

**The Effects of Information Technology Support,
Social Network, Internal Communication, and
Teamworking on Knowledge Management
Capabilities at the Bank Branch Level**
ผลกระทบของการสนับสนุนทางด้านเทคโนโลยีสารสนเทศ
เครือข่ายทางสังคม การสื่อสารภายในองค์การ
และการทำงานเป็นทีมที่มีศักยภาพในการจัดการความรู้
ในระดับสาขานาคาร

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บทคัดย่อ

การศึกษานี้มุ่งเน้นในเรื่องของศักยภาพในการจัดการความรู้ (Knowledge Management Capabilities) ในลักษณะของปัจจัยลำดับที่สอง (Second-order Construct) ของสาขานาคารและปัจจัยต่างๆ ที่มีผลกระทบต่อศักยภาพในการจัดการความรู้ โดยที่ปัจจัยต่างๆ ในการศึกษานี้ได้แก่ การสนับสนุนทางด้านเทคโนโลยีสารสนเทศ เครือข่ายทางสังคม การสื่อสารภายในองค์การ และการทำงานเป็นทีม รวมถึงการศึกษาความสัมพันธ์ระหว่างปัจจัยต่างๆ กับศักยภาพในการจัดการความรู้ ผู้เขียนได้มีการสำรวจความแตกต่างในด้านของปัจจัยระหว่างสาขานาคารที่เป็นรัฐวิสาหกิจและสาขานาคารที่เป็นเอกชน ผลการศึกษาพบว่าปัจจัยเหล่านี้มีความสัมพันธ์เชิงบวกกับศักยภาพในการจัดการความรู้ของสาขานาคาร นอกจากนี้ผู้เขียนได้มีการอภิปรายแนวทางในการทำวิจัยในอนาคตอีกด้วย

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Abstract

This study focused on knowledge management capabilities as a second-order construct of bank branches in the Bangkok area and on the factors affecting knowledge management capabilities. Information technology support, social network, internal communication, and teamworking and their relationship with knowledge management capabilities were the main factors of the study. The author also explored the differences between state-owned and private bank branches in many aspects. The findings indicated that all of these factors have a positive relationship with the knowledge management capabilities of bank branches. Directions for further research are also discussed.

keyword: Management capacity, information technology, social network, internal communication, teamworking.

Introduction

This study had two main objectives. First, this study focused on knowledge management capabilities and their relationship with other resources or factors of the organizations. Second, the author also studied the differences between state-owned banks and private banks from the point of view of information technology support, social network, and internal

communication, teamworking, and knowledge management capabilities. Moreover, the results of the study should enhance understanding of the factors affecting the knowledge management capabilities of organizations. Currently banks provide new products and services in order to help bank branches survive fierce competition. Therefore, the bank branch needs to be more effective and efficient in its operations. In addition, bank branches have to change to meet the requirements of a rapidly-changing banking environment. Importantly, in today's knowledge economy, it is very important to study how each branch manages its knowledge, which is known as an intangible asset of the organization, and its capability to manage knowledge. In addition, it is crucial to scrutinize the factors that can really affect the capabilities to manage knowledge and the factors affecting knowledge management capabilities at the branch level.

Banking Industry in Thailand

There are two types of commercial banks in Thailand: private and state-owned banks. According to the State Enterprise Policy Office (2008), a state-owned enterprise in Thailand is defined as an organization, company or firm owned more than 50% by government agencies. Therefore, Krung Thai Bank is a state-owned bank because a government agency, called the Financial Institutions Development Fund (FIDF), holds 55.31% of the shares of the bank (SET SMART, 2008). The shares of all other commercial banks in Thailand are held at more than 50% by private firms, as shown in the table below.

Table 1: Bank Names and Types of Banks

Bank Name	Major Shareholders Owned by	Types of Banks
Bangkok Bank	More than 80% owned by private firms	Private bank
Krung Thai Bank	More than 55% owned by government agencies	State-owned bank
Kasikorn Bank	More than 95% owned by private firms	Private bank
Siam Commercial Bank	More than 87% owned by private firms	Private bank
Bank of Ayudhya	More than 91% owned by private firms	Private bank
Thai Military Bank	More than 75% owned by private firms	Private bank
Siam City Bank	More than 53% owned by private firms	Private bank

Source: SET SMART, 2008

The differences between private banks and state-owned banks have been discussed in past literature. For example, Al-Obaidan & Scully (1992) have conducted empirical research on the effectiveness between state-owned petroleum firms and private petroleum firms, and their empirical findings suggest that the state firms are less effective in managing their resources compared to private, for profit enterprises. For a comparison between state-owned banks and private banks, Omran (2007) studied the

financial and operating performance of 12 Egyptian banks and the results indicated that the performance of banks with state ownership were worse than that of banks with private ownership.

Organizational Resources and Knowledge

Barney (1991) has stated that resources refer to all assets, capabilities, organizational processes, organizational attributes, data, information, knowledge and others. There are three main types of resources: physical capital resources, human capital resources, and organizational capital resources. First, physical resources comprise the physical technology utilized in organizations, factories or plants, equipment, organizational geographic locations, and their access to raw materials for production. Second, human capital resources consist of the training, experience, judgment intelligence, relationships, and knowledge of individual staff and managers of organizations. Third, organizational capital resources are comprised of the formal reporting structure of the organizations, formal and informal planning, controlling systems, coordinating systems, informal relations among groups within an organization and also between the organizations and other individuals, groups or organizations in the environment.

Al-Athari & Zairi (2001) concluded that at the organizational level knowledge consists of corporate knowledge and shared understanding, and organizational knowledge has a similar process of acquiring, converting, and applying knowledge at the individual level. Organizational knowledge is related to actions and can be created by using information from many sources and social interaction to develop new organizational knowledge. Moreover, sources of knowledge outside the organizations are crucial, such

as customers, suppliers, government or other stakeholders. Moreover, it has been found that organizational knowledge and actions are the drivers of organizational change. For some organizations the transition may be very critical in terms of moving from industrial-based production and work systems to knowledge-based systems (Al-Athari & Zairi, 2001). Several organizations have used downsizing as the means to reduce organization costs-especially in the 1980s, but such methods forced the organizations to lose the critical and valuable knowledge of employees. Sin, Tse & Yim (2005) mentioned that based on the knowledge-based view of the firm, the underlying principle for the existence of the firm is the creation, transfer, and application of knowledge.

Knowledge Management Capabilities

In order to create a sustainable competitive advantage, organizations have to create knowledge management capabilities by emphasizing many factors, such as common practices, firm culture, human resource practices, decision-making practices, performance measures, and rewards, with the goals of supporting the organizations' ability to acquire, develop, share, integrate and apply knowledge. Cui, Griffith & Cavusgil (2005) suggested that success comes from the ability to acquire knowledge, learn about opportunities, and apply the knowledge appropriately.

In a study of Liu, Chen & Tsai (2004), knowledge management capabilities are seen as a tool for maintaining information and assisting the organization to operate more efficiently; it also means the process of the organization in obtaining, refining, storing, and sharing knowledge. Moreover, in their study of the knowledge management capabilities of

high-tech enterprises, knowledge management capability also represents the requisite technology and expertise for product design, assembly, and manufacturing during the product manufacturing process. Further, Ju, Li & Lee (2006) and Cui, Griffith & Cavusgil (2005) have suggested that the knowledge management capabilities include three interrelated processes: knowledge acquisition, knowledge conversion, and knowledge application.

Knowledge acquisition capabilities mean the ability of the organization to acquire and accumulate knowledge.

Knowledge conversion capabilities mean the ability of the organization to make existing knowledge useful by organizing, integrating, coordinating, and disseminating activities.

Knowledge application capabilities mean the ability of the organization to use knowledge, including storing, retrieving, applying, contributing and sharing it.

Factors Affecting Knowledge Management Capabilities

Past studies have pointed out many factors related to knowledge management and knowledge management capabilities, such as organizational processes and physical capital resources (Barney, 1991; Al-Athari and Zairi, 2001; Cui, Griffith & Cavusgil, 2005). However, several factors or variables have been conceptually discussed in the literature with limited empirical studies, including teamworking (Barney, 1991; Nonaka, 1991), internal communication (Nonaka, 1991; Sin, Tse & Yim, 2005; Roy, 2002), information technology support (Bharadwaj, Bharadwaj & Konsynski, 1999), and social network (McDonald & Westphal, 2003; Liebowitz, 2005). Therefore, the main purpose of this study is to investigate the relationship

of these factors and knowledge management capabilities.

Teamworking

The role of teamworking in knowledge management is also discussed in much of the literature. Organizational knowledge begins from knowledge of the individual. However, as indicated from Nonaka's "Spiral of Knowledge" (1991), working together importantly leads to sharing knowledge throughout the organization. Therefore, teamworking is one of the important concepts for knowledge sharing within the organization. Za'rraga-Oberty & De Saa'-Pe'rez, (2006) conducted empirical research and found that work teams support knowledge management in the organizations because the characteristics of work teams include self-management, leadership, individual autonomy, a climate of trust, common understanding, and the members' heterogeneous and complementary skills.

Internal Communication

Internal communication is crucial for organizational performance. Roy and Roy (2002) studied the importance of internal communication and found that effective strategic internal communication can reduce employee turnover, repeat past success, enhance further success, and eliminate inaccurate information resources. Regarding the aspects of knowledge management, Nonaka (1991) has found that internal communication is an important tool for the knowledge management process, generating frequent dialogue and communication among workers, and helping the transfer of tacit knowledge. Thus, having frequent dialogue and communication

assists with internal knowledge sharing in the organizations; therefore, effective internal communication is significant for knowledge storage and capturing.

Information Technology (IT) Support

The role of information technology in supporting the performance of the organization has been discussed in previous literature. According to Bharadwaj, Bharadwaj & Konsynski (1999), for example, the role of information technology has contributed to firm performance and IT investment has had a significantly positive association with firm performance. In addition, Ravichandran & Lertwongsatien (2005) found that variation in firm performance resulted from the extent to which IT was used to support and increase the core competence of the firm.

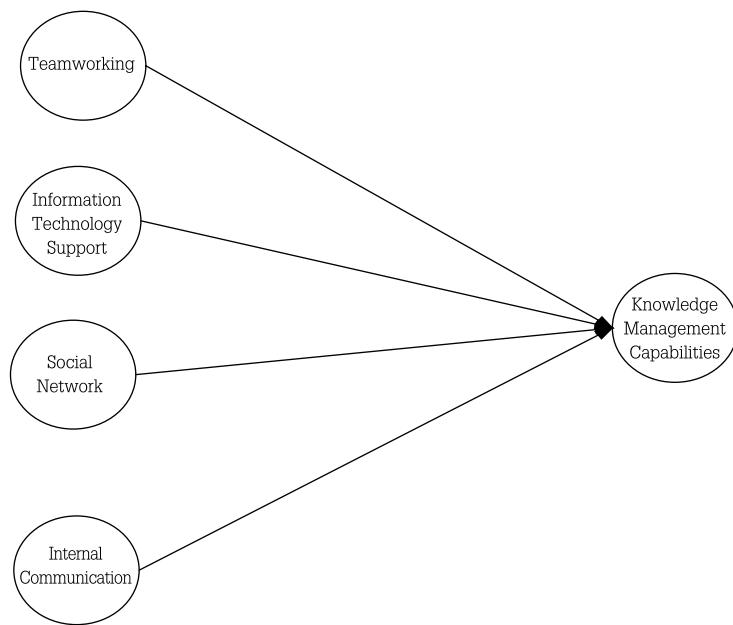
Social Network

Social networks among organizations have been studied in terms of interorganizational relationships, such as board interlocks and strategic alliances (McDonald and Westphal, 2003). Social networks between organizations can contribute to organizational performance as the organizations utilizes the relationship with their social network with ,for example, consultants, external advisors, and customers.

Liebowitz (2005) has suggested that social network refers to the relationships and flows between “actors,” including people, groups, organizations, computers, or other information/knowledge processing entities.

Conceptual Framework

To summarize the relationship of constructs or factors included in this study, the author has proposed a conceptual framework as shown below.



In this study, the construct of knowledge management capabilities, which was a second-ordered construct, contained three dimensions: knowledge acquisition, knowledge conversion and knowledge application. Table 2 provides details on the observed variables of each construct or factor.

Table 2: The Observed Variables and Constructs in the Study

Constructs	Observed Variables	
Information Technology Support	it1: Our bank branch provides IT support for communication among members.	
	it2: Our bank branch provides IT support for searching for and accessing necessary information.	
	it3: Our bank branch provides IT support for systematic knowledge storing.	
	it4: Our bank branch provides IT support for collaborative work with other branches.	
	it5: Our bank branch provides IT support for data analysis.	
Knowledge Management Capabilities	Knowledge Acquisition	kac1: Our bank branch has processes for acquiring knowledge about our customers.
		kac2: Our bank branch has processes for generating new knowledge from existing knowledge.
		kac3: Our bank branch has processes for acquiring knowledge about new products/services within our industry.
	Knowledge Conversion	kc1: Our bank branch has processes for transferring organizational knowledge to individuals.
		kc2: Our bank branch has processes for distributing knowledge throughout the organization.
		kc3: Our bank branch has processes for integrating different sources and types of knowledge.
	Knowledge Application	kap1: Our bank branch has processes for applying knowledge learned from experience.
		kap2: Our bank branch uses knowledge to adjust its business operation.
		kap3: Our bank branch is able to locate and apply knowledge to changing competitive conditions.

Table 2: (continued)

Constructs	Observed Variables
Social Network	sn1: Our bank branch has close co-operation with our stakeholders, such as companies, universities, technical colleges, etc.
	sn2: Our bank branch is in touch with professionals and expert technicians.
	sn3: Our bank branch encourages its employees to join networks made up of people (such as customers and suppliers) from outside organizations.
Teamworking	tw1: In our bank branch, we have a team-based working environment.
	tw2: In our bank branch, we have team-based problem solving.
	tw3: In our bank branch, we use team-based decision-making methods.
Internal Communication	ic1: Our bank branch has frequent communication within the organization.
	ic2: Our bank branch has effective processes for communication among departments.
	ic3: Our bank branch has processes for two-way communication between management and staff.
	ic4: Our bank branch has processes supporting information flow within the organization.
	ic5: Our bank branch has processes for exchanging information and ideas within our branch.

Research Methodology

The author studied seven commercial banks which have more than 100 full branches, located in the Bangkok area, including:

- Bangkok Bank
- Krung Thai Bank
- Kasikorn Bank
- Siam Commercial Bank
- Bank of Ayudhya

- TMB Bank
- Siam City Bank

These seven banks account for 837 branches out of 1,101 branches of all banks in Bangkok (Bank of Thailand, 2007). Since Bangkok is the capital of the country, bank competition is significantly high there, so knowledge management in the Bangkok area is crucial for the branches to be able to respond to this competitive environment. Banks are one of the most important business sectors in the economy of any country. Moreover, the nature of the banking business is to operate 24 hours, for example with ATM services. This implies the crucial role of knowledge management for banking operations.

In this study, the data were analyzed by using the structural equation modeling (SEM) and confirmatory factor analysis (CFA) technique. The author analyzed data with EQS 6.1. With the research questions proposed, structural equation modeling and confirmatory factor analysis were chosen as the most appropriate methods because they offered the most appropriate and efficient estimation technique (Hair, Black, Babin, Anderson & Tatham, 2006). In addition, the ERLS (elliptical reweighted least squares) method was applied, because this method minimizes problems occurring from data skewness and kurtosis, and this method has been shown to provide unbiased parameter estimates for both normal and nonnormal data (Sharma et al., 1989). Sharma et al. (1989) have further stated that the ERLS for non-normal data is equivalent in performance to Maximum Likelihood (ML) estimation. Moreover, with normal data conditions, ERLS performs as well as ML, but it performs better than the ML procedure when data are non-normal.

According to Hair et al. (2006), in order to demonstrate that the model is acceptably fit, at least three to four fit indices must be used. In this study, fit indices were used to measure the model, including NFI (normed fit index), NNFI (non-normed fit index), CFI (comparative fit index), and RMSEA (root mean square error of approximation). The benefits of these indices are that NFI, NNFI and CFI are not sensitive to sample size (Bentler, 1990), while the chi-square test is. According to Byrne (2006), NFI, NNFI, and CFI with a value of 0.90 or higher show a well-fitting model, and a value of 0.80 or higher shows a reasonably well-fitting model. For RMSEA and SRMR, also known as the badness of fit index, when the values are 0.05 or lower, suggesting that the model has a good fit, and values are from 0.05 to 0.10, it shows that the model has an average fit. In addition, MacCallum, Browne & Sugawara (1996) have suggested that the cutpoint for RMSEA is in the range of 0.80-0.10, indicating average fit and when RMSEA is higher than .1, the model has poor fit.

Therefore, the author in this study reported fit indices (CFI, RMSEA, NNFI, and NFI) in order to indicate model fit.

Table 3: Measures of the Structural Model Fit

Items	Criteria
Comparative Fit Index (CFI)	>0.90
Normed Fit Index (NFI)	>0.90
Non-Normed Fit Index (NNFI)	>0.90
Root Mean Square Error of Approximation (RMSEA)	<0.08

The Results

The study used questionnaires as a tool to collect data for the data analysis and this represented cross-sectional data. The author randomly selected the bank branch by using Microsoft Excel's random function. When targeted branches were selected, questionnaires were sent and followed by telephone calls and bank visits. Lastly, the author collected all 277 questionnaires with no missing values because when some questions were left unanswered, the author called back or visited the branch so that the questionnaires could be completed.

Table 4: Descriptive Statistics

Construct		Observed Variables	N	Minimum	Maximum	Mean	Standard Deviation
Information Technology Support	it1	277	2	7	6.16	0.915	
	it2	277	2	7	6.16	0.895	
	it3	277	2	7	6.15	0.965	
	it4	277	3	7	6.16	0.895	
	it5	277	1	7	6.00	1.068	
Knowledge Management Capabilities	Knowledge Acquisition	kac1	277	4	7	5.82	0.853
		kac2	277	4	7	5.87	0.800
		kac3	277	4	7	5.96	0.882
	Knowledge Conversion	kc1	277	2	7	6.03	0.855
		kc2	277	3	7	5.99	0.893
		kc3	277	1	7	5.72	0.920
	Knowledge Application	kap1	277	2	7	5.87	0.844
		kap2	277	3	7	5.97	0.851
		kap3	277	3	7	5.95	0.881

Table 4: (continued)

Construct	Observed Variables	N	Minimum	Maximum	Mean	Standard Deviation
Social Network	sn1	277	1	7	5.74	1.018
	sn2	277	3	7	5.67	0.931
	sn3	277	2	7	5.52	1.009
Teamworking	tw1	277	2	7	6.13	0.760
	tw2	277	2	7	5.96	0.811
	tw3	277	2	7	5.97	0.836
Internal Communication	ic1	277	4	7	6.24	0.752
	ic2	277	1	7	5.94	0.823
	ic3	277	2	7	5.94	0.909
	ic4	277	3	7	5.84	0.820
	ic5	277	4	7	5.88	0.852

Reliability Analysis and Discriminate and Convergent Validity

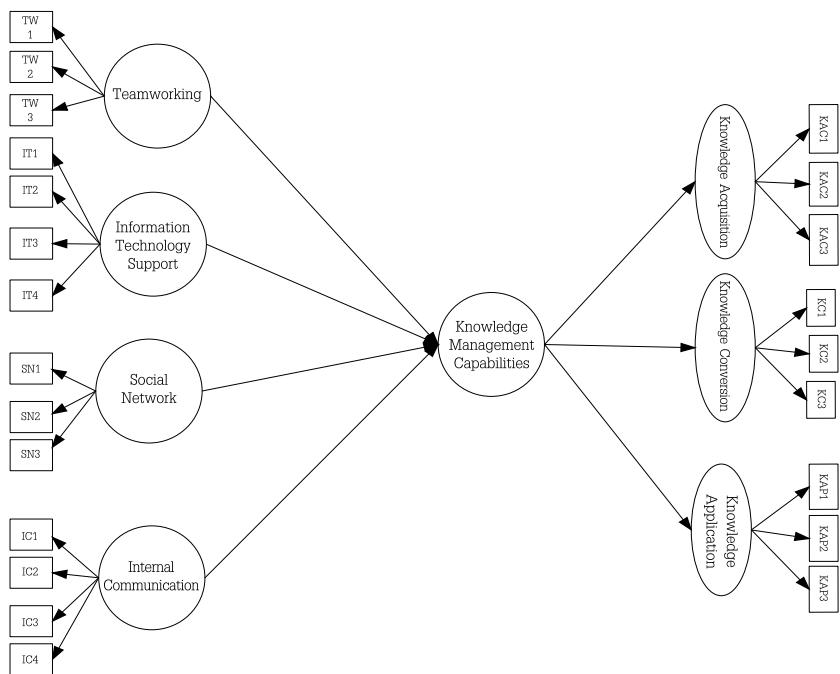
The reliability analysis showed that all constructs had a Cronbach alpha higher than .80 (the lowest value was .852), indicating highly reliable constructs (Hair et al., 2006).

Anderson and Gerbing (1988) have provided a comprehensive understanding of convergent and discriminant validity, which are important validities to measure before further conducting research on structural equation modeling. To measure convergent validity, confirmatory factor analysis was used by confirming that all scale items loaded significantly on their hypothesized construct factors (Anderson and Gerbing, 1988). Anderson and Gerbing (1998) have also stated that when all the t-values exceed the standard of 2.00, satisfactory convergent validity is indicated. The chi-square statistic tests of both measurement models are significant

as anticipated when the sample size becomes large. Other fit indices demonstrated good fit of the models. The results of this study provided the lowest t-value of 9.775, greater than 2.00.

Discriminant validity can indicate that one construct differs from other constructs. Following Anderson and Gerbing (1988) and Jiang, Klein and Crampton (2000), the discriminant validity was examined for each pair of constructs at a time in order to compare the difference between the χ^2 test of fixed and free models, where the results should exceed χ^2 (1, 0.05)=3.841, in order to conclude that two constructs had discriminant validity. In this study, the lowest difference between free and fixed models was 31.551, higher than 3.841, showing that the constructs had discriminant validity.

The Model



FIT INDICES

CHI-SQUARE = 684.856 BASED ON 224 DEGREES OF FREEDOM
 PROBABILITY VALUE FOR THE CHI-SQUARE STATISTIC IS .0000
 BENTLER-BONETT NORMED FIT INDEX (NFI) = .951
 BENTLER-BONETT NON-NORMED FIT INDEX (NNFI) = .962
 COMPARATIVE FIT INDEX (CFI) = .967
 ROOT MEAN-SQUARE ERROR OF APPROXIMATION (RMSEA) = .086

According to the fit indices above, the model provided good fit, as the NFI, NNFI, and CFI indicated a good fit because their values were greater than .90. The RMSEA was slightly higher than the criteria, however, it was still acceptable because according to MacCullum et al. (1996), when the RMSEA was greater than 1.0, the model was poorly fit. Therefore, overall the model indices were sufficient to indicate model fit.

The results indicated that all four constructs had positive influence on knowledge management capabilities, as shown in Table 4.

Table 5: The Relation of Parameters of Constructs

The Relation of Parameters	Parameter Estimates	T-value
Information Technology Support → Knowledge Management Capabilities	.265*	2.556
Teamworking → Knowledge Management Capabilities	.348*	3.232
Social Network → Knowledge Management Capabilities	.394*	4.211
Internal Communication → Knowledge Management Capabilities	.353*	2.527

Note: * indicated statistical significance at .05

After confirming that the model fitted well with the data collected from bank branches, the results provided that all constructs, including information technology support, social network, internal communication, and teamworking, had a significantly positive influence on knowledge management capabilities, which were composed of the process of knowledge acquisition, knowledge conversion or knowledge creation, and knowledge application. While social network provided the highest influence on knowledge management capabilities, followed by internal communication, teamworking, and information technology support, the results indicated that while most organizations consider information technology as one of the most important factors in knowledge management, other factors showed greater significance in the management of knowledge. This implied that human aspects of knowledge management are more important than the technological aspects for the organization.

In this study, the commercial banks included both private and state-owned banks. Only one bank was state-owned, Krung Thai Bank, because more than 50% of their ownership is held by a government agency. In this part of the study, the author made a comparison between private and state-owned banks and a t-test was used to identify the differences between these bank branches.

Table 6 Mean and Standard Deviation of Private and State-Owned Banks

Constructs	Types of Banks	N	Mean	Standard Deviation
Knowledge	Private bank	237	5.88	.711
Management	State-owned bank	40	6.08	.642
Capabilities				
Social Network	Private bank	237	5.61	.881
	State-owned bank	40	5.83	.759
Teamworking	Private bank	237	6.00	.713
	State-owned bank	40	6.13	.895
Internal	Private bank	237	5.95	.699
Communication	State-owned bank	40	6.09	.697
Knowledge	Private bank	237	5.86	.761
Acquisition	State-owned bank	40	6.02	.747
Knowledge	Private bank	237	5.87	.816
Conversion	State-owned bank	40	6.14	.735
Knowledge	Private bank	237	5.91	.780
Application	State-owned bank	40	6.08	.703
Information	Private bank	237	6.10	.788
Technology	State-owned bank	40	6.26	.734
Support				

In the above table, the mean scores of state-owned bank were higher than the average mean scores of all private banks. However, in order to test the difference between private and state-owned banks, the

author analyzed the data by using a t-test.

Table 7 The Results of the T-Test between Private and State-Owned Banks

Constructs	Test of Equal Variances	Levene's Test for Equality of Variances		T-test for Equality of Means	
		F	Sig.	T	Sig. (2-tailed)
Knowledge	Equal variances	.958	.329	-1.671	.096
Management	assumed				
Capabilities	Equal variances			-1.790	.079
	not assumed				
	Equal variances	1.173	.280	-1.508	.133
Social Network	assumed				
	Equal variances			-1.677	.099
	not assumed				
	Equal variances	.051	.822	-.986	.325
Teamworking	assumed				
	Equal variances			-.839	.406
	not assumed				
Internal Communication	Equal variances	.006	.938	-1.156	.249
	assumed				
	Equal variances			-1.159	.252
	not assumed				
Knowledge Acquisition	Equal variances	.619	.432	-1.190	.235
	assumed				
	Equal variances			-1.206	.233
	not assumed				

Table 7 (Continued)

Constructs	Test of Equal Variances	Levene's Test for Equality of Variances		T-test for Equality of Means	
		F	Sig.	T	Sig. (2-tailed)
Knowledge	Equal variances assumed	.214	.644	-1.948	.052
Conversion	Equal variances not assumed			-2.099	.040
Knowledge	Equal variances assumed	1.286	.258	-1.339	.182
Application	Equal variances not assumed			-1.442	.155
Information	Equal variances assumed	.417	.519	-1.146	.253
Technology Support	Equal variances not assumed			-1.205	.233

In the table above it can be seen that the results of the t-test for all constructs indicated that there was no significant difference found between state-owned and private banks at $p<.05$. Therefore, it can be concluded that there is no statistically significant difference between state-owned banks and private banks in this study.

Conclusions, Policy Implications for State-Owned Enterprises, and Directions for Future Research

The research achieved both objectives as shown in the findings.

First, the results indicated that there was a statistically significant relationship between knowledge management capabilities and four factors: information technology support, teamworking, internal communication, and social network. Second, the differences between state-owned and private bank branches were not significant, which appeared to disagree with some of the past research findings. However, this study had some limitations in that the research was conducted only in Thailand, especially in the Bangkok area, and focused only on the banking industry.

In addition, this study suggested that knowledge management capabilities, as a second-order construct, are positively influenced by information technology support, teamworking, social network, and internal communication. Both state-owned and private bank managers should focus on strengthening these components of the organizations in order to ensure that the organizations can achieve their goals and that resources are utilized effectively.

For policy implications for state-owned enterprises, one interesting aspect discovered by this study concerns the fact that there were no significant differences in knowledge management capabilities and knowledge management outcomes between the state-owned bank (or Krung Thai Bank) and private banks. The measurement was at the bank branch level. It can be concluded that the operations at the branch level, at each bank branch, including branches of private and state-owned banks, have no differences in knowledge management capabilities or outcomes. In addition, the crucial findings include the fact that there were no statistically significant differences between the state-owned bank and the private banks. As one of Krung Thai Bank's goals was to be able to

compete with other private banks effectively, the results also indicated that the bank can achieve its goals. Despite its governmental ownership, Krung Thai Bank was the second largest bank in the country in terms of total assets and bank branches, including several bank branches abroad. Moreover, Krung Thai Bank operated under the system of state enterprise performance assessment in order to monitor and control state enterprise operational efficiency, evaluated by the State Enterprise Policy Office, the Ministry of Finance, which acted as Secretary to the Performance Assessment Committee for all state enterprises. In addition, the bank offered similar financial services to other banks, ranging from personal and corporate loans to Internet banking.

These results showed that when a state-owned enterprise competitively operates in any industry, it needs to adapt to the environment and deal with the environment as their competitors do. The difference in the present study's results from those of past studies (such as Al-Obaidan and Scully, 1992 and Omran, 2007) may have stemmed from the contextual difference between the banking industry in Thailand (particularly in the Bangkok area) and other countries, and study conducted at the branch level and not at the overall organizational level.

Further research may emphasize the outcomes of knowledge management capabilities in terms of knowledge management outcomes in order to provide better understanding of the results of knowledge management capabilities. Furthermore, researchers can explore other factors, such as leadership and organizational culture, which may affect the knowledge management capabilities and knowledge management outcomes of the organizations.

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