase intention and behavior.

During the last decade, several researchers have tried to investigate the factors that influence consumer to shop online in various context i.e. organic personal care products (Kim & Chung, 2011), airline ticket (Ruiz-Mafe et al, 2009), apparel products (Ha & Stoel, 2009), tourism service (Lin et al., 2010; Chiu, 2009), health tourism service (Phatthana, 2011), stationery (Merrilees & Fenech, 2007), luxury product (Hung et al., 2011), personalized products (Moon, Chadee, & Tikoo, 2008), banking service (Lu, Cao, Wang, & Yang, 2011), insurance (Broekhuizen & Huizingh, 2009). Lu et al. explored the factors that influence the intention of consumers of banking service in China to transfer their usage from the offline to the online channel. Broekhuizen and Huizingh (2009) explored the moderating influence of direct online shopping experience of online visitors and online buyers. The results showed that online visitors concerned more on perceived enjoyment, risk and price attractiveness than online buyers. Price attractiveness is a strong factor for online visitors to use the online transaction in the future. Soopramanien and Robertson (2007) conducted the research to study the characteristics of buyers, browsers, and non-Internet shoppers in online shopping context and explore the factors that extent the differences or similarities in online shopping behavior among these groups. Similar with the study by Broekhuizen and Huizingh, they also examined the factors that influence online purchase between inquirers and buyers of car insurance from a Dutch comparison website.

Although the driving forces behind the online purchase have been assessed for a long period of time, there still be the hiding factors that prevent customer from submitting the transaction payment (Celik, 2011). The findings of the study should help the

marketers in their difficult tasks to perform the efficient strategies to gain more benefits from online commerce.

2.7 The Predictors of Online Purchase Intention and Behavior

Online consumer behaviors are not similar to offline consumer behaviors as they are dealing with technology concerns. Several researches have tried to explore the factors that enhance consumers to buy product or service online to develop new knowledge, model and theories in order to understanding more on the online consumer behavior. Most of the previous researches have utilized the intention-behavior relationship model; therefore, the antecedents of behavioral intention of e-shopping have been investigated for a long period of time.

Factors that have been found to be the direct antecedents of online purchasing intention were attitude (Ahn et al., 2004; Heijden et al., 2001; Hui & Kejin, 2009), perceived ease of use (Chiu et al., 2009; Lee et al., 2006; Yoon, 2009), perceived usefulness (Chiu et al.; Ha & Stoel, 2009; Ozkan, Bindusara & Hackney, 2010; Ruiz-Mafe et al., 2009; Xie et al., 2011), culture (Moon et al., 2008), product type (Moon et al.), price (Moon et al.), trust (Chen & Barnes, 2007; Harris & Goode, 2010; Said & Galal-Edeen, 2009; Weisberg, Te'eni, & Arman., 2011), risk (Chang & Chen, 2008; Zhu et al., 2009), subjective norms (Laohapensang, 2009; Xie et al.), past experiences (Kim & Chung, 2011; Weisberg et al.).

Attitude is defined as the overall evaluation of a particular concept. Ajzen (1991) defined an attitude towards a behavior as a positive or negative assessment in performing the behavior. Therefore, an attitude towards the online shopping refers to the degree to which the consumer evaluates the Internet shopping (Jaturavith, 2007). In behavioral theories such as the theory of reasoned action (TRA) proposed by Fishbein and Ajazen (1975), the theory of planned behavior (TPB) proposed by Ajzen, and the technology acceptance model (TAM) proposed by Davis (1989) insisted that one of the major factor that affect the intention is the individual's attitude toward the behavior.

In online shopping context, several studies have been conducted to confirm the importance of attitude toward the online purchase intention (Ahn et al., 2004; Chen, 2009; Lee et al., 2006; Phatthana, 2011; Zhu et al., 2009). For instance, Lin (2007) conducted the research to compare the three models, TAM, TPB, and TRA, to examine the best model in predicting online purchasing intentions. The results from all theories indicated attitude is the important variable to determine online purchase intention. Monsuwe et al., (2004) extended Technology Acceptance Model (TAM) to investigate the factors that drive consumer to shop online and attitude was one of the moderating factors. Limayem et al. (2000) extended the Theory of Planned Behavior and indicated from the results that attitude toward online shopping had the strongest influence on the online shopping intention. Some researchers have taken the prospect of original TAM and regard attitude as an important factor to affect the use intention (Tseng & Hsu, 2010; Xie et al., 2011; Yoon, 2009). Confirming with the consistent result from previous research that attitude has positive relationship

with purchasing intention on the adoption of online health tourism service (Phatthana), E-security trading system (Rotchanakitumnuai & Speece, 2003) and online shopping (Ahn et al.; Ha & Stoel, 2009; Hui & Kejin, 2009; Lee et al., 2006; Said & Galal-Edeen, 2009; Zhu et al., 2009).

However, the final version of TAM proposed by Venkatesh and Davis (1996) eliminated the attitude construct from the model and indicated the direct influence of perceived usefulness and perceived ease of use on behavioral intention. Confirming with some theoretical research in recent years that extracting attitude from the model as they believed that the moderating effect of attitude can be explain only small portion of variation in the consumer's intentions to shop in online context (Celik, 2011; Chiu et al., 2009; Faqih, 2011; Ruiz-Mafe et al., 2009; Tseng & Hsu, 2010; Xie et al., 2011; Yeh, Lin, & Lu, 2011; Yoon, 2009). Little research has been conducted to compare the explanatory power between the model with attitude and the one without attitude. However, there are evidences taken by comparing the research that have almost the same antecedents of online purchase intention except attitude. Yoon explored the effect of national culture on consumer acceptance of e-shopping in China. Without the moderating effect of culture factor, the belief of usefulness, ease of use and trust are constructed to predict online purchase intention. The result showed that 46.5% of variation of e-commerce intention can be explained by these factors without the moderating effect of attitude. Compared with the result of Lin (2007), that found the moderating effect of attitude, 41% of variation of online purchase intention can be explained by perceived usefulness, perceived ease of use and attitude. This indicated that without the role of attitude in the model may not

lead to the decreasing of variation of consumer's purchase intention in e-commerce. Thus, it was deemed to exclude the attitude construct from the scope of this study.

For other non-selected variables, this study was not corporate due to the reasons that will be discussed next. Perceived risk surrounding an intention to purchase of products and services online is arisen from; fear of such products or services will live short of expectation; fear of losing self-esteem resulting from making a wrong decision on product and service; wasting one time; and also loss of privacy on personal information (Ruiz-Mafe et al., 2009). Some previous studies have found the insignificant relationship between perceived risk and online purchase intention (Heijden et al., 2001; Leelayouthayotin, 2004; Lu et al., 2011; Lian & Lin, 2008; Ozkan et al., 2010; Xi et al., 2011; Yi & Fan, 2011). Lian and Lin found no relationship between perceived risk and purchasing intention for intangible products or services (e.g. online news and magazines, computer games). The same relationship also found from the study of Yi and Fan. Consistent with the result from Leelayouthyotin (2004) in which insisted that perceived risk has no significant relation to Thai consumers' purchase intention when buying health food product via the Internet.

Culture has been found significantly affecting consumers' purchase intention from the study by Moon et al. (2008) in which people from individualistic countries were more likely to involve in online purchase than those from collectivistic countries. The subjects from the study of Moon et al. came from different countries in which

the culture can be verified. Nevertheless, this study mainly focuses on online purchase intention of Thai people and the difference of culture towards the online purchase intention do not involve in the objectives of this study. Therefore, culture may not become specific in the conceptual model. The same reason also applied for the product type as this study does not concern on the type of product selling online. Even price was found directly affecting the online purchase intention from the study of Moon et al., however two studies on Thai consumers' purchase product or service via the Internet in which both health tourists and health food consumers found that price was insignificantly related to their intention (Leelayouthayotin, 2004; Phatthana, 2011).

Most of the previous researchers have found out that past experience does not directly influence online purchase intention. Some were found as the moderators in the relationship between other factors and online purchase intention (Broekhuizen & Huizingh, 2009). Past experience was also found insignificantly related to the intention of Thai consumer to purchase health food online. In conclusion, the variables, culture, product type, price and past experiences will not be included as the direct antecedents to online purchase intention towards the actual behavior in this study.

2.8 The Selected Variables

This study will examine the direct influence of perceived usefulness, perceived ease of use, trust, perceived informativeness, and electronic word of mouth as the

predictors of online purchase intention toward actual behavior in which each factor will be discussed in details as follows;

Perceived Usefulness

In predicting purchase intention in the online channel, the effective factor mostly validated by many researchers that significantly affecting the voluntary adoption by an individual is perceived usefulness (Celik, 2011; Gefen, 2000). Davis, Bagozzi, and Warshaw (1989) defined perceived usefulness as the degree to which a consumer believes that using the system will increase his/ her performance while Monsuwe et al. (2004) defined perceived usefulness in online purchase as a degree in which consumer believes that using the Internet as a shopping medium will increase consumer's shopping experience. Some research identified 'relative benefit' instead of 'perceived usefulness'. However, the two terms were similar as both indicated the performance improvement when transact payment online (Lu et al., 2011).

The term of usefulness perception has been acknowledged by many researchers since Davis (1989) has developed the parsimonious model for users' acceptance of technology called the Technology Acceptance Model (TAM). Perceived usefulness in the acceptance of technology reflects the consumer expectation of performance gain by using the system. As shopping can take place in online context in which the activities occurred via the technology such as the Internet, website and system, thus, the study of consumer's online purchase behavior does not considered only the behavior per se but also the technology acceptance. Most marketing researchers then adopted the variables, such as usefulness, from TAM to examine consumers' acceptance of online purchase. In online context, consumers' perception of

usefulness when shopping online refers to the benefits that they will receive when buying products/services via the Internet. These benefits included the improvement of performance, the increasing of productivity and enhancing of effectiveness (Ahn et al., 2004; Chiu et al., 2009; Yoon, 2009). Moreover, consumers can benefit when buying online in term of more time saving, more money saving and easier in buying (Chu & Lu, 2007; Ruiz-Mafe et al., 2009). Some of researchers used usefulness as a surrogate for extrinsic motivation (O'Cass & Fenech, 2003) of consumer to adopt online shopping.

Perceived usefulness has been proven by many researchers to be able to enhance consumers to use the innovative technologies to purchase products/services via the Internet. The results from previous studies indicated the relationship between perceived usefulness and online purchase intention in direct relationship (Bonera, 2011; Chiu et al., 2009; Ruiz-Mafe et al., 2009; Tseng & Hsu, 2010; Xie et al., 2011; Yoon, 2009), in indirect relationship mediated by other variables (Chen & Barnes, 2007; Chiu, 2009; Chu & Lu, 2007; Hausman & Siekpe, 2009; Kate, Haverkamp, Mahmood, & Feldberg, 2010; Hernandez, Jimenez, & Martin, 2011; Hui & Kejin, 2009; Lin et al., 2010; Yi & Fan, 2011; Zhu et al., 2009) or, in both direct and indirect relationship (Ahn et al., 2004; Ha & Stoel, 2009; Lee et al., 2006; Ozkan et al., 2010).

Most researchers found the positive relationship between perceived usefulness and online purchasing intention (Ahn et al., 2004; Ha &Stoel, 2009; Harrison, Mykytyn & Riemenschneider, 1997; Lee et al., 2006; Lin et al., 2010; Ruiz-Mafe et al., 2009; Tseng & Hsu, 2010; Xie et al., 2011; Yoon, 2009). This can imply that consumers

will buy product or service online if they perceived that purchase products or service online benefit them. Even though most researchers have found the direct relationship between perceived usefulness and online purchase intention, however, some have found it is insignificantly related to online purchase intention (Gefen et al., 2003; Heijden et al., 2001). Gefen et al. found out that perceived usefulness has no significant relation to online purchase intention among potential consumers who have no experience with the specific website. Consistent with the result from the study by Heijden et al. indicated the insignificant relationship between these two variables. By considering the sample from the study by Heijden et al. the majority (64.4%) of the sample were consumers who have never bought from the Internet. People who have never bought any products or services online may not notice the benefits that they can receive when purchasing via online channel.

Perceived ease of use

Perceived ease of use is one of the construct from the Technology Acceptance Model (TAM) and defined as the level a consumer who uses the system believes that it would be free of effort (Eriksson, Kerem, & Nilsson, 2005; Venkatetsh & Davis, 2000). While perceived usefulness represents the extrinsic motivation, perceived ease of use related to the intrinsic motivation (Celik, 2011). If a technology is perceived as too difficult to use, a person will choose an alternative option that is easier for him or her to perform. Ruiz-Mafe et al. (2009) mentioned that perceived eases of use through internet channel in purchase of products and services is another factor most of internet users take into account when making buying decision. Perceived eases of use is a degree of confidence in the system provided will be easy

to use and to understand. A website will be ease of use when information is organized neatly and update regularly, load speedily, and the number of pages required to complete a process is low (Ruiz-Mafe et al.). Ozkan et al. (2010) mentioned that consumer will not have interest in online payment if the process takes a lot of time.

Research has shown inconsistent findings for the relationship between perceived ease of use and online purchase intention. While some studies found the positive direct relationship (Chiu et al., 2009; Lee et al., 2006; Yoon 2009), most researchers have indicated the insignificant relationship (Phatthana, 2011; Tseng & Hsu, 2010; Ruiz-Mafe et al., 2009; Yeh et al., 2011). Gefen et al. (2003) mentioned that the influence of PEOU diminishes as users become familiar with a technology.

Without the direct influence to online purchase intention, most previous research have found the relationship with the mediating of perceived usefulness intention (Ahn et al., 2004; Ha & Stoel, 2009; Hassanein & Head, 2007; Leelayouthayotin, 2004; Rotchanakitumnuai & Speece, 2003; Ruiz-Mafe et al., 2009; Yeh et al., 2011). This research, therefore, will examine perceived ease of use in order to validate the relationship between online purchase intentions toward actual purchase.

Trust

One key reason that prevents Internet users to submit their payment online was trust in the Internet safety (Gefen & Straub, 2003). Trust in online purchasing could be defined as the confidence of an online shopper that all relevant information is precise, the product and service meet the consumer expectations, the personal and

financial information is safe, and the product and service delivery is capable (Heu, 2008; Kim et al., 2010; Noknoi & Boripunt, 2009). Chang and Chen (2008) defined perceived trust as the individual's perception of someone regarding confidence or willingness to rely on someone or something. In a brick-and-mortar store, consumer trust depended on the characteristics of salesperson such as their expertise, likeability, and similarity to the buyer (Doney & Cannon, 1997). However in an online store there is no physical salesperson and consumers in which will cause many uncertainties that occur from unknown information. Trust belief could therefore reduce the perceptions of uncertainty and initiate consumer's conviction in online environment (Pavlou, 2003). When facing with the uncertainty situation, trust is the important belief for consumer (Mayer, Davis, & Schoorman, 1995). Gefen et al. (2003) also indicated that loss of confidence can be arisen from a perception of unsecured in communication that takes place in the selling and buying transaction through online commerce.

Many researchers have sought to find out the importance of trust in online consumer behavior. Previous research have been conducted and indicated that lack of trust is the obstacle to the advancement of electronic commerce (Becerra & Korgaonkar, 2011; Chang & Chen, 2008; Kim et al., 2010; Zhu et al., 2009). Becerra and Korgaonkar explored the influence of trust belief in terms of product, brand and vendor on consumer's online intention. They suggested three trust beliefs that affect online intentions which were vendor, brand, and product. The results insisted that trust belief could reduce perceptions of uncertainty, risk and vulnerability. By comparing website-oriented models and trust-oriented models, Heijden et al., (2001) validated that trust-oriented models were more appropriate to explain online

purchase intention. Therefore, lack of trust was the primary reason for consumers to leave without making any transaction (Becerra & Korgaonkar; Kim et al.).

Prior studies have incorporate trust into TAM in several ways; an antecedent of risk (Heijden et al., 2001; Zhu et al., 2009), perceived usefulness (Ha & Stoel, 2009; Rotchanakitumnuai & Speece, 2003; Yoon, 2009; Zhu et al.), attitude (Ha & Stoel; Hassanein & Head, 2007; Hui & Kejin, 2009; Rotchanakitumnuai & Speece; Said & Galal-Edeen, 2009; Zhu et al.) and online purchase intention (Chang & Chen, 2008; Chen & Barnes, 2007; Harris & Goode, 2010; Kim, Fiore, & Lee, 2007; Rotchanakitumnuai & Speece; Said & Galal-Edeen; Weisberg et al., 2011; Yoon).

The role of trust in the model is also unclear in which some researchers indicate trust as antecedent for perceived ease of use (Kim & Song, 2010) while some indicated that perceived ease of use as antecedent of trust (Faqih, 2011; Yoon, 2009; Zhu et al., 2009). Trust also found to be the antecedents of usefulness (Chiu et al., 2009; Faqih; Ha & Stoel, 2009; Kim & Song; Rotchanakitumnuai & Speece, 2003; Zhu et al.), attitude (Ha & Stoel), and behavioral intention (Chiu et al.; Yoon; Gefen et al., 2003; Lin & Lu, 2010). The research also found insignificant relationship between trust and attitude (Heijden et al., 2001) and insignificant relationship between trust and behavior (Kamarulzaman, 2007). This research will examine how trust will influence online purchase intention towards actual purchase behavior.

Perceived Informativeness

Although perceived usefulness, perceived ease of use and trust have been proved as significant variables in predicting online purchase intention by a large number of

previous research, there still be deemed salient influences that can additionally incorporate with those variables to provide better understanding on the consumer behavior in online purchase intention.

The research aim to find out the hiding factors that prevent customer from submitting the transaction payment keep continuing until now (Celik, 2011; Lu et al., 2011). As buying products or services online, consumers cannot always experience the true features of a product before making the decision. Intangible product (e.g. game online) or services that cannot be tried before purchase, resulted in difficulties in making purchasing decision. In addition with the ability of technology that allows Internet users to interact with businesses or other consumers before and after the purchasing and the increasing power of social network, the recent issues that have captured the interest in the recent studies are the influence of perceived informativeness and the power of electronic word of mouth.

In the electronic commerce, consumers always face with the uncertainty situation of buying products/services online because they cannot see the product attributes. During the five steps of buying decision process consumers spend a lot of time searching for information in order to reduce uncertainty by gaining product knowledge (Bettman, Johnson & Payne, 1991). In the past research, consumers always rely on the reference group such as friends, family, and colleagues to perform their purchase behavioral intention. They also search information from the company and advertisements. Since the exposal of the Internet era, the traditional way of searching information and the buying behavior have changed (Racherla, 2008). There are various types of online resource that consumers can search for

product/service information such as brand websites, product review sites, Facebooks, blog posts, Youtube and Twitter. Social network is now involved in all steps of the buying decision process. For example at the first stage of the buying decision process is the need cognition, we always seek for our friend reviews and experiences of certain products in Facebook. In the second step that is the informational search; when we realize the need for products/services, the information search begins.

In the Internet era, we can always rely on the Internet resources. During the evaluation of alternatives, we sometime ask people in social network to compare the options. Even in the purchase decision process, we always rely on knowledge around the Internet. Finally for the post purchase behavior, many customers turn information seeker into information provider. Issue of consumers' perceived informative has become crucial in e-commerce as before making purchase decision consumers always collect the relevant information regarding the products or service from websites (Kim et al., 2010). Ducoffe (1996) defined perceived informativeness as the belief of potential customer that the information provided is necessary for making decision. To minimize the uncertainty when buying products online, consumers who have low levels of trust toward websites may consider the information they perceived (Kim et al.). Ho and Wu (1999) also found out that customers increase their satisfaction by receiving valuable and accurate product information and finally motivates the consumer to act.

Perceived informativeness became an interesting factor influencing online purchase intention in recent years. However, only few studies shed the light the influence of perceived informativeness on the consumer purchase intention in online context

(Hausman & Siekpe, 2009; Kim et al., 2010). Understanding the influence of perceived informativeness to the purchase intention will help business companies to know how to retain and enlarge their customer base. Therefore, this study will investigate the influence of consumers' perceived informativeness towards consumers' intention to shop online

Electronic Word of Mouth (EWOM)

As confirmed with the result from online survey by Nielsen (2007) that studied the most powerful selling tool before making the buying decision, Thai consumer always rely on other consumers' experiences when buying products/services. The results indicated that Thai consumers place their highest levels of trust in other consumer's recommendation. Nowadays, the increase of online community has changed the way of communication not only to the speed of information transmitted but also decrease the information asymmetry (Tseng & Hsu, 2010). As the Internet has enabled new form of communication platforms, therefore, sharing information in positive or negative signals made by potential, actual, or former consumers about attribute or experience of product or company in which it can be called electronic word of mouth (EWOM) (Hennig-Thurau et al., 2004).

Recently, the influence of EWOM on consumers is gradually receiving increased attention. Previous research related to EWOM mainly focused on the influence of EWOM on attitude toward product (Doh & Hwang, 2008; Fagerstrom, 2007; Lee, 2009; Lee, Park & Han, 2008; Martin & Lueg, 2011; Wu & Wang, 2011; Ying & Chung, 2007), engagement (Karakaya & Barnes, 2010), brand royalty (Xu & Chan, 2010), and consumer's service rating (Lim & Chung, 2011). Little attention has been

given to the influence of EWOM on the purchase intention and its antecedents. Therefore, this study has focused on the influence of EWOM as an antecedents of online purchase intention and directly related to Actual purchase behavior.

Traditional word of mouth (WOM)

Prior to the development of the Internet, consumers searched and shared the information regarding the product attributes and product related-experiences through various sources of information. According to Andreasen (1968), the information sources can be categorized into 4 sources, impersonal advocated sources (e.g. brochures, advertisements), impersonal independent sources (e.g. product experts), personal advocated sources (e.g. salespersons), and personal independent source (e.g. friends and relatives). Among the information sources, personal independent sources have found to be the most important communication that consumer perceived as high trustworthy and lead to persuasiveness (Derbaix & Vanhamme, 2003; Lin, Tzeng, Chin, & Chang, 2010; Wilson & Sherrell, 1993). Personal independent sources or interpersonal sources referred to non-commercial people who have close relationship with information seeker such as friends, family, and colleagues but excluded the commercial persons such as salesperson and marketers (Mourali & Laroche, 2005). Word-of-mouth (WOM) communication sources are primarily interpersonal sources which defined as the communication between non-commercial parties evaluating product and service in both positive and negative signals (Arndt, 1967). People who shared the product-related information always are close relationship such as friends and family (Sundaram, Mitra & Webster, 1998).

Electronic word of mouth (EWOM)

Since the emergence of the Internet, it is possible for consumers to search and share information and recommendation about the product/service experiences without face-to-face communication. Experienced consumer can write down the reviews about the product they have been used in website and received much attention from other consumers who search for more information about the product (Lee & Li, 2006; Park & Kim, 2008). As the Internet has enabled new forms of communication platforms, therefore, sharing information in a positive or negative signal made by potential, actual, or former consumers about attribute or experience of product or company (Hennig-Thurau et al., 2004). The EWOM has 3 significant differences from WOM. Firstly, EWOM communication occurs in online context so it has no characteristics of face-to-face communication. Secondly, the information is sent to recipients who are not looking for the product (Park & Kim, 2008) and lastly, the information in EWOM can be given by anonymous people who even have no relationship with information seekers. As the information is mostly exchanged in private conversation for the traditional WOM, therefore, it is one of limitation that makes WOM difficult to be observed. The information in EWOM is presented in term of text based content and can be observed by anyone who views the site. That makes the messages in EWOM easier for measurable in term of both quality and quantity than in traditional WOM (Lee et al., 2008; Park & Kim).

EWOM platforms

Since customers cannot always experience the true features of a product purchased via the Internet even intangible product (e.g. game online) or services that cannot be tried before purchase, there are difficulties in making the correct purchasing

decision. Many studies have claimed that message from EWOM plays two roles; as informant or as recommender (Park, Lee, & Han, 2007). Even an online consumer review can be viewed as those who provide information of products in the same manner as the producer does, however, the information given by online consumer review will hold a view from consumer's perspective. While those provided by the producer will mainly emphasize on product information, for example, product characteristics, technical specification, and the compliance with technical standard. On the contrary, online consumer review will describe product characteristics in term of its practicality and level of satisfaction from consumer's perspective. Moreover, online consumer review will also provide valuable information that seller unwilling to provide due to some limitation such as a description space (Lee et.al, 2008). Some studies mentioned that the consumption experience that consumers express through the Internet consists of hedonic and utilitarian elements. Hedonic EWOM refers to the pleasant, gratified product experience consumers receive while utilitarian EWOM refers to product functionality and effectiveness (Wu & Wang, 2011). Similar with the study of Park and Lee (2008) that classified EWOM into attribute-value reviews and simple-recommendation reviews. Attribute-value reviews are rational, objective, and concrete, based on facts about a product. Simple-recommendation reviews consist of emotional and subjective recommendations. These reviews present subjective feelings, interjection, and non-relative information, therefore they are emotional and abstract based on consumer feeling about a product.

EWOM communication can take place in many platforms. Litvin, Goldsmith, & Pan (2008) categorized EWOM platforms with the level of interactivity and communication scope as shown in Figure 2.5. Consumers can post their comments

or experience of goods and services on weblogs (e.g.), discussion forums (e.g.), review websites (e.g.), e-bulletin board systems, newsgroup, social networking sties (e.g. facebook.com, twitter.com) (Cheung & Thadani, 2010).

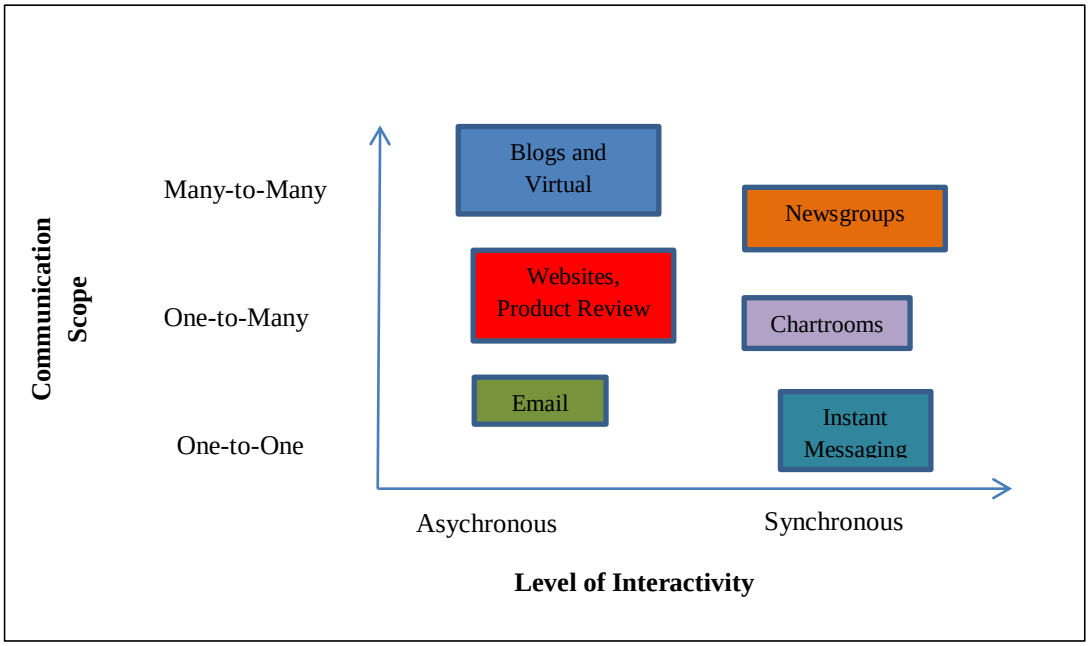


Figure 2.5
A Typology of Electronic Word of Mouth (EWOM) Channels
Source: Litvin et al. (2008)

The online consumer review is defined as any unbiased comment on the Internet platform from other consumers about their own consumption-related advice which is available to a multitude of people (Stauss, 2000). The online consumer reviews provide the consumer with the information about the product attributes and the recommendation in both positive and negative signal. This consumer-created information helps other consumers to learn more about the product and reduce uncertainty during the process of decision making on purchase (Park et al., 2007).

Previous study on EWOM outcome

A number of studies of EWOM have been conducted in the previous years and can be categorized in two terms. "1) Market-level that is identifying the product information process by viewing EWOM as accumulated customer opinion, and its relationship with other market level signals, or, 2) Individual-level that is identifying the customer's decision-making process by viewing the EWOM as informational, focusing on how the information affects a customer's decision-making process" (Lee & Lee, 2009).

Previous research related to EWOM mainly focuses on the influence of EWOM on attitude toward product (Doh & Hwang, 2009; Fagerstrom, 2007; Lee, 2009; Lee et al., 2008; Martin & Lueg, 2011; Wu & Wang, 2011; Ying & Chung, 2007), engagement (Karakaya & Barnes, 2010), brand royalty (Xu & Chan, 2010), consumer's service rating (Lim & Chung, 2011). For example, Park and Lee (2008) studied online consumer reviews, one type of EWOM that involves positive or negative comments made by other customers about products selling online. The study conducted the experiment to determine the influence of EWOM overload on consumer behavior. The results showed that the increasing number of positive EWOM will enhance the perception of popularity and informativeness for consumers. However, when information overload occurred, the purchasing intention of low-involvement consumers increases while high-involvement consumers decrease.

Different with the study of Park and Lee (2008), most of samples from the study of Lee et al., (2008) read six to eight reviews average before deciding to the purchase.

Ying and Chung (2007) investigated the influence of EWOM from single-message single-source containing both positive and negative signals to consumer attitude. The experiment also found out the influence from order effects on the evaluation of customers. The results posited that subjects given with mainly PWOM have more influence on consumer attitude than those with mainly NWOM. For order effects, subjects tend to base their evaluations more on later information than earlier information. The results also found in experienced products, restaurant and travel destination. Wu and Wang (2011) examined the influence of positive EWOM source credibility and the type of message appeal on brand trust, brand affection and purchase intention. The results indicated that message source credibility affects the influence of EWOM whether or not the products are electronics goods or fast-moving consumer goods (FMCG). High credibility of EWOM message source increase brand trust, brand affection, brand attitude and purchase intention. As little research focus the influence of EWOM on purchase intention and its antecedents in online context, this research then adding EWOM as one factor of the model (Pang & Ji, 2007; Park & Kim, 2008).

2.9 The Theoretical Framework

Based on the review of previous research concerning the study of online purchase behavior the theoretical framework for this study is presented as in Figure 2.6. The figure illustrates the direct relationship between online purchase intention and actual purchase. Perceived usefulness, perceived ease of use, trust, and perceived informativeness are the predictors of online purchase intention. In addition, perceived ease of use is expected to have the relationship with perceived usefulness.

Finally, EWOM is expected to be the antecedent of the predictors of online purchase intention which are perceived usefulness, perceived ease of use, trust and perceived informativeness.

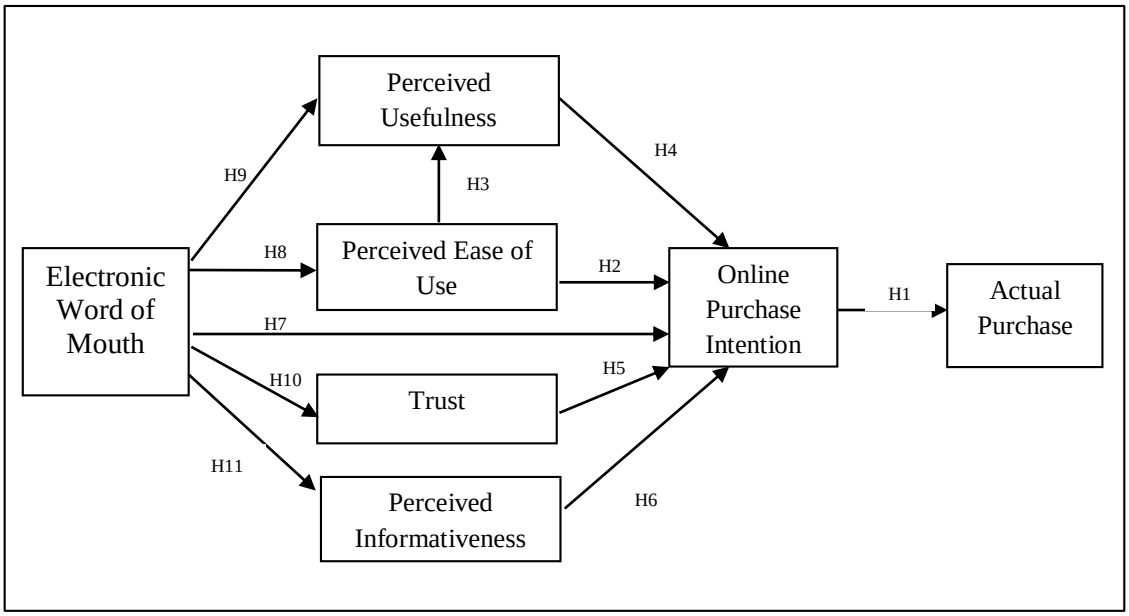


Figure 2.6
The Theoretical Framework

2.10 Hypotheses

The relationship between online purchase intention and actual behavior

During the last decade, research has been conducted to explain online consumers' purchasing behavior and the results have shown the same direction in which purchasing intention can be the significant predictor for actual purchase behavior (Chen, 2009; Lin et al., 2010; Sheppard, Hartwick, & Warshaw, 1988). For example, the result from Lin et al. supported the previous idea by showing that online booking behavior intention of tourists has a positive influence to the real online purchasing

behavior. Sheppard et al. also found out that purchasing intention developed well in advance of the real purchase. Moreover, Lin (2007) comparing the results of both TAM and TPB and discovered that behavioral intention is the primary determinant of actual purchase behavior. Thus, the study hypothesized that:

H1: The more positive the online consumer intention, the greater the actual purchase.

The relationship of perceived ease of use and online purchase intention

According to the Technology Acceptance Model (TAM), Perceived Ease of Use (PEOU) has a strong influence on behavioral intention to adopt information technology. If a technology is perceived as too difficult to use, a person will choose an alternative option that is easier for him or her to perform. The study from Mafe et al. (2009) showed the different result from Technology Acceptance Model in which Perceived Ease of Use (PEOU) did not have a direct influence on the online airline ticket purchasing intention of consumers in Spain. Similar with Mafe et al., the result from the study of Lin et al. (2010) indicated that perceived ease of use has no direct influence to attitude and online purchasing intention. Trading transaction through online channel may well be overlooked due to the unattractive feature of webpage, for example, information displayed in ill-placed manner, obsolete information, slow downloading info, and unduly onerous buying process. An ill-designed webpage hence will concurrently give a false impression to the consumer's online buying experience (Mafe et al., 2009). Thus, the study hypothesized that:

H2: The higher the level of the perceived ease of use, the greater the level of online consumer intention.

The relationship of perceived ease of use and perceived usefulness

Most of the research showed the similar result in which there was the positive relationship between ease of use of the system consumers perceive and usefulness of the system as the Technology Acceptance Model (Ahn et al., 2004; Ha & Stoel, 2009; Lin et al., 2010; Ruiz-Mafe et al., 2009). Lin et al. combined DTPB and TAM to explore online purchase behavior of consumers in Taiwan, the results indicated a positive influence of perceived ease of use on perceived usefulness. Ruiz-Mafe et al. (2009) showed the same result from the study on online airline ticket purchasing and indicated that perceived ease of use does not have a direct influence on the online purchases but it strongly influences the perception of usefulness of online channels, with a net mediated influence of ease of use on purchase intention. Ahn et al. (2004) also found the same result that perceived ease of use (PEOU) and the perceived usefulness (PU) are positively related when they study in the shopping online for tourism product and services in South Korea. Thus, the study hypothesized that:

H3: The higher the level of perceived ease of use, the greater the perceived usefulness.

The relationship of Perceived usefulness and online purchase intention

Most of previous research has found positive relationship between perceived usefulness and purchasing intention (Ahn et al., 2004; Ha & Stoel, 2009; Harrison et al., 1997; Lin et al., 2010; Ruiz-Mafe et al., 2009). Ruiz-Mafe et al. as the result from their study; believed that the small number of online airline purchasing comes from the insufficient knowledge of airline companies to build a useful website. In buying air ticket online, factors that give value added to customer encompass cheaper rate, e-ticket issuance, online check-in, flight change enabled on webpage, as well as offering ticket reduction promotion campaign on webpage. The same result of positive relationship between perceived usefulness and purchasing intention also found in the study of Ahn et al. (2004) for Internet shopping malls customers. Similarly, the study of Celik (2011) found the direct relationship between PU and online purchase intention in Turkish context. Nevertheless, the different results from the majority also found from the study of Heijden et al. (2001), they pointed out the insignificant relationship between perceived usefulness and online purchase intention. Despite the contradicting results from the study of Heijden et al., the majority of studies demonstrated that perceived usefulness has a direct positive influence on the intention to adopt the Internet as the purchasing channel. Then the following hypothesis has been formed for this study.

H4: The higher the level of perceived usefulness, the greater the level of online consumer intention.

The relationship of trust and online purchase intention

Trust has been proven in many studies to be an essential antecedent to purchase intentions (Chang and Chen, 2008; Lu et al., 2011; Said & Galal-Edeen, 2009; Yoon, 2009). Lu et al. explored factors affecting trust building among Virtual Community Members. The study was conducted from the members of the Taobao Virtual Community in China Website. Trust was separated into 2 types including trust in members and trust in website or vendor. The results indicated that building trust in Virtual Community Members lead to build trust in website/vendor and further affect the consumer's intentions to get information and purchase. These findings are similar to those of Yoon (2009), Said and Galal-Edeen, and Chang and Chen that the results from the study showed the more likely they perceive trust to the website, the more likely they will purchase from the online retailer. Thus, the study hypothesized that:

H5: The higher the level of trust, the greater the level of online consumer intention.

The relationship of perceived informativeness and online purchase intention

In the electronic commerce, consumers always faced with the uncertainty situation as buying products/services online, consumers cannot obviously examine the product attributes. Therefore, the information search stage is so important for online consumer to reduce the uncertainty. For the company and marketers, during the information search stage, they can influence consumers to buy their product (Racherla, 2008). In the tourism and travel industry, travellers are now relying on the

review from the other's experience in the third-party website such as Amazon, and TripAdvisor (Recherla, 2008).

Perceived informativeness can enhance customer's purchase decision and also improve trust toward the websites (Kim et al., 2010). Lohse and Speller (1998) found that adding a frequently asked questions (FAQ) section about the company and its products was associated with more cyberstore traffic and higher sales. FAQ was one of the ways for consumers to learn more about products or the sellers' information. These can also implied that more information can increase the company's sales. Dholakia and Rego (1998) argued that a controversial on a disclosure of benefits of product on webpage is a crucial indicator presenting information quality on such webpage. Lohse and Spiller (1998) found that a revision of product list and adding new product picture will also affect sale turnover as well. Ho and Wu (1999) also found that product descriptions which are useful and accurate will result in increased customer's satisfaction. To sum up, a provision of product information that is accurate will influence customer to make buying decision. The recent study of Park and Kim (2008) on the influences of the roles of online consumer reviews on purchasing intention. The results indicated that both roles of EWOM, popularity and informativeness, can influence purchasing intention. Thus, the study hypothesized that:

H6: The higher the level of the perceived informativeness, the greater the level of online consumer intention.

The relationship of EWOM and Online Purchase Intention

In online purchase environment, consumers have faced with many uncertainties because there are limited cues for information processing (Hanson, 2000). The inability of examining product's attribute and experience acknowledgement increases the uncertainty for online purchase decision making. EWOM information is therefore playing useful role for prospective customer in online context especially for experience products that attributes are difficult to observe such as movie and book. Most EWOM affects the adoption of new categories of product or brand for the non-users and sometimes it affects the decision in switching between brands (East et.al, 2008). Previous study suggested that consumers have the social desirability to conform to the expectations of others, so they often determine their behavior by observing the behavior of others (Zhu & He, 2002). Park and Kim (2008) investigated the influence of the type and the number of online consumer review such as EWOM. The result demonstrated that the type and the number of EWOM have stronger influence on the purchase intention of customer in which the number of reviews is a more important factor for low expertise rather than high expertise customers. Most of the previous research provided the evidence for the relationship between EWOM and purchase intention but less research has focused on the relationship of EWOM to online purchase intention (Park & Lee, 2008). Thus, the study hypothesized that:

H7: The higher the level of perceived EWOM, the greater the level of online consumer intention.

The relationship of EWOM and Perceived ease of use

Previous research in online purchase behavior has not paid much attention on the antecedents of perceived ease of use. Most of the research treated perceived ease of use as one of the predictors of online purchase intention and one of the antecedents of perceived usefulness and attitude. However, a few researchers studied the influence of external factor on perceived ease of use. For example, Ha and Stoel (2009) studied the antecedents in a technology acceptance model. Results supported e-shopping quality as an antecedent of perceived ease of use. Zhu et al. (2009) found that most of websites that are related to consumers' prior browsing experience is related to perceived ease of use. The results also indicated that a website with user-friendly design also allow the perception of ease of use.

Word of mouth has played a crucial role in consumer's buying behavior because WOM will give other consumer's buying perception both satisfaction and dissatisfaction (Kim et al., 2007). In actual fact, WOM has become a crucial element which affects consumer's attitude and behavior in buying of products. Today, the pattern of the traditional WOM has changed from face-to-face communication mode to sharing the experience via the web without face-to-face communication (Xie et al., 2011). Then the study of the influence of electronic WOM as the predictors of online purchase intention has received much attention. However the research on the influence of EWOM on perceived ease of use is in the early stage. Tseng and Hsu (2010) conducted the study in applying EWOM communication and TAM to explain consumer's purchasing intention toward innovative products/services. The results

posited that EWOM influenced the antecedents of purchasing intention, perceived usefulness, perceived ease of use and perceived enjoyment.

The recent research of Parry, Kawakami, and Kishiya (2012) also confirmed with the results from the study of the influence of personal and virtual word-of-mouth on technology acceptance in Japan. The relationship between virtual word-of-mouth and perceived ease of use has been found in both categories of product including smart phones and Blue-ray DVD recorders. Thus, the following hypothesis has been performed to test the relationship between EWOM and perceived ease of use. Thus, the study hypothesized that:

H8: The higher the level of perceived EWOM, the greater the level of perceived ease of use.

The relationship of EWOM and Perceived usefulness

In electronic commerce, perceived usefulness can be determined by many variables such as trust, perceived ease of use, subjective norm, personal innovativeness (Celik, 2011; Lin, 2007; Rotchanakitumnuai & Speece, 2003). Rotchanakitumnuai and Speece found information quality which is the accessibility and the flow control enable users to perceive the usefulness of using electronic securities trading system. Besides the mentioned factors that affecting the perceived usefulness of buying products/services online, WOM is one of the factors that widely accepted in traditional marketing research that affects consumer perception towards the behavior (Doh& Hwang, 2009; Lee et al., 2008; Martin & Lueg, 2011; Ying & Chung, 2007).

Traditional marketing research has largely placed a great emphasis on a channel of communication through WOM. Researchers will draw a great attention to the evaluation of product of consumer's choice as recommended by online consumer review. There were a large number of researchers who tried to shed light into an evaluation of individual, products and consumer's choices affected by advertisement.

From the study of Davis and Khazanchi (2008) who explored the influences of EWOM on sales of online business. The results insisted that EWOM can affect sales by changing consumers' perception. This result was confirmed by Xie et al. (2011), who found that one of factors influencing consumer's intention towards web group buying is EWOM. The empirical results showed that EWOM influence consumer perception especially for the usefulness of web group buying and lead to increase consumers' intention to buy from website. The recent research of Parry et al. (2012) also confirmed with the results from the study of the influence of personal and virtual word-of-mouth on technology acceptance in Japan. The relationship between virtual word-of-mouth and perceived usefulness has been found for only the smart phones instead of Blue-ray DVD recorders. Thus the following hypothesis has been performed to test the relationship between EWOM and perceived usefulness. Thus, the study hypothesized that:

H9: The higher the level of perceived EWOM, the greater the level of perceived usefulness.

The relationship of EWOM and trust

Since the online purchase occur without direct face-to-face interactions and only on a virtual space, consumers therefore search all relevant information from other consumers' product online review, which is one type of EWOM, in order to increase trust (Kim & Song, 2010; Lin et al., 2010; Wu & Wang, 2011). Lin et al. compared the degree to which the recommendation sources which are WOM, advertising and expert recommendation influence e-book usage intentions. The results posited that by comparing with the other sources, WOM has played the major role to motivate the potential user's intention to use e-book in the library. Furthermore, the recommendation by WOM can enhance the perceived trust toward the intention to use e-books in an academic digital library as well. This result is congruent with Wu and Wang who suggested that positive EWOM can influence consumers' trust in brand. In their research, the influence of message source credibility and the type of message on the influence of EWOM has been discovered. The findings suggested that for both notebook and shampoo as representative for electronic goods and fast-moving consumer goods (FMCG), respectively the positive EWOM message with higher message source credibility indicates a better brand trust than those with lower message source credibility. Kim and Song (2010) pointed out that WOM quality has positive influences on online shopping mall trust. In their study, WOM quality is measured by the number of members and reviews in bulletin board or product review section. Fam, Foscht and Collins (2004) indicated that widely recognized websites will have a great influence on an overall buying decision of consumer and results in placing stronger trust on that website. Chang and Chen (2008) indicated from the research results that consumers who are acquainted and recognized with the seller'

brand will hold stronger trust to that online seller, lower perceived risk and incline to buy more from online seller. Thus, the study hypothesized that:

H10: The higher the level of perceived EWOM, the greater the level of trust.

The relationship of EWOM and perceived informativeness

During the purchase decision process, consumer search for additional information to help them to decide the best decision for their purchasing. Searching the information from past-experienced customers can give them more trust as the information from marketers may contain only the good side of the product while information by other consumers may contain both negative and positive opinion. Comparing with other communications such as advertisement, consumers pay much attention on the communication from other consumers as they may believe that those advertisements initiated by the marketer itself and may contains only good side of products/services. Confirm with the previous research that found WOM as trustworthy by consumers who are independent from the marketers (Bansal & Voyer, 2000; Smith, Menon, & Sivakumar, 2005).

EWOM evaluated the products or services into 2 types which are information and recommendation in which information is regarding the attribute of product and the recommendation come from their own opinion or feeling after using the product (Park & Lee, 2008). In the study of Lim and Chung (2011), they clarified the type of product/service attributes into 3 forms which were search, experience and credence.

Search attributes is defined as an element assisting consumers in making correct decision before any buying will take place. While experience attributes is defined as attributes arisen after the event of buying or in between the usage. For Credence attributes is an attribute that cannot be evaluated, despite the buying or consuming of product have already taken place. For unfamiliar brand, WOM played as an information cue to form customer evaluation for purchasing decision (Lim & Chung). From previous research, Park and Lee found that the increment in the number of reviews especially for attribute-value reviews provide consumers with more perception on informativeness. In addition, the research also reported that customers who read the positive online product reviews are highly perceived with information and lead to positive influence on purchasing intention. Thus, the study hypothesized that:

H11: The higher the level of perceived EWOM, the greater the level of perceived informativeness.

2.11 Summary

Understanding consumer behavior is important for the success in e-business. The difference between online and offline context resulted difference in consumer behavior. Previous research examined the factors that affect online purchase intention based on TAM. However, little research has studied trust, perceived informativeness, and EWOM with TAM. Trust, perceived informativeness and EWOM have been independently proven by previous studies to be one of the significant factors in determining online purchase intention. Thus, a theoretical

framework was developed from TAM along with these factors. The hypotheses are developed to test the relationship between (1) online purchase intention and actual purchase, (2) perceived ease of use, perceived usefulness, trust, perceived informativeness and electronic WOM toward online purchase intention, and (3) electronic WOM and the predictors of online purchase intention.

CHAPTER 3

METHODOLOGY

3.1 Introduction

Previous chapters introduced the problem of the study and reviewed the literature pertinent to the major dependent and independent variables of the investigation. This chapter describes the research design and methodology employed to collect and analyze the data of the study. This chapter includes a description of the data collection, analysis procedures, and the test instruments used to achieve the research's purpose.

3.2 Research Design

The research design involves the steps that data will be gathered and analyzed to reach the research objectives (Sekaran, 2003). This study adopted a quantitative approach in order to test hypotheses and validate the propose framework. The framework was to identify the factors influencing purchase intention towards actual behavior in online context. It involved the test of the relationships between online purchase intention and actual online purchase, the relationships between factors influencing online purchase intention, the relationships between perceived ease of use and perceived usefulness, and the relationships between EWOM with perceived ease of use, perceived usefulness, trust, and perceived informativeness. Therefore,

this study is a quantitative correlation study by survey method and data were collected via questionnaires.

3.3 Population and Sample

3.3.1 Population

The research aims to study the factors affecting online purchase behavior of Thai consumers. Then the unit of analysis for this study is individual. People who would like to buy products/services online must adopt the Internet technology as it is the medium between retailers and shoppers (Soopramanien & Robertson, 2007). Thus, Internet users in Thailand who have bought products/services from e-retailer can be categorized as the population in this study. The data from Truehits (2014) indicated the number of Internet users in Thailand at the end of 2013 is 26,140,473 accounted for 40.03% of Thailand population.

3.3.2 Sample

Even if Internet users can be identified by An Internet Protocol address (IP address) but it is so difficult to identify who they are. With the unavailable list of Internet users, university students were used as the sample for this research. The reasons why this research used university students as sample are as follows; First, the data provided by the Internet research center corporation (2013) indicated the group that most use the Internet in Thailand is university students accounted for 34.20% followed by computer and internet working group accounted for 11.34% and education personnel accounted for 7.93%. Second, most of previous researches have

widely used students to represent the sample in the studies of online purchase (Abadi, Hafshejani, & Zadeh, 2011; Gefen et al., 2003; Kim et al., 2007; Lee et al., 2006; Zhang et al., 2006; Zhu et al., 2009). The results from these studies also confirmed that students were the active online customer. The majority of students as the research respondent showed that they have experiences with online purchase. Next, previous research conducted among online consumers also found the characteristics of online consumers which were young and hold at least college or university education (Blanco et al., 2010; Celik, 2011; Kamarulzaman, 2007; Tseng & Hsu, 2010; Xie et al., 2011; Yeh et al., 2011) which consistent with the characteristics of students. Last but not least, one of the variables examined in this research is electronic word of mouth in which students are the group that has experience with technology and being portrayed as typical users who use the Internet for searching product/service information before purchasing (Kim et al.). Based on the mentioned reasons then university students were appropriate to be the sample for this research.

3.3.3 Sample Size

The data provided by Truehits.net (2013) indicated the number of Internet users in Thailand is accounted for 40.03% of total population and 34.20% of them are university students. Cochran (1963) as cited in Israel (2009) identified the formula which used to calculate an appropriate sample size (n) from the identified population as follow;

$$n = \frac{z^2 p' q'}{E^2}$$

Z is the standard normal distribution for a given confidence level

p' is the population proportion of students that use the Internet

q' is equal to 1- p'

E is the acceptable margin of error

Base on a 95% confidence interval with a margin of error ±5%, the number of sample is

$$n = \frac{(1.97)^2(0.34)(0.66)}{(0.05)^2}$$

$$n = 348.35 \approx 349$$

Thus a minimum of 349 participants with usable responses were necessary to represent this population. However, SEM is the technique for maximum likelihood estimation (MLE) in which the sample size should not less than 200 (Kline, 2005). If calculating the minimum sample size with the following formula

$$n = \frac{p(p+1)}{2}$$

While p is the number of observed variables in which this study included 29 observed variables then a minimum sample size for this study is 435.

$$n = \frac{29(30)}{2}$$

Due to the large number of population and the model containing many parameters; the sample size for this study should not be less than 435 participants. However, by avoiding the incomplete data and ensuring the minimum number of the usable data then the number of distributed questionnaires must be more than the minimum sample size. In recent years, some previous research of online purchase intention that collected data by questionnaire has the range of the respond rate 66%- 72% (Kim et al., 2010; Laohapensang, 2009; Lu et al., 2011). To guarantee the minimum number of sample size, avoid the unreturned questionnaire, no experience of online buying within 3 months, and incomplete information, the questionnaires were distributed to 900 students.

3.3.4 Sampling method

Simple and stratified random sampling method was employed for this study to select the sample. The area of Thailand is divided into 5 parts including Northern, Northeastern, Central, Eastern and Southern Parts. Each part has a number of universities as the details in Table 3.1.

Table 3.1
Number of University of Each Part in Thailand

Part	No. of university
Northern	32
Northeastern	32
Central	39
Eastern	28
Southern	22

Source: Office of the Higher Education Commission for academic year 2012

Firstly, one university from each part of Thailand was selected by simple random sampling method which were Mae Fah Luang University from Northern part, Khon Kaen University from Northeastern part, Kasetsart University from Central part, Nakhon Pathom Rajabhat University from Eastern part, and Songkhla Rajabhat University from Southern part. The total number of students enrolled at academic year 2013 from these five universities is approximately 112,767. Next the percentage of student in each university was calculated and the sample size of each university (stratum) was proportional to the size of the stratum as per details in Table 3.2. The number of sample was calculated in order to get the equal number from each faculty at the same university. Next, the sample was selected via systematic random sampling from the list of student's Id provided by the staffs of each faculty in each university. The questionnaire was sent via email to each respondent. The complete questionnaires were sent back via email.

Table 3.2
Stratified Samples for Each University

List of Selected Universities	**No. of Student**	**% of Student**	**No. of sample required**	**No. of Faculty**	**No. of sample from each faculty**
1.Mae Fah Luang University	10,768	9.55	100	10	10
2.Khon Kaen University	37,126	32.92	288	18	16
3.Kasetsart University	36,100	32.01	285	15	19
4.Nakhon Pathom Rajabhat University	14,387	12.76	115	5	23
5.Songkhla Rajabhat University	14,386	12.76	112	8	14

Source: Office of the Higher Education Commission for academic year 2013

3.4 Data Collection

Data were collected using the self-administered questionnaire (Appendix A) ranging from January-March 2014. The questionnaire was send as the attached file to the selected sample via electronic mail (e-mail). The respondents were informed the purpose of the questionnaire and requested to return the complete questionnaire by replying the e-mail. The email was resend every one week for 4 weeks to the respondents who had not response.

3.5 Questionnaire Design

The questionnaire was used to collect the data to test the independent variables explaining online purchase intention toward the dependent variable, actual purchase. The questionnaire was divided into three sections.

Section A included five questions on the demographic profile of the respondent. The questions were included gender, current education, the average monthly income and the experience on the online purchase for the last three months. The last question was answered in case the respondent has no experience on the online purchase for the last three months.

Section B contained questions on the information of online purchase. The questions for this section were the average money spent and the product/service category buying online.

Section C included questions that solicit responses on the key constructs of the research framework; namely online purchase intention, attitude, perceived

usefulness, perceived ease of use, trust, perceived informativeness and electronic word of mouth, and the questions on the actual online purchase. The questions in this section were measured using seven-point Likert-type items, anchored by 1=strongly disagree and 7=strongly agree, adopted from existing scales. The measures of the various constructs come from previous literature, adapted to the context of online shopping if necessary.

3.6 Operationalization of the Variables

3.6.1 Actual online purchase

Actual online purchase behavior means that consumer has performed buying behavior via the website that sells products or services. It can be evaluated as the approximate number of purchases the user used an online retail site for purchasing in a given time period (Ajzen & Fishbein, 1980; Limayem et al., 2000) and the approximate amount spent each time to perform the online buying behavior. Actual online purchase behavior can be measured by two dimensions: the frequency of purchasing via website and the money spent online. The frequency of purchasing via website can be defined as the number of online purchases that a consumer has performed during the period of time in the past. To assess the frequency of online purchase, two measured items were used to assess the actual purchase which are "I usually buy products/services via website" and "I really satisfied when shopping online". The other dimension for actual online purchase behavior is the money spent online which can be assessed by "I always make transaction to buy products/services from online vendor". Each item was measured using seven-point Likert-type items, anchored by 1=strongly disagree and 7=strongly agree.

3.6.2 Online purchase intention

Online purchase intention attempted to measure the degree to which a consumer or potential consumer intent to use website to purchase products/services in the future either for the first time or to repurchase. Online purchase intention can be measured by three dimensions: intend to purchase from e-shopping sites, recommend others to buy from websites, and provide the information to online site. The intention to purchase from e-shopping sites means the willingness that consumer or potential consumer would like to purchase or repurchase products/services from websites. Two measured items were used to assess the intention to purchase from e-shopping sites: "I intend to make transaction to purchase from online vendor" adapted from Gefen (2000) and "I intend to purchase products/service from online vendor in the future" adapted from Ahn et al. (2004). Another dimension of online purchase intention, recommend others to buy from websites means that consumer or potential consumer decided to recommend others to buy products/services via online retails which can be assessed by one item adapted from Ahn et al. (2004), "I will recommend others buying products/service via website". By providing the information to online site which is another dimension of online purchase intention means that consumers who are willing to provide their information to e-shopping site such as name, address, e-mail are likely to receive the information from the site and likely to buy products/services online in the future. To assess this dimension, a measured item adapted from Gefen (2000) "I intend to provide the online vendor with the information it needs better serve my needs" was used. The items had been validated and adapted by Weisberg et al. (2011) to examine the influence of past purchase to online buying intention. The reliability of the four items is ranked from

0.78 to 0.92. Each item was measured using seven-point Likert-type items, anchored by 1=strongly disagree and 7=strongly agree.

3.6.3 Perceived ease of use

Perceived ease of use in online purchase behavior means that a consumer feels that the process of buying products/services via website is not quite difficult to understand and use. Perceived ease of use can be measured by two dimensions: easy to understand and easy to use. The items were adapted from Davis (1989). Easy to understand means that the process of online purchase via website will ease learning and understand. Two measured items were used to assess the dimension of easy to understand, "Shopping via website is easy to learn" and "Shopping via website is clear and understandable". The other dimension which is easy to use means that the process of purchasing products/services online will be easy to follow and to finish the online purchasing task. Three measured items were used to assess the dimension of easy to use: "Shopping via website is easy to use", "Shopping via website does not require a lot of mental effort", and "I can shop via website without any expert help". Previous studies had developed and validated the items for measuring perceived ease of use (Ahn et al., 2004; Gefen et al., 2003; Lin, 2007). The reliability of the five items is 0.94. Each item was measured using seven-point Likert-type items, anchored by 1=strongly disagree and 7=strongly agree.

3.6.4 Perceived usefulness

Perceived usefulness can be defined as a consumer believes that buying products/services via online channel will benefit them and help to improve their performance in purchase behavior (Davis et al., 1989). Perceived usefulness can be measured by two dimensions: increase benefits and improve performance. Increasing benefit means buying products/services online will initiate a consumer with benefits such as saving time or making purchasing process easier. The items were adapted from Davis (1989). Three measured items can be used to assess the dimension of increasing benefits including "Buying products/services via website increases my buying and searching productivity", "Buying products/services via websites saves my time" and "Buying products/services via website enhance my buying effectiveness". For the other dimension, improve performance which means that consumer will believe that buying products/services through online retail will improve their purchasing process and make it easier including "Buying products/services via website improve my buying performance" and "Buying products/services via websites makes my job easier". The items had been validated by Ahn et al. (2004), Gefen et al. (2003) and Lin (2007). The reliability of the five items is 0.98. Each item was measured using seven-point Likert-type items, anchored by 1=strongly disagree and 7=strongly agree.

3.6.5 Trust

Trust attempted to measure the willingness of a consumer to rely on e-tailor website for buying products/services online (Heu, 2008; Kim et al., 2010). Trust can be measured by one dimension which is the willingness to rely on website. The four

measured items adapted from the study of Gefen et al. (2003) were used to assess the consumer willingness including “Website is trustworthy for making online purchase”, “Website is secure and reliable for making online purchase”, “Website is secure to provide the personal information”, and “I trust the website”. Items had been validated by previous research (Becerra & Korgaonkar, 2011; Hassanein & Head, 2007; Kassim, Jailani, Hairuddin, & Zamzuri, 2012). The reliability for the items is 0.83. Each item was measured using seven-point Likert-type items, anchored by 1=strongly disagree and 7=strongly agree.

3.6.6 Perceived informativeness

Perceived informativeness means that a consumer believes that information provided by e-retailer via website will be useful for making decision to buy products/services online. Perceived informativeness can be measured by one dimension which is useful information. Useful information means that the information regarding products/services provided by website is relevant, accurate and value. To assess useful information, the four measured items adapted from the study of Ducoffe (1996): “Website provides relevant product/service information”, “Website is a source for searching product/service information”, “Website provides accurate information”, and “Website provides value information” were used. Unal, Erciú and Keser (2011) have already adopted the items to investigate a difference between the attitudes of youth and adults towards mobile advertising in Turkey. The reliability is 0.90. Each item was measured using seven-point Likert-type items, anchored by 1=strongly disagree and 7=strongly agree.

3.6.7 Electronic word of mouth

Electronic word of mouth means that a consumer believes that the comment of products/services wrote on the Internet about their own consumption-related advice from other consumers will benefit to the consumer to buy products/services online. Electronic word of mouth can be measured by two dimensions: the frequency of reading electronic word of mouth and the benefit of electronic word of mouth. The frequency of reading electronic word of mouth means that before making online purchase decision a consumer always read others people's comments regarding product/service information.

The items to measure EWOM were adapted from Bambauer-Sachse and Mangold (2011). The frequency of reading electronic word of mouth can be assessed by two items: "I often read other consumers' products/services online reviews to gather more information" and "I often read products/services online reviews before purchasing via website". The other dimension of electronic word of mouth is the benefit of electronic word of mouth which means that the relevant information from other people's experience regarding products/services will be useful to a consumer for online purchasing decision. This dimension can be assessed by two items: "To make sure the right purchase decision, I often read products/services online reviews" and "Online products/services reviews make me confident in online purchase". The items had been validated from the study of Jalilvand and Samiei (2012) to examine the effect of electronic word of mouth on brand image and purchase intention. The reliability for the four measured items is 0.93. Each item was measured using seven-point Likert-type items, anchored by 1=strongly disagree and 7=strongly agree.

3.7 Pilot Test

As the sample for this study was the university students, the group of people who tested the questionnaire before delivering to the respondents of this research was 50 undergraduate students from Thaksin University located in Songkhla province. All 50 students had the experience with online purchase within three months. The main reason for pilot study is to ensure that the respondent will clearly understand all questions in the questionnaire. In case some of them were not understand the question clearly then the questions were reviewed and adjusted.

After collecting the data from pilot group, the reliability of each variable has been analyzed using the Cronbach's Alpha coefficient as shown in Table 3.3. The result indicated the Cronbach's Alpha coefficient between 0.825-0.924. The high value of Cronbach's Alpha indicates good internal consistency of the items in each variable.

Table 3.3
Reliability Test from the Pilot Test

Variables	No. of Item	Cronbach's Alpha
Actual Purchase	3	0.829
Online Purchase Intention	4	0.855
Perceived Usefulness	5	0.825
Perceived Ease of Use	5	0.889
Trust	4	0.913
Perceived Informativeness	4	0.857
Electronic Word of Mouth	4	0.924

3.8 Data Analysis

The returned questionnaires were eliminated in case the respondent has no experience with online buying within the past three months. Then, the data were analyzed using SPSS and AMOS software. Both descriptive analysis and structural equation modeling (SEM) were performed to fulfill the objectives of the research. However, SEM is the technique for multivariate analysis; the data must meet the prerequisite of the analysis.

3.8.1 Prerequisite

The initial necessary step in any analysis is the examination of the data to meet the assumptions of statistic techniques. Especially for multivariate analysis techniques, the prerequisites for structural equation model are the examination of missing data, multivariate outliers, multivariate normality, and Multicollinearity (Hair, Black, Babin, & Anderson, 2010).

3.8.1.1 Missing data

Missing data is occurred when one or more variables containing with no valid values in which it will cause bias to statistical results. Normally, the individual questionnaire that has less than 10 percent the missing data might not be a problem (Hair et al., 2010). However, the sample size for this analysis was much higher than the minimum sample size. Thus, in the preliminary stage, the questionnaire contained missing data in any of the variables was eliminated from the analysis. Anywise, after the examination

for the missing value, in case of the minimum number of sample size cannot reach, the questionnaires with less than 10 percent of missing data returned back for the analysis. Mean substitution can be used as the imputation method to replace missing values.

3.8.1.2 Multivariate outliers

Outliers are the observation that obviously different from the other observations which judged to be an unusually high or low value. Outliers can seriously misrepresent statistic test (Hair et al., 2010). In SPSS, multivariate outliers can be tested by Mahalanobis distance and Cook's distance. The threshold for the Cook's distance should not be exceeding 1.00. Mohalanobis distance is the distance of a particular case from the centroid of the remaining cases, where the centroid is the point created by the means of all the variables (Tabachnick & Fidell, 2001). Mahalanobis (D2) measure is a mean of multivariate outlier detection to measure the multidimensional position of each observation compared with the centre of all observations on a set of variables. The threshold levels for the Mahalanobis divided by the number of variables involved (D2/df) with conservative level of significance exceed values of 2.5 for small samples (80 or fewer observations) and 3 or 4 for larger samples can be determined as possible outliers (Hair et al., 2010).

3.8.1.3 Multivariate normality

In statistic methods, the normal distribution is the most fundamental assumption for many statistical techniques. Multivariate normality is also assumed for multivariate analysis. Multivariate normality means that each variable combined is individually univariate normality. Univariate normality can be tested by two measures: kurtosis and skewness. Kurtosis refers to the highness of the distribution while skewness refers to the symmetric of the distribution. A normal distribution occurred when the value of kurtosis and skewness is equal to zero (Hair et al., 2010).

Three most widely used multivariate normality tests, including Mardia's, Henze-Zirkler's and Royston's multivariate normality tests. In AMOS, the test of the individual variables for normality will be provided with skewness and kurtosis values and it will also provide a test for Mardia's multivariate kurtosis for multivariate normality. Nevertheless, the effects of nonnormality can be reduced in case of large sample sizes, 200 or more (Hair et al., 2010).

3.8.1.4 Multicollinearity

Multicollinearity is a statistical problem in which two or more latent variables in a model are highly correlated. If Multicollinearity has occurred, it will cause the misunderstanding on the result. Multicollinearity presents when the value of sample correlation between two variables is exceeding 0.80. If any of these has been found, it is essential to consider removing one of the

strongly correlated pairs of variables or alternatively combining them to form a single measure (Pallant, 2011).

3.8.2 Descriptive Analysis

The statistic techniques employed for descriptive analyses were frequency and percentage in order to describe the respondents' demographic and online purchase information. Mean and standard deviation were employed to describe all variables. In addition, mean and standard deviation were used to show the level of online purchase intention and the level of actual purchase which are the first two objectives of this research. The details of each question in each variable were provided by frequency and percent.

3.8.3 Structural Equation Modeling (SEM)

The structural equation modeling (SEM) approach was conducted to test hypothesizes and confirmatory factor analysis. SEM is utilized to evaluate how well the proposed conceptual model fit the collected data (Bollen & Long, 1993). SEM was used to analyze the data for three reasons. First, SEM has been proved by most researchers to examine a set of relationships between one or more independent variables and one or more dependent variables for online purchase behavior (Ahn et al., 2004; Bigne-Alcaniz, Ruiz-Mafe, Aldas-Manzano, & Sanz-Blas, 2008; Hausman & Siekpe, 2009; Lee et al., 2006; Lin, 2007; Yeh et al., 2011; Zhang et al., 2006). Second, SEM is multivariate technique that permits the simultaneous estimation of

multiple equations. Lastly, SEM can perform factor analysis and regression analysis in only one step (Hair et al., 2010).

3.8.3.1 Evaluation of measurement model

A. Reliability

Reliability refers to the consistency of measurement in which it will be verified by using 3 criteria including composite reliability, average variance extracted and Cronbach's alpha. Composite reliability measures the internal consistency of the measurement model in which the threshold value should be greater than 0.7 (Hair, Anderson, Tatham, & Black, 1998). Average variance extracted (AVE) for all constructs should be greater than 0.5 (Fornell & Larcker, 1981). Cronbach's alpha recommended value should not be less than 0.7 (Nunnally, 1978). All constructs should be above the recommended value for each criteria then the measurement model will be adequate reliability.

B. Validity

Validity refers to the legitimacy of the study in which it can be assessed by content validity and construct validity.

I. Content validity refers to the representation of the items of a specific construct to the concept to be measured in the study in which all constructs in

the study were derived from previous studies which have been repeatedly tested for validity (Zhang et al., 2006).

II. Construct validity is refer to the degree to which two measures designed to measure the same construct are related in which it will be verified by using 2 criteria as follows;

- Convergent validity is measured by a factor loading analysis in which the value of measurement items in each construct should be greater than 0.5 and larger than the value of other items loaded on other constructs (Gefen & Straub, 2003).
- Discriminant validity assesses by the correlation between any 2 constructs should be lower than the square root of the AVEs within the construct (Fornell & Larcker, 1981).

3.8.3.2 ***Evaluation of structural model***

The statistic technique for confirmatory factor analysis was the chi-square (x^2) test in which contrary to the most other hypothesis testing that expected to reject the null hypothesis, in SEM the null hypothesis expected to not reject. Because the null hypothesis in SEM means the model fits for the data. However, as chi-square testing is sensitive when dealing with the large sample sizes then other indices for assessing model fit will be recommended (Bentler, 1990) as shown in Table 3.3.

A. Measure of Fit

Measure of fit is the examining the harmony between research model with empirical data. There are many statistic techniques for testing the fit of the model which grouped into various types and each type has its specific capability in model evaluation. In the study, the fit measurements will be group into 4 types as shown in Table 3.4 including absolute fit measure, incremental fit measure, parsimonious fit measure and minimum sample discrepancy.

1) Absolute fit measure

The statistic techniques including,

- Chi-square (x^2) or p-value: the model is fit with the data if the value of Chi-square is low or p-value (PCLOSE) > 0.05. However Chi-square is very sensitive with the size of sample which means that the more sample size, the more value of Chi-square.
- CMIN/DF: To reduce the effect of sample size to Chi-square, then, CMIN/DF can be used to determine the fit of the model. The model is fit if the value of CMIN/DF < 3.
- Root Mean Residual (RMR): the model is fit if the value of RMR is close to 0 or less than 0.05.
- Goodness-of-fit index (GFI): the fit of the model. The model is fit if the value of GFI > 0.90.

2) Incremental fit measure

The statistic techniques including,

- Adjust Goodness-of-fit Indices (AGFI): the value of AGFI should more than 0.9
- Tucker-Lewis Index (TLI): Schumacker & Lomax (2004) recommended that the value of TLI should more than 0.9
- Normed Fit Index (NFI): the value of NFI should more than 0.9
- Comparative Fit Index (CFI): the value of CFI should more than 0.9

3) parsimonious fit measure

A model with high in parsimony is a model with relative few parameters and relatively many degrees of freedom.

- Parsimony Normed Fit Index (PNFI): the model is parsimony if the value of PNFI > 0.6.
- Parsimony Goodness-of- Fit Index (PGFI): the model is parsimony if the value of PGFI is high

4) minimum sample discrepancy measure

The minimum number of the sample size to accept the model fit

- Hoelter: the minimum number of Hoelter is not less than 200.

Table 3.4
The Recommended Values of the Fit Indices for the Final Model

Fit Indices	Recommended Cut-off values
Absolute fit measures	
Chi-square (x^2)	The lower, the better
CMIN/DF	<3.00
PCLOSE	>0.05
Goodness-of-fit index (GFI)	>0.90
Root Mean Square Error of Approxition(RMSEA)	<0.05
Root Mean Residual (RMR)	<0.05
Incremental fit measures	
Adjust Goodness-of-fit Indices (AGFI)	>0.90
Tucker-Lewis index (TLI)	>0.90
Normed fit index (NFI)	>0.90
Comparative fit index (CFI)	>0.90
Parsimonious fit measures	
Parsimonious normed fit index (PNFI)	>0.60
Parsimonious Goodness-of-fit Index(PGFI)	The higher, the bettevr
Minimum sample discrepancy measure	
Hoelter (0.05)	>200

Source: Ahn et al. (2004)

B. Hypothesis testing

Hypothesis testing was tested by path analysis. The relationship between the constructs was examined based on t-values associated with path coefficients between the constructs. If the estimated t-value is greater than a critical value, the null hypothesis that the associated estimated parameter is equal to 0 is rejected. Subsequently, the hypothesize relationship was supported. The explanatory power of a structural model was assessed by the R-square scores of the endogenous variables.

3.9 Summary

The study adopted a quantitative approach in order to test hypotheses and validate the propose framework. The population for the study is Internet users who have bought products/services from websites. Stratified random sampling method and simple random sampling method would be employed to select the sample. Data were collected by using self-reported questionnaires and the pilot test was used to test the reliability of the research instrument. Both descriptive and inferential analysis were used to analyze the data including with Structural Equation Modeling (SEM) to fulfill the objectives.

CHAPTER 4

DATA ANALYSIS

4.1 Introduction

This chapter presents the results of analyzed data by using the package of IBM SPSS Statistic and AMOS version 21. First part of this chapter presents all constructs in the research model and its' abbreviation. Second part presents the prerequisite for preparing the data for the analysis of structural equation model. This part consists of the data screening for the usable questionnaire. Then Mahalanobis distance and Cook's distance were used to test multivariate outliers. Skewness and Kurtosis values have been used to check the normality distribution of the data. Multicollinearity will be used to check the redundant variables. Third part, demographics of the respondents is reviewed in order to give a more detailed context for the understanding of subsequent data presentation. The last part of this chapter, structural equation model which comprises of measurement model and structural model were checked by the criterion of goodness fit indices. All hypotheses formulated for the study has been tested.

4.2 Constructs of the Research Model

The theoretical model comprises seven latent constructs as follows

- Actual online purchase (AP)
- Online purchase intention (OPI)
- Perceived usefulness (PU)

- Perceived ease of use (PEOU)
- Trust (T)
- Informativeness (INFO)
- Electronic word of mouth (EWOM)

A latent construct cannot be measured directly but can be represented or measured by one or more variables which are called observed variables. Each latent variable in the model consists of observed variables as shown in Table 4.1.

Table 4.1
Latent and Observed Variable

Latent Variables	**Observed Variable**
AP	AP1, AP2, AP3
OPI	OPI1, OPI2, OPI3, OPI4
PU	PU1, PU2, PU3, PU4, PU5
PEOU	PEOU1, PEOU2, PEOU3, PEOU4, PEOU5
T	T1, T2, T3, T4
INFO	INFO1, INFO2, INFO3, INFO4
EWOM	EWOM1, EWOM2, EWOM3, EWOM4

4.3 Prerequisite

4.3.1 Data Screening and missing value

A total of 900 questionnaires were personally email to the selected respondents. Only 873 questionnaires returned by email, however, 31 questionnaires were the respondent who did not buy products/services online in the last three months which means that only 842 questionnaires were usable for data analysis. The response rate is 97.0%. After checking for missing data, 16 questionnaires have found to have blanks for some variables. Therefore, the respondents for the data analysis are 826 cases which is sufficient the study as mentioned in chapter 3, a minimum of 435 participant's usable responses were necessary to represent the population.

Before go to the part of analysis result, as the 31 unusable questionnaire containing the demographic and the reason for not buying products/services online in the last three months in which the information may benefit for further study. As shown in Table 4.2 the majority of the sample who not buying products/services are male with the current study in bachelor degree and having the average income of less than 152 USD per month.

Table 4.2
Demographic Profile of the Sample Who Did Not Buy Online in the Last 3 Months

Attribute	**Value**	**Frequency**	**Percentage (%)**
Gender	Male	22	70.97
	Female	9	29.03
Current Education	Bachelor	31	100.00
	Master	0	0.00
	Doctoral	0	0.00
Income	Less than 152 USD	18	58.06
	152-302 USD	13	41.94
	303-454 USD	0	0.00
	455-606 USD	0	0.00
	More than 606 USD	0	0.00

Figure 4.1 describes the main reasons for the respondents who never buy products/services online. Risk and lack of trust are the main reasons that prevent them from online buying. Another main reason is consumers cannot physically see a product.

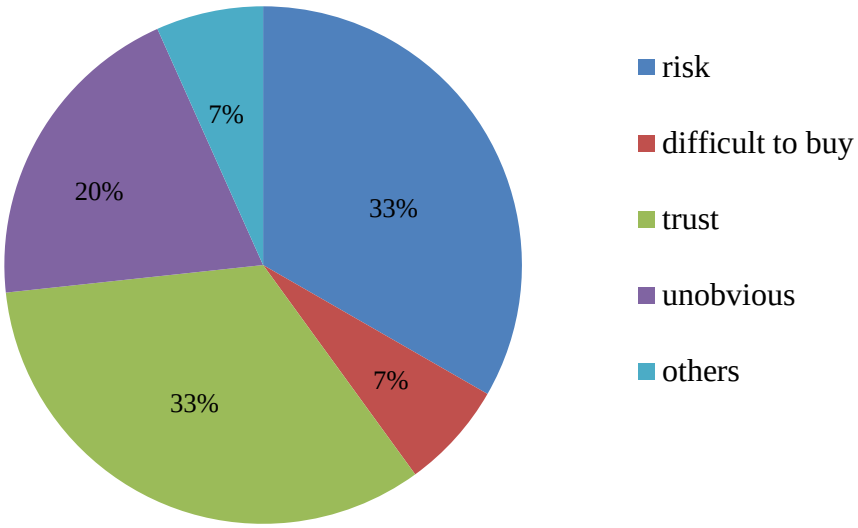


Figure 4.1
The Main Reason for Not Buying Products/Services Online

4.3.2 Multivariate Outliers

After selecting the usable questionnaires then the next step is to test the multivariate outliers using Mahalanobis distance and Cook's distance. Mohalanobis distance is the distance of a particular case from the centroid of the remaining cases, where the centroid is the point created by the means of all the variables (Tabachnick & Fidell, 2001). Mahalanobis (D^2) measure is a mean of multivariate outlier detection to measure the multidimensional position of each observation compared with the centre of all observations on a set of variables. The threshold levels for the D^2/df measure should be conservative, resulting in values of 2.5 (small samples – 80 or fewer observations) versus 3 or 4 in larger samples (Hair et al., 2010). From table 4.3 the D^2/df measure was equal to 1.85 as the maximum number of D2 is 48.079 and degree of freedom is 26. Moreover, multivariate can also be calculated by the Cook's

distance value in which the threshold value does not exceed 1.000. The result of the Cook's distance in Table 4.3 also indicated minimum and maximum values of Cook's distance that did not exceed 1.000. Therefore, there are no outliers observed by both Mahalanobis distance and Cook's distance.

Table 4.3
Mahalanobis and Cook's Distance

	Minimum	**Maximum**	**Mean**	**Std. Deviation**	**N**
Predicted Value	1.2224	6.4331	4.4149	.85327	826
Std. Predicted Value	-3.741	2.365	.000	1.000	826
Standard Error of Predicted Value	.031	.192	.069	.023	826
Adjusted Predicted Value	1.2077	6.4343	4.4150	.85325	826
Residual	-3.27953	2.67515	.00000	.78424	826
Std. Residual	-4.167	3.399	.000	.996	826
Stud. Residual	-4.192	3.437	.000	1.002	826
Deleted Residual	-3.32006	2.73643	-.00011	.79297	826
Stud. Deleted Residual	-4.235	3.460	.000	1.004	826
Mahal. Distance	.292	48.079	5.993	5.307	826
Cook's Distance	.000	.108	.002	.005	826
Centered Leverage Value	.000	.058	.007	.006	826

4.3.3 Multivariate Normality

The normal distribution of the data is the most fundamental assumption for statistical methods (Hair, Black, Babin, & Anderson, 2010). Many statistical techniques can be used to test the normality of the distribution. The skewness and kurtosis values are one of the technique that can assessed the distribution. The skewness value provides an indication of the symmetry of the distribution. Kurtosis provides information

about the peakedness of the distribution (Pallant, 2011). Data that distributed by normal, the skewness and kurtosis value will be equal to zero. Even the value of both skewness and kurtosis values as indicated in Table 4.4 are not exactly 0, however, skewness for all scale items lower than 3.0 and none has kurtosis index greater than 8.0. Thus it is safe to assume that multivariate normality appeared.

Table 4.4
Skewness and Kurtosis

Variables	Min	Max	Mean	S.D.	Skewness		Kurtosis	
					Statistic	Std. Error	Statistic	Std. Error
OPI1	1	7	3.98	1.325	-.106	.085	-.262	.170
OPI2	1	7	4.38	1.250	-.281	.085	.033	.170
OPI3	1	7	4.33	1.257	-.258	.085	.042	.170
OPI4	1	7	4.13	1.336	-.255	.085	-.321	.170
PU1	1	7	4.48	1.263	-.256	.085	-.119	.170
PU2	1	7	4.89	1.425	-.288	.085	-.574	.170
PU3	1	7	4.52	1.306	-.274	.085	-.270	.170
PU4	1	7	4.52	1.279	-.181	.085	-.330	.170
PU5	1	7	4.89	1.365	-.372	.085	-.336	.170
T1	1	7	4.28	1.236	-.151	.085	-.346	.170
T2	1	7	4.22	1.278	-.090	.085	-.212	.170
T3	1	7	3.96	1.271	-.066	.085	-.217	.170
T4	1	7	4.20	1.221	-.079	.085	-.130	.170
INFO1	1	7	4.60	1.228	-.206	.085	-.188	.170
INFO2	1	7	4.72	1.232	-.168	.085	-.283	.170
INFO3	1	7	4.30	1.253	-.223	.085	-.195	.170
INFO4	1	7	4.57	1.205	-.286	.085	-.022	.170
PEOU1	1	7	4.73	1.270	-.349	.085	-.178	.170
PEOU2	1	7	4.69	1.263	-.225	.085	-.432	.170
PEOU3	1	7	4.72	1.272	-.247	.085	-.326	.170
PEOU4	1	7	4.42	1.285	-.145	.085	-.215	.170
PEOU5	1	7	4.61	1.399	-.194	.085	-.387	.170
EWOM1	1	7	4.92	1.404	-.283	.085	-.576	.170
EWOM2	1	7	4.99	1.398	-.320	.085	-.600	.170
EWOM3	1	7	4.96	1.413	-.410	.085	-.316	.170
EWOM4	1	7	4.90	1.363	-.337	.085	-.418	.170
AP1	1	7	4.45	1.362	-.117	.085	-.353	.170
AP2	1	7	4.58	1.252	-.264	.085	-.059	.170
AP3	1	7	4.22	1.416	-.274	.085	-.275	.170

4.3.4 Multicollinearity

Multicollinearity presented when the value of sample correlation between two variables is exceed 0.80. If any of these has been found, it is essential to consider removing one of the strongly correlated pairs of variables or alternatively combining them to form a single measure (Pallant, 2011). However, there was no pair of any variables that have sample correlation exceeds 0.80 as shown in Appendix B. This indicated that there was no multicollinearlity issue between two variables.

4.4 Descriptive Analysis

The demographic profile of the survey respondents is presented in Table 4.5. The largest group is female, which accounted for 69.90% of the total respondents. In addition, it was shown that a large number of respondents representing 79.40% is under the current education of having a bachelor degree and the average income of the majority (39.60%) of the respondent earn 152 to 302 USD per month.

Table 4.5
Respondents' Profile

Attribute	Value	Frequency	Percentage (%)
Gender	Male	249	30.10
	Female	577	69.90
Current Education	Bachelor	656	79.40
	Master	120	14.50
	Doctoral	50	6.10

Table 4.5 (Continued)

Attribute	Value	Frequency	Percentage (%)
Income*	Less than 152 USD	299	36.20
	152-302 USD	327	39.60
	303-454 USD	78	9.40
	455-606 USD	55	6.60
	More than 606 USD	67	8.20

***** Converted rate at 1USD = 33 Baht

Table 4.6 describes that almost half of the respondents spend an average amount of money (15 to 30 USD) to buy products/services online. Most of the respondents usually buy clothes and cosmetic via the website which accounted for 67.40% and 32.50% respectively as shown in Table 4.7.

Table 4.6
Average Amount Buying Products/Services Online

Average amount*	Frequency	Percentage (%)
Less than 15 USD	182	22.00
15 - 30 USD	388	47.00
31 - 45 USD	135	16.30
46 - 60 USD	46	5.60
More than 60 USD	75	9.10

***** Converted rate at 1USD = 33 Baht

Table 4.7
Type of Products/Services Purchase Online

Type	Frequency	Percentage (%)
Cloth	557	67.40
Cosmetic	268	32.50
Food	161	19.50
Computer	153	18.50
Book	148	17.90
Electronic Ticket	142	17.20
Software	112	13.60
Service	83	10.10
Sport	72	8.70
Appliance	7	8.60
Other	69	8.40
Tool	56	6.80

The descriptive analysis of latent constructs includes maximum, minimum, mean, standard error, and standard deviation was shown in Table 4.8.

Table 4.8
Descriptive Analysis of the Variables

Variables	N	Minimum	Maximum	Mean		Std. Deviation
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic
OPI	826	1.00	7.00	4.2064	.03546	1.01924
PU	826	1.00	7.00	4.6603	.03650	1.04905
TRUST	826	1.00	7.00	4.1653	.03679	1.05734
INFO	826	1.00	7.00	4.5472	.03513	1.00975
PEOU	826	1.00	7.00	4.6322	.03550	1.02027
EWOM	826	1.00	7.00	4.9455	.04262	1.22483
AP	826	1.00	7.00	4.4149	.04032	1.15893

Mean of almost variables is close to 4 except EWOM which close to 5. Trust has lowest for mean value (4.1653) while the highest mean is electronic word of mouth (EWOM=4.9455). The standard deviation of all variable is close to 1 with perceived informativeness (INFO) has lowest value (1.00975) and EWOM has highest value (1.22483). All variables have 1.00 as minimum value and 7.00 as maximum value.

As two main objectives for the study are focused on the level of online purchase intention and actual online purchase, then the details of descriptive analysis for each objective of online actual purchase and online purchase intention are shown below. The mean average of actual purchase is 4.4149 which fall into undecided in seven-point Likert scale. This means that the respondents are undecided to perform buying products/services in online context. The details of each item that measured actual purchase, actual purchase variable consisted of 3 items as follows;

AP1: I usually buy products/services via website.

AP2: I really satisfied when shopping online.

AP3: I always make transaction to buy products/services from online vendor.

From Table 4.9, the majority of the respondents agree and agree somewhat to usually buy product/ service via website, really satisfied when shopping online, and to always make transaction to buy products/services from online vendor.

Table 4.9
Frequency and Percentage of the Level of Actual Purchase in Each Item

	AP1		AP2		AP3	
	Frequency	**Percent**	**Frequency**	**Percent**	**Frequency**	**Percent**
strongly disagree	12	1.5	10	1.2	35	4.2
Disagree	55	6.7	32	3.9	68	8.2
Disagree somewhat	131	15.9	113	13.7	126	15.3
undecided	217	26.3	216	26.2	231	28.0
Agree somewhat	236	28.6	270	32.7	221	26.8
agree	115	13.9	139	16.8	109	13.2
strongly agree	60	7.3	46	5.6	36	4.4
Total	826	100.0	826	100.0	826	100.0

For the level of online purchase intention, the mean average is 4.2064 which fall into undecided in seven-point Likert scale. This means that the respondents are undecided to intent to use website to purchase products/services in the future either for the first time or repurchase. The details of each item that measured online purchase intention, online purchase intention variable consisted of 4 items are follows;

OPI 1: I intend to make transaction to purchase from online vendor.

OPI 2: I intend to purchase products/services from online vendor in the future.

OPI 3: I will recommend others buying products/service via website.

OPI 4: I intend to provide the online vendor with the information it needs better serve my needs.

From Table 4.10, the majority of the respondents agree and agree somewhat to intend to purchase products/services from online vendor in the future, to provide the online vendor with the information it needs better serve their needs, to make transaction to purchase from online vendor, and to recommend others buying products/service via website.

Table 4.10
Frequency and Percentage of the Level of Online Purchase Intention in Each Item

	OPI1		OPI2		OPI3		OPI4	
	Frequency	**Percent**	**Frequency**	**Percent**	**Frequency**	**Percent**	**Frequency**	**Percent**
strongly disagree	26	3.1	15	1.8	17	2.1	29	3.5
Disagree	96	11.6	43	5.2	48	5.8	64	7.7
Disagree somewhat	155	18.8	133	16.1	125	15.1	166	20.1
undecided	244	29.5	219	26.5	252	30.5	215	26.0
Agree somewhat	223	27.0	287	34.7	254	30.8	233	28.2
agree	57	6.9	96	11.6	100	12.1	100	12.1
strongly agree	25	3.0	33	4.0	30	3.6	19	2.3
Total	**826**	**100.0**	**826**	**100.0**	**826**	**100.0**	**826**	**100.0**

4.5 Structural Equation Modeling (SEM)

Structural equation model (SEM) comprises of 2 models which are measurement model and structural model. The measurement models were evaluated to ensure that the items used to measure each of the constructs is adequate. Then, the structural model was evaluated to assess the relationship between variables.

4.5.1 Evaluation of measurement model

4.5.1.1 Reliability

Reliability refers to the degree to which an instrument measures the same way each time it is used under the same condition with the same subjects. The reliability of the individual items in the questionnaire has been tested by checking the internal consistency which was measured by reliability coefficients called Cronbach's alpha (α). Kline (2005) recommended that reliability coefficients about 0.9 are excellent while 0.8 are very good and 0.7 are adequate. As shown in Table 4.11, the Cronbach's alphas for all variables were computed well exceeded the 0.70 threshold as suggested by Kline (2005).

Table 4.11
Cronbach's Alpha for the Variables

Variable	No. of item(s)	Cronbach's alpha (α)
Electronic Word of Mouth (EWOM)	4	0.901
Perceived Usefulness (PU)	5	0.849
Perceived Ease of Use (PEOU)	5	0.845
Trust (T)	4	0.866
Informativeness(INFO)	4	0.839
Online Purchase Intention (OPI)	4	0.797
Actual Purchase (AP)	3	0.826

4.5.1.2 Validity

Confirmatory Factor Analysis (CFA)

The measurement model is the first step in the two-step approach to structural equation modeling (Anderson & Gerbing, 1988). The measurement model of each variable was examined in accordance with the goodness of fit.

Measurement model of Electronic Word of Mouth (EWOM)

The measurement model of electronic word of mouth (EWOM) variable consists of 4 observed variables in which each observed variables represent each question as follows;

EWOM1: I often read/watch other consumers' product/service online reviews to gather more information.

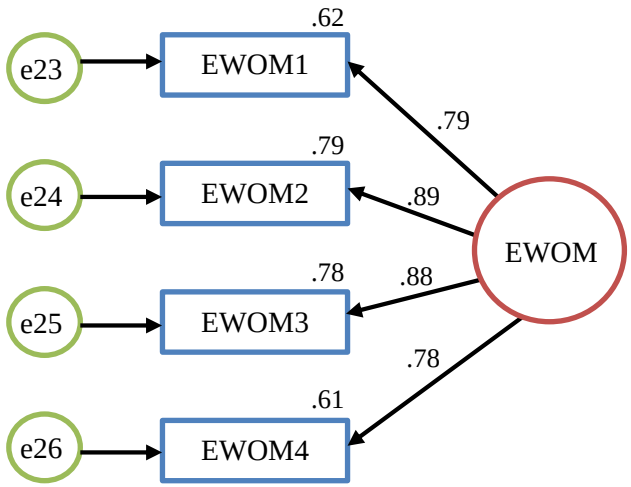
EWOM2: I often read/watch product/service online reviews before purchasing via the website.

EWOM3: To make sure the right purchase decision, I often read/watch product/service online reviews.

EWOM4: Online product/service reviews make me confident in online purchase.

The default measurement model of EWOM is shown in Figure 4.2. The EWOM model yields p-value of 0.000 and CMIN/DF of 13.890. It indicated that the model

does not fit with the data. As chi-square is very sensitive to the size of sample, it is more appropriate to assess other fit measures. Fortunately, other fit measures indicate the goodness of fit (GFI= 0.984, CFI = 0.988 and RMR = 0.033) which means that the model fits with the data.



CMIN/DF=13.890, Chi-square= 27.780, p-value= .000,
GFI= .984, CFI = .988, RMR= .033, RMSEA = .125, PCLOSE = .001

Figure 4.2
Default Measurement Model of Electronic Word of Mouth (EWOM)

The value of regression weights from table 4.12 shows that all C.R. is more than 1.96 and P-value less than 0.05. In conclude, EWOM latent variable consists of 4 observed variables descending sort by factor loading which are EWOM2, EWOM3, EWOM1 and EWOM4 (0.89, 0.88, 0.79 and 0.78 respectively)

Table 4.12
Regression Weights of EWOM

			Estimate	S.E.	C.R.	P
EWOM4	<---	EWOM	.963	.040	23.995	***
EWOM3	<---	EWOM	1.130	.041	27.887	***
EWOM2	<---	EWOM	1.122	.040	27.968	***
EWOM1	<---	EWOM	1.000			

Measurement model of Perceived Usefulness (PU)

The measurement model of perceived usefulness (PU) variable consists of 5 observed variables in which each observed variables represent each question as follows;

PU1: Buying products/services via the website increases my buying and searching productivity.

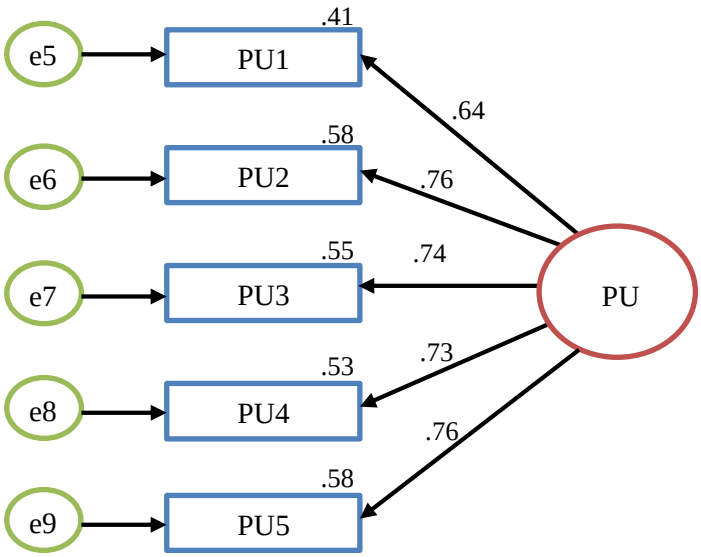
PU2: Buying products/services via the website saves my time.

PU3: Buying products/services via the website enhance my buying effectiveness.

PU4: Buying products/services via the website improve my buying performance.

PU5: Buying products/services via the website makes my job easier.

The default measurement model of PU is shown in Figure 4.3. The PU model yields p-value of 0.000 and CMIN/DF of 7.672. It indicated that the model does not fit with the data. As chi-square is very sensitive with the size of sample, it is more appropriate to assess other fit measures. Fortunately, other fit measures also indicate the goodness of fit (GFI= 0.982, CFI = 0.979 and RMR = 0.045) which means that the model fits with the data.



CMIN/DF=7.672, Chi-square= 38.362, p-value= .000,
GFI= .982, CFI = .979, RMR= .045, RMSEA = .090, PCLOSE = .006

Figure 4.3
Default Measurement Model of Perceived Usefulness (PU)

The value of regression weights from table 4.13 shows that all C.R. is more than 1.96 and P-value less than 0.05. In conclude, PU latent variable consists of 5 observed variables descending sort by factor loading which are PU5, PU2, PU3, PU4 and PU1 (0.76, 0.76, 0.74, 0.73 and 0.64 respectively)

Table 4.13
Regression Weights of PU

			Estimate	S.E.	C.R.	P
PU5	<---	PU	1.000			
PU4	<---	PU	.900	.045	19.864	***
PU3	<---	PU	.935	.046	20.207	***
PU2	<---	PU	1.043	.051	20.622	***
PU1	<---	PU	.784	.045	17.496	***

Measurement model of Perceived Ease of Use (PEOU)

The measurement model of perceived ease of use (PEOU) variable consists of 5 observed variables in which each observed variables represent each question as follows;

PEOU1: Shopping via website is easy to learn.

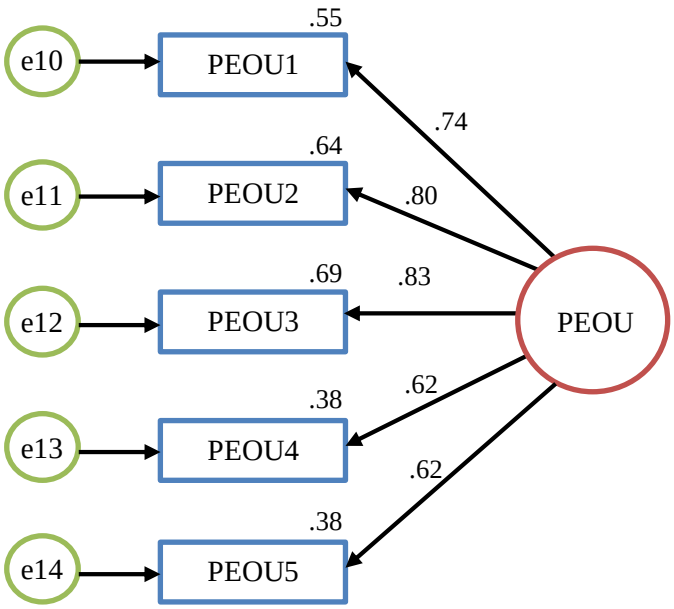
PEOU 2: Shopping via website is clear and understandable.

PEOU 3: Shopping via website is easy to use.

PEOU 4: Shopping via website does not require a lot of mental effort.

PEOU 5: I can shop via website without any expert help.

The default measurement model of PEOU is shown in Figure 4.4. The fit measures indicated that the model does not fit with the data. Even GFI (0.953) and CFI (0.939) has shown that the default model has fit with the data, however the other fit indices shown the unacceptable value (p-value = 0.000, CMIN/DF = 21.652, RMR = 0.09). From Table 4.14, the highest value of modification indices is the pair of e14 and e13 with par change 0.351.



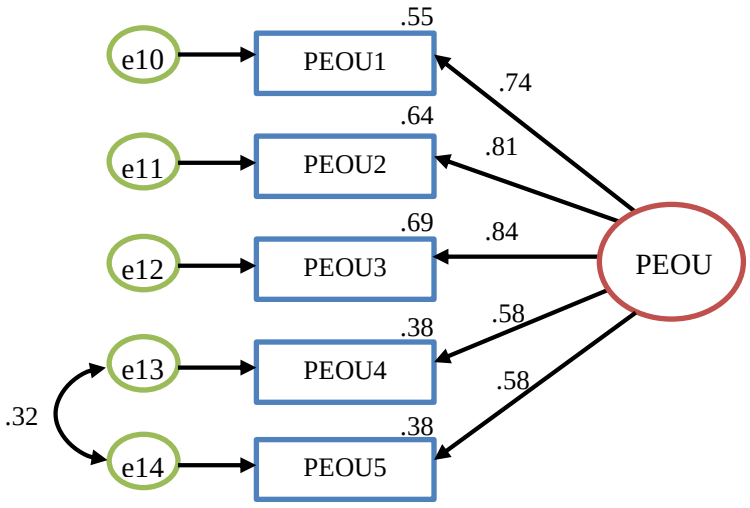
CMIN/DF=21.652, Chi-square= 108.262, p-value= .000,
GFI= .953, CFI = .939, RMR= .090, RMSEA = .158, PCLOSE = .000

Figure 4.4
Default Measurement Model of Perceived Ease of Use (PEOU)

Table 4.14
Modification Indices and Par Change of PEOU

		M.I.	Par Change
e12 <-->	e11	4.467	.051
e13 <-->	e10	17.463	-.142
e13 <-->	e11	4.767	-.069
e14 <-->	e10	4.679	.080
e14 <-->	e11	13.459	-.125
e14 <-->	e12	11.075	-.110
e14 <-->	e13	70.359	.351

The adjust measurement model of PEOU is shown in Figure 4.5. By ignore the p-value and CMIN/DF due to the large number of sample size, the other fit measures (GFI= 0.984, CFI = 0.983 and RMR = 0.039) indicate that the model fits with the data.



CMIN/DF=8.262, Chi-square= 33.050, p-value= .000,
GFI= .984, CFI= .983, RMR= .039, RMSEA = .094, PCLOSE = .006

Figure 4.5
Adjusted Measurement Model of Perceived Ease of Use (PEOU)

The value of regression weights from Table 4.15 shows that all C.R. is more than 1.96 and P-value less than 0.05. In conclude, PEOU latent variable consists of 5 observed variables descending sort by factor loading which are PEOU3, PEOU2, PEOU1, PEOU4 and PEOU5 (0.84, 0.81, 0.74, 0.58 and 0.58 respectively).

Table 4.15
Regression Weights of PEOU

			Estimate	S.E.	C.R.	P
PEOU5	<---	PEOU	1.000			
PEOU4	<---	PEOU	.921	.057	16.185	***
PEOU3	<---	PEOU	1.312	.079	16.573	***
PEOU2	<---	PEOU	1.260	.077	16.363	***
PEOU1	<---	PEOU	1.160	.074	15.613	***

Measurement model of Trust (T)

The measurement model of trust (T) variable consists of 4 observed variables in which each observed variables represent each question as follows;

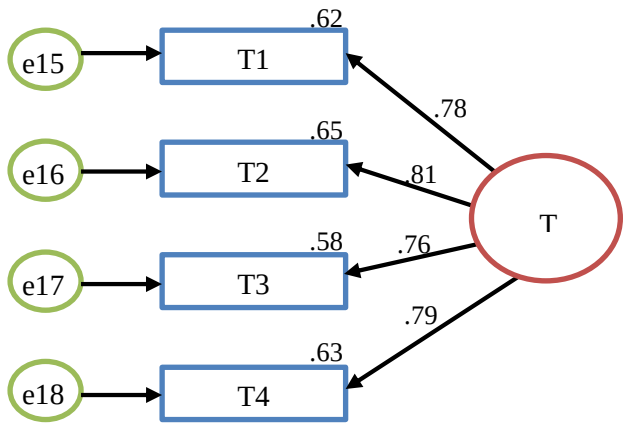
T1: Website is trustworthy for making online purchase.

T2: Website is secure and reliable for making online purchase.

T3: Website is secure to provide the personal information.

T4: I trust the website.

The default measurement model of T is shown in Figure 4.6. The fit measures indicated that the model does not fit with the data. Even GFI (0.950) and CFI (0.951) has shown that the default model has fit with the data, however the other fit indices shown the unacceptable value (p-value = 0.000, CMIN/DF = 40.357, RMR = 0.061).



CMIN/DF=40.357, Chi-square= 80.713, p-value= .000,
GFI= .950, CFI = .951, RMR= .061, RMSEA = .218, PCLOSE = .000

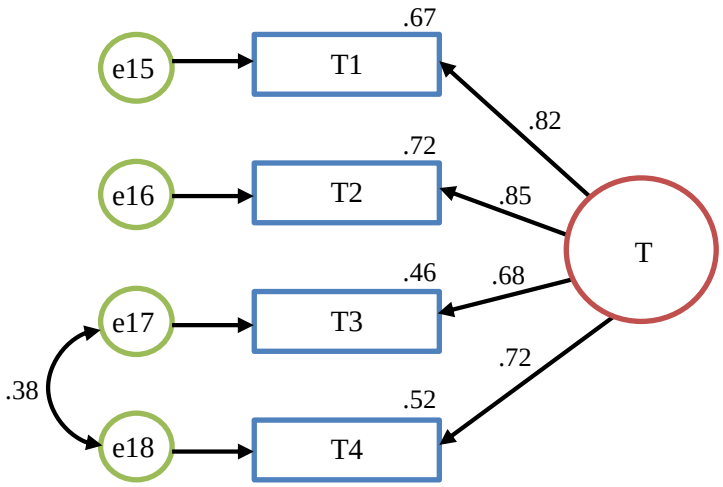
Figure 4.6
Default Measurement Model of Trust (T)

From Table 4.16, the highest value of modification indices is the pair of e16 and e15 with par change 0.179.

Table 4.16
Modification Indices and Par Change of T

			M.I.	Par Change
e16	<-->	e15	47.511	.179
e17	<-->	e15	18.931	-.116
e17	<-->	e16	6.559	-.068
e18	<-->	e15	6.122	-.060
e18	<-->	e16	13.700	-.090
e18	<-->	e17	38.308	.155

The adjust measurement model of T is shown in Figure 4.7. By ignore the p-value and CMIN/DF due to the large number of sample size, the other fit measures (GFI= 0.999, CFI = 0.999, RMSEA = 0.042, PCLOSE = 0.45) indicate that the model fits with the data.



CMIN/DF=2.450, Chi-square= 2.450, p-value= .118,
GFI= .999, CFI = .999, RMR= .009, RMSEA = .042, PCLOSE = .450

Figure 4.7
Adjusted Measurement Model of trust (T)

The value of regression weights from Table 4.17 shows that all C.R. is more than 1.96 and P-value less than 0.05. In conclude, T latent variable consists of 4 observed variables descending sort by factor loading which are T2, T1, T4, and T3 (0.85, 0.82, 0.72, and 0.68 respectively)

Table 4.17
Regression Weights of T

			Estimate	S.E.	C.R.	P
T4	<---	Trust	1.000			
T3	<---	Trust	.981	.043	22.704	***
T2	<---	Trust	1.238	.059	20.845	***
T1	<---	Trust	1.155	.056	20.680	***

Measurement model of Perceived Informativeness (INFO)

The measurement model of perceived informativeness (INFO) variable consists of 4 observed variables in which each observed variables represent each question as follows;

INFO1: Website provides relevant product/service information.

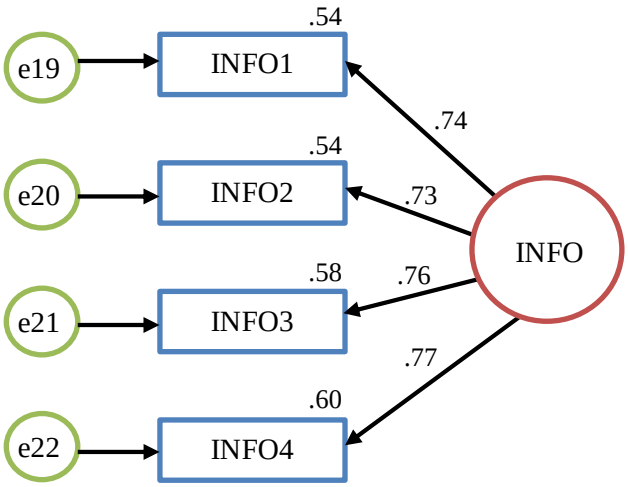
INFO 2: Website is a source for searching product/service information.

INFO 3: Website provides accurate information.

INFO 4: Website provides value information.

The default measurement model of INFO is shown in Figure 4.8. The INFO model yields p-value of 0.000 and CMIN/DF of 24.805. It indicated that the model does not fit with the data. As chi-square is very sensitive with the size of sample, it is more appropriate to assess other fit measures. Fortunately, other fit measures indicate the

goodness of fit (GFI= 0.969, CFI = 0.963 and RMR = 0.045) which means that the model fits with the data.



CMIN/DF=24.805, Chi-square= 49.609, p-value= .000,
GFI= .969, CFI = .963, RMR= .045, RMSEA = .170, PCLOSE = .000

Figure 4.8
Default Measurement Model of Perceived Informativeness (INFO)

The value of regression weights from Table 4.18 shows that all C.R. is more than 1.96 and P-value less than 0.05. In conclude, INFO latent variable consists of 5 observed variables descending sort by factor loading which are INFO4, INFO3, INFO1, and INFO2 (0.77, 0.76, 0.74, and 0.73 respectively).

Table 4.18
Regression Weights of INFO

			Estimate	S.E.	C.R.	P
INFO4	<---	INFO	1.000			
INFO3	<---	INFO	1.023	.050	20.456	***
INFO2	<---	INFO	.969	.049	19.796	***
INFO1	<---	INFO	.969	.049	19.843	***

Measurement model of Online Purchase Intention (OPI)

The measurement model of online purchase intention (OPI) variable consists of 4 observed variables in which each observed variables represent each question as follows;

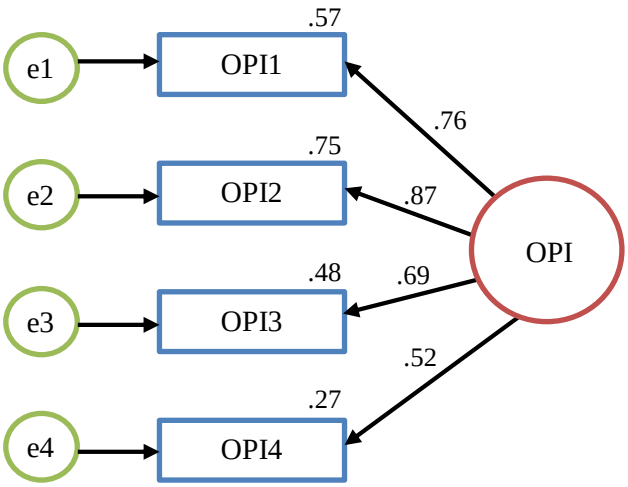
OPI 1: I intend to make transaction to purchase from online vendor.

OPI 2: I intend to purchase products/services from online vendor in the future.

OPI 3: I will recommend others buying products/service via website.

OPI 4: I intend to provide the online vendor with the information it needs better serve my needs.

The default measurement model of OPI is shown in Figure 4.9. The OPI model yields p-value of 0.000 and CMIN/DF of 8.934. It indicated that the model does not fit with the data. As chi-square is very sensitive with the size of sample, it is more appropriate to assess other fit measures. Fortunately, other fit measures also indicate the goodness of fit (GFI= 0.989, CFI = 0.985 and RMR = 0.046) which means that the model fits with the data.



CMIN/DF=8.934, Chi-square= 17.868, p-value= .000,
GFI= .989, CFI = .985, RMR= .046, RMSEA = .098, PCLOSE = .021

Figure 4.9
Default Measurement Model of Online Purchase Intention (OPI)

The value of regression weights from Table 4.19 shows that all C.R. is more than 1.96 and P-value less than 0.05. In conclude, OPI latent variable consists of 4 observed variables descending sort by factor loading which are OPI2, OPI1, OPI3 and OPI4 (0.87, 0.76, 0.69 and 0.52 respectively).

Table 4.19
Regression weights of OPI

			Estimate	S.E.	C.R.	P
OPI4	<---	OPI	1.000			
OPI3	<---	OPI	1.254	.095	13.268	***
OPI2	<---	OPI	1.566	.110	14.240	***
OPI1	<---	OPI	1.447	.105	13.842	***

Measurement model of Actual Online Purchase (AP)

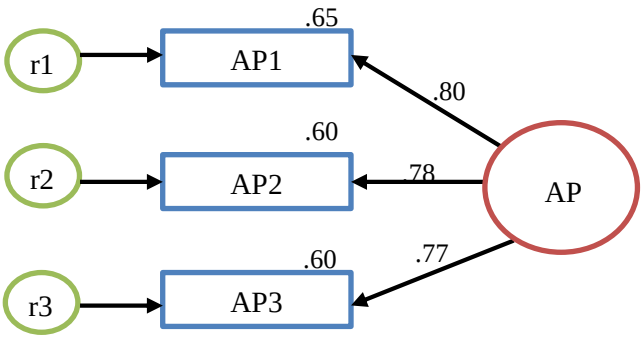
The measurement model of actual online purchase (AP) variable consists of 3 observed variables in which each observed variables represent each question as follows;

AP1: I usually buy products/services via website.

AP2: I really satisfied when shopping online.

AP3: I always make transaction to buy products/services from online vendor.

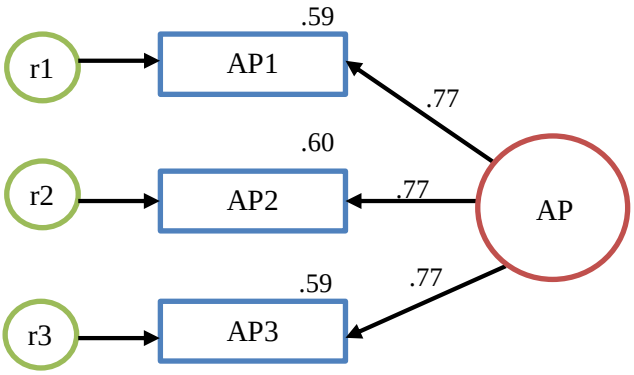
As actual online purchase variable consist of only 3 observed variables then the just identification case has occurred as shown in Figure 4.10. The fit indices cannot measure whether the model has fit with the data. In order to set the degree of freedom to be positive or over identification, the number of independent parameter should be reduced by setting the variance of a latent variable equal to 1.



CMIN/DF=\cmindf, Chi-square= .000, p-value= \p,
GFI= 1.000, CFI = 1.000, RMR= .000, RMSEA = \rmsea, PCLOSE= \PCLOSE

Figure 4.10
Default Measurement Model of Actual Online Purchase (AP)

After reduce the number of independent parameter, the value of fit indices is shown in Figure 4.11. The AP model yields p-value of 0.000 and CMIN/DF of 4.645. It indicated that the model does not fit with the data. As chi-square is very sensitive with the size of sample, it is more appropriate to assess other fit measures. Fortunately, other fit measures also indicate the goodness of fit which means that the model fits with the data (GFI= 0.996, CFI = 0.996 and RMSEA = 0.066).



CMIN/DF=4.645, Chi-square= 4.645, p-value= .031,
GFI= .996, CFI = .996, RMR= .101, RMSEA = .066, PCLOSE= .236

Figure 4.11
Adjusted Measurement Model of Actual Online Purchase (AP)

The value of regression weights from Table 4.20 shows that all C.R. is more than 1.96 and P-value is less than 0.05. In conclude, AP latent variable consists of 3 observed descending variables sort by factor loading which are AP2, AP3, and AP1 (0.772, 0.771, and 0.766 respectively) as shown in Table 4.21.

Table 4.20
Regression Weights of AP

		Estimate	S.E.	C.R.	P
AP3	<--- AP	1.072	.045	23.910	***
AP2	<--- AP	.949	.040	23.948	***
AP1	<--- AP	1.000			

Table 4.21
Standardized Regression Weights of AP

		Estimate
AP3	<--- AP	.771
AP2	<--- AP	.772
AP1	<--- AP	.766

4.5.2 Evaluation of structural model

4.5.2.1 Measure of fit

The initial model before a modification is presented in Figure 4.12 with standardized estimates. Clearly the initial model cannot meet almost the minimum of the requirements as shown in Table 4.22. Only Parsimonious normed fit index (PNFI) has passed the requirements.

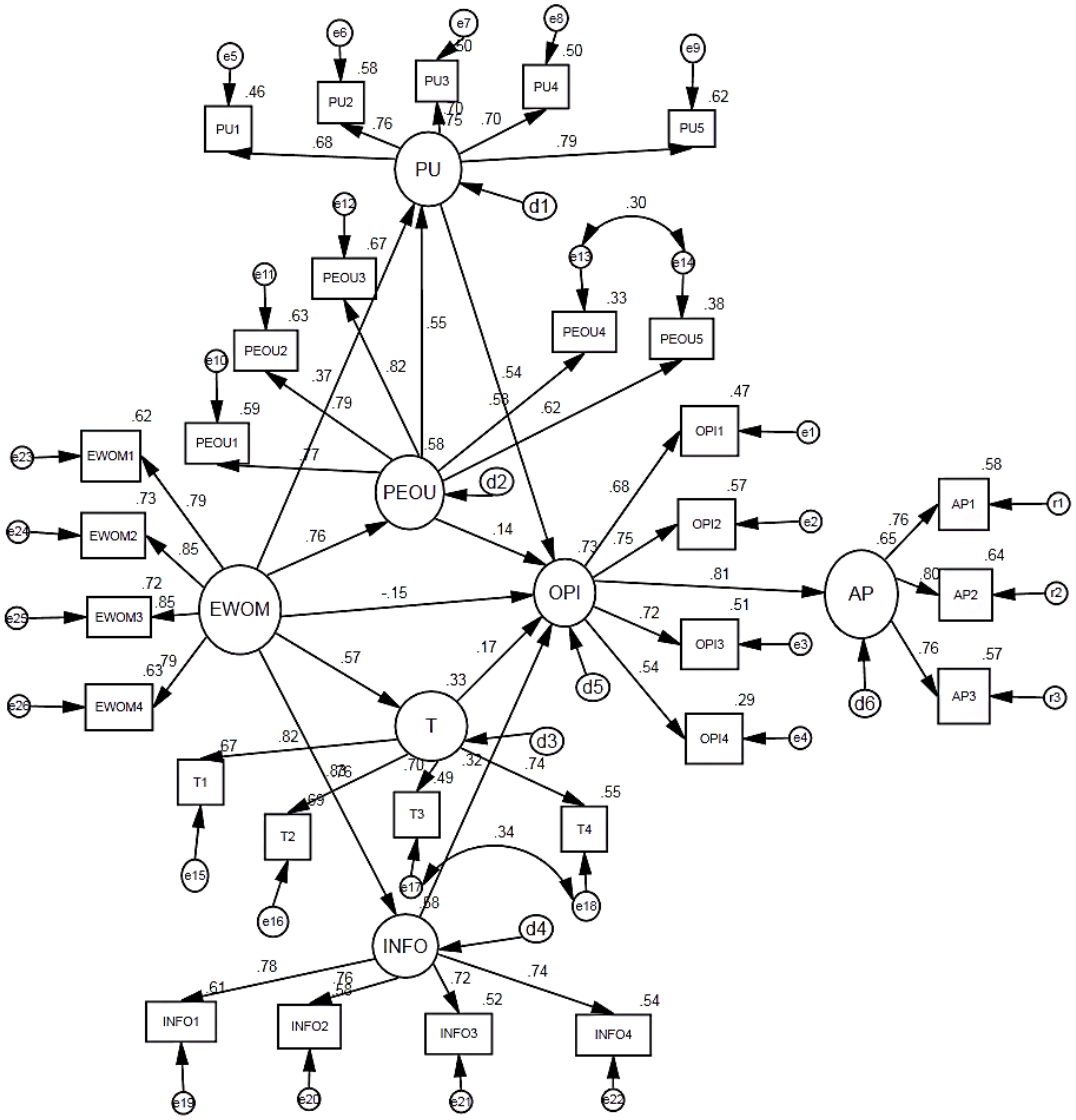


Figure 4.12
The Initial Model with Standardized Estimates

Table 4.22
Fit Indices before Model Revised

Fit Indices	Recommended Cut-off Values	Model
Absolute fit measures		
Chi-square (x^2)	The lower, the better	1809.217
CMIN/DF	<3.00	4.970
Goodness-of-fit index (GFI)	>0.90	0.852
Root Mean Square Error of Approxition (RMSEA)	<0.05	0.069
PCLOSE	>0.05	0.000
Incremental fit measures		
Adjust Goodness-of-fit Indices (AGFI)	>0.90	0.823
Tucker-Lewis index (TLI)	>0.90	0.888
Normed fit index (NFI)	>0.90	0.877
Comparative fit index (CFI)	>0.90	0.899
Parsimonious fit measures		
Parsimonious normed fit index (PNFI)	>0.60	0.787
Parsimonious Goodness-of-fit index (PGFI)	The higher, the better	0.713
Hoelter (.05)	>200	187

The revised model is revised based on modification indices as shown in Figure 4.13. The result of fit indices after revising model is shown in Table 4.23. All fit indices except p-value has passed the minimum requirement.

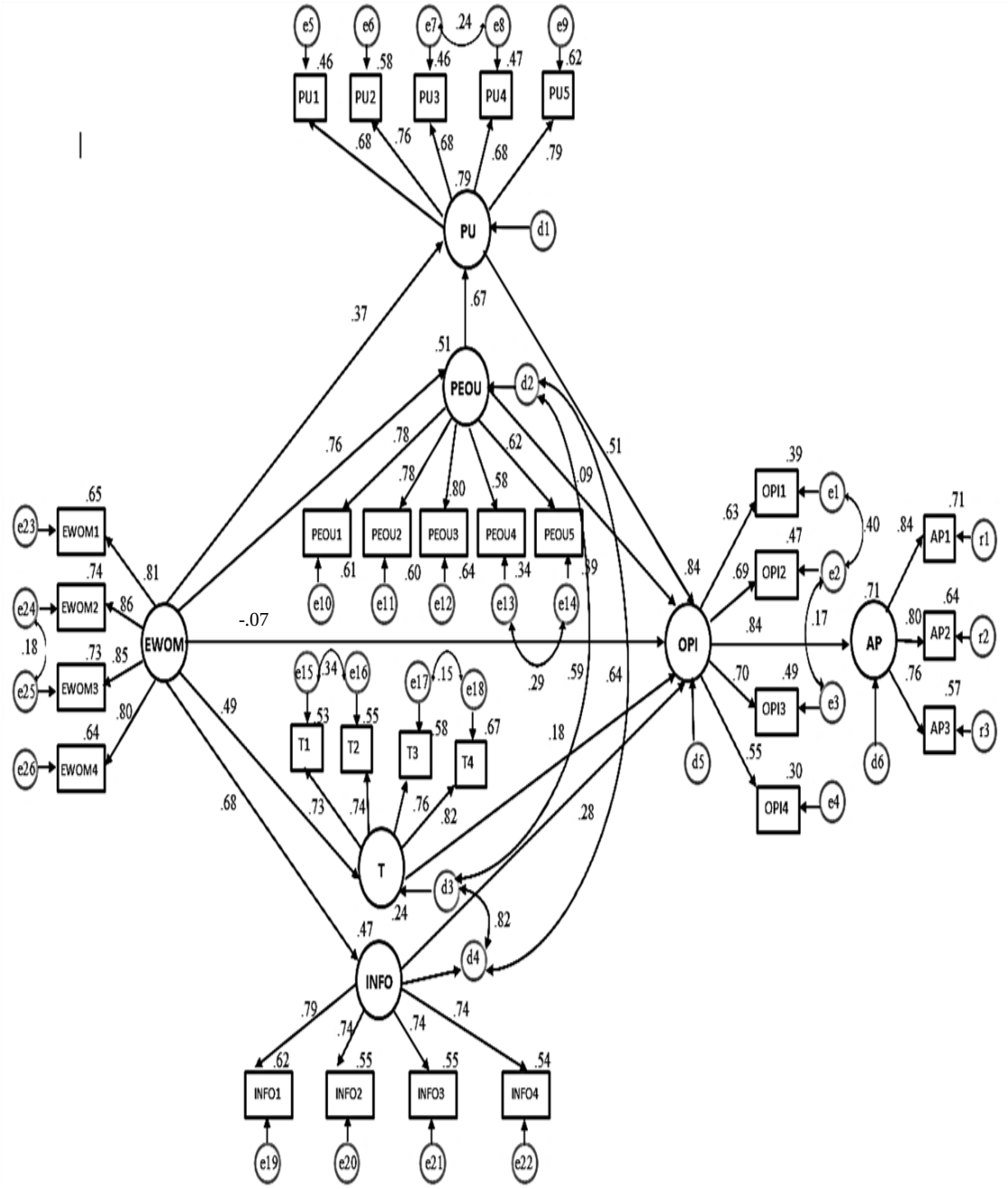


Figure 4.13
The Revised Model with Standardized Estimates

Table 4.23
Fit Indices after Model Revised

Fit Indices	Recommended Cut-off Values	Model	Revised Model
Absolute fit measures			
Chi-square (x^2)	The lower, the better	1809.217	1061.770
CMIN/DF	<3.00	4.970	2.974
Goodness-of-fit index (GFI)	>0.90	0.852	0.916
Root Mean Square Error of Approxition (RMSEA)	<0.05	0.069	0.049
PCLOSE	>0.05	0.000	0.695
Incremental fit measures			
Adjust Goodness-of-fit Indices (AGFI)	>0.90	0.823	0.918
Tucker-Lewis index (TLI)	>0.90	0.888	0.944
Normed fit index (NFI)	>0.90	0.877	0.928
Comparative fit index (CFI)	>0.90	0.899	0.951
Parsimonious fit measures			
Parsimonious normed fit index (PNFI)	>0.60	0.787	0.816
Parsimonious Goodness-of-fit index (PGFI)	The higher, the better	0.713	0.752
Hoelter (.05)	>200	187	313

4.5.2.2 Hypothesis testing

Path analysis was used to answer the hypothesis testing for the study. Results show that all hypotheses were supported.

Hypotheses 1

Hypotheses 1 proposed that the more positive the online consumer intention, the greater the actual purchase. The results are shown in Table 4.24 indicated that the pathway from online purchase intention to actual online purchase is significant ($p < 0.05$) with the critical ratio of 16.839 which more than 1.96 and standardized regression weight of 0.841. Therefore, the hypothesis that the online consumer intention positive affect the actual purchase is supported.

Hypotheses 2

Hypotheses 2 proposed that the higher the level of the perceived ease of use, the greater the level of online consumer intention. The results are shown in Table 4.24 indicated that the pathway from online purchase intention to actual online purchase is not significant ($p > 0.05$) with the critical ratio of 1.046 which less than 1.96 and standardized regression weight of 0.095. Therefore, the hypothesis that the level of the perceived ease of use positive affect to the level of online consumer intention is not supported.

Hypotheses 3

Hypotheses 3 proposed that the higher the level of perceived ease of use, the greater the perceived usefulness. The results are shown in Table 4.24 indicated that the pathway from perceived ease of use to perceived usefulness is significant ($p < 0.05$) with the critical ratio of 12.796 which more than 1.96 and standardized regression weight of 0.667 Therefore, the hypothesis that the perceived ease of use positive affects the perceived usefulness is supported.

Hypotheses 4

Hypotheses 4 proposed that the higher the level of perceived usefulness, the greater the level of online consumer intention. The results are shown in Table 4.24 indicated that the pathway from perceived usefulness to online consumer intention is significant ($p < 0.05$) with the critical ratio of 5.767 which more than 1.96 and standardized regression weight of 0.506 Therefore, the hypothesis that the perceived usefulness positive affects the online consumer intention is supported.

Hypotheses 5

Hypotheses 5 proposed that the higher the level of trust, the greater the level of online consumer intention. The results are shown in Table 4.24 indicated that the pathway from trust to online consumer intention is significant ($p < 0.05$) with the critical ratio of 2.190 which more than 1.96 and standardized regression weight of

0.176. Therefore, the hypothesis that the trust positive affects the online consumer intention is supported.

Hypotheses 6

Hypotheses 6 proposed that the higher the level of the perceived informativeness, the greater the level of online consumer intention. The results are shown in Table 4.24 indicated that the pathway from perceived informativeness to online consumer intention is significant ($p < 0.05$) with the critical ratio of 2.679 which more than 1.96 and standardized regression weight of 0.283. Therefore, the hypothesis that the perceived informativeness positive affects the online consumer intention is supported.

Hypotheses 7

Hypotheses 7 proposed that the higher the level of perceived EWOM, the greater the level of online consumer intention. The results are shown in Table 4.24 indicated that the pathway from perceived EWOM to online consumer intention is not significant ($p > 0.05$) with the critical ratio of -1.263 which less than 1.96 and standardized regression weight of -0.067. Therefore, the hypothesis that the perceived EWOM positive affects the online consumer intention is not supported.

Hypotheses 8

Hypotheses 8 proposed that the higher the level of perceived EWOM, the greater the level of perceived ease of use. The results are shown in Table 4.24 indicated that the pathway from perceived EWOM to perceived ease of use is significant ($p < 0.05$) with the critical ratio of 17.564 which more than 1.96 and standardized regression weight of 0.715. Therefore, the hypothesis that the perceived EWOM positive affects perceived ease of use is supported.

Hypotheses 9

Hypotheses 9 proposed that the higher the level of perceived EWOM, the greater the level of perceived usefulness. The results are shown in Table 4.24 indicated that the pathway from perceived EWOM to perceived usefulness is significant ($p < 0.05$) with the critical ratio of 6.387 which more than 1.96 and standardized regression weight of 0.278. Therefore, the hypothesis that the perceived EWOM positive affects perceived usefulness is supported.

Hypotheses 10

Hypotheses 10 proposed that the higher the level of perceived EWOM, the greater the level of trust. The results are shown in Table 4.24 indicated that the pathway from perceived EWOM to trust is significant ($p < 0.05$) with the critical ratio of 12.257 which more than 1.96 and standardized regression weight of 0.494.

Therefore, the hypothesis that the perceived EWOM positive affects trust is supported.

Hypotheses 11

Hypotheses 11 proposed that the higher the level of perceived EWOM, the greater the level of perceived informativeness. The results are shown in Table 4.24 indicated that the pathway from perceived EWOM to of perceived informativeness is significant ($p < 0.05$) with the critical ratio of 16.187 which more than 1.96 and standardized regression weight of 0.684. Therefore, the hypothesis that the perceived EWOM positively influences perceived informativeness is supported.

Table 4.24
Results of Hypothesis Testing

Hypothesis	Path	C.R.	P	Result	Standardized Regression Weight
H1	OPI →AP	16.839	0.000	Supported	0.841
H2	PEOU → OPI	1.046	0.296	Not Supported	0.095
H3	PEOU → PU	12.796	0.000	Supported	0.667
H4	PU → OPI	5.767	0.000	Supported	0.506
H5	T → OPI	2.190	0.029	Supported	0.176
H6	INFO → OPI	2.679	0.007	Supported	0.283
H7	EWOM → OPI	-1.263	0.207	Not Supported	-0.067
H8	EWOM → PEOU	17.564	0.000	Supported	0.715
H9	EWOM → PU	6.387	0.000	Supported	0.278
H10	EWOM → T	12.257	0.000	Supported	0.494
H11	EWOM→ INFO	16.187	0.000	Supported	0.684

The final model with standardized regression weights was showed in Figure 4.14 in which nine of eleven hypotheses were supported.

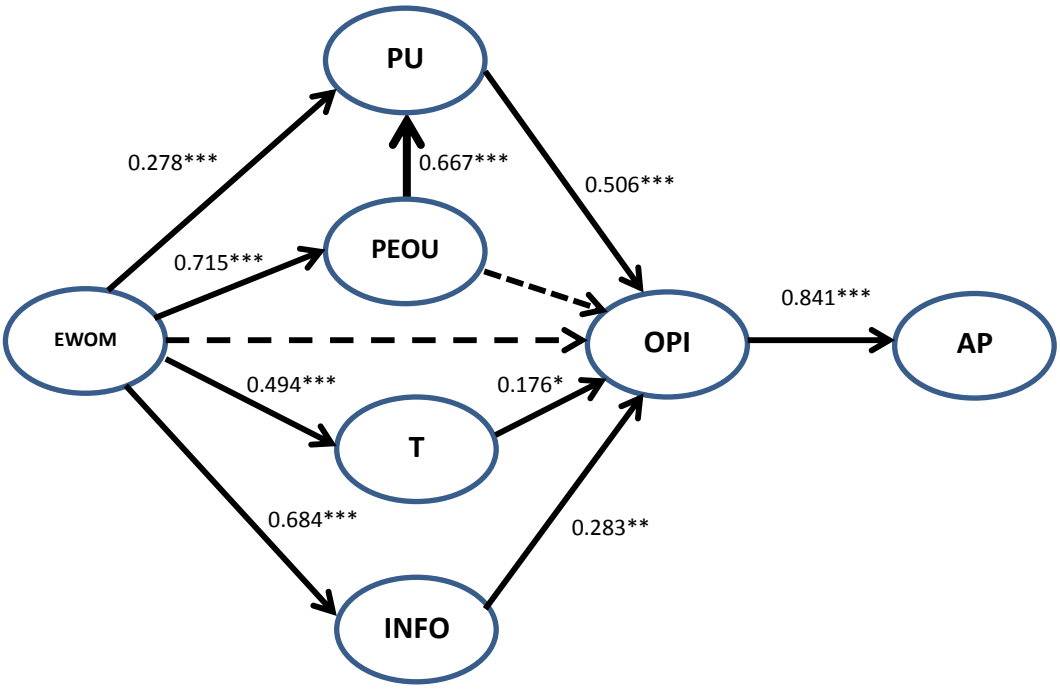


Figure 4.14
Path Coefficients Resulting from Structural Equation Modeling
* = Significant at the 0.05 level,
** = Significant at the 0.01 level,
*** = Significant at the 0.001 level

4.5.2.3 Squared Multiple Correlation (SMC)

The result of SMC presented in Table 4.25. Electronic Word of Mouth (EWOM) explains 51.2% variance in perceived ease of use (PEOU), 46.8% variance in perceived informativeness (INFO), 24.4% variance in trust (T) and 78.8% variance in perceived usefulness (PU). Perceived usefulness (PU), trust (T), and perceived informativeness (INFO) explains 83.7% variance in online purchase intention (OPI). Online purchase intention (OPI) explains 70.7% variance in actual online purchase (AP).

Table 4.25
Squared Multiple Correlation (SMC)

Variable	Estimate
PEOU	.512
INFO	.468
T	.244
PU	.788
OPI	.837
AP	.707

4.6 Summary

The results from the analysis confirmed that online purchase intention is the predictor of actual purchase. Perceived usefulness, trust and perceived informativeness are the direct antecedents of online purchase intention. Even perceived ease of use has no direct relationship with online purchase intention, the relationship has occurred via the mediation of perceived usefulness. While electronic word of mouth has no direct relationship with online purchase intention but it has the influence on the antecedents of consumers' intention to purchase from e-retailers.. In sum, the theoretical model has a capability to explain online purchase intention toward actual purchase.

CHAPTER 5

DISCUSSION AND CONCLUSION

5.1 Introduction

This final chapter is dedicated to present the results and implications of the study in following order. First, an overview of the study is presented in the discussion section. Second, the conclusion of what have been found from the study will touched upon in the next section, i.e. an overview of the findings. Then the implication will be discussed next in term of theoretical, methodological and practical aspects. Last but not least, the limitation of the study and what should be concerned for future study have been mentioned in the last section. An overall conclusion will be later mentioned at the end of this chapter.

5.2 Discussion

The proliferation of Thai Internet users has given an opportunity to companies of all sizes to reach out to their online potential buyers in anticipation of increasing value of their online retailing and services in the business-to-consumer (B2C) business pattern. Nevertheless, the evidence and findings reveal a stark contrast. For example, the growth rate of e-commerce value in Thailand is now on a falling trend as the number of e-commerce registered companies and the Internet users who have experienced in online buying is declining. In this regard, an understanding of online consumer behavior that actually performs the actual transactions could offer valuable information to turn Internet user into online consumers. Even though many

researches in the past have tried to shed the light into the online consumer behavior, yet the results from these studies have been plagued with inconsistence in methodology and most of which drew attention only to their buying intention, rather than the actual buying in the online context. Moreover, the study of online consumer in Thailand is still far from being fully fledged, comparing with to those in western countries. With differences in lifestyle and modernity level such as assimilation with online technology or e-commerce, the result may ends up in difference behavior. Hence, this research is aimed at examining the influence of factors that turn consumer purchase intention into actual purchasing behavior in online context of Thai consumers. Further, this study also extends the scope of research on previous online purchase by exploring the influence of trust, perceived informativeness, and electronic word of mouth on online purchase intention towards actual purchase. Data in this study was collected from Thai university students who currently pursuing bachelor degree, or master degree or doctoral degree. In addition, all respondents have experienced in buying products/services online in the last 3 months. A Total of 826 questionnaires were returned with usable for data analysis.

The specific objectives of this research could be outlined as follows: (1)To determine the level of online actual purchase among Thai consumers; (2)To determine the level of online purchase intention among Thai consumers; (3)To determine to what extend does the purchase intention influence actual purchase in online channel among Thai consumers; (4)To determine the factors that govern online purchase intention among Thai consumers; (5)To determine to what extend does electronic word of mouth influence perceived ease of use, perceived usefulness, trust, perceived informativeness, and online purchase intention among Thai consumers.

5.3 Overview of the Finding

The main result from the study reveals the majority respondents in this research are female students pursuing bachelor degree and earning the income of less than 303 USD per month. In addition, most of them have spent forless than 31 USD in each online transaction. Cloths become a hot pick of their choice on online buying. The main reasons for the respondent who never buy online are anticipated risks and untrustworthy.

5.3.1 The level of actual online purchase

The results indicate a moderate level of actual online purchase for Thai consumers lie within the stage of undecided to perform buying behavior via the web site. However, in details, the majority of the respondents agrees somewhat to usually buy products/services via website and be satisfied with online shopping. On the other hand, they, often, hesitated to make transaction of any products/services with online vendor. This is in line with the findings from Sooperamanien and Robertson (2007) that consumers who have the intention for online purchase may not actually commit any transaction online. This finding is also in concordance with the result of the survey conducted in 2013 by the National Statistical Office in Thailand, revealing that more than 90% of online consumers prefer to make the payment through a counter bank rather than a storefront-of-seller website. The possible explanation for this result may cause from the lack of trust in the safety of making payment via the website and the risk of stealing of personal data and credit card information and

insufficient laws to guard against and deal with electronic commerce fraud as most cases cannot be arrested (Bangkok Post, 2014).

5.3.2 The level of online purchase intention

The finding indicates the level of online purchase intention lay at the same level as that of actual purchase, the level of which Thai consumer undecided to undertake such online purchase. The online consumer still agree somewhat to intend to purchasing products/services online, to recommend others buying online, and to provide the online vendor with the information. However, they are undecided to make any transactions with online vendor in the future. The result is in line with actual online purchase in term of the volume of online payment and the finding from Jaturavith (2007) that indicated neutral level of the intention to use the Internet as a shopping medium for Thai consumers. Nevertheless, the results contrasted with the results from Flick (2009) who found that American has high level of online purchase intention. The main reason which holds back Thai online buyers from undertaking financial transaction with online store might have caused by a small number of online shops registered with the Department of Business Development. Based on the data from Electronic transaction Development Agency (2013), it reveals that the number of registered online corporations is currently at 0.11%. This indicated that most of online stores are non-registered business which might resulted potential buyers who hesitated to make financial transactions due to lack of security.

5.3.3 The influence of online purchase intention on actual online purchase

The results of the study indicated that online purchase intention is found to be a significant determinant of actual online purchase in Thailand context. The results also confirmed the theoretical intention-behavior relationship which includes the theory of reasoned action (TRA), the theory of planned behavior (TPB) and the technology acceptance model (TAM). Consistent with the results from the study of Ahn et al. (2004), Leelayouthayotin (2004) and Lin et al. (2010). Therefore, it is apparent that online business should aim to strengthen consumer's purchase intention in order for actual purchase to occur. Even if the results come out with high degree of variation, extending the study to cover actual purchase will portray clearer picture of online consumer behavior instead of pause at consumer's intention.

5.3.4 The influences of antecedent factors on online purchase intention

For the underlying factors that have a direct influence on online purchase intention among Thai consumers, only three of which have emerged as significant predictors of online purchase intention. In order of importance, the factors can be outlined as follows: perceived usefulness, perceived informativeness and trust. In turn, this information will be crucial for online vendors to cash in on buying conviction of the consumer by which greater emphasis will have to be placed upon the consumer's awareness of the benefits from buying online, provision of information on products and services as well as to instill confidence in purchase online among the consumer concurrently. While those three factors have played a crucial role in online purchase intention, the other two factors, i.e. perceived ease of use and electronic word of

mouth, have no direct relationship with online purchase intention. One reason that might have caused the perceived ease of use to have no influence on online purchase may arise from technology assimilation. Since the testing sample was drawn from a group of well-educated individuals who are familiar with computer technology. Meanwhile, the cause that the electronic word of mouth is not directly influence the consumer's purchase intention may arise from taking advantage of previous consumer review for more information about products/services.

As aforementioned earlier that perceived usefulness is the most significant factor that triggers online purchasing drive. This means that the greater perceived the benefit of buying products/services online by consumers, the higher will be the level of intention to perform online buying. Perceived usefulness has been proven in a number of studies, it can enhance consumer's motivation in interfacing with the innovative technologies, the result of which have underscored an identical notion of for purchasing products/services via the Internet. Consistent with previous studies that underlines the positive direct relationship between the perceived usefulness and online purchase intention (Bonera, 2011; Chiu et al., 2009; Lee et al., 2006). As such, online purchase can be realized only if the consumers anticipate the benefits they could earn from buying online as it differentiates from the offline one. Ruiz-Mafe et al., (2009) suggest that consumers can benefit when buying online in term of more time-saving and more money saving. In this case, the sellers should point out to the consumers of the benefits they could earn more from buying offline, for example, through promotion campaign or offering discounted rate if they make

payment through e-transactions. This may attract more buyers to buy goods and services online.

Perceived informativeness is ranked as the second strongest factor influencing online purchase intention. The results revealed that perceived informativeness positively affects online purchase intention. This means the more believed in sufficient information provided the more in the intention to purchase in cyberspace. The result is in line with the previous studies by Ho and Wu (1999), Huasman and Siekpe (2009), and Kim et al. (2010). The results underscored the earlier study undertaken by Lohse and Speller (1998) in which they added frequently asked questions (FAQ) section about the company and its products that can draw more cyberstore traffic and higher sales. Buying product in online context, consumers cannot experience the true features of the product before making decision; online retailers should provide relevant product information that could trigger their intention to buy online.

The last factor, that has a direct influence on online purchase intention, is trust. The result showed the positive relation between the two factors. This means the higher level of trustworthiness, the higher intention to buy online. The finding is consistent with previous study by Chiu et al. (2009), Lin and Lu (2010), and Yoon (2009). In an online store, there is no face to face transaction between the sellers and the buyers, the consumers then have been left among several uncertainties. Trust/belief could therefore drive away any perceptions of associated uncertainty and initiate consumer's conviction in online environment (Pavlou, 2003). These finding also

support the recent study by Lu et al., (2011) that building trust in website/vender affect the consumer's intention to get information and purchase. Therefore, online supplier should building trust in the website in term of transaction, security and guarantee for quality of products/services which will further affect the consumer's buying intention.

The finding of the study also shows the contradictory results from TAM. For perceived ease of use, this factor is showed as one of the direct factor of the intention in the Technology Acceptance Model (TAM). However, previous research has showed inconsistent finding of the relationship between perceived ease of use and purchase intention in online context. The results from the study insisted that perceived ease of use has no direct relationship with online purchase intention, but the relationship is mediated by perceived usefulness. These are in line with the study of Phatthana (2011), Tseng and Hsu (2010), and Yeh et al. (2011). An interpretation of the result may cause by the familiarity with the computer technology of Thai people in which it evaporated the influence of perceived ease of use on online purchase intention.

Electronic word of mouth also showed the same result in no direct relation to online purchase intention as perceived ease of use. Contradiction to the results from the studies of Park and Kim (2008) saying that consumers usually rely on the information from prior consumers to commit their purchasing in online market. In offline context, WOM has been proved as playing crucial role in consumer behavior

and influence purchase decision in traditional context (Richins & Root-Shaffer, 1998).Thai consumers always rely on other consumers who already gain experience in online buying. Even EWOM did not directly affect online purchase intention, adding EWOM into the model creates a significant theoretical improvement in explaining online consumers' purchase behavior for Thailand context.

5.3.5 The influence of electronic word of mouth on perceived ease of use, perceived usefulness, trust, and perceived informativeness

Results of the present study indicated that electronic word of mouth did not have the direct influence on online purchase intention. Instead, there were significant indirect influences of electronic word of mouth on purchase intention toward actual behavior in online context mediated by direct influences of perceived ease of use, perceived usefulness, trust, and perceived informativeness. The influences of electronic word of mouth was beneficial to online retailers, though not directly urge consumers to click the purchase button. Consumers can recognize the benefits of online buying, the easy use, the information awareness, and the trustfulness via the influence of EWOM.

Among four variables, electronic word of mouth had the strongest influence on perceived ease of use. The result showed the positive relationship between the two variables. This means consumers are heavily rely on the convincing information from prior consumers in online and perceived that buying products/services via online channel is not too complicated. Consistent with the study of Parry et al.

(2012) in Japan that virtual word of mouth influences perceived ease of use of consumers to buy smart phone and Blu-ray DVD recorders from online vendors.

Perceived informativeness has come second as a factor on which electronic word of mouth apparently had a strong influence. Undoubtedly, the result showed the positive relation between the electronic word of mouth and the perceived informativeness. It also falls in line with the previous research conducted by Park and Lee (2008) in which an increasing number of reviews, especially an attribute-value reviews will provide consumers with more perception on informativeness. This means the customers who read the online product/service review will become well aware of the underlying informativeness and lead to positive influence on purchasing intention.

Besides perceived ease of use and perceived informativeness, the finding also indicated the electronic word of mouth has come third as a factor having significant influence on trust. Prior study conducted by Dellarocas (2003) also reports the relationship between electronic word of mouth and trust. This means that consumers relied on electronic word of mouth from other consumers so that they could react with confidence to undertake a transaction with online vendors. The results are also in line with the results from previous researches that consumers will usually search all relevant information from other consumers' product online review, one type of EWOM, in order to gain more trust (Kim & Song, 2010; Lin et al., 2010; Wu & Wang, 2011).

In traditional marketing research, word of mouth has been proven as the factor that affects consumer perception towards the behavior (Doh& Hwang, 2009; Lee et al., 2008; Martin & Lueg, 2011; Ying & Chung, 2007).The results from the study also report the significant relationship between electronic word of mouth and perceived usefulness. Consistent with the result of Xie et al. (2011), electronic word of mouth could influence consumer perception, especially on the usefulness of web group buying and lead to an increase in consumers' intention to buy from website.

5.4 Contributions of the Research

The study examined the influence of the factors that turned consumer purchase intention into actual purchase behavior in online context among Thai consumers. The research findings have a profound consequence to theoretical and methodological contributions in academic domain while providing several managerial implications. The details are discussed further below.

5.4.1 Theoretical contribution

The study has made several advances from a theoretical perspective. First, the previous studies in the past few years on online consumer behavior confined their studies only to the purchase intention, stop short at actual purchase (Celik, 2011; Liu, Chen, & Zhou, 2010; Tseng & Hsu, 2010). Therefore, the validity of how intention affects actual behavior still in great doubt (Cao & Mokhtarian, 2007). In the light of this, this research is intended to extend the dependent variable to cover

actual online purchase. The results also confirm that online purchase intention can predict actual purchase in online context to some extent. Consistent with the comments made by Limayem et al. (2000) saying that stopping the investigation at intention could be lead to misleading to predict online shopping behavior.

Second, besides given an attention to actual online purchase, the study also validates the relationship between variables in technology acceptance model (TAM). The findings also reveal an inconsistency of the relationship as shown in the previous research. The results of this research have confirmed the relationship between perceived usefulness and intention, even some research has found insignificant relationship between these two factors (Gefen et al., 2003; Heijden et al., 2001). At any rate, the results indicate that no direct relationship between perceived ease of use and online purchase intention for Thai consumers. Nevertheless, perceived ease of use cannot be taken out from the model of this study, since the sample group has already experienced with online buying within three months. This means they know quite well how to adopt technology as the medium for online buying. Omission of this variable may have caused a grave consequence in no relationship between perceived ease of use and online purchase intention. However, the relationship has arisen from the mediating of perceived usefulness. Perceived ease of use for the technology allows users to anticipate the benefit of the technology and lead to a rise in their intention to use the technology as the medium for purchasing.

Third, by adding the key constructs into the original TAM, the results have showed the high value to explain the variance. The additional factors are trust, perceived informativeness and electronic word of mouth integrated into the original TAM. The

result indicates a significant theoretical improvement in explaining online consumers' purchase behavior for Thailand context. Based on the result of the present study, it can be concluded that trust and perceived informativeness have direct influence on online purchase intention toward actual behavior. Even the results from this research indicated the insignificant direct relationship between electronic word of mouth and online purchase intention; however, the results show the influence of electronic word of mouth on the antecedents of online purchase intention. The potential online consumers can perceive more useful, easy to use, trust, and informativeness for online buying through the electronic word of mouth which in turn affect online purchase intention toward actual purchase. In addition, the result from the study will create more understanding of Thai consumer in online context as only few studies investigate online purchase behavior in Thailand context.

5.4.2 Methodological contribution

To operationalize the research's constructs, the researcher applies the items from previous research in order to ensure measurement reliability. Except one construct, actual online purchase, it was not adopted in previous studies due to the limitations of structural equation model to ensure the compatibility of scale. In addition, most of previous research measured actual online purchase from self-reported of purchase frequency and money spent while others variables, such as online purchase intention measured in Likert scale (Escobar-Rodriguez and Carvajal-Trujillo, 2014; Guo and Barnes, 2011). The three measurement items of actual online purchase have been developed by using Likert scale in this research and the reliability came out at high level. Moreover, most of the sample group on online purchase in previous research

only made up of undergraduate student (Lee et al., 2006; Yoon, 2009) in which the result may not be well represented online consumers class. As the representative respondents in the study not only the undergraduate student but also inclusive of those in graduate school which can be used to represent other groups of online consumers so that the results from the study can be generalized.

5.4.3 Practical contribution

Apart from the theoretical and methodological contribution, the result also has an implication on its application and practicality to private sector and governmental agencies alike as outlined below:

Business sector

In the view of business operator, the results of the study will give managerial implication to both local and foreign business corporations stemming from the fact that the online business is borderless. Research findings will offer the existing business operators and those who wish to participate into this business with more understanding about the consumer's behavior and gain the clearer picture of the factors driven behind the consumer's need that can be used to spur their demands to buy more online. This will eventually yield a direct positive influence on the business's operating performance as online commerce costs business operator has less operating expenses than the offline counterpart.

Moreover, the finding is of particularly important for managers or entrepreneurs to allocate resources to retain and enlarge their current customer base. Firstly, the results indicated that the use of electronic word of mouth will enhance consumer perceived usefulness, perceived informativeness, and trust online purchase, and raise online purchase intention toward actual purchases. Using electronic word of mouth to aid customer online buying can have a positive influence on businesses. Today, social network is very popular worldwide, especially Facebook, Instragram, and YouTube. Companies can invest on an advertisement on social network in order to gain the broader online customers. To attain a great achievement of results, company can advertise via the online influencers such as bloggers or youtuber. Bloggers is the one who write the review about their experience in their own website, while youtuber is the one who make video and upload to cyber space. Businesses can send the bloggers or the youtuber for the sample products/services. These will bring in a review of products/services via their online channel. Most youtuber or blogger always review the information about products/services, and put up their comments as well as mention on how to buy products/services. Reviews by bloggers, youtubers or previous customers will help to spread out the information about products/services, and trust on the seller website, and the advantage of buying products/services online. Moreover, some reviewers demonstrate the steps of buying products/services online which help other consumers to understand clearly on how to buy products/services via online channel. In the meanwhile, the company can create their own website or Facebook page to exploit the information provided by current or former consumers or web-browser to understand customer concerns and complaints so that the company can take corrective and preventive measures in response..

Secondly, the advantages of online channel must be promoted to the customers. In addition, the steps of buying products/services online must be provided in the website with ease of use and should have a few steps for buying. Along with the instruction must be. In addition, the website must be quick access to the reviews of products/services by the previous consumers. The reviews will benefit the new comer to have more understanding about product/service information, realize of an advantage of buying via Internet channel and put more trust in this channel.

Thirdly, trust is one of the factors that play an important role for consumers in determining whether to adopt online buying. Therefore, online vendors should ensure that trust in vendors' websites and trust in security and privacy are properly stated. For example, to enhance trust in using Internet as medium for buying products/services online, the website must be applied the guarantee trade mark issued by the government office. A warranty by a third party will assure consumers that they are protected. Apart from this, the business should also have an application or system that can inspire the consumer's confidence on both security of payment and privacy of the buyer's personal information, as well as a delivery of quality products/services. Together with having a policy of refunding if the delivered products are not of acceptance as an assurance.

Finally, the websites should provide the information not only about their own products/services but also the related information such as how to select products/services to best suits the buyer's interest. More information about products/services will help them to make decisions on online. The stimulus measure

to raise awareness among the consumers on the benefits earned from buying products/services through online channel is of significance. Noting that, the business operator should be also realized of the benefits from raising awareness of online buying, in term of time saving, and travelling expenses. Apart from this, the operator should undertake sale promotion campaign for shopping online channel by emphasis on buying transaction cost less than conventional store shopping. Equally important, the new business alliance will also help the corporation to success in online business by a joint sale promotion campaign for the products that can buy altogether.

Government sector

The significance given by the government to e-commerce will raise Thai competitiveness in the world market. The relevant governmental agencies, including ICT ministry, Commerce Ministry, Legislative Assembly, and National Police Office should cooperate and collaborate in the concordance manner and put a clearer picture of the policy direction. The Information, Communication and Technology Ministry should play a role of mediator between the tripartite, i.e. the government, business operator and consumer to instill the common understanding about e-commerce. The benefit, the consumer can earn from online shopping, especially the elder as Thai society approaching a senior society, the so-called “Ageism”. Buying online can well respond to the demand of this group who have difficulties in travelling. Additionally, the government should push ahead a plan to have online store registered so that they could have an organized collection of data and information on e-business and for the benefits of implementing preventive measure against unlawful practice. Such a database could enable the authority to track down

the registered e-store who commits wrong doing or in case where the buyer was defrauded. Apart from this, the government should embark on a public relationship campaign aiming to educate the public about the channel they can launch a complaint against the website that commits shoddy business practices. Also, the monitoring and punitive measures should be step up and put in place against those websites.

As for the Legislative Assembly, they should pass the new Act or review tbills that are obsolete so as to ensure its substance of the law covered all e-business practice. Also, the consumer protection bill should be put in place accordingly. For the National Police Office, they should place a great emphasis on the violation of the Computer Bill and embark on draconian law enforcement.

5.5 Limitation of the Study and Suggestion for Future Research

This study aims to develop an extended TAM to understand the online purchase behavior in Thailand context. The results of this study help to gain insight into factors influencing the success of e-commerce, especially in developing countries like Thailand. The model proposed in this research reveals a great predictive power in describing buying intention of consumer that drives real purchase. However, there are some limitations arisen from this research.

First, the factors chosen in this study may not cover all the factors that could drive the consumer's acceptance in e-commerce. As such, the future study should take account into other factors that influence on the adoption of online commerce which lay outside scope of this research. For example, concerning about the influence of marketing mix such as product, price, place, and promotion may help to provide a better model. As the result of this study is of concern to the electronic word of mouth, further research may cover the direction of electronic word of mouth or the trustworthiness of the source of electronic word of mouth.

Second, besides the study of consumer's intention to purchase in online context, future research should extent the study to examine e-loyalty. Most of today's online retailers exist in cyberspace for a short period of time due to the lack of e-loyalty from their current customers. Even a best-designed business model will ruin without repeat purchases (Reichheld & Schefter, 2000). Therefore, study on e-loyalty is another important issue for online business to sustain profits.

Third, the sample is one of the limitations in this study for which more than half of the respondents are university students with bachelor degree. Since, the majority of Internet user in Thailand are university student, their earnings hence is undoubtedly to be low and that may cause purchasing power to be low. It is worthwhile for future research to examine the group from middle class who earn higher income and pose more purchasing power than university students. Moreover, the demographic of the respondents may be one of the factors that affect online purchase intention.

Finally, as the study is not a longitudinal study due to a limited time and resources, it is suggested for further research to adopt a longitudinal study in which the intention will be measured at one point of time and the actual behavior can be measured a few months later to achieve the accuracy of the data.

5.6 Conclusion

This study extends previous online purchase behavior research by extended technology acceptance model with trust, perceived informativeness, and electronic word of mouth. The results confirm the direct relationship of perceived usefulness, trust and perceived informativeness to online purchase intention. Moreover, the results also confirm the idea that online purchase intention can predict the actual purchase behavior. Even if the new factor, electronic word of mouth has not direct influence on online purchase intention, however, it has indirect influence via perceived usefulness, trust and perceived informativeness. The findings add to a growing body of literature that attempts to describe and comprehend consumer behavior. Moreover, the finding can help marketers to better understanding of online customers and develop the right strategies to compete in online market. Future research is needed to examine other factors, groups or statistical techniques to get clearer picture on consumer behavior in the online context.

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