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**IJMBE** International Journal of  
**Management, Business, and Economics**



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## Abstract

This study explores the framework for building the customer sentiment knowledge in Thai life insurance based on negative customer sentiments expressed on social media, using the theoretical framework in solving the problems. Our purpose framework presented the solution exploits the benefits from the knowledge management model such as the SECI model, Yamazaki pyramid concept model, Garvin's and Marquardt's theory of knowledge management. The results of this study present the customer sentiment knowledge management to show the relationship of main factors, knowledge management infrastructure and organization factors which impact on customer satisfaction in Thai life insurance's customer and the recommend the problem-solving methods from our purpose framework in order to support the purpose of increasing the customer satisfaction as well as raise the sustainability of the life insurance business.

**Keywords:** Customer Sentiment Knowledge Management

## 1. Introduction

According to the Kasikorn Research Center, disclosing the situation of the life insurance business in 2020 stated that this is one of the businesses that were affected by the Covid-19 epidemic. In the first seven months of the year 2020, the overall life insurance premiums shrank between -2 and -5%, accumulating to about 580,000-600,000 million baht. Later, the government has relaxed the regulations measures controlling the COVID-19, as well as the epidemic situation in various countries and the infected rate have decreased to the controllable level, this results in the improvement of the economic situation. This means the life insurance business would have opportunities to grow as people are starting to realize the importance of life insurance and insurance health plans.

Insurance companies now operate in a more competitive environment than they used to in the past and customers easily switch from one insurer to another. Cancellations and lapses have become one of the factors influencing the level of risk an insurance company and its position in the market. The proliferating extension of the Internet played an instrumental role in reducing information-

gathering costs for customers who wish to change insurers. Now, the central problem for insurance companies is not only to create and launch new products for the market but additionally to achieve commercial success by retaining customers. As a consequence of this growing interest in increasing customer loyalty, the insurance business is no longer product-oriented only, but also customer-oriented.

Thailand began to emerge into the digital world with new technology coming into the basic working force of people today. Apart from being compatible to survive in the life insurance industry, the company must keep up with the consumer behavior that is rapidly and continuously changing. Therefore, it is crucial to come up with the new policy that is most relevant to the needs of consumers, leading to the development of online channels to occur. There are 107 insurance companies that have registered for the electronic transactions, classified into 20 life insurance companies (from 23 companies), 42 non-life insurance companies (from 56 companies), and 51 insurance brokers/ banks. This is considered a positive factor that is important to the overall picture of the insurance business, both in terms of the insurance premium as well as expands the customer base of the minor customers to increase, by creating the familiarity of the digital purchase of insurance of the minor customers in order to keep up with the changing consumer behavior as well as support the society that moving into the digital society in the future.

In this society, social media allows the company to acknowledge the problems in advance from the customer reviews posted on social media. This is considered an active policy, while insurance business companies in Thailand mostly have passive management, waiting for the problems to be severe, and customers make the complaints before taking action. The social customer relationship management and knowledge management through the study of the models and theories are the processes of searching, collecting, applying, exchanging, and creating knowledge. It is organized in a systematic way to provide knowledge in a sustainable manner in the organization and to help promote and increase efficiency in life insurance business management. Moreover, this allows the company to be aware of the solution of the cancellation of the policy, as well as increase the satisfaction of being life insurance business customers.

## **2. Literature Review**

### **2.1 Social Customer relationship management (Social CRM)**

As the most important asset to any company, customer satisfaction is the primary goal for every company in achieving their business goals. To increase customer satisfaction, which is the key to success in business, customer relationship management (CRM) is used as a strategic tool for companies to build, manage and strengthen customer relationships. The definition of Customer Relationship Management (CRM) is to develop and maintain long-term, mutually beneficial relationships between the organization and its prospects through a customer-centric business strategy. It is also a corporate strategy that seeks to reach customer feelings, understand customer behavior, and convince customers by building customer relationships for customer acquisition, customer retention and royalties, as well as increasing profits.

With the rapid growth of ICT, both sales/service records and customer feedback are digitized and acquired online via a web browser or social media. Customers are not limited to the underlying role in their relationship with Company anymore (Malthouse, 2013). As a result, many researchers are beginning to study social CRM, which takes place along the border between CRM and social media. Researchers are involved in the impact of social media on traditional CRM issues, such as

customer churn. Much research has been involved in the results of customer acquisition. Word-of-mouth compared to other channels. In addition, the research found that the view of customer value has changed; customer value is not only limited to purchase but also includes a longer social component such as customer influence, references and knowledge.

## 2.2 Knowledge Management

*Knowledge* has been widely recognized as the most crucial competitive asset (Palacios and Garrigos, 2006). Knowledge refers to a theoretical or practical understanding of a subject. Knowledge management (KM) has become a very common term in the twenty-first century, as it has been applied to a wide spectrum of activities and areas with the purpose of managing, creating and enhancing intellectual assets (Shannak, 2009) and it has become enriched with a huge wealth of contributions from many scholars and an extensive accumulation of experiences (Palacios and Garrigos, 2006). From a deeper point of view, knowledge management should be a kind of working method and philosophy. Knowledge management is a part of the field of management studies, but it is also closely integrated with information and communication technologies (Mihalca et al., 2008).

*Knowledge management* can be observed from several perspectives, as there are a number of fields that contribute to it (Mihalca et al., 2008). The prominent among them are the fields of philosophy, cognitive science, social science, management science, information science, knowledge engineering, artificial intelligence and economics (Kakabadse et al., 2003). Funmilola Olubunmi Omotayo (2015) studied the importance of knowledge management in today's economy, which is a knowledge economy, and explains effective knowledge management as an essential component for knowledge-seeking organizations to gain a strategic advantage, and sustainable competition (Funmilola, 2015). Ganesh D. Bhatt (2001) also studied the relationship of knowledge management between people, technology and technique, and explained knowledge management by balancing the organization. It is found that the organizations that focus specifically on people, technology, or technique do not have the sustainable learning that covers every part (Ganesh, 2001). A learning organization, systematically defined, is an organization which learns powerfully and collectively and is continually transforming itself to better collect, manage, and use knowledge for corporate success (Marquardt, 1996). Organizations implement knowledge management with the assumption that knowledge management will enhance competitive organizational advantages (Marquardt, 1996).

According to Wang and Plaskoff (2002), a *knowledge management system (KMS)* is defined as a system that is composed of knowledge workers using knowledge management technologies and tools to perform knowledge tasks in a knowledge organization in order to increase organizational and individual productivity and innovation. A successful KMS is suggested to have several elements, including people and their behaviors inside the organization, the knowledge management process, the management practices (e.g., senior management's support), culture and structure of the organization, information technology, as well as information exchange (Avarm 2000). Yang (2004) indicated that Taiwan life insurance enterprises had initiated to develop relevant information systems recently in embarking on knowledge management (Paquette, 2006; Yang, 2004). Bakar, Soykan, and Acar (2018) measured the knowledge of life insurance among students in the Insurance and Risk Management Department, Dumlupinar University, Turkey. Although the research was not related to satisfaction levels, it measured the students' level of basic knowledge of life insurance and found that even those who wished to work in the insurance sector had very little basic knowledge of life insurance. This indicated the need for better education and knowledge sharing with students. Further, it implied that insurance knowledge would influence the life insurance market and, therefore, more knowledge support was necessary (Bakar, et al., 2018).

However, it was suggested that the life insurance organizations should employ the concepts and suggestions of innovation in putting such systems into place. Knowledge utilization provides an insightful understanding for people and organizations such as allowing an operation in accordance with their demands, making coordination between the parties, or facilitating the management of information to make better decisions. That means knowledge is valuable, however, it needs some actions to find a way to make use of knowledge on hand. **Knowledge extraction** is the process to explore and construct knowledge from various sources of data. Fourie et al. (2004) addressed knowledge management instruments used by one German company that provided banking and insurance services for more than 255,000 customers through 200 head office employees. This company adopted several techniques for managing its knowledge, e.g. applying document management systems to help employees to find the relevant document easily, applying keywords and document descriptions, conducting regular seminars for training employees, and creating knowledge through direct communications with colleagues, managers and experts. Additionally, this company used some technical tools to share and disseminate knowledge (Fourie and Cloete, 2004).

Moreover, Wanphen Deeprom (2010) applied knowledge management to resolve customer complaints, starting with conducting questionnaires and interviews with relevant people to find out points to be applied to the solution. From the analysis of the survey, it is found that the problems arising from the organization do not have a system that is easy and fast to access, and the moderation process is not up to standard. Information systems are designed as a tool for screening and supporting access to information; also, the knowledge exchange platform is offered to stimulate learning between each other. From the stated implementation, it can reduce the time of accessing information of the relevant people as well as increase the satisfaction of the users of the knowledge management system at a high level.

### 2.3 Knowledge Management Model

Models and theories are essential to knowledge management. Knowledge management is the process of systematically collecting, searching, and exchanging information, applying, and implementing the knowledge by systematically collecting the information for the sustainable use of the organization. In this study, the theories about knowledge management are used to identify the possibility of each theory and apply into the life insurance business in order to reduce the problem of the abandonment of the insurance as well as increase the satisfaction of the customers, which the details outlined as follows;

*Yamazaki's theory of the pyramid of knowledge* is a concept of Hideo Yamazaki, Japanese Academic of Knowledge Management, who defines knowledge in the form of a pyramid. He states that there are four types of knowledge, and there are four stages of development, from High to low. From data to information to knowledge to wisdom, each level has different meanings, yet have a relationship that is the base of one another by 1) data, facts about a particular subject from observing what happened and information has not undergone the analysis process, raw data. 2) Information, the data that has undergone the analysis process in order to benefit any subjects. 3) Knowledge, the information that has undergone through a comparative thinking process, connected with other knowledge until it is understood and able to be used for any purpose. Lastly, 4) wisdom, and application of knowledge and information to solve or develop the working process, and can be called "Practical intelligence."

*SECI Model* – was presented by Nonaka and Takeuchi, 1995. It is the creation of knowledge by expanding results from knowledge types, tacit knowledge, and explicit knowledge. This model is called "SECI- Knowledge Conversion Process", having the process as follow; 1) socialization, which

is a direct transfer of knowledge between a group of people or individuals 2) externalization, which is the transfer of knowledge from experts from one person to another. 3) combination, which is the process of learning new things to keep pace with the changing trend as well as getting knowledge from the outside, and transfer new knowledge to their organization. Lastly, 4) internalization, which is the implementation of the knowledge into the practical work (Nonaka, 1991; Nonaka et al., 1996).

**Marquardt's Theory** of Knowledge Management, a learning organization based on the concept of Marquardt, consists of: 1) organization requires the concrete foundation in order to create the learning organization, 2) people, one organization requires to be involved with people around various parts of the organization, 3) technology, having new and modern technological tools is considered a facility that allows the creation of a learning organization to be more convenient, 4) knowledge used in the organization must be systematically managed in order to utilize and use them at their most efficient, and 5) learning is considered a core of learning organization, which can be separated into three parts; People, Group, and Organization (Marquardt, 1996; Marquardt, 2002).

**Garvin's Theory** of Knowledge Management (Building a Learning Organization, 1993) presents five principles for developing a learning organization. It consists of: 1) systematic problem solving using the concept of Deming Cycle (PDCA), Fact-based Management and Statistical Process Control etc., 2) experimenting in new approaches related to searching and experimenting of new knowledge as the systematic problem solving, 3) learning from their own experiences and past history including the successes and failures of the company by evaluating these systematically and recording the knowledge gained from activities, 4) learning from the experiences and best practices of others. It is the type of learning that is not learned solely by self-revision or self-analysis. Sometimes, the profound influence can be gained by looking outside of a familiar environment and getting new perspectives, and 5) transferring knowledge quickly and efficiently throughout the organization.

Life insurance is one of service industry therefore to gain high customer satisfaction is directly related to the sustainable of business including Thailand situation too. As discussed in previous section, we are in the social media and a lot of opinion of customer related to products and services are scatter in various social media. Deploying the useful of customer sentiment to find out knowledge related to customer sentiment is necessary. This task presents the results from customer sentiment knowledge management using propose model that make use of good points from the previous works as literature review part. We explained on Thai life insurance business as a case study in this research.

## **2.4 Customer knowledge management and customer sentiment knowledge management**

**Customer knowledge management** is the process for managing knowledge related to the customer, such as customer profile and customer activity. In the social media era, customers prefer to express feelings on social media, both positive and negative opinions. However, a company can utilize and solve the problems in time with negative sentiment extraction.

In addition, **Customer sentiment knowledge management** is also the knowledge management that exploits the benefit from customer sentiment such as product improvement strategy based on positive opinion, complaint management system based on negative emotion. However, extracting customer minds from messages spreading in social media is not an easy task because it requires language and analysis technology based on business knowledge. There is one concern from sentiment extraction from social media; it is entirely unclear a characteristic of a person who expresses that kind of sentiment on social media as anonymous sources.

## 2.5 Framework Model

Companies try to improve their relationship with their valuable customers with the help of knowledge management, which enables them to gain a competitive advantage by creating close and loyal customers who will not switch to rival companies easily (Paquette, 2006). Therefore companies use knowledge management as the process of acquiring the collective expertise and intelligence within an organization, which leads to innovation through continuous organizational learning (Nonaka, 1991; Quinn et al., 1996). Therefore organizations should reinforce their knowledge management and customer relationship management systems in a way that enables them to obtain value-added knowledge for their customers and themselves. Integrated Model of Knowledge Management effect on customer relationship management based on the above literature review. An integrated model is developed to examine the relationship between knowledge management, critical factors, and customer relationship management performance.

This framework model exploited the benefits of knowledge management on customer relationship management, which is integrated from many theories such as Garvin's theory (Building a Learning Organization, 1993) and Marquardt's theory in principles for developing a learning organization. In addition, to merge two kinds of tacit knowledge and explicit knowledge as SECI model suggest also utilize this framework concept to exchange knowledge from various sources such as critiques from social media, customer complaint, questionnaires, organization staff and expertise.

The purpose of this modeling is to demonstrate the correlation of key influencing factors of knowledge management infrastructure and organization factors that help collect, store, analyze and define issues affecting knowledge management in order to foster customer knowledge and customer sentiment knowledge from learning and exchange of experiences. It can be used to improve the performance of social customer relationship management for increasing customer satisfaction and leading to the development process in the organization. Then turn the results into the knowledge cycle by sending a new or additional system, feedback or affected by that implementation back to develop in the additional KM infrastructure and organization factor. This model takes into account the use of customer sentiment information and society surrounding the organization to be the data driver to become knowledge. This model is illustrated in Figure 1.

The model consists of a set of components that are categorized into two major sections. The first section, which is related to Knowledge Management (KM) critical factors, is drove by two factors, namely, **Organizational Factors (OF)** and **Knowledge Management Infrastructure (KMI)**. The result from the first section will create customer knowledge and customer sentiment knowledge to employ in the next section. The second section is related to **Social Customer Relationship Management Performance (SCRMP)** that directly impacts both kinds of knowledge in the first section. SCRMP also impact customer satisfaction level. Customer knowledge and customer sentiment knowledge also can deploy to implement the Service Process Improvement (SPI). After the exchange process of knowledge (Socialization) which is considered to extract knowledge from people with the process (Externalization). It has been tested which process can improve customer satisfaction by bringing forward learning. Until the formation of sealed learning and knowledge embedded (Internalization) covers the learning cycle and can actually do it effectively.

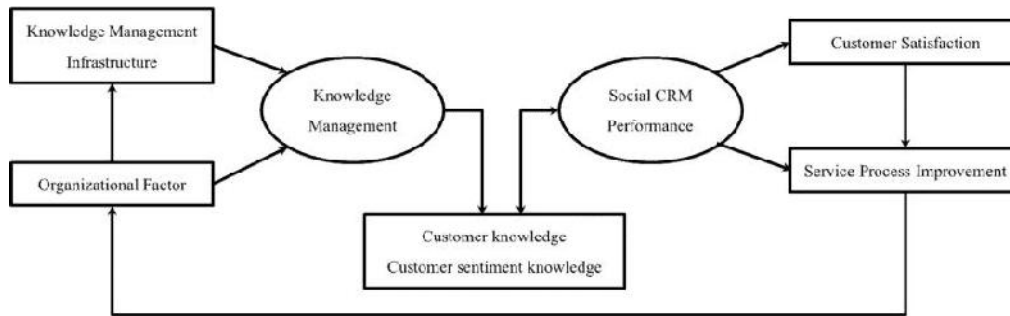
**Knowledge Management Infrastructure (KMI)** means everything that comes together to facilitate the flow of information and knowledge to support the many tasks and actions and decisions that make up the activities of the organization (Lambe, 2006). Generally, the infrastructure includes many major components, such as organization culture, organization structure, and information technology infrastructure with common knowledge. Our context mainly concentrates on information



technology infrastructure related to social media components as the purpose of social customer relationship management.

**Organizational Factor (OF)** relates to the capacity of the knowledge infrastructure. Policy and procedure with the ability to process knowledge are essential organizational capabilities and a prerequisite for effective knowledge management.

The proposed framework model presents in the Figure 1.



**Figure 1** The Framework Model of Customer Sentiment Knowledge Management

### 3. Methodology

The study aims to examine the impact of knowledge management on customer's satisfaction and find out the service process improvement. The research method was researched using data that collect from the survey method. A descriptive research design was adopted to analyze *KMI* and *OF* have an impact on customer satisfaction in Thai life insurance. This study is based on primary data collected using a questionnaire spread via the Google document platform. The sample of the survey was insurance peoples, who are a total of 374 questionnaires. Binary Logistic Regression analyzed the quantitative data by select all input variables (Enter), which have a statistical significance level at 0.05, data processing from Statistical Package for the Social sciences.

### 4. Research Results

This research aims to study the impact of knowledge management on customer relationship management to satisfy the customer and enhance the service process to improve in Thai life insurance. The questionnaire inquired about the satisfaction level of the respondents relate to *KMI* and *OF* of problem-solving way.

The questions from the questionnaire have two sets. The first set is about the dissatisfaction of customers in Thai life insurance. In the first part of the questionnaire, we try to find customer sentiment by extracting critical words from the web blog for exploring customer dissatisfaction. After that, we merged customer sentiment from social media with the real experience of respondents in the questionnaire. To construct *customer knowledge* and *customer sentiment knowledge* by sharing knowledge between explicit knowledge and tacit knowledge are occurred. The results of the first part of the questionnaire found that Thai life insurance has a problem with the service of an agent, claim assessment quality, policy cancellation, and problems of misunderstanding based on

demographic characteristics, life insurance attitudes, experience and knowledge in life insurance of Thai respondents (Sucharitcham et al., 2020).

We utilize the results of the first part of the questionnaire to design the second part of the questionnaire, which is set up by discussing with expertise area in Thai life insurance domain in order to raise problem-solving method with practical in the real practice of Thai case. The results of the discussion can be classified into each model component, **KMI and OF**. Both factors are raised in the main study of the second part of the questionnaire. The answers to the questionnaire are collected from the respondents as the following demographic information.

The result of demographics found the sample majority of respondents **gender** are female 209 (55.9%) more than male 165 (44.10%). The **age** of respondents less than, and equal 20 is 2 (0.5%), age between 21 – 30 years old range 31 (8.3%), aged group 31 - 40 years old 86 (23.00%), aged group 41 - 50 years old 149 (39.8%) followed by those aged group 51 - 60 years old 91 (24.70%) and the last of the aged group over 60 years is 14 (3.7%). As we are concerned about the knowledge sharing process, the various **life insurance experiences** are collected as ‘Has experience’/‘Does not have experience’ equal 167/207 (44.7%/55.3%). In addition, we collected data from a different **knowledge base in life insurance**. The high level of a knowledge base is 138 (36.9%), the Medium level of a knowledge base is 167 (44.7%), and Low level of a knowledge base is 69 (18.4%).

A hypothesis shows that the knowledge management infrastructure (KMI) has a significant positive relationship with customer relationship management performance. And the organizational factor (OF) has a meaningful positive relationship with customer relationship management performance, directly related to customer satisfaction improvement and service process improvement. In addition, the customer knowledge and customer sentiment knowledge can capture in this stage too. We have tested on *Logistic regression* to study the relationship and possibility of influencing factors that impact customer satisfaction.

An interesting event is *customer satisfaction (S)*, *customer dissatisfaction (D)*. A chance to get satisfied from a customer (prediction) is

$$P(\text{Satisfy}) = \frac{1}{1+e^{-W}}$$

by  $W = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \dots + \beta_n X_n$

**Hypothesis A.** The independent variable is customer satisfaction level has a significant relationship relate to Knowledge management infrastructure (**KMI**), which has three example dependent variables for hypothesis testing. It composes of ‘**Short message communication system (SMC)**’, ‘**Social media training system (SMT)**’ and ‘**Social media information extraction system (SMI)**’.

Variables in the Equation									
		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
								Lower	Upper
Step 1 <sup>a</sup>	KMI_SMC(1)	2.993	0.704	18.063	1	0.000	19.941	5.016	79.272
	KMI_SMT(1)	2.757	0.581	22.521	1	0.000	15.746	5.044	49.160
	KMI_SMI(1)	2.186	0.773	7.988	1	0.005	8.899	1.954	40.520
	Constant	-5.818	1.078	29.151	1	0.000	0.003		

a. Variable(s) entered on step 1: KMI\_SMC, KMI\_SMT, KMI\_SMI

$$W = -5.818 + 2.993SMC + 2.757SMT + 2.186SMI$$

**Hypothesis B.** The independent variable is that customer satisfaction level has a significant relationship relate to the Organization factor (*OF*), which consists of two sections. First, “*Policy (POL)*” has three example dependent variables for hypothesis testing. It composes of ‘*Allow to change plan (ACP)*’, ‘*Allow premium discount (APD)*’, and ‘*Promote advertisement (PMA)*’. The second is hypothesis C.

Variables in the Equation									
		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
								Lower	Upper
Step 1 <sup>a</sup>	POL_ACP(1)	2.591	0.614	17.791	1	0.000	13.349	4.004	44.504
	POL_APD(1)	3.120	0.548	32.429	1	0.000	22.637	7.736	66.238
	POL_PMA(1)	4.162	0.572	52.885	1	0.000	64.224	20.917	197.196
	Constant	-6.597	0.928	50.495	1	0.000	0.001		

a. Variable(s) entered on step 1: POL\_ACP, POL\_APD, POL\_PMA.

$$W = -6.597 + 2.591ACP + 3.120APD + 4.162PMA$$

**Hypothesis C.** The independent variable is customer satisfaction level has a significant relationship relate to Organization factor (*OF*) in the second section which is “*Procedure (PCD)*”, it consists of ‘*Negotiation (NGT)*’, ‘*Training customer (TCS)*’, ‘*Training agent (TAG)*’, ‘*Frequency contact customer (FCC)*’, and ‘*Case by case customer support (CCS)*’.

Variables in the Equation									
		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
								Lower	Upper
Step 1 <sup>a</sup>	PCD_NGT(1)	2.516	0.639	15.506	1	0.000	12.384	3.539	43.332
	PCD_TCS(1)	1.890	0.478	15.658	1	0.000	6.619	2.596	16.880
	PCD_TAG(1)	2.643	0.679	15.138	1	0.000	14.053	3.712	53.202
	PCD_FCC(1)	1.955	0.895	4.775	1	0.029	7.063	1.223	40.790
	PCD_CCS(1)	3.210	0.899	12.735	1	0.000	24.774	4.250	144.412
	Constant	-9.632	1.541	39.074	1	0.000	0.000		

a. Variable(s) entered on step 1: PCD\_NGT, PCD\_TCS, PCD\_TAG, PCD\_FCC, PCD\_CCS.

$$W = -9.632 + 2.516NGT + 1.890TCS + 2.643TAG + 1.955FCC + 3.210CCS$$

**Hypothesis D.** The independent variable is customer satisfaction level has significant relationship relate to Knowledge management infrastructure (*KMI*) and Organization factor (*OF*).

Variables in the Equation									
		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
								Lower	Upper
Step 1 <sup>a</sup>	PCD_NGT(1)	1.569	1.473	1.136	1	0.287	4.804	0.268	86.147
	PCD_TCS(1)	3.951	1.442	7.508	1	0.006	51.999	3.080	877.936
	PCD_TAG(1)	2.533	1.216	4.338	1	0.037	12.589	1.161	136.486
	PCD_FCC(1)	1.355	2.318	0.342	1	0.559	3.876	0.041	364.510
	PCD_CCS(1)	5.269	4.189	1.582	1	0.208	194.204	0.053	713828.809
	KMI_SMC(1)	3.761	4.396	0.732	1	0.392	43.008	0.008	237550.161
	KMI_SMT(1)	5.818	1.697	11.753	1	0.001	336.343	12.083	9362.507
	KMI_SMI(1)	2.630	4.385	0.360	1	0.549	13.877	0.003	74924.000
	POL_ACP(1)	3.219	1.080	8.881	1	0.003	25.011	3.010	207.796
	POL_APD(1)	8.116	2.223	13.325	1	0.000	3346.773	42.868	261285.641
	POL_PMA(1)	6.051	1.725	12.300	1	0.000	424.461	14.431	12484.954
	Constant	-34.507	10.099	11.675	1	0.001	0.000		

a. Variable(s) entered on step 1: PCD\_NGT, PCD\_TCS, PCD\_TAG, PCD\_FCC, PCD\_CCS, KMI\_SMC, KMI\_SMT, KMI\_SMI, POL\_ACP, POL\_APD, POL\_PMA.

$$W = -34.507 + 1.569NGT + 3.951TCS + 2.533TAG + 1.355FCC + 5.269CCS + 3.761SMC + 5.818SMT + 2.63SMI + 3.219ACP + 8.116APD + 6.051PMA$$

$$H_0: \beta_i = 0 \quad ; \quad i=0,1,2,3,\dots,11$$

$$H_1: \beta_i \neq 0$$

As consider at the Wald statistics has Chi-square distribution and Sig. value, found that  $\beta_0 \neq 0, \beta_1 \neq 0, \beta_2 \neq 0, \beta_3 \neq 0, \beta_4 \neq 0, \beta_5 \neq 0, \beta_6 \neq 0, \beta_7 \neq 0, \beta_8 \neq 0, \beta_9 \neq 0, \beta_{10} \neq 0,$  and  $\beta_{11} \neq 0$   
 $\hat{W}$  (Error) =  $-34.507 + 3.951TCS + 5.818SMT + 3.219ACP + 8.116APD + 6.051PMA$

The hypothesis shows that the knowledge management infrastructure and the organizational factor of building a learning organization model on the concept of social customer relationship management have a significant positive relationship with customer satisfaction and service process improvement. The results show significant factors, knowledge management infrastructure (KMI) and organization factors (OF), have significantly related to the customer relationship management performance which has a significant positive relationship with customer satisfaction and the service process improvement of the Thai life insurance. Especially, when test the hypothesis using main factors separately between KMI and OF, all of the sub-factors have significance for a chance to get satisfaction from a customer (prediction). However, when testing the hypothesis with both main factors (KMI and OF) at the same time, the results still found a close relationship to a chance to get satisfaction from a customer, but there is some standard error to consider.

## 5. Conclusion

Learning process and building knowledge from the customer sentiment make the sharing process of knowledge and it can be further enhanced in another, especially in an age of social media where criticism is spread across social media. The customer sentiment knowledge model framework presents the possibility to get better customer satisfaction and to suggest the service process improvement in knowledge management infrastructure and organization factor. This model framework deploys benefit from the standard model framework of knowledge such as the SECI model, Garvin's theory of knowledge management, Yamazaki's learning pyramid concept model, and

Marquardt's theory of knowledge management. They all focus on the end result, which is sustainable development from knowledge management and continuous cooperative learning at all levels throughout the organization. In this regard, self-development plays an essential role in the life insurance business to achieve differentiation and competitiveness by focusing on customer satisfaction and reducing policy cancellation rates. Therefore, the life insurance business should turn its attention to the knowledge management strategy within the organization in order to draw on the potential in various areas. Therefore, the organization must be adjusted and reformed to be ready with the changing environment, such as restructuring, increasing knowledge for personnel, and developing skills to meet their needs and meet the digital era changes. It is necessary to emphasize social customer relationship management (SCRM), under the main objective of aware of customer needs with the emphasis on two-way communication to enable better communication between the organization and its customers and meet their needs resulting in customer satisfaction.

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