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An Investigation of the Determinants of Knowledge Management Systems Success in Banking Industry

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Abstract**—**The efficient knowledge management system (KMS) is one of the important strategies to help firms to achieve sustainable competitive advantages, but little research has been conducted to understand what contributes to the KMS success. This study thus set to investigate the determinants of KMS success in the context of Thai banking industry. A questionnaire survey was conducted in four major Thai Banks to test the proposed KMS Success model.

The result of this study shows that KMS use and user satisfaction relate significantly to the success of KMS, and knowledge quality, service quality and trust lead to system use, and knowledge quality, system quality and trust lead to user satisfaction. However, this research focuses only on system and user-related factors. Future research thus can extend to study factors such as management support and organization readiness.

Keywords**—**Knowledge, Knowledge Management, Knowledge Management system, Knowledge Management System Success, Banking Industry, Thailand

I. Introduction

IN this highly competitive economy, organizations are struggling to survive and compete. One of the strategies employed in those organizations is knowledge management (KM) with the support of Knowledge Management System (KMS). The efficient KMS is expected to help firms to achieve sustainable competitive advantages by well utilizing the existing knowledge base [3].

Benefits of KMS have been witnessed in many companies. Ford, Chevron, Texas instrument are obvious examples; these companies have saved many million dollars through the use of efficient KMS [8]. However, it is not easy to successfully adopt KMS. It has been reported that 70% of the surveyed KMS failed [27].

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Despite the high number or chance of failure, KMS has been adopted and considered important in several industries. Therefore, this research attempts to investigate factors which determine KMS Success, particularly in the context of Thai banking industry. The industry is of particular interest because several Thai banks have invested huge amount of money on implementing KMS, but limited success was evidenced. On the contrary, in other context such as in a Hong Kong bank, KMS was found helpful in reducing time spent on customers' calls from the average of 23 minutes to 12 minutes [5]. Therefore, the need to study factors contributing to the KMS success in this context is found compelling.

This paper consists of six major sections. Following the introduction is literature review on KM and KMS success model. Section 3 presents the conceptual framework and research hypotheses. Section 4 outlines research methodology and data analysis. Section 5 discusses the research findings and their implications. Finally, section 6 concludes the research and discusses its limitation as well as potential for future research.

II. Literature Review

Information and Knowledge

Huge amounts of data in various formats are structured and converted to be information. If the information can be used to create benefits for organizations, it then shall be called knowledge. In other words, knowledge is the perception and understanding of the series of information and the application of the information in beneficial ways [34]. It can be applied in solving current problems or operational problems [37].

According to Newman (1997), knowledge can also lead to the creation of technology; this process is named DIKT (Data, Information, Knowledge and Technology). This highlights the relationship among Data, Information, Knowledge, and Technology and points out that value of knowledge depends on how it is applied. Therefore, efficient knowledge management is fundamental as it enables organizations to well utilize their knowledge and ultimately obtain sustainable.

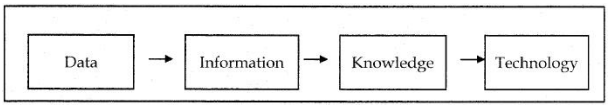

Fig. 1 DIKT Framework of NEWMAN

Knowledge Management System: KMS

In terms of process, KM consists of six steps which are create, capture, refine, store, manage and disseminate [39], and therefore KMS should support these six core activities. The process of creating the KMS consists of four stages which are Infrastructural Evaluation, KM System analysis, Design & Development, System Development and Evaluation [36].

In terms of technology, KMS is the system which captures knowledge and allows the knowledge to be applied at the various levels in organizations. KMS share many similarities with IS, and many tools and techniques of KMS are related to IS [16]. All the knowledge is kept in the knowledge-base [38] which relates to the modern information technologies such as internet, intranet, extranet, lotus notes, and data warehouse. These technologies make the KMS more effective [2]. Moreover KMS may refer to a class of IS used to manage organizational knowledge and support the organizational process in terms of knowledge creation, storage/retrieval, transfer, and application. According to Turban, Leidner, Mclean and Wetherbe (2006), KMS require three kinds of technologies, namely i) Communication technologies which enable users to access to the needed knowledge and communicate with each other, ii) Collaboration technologies which make group-work possible, and iii) Database management system which helps in storage and manage knowledge [40].

IS Success models and KMS Success models

Although KMS and IS are not equivalent, the DeLone and McLean (D&M) IS Success Model (1992, 2003) was found applicable to the success of the knowledge management system [1]. Several prior studies on KMS success were also based on the D&M model.

The D&M IS Success Model is composed of system quality, information quality, service quality, use, user satisfaction, and net benefits (the net results of individual impacts and organisational impacts) as show in Fig. 2 DeLone and McLean argue that these six dimensions of success are interrelated rather than independent, indicating that causality flows in the same direction as the information process.

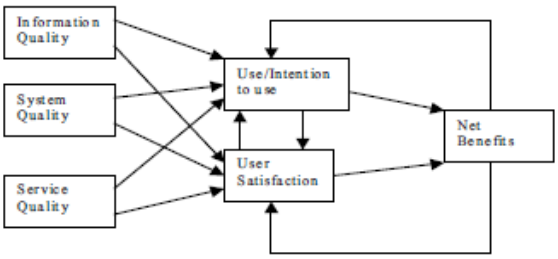

Fig. 2 The DeLone and McLean IS Success Model [13]

In the D&M model, Intention to Use is subjective and might not be able to truly assess. On the other hand Use is an action, meaning that it is relatively easier to be assessed. Besides, Intention to Use implies in itself an attitude or a will towards a system which is not yet in use, while Use implies that a system is already existed and being adopted. However, since both Intention to Use and Use affect each other by causing backward impact through User Satisfaction, many studies adopting the D&M model investigated only one of the two dimensions. Mostly, Intention to Use was applied in the studies which examined the system which had not yet been adopted.

Nevertheless, organizations should take into consideration of social factors to ensure success when designing and implementing KMS [9]. Trust, in particular, is a social factor which was deemed important by economists, physiologists, sociologists and management theorists. It has been widely accepted among those researchers that trust is important for human affair [20]. In the context of organizations, trust is found necessary for organization culture and can facilitate the implementation and utilization of knowledge [22]. Furthermore, it is highly important for the creation of effective operation of knowledge base and a trusting culture may enhance the exchange of knowledge [32].

Alavi and Leiner (2001) also found that trust facilitates knowledge development and encourage KMS use. Therefore, trust can be considered as a key component to ensure effective KM, and should be included to measure the success of KMS implementation [4]. However, despite its importance, an influence of trust on KMS success have not been fully explored and examined in IS and KM research. This research therefore includes trust in the proposed KMS Success model, which is presented in the next section.

Davenport, Dalong and Beers (1998) studied the factors leading towards the KMS success. The eight factors indicating the successes of KM project are top management support, clear project goals, linkage with the economical results, various knowledge distribution channels, motivation to encourage the KM users, organization culture, and flexible knowledge infrastructure.

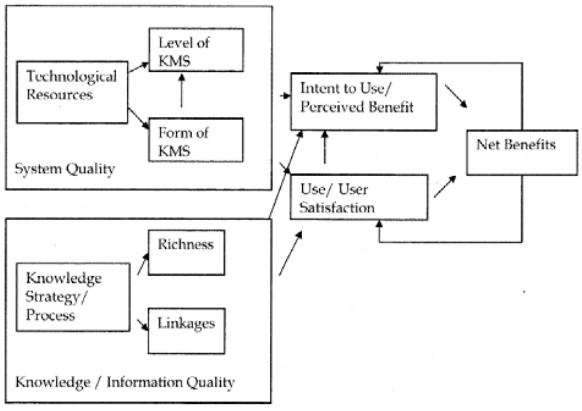

Fig. 3 Jennex and Olfman KM Success Model, [24]

Jennex and Olfman (2003) proposed the conceptual framework of the KMS success which was developed from the IS success model of DeLone and McLean (2002). Their model consisted of five factors, namely system quality, knowledge/information quality, intention to use/perceive benefit, use/user satisfaction and net benefits. In this model,

service quality is part of the system quality (see Fig. 3), which included three factors: Technological resources, Form of KMS and Level of KMS. Knowledge/information quality consisted of three factors: knowledge strategy/process, knowledge/ information richness, and linkages between components. The two authors found that these factors were useful for predicting KM success and designing effective KM.

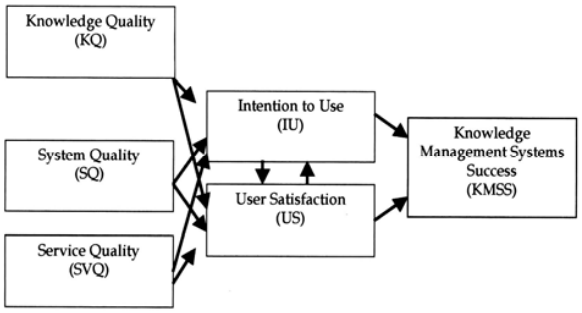

Fig. 4 Halawi *et al*. The KMS Success Model (2008) [19]

Recently, Halawi conducted an empirical study examining measures of KMS Success. Their model was also based on the D&M model and it was found helpful in understanding determinants of KMS Success. However, as mentioned above that trust is an important social factor and that intention to use is more appropriate for a system which has not yet been adopted, this research therefore adds trust and applies 'use' instead of 'intention to use'. The model is shown in the next section along with the research hypotheses.

III. Conceptual Framework

The conceptual framework of the KMS success (see Fig. 5) was developed from many related studies reviewed above and Halawi et al. [19] in particular. The framework composes 4 main constructs which lead to KMS success; they are technical, social, use and user satisfaction. The technical construct consists of system quality, knowledge quality, and service quality. Social construct consists of trust.

Prior research found that the influence of system quality, information quality and service quality have an impact on the system use and User satisfaction [28] [13] as well as trust [9].The relationship between constructs in IS success model can be applied in KMS because KMS can be viewed as a class of information systems used for managing organizational knowledge and supporting the organization process [4]. The success of information system should be emphasized on both technical and social dimension [14] as the success of KMS requires the combination of both dimensions [12].

From the model, twelve research hypotheses were developed as follows:

Knowledge Quality – Rich knowledge quality is essential to knowledge utilization [18]. Therefore it is hypothesized that good knowledge quality could lead to use and user satisfaction of a knowledge management system.

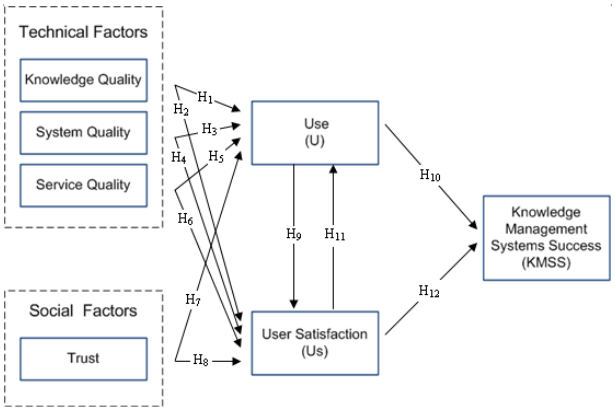

Fig. 5 The Knowledge Management System Success Model

Hypothesis 1: There is a positive relationship between knowledge quality and the use of a knowledge management system

Hypothesis 2: *There is a positive relationship between knowledge quality and user satisfaction of a knowledge management system*

System quality – System quality concerns user-friendly interface, easy-to-use, and reliable system [33]. Prior research, such as that of [24] and [33], found that high system quality could lead to use and user satisfaction. Thus, this research proposes the following hypotheses:

Hypothesis 3: There is a positive relationship between system quality and the use of a knowledge management system

Hypothesis 4: There is a positive relationship between system quality and user satisfaction of a knowledge management system

Service quality - Service quality is an important factor in creating good attitude and user satisfaction [7]. The system use can also be influenced by service quality [9]. Thus, this research proposes the following hypotheses:

Hypothesis 5: There is a positive relationship between service quality and the use of a knowledge management system

Hypothesis 6: *There is a positive relationship between service quality and the user satisfaction of a knowledge management system*

Trust – Trust is considered an important factor which influenced the success of the KMS [11]. Prior research found that trust played an important role in encouraging people to use the system and it was a factor which enabled effective knowledge management [4]. Besides, high trust encouraged and usage of knowledge management system [25] and therefore contributed to user satisfaction [9]. Thus, this research proposes the following hypotheses:

Hypothesis 7: There is a positive relationship between trust and the use of a knowledge management system.

Hypothesis 8: There is a positive relationship between trust

and user satisfaction of a knowledge management system

Use – KMS Use covers the usage of KMS in order to support decision-making, knowledge sharing, recording, and transferring [31]. Prior research found that System use is a factor leading to success in knowledge management [24] [13]. Thus, this research proposes the following hypotheses:

Hypothesis 9: There is a positive relationship between the use of a knowledge management system and user satisfaction

Hypothesis 10: *There is a positive relationship between the use of a knowledge management system and knowledge management system success*

User satisfaction - An increase in user satisfaction positively affects system use, particularly in terms of effectiveness [15] and more usage [28] [23]. Also, satisfaction in systems can be considered an appropriate measure of system success since it leads to more usage or system acceptance in other words [23]. Thus, this research proposes the following hypotheses:

Hypothesis 11: There is a positive relationship between user satisfaction and the use of a knowledge management system

Hypothesis 12: *There is a positive relationship between user satisfaction and knowledge management system success*

IV. Methodology

Research tool development

The respondents were asked to indicate their agreement or disagreement with survey instrument using a five-point Likert scale, the scale are adapted from DeLone, W.H & E.R. McLean [13], Jen-Her Wu & Yu-Min Wann [23] and Kamla Ali Al-Busaidi [25]. Appendix I presents a list of items used in this study

Quantitative research method was implemented in a form of survey. Questionnaire was used as a tool in gathering data together with quality research which the suggestion about the KMS will be asked. In order to evaluate the understanding and degree of difficulty of the questions as well as adjusting the questions for the actual data collection, the pre-test of this questionnaire was conducted with 50 respondents who have used the KMS for at least three months.

Data collection and sampling

This research employed questionnaire survey as a data collection method. As this research aimed to investigate factors influencing KMS success in the context of Thai banking industry, employees of the four major Thai banks which adopted KMS were deemed appropriate. Sample size was calculated by multiplying the number of questions in the questionnaire by five. This sample size calculation method was supported by Hair [17]. As the questionnaire employed in this research had 31 questions in total, the sample size should therefore be more than 155 (31 * 5) [17]. However, Comrey and Lee (1992) suggested that appropriate sample size should be above 200 [10]. Hence, in order to avoid inadequacy of data due to incomplete or missing questionnaires, sample size was set to 250.

The questionnaires were distributed based on the stratified sampling technique. 215 questionnaires were returned. Then, incomplete questionnaires were excluded.

V. Data Analysis And Result

The returned questionnaires were statistically analyzed by a statistical program. First, the research instrument was assessed its reliability and validity. Second, Descriptive statistics are applied to analyze the respondents' demographic data. Third, Correlation matrix approach and factor analysis were applied to examine construct validity and reliability. Finally, the hypotheses were tested by the multiple linear regression analysis

Reliability and Validity Assessment

Measurement validity in terms of reliability and construct validity was assessed. Reliability of the instrument was evaluated using Cronbach's alpha. The calculated alpha was well above 0.8 (see Table I) for all factors, exceeding the common threshold value recommended by Nunnally [29]. This indicates an adequate reliability of the constructs.

TABLE I
Reliability Assessment

Factor	Mean	Cronbrach's alpha
Knowledge Quality	3.54	0.912
System Quality	3.49	0.896
Service Quality	3.30	0.862
Trust	3.58	0.931
Use	3.74	0.870
User Satisfaction	3.71	0.884
KMS Success	3.74	0.917
Knowledge Quality	3.54	0.912

To examine the unidimensionality/ convergent validity of each predefined multi-item construct, an exploratory factor analysis using principal components factor analysis with varimax rotation was performed. The rotate matrix component is shown in Table II. It is evident that there are no cross-loading items. Factor loading for all variables are greater than 0.6, which was considered significant [30]. This ensures adequate convergent and discriminant validity [21].

TABLE II
Rotate Component Metrix

	Component					
	SVQ	TRUST	KQ	US	Use	SQ
SVQ4	0.795	0.055	0.247	0.078	0.049	-0.042
SVQ2	0.785	0.050	0.015	-0.133	0.248	0.144
SVQ5	0.777	0.244	0.083	-0.189	-0.174	0.098
SVQ1	0.764	0.107	-0.006	0.106	0.097	0.370
SVQ3	0.762	0.107	0.200	0.215	0.252	-0.171
Trust4	0.238	0.810	0.280	0.165	0.066	0.079
Trust2	0.097	0.782	0.212	0.188	0.206	0.324
Trust3	0.157	0.780	0.220	0.207	0.196	0.262
Trust1	0.113	0.780	0.212	0.289	0.207	0.234
KQ4	0.093	0.222	0.802	0.255	0.193	0.065
KQ5	0.208	0.201	0.766	0.389	0.147	0.056
KQ3	0.196	0.246	0.686	-0.014	0.113	0.415
KQ2	0.146	0.254	0.664	0.107	0.204	0.437

KQ1	0.069	0.265	0.650	0.251	0.235	0.403
Use1	-0.081	0.280	0.120	0.806	0.146	0.192
Use2	-0.109	0.138	0.189	0.799	0.176	0.209
Use3	0.047	0.030	0.239	0.781	0.161	0.155
Use4	0.152	0.313	0.107	0.775	0.151	-0.029
US1	0.057	0.227	0.097	0.172	0.813	0.092
US3	0.181	0.129	0.221	0.136	0.810	0.014
US2	-0.008	0.038	0.040	0.159	0.784	0.314
US4	0.196	0.139	0.253	0.155	0.773	-0.237
SQ2	0.222	0.281	0.314	0.251	0.114	0.709
SQ3	-0.048	0.371	0.226	0.156	0.008	0.704
SQ1	0.281	0.271	0.381	0.306	0.028	0.639

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization. a.
Rotation converged in 7 iterations

TABLE III
ANALYSIS OF INTERMEASUREMENT CORRELATION

	KQ	SQ	SVQ	Trust	Use	US	KMSS
KQ	1						
SQ	0.690	1					
SVQ	0.374	0.368	1				
Trust	0.648	0.644	0.365	1			
Use	0.464	0.314	0.288	0.428	1		
US	0.525	0.526	0.115	0.524	0.417	1	
KMSS	0.495	0.470	0.446	0.530	0.556	0.415	1

Descriptive Statistics

Descriptive statistic analysis using frequency and percentage is described in Table 4. It shows the respondents' demographic profiles and their KMS usages. The majority of the respondents (55.8%) are female. More than 80% of the respondents have been using KMS for at least or more than a year.

TABLE IV
RESPONDENTS PROFILE

Gender	
Male	44.2 %
Female	55.8 %
Age (Years)	
< 25	8.7 %
25 – 35	63.5 %
36 – 45	20.0 %
46 – 55	5.5 %
> 55	2.3 %
Education	
Lower than Bachelor's degree	4.2 %
Bachelor's degree	74.0 %
Higher than Bachelor's degree	21.8 %
Experience in use KMS (Years)	
< 1	12.5 %
1 – 3	54.0 %
4 – 6	30.2 %
> 6	3.3 %
Frequency in use KMS / month	
1-5 times	21.9 %
6-10 times	46.5 %
> 10 times	31.6 %
Average time in use KMS / Times (Minutes)	
< 10	18.6 %
10 – 20	49.8 %
21 – 30	26.0 %
> 30	5.6%
Objective to use KMS	
- Respond the organization's policy for employees to use the KMS.	64.7 %
- Search for the knowledge to assist in the operation.	67.0 %
- Search for additional knowledge in general apart from work.	39.1%
- Take knowledge gained to transfer to others.	27.9 %
- Other	5.1 %

Multiple Regression Analysis

Multiple regression analysis was used to test the twelve research hypotheses. Multicollinearlity problem was evaluated by variance inflation factor (VIF). Theoretically, if the VIF value is lower than 10 it means that either there is no relationship between the variables or there is a problem about multiple relations [26].

TABLE V
FACTORS WHICH HAVE AN IMPACT ON KMS USE

Variable	b	βeta	t	Sig.	VIF
Knowledge Quality	0.308	0.308	3.461	0.001*	2.388
System Quality	-0.214	-0.214	-2.471	0.014*	2.258
Service Quality	0.148	0.148	2.312	0.022*	1.237
Trust	0.185	0.185	2.177	0.031*	2.182
User Satisfaction	0.245	0.245	3.403	0.001*	1.561

* $P < 0.05$ $R = 0.533$ $R^2 = 0.306$ $F = 18.404$ Sig. = 0.000*

TABLE VI
FACTORS WHICH HAVE AN IMPACT ON USER SATISFACTION

Variable	b	βeta	t	Sig.	VIF
Knowledge Quality	0.210	0.210	2.484	0.014*	2.542
System Quality	0.174	0.174	2.139	0.034*	2.275
Service Quality	-0.173	0-.173	-2.909	0.004*	1.219
Trust	0.247	0.247	3.133	0.002*	2.131
KMS Use	0.214	0.214	3.403	0.001*	1.365

Characteristic	Percentage

* $P < 0.05$ $R = 0.627$ $R^2 = 0.393$ $F = 27.052$ Sig. = 0.000*

TABLE VII
FACTOR THAT HAVE IMPACTS ON KMS SUCCESS

Variable	b	βeta	t	Sig.	VIF
KMS Use	0.463	0.463	7.602	0.000*	1.211
User Satisfaction	0.221	0.221	3.368	0.000*	1.211

* $P < .05$ $R = .591$ $R^2 = .349$ $F = 56.970$ Sig. = .000*

The results of the questionnaire survey are presented in Table 5, Table 6 and Table 7

Hypothesis 1: From Table 5, Knowledge Quality is found to have the positive βeta of 0.308 at p = 0.001*. It can be seen that Knowledge Quality has significant positive relationship with and also highly influences KMS Use. Therefore hypothesis 1 is accepted.

Hypothesis 2: From Table 6, Knowledge Quality is found to have the positive βeta of 0.210 at p = 0.014*. It can be seen that Knowledge Quality has significant positive relationship with User Satisfaction. Therefore hypothesis 2 is accepted.

Hypothesis 3: From Table 5, System Quality is found to have the negative βeta of -0.214 at p = 0.014*. It can be seen that System Quality has significant negative relationship with KMS. Therefore hypothesis 3 is rejected

Hypothesis 4: From Table 6, System Quality is found to have the positive βeta of 0.174 at p = 0.034*. It can be seen that System Quality has significant positive relationship with User Satisfaction. Therefore hypothesis 4 is accepted.

Hypothesis 5: From Table 5, Service Quality is found to have the positive βeta of 0.148 at p = 0.022*. It can be seen that Service Quality has significant positive relationship with KMS Use. Therefore hypothesis 5 is accepted.

Hypothesis 6: From Table 6, System Quality is found to have the negative βeta of -0.173 at p = 0.004*. It can be seen that System Quality has significant negative relationship with User Satisfaction. Therefore hypothesis 6 is rejected.

Hypothesis 7: From Table 5, Trust is found to have the positive βeta of 0.185 at p = 0.031*. It can be seen that Trust has significant positive relationship with KMS Use. Therefore hypothesis 7 is accepted.

Hypothesis 8: From Table 6, Trust is found to have the positive βeta of 0.247 at p = 0.002*. It can be seen that Trust has significant positive relationship with and also highly influences User Satisfaction. Therefore hypothesis 8 is accepted.

Hypothesis 9: From Table 6, KMS Use is found to have the positive βeta of 0.204 at p = 0.001*. It can be seen that KMS Use has significant positive relationship with User Satisfaction. Therefore hypothesis 9 is accepted.

Hypothesis 10: From Table 7, KMS Use is found to have the positive βeta of 0.463 at p = 0.000*. It can be seen that Use has significant positive relationship with and also highly influences on KMS Success. Therefore hypothesis 10 is accepted.

Hypothesis 11: From Table 5, User Satisfaction is found to have the positive βeta of 0.245 at p = 0.001*. It can be seen that User satisfaction has significant positive relationship with KMS Use. Therefore hypothesis 11 is accepted.

Hypothesis 12: From Table 7, User Satisfaction is found to have the positive βeta of 0.221 at p = 0.000*. It can be seen that Use has significant positive relationship with KMS Success. Therefore hypothesis 10 is accepted.

VI. Discussion and Implications

The hypothesis testing reveals that both KMS Use and User Satisfaction have positive relationship with KMS Success. KMS use has a greater impact on KMS success than User Satisfaction does. Besides, it appears that User Satisfaction has a positive relationship with KMS Use. In other words, if the employees are satisfied with the efficiency and effectiveness of the system, they will be willing to use the system. This implies that despite its less influential effect on KMS Success, User Satisfaction is a fundamental factor on which a KM manager should pay attention. The satisfaction

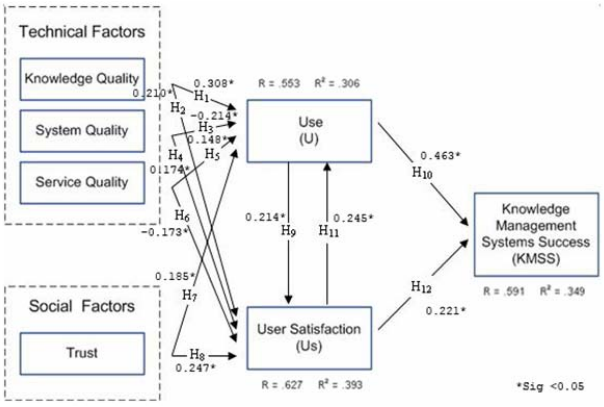

Fig. 6 Hypothesis testing results

could be enhanced by focusing on users' needs and making the KMS best accommodate them.

Considering KMS Use, Knowledge Quality is the most influential factor affecting KMS Use. User satisfaction, Trust, and Service quality are the less influential factors, consecutively, affecting KMS Use. However, System Quality does not have positive effect on KMS Use. This could be accounted by different patterns of usage and skills of each user. Low quality systems which meet basic requirements are adequate for some people, while others might demand for high-quality system. This is also supported by Tanya [35].

Considering User Satisfaction, Trust is the most influential factor affecting user satisfaction. KMS use, Knowledge quality, and System quality are consecutively less influential. However, Service Quality does not have positive effect on User Satisfaction. It may well be that expectation on KMS is higher on other common Information System, and therefore User Satisfaction is relatively higher [6].

In terms of Knowledge Quality, the factor is the most influential factor on KMS Use and ranked third among factors influencing User Satisfaction. Therefore, a KM manager should pay attention on elements which contribute to Knowledge Quality such as completeness, clarity, availability and adequacy of the knowledge.

In terms of System Quality, although the factor appears to have a negative relationship with KMS use, it has positive effect on User Satisfaction, which in turn influences KMS Use. Therefore, System Quality is not negligible. KMS should always be ready and easy to use. Otherwise, it could reduce User Satisfaction and thus discouraging KMS Use.

In terms of Service Quality, it is the least influential, but proven significantly relevant, factor on KMS Use. Therefore, a service department should have good knowledge and understanding of the system as well as common and potential problems. This is to enable a readily high-quality service to all users.

Finally, in terms of Trust, the factor has a relatively high effect on both KMS Use and User Satisfaction. This indicates its significance on the KMS Success. Trust on the knowledge contained in the KMS and trust on the system *per se* could yield satisfaction and lead to system usage. However, since trust is based on individual perception towards a certain thing,

a Knowledge Manager will need to put extra effort on creating or influencing such perception.

VII. Conclusion And Future Research

The objective of this study was to investigate the determinants of KMS success in the context of Thai banking industry. This was achieved by a quantitative questionnaire survey with 250 employees, in the four major Thai banks, who have been using KMS to support their work. The KMS Success model of Halawi and his co-authors [19] was adapted as the framework for this research. Trust was added as a result of literature review which indicates its importance on IS Success.

Of twelve hypotheses, ten were supported. Only hypothesis 3 and 6 were rejected. The results of our study indicated a significant relationship among the seven constructs (Knowledge Quality, System Quality, Service Quality, Use, User Satisfaction and Knowledge Management System Success) and support the original work of Halawi [18]. Trust appears to be significantly relevant to KMS Success via its influence on both KMS Use and User satisfaction.

This research contributes particularly to the issues of determining and evaluating Knowledge Management Success. It adds to the KMS Success model of Halawi [18] that social factors can be relevant and influential on KMS Use and User Satisfaction. This raises the importance of social factors, which have been disregarded in original IS Success models, such as that of DeLone and McLean [13].

However, this research is not without limitation. One clear limitation is the small sample size which causes limitation on generalisability. Furthermore, from the survey, one of the important measures of Knowledge Quality is the degree of knowledge relevancy, which varies in different contexts, depending on organizational and operational characteristics. As a result, the findings might not be applicable in other industries which operate differently.

Therefore, future research could test this model in other contexts and could strengthen the model by including other social and organizational factors which could affect KMS Success, such as management support and organization readiness. In addition, path analysis could be applied in future research in order to understand indirect effects of variables in the model and demonstrate how the model fits the data collected.

APPENDIX: Instruments For Measurement KMS Success

Knowledge Quality: The Opinion of knowledge provide by KMS.
KQ1: Knowledge in KMS is easy to understand.
KQ2: Contextual of knowledge is easy to apply.
KQ3: Knowledge in KMS adequate for you to complete work-related tasks.
KQ4: Knowledge in KMS is accurate.
KQ5: Knowledge in KMS is up to date.

System Quality: How good the KMS is in terms of its operational characteristics.
SQ1: KMS is easy to use.
SQ2: KMS is user friendly.
SQ3: KMS is stable.
SQ4: The response time of KMS is acceptable.

Service Quality: The opinion of the quality of information technology IT support to the system's end user
SVQ1: Provides adequate for your system use..
SVQ2: Does the best respond as soon as possible when you have problem.
SVQ3: Have the knowledge to answer your question.
SVQ4: Understand your specific needs.
SVQ5: Have the empathy when you have problem

Trust: The confidence on the knowledge you use from KMS that is contributed by other
Trust1: You trust the knowledge you use from the KMS
Trust2: The knowledge you use is truthful
Trust3: The knowledge you use is reliable
Trust4: You believe in everything you use from the KMS

Use: The extent of the KMS being used
U1: I use KMS to help me make decisions
U2: I use KMS to help me record my knowledge
U3: I use KMS to communicate knowledge and information with colleagues
U4: I use KMS to share my general knowledge

User Satisfaction: The sum of one's feelings of pleasure or displeasure regarding KMS
US1: I am satisfied with KMS efficiency
US2: I am satisfied with KMS effectiveness
US3: I am satisfied that KMS meet my knowledge or information processing needs US4: Overall, I am satisfied with KMS

Knowledge Management System Success: The valuation of the benefits of the KMS by users
KMSS1. KMS helps me acquire new knowledge and innovative ideas
KMSS2. KMS helps me effectively manage and store knowledge that I need
KMSS3: KMS enable me to accomplish tasks more efficiently
KMSS4: KMS improves the decision making
KMSS5: KMS improves the quality of my work life

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