The Impact of the Internet on Buyer Behavior in Globalization: The Case of Thai Telecommunication E-Services

ABSTRACT

This study aims to make the contribution on the impacts of the internet on buyer behavior by focusing on Thai telecommunication e-services. Because the impact of the internet makes buyer behavior change, the applied model of buyer behavior using telecom e-services is developed to serve this change. Drawing from empirical study of the current literature, the paper reviews factors that affect online buyer behaviour based on the understanding telecom customers’ experience and perception of them about telecommunication e-service. Also, the model provides knowledge feedback for re-buying processes to customer experience as a learning loop to understand Telecom customer behaviour.
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1. INTRODUCTION

Since the internet is acknowledged as the powerful tool in the business processes, many researchers have tried to reveal its impacts and influences. Especially, the power of the internet in supporting the buying behaviour of the customers is interesting in today business study. Buyer behavior means the activities that come from a person or organization on buying products or services. The activities include mental processes beginning from desiring products/services to making decision to buy products/services. According to Belch and Belch (2007, p.105), they defined buyer behavior as the process and activities which people engage in when they want to buy products or services. These processes and activities are composed of searching for product or service, selecting, purchasing, using, evaluating, and disposing of products and services so as to satisfy their needs and desires’. Buyer behaviour is an important topic because it describes the reason of why people want to buy one kind of products/services rather than another one. Strader and Hendrickson (1999, 2001) supported this idea and said that companies must understand customers’ need and try to create differentiate implications to be better than competitors in present competitive market. Buyer behaviour also explains about the decision-making process of customers that can be predicted as a key to success for long-term benefit in the today business. However, most studying about buyer behavior is normally done in non-technological business such as book store, music shop or DVD/VCD shop. Also, most of existing studies mainly consider only environmental factors such as season, culture, psychological and social issues as influences of buyer behaviour. Studying buyer behaviour in high technology like telecommunication will be greatly useful to businesses in learning consumer behavior especially when the internet is fully developed into the business process.

Conceptually, the word ‘globalization’ can be explained by the development of overall global structures such as the spreading of capitalism, uniting of trade zone and developing of global emerging media technology. The good example of emerging technology is the internet that brings a number of new opportunities into the globalization as well as the local region. Moreover, the internet and website provide convenient services to customers, who can manage their resource efficiently by themselves. Also, the internet can reduce cost that businesses pay in providing service to support customers’ need. Bitner (2001, p.376) supports that new technology, like internet, provides a new convenient and productive way to service customer as well as an easy way for customers to learn and get information about products/services. Moreover, the internet will change the service processes of business from the traditional one to the fast electronic one. This means it will certainly change customers’ lifestyle and their attitudes about the service. The internet also plays the role of leading and motivating customer in making a decision to buy product/service, so understanding buyer behavior using the internet is a necessary issue for telecom businesses that want to be successful in the global market of this information era.

This paper aims to examine the impact of the internet on buyer behavior of telecommunication e-services by contributing on the theory of buyer behaviour. However, this paper will only consider Thai buyer behaviour in telecommunication e-services. To make it clear, the telecommunication e-services in this paper mean the electronic service or web-based service of telecom companies that helps customer in three main categories such as managing their own profiles, changing their service information (Package or Promotion), and supporting payment activities. The structure of this paper can be divided in four main
parts. First, it reviews buyer behavior theory and the related studies of this field concerning the internet and telecom services. Next, global and Thai online behavior are reviewed. Then, a model of using the internet to support buyer behavior in the market of telecommunication e-services will be developed based on the theory of buyer behavior. Lastly, managerial implication, further studied research and conclusion are presented to advance telecom business ability in dealing with the internet.

2. THEORETICAL BACKGROUND AND RESEARCH LITERATURE REVIEW

The field of buyer behavior was emerged in the 1960s and was interested in the international buyer behavior in the mid-1970s. In 1969, Engel, Kollat and Blackwell (1969), have set the classic model to explain about consumer decision making to buy products or services, called the EKB model. The EKB model is composed of problem recognition, information search, information evaluation, decision and post-purchase evaluation.

In the same year, Howard and Sheth introduced the theory of buyer behavior that reviews the process of customers when they want to buy products/services. By adapted learning theory concept, Howard and Sheth (1969) describe purchasing behaviour and process related to that behaviour for the customers that can be industrial purchaser, end-consumer purchaser and house-hold purchaser. This theory explains decision format of purchaser as three different levels of problem solving (Loudon and Della Bitta, 1993, p.607). First, extensive problem solving refers to the beginning stage that purchasers have a little or no information about products/services they want to buy. Next, limited problem solving is the second stage that purchasers have received the information about those products/services, so they set service criteria as desired level for buying. However, they still have an uncertainty to select which products/services will provide them a maximum value and need more information before making a decision. Finally, routinized response behaviour refers to the stage that purchasers have enough information to make a purchase and they also make a decision with confidence. In this stage, purchasers have more experiences with one brand that they can make a decision without doing evaluation.

Theory of buyer behavior

Howard and Sheth (1969) stated that the theory of buyer behavior could be divided into four groups: input variables, output variables, hypothetical constructs and exogenous variables. Firstly, input variables are stimuli from buyer’s environment that concerns about individual, commercial or social issues. The significant stimuli are about the things that influence the direct experience of customer related to products/services, for example, product sizes and product characteristics while the symbolic stimuli refers to any things that are created to
The theory of buyer behaviour can be explained as follows. Customers’ attention is created from three stimuli of customers’ environment (significant and symbolic stimuli from individual experience, brand comprehension from commercial perception and social stimuli from social occurrence). The results of the attention bring into perceptual bias that related to brand comprehension, motive, choice criteria and intention depending on the level of perception. Also, the feedback of attention generates stimulus ambiguity, motive, overt search and significant stimuli. When customers have a motive, they set choice criteria of selecting products/services that bring to their attitudes and intentions to purchase product/service consequently. With the good brand comprehension, customers will feel confidence in products/services, and this process creates strong intention and then purchasing the product/service. As can be seen in this theory, all of factors will lead to the intention as the result and this intention will create the purchasing process of the customer. The feedback of purchasing creates satisfaction or dissatisfaction of customers in products/services. When customers satisfy the products/services, they will have positive experience and strong confident with those products/services. This will likely to cause the possibility of the products/services to be selected again in their next purchases.
For example, herbal toothpaste may be preferred by a customer who have a good experience, prefer herbal favor or perceive good social occurrence about herb. His good experience leads to attention and perceptual bias of using the herbal toothpaste. If the degree of perceptual bias is strong enough, customer will create an intention and purchasing that toothpaste. If the degree is not strong, the customer just has a motive or he/she wants to compare with other product brands. After undermined evaluating process is finished and confirmed that this toothpaste is the good choice, the customer create attitude, intention and then purchasing consequently. However, some customers may not have direct experience but they saw the toothpaste in advertising. If the advertising give them a high confidence with the herbal toothpaste, intention will be created and possibly leaded to purchasing. If the confidence is not high, customer’s attitude will be firstly set and the intention to purchase is created. After customers have used the herbal toothpaste, satisfaction or dissatisfaction is provided as evidence to customer when making a next decision about the toothpaste.

In 1980s, the research stream in buyer behavior had significantly increased in the international context. Most of the research in international buyer behavior tends to examine a number of topics including buyer behavior, country of origin, industrial buyer behavior, information seeking and perceived risk (Li and Cavusgil, 1995). In this period, Bettman and Park (1980) proposed the information-processing model that mainly explained the effects of prior knowledge and experience and choice process on customer decision processes. This model is a basic idea to understand the human and technology interactive. In 1990s, the industrial buyer behavior research became more interesting than in the past and provided benefits for teaching and operating businesses of buyer behavior. Moreover, Law (1994) said that this research stream showed a wide range of evidence of post-modernist analysis and social phenomena. It also helped firms deal with their counterparts, subsidiaries and suppliers. Even though there were much debate about the difference of consumer buyer behavior and organizational buyer behavior. It was argued that both of them are quite similar when compared in term of buying reason.

![Figure 1: Theory of buyer behavior](source: Howard and Sheth (1969).)
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because individual customer will purchase not only to satisfy himself/herself but also to influence others as same as the organizational customers (e.g. Howard and Sheth, 1969; Wilson, 2000).

However, the previous study of buyer behavior has a weakness for neglecting the new technology such as the internet that has dramatically increased in the buying process of customers in these days. Karl Mann (1999) supported that the area of buyer behavior study still left the issues about the impact of the internet and any new computer technology on buyer behavior. Similarly, Zeithaml, Bitner and Gremler (2009, p.15-16) suggested that technology provides tremendous supports to customers in accessing the information for making decision, choices of service offering, and conveniences in contact with company and it need to be researched to understand buyer behaviour with the new technology. Some topics in buyer behaviour seem to be conducted predominantly. For example, Electronic Data Interchange (EDI) has received much attention in the buyer behaviour literature but direct buying on the Internet remains largely unstudied. Clearly, this situation creates several research questions concerning the buyer behaviour with the Internet. For instance, some interesting research questions about buyer behaviour and internet are how the internet commerce and employee empowerment affect our concepts of the buying center? And how do the internet influence buyer behavior theories and frameworks of buying situations, professional purchasing, and many other aspects of marketing? Another weak point is that buyer behavior theory seems to pay less attention on re-buying process that can predict the long-term benefit of businesses. Re-buying process comes from accumulated knowledge and experience that customers perceive when consuming the products/services and then their attitudes will be created from that experience as their database for next purchasing. Ehrenberg (1988) agreed that studying about penetration and re-buying process of the customer can properly predict buyer behavior aspects in the next purchases. Especially, re-buying process will be an important key in buyer behavior study.

Online buyer behaviour

Most of the research in this area has two main streams. On the one hand, researchers see online customer behaviour is different from traditional customer behaviour, so they focus on finding factors that shape consumer behaviour and modeling the online purchasing process (Guttman et al., 1999; Mile et al., 2000; Li and Zhang, 2002, Mcknight et al., 2002, Constantinides, 2004). On the other hand, some researchers consider online buyer behaviour as next step further of traditional buyer behaviour. They believe that the fundamental of online buyer behaviour is similar to the traditional one but some factors would be included, especially trust and confidence (Lee, 2002, Liang and Lai, 2002, Suh and Han, 2002).

By reviewing the literature about online buyer behaviour, Bellmann and his colleagues in 1999 who studied the predictors of online behavior found that there are two main reasons of internet buyer behavior. First, customers normally use the internet as a part of their lifestyles. Second, customers do not have much time to spend for the traditional ways of shopping. Guttman, Moukas and Maes (1999) did survey about buyer behavior and the internet and described 6 stages model in explaining buyer behaviour with the internet. This six stages model includes price negotiation, shipping option, financial center, customer help, user preferences and personalization. In 2000, Mile and his colleagues had studied further from Guttman, Moukas and Maes (1999) by including three additional stages in the model of buyer behavior such as identify & manage
criteria, search for products & merchant and compare alternatives & choose. Next, Gronroos et al., (2000) proposed the NetOffer model for the virtual marketspace. This model explains internet buying as service consumption that embraced elements like user interface, facilitating services and supporting services. These three elements are supported by information related to online behaviour. Furthermore, base on 424 responses about behavioral factors of online users, Lee (2002) found that electronic business should focus on the traditional marketing factors, for example customer-service center, security, warranty and accurate billing rather than web-savvy features or virtual storefront design.

Next, Cheung et al. (2003) did a comprehensive literature review in online buyer behaviour and suggested the framework of online consumer behaviour based on the model of intention, adoption and continuance (MIAC). The study also identifies factors affecting online consumer in two main categories, uncontrollable factors and controllable factors. Uncontrollable factors are consumer characteristics and environmental influences while controllable factors are product/service characteristics, medium characteristics and merchant/intermediary characteristics. Further, Kau and his colleagues in 2003 studied online behavior in the aspect of their demographic make-up, psychographics, navigation expertise, shopping experience and so forth. They found that customers in different groups have different psychographics, navigation expertise, and shopping experience. Moe and Fader (2004) developed the model of conversion behaviors that consist of accumulating of visited effects and threshold purchasing effects. On the one hand, the accumulating of visited effects means that the customers have experiences in using the internet and gathering many good supported evidences until they have enough confidence to buy from the webs. On the other hand, threshold effects mean the temporary desire of buying occurred from attractive webs or services on web but these effects may grow or decrease when customers have more experiences. Similarly, Constantinides (2004) suggested that businesses or e-marketer should be considered the customer's virtual experience as a major parameter influencing online purchasing. Moreover, Constantinides (2004) proposed the further research question about studying the web experience from different types of web sites.

**Why study buyer behaviour in telecommunication e-services?**

The telecommunications industry is significant in the global and local market as an infrastructure provider for the transportation of business information. The World Trade Organization (cited in Cowhey & Klimenko, 1999) reported that the high level of investment in the telecommunication sector can be used as a predictor of high economic growth and acceleration of economic development both nationally and globally. Because the telecommunications industry rapidly introduces and uses new technologies and communication networks, it was one of the first industries that use or provide electronic services to both business and individual customers. For example, in the United Kingdom by 1999, telecommunications providers had provided an advantage in electronic commerce by enabling the web services to facilitate telecom customers such as internet bill pay and online shopping (Bishop 1999).

In term of economic growth, Telecom Asia (2000) reported that Telstra had done a user survey in 2000 and found that data telecom services show a significant growth for more than 50% of Asia market due to the increasing of customers who use the internet. The impact of these events directly affected the selection of telecommunication services of the customer because the internet can be easily used by
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them to penetrate market information that contains data of the product, price, policy, promotion and channel for customer searching around the world. Maddox et al. (1997) supports that customers recognize and notice web address of telecommunication companies as contact information when they look at all advertisements. Surprisingly, new internet users show a highly percentage to visit telecommunication web sites within the next month after finding web addresses from the advertisements.

For the research about telecommunication, it was found that most of researches in this field are empirical study about the macro view of telecommunication such as the government policy, economic impact, the effect of WTO, telecommunication policy, and regulatory framework. However, there are few researches about the micro view of telecommunication services such as telecom service quality, behaviour intention, and customer behavior. Therefore, some researches were conducted on the strategy, business alliance, service quality, customer satisfaction, behaviour intention and loyalty (Wang and Lo 2002; Charoensuk, S 2006), but all of them neglect to consider buyer behavior that is one of the important parts of today’s marketing. Athanassopoulos and Liakopoulos (2003) supported this idea and said that the success of telecommunication industry mainly concerns about customer issues and their behaviors that can be related to the overall performance of telecommunication industry. Another point is that information technology like the internet will open the new opportunities in dealing with local and global telecom customers. Thus, the internet can easily make a cross-border commercial trading and provide abundant of related information. Also, it will get rid of problems in dealing with long distance customers.

The telecommunication industry is a huge business that may influence any business activities in this information era as the infrastructure, so this industry will play the important role in global electronic market. Bishop (1999) agreed those telecommunication providers are now gaining business advantages by being internet service provider and e-commerce facilitator. This is a main reason that this paper intends to study the impact of the internet on buyer behaviour in telecommunication e-service. Also, this topic will apply to the telecom businesses when they plan to go electronic market. However, telecommunication by itself has complex details because it has two folds to be considered: (1) technology area and (2) business area. Technology area concerns about service quality that comes from technology standard, network support and telecom equipment while business area considers competitive performance, value offering and service as the key drivers (Barnes and Glynn 1993, p 43). To cope with these requirements, telecom firms have to find the optimized solution in providing advance technologies and precisely understanding customer needs in operating services at the same time. Chan (2000) argued that the internet is becoming a necessary part of telecom firms that can be shaped telecom companies in operating data networks, provisioning broadband, improving services and providing wholesale/resale to customers. However, there are no researches that mainly consider buyer behavior of telecommunication services influenced by the internet for customer decision making.

When trying to apply the theory of buyer behaviour (Howard and Sheth, 1969) in telecommunication e-services, many questions have been addressed. First of all, the theory of buyer behaviour only concerns the interactions between human and human how the theory can be applied for e-service that has interactions between human and mechanism. Steckel et al., (2005, p. 312) supports this statement by saying that:
Little research to date has addressed the question of how consumers evaluate and choose such complex (typically information technology-oriented) consumer-firm interaction mechanisms. Two potentially relevant areas of research that have begun to address related questions are the literature on information technology adoption in organizations (e.g. Davis et al., 1989) and self service technology acceptance (e.g. Dabholkar and Bagozzi, 2002).

Secondly, what components of theory of buyer behaviour need to be adapted when it is used with electronic services and in what way? For example, factors that generate attitude, choice criteria or perceptual bias of e-service may be different from traditional service and needed to be reviewed. Thirdly, the business process of telecommunication is specific and differs from consumer products or other services so it needs the specific model for telecom business. For instance, some factors like service monitoring, technical support or service level agreement (SLA) are necessary only for the telecom business and needed to include in the model.

To close the theoretical research gaps, conducting research about the impact of the internet on buyer behavior can beneficially reveal the advantages to telecom firms in coping with using e-services of telecom customers. It can also be used as a business prototype for other businesses which want to understand buyer behavior of e-services and prepare themselves for marketing in electronic market. Also, scholars in this area have tried to develop models that define customer participation with e-services but the new integrative model of online buyer behaviour are also needed in order to promote systematic investigations of its elements (Li and Zhang, 2002; Steckel et al., 2005). Thus, it is clear that studying the impact of the internet with buyer behavior in telecommunication service will be useful for most businesses in applying their knowledge in the further steps of the electronic market.

### E-service: definition and importance

Voss (1999, 2003) defines e-service as service in the virtual market that uses new media such as the web for delivery of the service. For this reason, e-service is defined as a web-based service (Reynolds, 2000). Additionally, Boyer, Hallowell and Roth (2002) see e-services as services that are comprised of all interactive services and delivered on the internet by using advanced telecommunications, information, and multimedia technologies. According to Rust and Lemon (2001), the term ‘e-service’ expresses the true nature of the web as it becomes a key to effective marketing in the information era. They also remark upon three critical aspects of e-service: true interactivity with customers, personalization and real-time adjustment for customer offering.

Voss (1999, 2000) has shown the difference between e-service and e-commerce in terms of customer relationship marketing. He explains that service on the internet can be distinguished from pure sales on the web, with little or no service content to pure service, free or with a service contact. Recently, Rowley (2006) has defined e-service as service mediated through technology and points out that two inherent characteristics of e-service are the availability of information and need for some degree of self service:

**E-service is deeds, efforts or performances whose delivery is mediated by information technology (including the Web, information kiosks and mobile devices). Such e-service includes the service element of e-tailing, customer support and service, and service delivery (Rowley, 2006).**

In terms of benefits, Voss (2000) asserts that good elements of e-services are fast response, automatic response, organized customer communication, choice of phone follow up, ability to check status, a large volume of service enquiries, the
ability to automate status checking, and the provision of links to frequently-asked questions. Lavenburg (2005) found that using the internet in retail business can enhance company image, the acquisition process of business and post purchase supports. All these elements explain the advantage of e-service that service firms can use to benefit their customers and create competitive advantages over other competitors. Indeed, it became clear in the course of the research that e-service is increasingly important in the operation of service firms.

3. GLOBAL INTERNET BUYER BEHAVIOR

The purpose of this study is to examine the impact of the internet on buyer behavior in globalization, focusing on Thai telecommunication e-services. For clear understanding, this part of paper is organized into three subtopics. Firstly, it shows history of the internet, the world usage statistic and most popular behaviours of global users when they go online. Secondly, benefits of telecom e-services are presented to understand the advantages of using telecom e-services in Thailand. Finally, this paper will analyze the situations of telecom e-services in Thailand and also suggested the existing e-services from current telecom operators both wireline and wireless.

3.1 Nature of the internet and global buyer behavior

The internet is an amazing information technology that was firstly invented by the military section and it was still kept for military purpose until 1996 when independent internet service providers (ISP) could carry their own traffic for commercialization. During that time, one of communication technologies was used by large organizations in business transaction on web commerce called Electronic Data Interchange (EDI) but this technology has never reached the level of popularity for web trade because of its high cost, slow development of standard and the complexity of development. In 1992, the first World Wide Web (www) was released by Corporation for Research and Educational Networking (CERN) for information seeking purpose and became much more popular than EDI that can be proved by the continuous increasing of internet user and the growth of electronic market. Because the internet uses the concept of packet switching that can run many works simultaneously, so it is very helpful for doing business on web sites. Now web sites have become a popular media in commerce and internet has been known as an efficient marketing tool for penetrating customer needs. According to internetworldstat website (2009), the world internet usage grows up more than 100% in every part of the world. This website shows that the world total growth of internet users is about 342.2% calculating from 2000 to 2009.
Another point is that the internet speed is continuously increased to run the amount of information smoothly as well as the increasing of people who online in the internet shows significant number. It was argued by Bickerton et al. (1997, p. 30-31) that customers in the 21st century, have numerous alternative products/services to choose and internet marketing can respond the customer needs that direct to high sale volumes and revenues. Vicari and Kohler (1999) supported that the internet user behavior depends on the access speed that users have when they connect to the internet. This situation confirms that high speed internet service will be more attractive for users than low speed service when they want to use the internet. From this viewpoint, it can be related to the telecommunication infrastructure or internet service provider who provides internet service to prepare for high-speed broadband access that will be a significant key for internet commerce.

Table 1: World internet usage and population statistics
(Source: www.internetworldstats.com/stats.htm)

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<td>million</td>
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<tr>
<td>Africa</td>
<td>975</td>
<td>4.5</td>
<td>54.1</td>
<td>1100.0%</td>
<td>5.6%</td>
</tr>
<tr>
<td>Asia</td>
<td>3,780</td>
<td>114</td>
<td>657.1</td>
<td>474.9%</td>
<td>17.4%</td>
</tr>
<tr>
<td>Europe</td>
<td>803</td>
<td>105.1</td>
<td>393.4</td>
<td>274.3%</td>
<td>48.9%</td>
</tr>
<tr>
<td>Middle East</td>
<td>197</td>
<td>3.3</td>
<td>45.9</td>
<td>1296.2%</td>
<td>23.3%</td>
</tr>
<tr>
<td>North America</td>
<td>337</td>
<td>108.1</td>
<td>251.3</td>
<td>132.5%</td>
<td>74.4%</td>
</tr>
<tr>
<td>Latin America/Caribbean</td>
<td>581</td>
<td>18.1</td>
<td>173</td>
<td>860.9%</td>
<td>29.9%</td>
</tr>
<tr>
<td>Oceania</td>
<td>34</td>
<td>7.6</td>
<td>20.7</td>
<td>172.7%</td>
<td>60.4%</td>
</tr>
<tr>
<td>World total</td>
<td>6,710</td>
<td>361</td>
<td>1596.3</td>
<td>342.2%</td>
<td>23.8%</td>
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</tbody>
</table>

NOTES: (1) Internet Usage and Population Statistics were updated on March 31, 2009.
(2) Demographic (population) numbers are based on data contained in the web site gazetteer.de.
(3) Internet usage information comes from data published by Nielsen/NetRatings, by International Telecommunications Union, by NICs and other reliable sources.

If we consider about internet behaviour, there are several categories of internet user behaviour, which also appear in every part of the world. And this result will show the significance in revealing internet activities in business. Liu et al., (2002) suggest that the online user behaviours can be divided into eight main categories:


As can be seen from eight categories, most of them show the behaviour of internet users when they go online. Many internet users may have done more than two kinds of behaviour at the same time. For example, when a user searching information by search engine (i.e. Google or Yahoo), he/she may also chat with MSN or read an e-mail. Furthermore, these eight categories have shown relations with other services both inside and outside the group. The eight online behaviours can easily bring incomes to the firms that aware and prepare to complete on the internet. Moreover, the internet shows the cross-
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border commerce, so it is undoubtedly believed that the internet makes buyers feel the easiness of buying foreign products/services and also bring the firm to be a global company. Erika (2000) suggested that the keys to target international online customers are making sure that your business are attractive enough to international customers or another one is going out and finding them. Furthermore, she stated that targeting international customers on web businesses has to be done based on the understanding of the differences of international web use. This point of views is also supported by Mooij (2004) who said that the effective international marketing has to understand the differences that come from various value perspectives of people in different countries.

3.2 Benefits of Telecom e-services

The internet market is known as a perfect market. The concept of the perfect market is about the basic symmetry of supply and demand or selling and buying (Anderson, 1997). This concept means customers have an equal chance to receive information and to access the market as both seller and buyer. This is the theoretical assumption for the most perfect and beneficial markets. According to Markillie (2004) the internet is working similarly to a perfect market due to the customer can receive the information before buying as a buyer while he/she sometime provides information as a seller. From this viewpoint, the website is becoming an important channel to promote company’s brand, products and services, although some businesses do not sell online. Markillie also pointed out that today the internet is changing buyer behaviours in buying products/services and this situation also occurs in the telecommunications industry.

Telecom e-services reduce operational costs, especially employee costs such as overtime, and can improve customer relationships of telecommunications providers through the quick responded service. Porter (2001, p.71) confirmed that the internet is the powerful tool in the present day for enhancing the operational effectiveness, especially easing and speeding the access to real-time information. Moreover, Porter (2001) suggested another benefit of the internet, the strategic positioning, which is the ability to define a distinct value proposition and a cleverly making decision what not to do. However, the internet markets for telecommunication services are still in their initial stages, so the impacts on buyer behaviour are now being reviewed by users and providers, and it may take some time for a telecommunications provider to realize what their customers think about the developing situation of the internet technology.

There are three main ways that the internet influences consumer behaviour towards telecom e-services.

- Firstly, the internet provides many choices for customers to select telecom services with information that they can use to make a decision whether to buy or sell. This statement is supported by many research and empirical studies (Silverman et
al., 2001; Koufaris, 2002; Li and Zhang, 2002). According to Bellman, Lohse and Johnson (1999), looking for product information on the internet is the most important predictor of online buying behaviour and customers choose the internet because they want the convenience rather than cost saving. As suggested by Markillie 2004, European shoppers do research many kinds of products before purchasing anything at shops or department stores (see Figure 2).

- Secondly, internet-based services (web services or e-services) improve customer relationships or involving conditions. These services also provide a sense of personalize experience when customers use the internet-based service to search or buy products or services. For example, the customers can create personal user account and password in on-line banking and then they can set the favourite issues or interested topics by themselves. In detail, web services or e-services are based on a self-service technology in which customers perform as service providers for themselves (Broderick & Vachirapornpuk, 2002). In addition, Hamid and Kassim (2004) found that the internet has a positive impact on customer loyalty, personalized services and consumer behaviour.

- Finally, the internet provides convenient facilities to customers such as the 24x7 services, no regional restrictions, easy to use and fast responses (Zeithaml, Bitner and Gremler 2009). Many research papers indicate that convenience is a vital factor that influences customer going online (Gronroos et al., 2000; Constantinides, 2004; Steckel et al., 2005).

In conclusion, the internet has great influence on buyer behavior of customers. Because the internet provides many advantages to customers, telecom firms should aware and prepare themselves before adapting the internet technology to their business process. The figure below shows the ratio of the offline purchase after searching the European online shoppers (Figure 2).

### Figure 2: Look before you leap: Survey of European Online Shoppers


#### 3.3 The telecom e-services in Thailand

In Thailand, many telecommunication providers initially develop internet services to serve their customers. Gunawardana, Withers and Tangkitvanich (2000) have observed that the emerging market of Thai telecommunications is driven by new technologies and economics and the internet is a technology to serve telecommunications firms at present not only for regional customers but also for international customers. Using the internet technology provides many challenges for telecommunications providers: there is no time limit in servicing customers; it is easy to create both new customers domestically and internationally (no regional restrictions); and it is possible to improve customer
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satisfaction because they can select services by themselves from a self-service menu rather than be limited to select the choices in brochures or catalogues.

Table 2: Types of e-services and Telecom operators in Thailand

<table>
<thead>
<tr>
<th>Telecom Operator</th>
<th>Group 1</th>
<th>Group 2</th>
<th>Group 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Managing their own profiles</td>
<td>Managing service information (Ordering, Package or Promotion)</td>
<td>supporting payment activities</td>
</tr>
<tr>
<td><strong>Wireline</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOT</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>True</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>TT&amp;T</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Maxnet</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td><strong>Wireless</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>AIS</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>DTAC</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>TrueMove</td>
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<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Hutch</td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>ThaiMobile</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

(Source: TOT, True, TT&T, AIS, DTAC, TrueMove, Hutch, and ThaiMobile websites)

For the telecom e-service in Thailand, it can be separated by types of telecom operator: wireline operators and wireless operators. There are four wireline operators and five wireless operators. The wireline operators are TOT public company limited (TOT), True Corporation (True), TT&T Corporation (TT&T), and Maxnet while wireless operators are Advance Info Service (AIS), Total Access Communication (DTAC), True Corporation (TrueMove), Hutch and ThaiMobile. The services which these two groups of operators serve customer mainly are voice, internet and value-added services. As stated earlier.
Telecom e-services in Thailand are initially developed, so only few services are provided to serve the customers depend on the ability of each telecom operator. Some operators provide more than 15 services and other operators are ranging from 10 to 2 services. However, all of services can be integrated in three main groups such as managing their own profiles, changing their service information (Package or Promotion), and supporting payment activities.

As presented in Table 2, Telecom e-services in group 1 (Managing their own profiles) includes making the customer's profile, change customer’s information (address, name, password, or preferences), viewing current promotion, and news & privileges. For Telecom e-services in group 2 (Managing service information), this group, for example, includes online ordering, changing promotion or package, and applying or changing value-added service. Next, the group 3 is, for example, bill payment, payment history report, check usage and credit limit. However, the number of telecom e-service would be increased in the near future due to the cost-saving efficiency and service availability.

4. THE APPLIED MODEL OF BUYER BEHAVIOR WITH THE TELECOM E-SERVICES

As stated in earlier section, the theory of buyer behaviour by Howard and Sheth (1969) seems to neglect the technology issue, especially in human and mechanism interaction. The importance of study human and mechanism interaction is steadily increased by the number of internet users from every part of the world (Gronroos et al., 2000, p.243). Therefore, the study of human and mechanism interaction in relating to buyer behaviour is limited especially in telecommunication business that, in fact, plays the role of internet provider and facilitator. Also, there are general agreements from academics and practitioners that understanding the steps of the buying process, factors affecting decision making process and a model in explaining online buyer behaviour are necessary for marketers to comprehend in business (Gronroos et al., 2000; Silverman et al., 2001; Koufaris, 2002; Li and Zhang, 2002; Kotler, 2003; Constantinides, 2004; Steckel et al., 2005). To study online buyer behaviour, there are several theories that researchers used to explain, for example, theory of buyer behaviour, technology acceptance model (TAM), and flow theory (Guttman et al., 1999; Mile et al., 2000; Silverman et al., 2001; Koufaris, 2002; Li and Zhang, 2002; Cheung et al., 2003; and Constantinides, 2004). In this paper, the applied model is developed based on theory of buyer behaviour and the understanding of customers experience when using telecom e-services. The model is illustrated in Figure 3 below.

To begin with, this model will be described in term of experienced perception, learning and value acceptance of telecom customers when using internet e-service. The experience of online buyer behaviour is a vital factor in explaining online purchasing decision. Kotler (2003) and Constantinides (2004, p 112-113) support the importance of studying experience of online users by saying that web experience is a major factor that influences the customers when making online purchasing, so study experience of online buyer behaviour is necessary. When considering the elements of online buyer behaviour, Constantinides (2004, p 113) suggests that the study of web experience would include elements like searching, browsing, finding, selecting, comparing, evaluating information, interacting and transacting with the online firms. This paper will review the current literatures with factors affecting online buyer behaviour and try to map these factors with the
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telecom e-service characteristics. Similarly, Steckel et al., (2005) suggest that the objectives of customer when using interactive processes include acquiring information about a product, defining its characteristics, placing the order and obtaining the manufactured product.

As can be seen from Figure 3, the model is divided into three main parts such as input, buyer's decision process and purchase decision. First of all, the inputs of this model are two types of input: internal stimuli and external stimuli. The internal stimuli mean influences occur from their own preferences or previous experience of customers which may have effects over their buying behaviour with the telecom e-services. Some academics have defined the internal stimuli as demographic, personal issue (expectation), cultural issue, economic, social and experiential issues (Howard and Sheth, 1969; Kotler, 2003; Constantinides, 2004). For external stimuli, this paper considers them based on business characteristics of telecommunication and related environment factors such as marketing stimuli, product/service characteristics and web quality. In addition, Li and Zhang (2002, p. 510) indicates

![Figure 3: The Applied model of buyer behavior with the internet for telecom e-services.](image-url)
external stimuli of online buyer behaviour that are three dimensions such as legal framework to protect customers from online transaction losses, the system of third party recognition and number of competitors. As suggested by Belch and Belch (2007), customers undertake both an internal (memory) and an external search as the input when they want to make a purchase decision. Also, Engel, Kollat and Blackwell (1969) and Engel, Blackwell and Miniard (1995) suggests that the inputs of buyer behaviour model are all kinds of stimuli that come from related issues concerning with customer, like individual experience and preference, business characteristic and environment factors.

Second part, the model presents buyer's decision process of online buyer behaviour in telecom e-services. After customers have recognized their internal and external stimuli, they have an attention and want to identify service criteria for selecting the one that matches their needs. As suggested by Bovee et al., (1995, p.117), attention is the cognitive process of customers after receiving stimuli in which they selectively concentrate on one aspect and ignore other things. Next, when attention of the customers occurs, customer will identify service criteria to find the suitable solution for them. For example, the customers may have an attention to use the mobile package after viewing TV advertisement. However, they want to choose only one mobile operator that provide them maximize value, so they set service criteria that they want as an expected level before searching and making a decision. Belch and Belch (2007, p.114-119) supported that consumers usually evaluate alternative products/services in terms of the functional and psychological benefits that businesses or other service providers offer by comparing with their expected needs. From this viewpoint, Belch and Belch (2007) also suggested that marketing organization needs to know which benefits consumers are seeking and therefore which attributes are most important in terms of making a decision.

Further, when customers recognize a need for products/services, they go online and search for that the products/services related information. In this model, the customers select to search their needs via the internet by using Web browsing, search engine or other internet-based methods. For telecom e-services, the searching tools are facilitated by key word, conceptual parameter, site navigation, search facilities, and search process (Silverman et al., 2001; Constantinides, 2004). Steckel et al., (2005, p.313) describes that the internet make customers easier to obtain abundant information related to products/services they are interesting. For instance, the customers do searching with Google search, Yahoo search or AltaVista for telecom services and this internet searching also provides personalization to the customers by allowing them to customize their search with key word matching, key preference or related these issues. The personalization is suggested by many researchers in the field of online buyer behaviour as the future study (Silverman et al., 2001, p.27; Steckel et al., 2005, p.315). For telecom e-services, the word personalization in this paper refers to the design of personalized decision tools of telecom e-service web-pages provided for customers when using internet-based services. Shih (1998) suggests that the web service should offer the users opportunities to reconstruct the web sites as their preferences. In detail, the personalization of telecom e-services fits with two service groups, managing their own profile and managing service information.

The result of searching brings into the perceptual bias that, on the one hand, leads to confidences in using telecom e-services, value comprehension and purchase respectively. Steckel et al., (2005) support that the abundance of information from the internet will lead customer to the perceptual
bias, making one choice more favorite than other alternative choices. For the relationship of confidence and value comprehension, this relationship draws from psychological issue of online customers. Confidence refers to a sense of reduced anxiety and comfort in knowing what to expect to customers before developing their relationship with service operators while value comprehension means the acceptance of benefits when customers using the service (Zeithaml, Bitner and Gremler, 2009, p. 183). After customers have a value comprehension, the online purchase will happen. On the other hand, the perceptual bias of the customers makes them evaluating a choice criterion that is composed of three facilitated buying factors such as price option, shopping option and security option (Silverman et al., 2001, p. 8). Price option is about the methods that internet seller and buyer agree to use for setting the price such as price plus sending fee, e-bidding or e-auction (Guttman et al., 1999; Silverman et al., 2001). For shopping option and security option, these two options are methods that internet seller accommodate buyer for their purchasing such as e-payment, credit card payment or money transfer with internet security protection (Constantinides, 2004). Therefore, the evaluation process of customer will make on the basis of maximize value acceptance for service offerings in telecom operators.

Next, attitude of customers is created after they evaluate and accept three previous choice criteria. The attitude refers to strongly feeling or belief of a person - both positive and negative - toward a product, service, idea, or issue (Bovee et al., 1995, p.121). The attitude of the telecom internet user comes from their beneficial advantages of the internet services. Further, there are some supported issues that need to be added into the model of buyer behaviours in telecom e-services. This is similar to supporting payment activities (Table 2.) of current telecom e-services. However, when comparing with the current telecom e-services, an only payment activity was found to be served the telecom customers. There are four main topics of supporting tools. Firstly, Customer Relationship Management (CRM) is a software-based supported tool that helps telecom operators managing overall relationship with the customers. This software manages telecom supports such as call center, helpdesk, representative, web site, and securing financing (Silverman et al., 2005). Next, 24x7 service monitoring and call center are two necessarily supporting processes which telecom operators have used to serve the customers. Finally, service level agreement (SLA) is a negotiated agreement between customer and service provider about minimum acceptance level of telecom service to serve the customers. If telecom providers provide all of these three advantages, customers will positively perceive a good attitude in telecom e-services.

As suggested by Porter (2001, p.65), the internet technology provides better opportunities for business to establish its distinctive strategic positioning than the previous generations of information technology. The attitude brings into the intention stage and goes on to purchase via telecom e-services. After purchasing via telecom e-service,
customers may either satisfy or dissatisfy on the telecom services. Li and Zhang (2002, p.514) supported that satisfaction of online customers is evaluated by the level of achieving expectations. If expectations are met, the degree of satisfaction is high and it will influence intentions, decisions and purchasing positively. Therefore, most of current literatures about online buyer behaviour seem to consider only satisfaction but the area of dissatisfaction response remains unstudied. In this paper, the applied model takes into account to provide both satisfaction and dissatisfaction responses after purchasing via telecom e-services as the learning log of the customers and telecom operators for next decision making. For example, if customers experience satisfaction, they will remember it as knowledge feedback for re-buying process not only for themselves but also for their societies. However, when customers experience dissatisfaction with the telecom service, they do not want to buy this service next time and may tell this bad experience to their families or other peer groups. As supported by Belch and Belch (2007, p.120-126), they said that:

"Once the consumer has purchased and used the product, they will evaluate their purchasing decision. They compare the product's performance with their expectations. If the product does not perform as expected they will experience post purchase dissatisfaction. When consumers purchase high involvement products, that are more expensive products for which they exert a greater purchasing effort in terms of time and search, they usually experience some level of discomfort after the purchase. That is, they experience some doubt that they made the right choice."

In the theory of buyer behavior, Howard and Sheth (1969) neglected the interactions between human and mechanism and technological issue. Also, the applied model would consider the responses after purchasing both satisfaction and dissatisfaction as the knowledge feedback for re-buying process that is shown in Figure 3. Moreover, the reviewed studies have shown that re-buying process or commitment process of customers is necessary to benefit trades on the internet because it shows the linkage of the satisfaction and dissatisfaction result as the inputs for next purchasing process. In this paper, the applied model represents the buyer behaviour of online customers when using the telecom e-services. This applied model will help the telecom business to understand the buyer behaviour of their customers when they have participated in the telecom online service (Athanassopoulos and Liakopoulos, 2003).

5. MANAGERIAL IMPLICATIONS AND FURTHER STUDIES

In summary, the internet will surely affect buyer behavior in the global context of businesses and the company who prepare to understand this change will get more advantage than others who neglect it. For telecommunication firms, it is a business relating to new technology for supporting their customers and the internet is one of the first choices that most of them use in every part of the world. To become the successful telecom businesses, understanding the model of online buyer behavior and its process are the first priority to serve the customers online. Moreover, telecom firms should do survey every year about customer expectation and their perception in the services because both of them will predict the way that telecom companies should focus to cope with the change of customers’ behavior and their environments. Also, telecom operators would pay attention to supporting tools like Customer
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Relationship Management (CRM), 24x7 monitoring, Call center, and Service Level Agreement (SLA).

Study on the linkage between buyer behavior and customer decision making of technological products/services is an interesting further research. Because buyer behavior shows the whole picture of customer intention when buying products/services while decision making will tell telecom firms what should be focused to support telecom e-services purchasing. Another kind of further study is the study on the degree of perception and expectation of technological products/services which are useful to explain buyer behavior in purchasing situations. Thus, the further researcher should look carefully about the impacts of new technologies on buyer behavior field and should conduct the research in the particular area that can cover or extend the theoretical context of buying behavior theory or decision-making model.

However, the purpose of this study was not to test an applied model of buyer behaviour with the internet for telecom e-services, because so far such models have not been suggested in literature. Instead, the purpose of this study aims to develop the relationship among elements of online buyer behaviour of telecom e-services. In future studies, the applied model would be hypothesized for further testing.

6. CONCLUSION

This paper reviews the impact of internet on buyer behavior in globalization by focusing on telecom e-services. It also offers the applied model of buyer behavior for telecom service by studying the impact of the internet to guide the telecom firms in dealing with their customers, especially in IT era. Firms that understand buyer behavior with the internet can survive in today competitive situation.

According to buyer behavior field, its now challenged by technology advancement, especially the internet. However, few researchers have paid attention to study the effects of the internet on buyer behaviour, so it should be reviewed to extend the theoretical knowledge. Moreover, there are very few researches that study the buyer behaviour with interactions between human and mechanism, for example human and electronic services. Also, the researches in telecom services mostly focus on macro view rather than the micro view of telecommunication services like purchasing behavior. To close these two gaps, the applied model of buyer behavior with the internet for telecom e-services is developed to understand the customers when using internet services. The concept of this model is about experiences and perceptions that have affected on buyer behavior of telecom e-services when using the internet. This new model is added by factors such as searching processes, personalization and supporting tools that are facilities of the internet technology. Furthermore, the model is also added the knowledge feedback for re-buying process to assure the effects of customers’ experience for previous purchase. Moreover, this feedback also link to their related group of customers as word of mouth to decide buying process in the future. In conclusion, this model would be helpful for telecommunication operators when dealing with their buyers and the internet technology in globalization.
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