THE EFFECT OF PERCEIVED VALUE, TECHNOLOGY ACCEPTANCE, AND E-SERVICE QUALITY ON CUSTOMER SATISFACTION AND SERVICE LOYALTY FOR INSTANT MESSAGE PROVIDERS BUSINESS

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Abstract

Thailand is the second-fastest growing smartphone market in the ASEAN region, mobile instant message (MIM) services have been widely adopted in Thailand. Although previous research are extensive on the adoption of mobile services industry, only few focus on customer satisfaction and loyalty to MIM in Thailand.

This research use simple random sampling to choose four places (Si Lom, Sutthisan, Phahon Yothin and Lardprao) in Bangkok, and use accidental sampling to choose the respondents who use the MIM. A total of 430 respondents answered the questionnaires. Data analysis was using descriptive statistic, multiple regressions and factor analysis.

This research found that perceived value, technology acceptance, and e-service quality has the positive significant effect on customer satisfaction and service loyalty; functional value is seen to be a major driver of customer satisfaction. Additionally, this research find that nationality and behavioral of MIM usage, have difference in the objective of use.

The result of this research showed that MIM provider should develop and provide more functional value in MIM, to let customers got more value from the function through use them product and service. Consider the finds of behavior and nationality of respondents, most of Chinese respondent use MIM for social communication, and Thai respondent use MIM for both social communication and work. MIM provider should pay more attention on different nationality customer's needs.

Keywords: mobile instant message, customer satisfaction and service loyalty.

1. Introduction

Thailand is the second-fastest growing smartphone market in the ASEAN region, due to its still-low broadband penetration. Thailand's has reportedly reached a mobile penetration

rate of more than 130 percent, according to recent government figures. The country's smartphone penetration is expected to top 25 percent of the total population by the end of 2012, up from 17 percent in June 2012. However, 8% of mobile phone users worldwide have adopted Mobile Instant Messaging (MIM). It is used by 61% of them. More widely used than Short Message Service (SMS), Mobile Instant Messaging (MIM) is becoming the "primary non-voice method of interacting - with potentially dramatic consequences for service and network providers' revenue" (TNS Global, 2008).

Through the huge number of smartphone users install Mobile Instant Messaging (MIM) and huge significant convenience usage of Mobile Instant Messaging (MIM). For the instant message providers business, it is important to find what exactly drive the customer satisfaction and loyalty to select the instant message software provider.

In the research area of business and information management, one of the important research topic is customer satisfaction. (Au, Ngai, & Cheng, 2008). In review of studies, perceived value, technology acceptance factor and electronic service quality, all are important dependent variable for the customer satisfaction in the study area. Further, with the aid of information technology, customers are becoming more and more open to understanding the brand; thus, satisfaction alone may not be adequate to retain a long-term relationship (Kassim & Abdullah, 2008). Satisfaction positively affect the customer loyalty, satisfaction is one antecedent of customer loyalty, and satisfied customers are more loyal. (Deng et al 2010; Dick & Basu, 1994).

In such a competitive Mobile Instant Messaging (MIM) market, Mobile Instant Messaging (MIM) service providers are all making efforts to attract more users and gain more market shares. Thus, the ability to provide a high degree of customer satisfaction services is crucial to providers in differentiating themselves from their competitors. Accordingly, it is important for Mobile Instant Messaging (MIM) service providers to understand what factors impact these users' satisfaction and loyalty, and then to take measures to retain their customers. And the research question will concentrate on, how is the effect of perceived value, electronic service quality, technology acceptance factor on mobile instant message software customer satisfaction and loyalty in Bangkok, Thailand?

2. Literature review

Literature in this study includes customer satisfaction, perceived value, technology acceptance factor, electronic service quality and service loyalty.

2.1 Customer satisfaction

Oliver (1981) defined customer satisfaction, "the summary psychological state resulting when the emotion surrounding disconfirmed expectations is coupled with the consumer's prior feelings about the consumption experience", in the following study, customer satisfaction is defined as "the consumer's fulfillment response, the degree to which the level of fulfillment is pleasant or unpleasant" (Oliver 1997). Customer satisfaction is an overall attitude formed based on the experience after customers purchase a product or use a service (Fornell, 1992).

Furthermore, Kotler (2000) defined satisfaction as a person's feelings of pleasure or disappointment resulting from comparing a product's perceived performance in relation to them expectations. If the performance falls short of expectations, the customer is dissatisfied and if it matches the expectations the customer is satisfied. Most of companies want have high satisfaction level, customers who are just touch satisfied, they still easy to switch to another provider, when a better provider comes out. Satisfaction can be reflection in content of service, it is the assessment of the experience of interacting with a service provider, and customers can use it, to estimate future experience (Crosby et al, 1990).

2.2 Perceived value

Zeithaml, (1988) define perceived value as a ratio of perceived benefits to perceived costs. McDougall & Levesque (2000) has broadly defined perceived value is the results or benefits customers receive in relation to total costs (which include the price paid plus other costs associated with the purchase). On the research of the consumer perceived value Sweeney and Soutar (2001) defined functional value to be two group, price/value for money and performance/ quality.

Emotional value: the utility derived from the feelings or affective states that a product generates.

- Social value: (enhancement of social self-concept) the utility derived from the product's ability to enhance social self-concept.
- Functional value: (performance/ quality) the utility derived from the perceived quality and expected performance of the product.

From the review of literature, many research notice that, perceived value is related to customer satisfaction (Sweeny and Soutar. 2001). Between satisfied customers and supplier, value is a direct impact factor (Anderson et al., 1994). Bolton and Drew (1991) has been proposed that, part of the future intentions are determined by perceived value. McDougall& Levesque (2000) found perceived value is one of the most important driver for customer satisfaction. Through the customer purchasing process, no matter it is one-time purchase or repurchase, perceived value occurs in the whole process (Woodruff, 1997).

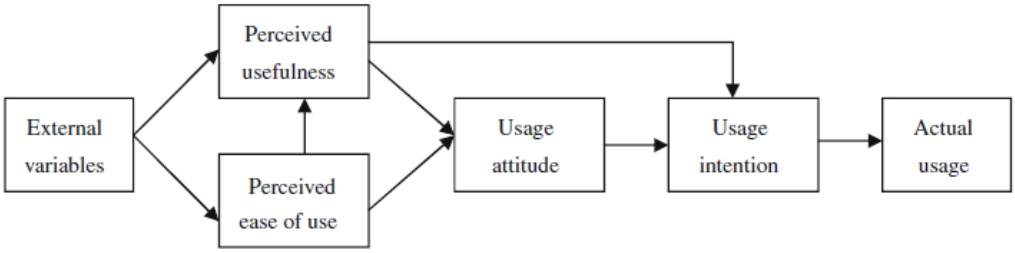
Consumers' perspectives on value, they are willing to make a purchase, when perceived values are high (Holbrook, 1994). Past research identifies a direct link between perceived value and loyalty and linkages in the perceived value-satisfaction-loyalty chain (Ryu et al., 2008; Parasuraman and Grewal, 2000).

2.3 Technology acceptance factor

Davis (1989) proposed to use the technology acceptance model explain and predict user acceptance in information systems or information technology. Through the perceived usefulness, the perceived ease of use has a positive indirect effect on usage of system, the model defined as

- Perceived usefulness: "The degree to which a person believes that using a particular system would enhance his or her job performance".
- Perceived ease of use: "The degree to which a person believes that using a particular system would be free of effort"
- Users' motivation: perceived usefulness, perceived ease of use, and usage attitude.

Figure 1 Technology acceptance model, (Davis 1989)



Technology acceptance model is a robust and powerful model for the explanation of technology usage (Lee, Kozar, & Larsen, 2003). Consider of ease of use in information technology, customer satisfaction in the online environment is significantly higher than in traditional channels, (Poddar et al, 2009; Verhagen and Dolen, 2009). Perceived usefulness as an extrinsic source of motivation (Davis et al 1992). Perceived ease of use had a significant impact on perceived usefulness (Liu et al, 2009).

Davis et al (1992) founded that "while usefulness will once again emerge as a major determinant of intentions to use a computer in the workplace, enjoyment will explain significant variance in usage intentions beyond that accounted for by usefulness alone". They concluded that, perceived enjoyment is an intrinsic source of motivation, perceived enjoyment can mediated the influence of perceived ease of use on intention.

Davis (1989) founded that, behavioral usage intentions is lead to actual system use. Research has demonstrated the validity of this model, across wide variety of information technology industry. Moon and Kim (2001) proposed, in the study of extended technology acceptance model, the perceived usefulness had a significant influence on behavioral usage intention.

2.4 Electronic service quality

Service quality is a customer's subjective comparison of expectations with actual service performance (Parasuraman, et al 1985). Many conceptualizations and measurements of service quality can be found. For example, it has been defined as consisting of two aspects: technical quality and functional quality (Gronroos, 1984). A third conceptualization of service quality includes interaction quality, physical environment quality, and outcome quality (Brady & Cronin, 2001).

- Interaction quality: attitude, behavior, and expertise.
- Physical environment quality: ambient conditions, design, and social factors.
- Outcome quality: waiting time, tangibles, and valence.

Parasuraman et al (2005) defined the four core dimensions that customers use to judge which they experience no questions or problems are as follow:

1. Efficiency: The ease and speed of accessing and using the site.
2. Fulfillment: The extent to which the site's promises about order delivery and item availability are fulfilled.
3. System availability: The correct technical functioning of the site.
4. Privacy: The degree to which the site is safe and protects customer information

If quality improvements are not based on customer needs, then it will not lead to improved customer satisfaction. The key difference between service quality and customer satisfaction is (Iacobucci et al 1995).

- Quality related to managerial delivery of the service
- Satisfaction reflects customers' experiences with that service.

Rust and Oliver (1994), suggest that customer satisfaction or dissatisfaction is "cognitive or affective reaction''. As a response to a set of service quality is one dimension on which satisfaction is based, (Dick & Basu 1994). Service quality as an antecedent to satisfaction, Bolton and Drew (1994, p. 176). Anderson et al. (1994) suggested that improved service quality will result in satisfied customer. Therefore, the hypothesis posted below

2.5 Service loyalty

"Service loyalty is the degree of which a customer exhibits repeat purchasing behavior from a service provider, possesses a positive attitudinal disposition toward the provider, and considers using only this provider when a need for this service arises" (Gremler and Brown 1996). Additionally ,Lu (2002) defined service loyalty as: "The willingness of customer to consistently re-patronize the same service provider, company that maybe the first choice among alternatives, thereby complying with actual behavioral outcomes and attaching with favorable attitude and cognition, regardless of any situational influences and marketing efforts made to induce switching behavior."

Therefore, in this study the service loyalty is defined as: customer consistently re-patronize the same software provider, regardless of any situational influences and marketing efforts made to induce switching. On the other hand, Moonkyu and Lawrence (2001) defined service loyalty is based on past experiences and future expectations, the customers have intention to continue choose their current service provider.

Anderson and Fornell (1994) point out that customer loyalty is determined to a large extent by customer satisfaction. Luarn and Lin (2003) proposed that, although satisfactory alternatives exist, consumer also give the preference to a particular product/service provider.

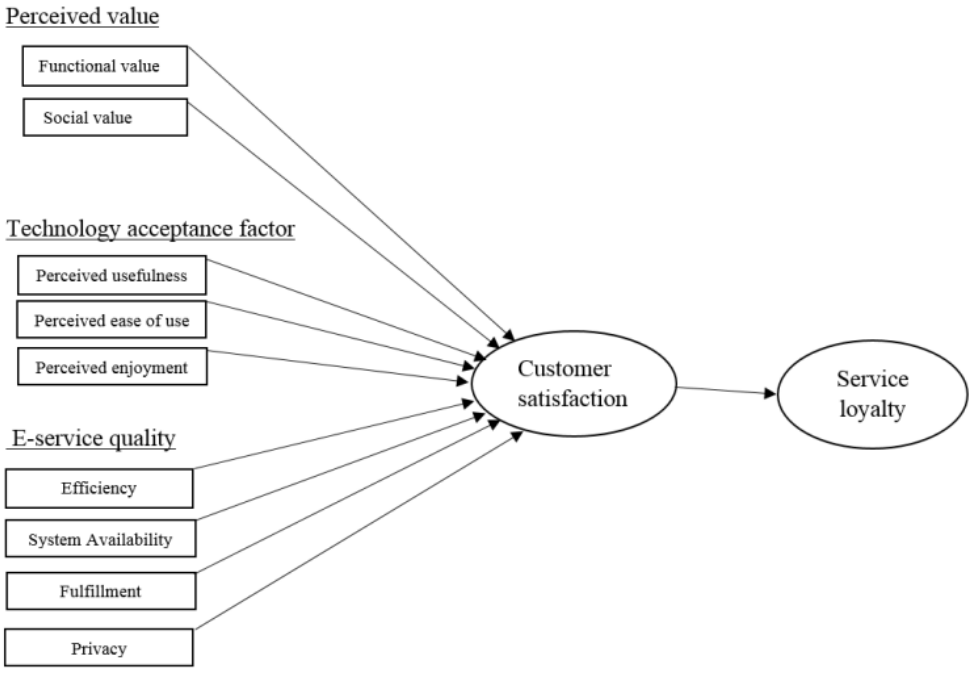
Some researcher have been studies the customer satisfaction or loyalty of mobile services consumers. They found that, analysis of loyalty effecting factor is important for the mobile instant message company. In addition, they also agree that, customer satisfaction is the core mediate for mobile service firms to enhance them company sustainability and success (Deng et al, 2010; Wang& Liao, 2007; Turel& Serenko, 2006). "There is increasing recognition that the ultimate objective of customer satisfaction measurement should be customer loyalty", Fornell (1992). In the research area of information management, one of the important research topic is customer satisfaction. (Au, Ngai, & Cheng, 2008).In review of studies, satisfaction positively affect the customer loyalty, satisfaction is one antecedent of customer loyalty (Deng et al 2010; Dick & Basu, 1994). Cristobal et al. (2007) report that e-satisfaction has a positive significant effect on e-loyalty Satisfied customers are more loyal.

3. Conceptual framework

After the literature review, the conceptual framework of this research was developed and showed as figure 2. There is three main independent variable which effects customer satisfaction, perceived value, technology acceptance factor and electronic service quality.

For each independent variable, totally have nine dimension to measure it, which including functional value**,** social value, perceived usefulness, perceived ease of use, perceived enjoyment, efficiency, system availability, fulfillment, and privacy.

Figure 2 Conceptual framework of this research



4. Methodology

This research selects four places to collect the respondents' data, which including Si Lom, Sutthisan, Phahon Yothin and Lardprao. Therefore, the questionnaires were distributed and collect in these four places in Bangkok. A total of 430 respondents answered the questionnaires, which 400 questionnaires were relevant for this study.

5. Research Instrument

Five-point Liker scale was used measured all indicators where "1" indicates the least favorable response alternative (Strongly disagree) and "5" the most favorable response alternative (Strongly agree).

Item Objective Congruence (IOC) was used to test the validity of questionnaire by experts. IOC was a process to content specialists to rate each individual item on the scale what if could use to measure the objectives of this study. All the items index of this study were greater than 0.75, in which meant that the all index were as valid.

The pretest for the reliability test was collect by 30 smartphone user in Bangkok, Thailand. The Cronbach's alpha coefficient was used to measure the reliability of this research. After the data taste, Crobach's Alpha of this study is ranked from 0.716 to 0.841. It can imply that the data were acceptable.

6. Data analysis

In the data analysis of this research, Pre-test used for complete the questionnaires. Likert Scale was applied to measure the level of agreement of variables the personal data is collect and analyze with descriptive statistic. Multiple regressions and factor analysis was used to examine the postulated hypothesis.

7. Result

The total sample size in this study consisted of 430 respondents distributed in Bangkok. The return rate was 93%. Thus, 400 questionnaires are used for data analysis based on the conceptual framework that the researcher mentioned in the previous chapters.

The majority of the respondents who are 21-25years of age for 175 respondents which equals to 43.8% and the second large group which is the respondents who are 26-35 years old that has 162 respondents which equals to 40.5% for this research, 44 respondents which equals to 11% of the respondents had the age between 36-50years old.

The sample was component of 121 male and 279 female which equals to 30.2% for male and 69.8% for female, included the 272 Thai and 128 Chinese respondents. The majority group of the respondents graduated a bachelor degree for 297 persons or 74.2% and 75 or 18.8% respondents graduated from master or above. In the income group shows that the majority group of the respondents has income of under 15,000 Baht/month for 141 persons or 35.2% and the second majority group was 15,001-25,000 baht /month 102 persons or 25.5%. Also the income between 25,001-30,000baht/month has 88 persons equals 22% of all respondents.

In the research of respondents smart phone use, shows that iPhone users was majority with 151 respondents contained which equals to 37.8% of all respondents, Samsung users has 122 respondents or 30.5% of all respondents, and Nokia has 37 respondents equal 9.2%. In the smartphone operation system use, the research shows that Android system is the majority with 183 respondents use equals to 45.8%, apple iOS was the second large group with 151 respondents contained which equals to 37.8%. Microsoft windows phone has 10.2% or 41 respondents.

Moreover, research of the behavioral to use mobile instant message software ,found that majority group was the 329 persons or 82.2% respondents use Line, has 168 persons or 42% respondents are use Wechat, for the Whatsapp and QQ, have 11.5% and 8.8% respondents use.8.2% respondents use other software. Many respondents have used more than one software at same time. The highest number of respondents most use mobile instant message software was the group of Line user with 260 persons or 65%. Also Wechat has 111 respondents or 27.8% were mostly used. In the time spend on mobile instant message software, the data showed that the majority respondents were use software over 5 time per hour with 41.2% respondents, has 28.0% respondents were use 4-5 time per hour, and 21.2% respondents were use 2-3 time per hour.

In the how long for respondents onetime use mobile instant message software section, has the 163 persons or 40.8% respondents are spend 20-30 minutes use software on onetime, 87 persons or 21.8% respondents are below 10 minutes use software on onetime, 79 persons or 19.8% respondents are spend 40-50 minutes use software on onetime, have 70 persons or

17.5% respondents are use over 50 minutes use software on one time. In the objective of use mobile instant message software showed that 285 of the respondents or 71.2% had used the mobile instant message software for the social communication ,30.8% or 123 of the respondents had used for work, 6.2% used for study, and 2.8% used for other. In the behavior and nationalist of respondents, in the objective of study and other, Chinese and Thai respondents are quite same only have few of them use MIM for study, in the objective of use for work, only have 10.9% Chinese use MIM for work, but have 40.1% Thai respondents use it for work, in the objective of social communication, have 94.5% Chinese are use MIM for social communication, and have 60.3% Thai use for it.

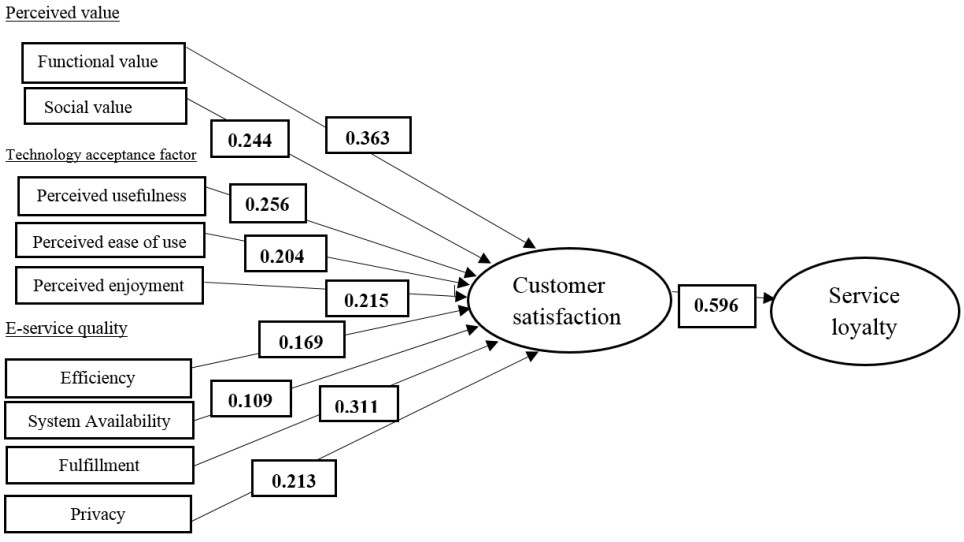
This research use 5-point rating scales with the means is range from 3.68 to 4.02, the functional value the result as agree (mean = 3.84, S.D. =0.60), the result of social value show as agree (mean = 3.71, S.D. =0.67), perceived usefulness (mean = 4.02, S.D. =0.62), perceived ease of use (mean = 4.09, S.D. =0.65), perceived enjoyment (mean= 3.93, S.D. =0.63) the result show as agree, efficiency (mean = 3.89, S.D. =0.62), system availability (mean = 3.87, S.D. =0.65) fulfillment (mean = 3.89, S.D. =0.63), and privacy (mean = 3.68, S.D. =0.73) the results show as agree. Customer satisfaction (mean = 3.90, S.D. =0.59), service loyalty (mean = 3.91, S.D. =0.65) results show as agree, show as table 1.

Table 1 Level of agreement

Item	Mean	Std. Deviation	Level of Agreement
	Perceived value		
Functional value	3.84	0.6	Agree
Social value	3.71	0.67	Agree
	Technology acceptance factor		
Perceived usefulness	4.02	0.62	Agree
Perceived ease of	4.09	0.65	Agree
Perceived enjoyment	3.93	0.63	Agree
	E-service quality		
Efficiency	3.89	0.62	Agree
System availability	3.87	0.65	Agree
Fulfillment	3.89	0.63	Agree
Privacy	3.68	0.73	Agree
Customer	3.9	0.59	Agree
Service loyalty	3.91	0.65	Agree

In the section of the perceived value functional value had the most significant positive effect on the customer satisfaction at 0.363; social value had the second significant positive effect on the customer satisfaction at 0.244. In the section of the technology acceptance factor, perceived usefulness had the most significant positive effect on the customer satisfaction at 0.256, perceived enjoyment had the second significant positive effect on the customer satisfaction at 0.215, and perceived ease of use had the third significant positive effect on the customer satisfaction at 0.204. For the electronic service quality section, fulfillment had the most significant positive effect on the customer satisfaction at 0.311, privacy had the second significant positive effect on the customer satisfaction at 0.213, efficiency had the third significant positive effect on the customer satisfaction at 0.169, and system availability had the forth significant positive effect on the customer satisfaction at 0.109. The customer satisfaction had the significant positive effect on the service loyalty at 0.596. As the figure 3 showed below.

Figure 3 Research result of this study; explain by the value of standardized coefficients (beta value)



8. Discussion

8.1 Perceived value with customer satisfaction

In the outcome of this research, perceived value section, through the value of standardized coefficients (beta value) was explained that, the functional value had the most significant positive effect on the customer satisfaction; social value had the second significant positive effect on the customer satisfaction. The result showed that the functional value and social value are the variables which can interpret the effect of perceived value on customer satisfaction.

From the review of literature, many research notice that, perceived value is related to customer satisfaction (Sweeny and Soutar. 2001). Between satisfied customers and supplier, value is a direct impact factor (Anderson et al., 1994) .Bolton and Drew (1991) has been proposed that, part of the future intentions are determined by perceived value. McDougall& Levesque (2000) found perceived value is one of the most important driver for customer satisfaction. Through the customer purchasing process, no matter it is one-time purchase or repurchase, perceived value occurs in the whole process (Woodruff, 1997).

Consumers' perspectives on value, they are willing to make a purchase, when perceived values are high (Holbrook, 1994). Past research identifies a direct link between perceived value and loyalty and linkages in the perceived value–satisfaction–loyalty chain (Ryu et al., 2008; Parasuraman and Grewal, 2000).

As mentioned earlier, perceived value plays the important role with customer satisfaction. It reveals that this research conform to the previous study. The finding of this research also found that the result corroborates with Sweeny and Soutar. 2001; McDougall& Levesque 2000; Anderson et al., 1994.

8.2 Technology acceptance factor with customer satisfaction

In the research outcome of the technology acceptance factor, through the value of standardized coefficients (beta value) was explained that, the perceived usefulness had the most significant positive effect on the customer satisfaction, perceived enjoyment had the second significant positive effect on the customer satisfaction at, perceived ease of use had the third significant positive effect on the customer satisfaction.

The result showed that the perceived usefulness, perceived enjoyment, and perceived ease of use are the variables which can interpret the effect of technology acceptance factor on customer satisfaction.

Additionally, this research also discovered that the perceived usefulness, perceived enjoyment and perceived ease of use has significant direct effect on customer satisfaction. This can implies that perceived usefulness also is the main determinant of effect of technology acceptance factor on customer satisfaction for instant message providers business. And compare with perceived ease of use, perceived enjoyment has more effect on the customer satisfaction.

Technology acceptance model is a robust and powerful model for the explanation of technology usage (Lee, Kozar, & Larsen, 2003). Davis (1989) founded that research has demonstrated the validity of this model, across wide variety of information technology industry. Consider of ease of use in information technology, customer satisfaction in the online environment is significantly higher than in traditional channels, (Poddar et al, 2009; Verhagen and Dolen, 2009). Perceived usefulness as an extrinsic source of motivation (Davis et al 1992). Moon and Kim (2001) proposed, in the study of extended technology acceptance model, the perceived usefulness had a significant influence on behavioral usage intention.

Base on the information above, that perceived usefulness also is the main determinant of effect of technology acceptance factor on customer satisfaction for instant message providers business, it reveals that this research conform to the previous study which already done by Moon and Kim 2001; Davis et al 1992; Poddar et al, 2009; Verhagen and Dolen, 2009.

8.3 Electronic service quality with customer satisfaction

After model test. in the section of the electronic service quality, through the value of standardized coefficients (beta value) was explained that, the fulfillment had the most significant positive effect on the customer satisfaction, privacy had the second significant positive effect on the customer satisfaction, efficiency had the third significant positive effect on the customer satisfaction, and system availability had the forth significant positive effect on the customer satisfaction.

For objective of this research, identify the effect of electronic service quality on customer satisfaction for instant message providers business. The result showed that the fulfillment, privacy, efficiency, and system availability are the variables which can interpret the effect of electronic service quality on customer satisfaction.

Oliver (1994), suggest that customer satisfaction or dissatisfaction is “cognitive or affective reaction’’. As a response to a set of service quality is one dimension on which

satisfaction is based, (Dick and Basu 1994). Service quality as an antecedent to satisfaction, Bolton and Drew (1994). Anderson et al. (1994) suggested that improved service quality will result in satisfied customer.

Refer on the information above, this research found that fulfillment is the most determinant of effect of electronic service quality on customer satisfaction for instant message providers business. Privacy and efficiency has temperate significant positive effect on customer satisfaction. System availability has the less effect on customer satisfaction for instant message providers business. It means that, this research conform to the previous study which already studied by Dick and Basu 1994; Bolton and Drew 1994; Anderson et al 1994.

8.4 Factor analysis

Factor analysis was an important method of statistic used to study the variability among all the observed variables. In factor analysis, observed variables were referred to as factors or dimensions.

After rotated analysis, it was provided functional value (FV) perceived usefulness (PU), perceived ease of use (PEOU), perceived enjoyment (PE), and efficiency (EFF), were rotated significantly in component as Instant message using experience (IMUE).

For the second factor loading, after rotated analysis, it was provided information that social value (SV), system availability (SA), fulfillment(FUL), and privacy (PRI) were rotated significantly in component as Instant message after use experience (IMAUE).

Base on the result of rotated analysis, this research use regression analyses between rotated factor and customer satisfactions. After tested the model, in the section of the factor analysis, through the value of standardized coefficients was explained that, the Instant message after use experience (IMAUE) had the most significant positive effect on the customer satisfaction, Instant message using experience (IMUE) had the second significant positive effect on the customer satisfaction.

For objective of this research, identify the effect of rotated factor on customer satisfaction for instant message providers business. The result showed that the Instant message after use experience (IMAUE) and Instant message using experience (IMUE) are the variables which can interpret the effect of electronic service quality on customer satisfaction. In other words instant message users making to choose Instant message after use experience (IMAUE) as a first determinant, when they need to use the mobile instant software service. Instant message using experience (IMUE) was the secondly determinant of users to use the mobile instant software service.

8.5 Customer satisfaction with Service loyalty

In the research outcome of the customer satisfaction, through the value of standardized coefficients (beta value) was explained that, the perceived usefulness had the significant positive effect on the service loyalty.

For objective of this research, the effect of customer satisfaction on service loyalty for instant message providers business. The result showed that the customer satisfaction the variable which can interpret the effect of customer satisfaction on service loyalty.

"Service loyalty is the degree of which a customer exhibits repeat purchasing behavior from a service provider, possesses a positive attitudinal disposition toward the provider, and considers using only this provider when a need for this service arises" (Gremler and Brown 1996). On the other hand, Moonkyu and Lawrence (2001) defined service loyalty is based on past experiences and future expectations; the customers have intention to continue choose their current service provider.

In the research area of information management, one of the important research topics is customer satisfaction. (Au, Ngai, & Cheng, 2008). "There is increasing recognition that the ultimate objective of customer satisfaction measurement should be customer loyalty", Fornell (1992). Satisfaction positively affect the customer loyalty, satisfaction is one antecedent of customer loyalty (Deng et al 2009; Dick & Basu, 1994). Customer satisfaction is the core mediate for mobile service firms to enhance them company sustainability and success (Deng, et al, 2010; Wang&Liao, 2007; Turel& Serenko, 2006, Cristobal et al, 2007, report that e-satisfaction has a positive significant effect on e-loyalty.

Base on the information above, that customer satisfaction is the main determinant on service loyalty for instant message providers business, it reveals that this research conform to the previous study which already done by Au, Ngai, & Cheng, 2008; Fornell 1992; Deng et al 2009; Dick & Basu, 1994; Wang&Liao, 2007; Turel& Serenko, 2006; Cristobal et al, 2007.

9. Implementation

9.1 For the instant message providers business

This research has important implications for instant message providers business. One of the challenging tasks that MIM providers face is how to enhance customer satisfaction and loyalty.

As suggested by this research model, customer loyalty will develop if the formation of perceived value, technology acceptance factor, electronic service quality, and customer satisfaction is well managed. Therefore, MIM service provider marketing strategies may be more fruitful through focusing on these variables. It is important for an MIM service provider to be a satisfying brand to increase customer loyalty. MIM service providers must be concerned about the quality of their service and highlight fulfillment. Particularly, they satisfy customers' value through providing good and reliable functional value, giving a more perception of social value.

Therefore, in order to meet the demands of different types of customers, MIM service providers should.

1. The research and development of MIM service business provider, should develop and provide more functional value in them service business, to make their customers feel can got more value from the function of use them service and product.

2. The MIM service business provider also should pay more attention to keep the fulfillment of them service and produce. Make sure the information technology department keep update, upgrade and maintenance them server, software and service. To provide the fulfillment environment for the customer use, finally enhance the customer satisfaction.

3. The public relation and marketing department of MIM service business provider, should increase the social value receive perception of customer, that can make the customer feel they are receive more social value during use the providers' service and product.

4. Technology acceptance factor appears to be important for both customer satisfaction and loyalty formation, which implies that, in order to attract more current customers to use the MIM providers' service and product, the service providers must try to establish that product and service of them are usefulness, ease-of-use and enjoyable to their customers and care about customers' needs, which can enhance the degree of customers' perceptions of technology acceptance factor.

5. Social communication as first objective of users use the mobile instant message software. For the instant message providers, they should pay more attention on this field, and for the objective use to work and study, the research and development department also should develop more function of software, to support and optimize these three main objective of use.

6. Consider the result of behavior and nationality of respondents, this research included Chinese and Thai nationality people. Most of Chinese respondent use MIM for social communication, and Thai respondent they are like use MIM for both social communication and work. For the instant message providers, they should pay more attention on both objective of use in different nationality customers, which is social communication and work. Research development and marketing department should create and develop the image and function, which MIM can bring more social communication value to customer, and convenient usage in work for customers are use MIM for work.

9.2 For the academic

1. The empirical of this research confirm that the perceived valve; technology acceptance model and electronic service quality model are fitted for testing the effect of customer satisfaction and service loyalty for instant message software providers business**.** The model can be well used in context across wide variety of information technology service industry.

2. The empirical of this research suggest that the researcher should focus on the customer perceived value, fulfillment and technology acceptance model to in the field of customer behavior in the of information technology service industry.

3. The empirical of this research suggest that, in the field of information technology service industry, through the information technology development ,efficiency and system availability are will not plays the significant role.

4. The empirical of this research suggest that, in the field of the regression analysis, factor analysis is a useful tool for investigating complex concepts variable relationship. It can investigate concepts that are not easily measured directly, by large number of variables into a few interpretable underlying factors.

10. Limitation of the study

The results might have limited generalizability. Due to the relatively small sample size, and geographic limitations, the results might also not be truly representative of all Thai mobile instant message software users.

11. Future research

1. The results of this study only provide results on consumers' customer satisfaction and service loyalty in Bangkok. Future research can consider to extend it with other areas in Thailand or other countries. It will be better to understand more about the customer satisfaction and service loyalty in the information technology service industry.

2. The future research was needed to investigate other factors in the information technology service industry, to study the relationship between the demographic and the customer satisfaction and service loyalty.

3. The future research could use more variable to measure the effect of customer satisfaction and service loyalty information technology service industry. So that makes the content of the information technology service industry more extensive and makes the results may become more meaningful.

4. The future research should enlarge the number of respondents, which may be able to distinguish respondents who were divided into different occupations or distinguish the objective of use MIM, for example business, research, family communication and so on.

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Appendices

English research questionnaire

A research is being undertaken to learn more about. The effect of perceived value, technology acceptance, and e-service quality on customer satisfaction and service loyalty for instant message providers business.

Your kindness in answering each of the questions below may help to improve the efficiency in information management. Please respond to each question. The format of requested responses varies by question and may require a written answer, checking √ in the relevant □ or for some questions are requested to indicate your perception level as a scale ranging from 1 to 5.

This questionnaire has 5 parts:
Part 1: Personal Information
Part 2: Perceived value
Part 3: Technology acceptance factor
Part 4: E-service quality
Part 5: Customer satisfaction
Part 6: Service loyalty

Part 1: Personal Information

Note: Please write down your answer or check √ in □ that related with your answer.

1. Gender □ (1) Male □ (2) Female
2. Age □ (1) 17-20 □ (2) 21-25 □ (2) 26-35
   □ (3) 36-50 □ (4) over 50 years
3. What is your nationality? □ (1) Thai □ (2) China
   □ (3) other (please specify) ……..
4. Education level □ (1) Under Bachelor □ (2) Bachelor
   □ (3) Master or above
5. Income per month □ (1) Under-- 15,000 Baht □ (2) 15,001--25,000 Baht
   □ (3) 25,001--30,000 Baht □ (4) 30,001 and above
6. Which brand of smart phone are you using? □ (1) iPhone □ (2) Samsung
   □ (3) HTC □ (4) NOKIA □ (5) LG
   □ (6) SONY □ (7) Blackberry
   □ (8) Other (please specify) ……..

7. What smart phone operation system are you using?
□ (1) iOS □ (2) Android
□ (3) Windows phone □ (4) Blackberry
□ (5) Other (please specify) ……..
8. Which brand of mobile instant message software (MIMS) are you using?
(Can choose more than one)
□ (1) Line □ (2) Wechat
□ (3) Whats App □ (4) other (please specify) ……..
9. Which brand of mobile instant message software (MIMS) are you mostly using?
(Only one can choose)
□ (1) Line □ (2) Wechat
□ (3) Whats App □ (4) other (please specify) ……..
10. How many times you spend on mobile instant message software (MIMS) per hour?
□ (1) 1 times □ (2) 2-3 times
□ (3) 4-5 times □ (4) Over 5 times
11. How long you spend time on mobile instant message software (MIMS) per time?
□ (1) Below 10 minutes □ (2) 20-30 minutes
□ (3) 40-50 minutes □ (4) Over 50 minutes
12. What is your main objective of using instant message software (MIMS)?
□ (1) Study □ (2) Work
□ (3) Social communication □ (4) other (please specify) ……..

From the part 2 to part 6, please indicate your perception level as a scale ranging from 1 to 5, in which by checking √ in the □ . Each statement is measured using a 5-point Likert scale: 1 = strongly disagree; 2 = disagree; 3 = neutral; 4 = agree; 5 = strongly agree. MIMS = Mobile instant message software.

Base on the MIMS of you mostly use (which is your answer in question 9), answer the question in part 2 - 6.

Part 2 Perceived value	**1**	**2**	**3**	**4**	**5**
2.1 This MIMS is reliable.					
2.2 This MIMS has good functions.					
2.3 This MIMS fulfills my needs well.					
2.4 This MIMS helps me to feel acceptable.					
2.5 This MIMS makes a good impression other people					
2.6 Using this MIMS gives me a sense of belongings to others users.					

Part 3 Technology acceptance factor	**1**	**2**	**3**	**4**	**5**
3.1 This MIMS is useful to me.					
3.2 This MIMS allows me to conveniently communicate with others.					
3.3 This MIMS improves my efficiency of communication with others.					
3.4 Learning to operate this MIMS is easy for me.					
3.5 It is easy for me to become skillful at using MIMS.					
3.6 Overall, this MIMS is easy to use.					
3.7 Using this MIMS gives enjoyment to me.					
3.8 Using this MIMS gives fun to me.					
3.9 Using this MIMS keeps me happy.					

Part 4 E-service quality	1	2	3	4	5
4.1 This MIMS enables me to complete a message quickly.					
4.2 This MIMS loads its message fast.					
4.3 This MIMS enables me to get on to it quickly.					
4.4 This MIMS is always available for use.					
4.5 This MIMS launches and runs right away.					
4.6 This MIMS does not crash.					
4.7 This MIMS push message in right time.					
4.8 This MIMS sends out the message as ordered.					
4.9 This MIMS makes send the right message.					
4.10 This MIMS protects about my message send.					
4.11 This MIMS does not share my personal information with other.					
4.12 This MIMS protects about my personal information.					

Part 5 Customer satisfaction	1	2	3	4	5
5.1 My choice to this MIMS service is a right choice.					
5.2 I think I did the right thing when I subscribed to this MIMS service.					
5.3 Overall, my feeling to this MIMS service is satisfactory					

Part 6 Service loyalty	1	2	3	4	5
6.1 I will continue to use this MIMS.					
6.2 I believe that this is my favorite MIMS.					
6.3Even if close friends recommended another MIMS, my preference for this MIMS would not change.					

Chinese research questionnaire

此调查问卷的调查目的为：在即时通讯软件服务商的服务下。感知价值，科技接受程度因素，电子服务满意度，对于顾客满意度和忠诚度的影响。

你下面所回答的每一个问题都有助于帮助提升即时通讯软件公司在信息管理领域的水平。请回答认真每一个问题，每个问题有5个不同程度，请在您所选的问题下（□）打勾（√）。

这份问卷有5个部分：
第1部分：个人信息
第2部分：感知价值
第3部分：科技接受程度因素
第4部分：电子服务质量
第5部分：客户满意度
第6部分：服务的忠诚度

第1部分：个人信息　　注：请在您所选的问题下（□）打勾（√）

1. 性别　□ (1) 男　□ (2) 女
2. 年龄　□ (1) 17-20　□ (2) 21-25　□ (3) 26-35　□ (4) 36-50　□ (5) 超过50岁
3. 国籍　□ (1) 泰国　□ (2) 中国　□ (3) 其他（请注明）.....
4. 教育程度　□ (1) 大学以下　□ (2) 大学　□ (3) 硕士或以上。
5. 每月收入　□ (1) 15,000泰铢或以下　□ (2) 15,001 – 25,000　□ (3) 25,001 – 30,000　□ (4) 30,001及以上
6. 您所使用的智能手机品牌是？□ (1) iPhone　□ (2) 三星　□ (3) HTC　□ (4) 诺基亚　□ (5) LG　□ (6) 索尼　□ (7) 黑莓　□ (8) 其他（请注明）.....
7. 您正在使用的手机操作系统是？□ (1) 苹果iOS □ (2) Android系统　□ (3) Windows phone系统　□ (4) 黑莓系统 □ (5) 其他（请注明）.....
8. 您正在使用哪个服务商的即时通讯软件？**(可多选)**　□ (1) 连我（Line）　□(2) 微信 (Wechat)　□ (3) Whats App　□ (4) 其他（请注明）....
9. 大多数情况下您使用哪个服务商的即时通讯软件？**(单选)**　□ (1) 连我（Line）　□ (2) 微信 (Wechat)　□ (3) Whats App　□ (4) 其他（请注明）....
10. 您每个小时大概使用几次即时通讯软件？□ (1) 1次　□ (2) 2-3次　□ (3) 4-5次　□(4) 大于 5次
11. 您每次大概花费多长时间来使用即时通讯软件？　□ (1) 少于10分钟　□ (2) 20-30分钟　□ (3) 40-50分钟　□ (4) 大于 50分钟
12. 你使用即时通讯软件的主要目的是什么？　□ (1) 学习　□ (2)工作　□ (3) 社交　□ (4) 其他（请注明）.....

从第2-6部分开始，每个问题有5种不同程度。请在您所选的问题下，打勾（√）。

您的评断分为 5 种等级，对应的数字分数规则为：5=非常认同；4 = 认同； 3 = 一般；2 = 不认同；1 = 非常不认同

根据你最经常使用的移动即时通讯软件（问题9题您所作的回答），回答2-6部分的问题

第2部分，感知价值	1	2	3	4	5
2.1这个移动即时通讯软件是可靠的					
2.2这个移动即时通讯软件具有良好的功能					
2.3这个移动即时通讯软件可以满足我的需求					
2.4通过对这个移动即时通讯软件的使用，可以帮助我获得别人的认同					
2.5通过对这个移动即时通讯软件的使用，可以帮助我获得别人的良好印象					
2.6通过对这个移动即时通讯软件的使用，让我感觉和其他使用者有一种归属感					

第3部分：科技接受程度	1	2	3	4	5
3.1这个移动即时通讯软件对我很有用					
3.2这个移动即时通讯软件可以让我方便地与他人沟通					
3.3这个移动即时通讯软件提高了通信的我与他人的效率					
3.4对于我来说，学习这个移动即时通讯软件的操作是容易的。					
3.5对于我来说，操作好这个移动即时通讯软件是容易的。					
3.6总体而言，这个移动即时通讯软件的操作和使用是容易的。					
3.7我很享受这个移动即时通讯软件的使用					
3.8使用这个移动即时通讯软件，给我了乐趣					
3.9使用这个移动即时通讯软件总是给我带来快乐					

第4部分：电子服务质量	1	2	3	4	5
4.1这个移动即时通讯软件使我能够快速完成消息的收发					
4.2这个移动即时通讯软件可以快速的加载消息					
4.3我可以顺畅的使用这个移动即时通讯软件					
4.4这个移动即时通讯软件总是可供我使用					
4.5这个移动即时通讯软件能正确的启动和运行					
4.6这个移动即时通讯软件不会崩溃					
4.7这个移动即时通讯软件可以按时的推送消息					
4.8这个移动即时通讯软件按照我的要求发送信息					
4.9这个移动即时通讯软件可以准确的发送消息					
4.10这个移动即时通讯软件可以保护我发送的消息					
4.11这个移动即时通讯软件不会分享我的个人信息					
4.12这个移动即时通讯软件可以保护我的个人信息					

第5部分：客户满意度	1	2	3	4	5
5.1我想我选择了这个移动即时通讯软件是一个正确的选择					
5.2我想我订阅了这个移动即时通讯软件的服务是一个正确的选择					
5.3总体来说，我对这个移动即时通讯软件的服务感到满意					

第6部分：服务的忠诚度	1	2	3	4	5
6.1我会继续使用这个移动即时通讯软件					
6.2我相信这是我最喜欢的软件					
6.3即使我的亲密的朋友推荐了另一个软件，我仍然偏爱这个软件不改变					