



**Factors Affecting Customers' Intention to use Internet Banking in Bangkok,  
Thailand**

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### **ABSTRACT**

The objectives of this research was study and understanding the 1) the relationship between attitude toward behaviour and intention to use Internet banking, 2) To study and understanding the relationship between subjective norm and the intention to use Internet banking, 3) To study and understanding the relationship between perceived usefulness and intention to use Internet banking, 4) To study the relationship between perceived ease of use and intention to use Internet banking. The sample of study has approximately 400 people by using quotation tool. Data analysis for this study was conducted using SPSS (Statistical Package for the Social Sciences) software. The analysis used descriptive statistics such as mean, percentage and standard deviation, as well as inferential statistics (regression analysis).

The finding of Internet Banking, as alternative delivery channel of financial industry this paper investigated the influence of factors on the intention to use Internet banking. Theoretical framework used for this study focus on Technology Acceptance Model (TAM) and Theory Reason Action (TRA) with four independent variables. Convenience sampling method was used. Results indicated all variable had significant positive influence the intention to use Internet banking. From this research found that the relationship between perceived usefulness and customers' intention to use the internet is the most important ( $R^2 = 0.699$ ) follow by perceive ease of use and customers' intention to use the internet ( $R^2 = 0.507$ ), attitude and customers' intention to use the internet ( $R^2 = 0.468$ ), the last one subjective norm and customers' intention to use the internet is important but less than the other 3 relationships ( $R^2 = 0.304$ ). The findings from this research would be useful for banks in the subject area, particularly for Bangkok area.

**Keywords: Internet banking, TRA, TAM,**

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## CHAPTER 1

### INTRODUCTION

#### 1.1 BACKGROUND OF RESEARCH

It has been realized by many financial institutions that one of the competitive marketing strategies is the distribution channel (Friars, 1985). Nowadays, there are many new channels that a bank can adopt to serve clients and distinguish itself from its competitors, such as telephone banking and Internet banking. The former important strategy that a bank employed in the past to gain its market share and more profits was the expansion of the branches. In the present time, it is no longer the significant key strategy since a bank needs to develop more innovative or different ways for customers to access to its services if it wants to compete with the others.

Like other businesses, the financial institutions need to focus on the profit and gaining the profit has become more difficult today as there are many competitors. (Llewellyn & Drake, 1997) explain that the main incomes of banks are from saving interests and loan charges. With a lot of service providers in the market, many banks need to offer the customers the same interest rates and charges. In the near future, the competition will probably be more intense due to the rapid development of technology and the globalization of monetary business. Therefore, it can be assumed that the future of the bank business involves its initialization and creation of technology to serve and satisfy the customers.

As the business is more challenging now, many banks are forced to introduce alternative channels to attract clients and make them satisfied. Internet banking is one of the popular channels that the banks choose to offer. It allows clients to access to their data and to make transactions conveniently. Many banks in various developed countries provide this latest channel called Internet banking, electronic banking, or online banking. It has been widely agreed that this kind of channel has a great impact on the financial business and the banks have realized

that the Internet can give the new experience to their clients and can move their business to the international level.

Internet banking refers to the system that allows clients to access to their account and data as well as to perform general financial activities online. These do not require any document, original signature, or confirmation by phone. It also refers to the presentation of bank information and products on the bank's website. With Internet banking, banks can provide data, such as their balance reports, and services, like inter-account transfers, bill payment, etc to their clients. All of these activities can be done in the clients' houses or workplaces via telecommunication network.

In other words, Internet banking is an electronic consumer interface and an alternative distribution channel. For the service providers or banks, it is also the most efficient way to reduce expenses and to maintain or even enhance their services. In addition, it allows clients to connect with the banks from any places in the world and all it requires is an Internet-linked device. It is an innovative way to let clients immediately handle their transaction by themselves without physically visiting the banks. Due to its benefits, Internet or online banking is considered one of the fastest-growing banking practices. It is therefore necessary for the banks to provide this kind of feature for both the clients and the banks themselves (Qureshi, Zafar & Khan, 2008).

Nowadays, the Internet has also been important to the banking business due to its advantages. The use of Internet banking relates to the client acceptance rather than the services offered by the banks. Many empirical studies show some factors hindering clients from using it (Sathye, 1999). However, there is not enough information concerning the clients' perception and the evaluation of online banking services, so (Lee & Lin, 2005) highlight the need for further studies on the influence of services and client's perception on the quality of services as well as their satisfaction (Ibrahim, Joseph & Ibeh, 2006).

In this study, the researcher adopts two theories to examine and analyze the data. The first one is the technology acceptance model (TAM) which is used to examine the clients' acceptance of technology. The other is the theory of reasoned action (TRA) which is a social psychology theory used for studying clients' intention to use the Internet banking.

The technology acceptance model (TAM) was proposed by Davis in 1989. It concerns the acceptance or intention to use technology. The theory explains that the use of information technology depends on the user's intention to use it and this intention relates to the user's belief about the system which is influenced by perceived usefulness (PU) and perceived ease of use (PEOU).

As for the theory of reasoned action (TRA), it was introduced by Fishbein & Ajzen (1975). It explains that a user's adoption of technology or behavior can be examined by considering his or her intention and belief in a particular behavior. A user's strength of intention to perform certain behavior can be measured by using behavioral intention (BI), which can indicate whether the user is ready to perform the behavior.

Though computer system is very competent and useful, it cannot improve any institute's performance if it is not adopted well. It is unfortunate that there is a widespread problem concerning the managers and professionals' resistance to the end-user system. In order to predict the user's acceptance accurately, we should measure the user's intention, including the attitudes, subjective norms, perceived usefulness, and perceived ease of use.

## **1.2 PROBLEM STATEMENT**

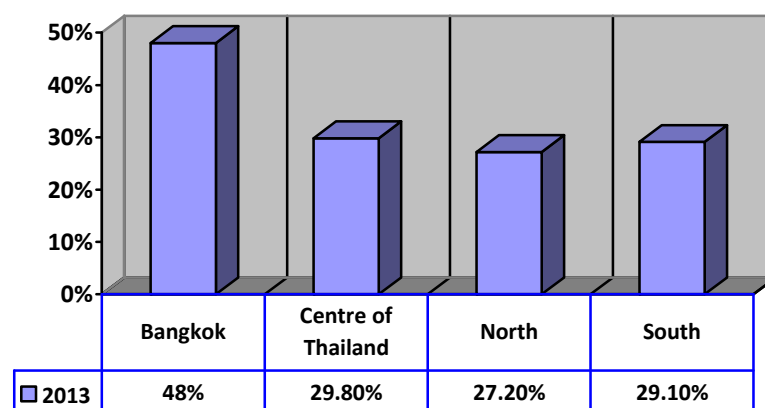
According to the Internet World Statistics (2008), in 2008 there were approximately 13.4 million Internet users in Thailand with around 21% penetration rate and 483% growth rate from 2000 to 2008. Therefore, there is a great opportunity to increase the use of Internet Banking in Thailand. which found that Bangkok has the most people who are using internet as shows on graph 1, Bangkok found 48% of total user follow by Centre of Thailand 29.8%, North of Thailand 27.2%, and South of Thailand 29.1% (National Statistical Office (NSO) 2013) also found the benefit both the banks and the clients, Internet banking has become the latest channel for banks to provide their financial services to clients and for clients to perform financial activities by themselves. Also, it has an important role in changing how the banks do their business and how the clients do their financial activities (Eriksson, Keren & Nilsson, 2008; Sayar

& Wolfe, 2007). Shih & Fang (2004) mention one of the advantages of Internet banking which is the reduction of expenses for maintaining the traditional branches. In addition, Internet banking allows clients to perform financial activities online on the banks' websites from any place and on any time they would like to. Compared to the traditional physical services, Internet banking is faster and requires less cost. However, NECTEC (2002) reported that the majority of Internet users in Thailand did not use Internet banking services, although the number of Internet users in the country is not sparse. There are various reasons and factors that may have caused this situation, for example, the lack of clients' technology acceptance since they must change their behavioral patterns and the Internet banking can be too complicated for some people to understand and to use. Surapong (2009) states that many commercial banks provide complex Internet banking services as well as simple Internet banking services. One of the reasons is that the banks are trying to encourage clients to perform low-value transactions by themselves through the Internet and telephone banking services, so they do not have to physically go to a branch counter or find an ATM (Chudasri, 2002). For the banks, Internet banking allows them to work more efficiently than other channels. Consequently, though probably still in early stages, most Thai commercial banks have launched their website to provide services online. These Internet-based services conform with Thailand's national ICT policies: IT 2010 (Years: 2001- 2010) that mentions the expansion of online services. Nevertheless, it is unfortunate that there is no report on the current growth of Internet banking in Thailand now.

By studying technology acceptance, the banks can realize and understand the needs as well as expectations of clients. This technology acceptance can be found by examining various factors or reasons impeding clients from using Internet banking services. The factors include perceived usefulness, perceived ease of use, attitudes toward the behavior, and subjective norms. One of the most significant theoretical models for studying technology acceptance is the technology acceptance model (TAM) proposed by Davis (1989) which is used in this research to predict and explain users' acceptance of technology. This model has been well-known and used in various researches with a wide range of contexts. Also, it is an extension of the Theory of Reasoned Action (TRA) developed by Fishbein & Ajzen (1977) to explain psychological determinants of behavior. The Theory of Reasoned Action (TRA) states that a

person's behavior is determined by his or her behavioral intention (BI), resulting from the person's attitude (perspective whether it is good to perform the behavior) and subjective norms (beliefs about certain people or groups' approval or disapproval of the behavior) (Fishbein & Ajzen, 1975). Based on the Theory of Reasoned Action, the technology acceptance model proposes two subjective beliefs that influence a person's attitude toward the behavior which are perceived ease of use (PEOU) and perceived usefulness (PU). Then that attitude will form the person's behavioral intention (BI) before the behavior is performed (Davis, Bagozzi & Warshaw, 1992; Venkatesh & Davis, 1996).

This study's objective is to examine the determinants of clients' intention to use Internet Banking in Bangkok by adopting two theories: (1) technology acceptance model (TAM) developed by Davis (1989) which includes perceived usefulness and perceived ease of use, and (2) theory of reasoned action (TRA) developed by Ajzen (1985) which includes attitudes toward behavior and subjective norms. These factors will be used to analyze clients' behavior and to categorize client groups. The results of the study will be beneficial as they will clarify the potential demand for Internet banking. Also they will help bank managers in categorizing their clients, so they can identify the target groups that will use Internet banking.



Graph 1 Source: National Statistical Office (NSO) 2013

### **1.3 OBJECTIVES OF RESEARCH**

There are four objectives:

1. To study the relationship between attitude toward behavior and intention to use Internet banking.
2. To study the relationship between subjective norm and the intention to use Internet banking.
3. To study the relationship between perceived usefulness and intention to use Internet banking
4. To study the relationship between perceived ease of use and intention to use Internet banking.

### **1.4 SIGNIFICANT OF THE RESEARCH**

Internet banking or online banking is the innovation that has critically changed clients' behavior and caused high competition among banks. The banks providing their services online must try to gain understanding about their clients and their attitude toward the use of Internet banking, so they can develop their services and compete with other banks. The new environment for service distribution channels then occurs as a result of the use of Internet banking provided by the banks and the clients or users (Mols, 1998).

Also, Mols (1998) explains that this new channel, which is Internet banking, can benefit the banks in several ways, for example, strengthening cross-selling and differentiating prices. As it offers 24 hours and 7 days services, clients can perform financial activities whenever and wherever they want. Moreover, when using Internet banking, clients are less price-sensitive, so they are likely to be more satisfied with the services and to create positive word of mouth. Sathye (1999) mentions that Internet banking costs the clients less than physically visiting a bank branch or it might even be free of charge. If the clients do not have to actually go to a bank branch and can perform their banking activities conveniently at home, they can also save time and fare

(Karjauloto, 1999). The most significant reason of the implementation of Internet banking is described by Sheshunoff (2000). He claims that Internet banking is a very powerful tool to retain clients. He further explains that when the clients adopt full-service Internet banking of particular banks, the numbers of clients changing financial institutions decrease. The consumer behavior theory can help describing the reasons for their behavior. For example, clients have to spend time and energy when they want to switch to other banks. Therefore, for banks, providing Internet banking services is very important and it can help the banks competing with others in the market.

In conclusion, Internet banking can benefit both the banks and the clients or users. The results of the study will provide information about the potential demand of Internet banking which is useful to the banks as they will be able to specify their target clients who use Internet banking services and improve their services.

## **1.5 RESEARCH OUTLINE**

Chapter one introduces the issues related to the topic under back ground internet banking information, particularly in the context problem statement and the objective. Chapter two discusses in detail various theories both the theory of reasoned action (TRA) and the technology acceptance model (TAM), which has been used in explaining user acceptance of technology in general. Also, it critically reviews the relevant literature related to the important factors that are likely to influence the internet banking information. The influential factors identified in the literature along with technology acceptance model and theory reason action are presented also was presented the conceptual model of acceptance of internet banking information systems proposed in this research. The conceptual model explains four hypotheses to be tested and analysed. Chapter three informed research methodology, research strategy, sample, sampling, data collection, and data analysis. The fourth chapter then presents findings collected by questionnaire survey and analyzes the data. The final chapter conclusion and investigation fills in answers for research objectives and provides recommendations both for business and for future research of the research.

## 1.6 DEFINITION OF TERMS

**Perceived usefulness** - is defined as the subjective probability that a user will increase its productivity using a specific application in its work, this application will help them to do a better and more efficient job (Davis, 1989)

**Perceived ease of use** - refers to the degree in which the future user thinks that the system use will be free of effort (Davis, 1989)

**Attitude toward behavior** - is defined as a person's general feeling of favorableness or unfavorableness for that behavior (Ajzen & Fishbein, 1980).

**Subject Norm** - is defined as a person's perception that most people who are important to him/her think they should or should not perform the behavior in question (Ajzen & Fishbein, 1980)

**Intention** - is the amount of effort one is willing to exert to attain a goal (Ajzen, 1991)

**Internet banking** - Products and services that could define as one of the banks' distribution channel. The definition of Internet banking varies according to the given subject and researchers (Daniel, 1999). Internet banking is services delivered through the Internet.

**TAM** stands for Technology Acceptance Model; TAM states that technology use is determined by the intention toward a particular behavior (Davis, 1989).

**TRA** stands for Theory of Reasoned Action; most behaviors of social relevance are under volitional control and are thus predictable from the intention (Ajzen & Fishbein, 1980).

## 1.7 HYPOTHESES

H 1: Attitude toward behavior (ATB) has a positive effect on the intention to use Internet



banking.

H 2: Subject Norm (SN) has a positive effect on the intention to use Internet banking.

H 3: Perceived usefulness (PU) has a positive effect on the intention to use Internet banking.

H 4: Perceived ease of use (PEOU) has a positive effect on the intention to use Internet banking.

## **CHAPTER 2**

### **LITERATURE REVIEW**

This study explains through the preliminary literature review and divided into four parts. The first provides historical on internet banking, second provide affecting factors of each variable, third review theory basis of technology acceptance model and theory reasoned action, and finally discusses prior research that has explored the relationships among these variables.

#### **2.1 HISTORY OF INTERNET BANKING**

#### **2.2 AFFECTING FACTORS**

2.2.1 Behavior Intention

2.2.2 Attitude

2.2.3 Subjective norm

2.2.4 Perceived usefulness

2.2.5 Perceived ease of use

#### **2.3 THEORETICAL BASIS**

2.3.1 Theory of Reasoned Action (TRA)

2.3.2 Technology Acceptance Model (TAM)

#### **2.4 RELATED RESEARCH**

## **2.1. HISTORY OF INTERNET BANKING**

Internet, online, or electronic banking is a major part of the development of banking business. Non-branch services are developed as alternative distribution channels for clients to use the banks' services. The notion of Internet and telephone banking emerged in the 1980s with the increasing use of the Internet. In the 1980s, banking and financial institutions in Europe and USA started to embrace "home banking" as the research concept. Due to their advancement, computers and the Internet can help clients more than machines and phones do (Sarel & Marmorstein, 2003).

The USA's "NetBank" was the first Internet banking service. Later in 1996, "Atlanta Internet Bank" was established. Citibank and Wells Fargo first adopted this feature in 2001 (Gefen & Straub, 2005). In Singapore, DBS Bank introduced its online financial services in 1997, followed by UOB, OCBC and other banks later (Gerrard & Cunningham, 2003).

In Thailand, the Internet was set up for the first time in 1991. According to the National Electronics and Computer Technology Center (NECTEC), the commercial use of the Internet began in 1995 with the arrangement of the nation's Internet Service Provider. Siam Commercial Bank, Krung Thai Bank, TMB Bank, Bangkok Bank, and other Thai commercial banks initially started their online banking services in 1999.

Pukapan & Trisatienpong (2001) mention that to set up an economic driving tool, Thai banking industry, with only 14 commercial banks, provides the branch ranking system with bank branches nationwide.

### Thai Commercial Bank




No	Logo	Thai Commercial Banks
1		BANGKOK BANK PUBLIC COMPANY LTD.
2		BANK OF AYUDHYA PUBLIC COMPANY LTD.
3		CIMB THAI BANK PUBLIC COMPANY LTD.
4		INDUSTRIAL AND COMMERCIAL BANK OF CHINA (THAI) PUBLIC COMPANY LIMITED
5		KASIKORNBANK PUBLIC COMPANY LTD.
6		KIATNAKIN BANK PUBLIC COMPANY LIMITED
7		KRUNG THAI BANK PUBLIC COMPANY LTD.
8		LAND AND HOUSES BANK PUBLIC COMPANY LIMITED
9		SIAM COMMERCIAL BANK PUBLIC COMPANY LTD.
10		STANDARD CHARTERED BANK (THAI) PUBLIC COMPANY LIMITED
11		THANACHART BANK PUBLIC COMPANY LTD.
12		TISCO BANK PUBLIC COMPANY LIMITED
No	Logo	Thai Commercial Banks
13		TMB BANK PUBLIC COMPANY LIMITED
14		UNITED OVERSEAS BANK (THAI) PUBLIC COMPANY LIMITED

Table 1 source: Thai commercial banks

Like the aforementioned explanation, Mols (1998) defines Internet banking as the service that allows clients to access to the data on a computer, television, or mobile phone. This is in accordance with Kolodinsky, Hogarth & Hilgert (2004) who state that electronic banking can be used on various platforms: Internet banking or online banking, PC banking or offline banking, telephone banking, mobile phone banking, and TV-based banking.

In the progressively competitive environment, Internet banking is considered a useful tool that can help banking business in reducing the use of paper. For many banks, keeping the paper records, which will be destroyed in the future, are laborious; therefore, financial institutions with millions of clients have replaced paper records with online computer networks. However, sometimes clients still ask for paper receipts and records though with Internet banking, they can easily get and keep these records or receipts in their mobile phones or computers (Sullivan, 2000).

### **Summary Internet Banking Services**

#### **Account Activities Review**

- View a summary of your current balance as well as detailed transaction records of your registered deposit accounts, mutual fund units, loans, credit cards.
- Print your transaction history
- View your credit-card statements and transactions over the last three months
- View the repayment history of your loan account to see how much principal you have left to repay and how much you have repaid in the last twelve months

#### **Bill Payments**

- Pay for goods and services online (including credit cards and supplementary credit cards)
- Set payment dates in advance so you won't forget to pay bills when they are due.

**Funds Transfer /Money Transfer**

- Transfer funds between bank accounts
- Transfer funds parties with accounts at other banks
- Transfer funds to 3rd parties with accounts at other banks
- Transfer funds to 3rd parties with accounts at other banks

**Investment**

- Invest in Mutual Funds
- Apply for Securities Trading Account
- Apply for e-Dividend Service

**2.2 AFFECTING FACTORS**

There are four importance factors behavior intention, attitude toward behavior, subjective norm, perceived usefulness and perceived ease of use.

**2.2.1 Behavior Intention**

Similar to Technology Acceptance Model (TAM), the Theory of Reasoned Action (TRA) states that a person's use of technology can be predicted by examining that person's intention to perform a particular behavior which, in this case, is the intention to use technology. Thus, the behavior concerning the use of technology can be determined by measuring the user's intention and other factors influencing the user's behavior (Davis, Bagozzi & Warshaw, 1989). As for the use of Internet banking, many studies have revealed that there is a significant relationship between "the intention to use" and "the real use" of online banking (Walker & Johnson, 2006).

Also, intention is the major antecedent of the Theory of Reasoned Action (TRA) which is a psychosocial theory that is proposed and adopted to study human social behavior and it

involves many factors, including notions, ideas, and the measurement of behavioral intention (Feather & Newton, 1982).

This behavioral intention affects a person's choice to perform or not perform a particular behavior. It results from the analysis of the consequence of behavior and the subjective value of consequence. If the result of the analysis is positive, the person is likely to decide to perform the behavior. The person's decision is the intention which is the important antecedent of the Theory of Reason Action.

Salazar (1991) explains that a person's intention is related to his or her behavior as it can indicate if the person is planning to perform the behavior. This intention remains for a time and until the suitable opportunity arises. The behavior of a person, therefore, is controlled by his or her intention. It can be said that intention leads to action. That is, a person will consider the consequence of his or her action or behavior before performing it. When studying a person's intention, his or her behavior can be predicted or explained accurately.

Ajzen & Fishbein (1980) propose that intention is an important indicator of behavior. Also, the performance of the behavior can be predicted precisely by considering a person's attitude toward the behavior, not the attitude toward the object at which the behavior is directed. For many years, various studies have shown that the intention to perform a behavior is the most significant antecedent of real behavioral performance. Therefore, it can be implied that a person's intention can predict possible behavior of the person in the future.

Many researchers place the intention as one of the best predictors of behaviors. It has become an essential part of several modern theories of human social behavior, such as the social cognitive theory (Bandura, 1997), the health belief model (Rosenstock, Strecher, & Becker, 1994; Strecher, Champion & Rosenstock, 1997), the information–motivation–behavioral skills model (Fisher & Fisher, 1992), the theory of interpersonal relations and subjective culture (Triandis, 1977), the theory of trying (Bagozzi & Warshaw, 1990), and the prototype/willingness model (Gibbons, Gerrard, Blanton, & Russell, 1998).

These theories can also predict a person's behavior and provide an explanation and information about the behavior. Each theory is different in detail, but the Theory of Reasoned Action provides variables that represent three factors influencing a person's decision to engage or

not engage in a behavior. These three factors are the likely positive or negative consequence of the behavior, the approval or disapproval of other people, and the elements that may facilitate or impede the performance of behavior.

To be more specific, the first aspect is the possible consequence of the behavior which is also known as behavioral belief (Fishbein & Ajzen, 1975; Ajzen & Fishbein, 1980), outcome expectation (Bandura, 1977), and price and advantage (Becker, 1974). Regardless of the terms, it is expected to provide a positive or negative evaluation or attitude toward the behavior. That is, after a person analyzes the consequences of the behavior, if the result reveals that the benefits of the behavior exceed the disadvantages, the person is likely to have a favorable attitude toward the behavior. On the other hand, if the disadvantages of the behavior overbalance the benefits, a negative attitude is probably formed by the person.

The second factor is the approval or disapproval of a person's family, friends, colleagues, and other people that is likely to occur when the person chooses to perform the behavior. This is usually termed as normative belief and it is assumed to cause social pressure or subjective norm (Fishbein & Ajzen, 1975; Ajzen & Fishbein, 1980). For this reason, when a person believes that other people expect him or her to do something, the subjective norm will press the person to do the behavior. In contrast, when the subjective norm is against the behavior, the person will be pressured not to perform it.

Finally, the last factor concerns the presence or absence of elements that make the performance of behavior easier or harder. It is also called managing belief or controlling belief. It creates a person's perception which concerns his or her sufficiency or deficiency of the capabilities to carry out the behavior. This kind of perception is called self-efficacy and personal agency (Bandura, 1977) or perceived behavioral control (Ajzen, 1991). That is, a person who believes that he or she possesses the skills or other resources needed to perform the behavior or overcome difficulties is likely to develop strong sense of self-efficacy or perceived behavioral control, while a people who believes that he or she lacks some of the requisite skills or resources is likely to develop weaker sense of self-efficacy or perceived behavioral control.



### 2.2.2 Attitudes toward behavior (ATB)

Fishbein & Ajzen (1975) explain that the attitude toward a behavior involves the degree to which the performance of behavior is positively or negatively valued. According to the expectancy value model, the attitude toward a behavior can be predicted by studying the accessible behavioral beliefs which involve the behavior's consequence and other attributes. The strength of each belief (b) is weighted by the evaluation (e) of the consequence or attribute, and the result is the person's belief about certain consequences that can occur if the behavior is performed. This can be explained in the following equation.

$$A = \sum b_i e_i$$

**Behavioral belief** involving the behavior and the expected consequence is considered subjective probability. A person may hold several behavioral beliefs about a behavior, but only a relatively small number of them are accessible. It is assumed that these accessible beliefs and the subjective values of the expected consequences can determine the attitude toward the behavior. In other words, a person's evaluation of each consequence leads to the person's attitude affecting the person's subjective belief that the behavior will bring about the expected consequence.

Consequently, a person's attitude associates with the person's belief about the positive or negative consequence of his or her behavior. Therefore, when the person develops the positive belief about his or her behavior, he or she will also develop the positive attitude toward that behavior. On the other hand, when the negative belief is formed, the negative attitude will be formed as well.

Shook & Bratianu (2010) agree that a person's belief about possible consequence plays an important role in forming the person's attitude. This can be easily explained that the more favorable the possible consequence is, the stronger the intention to do the behavior

will be; on the other hand, the less favorable the possible consequence is, the weaker the intention to do the behavior will be. Harris (1998) also claims that the attitude is important and, in order to reduce the prejudice and discrimination, the attention must be on the behavior. Nevertheless, there have not been many progresses concerning the prediction of the behavior and one of the significant issues of the previous studies has been about the attitude which is useful when predicting a person's behavior when the person has no problem.

Many researchers have seen and studied the attitude in different ways, so the definitions of attitude are varied. One definition concerns the psychological aspect and the other definition involves the sociological aspect. These definitions are explained by Mills (1959) as follows. First, psychological definition of attitude involves the behavior. Researchers who adopt the psychological definition of attitude attempt to reduce prejudice and discrimination by changing attitudes. As for sociological definition of attitude, it concerns the intention to act. In the sociological aspect, attitude is a "mental position with regard to a fact, or state; a feeling, or emotion toward a fact or state". Researchers who adopt the sociological definition of attitude will try to reduce prejudice and discrimination by changing behaviors. Despite of their difference, there is a question when dealing with people who only handle or accept what life brings (Mills, 1959).

However, Eagly & Chaiken (1993) define attitude as "a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor". Every person has this psychological tendency in the form of all kinds of evaluations on every matter, including overt and covert, as well as cognitive and affective evaluations. Generally, finding a person's attitude toward a physical object, an institution, an ethnic or religious group, etc. can help predicting the person's behavioral pattern or multiple-act criteria. It can be claimed then that the attitude toward a behavior is a good predictor of an action and it can be adopted by the researcher to examine and analyze data for this study concerning Internet banking.

Shown below in figure 1 is the MODE model (Motivation and Opportunity and Determinants) developed by Fazio (1986, 1990a, 1995; Fazio & Towles-Schwen, 1999) who attempts to explain the processes in which attitudes influence the performances of specific behaviors. The acronym MODE expresses that "motivation and opportunity act as determinants

of spontaneous versus deliberative attitude-to-behavior processes” (Fazio, 1995). The model is the result of his previous studies concerning the effects of attitudes on perceptions and judgments. According to the model, a person’s general attitude can influence or bias perception and judgment of information related to an object and this bias will occur after the activation of the attitude. Consistent with other dual-mode processing theories (Chaiken & Trope, 1999), the MODE model suggests that attitudes can be activated in one of the following two modes: (1) in a deliberative or controlled mode, or (2) in an automatic or spontaneous mode. That is, for the first mode, a person can retrieve or develop their attitude toward an object in an effortful manner when he or she is sufficiently motivated and has the cognitive capacity to do so. As for the latter mode, when a person’s motivation or cognitive capacity is low, his or her attitude will be available only if automatically activated. Fazio (1990a) also mentions that the automatic or spontaneous activation of attitude is reserved for strong attitudes.

In addition, attitude is defined by Fazio (1990a) as the learned association between an object and a positive or negative evaluation of that object, and the attitude strength is equivalent to the strength of this association. Therefore, the automatic attitude is activated only when there is a strong association between the attitude toward the object and a positive or negative evaluation. It can be easily explained that the stronger the attitude, the more likely it is that it will be automatically activated and accessible. Usually, the degree of accessibility (attitude strength) is found by measuring the latency of response to the attitudinal question and the concept is simple: the faster the response, the more accessible the attitude.

Also, Fazio (1990a) suggests that strong attitudes are more difficult to change than weaker attitudes. This suggestion is consistent with the general idea that strong attitudes involve personal issues and they are held with great conviction or certainty (Raden, 1985; Petty & Krosnick, 1995). Therefore, it can be assumed that these attitudes can last long and rarely change. In addition, they can influence perceptions or judgments and affect overt behavior (Krosnick & Petty, 1995).

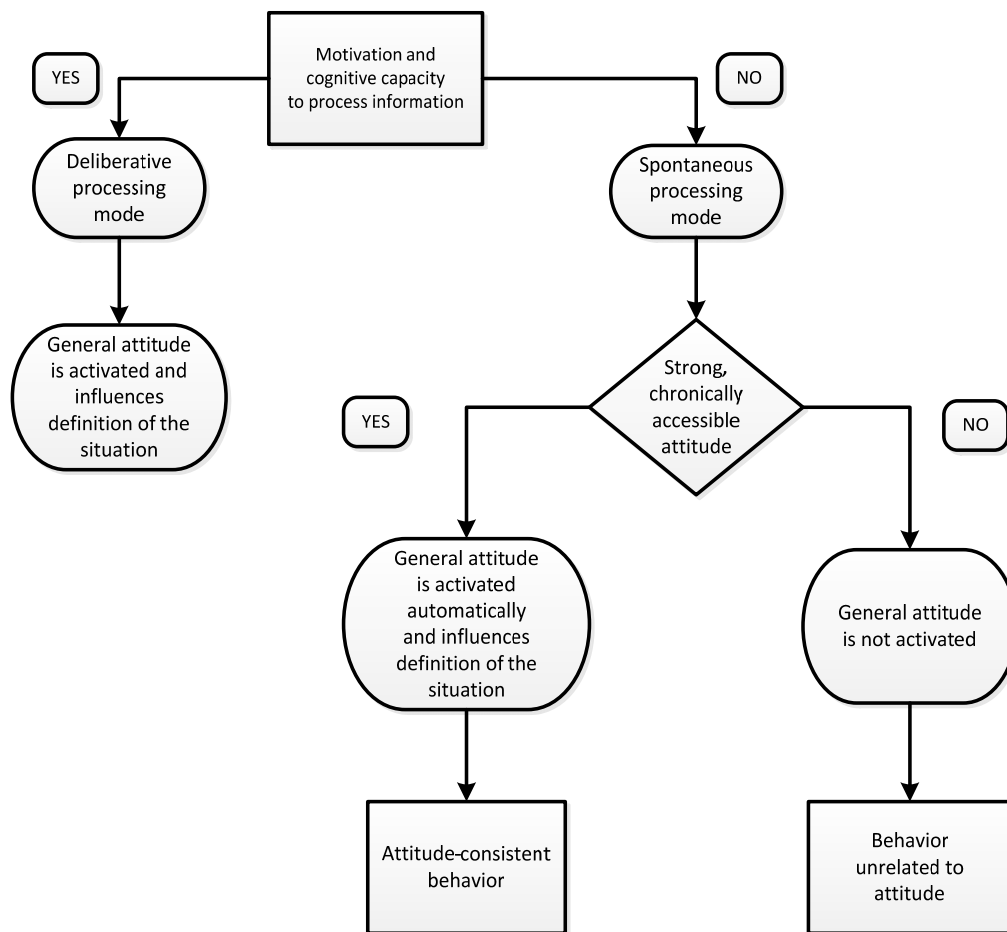


Figure 1 Fazio's (1990) MODE (Motivation and Opportunity and Determinants) MODEL

It is described by Ajzen (1991) that the more favorable the attitude and subjective norm as well as the greater perceived control, the stronger a person's intention to perform the behavior. Nevertheless, there might be situations where attitudes and subjective norms do not conform to each other. For example, a person might have a positive attitude toward purchasing a computer program, but his or her acquaintances or family impede him or her to do so. In order to realize a person's intention, significant factors concerning the person must be examined. This can be exemplified as follows: two persons share their positive attitudes toward buying a computer program while their acquaintances do not want them to do so. If one person wants to buy the program and the other does not, it is difficult to explain their intentions by

studying only these factors since they have the same attitude and norm. There could be different intentions if the attitude primarily determines the first person's intention and the subjective norm primarily influences the other person's intention. According to the theory, both attitudes and subjective norms are significantly placed as determinants of the actual intention which increases the value of the theory (Ajzen & Fishbein, 1980). Also, the relative weight of attitudes and subjective norms in the theory may have practical implications, for example, Trafimow (1996) explains that in the prediction of college students' drinking intentions, only attitudes are important. For this reason, anti-alcohol strategies should focus on the attitudinal components, not the normative components.

### 2.2.3 Subjective norm (SN)

“Subjective norms are a person's own estimate of the social pressure to perform or not perform the intended behavior” (Ajzen & Fishbein, 1980). It also refers to a person's perception about other people's perspectives toward his or her behavior. This includes the person's family and friends' perceptions about the behavior's consequences (normative belief), and the degree to which it influences the person's behavior (motivation to comply). In other words, subjective norm is formed by normative belief and motivation to comply, regardless of the person's perception. It can probably be concluded that “the importance of people around him/her and their opinions on how they should act will determine the behavioral outcome” (Ajzen & Fishbein, 1980)

Subjective norm is associated with behavior because when a person considers whether to perform an action or not, other people's perceptions about the action have a great influence on the person's decision. In other words, the approval or disapproval of other people affects the person's behavior. Fishbein and Ajzen (1980) suggest that subjective norm (SN) can be predicted by considering and examining a person's normative belief ( $nb_i$ ), which concern perceived expectations of other people or groups and his or her motivation to comply to the norm

( $mc_i$ ). In order to find and measure the subjective norm of a person, one can use the following equation.

$$SN = \sum nb_i mc_i$$

**Normative belief** is defined as a person's belief about other people's expectations for him or her to perform or not perform certain behavior. Generally, researchers who study normative beliefs will also examine **motivations to comply** which will show how much the person is willing to behave as expected by the others. To predict a person's subjective norm, each normative belief should be multiplied by the person's motivation to comply

Also, it can be explained that subjective norm is a predictor of intention to perform a behavior and that intention is a predictor of actual behavior. With its attributes, normative belief can be used in two ways: (1) to predict the variables (subjective norm, intention, and behavior), and (2) to provide information about the focus of efforts on normative beliefs of other people.

For at least a century, normative variables have been the important research concept in many social psychology studies, for example, the study of Le Bon (1895) concerning an effect in which he called contagion - people in a crowd are strongly affected by beliefs, emotions, and behaviors of others in that crowd. After Fishbein & Ajzen (1975, 1980) propose the Theory of Reasoned Action, the concept of normative beliefs then has become prominent.

Ajzen (1991) states that subjective norm is generally defined as "the perceived social pressure to perform or not to perform the behavior". Also, it is normally described as a person's perception or "opinion about what important others believe the individual should do" (Finlay, Trafimow & Moroi, 1999). This perception or opinion has been the person's normative belief which is usually multiplied by motivation to comply with this belief (Ajzen & Fishbein, 1972). Subjective norms, represented by normative beliefs, are within the social norms, but they are not identical since social norms, which are broader, usually refer to the permissible, but not necessarily required behaviors.

Subjective norms or beliefs about the expected action of a person in a particular situation have great influences on the actual behavior of the person, as shown in the model proposed by Fishbein & Ajzen (1975). Researchers have found many evidences that support this concept (Ajzen & Fishbein, 1980). Normally, a person wants to perform to other people's expectation; therefore, norms can be used to constrain a person's behavior. In some situations, if the norm is very strong, every person may act in the same way, regardless of his or her attitude. Thus, in those situations, attitude-behavior consistency can be low.

Furthermore, a person's behavioral intention can be studied and understood by examining and measuring the person's attitude toward the behavior and subjective norm. If the complete understanding is expected, the theory suggests finding out why the person holds certain attitudes and subjective norms. The determinants affecting the person's attitude and subjective norm are behavioral and normative beliefs. This belief is defined as subjective probability that an object (behavior) has a certain attribute (Fishbein & Ajzen, 1975). For example, if a person thinks that his or her family wants him or her to buy the computer program, the perceived subjective norm will force the person to buy that program. On the other hand, if the person perceives that his or her family is against the idea of buying the program, with this negative social pressure the person is not likely to buy it.

In summarize, although subjective norm has been well known in psychology area however all research resulted found the important outcome in the same direction that subjective norm able to forecast consumer behavior especially on customers' intention which it can be the key factor to improve on the new distribution channel provided by financial industry.

### 2.2.3 Perceived usefulness (PU)

Perceived usefulness is one of the two important factors of the technology acceptance model (TAM). It is defined by Davis (1989) as "degree to which a person believes that using a particular system would enhance his or her performance". The definition derives from the meaning of "helpful" which is "equipped for being utilized profitably". Similarly, it is defined by Mathwick, Rigdon & Malhotra, (2001) as "the extent to which a person deems a particular

system to boost his or her job performance”. A system with high perceived usefulness is the one that users believe it will help them to have better work performance (Vroom, 1964 ; Pfeffer, 1982). Well-known and used by many companies with Internet banking services, the theory is based on various theories in social psychology, such as the Theory of Reasoned Action (TRA) (Fishbein & Ajzen, 1975; Ajzen & Fishbein, 1980), and it has been considered one of the powerful frameworks in the field (Davis, 1989; Davis et al., 1989).

Perceived usefulness is one of the important issues when speaking of Internet banking. Researchers have found the impact of perceived usefulness on user acceptance of Internet banking. In the study of Pikkarainen et al. (2004), perceived usefulness is found to be a determinant of users’ real behaviors concerning the use of Internet banking which allows them to have autonomy in doing many banking activities such as performing banking transactions, seeking financial advices, or purchasing products. However, these activities are limited by the banks as they can choose the services they want to offer to clients via the Internet (Gerrard & Cunningham, 2003).

Furthermore, there is a study conducted by Tan & Teo (2000) which reports the importance of perceived usefulness as a great factor in determining the use of technology. That is, when a person wants to adopt a technological system, he or she would consider its usefulness and prefers to interact with the system that can be seen as useful (Bhattacharjee, 2002). Gong & Xu (2004) also mention the definition of perceived usefulness as a user’s subjective perception that a system will help his or her to have better performance. In the banking context, perceived usefulness is the degree to which a client thinks that delivery channel of a bank, such as ATM banking, is more beneficial than the former services (Awamleh & Fernandes, 2006)

In addition Shumaila. Y., Gordon. R., & John. G. (2010) supported the finding of perceived usefulness was the most significant factor reference on TAM theory. The researcher information was gathered by the way of questionnaires that were sent to 2000 respondents of



Halifax Bank. The 441 questionnaires were received. The demographic profile found 245 respondents were male which more than female 190 respondents. Age group 26 to 45 years old was the most frequency. Midpoint Internet experience was 2.6 years, and midpoint Internet banking experience was 1.5 years. The researcher and team compare the TRA, and the TAM in the contextual of impartially measured Internet banking behavior.

Abdul, K. K., (2013) was hand out the questionnaire to 300 students and were returned by the researcher 240 questionnaire. The demographic profile investigated on sex, age, and study programs. Each variable was measured by using seven point Likert scales. The sex hand out to respondents found that male (166 respondents) more than female (54 respondents). Age range was up to 25 years old and study programs of 144 students of BBA program, 54 students of MBA were the most frequency. This study found that it had a significant positive relationship with intention to use internet banking. The findings show that respondents were enthusiastic on the benefits that a system provided to them. However the research's results be able to used and assist banks better recognize Pakistani students of higher education intention to adopt Internet banking. This could simplify banks to devise profitable strategies to pull in this gathering to utilize this service.

All research finding confirm that, the experimental outcome of researches as perceived usefulness (PU) has a powerful predictor of the intention to use internet banking as well as outcomes recommend that relationship between perceived useful and the intention to use internet banking in the conceptual model is significant and be able to develop the model on the variance of perceived usefulness (PU).

#### 2.2.4 Perceived ease of use (PEOU)

Perceived ease of use (PEOU) is one of the important factors of the technology acceptance model. It is used to predict the tendency of the use of technology. Davis (1989)

defines PEOU as “the degree to which a prospective user believes that using a particular system would be free of effort”. This definition derives from the definition of “ease” as “freedom from difficulty or great effort”. It means that an application that seems to be easier to use than others is likely to be accepted by users. However, many researchers explain that perceived ease of use refers to the extent to which a person perceives that using an application would be at no cost to the person (Davis et al., (1989), Mathieson, (1991), Gefen & Straub, (2000), Gahtani, 2001).

In addition, perceived ease of use refers to the degree to which an associate innovation is considered not to be difficult to understand, to learn, or to operate (Rogers, 1962). Rogers (1962) also mentions that it involves the degree to which consumers consider a new product or service as better than its substitutes. The degree to which an innovation is used or learnt to use easily is also considered as the perceived ease of use (Zeithaml et al., 2002).

In terms of Internet banking, Mathieson, (1991) states that perceived ease of use is the consumer’s perception that online banking requires only little effort. For Consult (2002), perceived ease of use is the consumer’s ability to experiment with a new innovation and evaluate its benefits easily. He also explains that perceived ease of use, which includes many factors, can determine the growth of Internet banking. The factors mentioned are the convenience of services, the existence of security, high standard functionality, and the necessity of services.

The study of personal internet banking (PIB) by Surapong (2009), found that perceived ease of use effect on Intention to use internet banking. The more uncomplicated of using internet banking the more likely client has motivated to continue to use internet banking. Also, the more long term using internet banking the more likely client find it easy to use. However, if the use of customer was complicated on system they might be more likely found internet banking was difficult to use finally they will reject to use internet banking. On this study distributed questionnaire to 700 respondents and returned 660 to researcher. However 38 respondents were rejected due to researcher found the missing point of the answer more than one the questions. The respondents 622 were accepted accordingly. SPSS was used and analyze questionnaires. Age range 31-35 years of age was the most found in this study. Positions involve the most was supervisor level (64%). The mean value compared between male and female, found that males are 34 years which older than age of females 2 years old. In term of education male has

high level education more than females and 51 males graduated master degrees and female only 36 respondents that graduated master degree. Males have monthly salary of 36,000 baht which is 6,000 baht more than females. Males have more Internet experience than females.

The study from Rahmath, Hema, Nisar & Abdullah, (2013) conducted the research the internet banking usage in India. Research questionnaire had distributed to customers of bank total 600 questionnaires. Questionnaire papers were provided to sample group by random. However this study used total questionnaires 549. Each questionnaire item was five-point Likert scale. The study examines the influence of perceived ease of use the result found that perceived ease of use have positive effect on the use of Internet banking. The results of the regression analysis conducted on the factors. Certainly perceived ease of use has long been recognized as a basic requirement for designing the system. It is meaning that the difficulty of using online system is becoming less the use of online system was increasingly as user friendly. Furthermore, this study shows that since online systems were more common, standardized and easy use. The online system has become more public and increasingly.

On this research the researcher had summarized all the finding of previous research resulted as mentions were all significant determinant on behavioral intention to use internet banking and perceived ease of use is the important variable refer to TAM theory which be able to predicted significantly on clarification consumer acceptance technology.

## **2.3. THEORETICAL BASIS**

For many years, scholars have been investigating the factors which could influence the acceptance of new technologies. Among frameworks that have been developed, based on past studies, includes the Technology Acceptance Model, TAM (Davis, 1989), Theory of Reasoned Action, TRA (Fishbein & Ajzen, 1975).

### **2.3.1 Theory of Reasoned Action (TRA)**

The theory of reasoned action (TRA) proposed by Fishbein & Ajzen (1975) is considered one of the most significant social psychology theories and basic theories of human

behavior. The theory involves using attitudes, social influences and intentions, which are all related, to predict behavior. The behavioral intention (BI) can be found by examining a person's attitude toward the behavior (ATB) and subjective norm.

In the Theory of Reasoned Action, behavioral intention (BI) is placed as the only direct antecedent of actual behavior (AB). Also, it is assumed that BI can accurately predict AB if three boundary conditions that Fishbein & Ajzen (1975) propose can be hold. These three conditions are: (1) the degree to which the measure of intention and the behavioral criterion correspond with respect to their levels of specificity of action, target, context, and timeframe, (2) the stability of intentions between time of measurement and performance of the behavior, and (3) the degree to which carrying out the intention is under the volitional control of the individual.

When adopting the Theory of Reasoned Action to use in studies, researchers should first source the important beliefs for the particular behavior since the theory cannot define which beliefs affect the behavior. This theory has been used to examine various situations and contexts in order to predict the performances of behaviors and intentions, for example, the company turnover (Prestholdt, Lane & Matthews, 1987), the study and education (Fredricks & Dossett, 1983) and the breast cancer examination (Timko, 1987). Sheppard, Hartwick, & Warshaw (1988) also study about this theory and state that the capability to predict the behavior and intention of TRA is strong across conditions.

According to the TRA, before performing a behavior, a person might deliberate about his or her action. Ajzen & Fishbein (1975, 1980) also mention that a person will consider various variables and aspects of his or her action before choosing to perform or not perform a particular behavior. Therefore, Ajzen & Fishbein (1980) assume that most actions of social relevance are under volitional control and this theory puts a person's intention to perform or not perform a behavior as the immediate determinant of action.

It can be seen that the theory places a person's behavioral intention as the best predictor of his or her real behavior and the theory can identify factors about which a person deliberates when his or her intention is formed. In the process, the person considers, weighs, and combines (1) his or her attitude toward the behavior, and (2) the subjective norms concerning the behavior (shown in figure 2). Subjective norms involve the person's perception about other

people's perspectives on his or her behavior and the motivation to comply with these expectations. For example, when a person is choosing a college to attend to, the person may think about the perspectives of parents, friends, and other people on the college as well as the degree to which he or she should comply with those people's expectations.

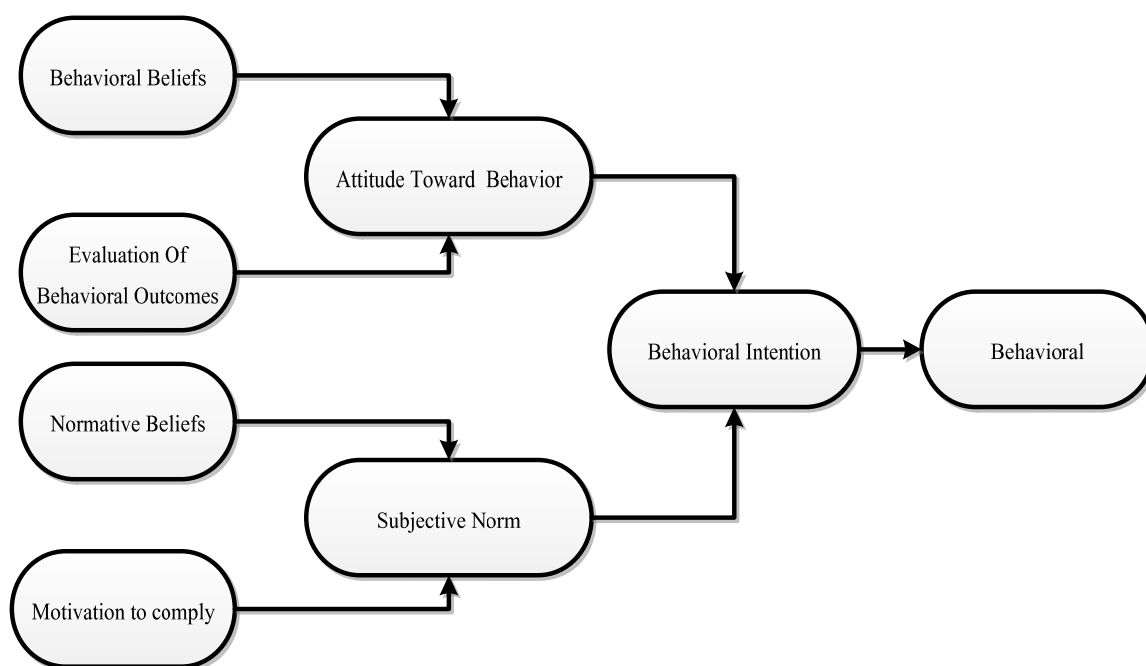


Figure 2 Theory of Reasoned Action (TRA) Source: Fishbein and Ajzen, 1975

As for the attitude mentioned in the theory, it refers to a person's attitude toward the behavior, not toward the object. These two attitudes are not similar, for example, a person may like a product (positive attitude toward the object), but does not want to purchase it due to its price (negative attitude toward the behavior). The attitude toward the behavior here is formed after the person analyzes details about the object. For this reason, only this kind of attitude is related to the theory. The attitude is affected by a person's belief about the possible consequence of certain behavior and the person's positive or negative perspective about the consequence.

There are many studies supporting the Theory of Reasoned Action and one of them is a study concerning family planning conducted by Davidson & Jaccard (1979) which

reveals the strong connection between women's behavioral intentions to have babies and their actual children in the next two years. Also, the study mentions that these women's intentions are related to their attitudes and normative norms.

Davis et al. (1989) explain that the Theory of Reasoned Action (TRA) has been adopted and proved in many researches to predict and describe intended behavior and actual behavioral performance. However, when applying it in different contexts, many researchers then realized the insufficiency and limitations of this theory (Davis et al., 1989; Ajzen, 1991).

Core Constructs	Definition	Author
<b>Attitude</b>	Refers to an individual's negative or positive evaluation of the behavior.	Fishbein and Ajzen (1975)
<b>Subjective Norm</b>	Refers to an individual's perception of social pressure to perform or not to perform the behavior.	Fishbein and Ajzen, (1975)

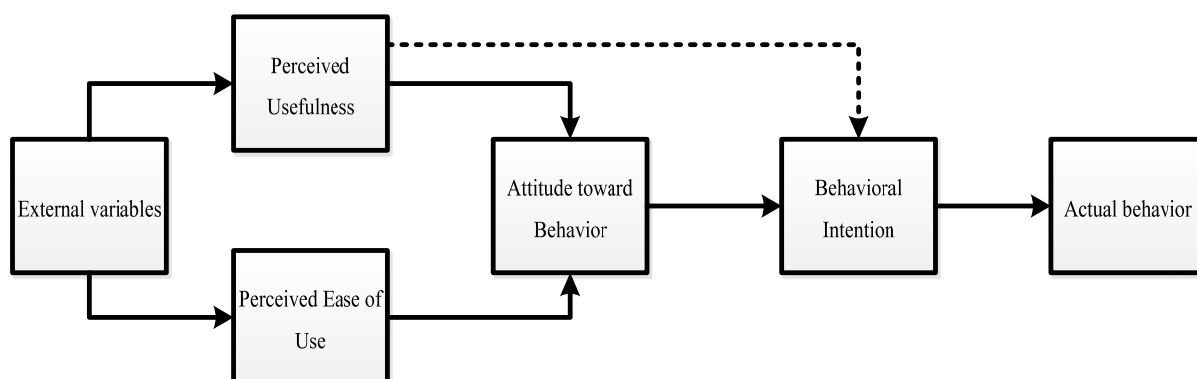
Table 2 Core constructs in TRA: Source FIDA Hussain Chandio, (2011)

Therefore, it is suggested that the theory should be used as a general behavioral theory which does not determine the specific beliefs in certain settings. Moreover, the theory is criticized for its unsuitability for predicting in the situations where people have low levels of volitional control (Ajzen, 1985). For this reason, the researcher adopts the technology acceptance model (TAM) to use in this research and the details about this model will be discussed in the following section.

### **2.3.2 Technology Acceptance Model (TAM)**

The technology acceptance model developed by Davis (Davis, 1989; Bagozzi, Davis & Warshaw, 1992), based on the TRA, is the theory used for indicating the success of using technology. Unlike the TRA, this theory does not include subjective norms as a factor for predicting a particular behavior. However, the attitude toward the behavior is used in this theory. TAM deals with a small number of basic variables developed from a research concerning the cognitive and affective determinants of computer acceptance.

Furthermore, TAM has been the prominent model for studying and predicting users' acceptance of technology. It involves two important beliefs or factors which are perceived usefulness (PU) and perceived ease of use (PEOU). Firstly, perceived usefulness (PU) refers to the degree to which a prospective user believes that using a certain system will benefit his or her job performance. It derives from the definition of the word "useful" as "capable of being used advantageously". In a company, employees are rewarded for good performance with raises, promotions, bonuses, and others (Vroom, 1964; Pfeffer, 1982). It can be explained that the system with high perceived usefulness is the one that a user believes it has a positive use-performance relationship. However, perceived ease of use (PEOU) is the degree to which a prospective user believes that he or she will be able to use a certain system effortlessly. It is related to the definition of the word "ease" which is "freedom from difficulty or great effort". As people have limited effort, they have to allocate it to perform different activities; therefore, they do not want to spend much effort to use a system or technology. For this reason, the system which is easy to use is more likely to be accepted by users than the complicated ones.

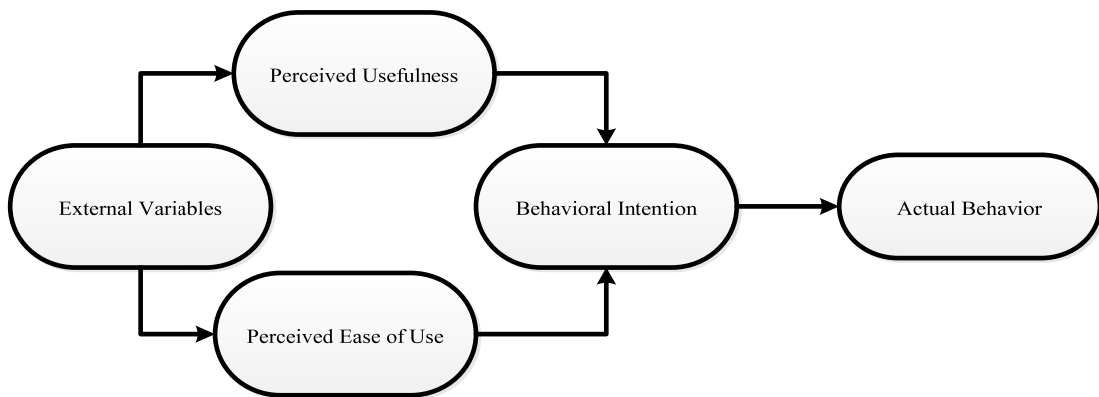


**Figure 3** Technology Acceptance Model (TAM) Source: Davis, Bagozzi & Warshaw 1989.

Figure 3 above illustrates and explains that TAM perceived usefulness and perceived ease of use can predict the attitude toward a particular behavior which, in this case, the use of technology. A person's attitude involves his or her behavioral intention (BI) to use the technology. Both the perceived usefulness and the perceived ease of use have great impacts on the behavioral intention. Also, both perceived usefulness and perceived ease of use have effects on behavioral intention.

The model developed in 1989 was revised to exclude the attitude. In an empirical study by Davis et al. (1989) on MBA students, regarding the use of word processing application, it reveals that attitudes do not fully affect the perceived ease of use and the perceived usefulness. For this reason, there was the revision of the model to be more "powerful for predicting and explaining user behavior, based on only three theoretical constructs which are behavior intention (BI), perceived usefulness (PU), and perceived ease of use (PEOU)"





**Figure 4** Revised Technology Acceptance Model (TAM) Source: Davis, 1989.

The revised model shown in figure 4 indicates that perceived usefulness and perceived ease of use are determined by external factors and behavioral intention is influenced by perceived usefulness and perceived ease of use. In many contexts, the external variables might be system design features, personal characteristics, or training, according to Davis et al., (1989).

Core Constructs	Definition	Author
<b>Perceived Usefulness</b>	Refers to the degree to which a person believes that using a particular system would enhance his or her job performance.	Davis (1989); Davis et al. (1989); Venkatesh et al. (2003)
<b>Perceived Ease of Use</b>	Refers to the degree to which a person believes that using a particular system would be free of effort.	Davis (1989) ; Davis et al. (1989); Venkatesh et al. (2003)

Table 3: Core constructs of the TAM, Source FIDA Hussain Chandio, (2011)

Furthermore, TAM can help the business for offering internet banking which is the new distribution channel that was created by bank. The business can also predicate customers' behavioral intentions by this theory. This may result in actual changes and modification in people's behavior when thinking about the innovation and lead to use Internet banking at the end. The knowledge, open wide information systems developers/customer to devise ways to perform as system appear easier to use and allows banking and technology experts to develop new ways to support the consumer needs and attached expectations of Internet banking customer.

#### **4. RELATED RESEARCH**

##### **2.4.1 The relationship between attitude and the intention to use Internet banking**

Ajzen & Fishbein (1980) the originator on attitude toward behavior have demonstrated that an individual's attitude can be anticipated with a high level of precision from the data of the individual's beliefs concerning the attitude object and the assessment aspect of these beliefs. As indicated by Ajzen & Fishbien's model, this person's attitude towards Internet banking is a function of the strength with which he/she holds these beliefs (the person's subjective likelihood that internet banking is related to the dissimilar attributes) and their evaluation of each attribute.

Consumer's attitudes have a powerful, positive effect on intention to use a new information system (Jahangir & Begum, 2008). In understanding the determinants of consumers' attitude, it is contended that this has an emphatically positive effect direct on consumers' intentions to use the new technology or system (Hernandez & Mazzon, 2007).

Malek (2011) the researcher finding found most respondents were male (73.7%) which more than female (26.3%). The study used survey data of 700 questionnaires in Jordanian public university employees which have used internet banking. The sample was given randomly form call direct to consumer by phone directories. Respondents ages range from 31 to 40 years

old and 80% of respondents were married, the most lives in the Jordanian. The result explore that there is significant positive relationship between attitude and behavioral intention which mean internet banking service was influence individuals to use internet banking parallel with Nadim &Noorjahan (2008) also found that customers have positive and statistically significant relationship between attitude and consumer intention to use internet banking. This study collected 227 respondents in Bangladesh and respondents rate were 91%. The average age of the respondents was 34 years. Respondents 74.89% respondent were male and 25.1% were female. This finding of this study has implications for developing usable internet banking systems.

Polatoglu & Ekin (2001) explained that customer attitude is consist of attribute beliefs about the object and perceived importance of that attribute in creating the choice to adopt. They also explain more in term of the internet banking context that focus on consumers' attitude which can categorize perceptions regarding information category as "payment, lead time of delivery, service that offer by bank, risk, trust, privacy, security, personalization, visual appeal, navigation entertainment, and enjoyment" (Polatglu & Ekin, 2001) and on their study, the researchers found that customer attitude affects the consumer's intention to use Internet banking.

Several researchers on their research support by all each result that attitude toward behavior has potential to be the key factor to investigate of customers intention which emphasis that there is a need to examine the influence of attitudes toward behavior influences upon the intention to use internet banking.

#### **2.4.2 The relationship between subjective norm and the intention to use Internet banking.**

By definition, Subjective norm can be defined as "a person's perception that most people who are important to her or him should or should not perform behavior in question" (Fishbein and Ajzen, 1975). The studies have investigated the significance of social science studies in banking studies (Amin et al., 2006; Nysveen et al., 2005; Kleijnen, Wetzels, & de Ruyter, 2004; Venkatesh & Morris, 2000) People surrounding them to accept and utilize internet banking. Moreover, the work study, Amin et al., (2006) alone found that subjective norm was a key indicator for Internet banking on mobile platform.

Amin et al., 2006 on their research with 200 questionnaires were provided which 115 respondents return the questionnaire. In addition respondents profile found Male (64 respondents) more than female (51 respondents) education bachelor's degree was found the most frequency education level. Additionally inspected that subjective norm has significant impact strong influence over the behavioral Intention to use innovation banking at platform mobile phone,

In the study of Nysveen (2005), subjective norm is found that the construct is important and lead to the acceptance of user. This means that the exploration of his team was success to found Internet banking acceptance by influencing such as friends, family, related. Similarly, With Kleijnen (2004) on wireless finance. It looks like that consumers that surround them and individual of each person add value to facing with bank to use internet service. This provides effect on consumer behavior.

The conducted study by Rahmath, Hema, Nisar & Abdullah (2013) found the factors for consumer acceptance internet banking was significantly. They distribute questionnaire to 549 user and use five-point Likert scale on questionnaire for measure however 549 respondents indicates that subjective norm is positive effect on the intention to use Internet banking. The researchers found that a subjective norm has a significant impact intention to use internet banking. This shows that family, friends have influence direct to customer as the same the author.

Obviously In refer studies, subjective norm in this research was influences include partners, friends, family, and colleagues. The result demonstrates that people consider using Internet banking because their relative.

### **2.4.3 The relationship between Perceived usefulness and the intention to use Internet banking.**

The importance of perceived usefulness has been widely recognized in the field of online banking. According to TAM, perceived usefulness is the degree to which a person believes that using a particular system would enhance his or her job performance.

The finding of a study conducted by Rahmath, Hema, Nisar, & Abdullah (2013) the research questionnaire has been distributed to customers of India bank total of 600

questionnaires by random but use only 549 questionnaires. Start with demographic resulted found that male (403 respondents) more than female (146 respondents). the result indicate that perceived usefulness has positive relation with intention to use internet banking this is support the hypotheses of this research also found that the perceived usefulness is the most important predictor This finding refers to the fact that consumer use internet banking for the benefits which when internet banking is perceived as useful, customer's intention to use it would great option for them. The researchers of this research also confirm of the results that banks need to focus and concentrate on newest service of bank.

Zahid, Mujtaba & Riaz (2010) found that perceiving a relatively higher correlation value between usefulness and internet banking acceptance found that when customers feel that internet banking is useful and benefit then they obtain the utilization services the bank offer to them then they start more interested in internet services than the traditional bank service. Amin, (2009) state on his research that there were two important things were found. Firstly, normally users were similarly with the usefulness of internet banking such as for web page, web site. Secondly, users were confident when they were performing on banking transactions. It can be improved their capacity.

Mohammad, Mustafa & Mohammad (2011), Sample collected 250 questionnaires and respondents of 202 were returned the response percentage was 81. The demographic profile found male (69%) more than female (31%) age founding most round 30 years old. Half of the sample has low income. Mohammad and team have banking consultant who experts related to finance business to supporting their research in more information. The regression was conducted which found the perceived usefulness factor affect the intention to use of Internet banking. The results found perceived usefulness was the most influential factors explain the intention to use Internet banking service.

Pikkarainen, Pikkarainen, Karjaluoto & Pahlila (2004) used TAM in Finland and they found perceived usefulness as a determinant of actual behavior, which influence users of this era banking created more innovative and try to design web more friendly for user, benefit with self-service that offer them great autonomic in doing banking transactions.

Moreover, Hanudin (2009) conducted the study of the factors influencing the

internet banking acceptance in Kota Kinabalu. The results suggest that perceived usefulness statistically significant. This study also used technology acceptance model (TAM) as the foundation model for investigating the internet banking was acceptance by user. For the statistic researcher present, a linear regression to examine the each factors that influence on online banking.

Similarly, in this research, once users think that system is useful then they are more likely to intention to use then finally they use it. Therefore, conformity with the TAM theory, researcher hypothesized that perceived usefulness could have a significant positive influence on consumers' intention to use internet banking.

#### **2.4.4 The relationship between perceived ease of use and the intention to use Internet banking**

Based on Eriksson, Kerem & Nilsson, (2005) state that an important key of internet banking factor that also popular was "ease of use" this factor was related to the effort of the requirement to adopt or choose internet banking as well as effect on consumers' attention in the new service channel which offer by bank. Upon evaluating ease of use he also found that this variable was the one should not overlook its relationship between technology and ease of use.

The survey by Adesina (2010) distributed the paper total 500 questionnaires and survey was returned 292 respondents from banks consumer in Nigeria the result found that ease of use has positive on the intention to use of internet. This study of the researcher has guided a knowledge regarding the factors that indicate users' acceptance systems willing to use internet banking follow the theory of TAM, this result was the same and support the other researchers such as Amin, (2009) found that perceived ease of use is positively affect intention to use as well as the result of Johar & Awalluddin (2011) Found in that the result the perceived ease of you has positive effect on intention to use internet banking this benefit to bank business it is useful and can also improve in deep into this aspect of e-commerce adoption issues.

Hsin & Mohamad, (2010). 220 questionnaires were distributed to respondents in Taiwanese and return 203 respondents demographic result found that female was majority

respondents (56%) ages range between 30 to 43 was most frequency, 4% had graduated at high school and 68% had finished bachelor's degree, 75% of respondent were from the high income (USD). the study found perceived ease of use positively influence the intention to use internet banking. Follow by Yitbarek & Zeleke (2013) finding on study regarding the analyze factors that influence customer's intention to use internet banking service channel in Bahir Dar City and obtain the similarly result.

Furthermore Akram, Jassim & Hassan (2011), found that the more easy use in consumer perception were the more likely to be found the accepted by consumer. This result had distributed 171 questionnaires to bank customers through the researchers' friends and their relatives, the researcher sent questionnaire to respondent by random which participants were bank customers also selected by random from universities, shopping malls, Internet cafes and employee form private company. The result was supported this research which found that perceived ease of use (PEOU) has positive effect upon customer Intention to use internet banking. The statistic analyze discover that the perceived ease of use was the main important determinants of internet banking usage, this factor have a great influence on the customer acceptance of the system.

Refer to TAM theory original one , the direct effect of PEOU on PU is explained by increased PEOU, then the theory revised one PEOU direct effect is on intention which 2 theories support and improve performance by having free effort to do the activities on new distribution channel. Similarly, once internet banking is easy to use, they are more likely that consumers would intention to use internet banking. Thus, compatible with TAM, it is hypothesized that PEOU has an influence on customers' intention to use internet banking.

Based upon the review of related studies, found that attitude toward behavior, subjective norm, perceived usefulness, and perceived ease of use have a variety of complex ways. These variable factors were impact intention to use internet banking, which encompasses the likelihood of perform actual use the service. Therefore, four hypotheses and conceptual model are developed as below:

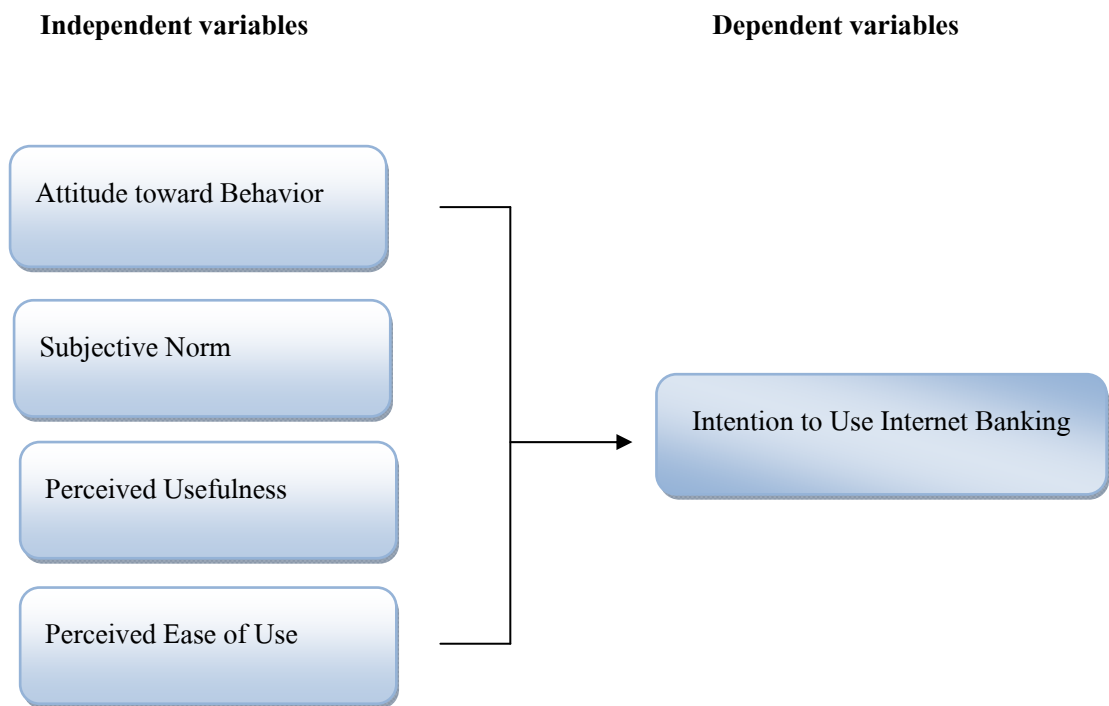
Thus, four hypotheses and conceptual model are developed as below

H1: Attitude toward Behavior (ATB) has positive effect on the intention to use Internet banking.

H2: Subject Norm (SN) has a positive effect on the intention to use Internet banking.

H3: Perceived usefulness (PU) has a positive effect on intention to use Internet banking.

H4: Perceived ease of use (PEOU) has a positive effect on intention to use Internet banking.



**FIGURE 5 CONCEPTUAL MODELS FOR THE STUDY**



## CHAPTER 3

### RESEARCH METHODOLOGY

#### 3.1 RESEARCH STRATEGY

This study will employ a quantitative research strategy. Quantitative research generates a numerical representative of a particular phenomenon. It is an empirical research method that provides a quantifiable description of the way something is in fact. This study will use a survey-style questionnaire to collect data. This method was chosen for a number of reasons. It is a popular and effective method that is used by the majority of other researchers in the field and it is inexpensive and easy to undertake. Using this approach enables a research to be conducted that might otherwise be impossible due to cost and logistical constraints.

#### 3.2 SAMPLE AND SAMPLING

The population of this study will be referred employing the calculating method of Taro Yamane: 1973. According to the population of the study, there are 2,515,000 ([www.nso.go.th](http://www.nso.go.th)) people who using internet and live in Bangkok. Bangkok is the capital city and investment hub of Thailand. It also a well-known holiday destination and has economic growth and purchasing power comparable with anywhere in Southeast Asia. The sample was chosen using a convenience sampling technique. The sampling was collected from respondents by the researchers based on the questionnaires distributed. The sample size of respondents chosen to participate for the research is around 400. By studying the sample, the researchers could generalize the population interest. Referring to the calculating method of Taro Yamane (Taro, 1973) his formula has been set as follows,

$$n = \frac{N}{1 + Ne^2}$$

When n = Sample size

N = Population size

e = the error of sampling

N = 5,673,560

e = 0.05

$$\frac{2,515,000}{1 + (2,515,000 \times 0.05)^2} = 399.93$$

### 3.3 DATA COLLECTION

Source of data collected for this study are as follows.

This study uses two types of data, primary, and secondary data. Primary data is derived from interviews of sample approximately 400 people by quotation tool. Secondary data is typically peer-reviewed journal articles, textbooks, news stories and other media, the research literature from documents, related articles, and research to find the basis of factors affecting the intention to use online banking.

While Primary, quantitative data can identify a particular phenomenon or trend, secondary data can often provide some insight as to why it occurred. This is important when conducting social research because it is often as useful to identify the social forces that generate a result as it is to discover the result itself. Essentially, secondary data, particularly sources that provide qualitative analysis, enable the researcher to explore aspects of a phenomenon that would not be identified by quantitative primary data.

### **3.4 DATA ANALYSIS**

Data analysis for this study was conducted using SPSS software. The analysis used descriptive statistics such as mean, frequency, percentage and standard deviation, as well as inferential statistics to facilitate meaningful analysis.

Descriptive statistics were used to develop the demographic profile of the study's respondents. Inferential statistics regressions was used to determine the relationship between usefulness and intention to use Internet banking, the relationship between perceived ease of use and intention to use Internet banking, the relationship between attitude and intention to use Internet banking, and the relationship between subjective norm on intention to use Internet banking. Single Regression was deemed appropriate for the analysis. This method is useful for evaluation the effect of independent variable on dependent variable.

For this research, there are 500 questionnaires which returned total 420 and rejected 20 due to respondents fill blank form, researcher has been used quality questionnaires total 400 questionnaires both paper and electronic, distributed to the sample group. The questions and sequences of questions on both forms are alike.

The paper questionnaires were distributed by the researcher at the universities, the department store, and the coffee shops to traditional banks' clients. However, electronic questionnaires, in the form of Google Document, were directly sent to the respondents via e-mail. Consequently, the respondents of electronic questionnaires were truly the Internet users since they received and answered the research questions online before summiting them. Later, the data collection was conducted automatically and efficiently, with no data loss.

### **3.5 RESEARCH INSTRUMENT**

Questionnaires designed to record and identify perceptions are often used to measure. In this research the researcher use liker scales that provide numeric range covering

strong agreement thorough strong disagreement. 5 points Likert scale questionnaires will be used to measure the impact between variables.

This study will use a self-administrative questionnaire to gather with primary data this is a commonly used measurement instrument for studies of attitude toward behavior, subjective norm, perceived usefulness, perceived ease of use and consumers' intention to use internet. Prior researchers in the field such as Shih & fang,(2004); Ajzen & Fishbein, (1980) and the others have used similar instruments.

To collect data for these research questionnaires were employed. They consist of three parts.

Part 1 contains 7 questions on demographic profile; general questions for personal factors provide the multiple choices to select the answer for measuring the parameters such as gender, age, education, occupation, income.

Part 2 Total contains 6 questions on Customers' Intention toward Internet Banking consist of contains 3 questions on Frequency of Internet Usage and contains 3 questions on Frequency of Internet Banking.

Part 3 contains 24 questions that represent the model hypotheses. Four of them explain the independent variables of the model (Behavioral Intention) while the other twenty questions illustrate the dependent variables (perceived usefulness, perceived ease of use, attitude toward behavior and subject norm).

**TABLE 4 QUESTIONNAIRE SCLAE AND MEASURMENT**

<b>Research Variables</b>	<b>References</b>	<b>Measurement</b>	<b>Questionnaire</b>
<b>Intention to use</b>	Shih & fang, (2004)	1. I intend to continue using e-banking in the future 2. I expect my use of e-banking to continue in the future 3. I will frequently use e-banking in the	Likert Scale

<b>Research Variables</b>	<b>References</b>	<b>Measurement</b>	<b>Questionnaire</b>
		<p>future</p> <p>4. I will strongly recommend others to use e-banking</p>	
<b>Perceived Usefulness</b>	Shih & fang, (2004)	<p>1. Using e-banking improves my performance of utilizing banking service</p> <p>2. E-banking can enhance the effectiveness of customers' transactions with their bank</p> <p>3. Using e-banking services enables me to utilize banking service more quickly</p> <p>4. Using e-banking for my banking service increases my productivity.</p> <p>5. I find e-banking useful for my banking activities</p> <p>6. Using e-banking makes it easier to do my banking activities</p> <p>7. Using e-banking can reduce queuing time</p> <p>8. Using e-banking can cut travelling expenses</p>	Likert Scale
<b>Perceived ease of use</b>	Shih & fang, (2004)	<p>1. It is easy for me to become skillful at using the e-banking</p> <p>2. I find e-banking easy to do what I need</p>	Likert Scale

<b>Research Variables</b>	<b>References</b>	<b>Measurement</b>	<b>Questionnaire</b>
		3. It is easy for me to learn how to use e-banking 4. I find e-banking to be flexible to interact with 5. My interaction with e-banking is clear and understandable 6. Overall, I find e-banking easy to use	
<b>Attitude</b>	Shih & fang, (2004)	1. I feel using Internet banking is a wise idea. 2. I feel using Internet banking is a good idea. 3. I like to use Internet banking. 4. Using Internet banking site is a pleasant experience.	Likert Scale
<b>Subjective Norm</b>	Ajzen & Fishbein, (1980)	1. My reference group influences my decision to use online banking. 2. Completely agree with my referent's opinions that I should use online banking service.	Likert Scale

### 3.6 RELIABILITY TEST OF THE QUESTIONNAIRE

When creating a questionnaire, Cavana et al., (2001) and Sekaran (2013) agree that in order to find errors in the questions or the sequence of questions, the reliability test should be conducted. Malhotra (2004) also mentions that there must be at least 30 respondents of questionnaire in order for it to be considered valid. The researcher, therefore, conducted the pre-

test with 30 respondents to measure the reliability of the questionnaire. The chosen sample group was Internet users in Bangkok. After the data collection, information received from the respondents was input into SPSS using Cronbach's alpha method. The reliability result should be at least 0.80 which would ensure the reliability of the questionnaire as recommended by Cavana et al., (2001) who explains that "reliabilities of less than 0.80 are considered to be poor, those in the 0.9 range are acceptable, and those over 0.9 are good, in which the results of the reliability". Below is the result of the reliability test of the questionnaire used in this study.

Table 6 Reliability test

Variables	No of Items	No. of Respondents	Reliability
Behavioral Intention to use	4	30	0.918
Perceive Usefulness	8	30	0.948
Perceive Ease Of Use	6	30	0.950
Attitude	4	30	0.928
Subjective Norm	2	30	0.963

## CHAPTER 4

### RESEARCH FINDING

This chapter shows the research finding from the data collection as mentioned in chapter 3. It comprises of three parts.

#### 4.1 DESCRIPTIVE RESULTS

From the survey, the researcher collected data from 400 respondents who used internet the results show as table.

##### Respondent Demographic

The data collected from 400 respondents. The information is presented in table 4.2 the table show that respondents of male (50.5%) more than female (49.5%) and the most common age range was between 21-30 year (43.5%). Education most respondents was Bachelor Degree (60%). Private company (48%) was most frequent occupations. the most commonly income was between 15,001-30,000 Baht (43%)

Table 5 Demographic Profile of Respondent

Profile	Description	n = 400	
		Frequency (n = 400)	Percentage (%)
Gender	Male	202	50.5
	Female	198	49.5
Age	< 20	34	8.5
	21-30	174	43.5



	31-40	144	36.0
	41-50	16	4.0
	>51	32	8.0
<b>Education</b>	Lower Bachelor Degree	32	8.0
	Bachelor Degree	240	60
	Master Degree and Higher	128	32.0
<b>Occupation</b>	Student	20	5.0
	Government officer/Public enterprise officer	118	29.5
	Private company	192	48.0
	Business	46	11.5
	Other	24	6.0
<b>Income</b>	< 15,000	50	12.5
	15,001-30,000	172	43.0
	30,001-50,000	140	35.0
	50,001-100,000	14	3.5
	>100,000	24	6.0

## CONSUMER BEHAVIOR TOWARD INTERNET USAGE

The question aims to provide insights of consumer behaviors of internet and internet banking usage and the question as follows

### Frequency of Internet Usage

The majority of Internet computer access has respondents 100% that able to access internet.

Table 6 Internet Computer Access

Detail	Frequency (n=400)	Percentage (%)
Yes	400	100

### Frequency of Internet Banking Usage

The knowing of Internet Banking web site found the majority of respondents 87.2% have known internet banking web site, despite of 11.3% do not know.

Table 7 the knowing of Internet Banking Web Site

Detail	Frequency (n=400)	Percentage (%)
Yes	354	87.2
No	46	11.3

Internet banking Experience found that the majority of respondents 70.4% have experience internet banking web, despite of 28.1% have no experience of internet banking.

Table 8 Internet Banking Experience

<b>Detail</b>	<b>Frequency (n=400)</b>	<b>Percentage (%)</b>
<b>Yes</b>	286	71.5
<b>No</b>	114	28.5

More than half has an experience to use the service of internet banking (70.4%) and this research categorize frequency of use into 5 categories which consist of the majority of respondents 20.5% have used internet few times a month, follow by 15% once a week have used internet, 12% few times a week, 11% once a month, 10% few time before, and everyday 3%.

Table 9 Frequency of Use

<b>Detail</b>	<b>Frequency (n=400)</b>	<b>Percentage (%)</b>
<b>Few time before</b>	40	10.0
<b>Once a month</b>	44	11.0
<b>Few times a month</b>	82	20.5
<b>Once a week</b>	60	15.0
<b>Few times a week</b>	48	12.0
<b>Everyday</b>	12	3.0
<b>Total use</b>	286	71.5%

Internet banking has 4 activities the majority of respondents 65.3% was Money transfer follow by account review 42.8%, account review 34.8% and fund transfer 4%.

Table 10 Internet activities

<b>Detail</b>	<b>Frequency</b>	<b>Percentage (%)</b>
<b>Money Transfer</b>	261	65.3
<b>Bill Payment</b>	195	34.8
<b>Account Review</b>	171	42.8
<b>Fund Transfer</b>	16	4.0

#### PERCEIVE USEFULNESS, PERCEIVE EASE OF USE, ATTITUDE AND SUBJECTIVE NORM

The section of descriptive analysis was the mean characteristic for 4 each of the scales (Perceived usefulness, Perceived ease of use, Attitude toward behavior and Subjective norm) these questions are based on the formulation follows:

$$\text{The width of each level} = \frac{\text{Highest score} - \text{Lowest score}}{\text{The number of level}} = \frac{5 - 1}{5} = 0.8$$

- |                   |           |       |                                |
|-------------------|-----------|-------|--------------------------------|
| 1. The average of | 1.00-1.79 | means | a very low level of agreement  |
| 2. The average of | 1.80-2.59 | means | a low level of agreement       |
| 3. The average of | 2.60-3.39 | means | a moderate level of agreement  |
| 4. The average of | 3.40-4.19 | means | a high level of agreement      |
| 5. The average of | 4.20-5.00 | means | a very high level of agreement |

## THE INTENTION

The Behavioral Intention comprises of 4 items (Q1-4) in which the range, mean, and standard deviation of this scale is shown in Table below. The highest ranked questions with high level of agreement is “*I expect my use of e-banking to continue in the future*” (mean = 4.11, S.D. = 0.824) follow by “*I intend to continue using e-banking in the future*” (mean = 3.93, S.D. = 0.925), “*I will frequently use e-banking in the future*” (mean = 3.92, S.D. = 0.900), “*I will strongly recommend others to use e-banking*” (mean = 3.42, S.D.=0.892) The overall mean value of the behavioral intention scale (BI) with mean score of 3.84 and S.D. of 0.888 recommend that consumer has intention to use internet banking.

Table 11 Mean Value of the Intention

No.	Behavioral Intention	Mean	S.D.	Mean Interpretation
1	I intend to continue using e-banking in the future.	<b>3.93</b>	<b>0.925</b>	High Level
2	I expect my use of e-banking to continue in the future.	4.11	0.824	High Level
3	I will frequently use e-banking in the future.	3.92	0.900	High Level
4	I will strongly recommend others to use e-banking.	3.42	0.892	High Level
	Overall	3.84	0.888	High Level

### ATTITUDE TOWARD BEHAVIOR

Attitude toward Behavior comprises of 4 items in which the range, mean, and standard deviation of this scale is shown in Table below. The highest ranked questions with high level of agreement is “*I feel using Internet banking is a good idea*” (Mean = 3.98, S.D = 0.868), follow by “*I like to use Internet banking*” (Mean = 3.91, S.D = 0.826), “*Using Internet banking site is a pleasant experience.*” (Mean = 3.90, S.D = 0.807), “*feel using Internet banking is a wise idea*” (Mean = 3.90 S.D. = 0.927). The overall mean value of the Attitude toward Behavior with mean score of 3.92 and S.D. of 0.857 recommend that consumer’s attitude has influence to customer’s intention to use internet banking.

Table 12 Mean Value of Attitude toward Behavior

No.	Attitude Toward Behavior	Mean	S.D.	Mean Interpretation
1	I feel using Internet banking is a wise idea.	<b>3.90</b>	<b>0.927</b>	<b>High Level</b>
2	I feel using Internet banking is a good idea.	3.98	0.868	High Level
3	I like to use Internet banking.	3.91	0.826	High Level
4	Using Internet banking site is a pleasant experience.	3.90	0.807	High Level
	Overall	3.92	0.857	High Level

### SUBJECTIVE NORM

Subject Norm comprises of 2 items in which the range, mean, and standard deviation of this scale is shown in Table below. The highest ranked questions with high level of agreement is “*completely agree with my referent’s opinions that I should use online banking service*” (Mean = 3.64, S.D = 0.976) follow by “*completely agree with my referent’s opinions that I should use online banking service*” (Mean = 3.52, S.D = 0.994) The overall mean value of the Subjective Norm with mean score of 3.82and S.D. of 0.874 recommend that subjective norm has influence to consumer’s intention to use internet banking.

Table 13 Mean Value of Subjective Norm

No.	Subjective Norm	Mean	S.D.	Mean Interpretation
1	My reference group influences my decision to use online banking.	3.64	0.976	High Level
2	Completely agree with my referent’s opinions that I should use online banking service.	3.52	0.994	High Level
	Overall	3.59	0.985	High Level

### PERCEIVED USEFULNESS

The perceived usefulness comprises of 8 items in which the range, mean, and standard deviation of this scale is shown in Table below. The highest ranked questions with very high level of agreement is “*Using e-banking can reduce queuing time*” (Mean = 4.38, S.D. = 0.885) follow by; “*Using e-banking can cut travelling expenses*” (Mean = 4.21, S.D. = 0.961), “*Using e-banking services enables me to utilize banking service more quickly*” (Mean = 4.20, S.D. = 0.825), in the group of high level is follows, “*Using e-banking makes it easier to do my banking activities*” (Mean = 4.10, S.D. = 0.854), “*E-banking can enhance the effectiveness of customers’ transactions with their bank*” (Mean = 3.99, S.D. = 0.858), “*Using e-banking*

*improves my performance of utilizing banking service*” (Mean = 3.94, S.D. = 0.823), “ *I find e-banking useful for my banking activities*” (Mean = 3.93,S.D = 0.877), “*Using e-banking for my banking service increases my productivity*” (Mean = 3.81, S.D. = 0.837). The overall mean value of the Perceived Usefulness with mean score of 4.07 and S.D. of 0.865 recommend that perceived usefulness has influence to consumer’s intention to use internet banking.

Table 14 Mean Value of Perceived Usefulness

<b>No.</b>	<b>Perceived Usefulness</b>	<b>Mean</b>	<b>S.D.</b>	<b>Mean Interpretation</b>
1	Using e-banking improves my performance of utilizing banking service.	<b>3.94</b>	<b>0.823</b>	<b>High Level</b>
2	E-banking can enhance the effectiveness of customers’ transactions with their bank.	3.99	0.858	<b>High Level</b>
3	Using e-banking services enables me to utilize banking service more quickly.	4.20	0.825	<b>Very High Level</b>
4	Using e-banking for my banking service increases my productivity.	3.81	0.837	<b>High Level</b>
5	I find e-banking useful for my banking activities.	3.93	0.877	<b>High Level</b>
6	Using e-banking makes it easier to do my banking activities.	4.10	0.854	<b>High Level</b>
7	Using e-banking can reduce queuing time.	4.38	0.885	<b>Very High Level</b>
8	Using e-banking can cut travelling expenses.	4.21	0.961	<b>Very High Level</b>
	Overall	4.07	0.865	<b>High Level</b>



### PERCEIVED EASE OF USE

The perceived ease of use comprises of 6 items in which the range, mean, and standard deviation of this scale is shown in Table below. The highest ranked questions with high level of agreement is “*It is easy for me to learn how to use e-banking*” (Mean = 4.00, S.D = 0.819) follow by “*Overall, I find e-banking easy to use*” (Mean = 3.96, S.D. = 0.850), “*I find e-banking easy to do what I need*” (Mean = 3.95, S.D = 0.866), “*It is easy for me to become skillful at using the e-banking*” (Mean = 3.85, S.D = 0.888), “*My interaction with e-banking is clear and understandable*” (Mean = 3.73, S.D = 0.858), “*I find e-banking to be flexible to interact with*” (Mean = 3.45, S.D = 0.964). The overall mean value of the Perceived Ease of Use with mean score of 3.82 and S.D. of 0.874 recommend that perceived ease of use has influence to consumer’ intention to use internet banking.

Table 15 Mean Value of Perceived Ease of Use

No.	Perceived Ease of Use	Mean	S.D.	Mean Interpretation
1	It is easy for me to become skillful at using the e-banking.	3.85	0.888	High Level
2	I find e-banking easy to do what I need.	3.95	0.866	High Level
3	It is easy for me to learn how to use e-banking.	4.00	0.819	High Level
4	I find e-banking to be flexible to interact with.	3.45	0.964	High Level
5	My interaction with e-banking is clear and understandable.	3.73	0.858	High Level
6	Overall, I find e-banking easy to use.	3.96	0.850	High Level
	Overall	3.82	0.874	High Level

## 4.2 INFERRIAL RESULT

### HYPOTHESIS RESULT

In this section, the outcomes of hypothesis testing are presented. Four key hypotheses were tested using regression analysis to determine the predictive strength of each of the relationship. The overall results of these hypothesis tests indicate that, attitude does have positive effect on intention to use internet banking, subjective norm does have positive effect on intention to use internet banking perceive usefulness does have a positive effect on intention to use internet banking and perceive ease of use does have positive effect on intention to use internet banking. This indicates of the hypotheses posed on following a comprehensive review of the literature can be accepted in the case of intention to use internet banking. Moreover this section includes discussion of the outcomes, including regression line equations as well as estimate of variation of outcomes. The presentation serves to demonstrate the positive outcomes as well as the procedures used to gain them.

#### **Hypothesis 1**

Hypothesis 1 stated, “Attitude toward behavior (ATB) has positive effect on the intention to use Internet banking” This was based on a selection of research (reported in Chapter 2 section 3.2) that demonstrates that there is a connection between these two characteristics in the exiting literature This using simple linear regression, which determines the likelihood of a given outcome (the outcome variable) based on the predictor variable.

The  $R^2$  shown is the prediction of future outcome on the basis of other related information (dependent and independent variables).  $R^2$  ranges between 0 and 1. It uses for describing how well a regression line fits a set of data.  $R^2 = 1.0$  indicates that a regression line fits the data well, while and  $R^2$  closer to 0 indicates a regression line does not fit the data very well. As Table 16 shows  $R^2$  value of 0.468, it suggests that 46.8% of the intention to use internet banking can be explained by Attitude toward behavior.

Table 16 H 1: Attitude has a positive effect on the intention to use Internet banking.

Variables	Model Hypothesis 1				
	B	SE B	Beta	t	Sig
<b>Constant</b>	1.256	0.141		8.902	0.000
<b>Attitude Toward Behavior</b>	0.661	0.035	0.684	18.708	0.000

$R^2 = 0.468^{***}$ ;  $F = 350.00$

Note. B = Unstandardized regression coefficient; Beta = Standardized regression coefficient.

\*\*\* $p < 0.05$

Coefficients enable construction of the linear regression equations that can be derived to describe this relationship. The unstandardized regression equations of the relationship between attitude toward behavior and intention to use internet banking can be defined as follow:

$$\text{Intention to use internet banking} = 1.256 + 0.661 (\text{Attitude toward behavior})$$

This means that for each increase point on the perceive usefulness, the level of customer intention increased by 0.661 points.

These finding suggest that there is moderate, though statistically significant, predictive relationship between the attitude toward behavior and the customer intention to use internet banking. Given the findings of the regression analysis, **Hypothesis 1 is accepted**. It can be said that the extent of the attitude toward behavior influences the customer intention to use internet banking for the case of consumer in Bangkok.

## Hypothesis 2

Hypothesis 2 stated, “Subjective norm (SN) has positive effect on the intention to use Internet banking” This was based on a selection of research (reported in Chapter 2 section 3.3) that demonstrates that there is a connection between these two characteristics in the existing literature This using simple linear regression, which determines the likelihood of a given outcome (the outcome variable) based on the predictor variable.

The  $R^2$  shown is the prediction of future outcome on the basis of other related information (dependent and independent variables).  $R^2$  ranges between 0 and 1. It uses for describing how well a regression line fits a set of data.  $R^2 = 1.0$  indicates that a regression line fits the data well, while and  $R^2$  closer to 0 indicates a regression line does not fit the data very well. As Table17 shows  $R^2$  value of 0.304, it suggests that 30.4% of the intention to use internet banking can be explained by Subjective Norm.

Table 17 H 2: Subject Norm has a positive effect on the intention to use Internet banking.

Variables	Model Hypothesis 2				
	B	SE B	Beta	t	Sig
<b>Constant</b>	2.164	0.131		16.493	0.000
<b>Subjective Norm</b>	0.470	0.36	0.552	13.197	0.000

$R^2 = 0.304^{***}$ ;  $F = 174.17$

Note. B = Unstandardized regression coefficient; Beta = Standardized regression coefficient.

\*\*\* $p < 0.05$

Coefficients enable construction of the linear regression equations that can be derived to describe this relationship. The unstandardized regression equations of the relationship between subjective norm and intention to use internet banking can be defined as follow:

$$\text{Intention to use internet banking} = 2.164 + 0.470 (\text{subjective norm})$$

This means that for each increase point on the perceive usefulness, the level of customer intention increased by 0.470 points.

These finding suggest that there is moderate, though statistically significant, predictive relationship between the subjective norm and the customer intention to use internet banking. Given the findings of the regression analysis, **Hypothesis 2 is accepted**. It can be said that the extent of the subjective norm influences the customer intention to use internet banking for the case of consumer in Bangkok.

### **Hypothesis 3**

Hypothesis 3 stated, “Perceived usefulness (PU) has positive effect on the intention to use Internet banking” This was based on a selection of research (reported in Chapter 2 section 3.4) that demonstrates that there is a connection between these two characteristics in the exiting literature This using simple linear regression, which determines the likelihood of a given outcome (the outcome variable) based on the predictor variable.

The  $R^2$  shown is the prediction of future outcome on the basis of other related information (dependent and independent variables).  $R^2$  ranges between 0 and 1. It uses for describing how well a regression line fits a set of data.  $R^2 = 1.0$  indicates that a regression line fits the data well, while and  $R^2$  closer to 0 indicates a regression line does not fit the data very well. As Table 18 shows  $R^2$  values of 0.699, it suggest that 69.9% of the intention to use internet

banking can be explained by perceived usefulness.

Table 18 H 3: Perceived usefulness (PU) has a positive effect on the intention to use Internet banking

Variables	Model Hypothesis 3				
	<i>B</i>	SE B	<i>Beta</i>	t	Sig
<b>Constant</b>	0.187	0.122		1.531	0.127
<b>Perceived Usefulness</b>	0.899	0.30	0.836***	30.421	0.000

$R^2 = 0.699^{***}$ ;  $F = 925.43$

Note. *B* = Unstandardized regression coefficient; *Beta* = Standardized regression coefficient.

\*\*\* $p < 0.05$

Coefficients enable construction of the linear regression equations that can be derived to describe this relationship. The unstandardized regression equations of the relationship between perceive usefulness and intention to use internet banking can be defined as follow:

$$\text{Intention to use internet banking} = 0.187 + 0.899 (\text{Perceive usefulness})$$

This means that for each increase point on the perceive usefulness, the level of customer intention increased by 0.899 points.

These finding suggest that there is moderate, though statistically significant, predictive relationship between the perceive usefulness and the customer intention to use internet banking. Given the findings of the regression analysis, **Hypothesis 3 is accepted**. It can be said that the extent of the perceive usefulness influences the customer intention to use internet banking for the case of consumer in Bangkok.

#### Hypothesis 4

Hypothesis 4 stated, “Perceived ease of use (PEOU) has positive effect on the intention to use Internet banking” This was based on a selection of research (reported in Chapter 2 section 3.4) that demonstrates that there is a connection between these two characteristics in the exiting literature This using simple linear regression, which determines the likelihood of a given outcome (the outcome variable) based on the predictor variable.

The  $R^2$  shown is the prediction of future outcome on the basis of other related information (dependent and independent variables).  $R^2$  ranges between 0 and 1. It uses for describing how well a regression line fits a set of data.  $R^2 = 1.0$  indicates that a regression line fits the data well, while and  $R^2$  closer to 0 indicates a regression line does not fit the data very well. As Table 19 shows  $R^2$  value of 0.507, it suggest that 50.7% of the intention to use internet banking can be explained by perceive ease of use.

Table 19: H4: Perceived ease of use (PEOU) has a positive effect on the intention to use Internet banking.

Variables	Model Hypothesis 4				
	B	SE B	Beta	t	Sig
<b>Constant</b>	1.124	0.137		8.194	0.000
<b>Perceived Ease of Use</b>	0.712	0.035	0.712	20.224	0.000

$R^2 = 0.507^{***}$ ;  $F = 409.00$

Note. B = Unstandardized regression coefficient; Beta = Standardized regression coefficient.

\*\*\* $p < 0.05$

Coefficients enable construction of the linear regression equations that can be derived to describe this relationship. The unstandardized regression equations of the relationship

between perceive ease of use and intention to use internet banking can be defined as follow:

$$\text{Intention to use internet banking} = 1.124 + 0.712 (\text{Perceive ease of use})$$

This means that for each increase point on the perceive usefulness, the level of customer intention increased by 0.712 points.

These finding suggest that there is moderate, though statistically significant, predictive relationship between the perceive ease of use and the customer intention to use internet banking. Given the findings of the regression analysis, **Hypothesis 4 is accepted**. It can be said that the extent of the perceive ease of use influences the customer intention to use internet banking for the case of consumer in Bangkok.



## CHAPTER 5

### DISCUSSION AND RECOMMENDATION

The final chapter comprise of three parts, including discussion, concussion and recommendation.

#### 5.1 CONCLUSION

This research was undertaken to explore the relationship between attitude toward and customer's intention to use internet banking, subjective norm and customer's intention to use internet banking perceive usefulness and customer's intention to use internet banking and perceive ease of use and customer's intention to use internet banking,. This is an area where there has not been a substantial amount of research, as Thailand is generally under-studied in the academic press in terms of business and consumer practices. The research objectives that were posed for this study were:

1. To study the relationship between attitude toward behavior and intention to use Internet banking.
2. To study the relationship between subjective norm and the intention to use Internet banking.
3. To study the relationship between perceived usefulness and intention to use Internet banking.
4. To study the relationship between perceived ease of use and intention to use Internet banking.

These objectives were undertaken using a quantitative survey of 400 respondents in Bangkok using data collected over a period of serval months. The quantitative survey was fist analyzed deceptively. All of these objectives were achieved using linear

regression between predictor variables (attitude toward behavior, subjective norm, perceive usefulness and perceive ease of use) and the outcome variable (Customers' intention to use internet banking). Hypotheses were posed based on the exiting literature on the relationships between these variables:

Hypothesis 1 proposed a positive relationship between attitude toward behavior and customer's intention to use internet banking. This relationship was shown to be positive, though only moderately strong. This indicated that attitude toward behavior did influence customer's intention to use internet banking for case of Thai customer in Bangkok Thus, this research points out that this relationship was consistent with the expectations set by the literature.

Hypothesis 2 proposed a positive relationship between subjective norm and customer's intention to use internet banking. This relationship was shown to be positive, though only moderately strong. This indicated that subjective norm did influence customer's intention to use internet banking for case of Thai customer in Bangkok Thus, this research points out that this relationship was consistent with the expectations set by the literature.

Hypotheses 3 proposed a positive relationship between perceive usefulness and customer's intention to use internet banking. This relationship was shown to be positive, though only moderately strong. This indicated that perceive usefulness did influence customer's intention to use internet banking for case of Thai customer in Bangkok Thus, this research points out that this relationship was consistent with the expectations set by the literature.

Hypothesis 4 proposed a positive relationship between perceive ease of use and customer's intention to use internet banking. This relationship was shown to be positive, though only moderately strong. This indicated that perceive ease of use did influence customer's intention to use internet banking for case of Thai customer in Bangkok Thus, this research points out that this relationship was consistent with the expectations set by the literature.

Overall, the objectives of the research were effectively accomplished using a combination of literature search and quantitative research. The findings offered some important insights into the nature of customer intention's to use internet banking case of Thai customer in Bangkok that could be applied to other areas. The most important finding was of course that attitude toward behavior, perceived usefulness and perceived ease of use was important for developing customer intention to use internet banking. It is not possible to build customer's intention to use internet banking without attitude toward behavior, perceived usefulness, and perceived ease of use. However, subjective norm less influence customer's intention than the other in case of Thai customer in Bangkok, These finding results are area of particular importance for finance institution.

## 5.2 DISCUSSION

The hypothesis results can be summarized as follows:

- Hypothesis 1: Attitude toward behavior (ATB) has a positive effect on the intention to use Internet banking. - **Proved.**
- Hypothesis 2: Subject Norm (SN) has a positive effect on the intention to use Internet banking. - **Proved.**
- Hypothesis 3: Perceived usefulness (PU) has a positive effect on the intention to use Internet banking. - **Proved.**
- Hypothesis 4: Perceived ease of use (PEOU) has a positive effect on the intention to use Internet banking. - **Proved.**

In this section, each of these relationships are discussed in some detail demonstrating that these finding were consistent with the expected out comes and identifying potential reason why these findings may have been seen.

The first hypothesis was that Attitude toward behavior has a positive effect on

the intention to use internet banking. This hypothesis was posed based on the bulk of the research that supported the positive relationship between attitude and customer's intention to use internet banking. Attitude refers that is associate "individual's salient belief as to whether or not the results of this or her behavior are positive or negative". Base on Ajzen & Fishbein, (1980); Nadim & Noorjahan, (2008); Polatoglu & Ekin, (2001) Jahagir & Begum, 2008; Shook & Bratianu, (2010); Harris, (1998); Mills, (1959); Malek, (2011); Polatoglu and Ekin (2001). found the same resulted for instance Ajzen & Fishbien (1980) the originator who proved that an individual's attitude towards any object be able to predicted with a high level of accuracy form knowledge of the individual's beliefs. Follow by Nadim & Noorjahan (2008) conducted a study on financial sector of internet banking in Bangladesh. This research in general, the results supported the developed hypothesized relationships. It is supreme importance to ensure that people actually intention to use the system. On this basis, the researchers expect that customer attitude affects the consumer's intention to use Internet banking. Overall, this research accepted that attitude toward behavior and customer's intention to use internet banking is related, with a positive relationship, in which this finding is entirely consistent with the expectations set with the literature regarding this relationship.

The second hypothesis was that subjective norm has effect on customer's intention to use internet banking. This hypothesis was posed based on the volume of the research that supported the positive relationship between subjective norm and customer's intention to use internet banking. Subjective norm is "a person's perception that most people who are important to her or him should or should not perform behavior in question". The investigate for all research support the similar direction (Amin et al., 2006; Venkatesh & Morris, 2000; Nysveen et al., 2005; Kleijnen et al., 2004; Rahmath, Hema, Nisar & Abdullah,2013) such as Rahmath, Hema, Nisar & Abdullah (2013) re-confirm on this research that there is influence positively positive effect between subjective norm and intention to use internet banking. Rahmath and team conducted study of the factors for consumer acceptance internet banking. The respondents indicate that subjective norm is positive effect on the intention to use Internet banking. This shows that family, friends have influence direct to customer. Overall, this research accepted that subjective norm and customer's intention to use internet banking is related, with a positive relationship, in this finding

is fully consistent with the prospects set with the literature review.

The third hypothesis was that perceived usefulness has effect on customer's intention to use internet banking. This hypothesis was posed based on the theory of the research that supported the positive relationship between perceive usefulness and customer's intention to use internet banking. Perceive usefulness is "defined as the degree to which a prospective user believes that using a particular system would enhance his or her job performance". The support result by Rahmath, Hema, Nisar & Abdullah, 2013; Zahid, Mujtaba & Riaz, 2010; Mathwick, Rigdon & Malhotra, 2001; Pikkarainen et al.,2004, Tan & Teo, 2000; Bhattacharjee, 2002; Shumaila, Gordon & John, 2010; Abdul, 2013. Which Rahmath, Hema, Nisar & Abdullah (2013) not only found the influence positive effect on subjective norm but also found that the perceived usefulness is the most important predictor of the intention to use online banking this finding refers to the fact that consumer use online banking for the benefits which when internet banking is perceived as useful, customer's intention to use it which the same as the researcher has found. Other authors also practical assumption of the results is that banks need to focus on the benefits of internet banking.

The last one hypothesis was that perceived ease of use has effect on customer's intention to use internet banking. This hypothesis was posed based on the volume of the research that supported the positive relationship between perceive ease of use and customer's intention to use internet banking. Perceive ease of use "refers to the degree to which a prospective user believes that using a particular system would be free of effort". Refer to the result of these researchers Eriksson, Kerem & Nilsson, (2005); Kerem & Nilsson, (2005); Amin, (2009); Johar & Awalluddin, (2011); Safeena, Date & Kammani, (2011); Surapong P.,(2009); Rahmath, Hema, Nisar & Abdullah (2013). For instance Eriksson, Kerem & Nilsson, (2005) "ease of use" is one of the main determinants it was related to the use Internet banking and can affect customers' interest in new wireless channel that offered by bank. Upon reviewing ease of use as one of the determinant variables one should not over look for business to create new technology for their

benefit.

Amin (2009) indicated that perceived ease of use is positively correlated with intention to use, the result is parallel which Johar & Awalluddin (2011) which found that the outcome explore a capability of useful and initiate the issue to improve in depth into this viewpoint of e-commerce. Safeena, Date & Kammani (2011) stated that perceived ease of use has positive impact to intention to use Internet banking. Customers are probably to use Internet banking when they feel it easy to use. Overall, this research accepted that perceived ease of use and customer's intention to use internet banking is related, with a positive relationship, in which this finding is entirely consistent with the expectations set with the literature regarding this relationship.

### 5.3. RECOMMENDATION

#### 5.3.1 Recommendations for Thai Commercial Bank

This research enables the researcher to generate a number of recommendations for business, especially for the internet usage in area financial industry the first recommendation is that it is clear that attitude toward behavior, subjective norm, perceived usefulness, perceived ease of use are the key aspects of business competition and financial industry should focus on these areas for customer improvement. Without these basic aspects of customer's intention on internet banking, it could be difficult for the bank to continue to compete in their business. To maintain these basic competitive advantages will be a key to growing internet banking usage in a period of intense competition and growth of the industry.

Thus this research should highlight on customers' internet banking usage behavior to find the way to improve the service so that increasing the amount of customers' actual use. The result found that 400 respondents or 100% is able to access to the internet. In addition 354 respondents or 87% had known the internet banking and 286 respondents' or 70.4% of

customers have the internet banking experience. The majority of customers fully enhances the benefits and value of using the internet banking, thus 70.4% of customer that having the internet banking experience is ready and has the potential to suggest the others to use the internet banking.

Furthermore, a group of 286 respondents or 70.4% (Internet Banking Experience) were responsive, average mean value of each factor, attitude toward behavior 3.92, subjective norm 3.59, perceived usefulness 4.07 and perceived ease of use 3.82 obviously that perceived usefulness was the key due to it has highest score at point 4.07 that mean the business has to realize and focus on consumer need which the customer aspect that perceived the usefulness is important for him/her to use internet banking. For example, customers realize that using the internet banking instead of visiting at the bank branch enable to decrease the costs of transportation and save time too. In contract found that 46 respondents or 11.3% (Internet Banking Experience) have no an experience to use internet banking. However business cannot be ignored. In business all our customer are all equally important.

Moreover this research found that the relationship between perceived usefulness and customer's intention to use the internet is the most important ( $R^2 = 0.699$ ) and relationship between subjective norm and customer's intention to use the internet is important but less than the other 3 relationships ( $R^2 = 0.304$ ). As this result researcher was indicated that the intention to use internet banking depending on the perceived benefits of its use meanwhile the group reference (friends, co-worker, blood relative) depends less than the other but still significant. Furthermore the business could bring this guide line to improve their business.

The viewpoints of customer and their behavior by using internet banking is clearly that most important factor in recommendation for the financial industry. In addition regression data, there was also interesting statistical data that was derived. The survey tools were specifically target to finding the intention of internet banking. This offers some information on

financial industry can more carefully to their customer and how to provide them with more relevant offering such as provide more user friendly to the web page customer will free effort to use internet banking.

According to customer improvement is able to develop both the internet banking system and marketing strategy which focus on new comer who hesitate to adopt using internet banking channel. To develop internet banking system, according to technology acceptance customer will intention to use internet banking when they feel that using internet banking improves their performance of utilizing banking service, using internet banking services enables customer to utilize banking service more quickly, and customer could find internet banking useful for their banking activities. Thus business should pay attention to the internet signal, setting preventive maintain, get ready for unexpected situation avoiding gap of the use that consumer feel useless and difficult to use. Rahmath, Hema, Nisar & Abdullah (2013) supported that in planning and development of online banking, software developers should also pay attention to practical functions and extend key feature that frequently required.

To define marketing strategy, business should motivate the prospected customer provide internet banking knowledge setting knowledge sharing campaign for new delivery channel. To provide internet banking knowledge basically, business able to add information manual structural to guide how to use internet banking in the web site for customer to know how to use internet banking. However call center also should stand by 24 hours to help them regarding the technical base.

Final recommendation of this research for wireless market, in Thailand that are more open in the use of internet and internet banking and bank also continue increase their service to cut cost and provide more distribution channel to the customer by finding customer attitude toward behavior, perceived usefulness, perceived ease of use and subjective norm. Moreover



majority of Thai customer in Bangkok used internet banking service however minority has not use the internet banking, for this value result could be the opportunity to increase more new target group for internet banking marketing.

#### 5.1.1 Recommendation for future research

The recommendation for future research is engaging in financial market segmentation and targeting research in order to determine who the internet banking's customer are and what their need are, and since we obtained information form the respondent we found that majority customer in Bangkok use internet as well as internet banking however for minority target was deny to use internet banking found the reason as personal interview that customer still feel insecure especially on their money.

Thus the analysis could also focus on identifying to customer's trust (to trust or do not trust) and security of internet banking (security or insecurity) in the context of internet banking. The customer's trust is typically a customer who has to decide whether to intention to use internet banking or stay with more traditional ways to process their transaction upon online. On the other hand security focus on the improvement overall security for instance passwords, policies and etc. Trust and Security could help improve the banking web site. This type of research is important because it is specific to the bank industry that would to extend their internet service the same as suggestion of finding Malek (2011), he stated that bank able to create a positive attitude amongst customer towards internet banking by promoting trust and decrease the perceived of risk which concern to the security. Thus It could also be more generally relevant because by typing aspects of this study, like in this research study on attitude toward behavior, perceived usefulness, perceived ease of use and subjective norm, moreover the demographic and psychographic profiles of intention to use internet banking helping for better understanding the implication and meanings of the customer behavior regarding to intention to use internet banking in Thailand.

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## APPENNDIX A: QUESTIONNAIRE

**Topic:** Factors Affecting Customers' Intention to use Internet Banking in Bangkok, Thailand

**Direction:** This survey is used to collect data in this research topic "Factors Affecting Customers' Intention to use Internet Banking in Bangkok, Thailand".

This survey is separated into 3 parts as follows.

### Part 1: General information about population.

**Direction:** Please fill the mark ✓ in  in front of the choice which is suitable with you.

#### 1.1 Gender

Male

Female

#### 1.2 Age

Below 20

21-30

31-40

41-50

Above 50

#### 1.3 Education level

Under graduates

Bachelor degree

Higher than graduates

#### 1.4 Occupation

Business

Government officer/Public enterprise officer

Staff at the private company

Student

.....

1.5 Average personal income per month

- Below 15,000 Baht                       15,001 - 30,000 Baht
- 30,001-50,000 Baht                       50,001 - 100,000 Baht
- Above 100,000 Baht

**Part 2: Customers' behavior**

**Frequency of Internet Usage**

**Direction:** Please fill the mark ✓ in  in front of the choice which is suitable with you.

2.1 Internet Computer Access?

- YES     NO

2.2 Internet Experience?

- YES     NO

2.3 Frequency of Use.

- Only once                                       Few time
- Few times a month                       Once a month
- Once a week                                       Few times a week
- Everyday

**Frequency of Internet Banking Usage**

**Direction:** Please fill the mark ✓ in  in front of the choice which is suitable with you.

3.1 Know Internet Banking websites.

YES

NO

3.2 Internet Banking Experience.

YES

NO

3.3 Frequency of Use.

Only once

Few time

Once a month

Few times a month

Once a week

Few times a week

**Part 3: Factors affecting customers' intention to use Internet banking in Bangkok, Thailand.**

**Direction:** Please fill the correct sign in the blank which the score of comments most matching with your opinion.

Item	Statement	Agreement level				
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Intention to use						
1.	I intend to continue using internet banking in the future					
2.	I expect my use of internet banking to continue in the future					
3.	I will frequently use internet banking in the future					
4.	I will strongly recommend others to use internet banking					
Perceived Usefulness						
1.	Using internet banking improves my performance of utilizing banking service					
2.	Internet banking can enhance the effectiveness of customers' transactions with bank					



Item	Statement	Agreement level				
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
3.	Using internet banking services enables me to utilize banking service more quickly					
4.	Using internet banking for my banking service increases my productivity.					
5.	I find internet banking useful for my banking activities					
6.	Using internet banking makes it easier to do my banking activities					
7.	Using internet banking can reduce queuing time					
8.	Using internet banking can cut travelling expenses					
Perceived ease of use						
1.	It is easy for me to become skillful at using the e-banking					
2.	I find internet banking easy to do what I want to do					

Item	Statement	Agreement level				
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
3.	It is easy for me to learn how to use e-banking					
4.	I find e-banking to be flexible to interact with					
5.	My interaction with internet banking is clear and understandable					
6.	Overall, I find internet banking easy to use					
Attitudes toward behavior						
1.	I feel using Internet banking is a wise					
2.	I feel using Internet banking is a good					
3.	I like to use Internet banking.					
4.	Using Internet banking site is a pleasant					
Subject norm						
1.	My reference group influences my decision to use Internet banking.					
2.	I completely agree with my referent's opinions that I should use Internet banking service					

Item	Statement	Agreement level				
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
	continuously.					

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Ridleun, K., Sukhabot, S., Factor Affecting Customers' Intention to use Internet Banking in Bangkok, Thailand, The 7<sup>th</sup> Nation Conference on Administration and management, Jun 28, Thailand

## APPENDIX

## APPENNDIX A: QUESTIONNAIRE

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This survey is separated into 3 parts as follows.

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**Direction:** Please fill the mark ✓ in  in front of the choice which is suitable with you.

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Male

Female

#### 1.2 Age

Below 20

21-30

31-40

41-50

Above 50

#### 1.3 Education level

Under graduates

Bachelor degree

Higher than graduates

#### 1.4 Occupation

Business

Government officer/Public enterprise officer

Staff at the private company

Student

.....

1.5 Average personal income per month

- |   |  |
|---|--|
| <input type="checkbox"/> Below 15,000 Baht  | <input type="checkbox"/> 15,001 - 30,000 Baht  |
| <input type="checkbox"/> 30,001-50,000 Baht | <input type="checkbox"/> 50,001 - 100,000 Baht |
| <input type="checkbox"/> Above 100,000 Baht |  |

**Part 2: Customers' behavior**

**Frequency of Internet Usage**

**Direction:** Please fill the mark ✓ in  in front of the choice which is suitable with you.

2.1 Internet Computer Access?

- |                              |                             |
|------------------------------|-----------------------------|
| <input type="checkbox"/> YES | <input type="checkbox"/> NO |
|------------------------------|-----------------------------|

2.2 Internet Experience?

- |                              |                             |
|------------------------------|-----------------------------|
| <input type="checkbox"/> YES | <input type="checkbox"/> NO |
|------------------------------|-----------------------------|

2.3 Frequency of Use.

- |  |   |
|--|---|
| <input type="checkbox"/> Only once         | <input type="checkbox"/> Few time         |
| <input type="checkbox"/> Few times a month | <input type="checkbox"/> Once a month     |
| <input type="checkbox"/> Once a week       | <input type="checkbox"/> Few times a week |
| <input type="checkbox"/> Everyday          |   |

### **Frequency of Internet Banking Usage**

**Direction:** Please fill the mark ✓ in  in front of the choice which is suitable with you.

3.1 Know Internet Banking websites.

YES

NO

3.2 Internet Banking Experience.

YES

NO

3.3 Frequency of Use.

Only once

Few time

Once a month

Few times a month

Once a week

Few times a week



**Part 3: Factors affecting customers' intention to use Internet banking in Bangkok, Thailand.**

**Direction:** Please fill the correct sign in the blank which the score of comments most matching with your opinion.

Item	Statement	Agreement level				
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Intention to use						
1.	I intend to continue using internet banking in the future					
2.	I expect my use of internet banking to continue in the future					
3.	I will frequently use internet banking in the future					
4.	I will strongly recommend others to use internet banking					
Attitudes toward behavior						
1.	I feel using Internet banking is a wise					
2.	I feel using Internet banking is a good					
3.	I like to use Internet banking.					

Item	Statement	Agreement level				
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
4.	Using Internet banking site is a pleasant					
Subject norm						
1.	My reference group influences my decision to use Internet banking.					
2.	I completely agree with my referent's opinions that I should use Internet banking service continuously.					
Perceived Usefulness						
1.	Using internet banking improves my performance of utilizing banking service					
2.	Internet banking can enhance the effectiveness of customers' transactions with bank					
3.	Using internet banking services enables me to utilize banking service more quickly					
4.	Using internet banking for my banking service increases my productivity.					
5.	I find internet banking useful for my banking					

Item	Statement	Agreement level				
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
	activities					
6.	Using internet banking makes it easier to do my banking activities					
7.	Using internet banking can reduce queuing time					
8.	Using internet banking can cut travelling expenses					
Perceived ease of use						
1.	It is easy for me to become skillful at using the e-banking					
2.	I find internet banking easy to do what I want to do					
3.	It is easy for me to learn how to use e-banking					
4.	I find e-banking to be flexible to interact with					
5.	My interaction with internet banking is clear and understandable					

<b>Item</b>	<b>Statement</b>	<b>Agreement level</b>				
		<b>Strongly disagree</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Agree</b>	<b>Strongly agree</b>
6.	Overall, I find internet banking easy to use					