Advanced SME with M - commerce System

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Abstract

  "M-commerce with SME standards" Research aimed to analyze the causal pathways that influence the sustainable development of SME business in Thailand which examined the consistency of the structural equation model of SME business using M-commerce system. Moreover, it aimed to study the opinions of SME business entrepreneurs in Thailand toward the use of M-commerce system and study the opinions of SME users in Thailand toward the use of M-commerce system.

  This research was designed as quantitative research which collected data from questionnaires and used the survey as research methodology and tools. The population is SME entrepreneurs and SME users who have a sample size of 400 samples but to be more efficient in analyzing the results. The sample size is suggested more 10% at 440 samples. Then, the relevant literature is summarized with the SME business component as conducted research in a sequential manner. It was found that the majority of SMEs surveyed responded to the questionnaire. The most SME businesses, which their fixed assets are less than 30 million baht, are employing less than 30 employees. In the general information section of the questionnaire, Most of SME's respondents were 220 female respondents, aged from 31 to 40 years old, with bachelor's degree, with current occupation as officers in the company, and average income ranged from 10,001 to 20,000 baht. The using the model of the structural equation for the satisfaction of SMEs was analyzed with SME entrepreneurs toward the use of the M-commerce system. The weight of the observed variable for each latent factor had linear coefficients between each others. It was found that the index of suitable for the model was $x2 / df = 18$, GFI = .975 , RMSEA= .046, RMR= .003, NFI= .994, CFI= .998 และ p = .002 which are approximate acceptable criteria.

Keyword: M-commerce

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Background and Significance of the problem

In many countries, Small to Medium Enterprises (SME) is considered an important mechanism that plays the role of the national economy. Thailand has a very small SME population of 99 percent, but these SMEs are able to produce only 42.35 percent of gross domestic product (GDP). The government has the policy to promote SMEs to be business-friendly and competitive. Through the programs provide such as business incubation training, the programs are able to create a network of entrepreneurs, to develop SMEs to create grosser domestic products (GDP) and to prepare for the integration into the ASEAN Economic Community. Thailand has both government and private sectors that many research studies have done, but for SMEs, there is no technology and new innovations to use as much as possible. The most important aspect of SME for Thailand's economy and society are the role of a business that can create value for the economy to Thailand. In the field of job creation, SMEs create value-added and monetize in the role of manufacturers, sales of goods, as well as in the role of service providers.

In Thailand, the number of SMEs has continuously increased. The number of SME entrepreneurs was 2.92 million, accounting for more than 99.6 percent of total enterprises. Small and medium enterprises (SMEs) are numbered 18,387, and 9,140 are large enterprises. SME is the driving force behind the growth of the Thai economy. The Office of Small and Medium Enterprises Promotion (OSMEP) have studied the number of enterprises in Thailand in 2012, which is expected to generate 1.8 trillion baht in productivity for the country. Employment of 10.5 million people, accounting for 80 percent of total employment, as well as SMEs, is also an important driving force for the Thai export sector. Export value reached 1.7 trillion Baht, accounting for 28.4 percent of the total export value.

The characteristics of the SME industry today can be divided into four main categories: manufacturing, wholesale trade, retail trade and service provider. According to the Small and Medium Enterprise Promotion Act BE 2543, each type of business will have different characteristics. Each type of SME will have different industries. Those industries that are important to the economy are called High Impact Sectors. These potential industries generate with the large amount of revenue per year. (Department of Industrial Promotion, 2556)

For the promotion of SME development in Thailand, the government has set up SME support agencies such as the Ministry of Industry through the Office of Small and Medium Enterprises Promotion (OSMEP), the Ministry of Commerce, the Thai Chamber of Commerce FTI the government has raised about 10,000 billion baht to promote the SME sector, but what Thailand is lacking. Cultural innovation currently, the Ministry of Commerce has established a coordinating center. And the ASEAN Economic Community (AEC) information service to raise awareness. Distributed information It also facilitates access to information about AEC in each province nationwide. The agencies involved in promoting SMEs have implemented activities to promote and assist SMEs in accordance with government policies through various structures such as SME Power project, GO SME project can be parted of SME by empowering entrepreneurs and enterprises. To raise the country to universal through the opening of opportunities for SMEs in Thailand, government can have business channels to foreign countries to compete with other countries in the region and on a global scale which referred to as internationalization or "SMEs Internationalization".

Businesses are constantly changing. Similarly, the e-commerce industry has introduced electronic tools such as mobile phones or portable computers to be used as a new channel. In trading, it becomes

a new business strategy that is more than using multiple computers, i.e., cheap, convenient and easy to carry. Convenient access to the service anywhere and anytime, resulting in business operations in the form of Mobile commerce or M-commerce increase and tend to continue to grow. For this reason, businesses that are mobile operators businesses can be trade through websites. While other business operators pay attention and turn to the business of commercial transactions in the form of M-commerce even more.

M-commerce refers to any transaction with the monetary value induced by the telecommunications network through mobile phones. M-commerce therefore carries out various activities related to business or financial transactions over the telephone network. Moving it is part of the conceptual system of electronic commerce. The wireless device is a tool to buy and sell products. Ordering Products and Services including sending emails can be by M-commerce using cell phones. It can be portable anywhere, anytime and anywhere. Make Online Trade Market or commercial transactions where mobile phones are a potential market. Because comfortable. There are no restrictions on time and place of purchase. And people in the Thai society are familiar with the use of mobile phones already. With the advancement of wireless technology, the number of mobile users has grown exponentially. And create new channel development opportunities. Through mobile phone channels, it is connected to the Internet without restrictions.

From the limitless development process, the introduction of wireless Internet of M-commerce is used in business when applying M-commerce to SMEs to increase standards and the potential for more modern SME business. Make it easier for SME business users. More convenient and faster To meet the demand Therefore, the researcher is aware of the importance of SME standards that bring M-commerce

system to develop, SME business has the potential and increase the standard as well as the efficiency of SME more and more.

Objective

This research aims to study the development of SME standards in the M-commerce system. The research objectives are as follows.

1. To analyze causal pathways that influence the sustainable development of SME business in Thailand.

2.To check the consistency of the model of the structural equation of the SME business to the M-commerce system.

3. To study the opinions of SME entrepreneurs in Thailand on the use of M-commerce.

4. To study the opinions of SME business users in Thailand on the use of M-commerce system.

Literary Review and Concept
Concepts and theories about M-commerce
Meaning of M-commerce

M-commerce refers to any transaction with a clear currency value through the mobile telecommunications network (Research, 2000). Therefore, M-commerce is an activity involving transactions or business transactions. Financial via mobile network, it is part of the concept of electronic commerce (E-commerce) system using wireless handheld devices as a tool to buy and sell goods, then buy and sell are including sending emails by M-commerce using cell phones. It can be carried anywhere, no place and time, made an online trading market or commercial transaction. Cell phones are a potential market because of comfort ability. There are no restrictions on time and place of purchase. And people in the Thai society are familiar with the use of mobile phones already.

Evolution of M-commerce

M-commerce has evolved from e-commerce, evolving into two phases:

1) The first stage was the beginning of electronic commerce. The electronic money transfer system was started at that time. Then the electronic document submission system was developed and then gradually developed other communication systems such as stock trading systems. Hotel Reservation However, the popularity of the use is still relatively small.

2) Phase 2 is a fast-growing Internet. The idea is to exchange information between computers for commercial purposes. Anyone who has a computer that can connect to the internet can join. However, there are restrictions on the location and time to bring the technology of the phone.

The evolution of M-commerce can be divided into 3 periods.

1) The first generation of SMS was the starting point for M-commerce business. SMS is a short message that lasts up to 160 characters via mobile phone.

2) The era of using WAP is the age of searching the Internet. The development of WAP can meet the needs of mobile phones to visit the site.

3) The broadband era is the era in which wireless networks develop at levels capable of receiving high-speed data such as GPRS.

Related Research

Luepreecha, W. & Tiwalai, S. (2012) studied the relationship of quality, quality, usage, user satisfaction, and effectiveness of the online hotel customer management system. The samples used in this study were the tourists who used the online customer service management system of the four-star and five-star hotel business in the Northern Province, using the analysis of hypothesis by analysis with multiple regressions. The research found that information quality has a positive impact on the satisfaction of tourists who come to use online hotel customer management system. Moreover, the result revealed that the quality of service has a positive impact on the satisfaction of tourists who use the online hotel customer management system.

Fang (2011) conducted a study to research the willingness of customers to buy over the Internet. The results of the DeLoen & McLean's (2003) hypothesis test showed that the variables that affect the satisfaction were: Quality of information System quality and quality of service.

Chang, K. & Cheng (2014) conducted a study on the quality of websites where trust is affecting customer interest. Study in the hotel. The research found that the quality of the site positively influenced trust, which would have a positive effect on the interest to purchase a product or service.

Yong (2014) studied the impact of service on customer satisfaction in the context of E-commerce. The data collected from the online questionnaire collected in China. The results show that Operators should focus on the quality of service. Due to the high quality of service provided through e-service and transportation service, it has a positive impact on customer satisfaction.

Scope of Research

Demographic scope

The population in this study was 6,551,718 SME entrepreneurs and SME users (the Office of the National Economic and Social Development Board) with the list in the online database of the Office of the Registrar commerce. The reason for choosing is such a population. This is because it is the largest business in the present. This can be easily monitored and controlled. It also gets information with new knowledge regularly. As a result, the researcher con-

siders it appropriate to represent SMEs in Thailand as a whole.

The sample of this study was 200 SME entrepreneurs and 200 SME business users.

Scope of Content

Researchers focus on the content of

1. SME business standards to be a guideline to improve the quality of SME business.

2. M-commerce system to develop SME business standards.

3. Development of SME to use M-commerce system in SME business.

The content is based on literature review from domestic research.

Hypothesis

Hypothesis 1: Get the attention of SME entrepreneurs in Thailand to use M-commerce.

Hypothesis 2: Interest from SMEs in Thailand for M-commerce

Assumption 3: The causal relationship influences the development of M-commerce for SMEs in Thailand.

Hypothesis 4: The causal relationship influences the increase of SME standards in Thailand.

Hypothesis 5: The causal relationship influences the increase of SME marketing in Thailand.

Assumptions 6: The causal relationship influences the performance of the SME business in Thailand.

Methodology

This research is a quantitative research. Quantitative research uses survey research methodology to collect data from questionnaires using criteria for the importance of elements. With a rating scale, there are 5 levels of answer. The sample selection was based on the Taro Yamane sample at a 95% confidence level that was significantly higher than the population. 100,000 people have the size of 400 samples, but in order to be more efficient in translating the results. Therefore, the sample size is 440 and the data from the relevant literature is summarized. It is a component of the SME business that conducts research in a sequential manner.

The inferential analysis is used to analyze the data. Confirmatory factor analysis of the measurement model of each Patent variable to deter-

Framework
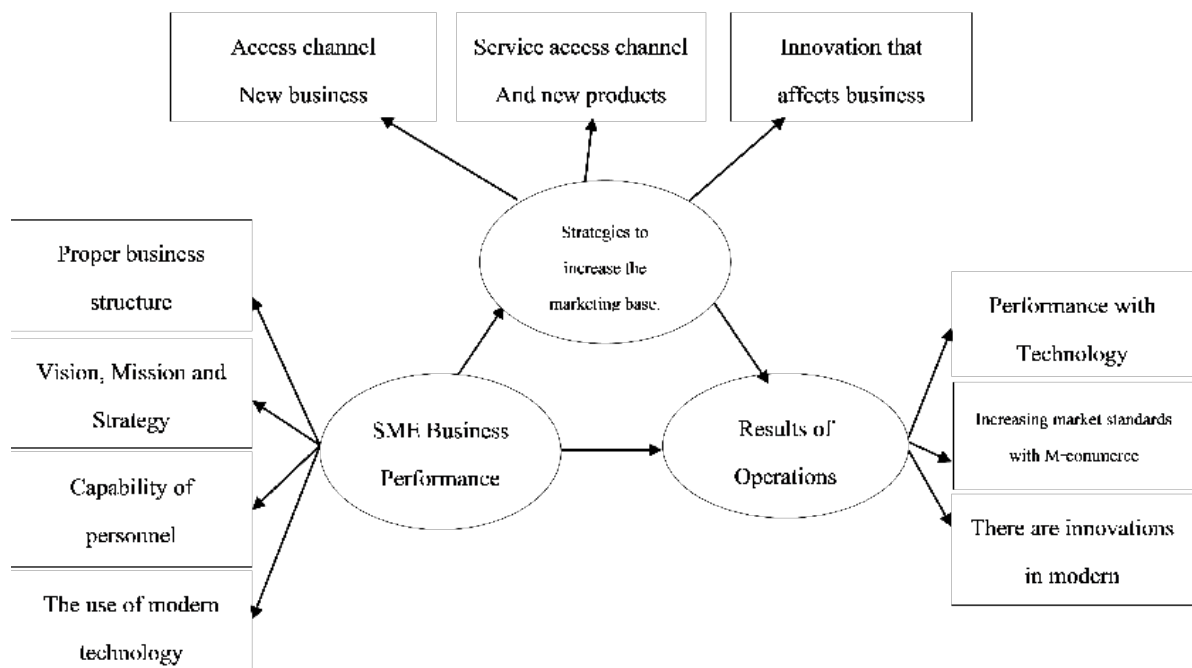
mine the Construct variable, Convergent validity and cracking, different Discriminant validity and Structural equation modeling (SEM) model to find the relationship between the components of social participation. Using Causal Analysis or path analysis. Check the harmony of the research model with the empirical data (Model fit).

Research result

Analysis of the respondent population, the questionnaire was used as a tool to collect data from 440 samples, divided into 220 SME entrepreneurs and 220 SME customers. With programmed statistical statistics. Then present the results in a table. Compose subtitles for analysis results. It is divided into 4 sections as follow.

Part 1: General information of SME entrepreneurs who responded to the questionnaire.

All 220 respondents were female, of which 85.91% were male and 31.9% were female, accounting for 14.09%, aged 31-40 years, accounting for 46.36%. There are 89 people in the age group of 51 to 60 years old, or 8.64%, followed by 61 and older, 6 persons or 2.73%, followed by 21 - 4 years 1.82 percent had a higher education level than the bachelor degree, accounting for 51.82 percent, followed by a bachelor degree of 86 students or 39.09 percent, followed by a lower level of education. The number of employees was 189, representing 85.91%, followed by 27 employees, or 12.27%. 1.82 percent, respectively.

*Part 2: General information of the SME survey respondents.*

All 220 respondents completed the survey. 169 retailers accounted for 76.82%, followed by the wholesalers 42%, 19.09%, followed by the service sector 6%, 2.73%, followed by the manufacturing sector 3%. 1.36% had fixed assets of less than 30 million baht, accounting for 76.82%, 30-60 million baht,

42%, 19.09%, and 50% - 100 million baht respectively. People accounted for 2.73% and 1.36% respectively. There were 169 employees, or 76.82%, less than 30 employees, followed by 16 to 30 persons, or 19.09% there were 6 people, 2.73%, followed by 50 - 200 persons (1.36%).

Part 3: General information of SME users of the respondents.

The sample consisted of 220 questionnaires (58.64%) and 91 males (41.36%), aged 31-40 years (54.09%). Of the 65 respondents, 29.55% were under the age of 20, 32% or 14.55%, followed by 51% or more, or 1.82%. And the rest is 109 people, 49.55%, followed by vocational education. The equivalent of 24.09%, followed by vocational certificate. 35 students were equivalent to 15.91 percent. Secondary 18 students were equivalent to 8.18%, followed by 5 students, or 2.27%, respectively. There were 129 staff members, 58.64% of whom were employees. 25.00 followed by 22 officials, 10.00%, followed by 14 business owners (6.36%), 159 (72.27%), followed by 50 22.73%, followed by 11 persons, accounted for 5.00%. The average income was 10,001 - 20,000 baht, 189 persons accounted for 85.91%, followed by 40,001-50,000 baht, accounting for 9.09%. Subsequently, 11.00% - 40.00%, respectively.

Part 4: SME-based satisfaction analysis using M-commerce system of SME entrepreneurs.
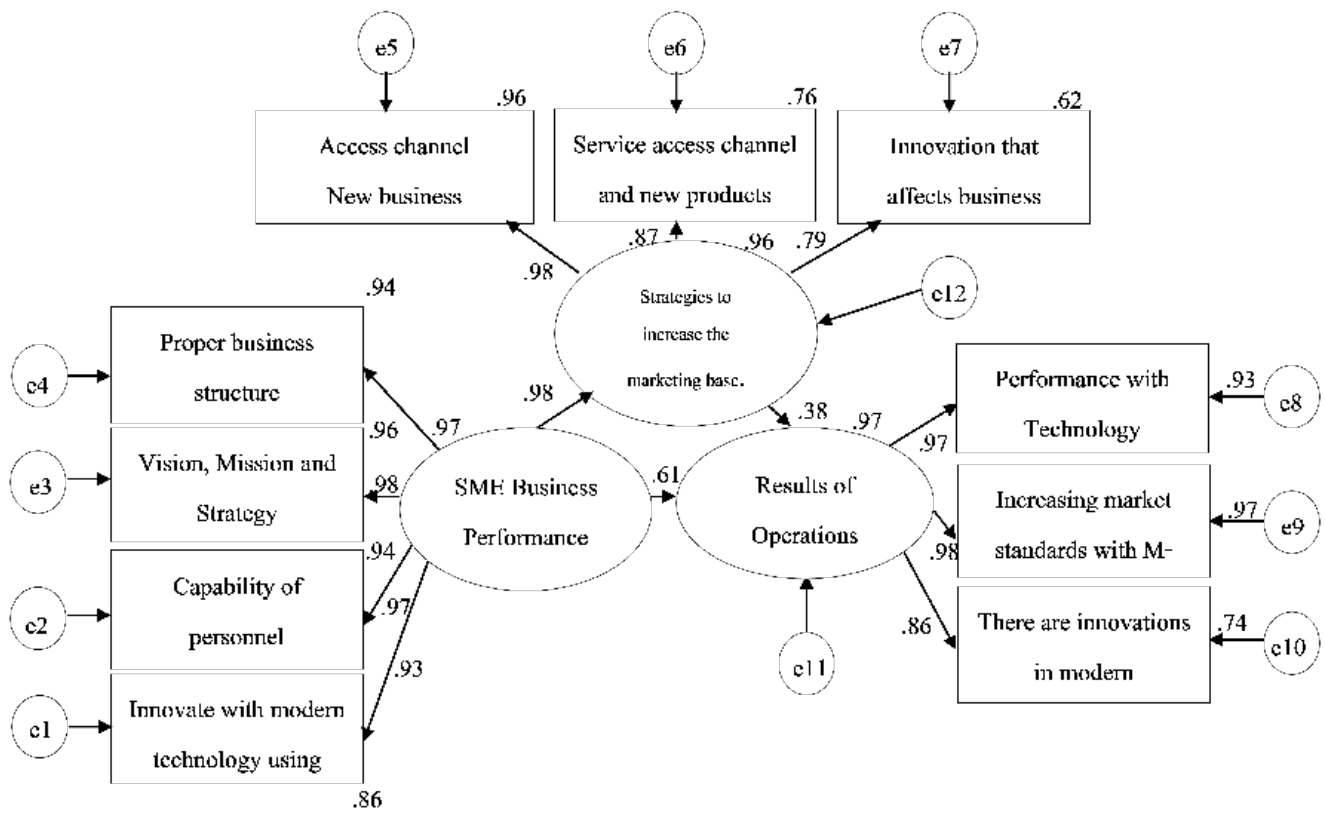
Chi   square = 25.455 df. = 18 Sig = .113 CMIN / df. = 1.414 n. 500

CFI   .998 NFI   .994 GFI   .975 AGFI   .924 IFI   .998

RMSEA = .046 RMR = .003

Based on the analysis of the model, the structural equation, the satisfaction level of SMEs, and the M-commerce system of SME entrepreneurs, the weight of the observed variable. Each latent factor and linear coefficients between latent factors.

The coefficient of fit for the model is x2 / df = 18, GFI = .975, RMSEA = .046, RMR = .003, NFI = .994, CFI = .998 and p = .002. Which is acceptable criteria.

Table 1. Statistical analysis of causal relationships that influence the sustainable development of SMEs in Thailand.

Variable (pair relationship)			λ	S.E.	t-value	Sig.
Strategies to increase the marketing base.	<	SME Business Performance	1.002	.036	28.046	0.000**
Performance	<	SME Business Performance	.609	.124	4.907	0.000**
Performance	<	Strategies to increase the marketing base.	.372	.120	3.098	0.002*
The use of modern technology	<	SME Business Performance	1.000			
Capability of personnel	<	SME Business Performance	1.035	.030	34.670	0.000**
Vision, Mission and Strategy	<	SME Business Performance	1.032	.034	30.623	0.000**
Proper business structure	<	SME Business Performance	1.062	.039	27.544	0.000**
New business access channel	<	Strategies to increase the marketing base.	1.000			
New access to services and products.	<	Strategies to increase the marketing base.	.979	.042	23.552	0.000**
Innovation that affects business development	<	Strategies to increase the marketing base.	.753	.044	17.167	0.000**
Performance with Technology	<	Performance	1.000			
Increasing market standards with M-commerce	<	Performance	1.007	.023	43.204	0.000**
Innovations with modern technology	<	Performance	.780	.036	21.663	0.000**

** Statistically significant at 0.001 * statistically significant at 0.05.w

Analyzes, tests, structural, causal factors were affecting the sustainable development of SMEs in Thailand. Independent variables were performance variables of SMEs and performance and variation based on modern technology. The ability of personnel, vision, mission and strategy are proper business structure. New business access channel, new access to services and products are innovations that affect business development performance with Technology Enhancing M-commerce marketing standards and innovation with modern technology. The regression coefficients of independent variables were statistically evaluated. The coefficient of determination determines the influence of variables. The statistical significance was 0.01 and statistically significant at 0.05.

Table 2. Structural Equation Modeling Statistics Modeling Impact on SME Sustainability in Thailand

index	Measurement criteria	result	Conclusion
Chi – Square	P. > 0.05	25.455	Acceptable Criteria
CMIN / df.	< 0.03	1.414	Acceptable Criteria
GFI	≥ 0.90	0.975	Acceptable Criteria
AGFI	≥ 0.90	0.924	Acceptable Criteria
NFI	≥ 0.90	0.994	Acceptable Criteria
IFI	≥ 0.90	0.998	Acceptable Criteria
CFI	≥ 0.90	0.998	Acceptable Criteria
RMR	< 0.05	0.003	Acceptable Criteria
RMSEA	< 0.05	0.046	Acceptable Criteria

Based on the structural model, the model influences the sustainable development of the SME business in Thailand after modifying the model. The results were consistent with the empirical data.

Conclusion

The results of the study revealed that the sample of respondents who completed the questionnaire was 220 samples, 85.91% were male, and 14.09% were male. 40 years of age were 46.36% and 41.40%, followed by the age of 41-50 years, accounting for 8.64%. The average age is 21 - 30 years, or 1.82%. 51.82% followed by the bachelor degree. 39.09%, followed by lower education which 9.09 percent owned the business, 85.91% were followed by employees, 12.27%, followed by partners who accounted for 1.82 percent.

It was found that 220 respondents completed the questionnaire. With retail sector, it is accounted for 76.82%, followed by wholesale, accounted for 19.09 percent, followed by the service sector 2.73%, followed by manufacturing sector 1.36%, fixed assets of less than 30 million baht or 76.82%, followed by 30-60 million baht or 19.09%. 50 - 100 million baht,

or 2.73%, followed by 50 - 200 million baht or 1.36%. The number of employees was less than 30 persons or 76.82%, followed by 16-30 persons, or 19.09%. 26 - 50 people accounted for 2.73% and secondly, 50 to 200 people accounted for 1.3 percent.

It was found that the general information of the SME's respondents to the questionnaire. Most of the 220 respondents were female, 58.64% and 41.36% male, aged 31-40 years or 54.09%, followed by 41-50 years old. 29.55, followed by under 20 years old, accounted for 14.55%, followed by 51 years or over, accounted for 1.82%. 49.55% followed by vocational education. Or equivalent 24.09% followed by vocational certificate. Or equivalent 15.91% were secondary school students. Or equivalent 8.18 % and higher than the bachelor, 2.27% occupation 58.64% followed by students 25.00%, followed by government officials at 10.00 %, and followed by business owners. 6.36% were single, 72.27% were married, and 22.73% were married. The average income is 10,001 - 20,000 baht, or 85.91 percent, followed by 40.001 - 50,000 baht or 9.09 percent and 30.001 - 40,000 baht, or 5.00 %, respectively.

Based on the analysis of the model, the structural equation, the satisfaction level of SMEs, and the M-commerce system of SME entrepreneurs, the weight of the observed variable. Each latent factor and linear coefficients between latent factors.

The coefficient of fit for the model is x2 / df = 18, GFI = .975, RMSEA = .046, RMR = .003, NFI = .994, CFI = .998 and p = .002, which is acceptable criteria.

Discussions

Analysis of the respondent population, the questionnaire was used to collect data from 440 samples, SME entrepreneurs and SMEs. With programmed statistical statistics. Then present the results in a table. Compose subtitles for analysis results.

The results of the analysis of general information of SME entrepreneurs of the respondents revealed as follow. It was found that 220 respondents were mostly male and 31-40 years old with higher education who is the owner of SME.

The results of the analysis of general information of SMEs surveyed. All 220 respondents completed the questionnaire. Fixed assets of most businesses are less than 30 million baht, employing less than 30 employees.

The results of the analysis of general information of SME users of the respondents showed that it was found that 220 respondents were female, aged from 31 to 40 years, with bachelor's degree, occupation, company status, average income from 10,001 to 20,000 baht.

The results of the analysis of the model of structural equilibrium model of SME service satisfaction with M-commerce system of SME entrepreneurs. The weight of the observed variable revealed with each latent factor and linear coefficients between latent factors.

It was found that the index of fit for the mod-

el was approximate acceptable criteria. The analysis of the opinions of the respondents presented both SME entrepreneurs and SMEs that the majority of SME entrepreneurs and SMEs in Thailand use M-commerce systems deployed to make the service. Therefore, the service is comfortable and easy to access. The M-commerce system is very popular with those who have tried it. And use the SME business and the answer is in the right direction.

Suggestion
Policy Recommendations

Entrepreneurs and interested parties recommended developing the site in a format compatible for mobile applications. It should focus on system quality. M-commerce system can be used to bring users to different parts. The system should be ready to use. And respond quickly to users.

Suggestions for further study

This research is a research based quantitative research. More research should be done using other research regulations. In qualitative research, gathering data from interviews with knowledgeable people, celebrities or accomplishments in the field of electronic commerce are recommended to get insights with their idea to understand what is going on and what is happening in the present time. Other variables should be studied. This may affect the preservation of shoppers via M-commerce, in addition to this research, such as the use of social networking.

References

Jittithavorn, J. et al. (2011). Factors Affecting the Success of SMEs in Thailand. Journal of Asian Social Science 7(5), 180 - 190.

Limyothin, P. (2012). Model of structural equation of factors influencing intention of resignation of hotel employees. In the 4th Annual Conference on Management, Prince of Songkla University. pp384 - 396.

Kaiwon, Y. (2013). Modeling of structural equations by AMOS. Bangkok: Chulalongkorn University Press.NamLeau, K. (2011). The causal relationship model of factors influencing professional nursing engagement. In the hospital under the Ministry of Defense in Bangkok. Master's thesis in Educational Research and Statistics, Srinakharinwirot University.

Office of Small and Medium Enterprises Promotion. (2011). Small and Medium Enterprises in Bangkok Siripatpasophon, S.(2015). The Conceptual Framework for Social Enterprise Development in Thailand. Journal of the Association of Researchers. 20(2), 30 - 47.

Small and Medium Enterprises Development Institute. (2016). Prince of Songkla University Network "The potential for the adaptation of SMEs entrepreneurs to support trade liberalization in Songkhla province.

Somboonkun, Y. (2012). ASEAN Economic Community (AEC) and the use of information technology to support the management of small and medium enterprises in the south. Thesis Title: Songkhla Smart Printing.

Tiraka, S. (2011). Varied Variables Analysis in Social Science Research. Bangkok: Department of Research and Evaluation. Faculty of Education, Ramkhamhaeng University.

TorUdom, R. (2013). Success factors of small and medium enterprises in agro-industry. Chachoengsao. Rajamangala University of Technology Thanyaburi. 8(1).

Wanitbuncha, K. (2012). Statistics for Research Bangkok (6th Ed.): Chulalongkorn University Press.

Wongwan, B. (2012) Small Business Management. Lampang: Department of General Management Faculty of Management Science. Lampang Rajabhat University.