Social Capital, Knowledge Sharing, and Performance in The Government Savings Bank (GSB), Thailand.

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Abstract

This study examines the linkage of the three dimensions of social capital which can enhance knowledge sharing and influence organizational performance. The linkage was studied through a structural equation model (SEM) utilizing the SPSS Amos 21.0 statistical software program. The SEM is based on Nahapiet and Ghoshal's (1998) division of social capital into three dimensions, namely, cognitive social capital, structural social capital, and relational social capital. The SEM is, furthermore, premised on the proposals of Tsai and Ghoshal (1998) and Uphoff (1999) that the three dimensions of social capital are interrelated. Additionally, Bandura's cognitive theory (1977, 1986, 1989, and 2001) is also incorporated into the SEM.

The data that were analyzed by Amos 21.0 using path analysis and other statistical procedures were collected from 1,440 bank staff in 167 GSB branches. The results showed that all paths exhibited a strong positive and significant effect on performance. The findings revealed that cognitive social capital has the strongest total effect on performance, while relational social capital has the strongest direct effect on performance. The empirical evidence demonstrated that it is worthwhile building cognitive social capital in order to enhance organizational performance.

Keywords: Social capital, knowledge sharing, organizational performance

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ทุนทางสังคม การแบ่งปันความรู้ และผลการดำเนินงานขององค์การ: ศึกษากรณีธนาคารออมสิน

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บทคัดย่อ

การศึกษาในครั้งนี้มีวัตถุประสงค์เพื่อศึกษาความสัมพันธ์ระหว่างมิติทั้งสามของทุนทางสังคมองค์การ ที่เสนอโดย Nahapiet และ Ghoshal (1998) ที่มีต่อความสามารถในการแบ่งปันความรู้ และต่อผลการดำเนินงานขององค์การ ทั้งนี้ได้มีการประยุกต์ร่วมกับแนวคิดของ Tsai และ Ghoshal (1998) และ Upoff (1999) ที่ว่าทุนทางสังคมทั้งสามมิติมีความสัมพันธ์และมีอิทธิพลต่อกัน รวมทั้งได้นำทฤษฎี Cognitive ของ Bandura (1977, 1986, 1989, และ 2001) มาใช้ในการพัฒนาแบบจำลองสมการเชิงโครงสร้าง โดยเก็บรวบรวมข้อมูลจากพนักงาน 1,440 คน จาก 167 สาขา ของธนาคารออมสิน ผลการวิเคราะห์ข้อมูลโดยใช้โปรแกรม AMOS เวอร์ชั่น 21.0 พบว่า ทุนทางสังคมเชิงการรับรู้ (cognitive social capital) มีอิทธิพลโดยรวม (total effect) มากที่สุดต่อผลการดำเนินงานของธนาคาร ในขณะที่ ทุนทางสังคมเชิงความสัมพันธ์ (relational social capital) มีอิทธิพลทางตรง (direct effect) มากที่สุดต่อผลการดำเนินงานขององค์กร ผลการศึกษาดังกล่าวแสดงให้เห็นว่าการสร้างทุนทางสังคมเชิงการรับรู้มีคุณค่ามากที่สุดต่อการส่งเสริมผลการดำเนินงานขององค์การ

คำสำคัญ: ทุนทางสังคม การแบ่งปันความรู้ ผลการดำเนินงานขององค์การ

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1. Introduction

From the beginning of the industrial era, theorists have tried to find out "what makes an organization effective." Not only organization theorists but also other social scientists have proposed techniques to search for the factors that make organizations perform efficiently and sustainably.

Organizational performance indicates that employee behavior is critical for an organization's efficiency and effectiveness. Several theories have explored the role of team processes and diversity linked to performance (Kilduff, Angelmar, and Mehra, 2000; Pelled, Eisenhardt, and Xin, 1999). Some researchers have been concerned with understanding why some organizations perform better than others and have frequently adopted the resource-based view of the firm as a model for explaining the sustained competitive advantage that some organizations possess (Barney, 1991). The resource-based view emphasizes that a firm utilizes its resources and capabilities to create a competitive advantage that ultimately results in superior value creation. Thus, successful organizations have unique capabilities or resources that give them an advantage over competitors.

Firm resources and capabilities are strengths that firms can use to conceive of and implement their strategies. Most analysts are concerned about tangible resources—physical capital—and ignore intangible resources or capital in the organization, such as social capital and cultural capital. Unlike other researchers, who see such organizational advantage as accruing from the particular capabilities that organizations have for creating and sharing knowledge, Nahapiet and Ghoshal (1998) developed the notion that social capital within an organization is likely to be a source of competitive advantage for the organization. Nahapiet and Ghoshal identified three dimensions of social capital, while Tsai and Ghoshal (1998) proposed that the three dimensions of social capital were linked and interacted with each other.

Additionally, Nahapiet and Ghoshal argued that social capital can enhance knowledge sharing, which in turn improves organizational performance. A

number of research studies have examined the relationship between social capital and knowledge sharing, on the one hand, or social capital and organizational performance, on the other hand, while a smaller number of research studies have examined relationships among social capital, knowledge sharing and organizational performance (Chui, and Hsu, 2006; Kim, Lee, Paek, and Lee, 2013).

While no empirical research studies have applied an integrative model to the banking industry, this study attempts to apply such a model to the Government Savings Bank (GSB), Thailand. The model attempts to explain the success of the GSB, which was established in 1913 as the first state enterprise bank in Thailand and is unusual in that it has functioned for one hundred years without any support or subsidies from the government.

In Thailand, the GSB is one of the largest and strongest banks in terms of asset size, deposits, loans, and the ratio of non-performing loans (NPLs) to loans. To achieve its success, it would seem that the GSB's operational procedures are more complex and riskier than those of other state and commercial banks. The GSB has been responsible for providing revenues to the state, supporting government populist policies, mobilizing savings throughout the country by encouraging people to save money, providing loans and services to people from all walks of life, and generally making the bank and its services easily accessible.

The reason why this study is focused on the GSB is because the effect of social capital and knowledge sharing on a state-enterprise bank in Thailand is currently unknown. It was therefore a challenge to identify the mechanisms by which social capital apparently influences organizational performance. This study utilized an empirical approach to quantify social capital in order to clarify and strengthen the concept theoretically, with the purpose of appropriately applying it within the specific context of the GSB.

2. Theoretical Background

Tsai and Ghoshal (1998) graphically emphasized the associations among the different dimensions of social capital after Nahapiet and Ghoshal (1998) had presented a theoretical model of how social capital facilitates knowledge sharing in an organization. Uphoff (1999), Uphoff and Wijayyaratna (2000), and Krishna and Uphoff (2002) found that structural social capital and cognitive social capital, although nominally distinct, were in fact connected and mutually reinforcing collective actions; however, cognitive social capital predisposed people to give aid and shared ways of thinking and acting that evoke cooperation.

Bandura's cognitive theory proposed that mental states cause human actions which contribute to self-efficacy. Bandura argued that when people believe that they are motivated to build their social network more in tune with their own values and the kinds of relationships that they engage in, they tend to form different kinds of relationships with different people. In the balance theory of Heider (1946), it was asserted that if two people are friends, they may have the same criteria for the assessment of an object. When people interact in small groups, similar evaluations of an object are a key indicator in explaining how communication ties are created within a group and the development of participation within groups. As a result, the associations among the three different dimensions of social capital can be conceptualized as shown in the depicted model (Figure 1).

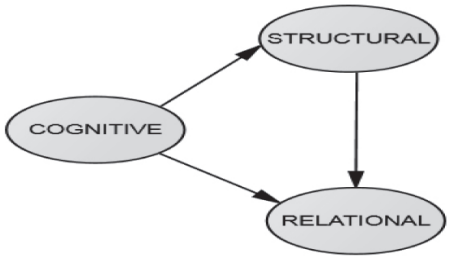

Figure 1. Relationships among the different dimensions of social capital

Most studies in the past highlighted the importance of social capital as a driver for knowledge sharing in organizations (Adler and Kwon, 2002; Coleman, 1988; Fukuyama, 1995; Hazleton and Kennan, 2000; Inkpen and Tsang, 2005; Nahapiet and Ghoshal, 1998; Widen-Wuff, 2004). These researchers pointed out how different dimensions of social capital may enable the sharing of different kinds of knowledge. At the same time, there have been numerous research studies that looked at the relationships of social capital and business success (Kilkenny, Nalbarte, and Besser, 1999), performance (Batjargal, 2000; Fredette, 2009; Wu, 2008; Wu, and Leung, 2005), innovation (Cook, and Clifton, 2004; Landry, Amara, and Lamari, 2000), revenue (Jenssen, and Greve, 2002; Johnson, Suarez, and Lundy, 2002), sales and value added (Chen, Tzeng, Ou, and Chang, 2007; Fafchamps, and Minten, 2002; Lechner, Dowling, and Welpe, 2006; Smerek, and Denison, 2007; Westlund, 2006; Zhang, and Fung, 2006), launching a new venture (De Clerk, and Arenius, 2003), profits and employment (Bosma, van Praag, Thurik, and de Wit, 2004; Chen, Tzeng, Ou, and Chang, 2007), growth (Cook, and Clifton, 2004; Cook, Clifton, and Oleaga, 2005; and Cook, 2007; Lou, Griffith, Liu, and Shi, 2004; Westlund, and Nilsson, 2005), return on investment (Chen, Tzeng, Ou, and Chang, 2007; Lock Lee, 2008; Lou, Griffith, Liu, and Shi, 2004), return to asset (Smerek, and Denison, 2007; Zhang, and Fung, 2006), market-to-book ratios (Lock Lee, 2008; Smerek, and Denison, 2007), total shareholder return (Lock Lee, 2008). However, there are few empirical studies that explore the linkage of the three dimensions of social capital, knowledge sharing, and organizational performance.

Although organizational performance and effectiveness and related issues are terms that are most often used, they still remain an important topic for academic studies. The challenges take account of the lack of consensus in defining organizational effectiveness and determining what dimensions of performance should be measured and how they should be measured.

The classical organizational theorists tried to analyze organizational effectiveness in terms of the efficiency that resulted from the implementation of management principles. The greatest contributions to organizational theories

focused on task performance. Since then, numerous theories, concepts, and frameworks have been proposed in the continuing discussion that seeks the key elements which affect performance.

In the 1990s, one of the most popular measurements was developed by the Harvard Business School called the balanced scorecard. It has been accepted that the balanced scorecard procedure is a high quality instrument for structuring an array of performance measures. It links the espoused strategies of an organization and performance measures. It measures, monitors, and controls financial variables, customers, business processes, and innovation and learning, which are the organizational performance measures that are targeted for research. This specific approach requires a focus on "the key success factors" that are believed to generate enough performance measures.

As a model of performance measurement, the GSB was encouraged to apply this strategic instrument to measure four categories of the framework as well. The GSB management team has implemented the balanced scorecard, and linked this strategic tool to support the payments of incentives to individuals as the personal key performance indicators (KPIs). Several measures are selected to track the achievement of the bank's strategic goals. Due to that, the KPIs were communicated and assigned to individuals, organizational units, and bank branches. Although the bank's KPIs include financial and non-financial measures, the KPIs of bank branches are mostly financial dealings. This study uses the bank branch as a unit of analysis to study the factors that make this organization perform well.

Organizational theories and concepts were established in the Anglo-American milieu and, as such, might not apply in the Thai organizational culture and context (Hofstede, 1994). Consequently, it is necessary to obtain empirical evidence to support social capital and knowledge sharing concepts in Thai bureaucratic organizations. Figure 2 shows the relationships among the three dimensions of social capital and knowledge sharing and performance.

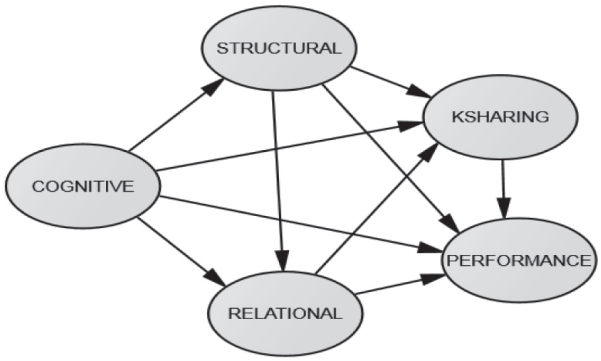

Figure 2. The proposed conceptual model

3. Methodology

This research adopted a quantitative method approach by using a cross-section of the GSB comparing members in different areas. Within the quantitative framework, the structured rank scale questionnaire survey tool is used to measure social capital and knowledge sharing on a 5-point Likert scale. Members in each bank branch, considered as the basic unit of social capital accumulation, were asked to rate items in the questionnaire. Although respondents were asked individually, social capital was apprehended as accumulations from individual to branch. Thus, aggregated individual rating scales were calculated to represent the overall picture of each bank branch as the unit of analysis.

3.1 Measures: The items were used to measure the manifest variables constructed from previous literatures. The questionnaire was designed in Thai, tested and retested to ensure that the questions were measuring what they were intended to measure, and were reliable and valid measures as well as practical. Branch performance was measured in terms of the percentage achievement of goals. Cognitive social capital was measured as shared vision and shared goals. Structural social capital was acknowledged as affection, frequency of interaction, and time spent. Relational social capital was identified as trust and the affective commitment of Meyer and Alan. Knowledge sharing was established as attitude, knowledge donating and collecting of van den Hooff and van Weena.

3.2 Sample and procedures: The research was conducted in GSB, one of the largest state-enterprise banks in Thailand. In 2011, the asset size of the GSB

was 1.772.6 billion baht. The bank employed 11,374 people and provide services through 598 branches. Respondents were bank branch staff working in 167 branches located in the Bangkok area as well as 2 out of 18 regions of the GSB, namely, Region 6 and Region 12, totaling 12 provinces as follows: Bangkok, Chai Nat, Lop Buri, Petchabun, Pichit, Nakhon Sawan, Uthai Thani, Ubon Rachathani, Buri Ram, Surin, Yasothon, and Si Sa Ket. Except for Bangkok, the provinces in Region 6 and Region 12 were small in terms of gross provincial product per capita. Questionnaires were administered to a total of 1,891 employees, produced 1,725 returns with an overall response rate of 91.22% within the selected branches. Of the questionnaires that were returned, only 1,440 could be used. As no names were taken, respondents had the freedom to answer the questionnaires without feeling pressured in an way.

3.3 Data analysis: Data were statistically cleansed before gathering and calculating the individual rating scales to represent the item value of each bank branch. Then, exploratory factor analysis was used to examine the factorial validity of the scale. Cronbach's reliability alpha was calculated to assess the internal consistency for all scales. The measurement model was assessed to explore relationships among the association of social capital, and the mediating of knowledge sharing which affects the performance of the organization. The measurement model was used to test the congruence of the causal relationships from the theoretical assumption and the empirical data by using the maximum likelihood estimation method run by Amos version 21.0.

4. Findings

Exploratory factor analysis was employed, using the principal component factor extraction method and varimax rotation. Table 1 shows that the KMO measure of sampling adequacy was met with a value of .86, and Bartlett's Test of Sphericity was significant at the .00 level. An EFA included the remaining 16 variables which resulted in four factors with eigenvalues over 1.0, explaining 51.29% of the total variance. Eigenvalues ranged from 14.29 to 2.35 for all factors extracted. The factor loading ranged from .69 to .91. Factors 1, 2, 3, and 4 were renamed

as cognitive, relational, structural, and k-sharing, respectively, in accordance with the extraction.

Table 2 shows the Cronbach's alpha range from .75 to .96. All scales met the minimum level of acceptability. A 17-item correlation table with mean and standard deviations is shown in Table 3. The 17 items were significantly intercorrelated with each other. All correlations were greater than .50 at the level of .01 (two tailed, N = 167).

Table 1. EFA of Questionnaire Variables

	Component			
	Factor1: Cognitive	Factor2: Relational	Factor3: Structural	Factor4: Ksharing
VISION	**.84**	.03	.05	.03
GOAL	**.82**	.15	.08	.02
ENTHUS	**.82**	.07	.04	.25
PLAN	**.81**	.16	.03	.04
METHOD	**.81**	.11	.04	.27
FAMILY	.75	.03	**.91**	.21
DEPEND	.75	.01	**.80**	.11
FORGIVE	.74	.09	**.79**	.06
SUPPORT	.71	.08	**.79**	.05
HONEST	.30	.09	.05	**.78**
ETHIC	.36	.09	.05	**.76**
TRANSPAR	.34	.04	.10	**.75**
MOOD	.15	**.75**	.06	.04
ASK	.20	**.71**	.12	.22
TRAIN	.23	**.70**	.02	.05
FRIEND	.08	**.69**	.04	.05
Eigenvalues	14.29	5.78	2.72	2.35
% of variance	29.17	11.80	5.54	4.79

Table 2. Cronbach's alpha

	Cronbach's Alpha	Meaning
OVERALL	**.96**	Excellent
COGNITIVE SOCIAL CAPITAL	**.94**	
VISION	.93	Excellent
METHOD	.91	Excellent
ENTHUS	.91	Excellent
PLAN	.91	Excellent
GOAL	.93	Excellent
STRUCTURAL SOCIAL CAPITAL	**.92**	
FAMILY	.89	Very good
DEPEND	.90	Excellent
FORGIVE	.88	Very good
SUPPORT	.91	Excellent
RELATIONAL SOCIAL CAPITAL	**.87**	
HONEST	.87	Very good
ETHIC	.75	Adequate
TRANSPAR	.83	Very good
K SHARING	**.90**	
MOOD	.88	Very good
ASK	.86	Very good
TRAIN	.84	Very good
FRIEND	.85	Very good

Table 3. Items Correlations for CFA and SEM Analysis

Observed variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1.ENTHUS	1																
2.METHOD	.75**	1															
3.VISION	.75**	.85**	1														
4.PLAN	.68**	.83**	.86**	1													
5.GOAL	.65**	.67**	.75**	.74**	1												
6.FAMILY	.62**	.66**	.71**	.68**	.78**	1											
7.DEPEND	.65**	.67**	.70**	.67**	.68**	.76**	1										
8.FORGIVE	.64**	.63**	.68**	.62**	.68**	.82**	.76**	1									
9.SUPPORT	.61**	.68**	.70**	.63**	.65**	.73**	.69**	.73**	1								
10.HONEST	.70**	.67**	.68**	.62**	.65**	.62**	.60**	.64**	.67**	1							
11.ETHIC	.64**	.66**	.73**	.65**	.74**	.68**	.66**	.66**	.69**	.70**	1						
12.TRANSPAR	.59**	.63**	.65**	.61**	.65**	.62**	.62**	.63**	.69**	.60**	.76**	1					
13.MOOD	.62**	.58**	.63**	.62**	.64**	.68**	.68**	.64**	.67**	.59**	.70**	.62**	1				
14.ASK	.55**	.59**	.59**	.57**	.55**	.61**	.51**	.61**	.61**	.55**	.57**	.56**	.62**	1	.		
15.TRAIN	.55**	.59**	.66**	.64**	.59**	.63**	.57**	.62**	.61**	.59**	.62**	.61**	.67**	.71**	1		
16.FRIEND	.60**	.65**	.71**	.74**	.68**	.65**	.62**	.60**	.62**	.55**	.67**	.61**	.71**	.69**	.74**	1	
17.PERFORM	.75**	.78**	.82**	.78**	.79**	.78**	.75**	.77**	.77**	.75**	.79**	.73**	.72**	.67**	.71**	.78**	1
Mean	4.35	4.51	4.48	4.49	4.43	4.33	4.37	4.39	4.23	4.24	4.20	4.15	4.24	4.30	4.35	4.33	4.01
S.D.	.27	.27	.26	.26	.31	.34	.26	.31	.31	.31	.30	.31	.34	.28	.25	.22	.48

** Correlation is significant at the 0.01 level (2 tailed)

Listwise N=167

According to the different hypothesized models, the confirmatory factor analysis model was used individually to estimate the relationship between each latent variable and related items. The measurement-testing model focused on the linear functions between the latent variables and their observed indicators in the model. Four measurement sub-models—(1) cognitive social capital, (2) structural social capital, (3) relational social capital, and (4) knowledge sharing, were examined by using the Amos 21.0 software program. The statistical requirements were met (Table 4).

Table 4. Statistical fits for the confirmatory factor analysis model

MODEL	P value	CMIN/DF	GFI	CFI	TLI	RMSEA
COGNITIVE	.29	1.23	.98	.99	.99	.04
STRUCTURAL	.69	0.37	.99	1.00	1.01	.00
RELATIONAL	.60	0.51	.99	1.00	1.02	.00
KSHARING	.18	1.71	.99	.99	.98	.06

The structural model reflecting the assumed linear, causal relationships among the constructs was tested with the data collected from the validated measures. Figure 3 presents the assessment of the overall measurement model of five factors. This overall measurement model demonstrated an acceptable fit to the data (Chi square = 226.278; df = 110; CMIN/DF = 2.05, GFI =.90; CFI =.96; TLI = .95; RMSEA = .08). The five constructs were allowed to co-vary freely in the CFA model. Model estimation was done using the maximum likelihood approach, with the item correlation matrix as input. Table 5 presents the summary of loading scales in each measurement model.

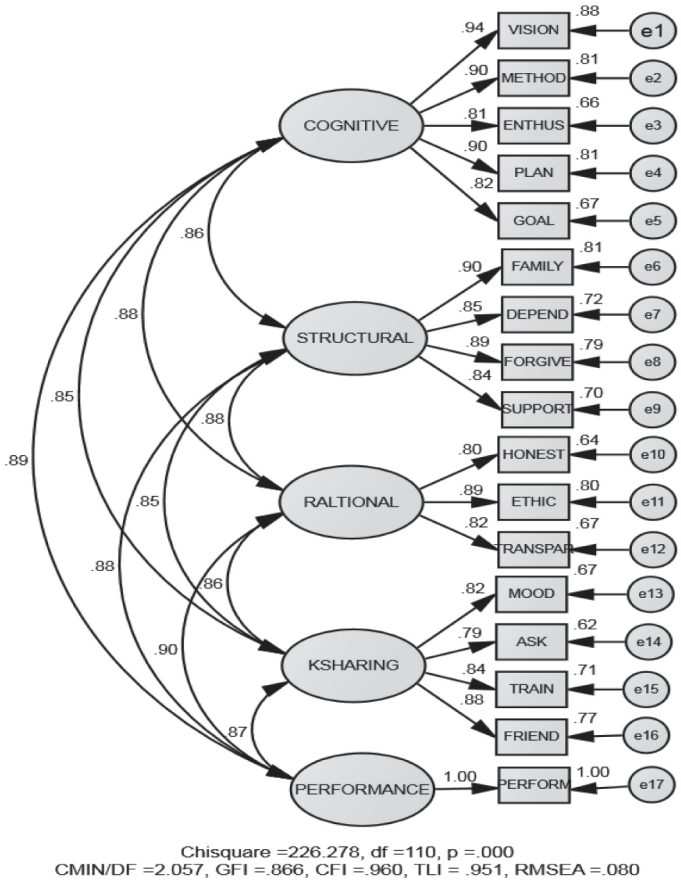

Figure 3. Analysis of the overall measurement model

Additionally, the convergent validity of the scales was verified by using three criteria by Fornell and Larcker (1981): 1) all factor loadings should be significant at .05, and ideally 0.7 or higher; 2) the average variance extracted (AVE) by each construct should exceed the variance due to measurement error for that construct and should exceed 0.5, and 3) construct reliability between .6 and .7 may be acceptable provided that the indicators of a model's construct validity are good. For the current measurement model, all loadings were above the 0.7 threshold. The AVE ranged from .69 to 1.00. The composite reliabilities of the constructs ranged from .73 to .79. Hence, all three conditions for convergent validity were met. Table 6 shows correlations, CR., and AVE.

Table 5. Summary of measurement scales

Construct	Measure	Loading
VISION	I am enthusiastic about pursuing the bank's vision.	.94
METHOD	I have proposed a super intelligent service method to my branch.	.90
ENTHUS	I am enthusiastic about pursuing collective goals.	.81
PLAN	My colleagues and I together plan to achieve goals.	.90
GOAL	In my branch, we mutually act to attain goals.	.82
FAMILY	I am very close to my colleagues as though I were a member of their family.	.90
DEPEND	My colleagues believe that I can help them when they face problems.	.85
FORGIVE	It is normal for colleagues to make mistakes.	.89
SUPPORT	I spend my free time assisting my colleagues.	.84
HONEST	My colleagues are honest.	.80
ETHIC	My colleagues behave in line with the bank's ethics.	.89
TRANSPAR	My bank policies are transparent.	.82
MOOD	When the branch manager is furious, we talk in a whisper.	.82
ASK	I share the information I have with my colleagues when they ask me to.	.79
TRAIN	Having had a training course, I provide knowledge to my colleagues.	.84
FRIEND	Colleagues share information with you.	.88
PERFORM	Percentage of performance success compare to goals.	1.00

Table 6. Correlations and AVE

Construct	AVE	CR	Squared Inter-construct Correlation (SIC=IC*IC)				
			COGNI	STRUCT	RELAT	KSHARE	PERFORM
COGNITIVE	**0.77**	0.79	**0.77**				
STRUCTURAL	**0.76**	0.78	0.74	**0.76**			
RALATIONAL	**0.70**	0.74	0.22	0.23	**0.70**		
K-SHARING	**0.69**	0.73	0.07	0.09	0.13	**0.69**	0.03
PERFORMANCE	**1.00**		0.07	0.05	0.11	0.03	**1.00**

Further, the discriminant validity of the scales was assessed using the guideline suggested by Kline (2005): the corresponding squared inter-construct correlation estimates (SIC) should be less than the construct average variance extracted (AVE). If they are, this indicates the measured variables have more in common with the construct they are associated with than they do with other constructs. AVE estimates in Table 6 are larger than the corresponding squared inter-construct correlation estimates. Hence, the test of discriminant validity was acceptable. This study concluded that the scales have sufficient construct validity.

Finally, the nomological validity was tested by examining whether the correlations between the constructs in the measurement model made sense. The construct correlations were used to assess this. Two indicators were used to demonstrate the nomological validity: the construct had to be positively related based on the theories reviewed, and in the construct model all correlations had to be positive and significant. In this model, the correlations were significant at the level 0.001, which met the requirement.

Figure 4 shows the test results for the various hypothesized models. The software provided statistical results in the figure: factor loadings of manifest variables in each latent variable, the explanatory power of the research model and the percentage of variance in the latent variables, and the path coefficient values. The results showed that all manifest variables were highly correlated to

the latent variables, indicating that all factors were well constructed. All paths exhibited a strong positive and significant effect on performance. In addition, the explanatory power of the research model was very high indicating that the hypotheses were able to effectively explain or had greater predictive power.

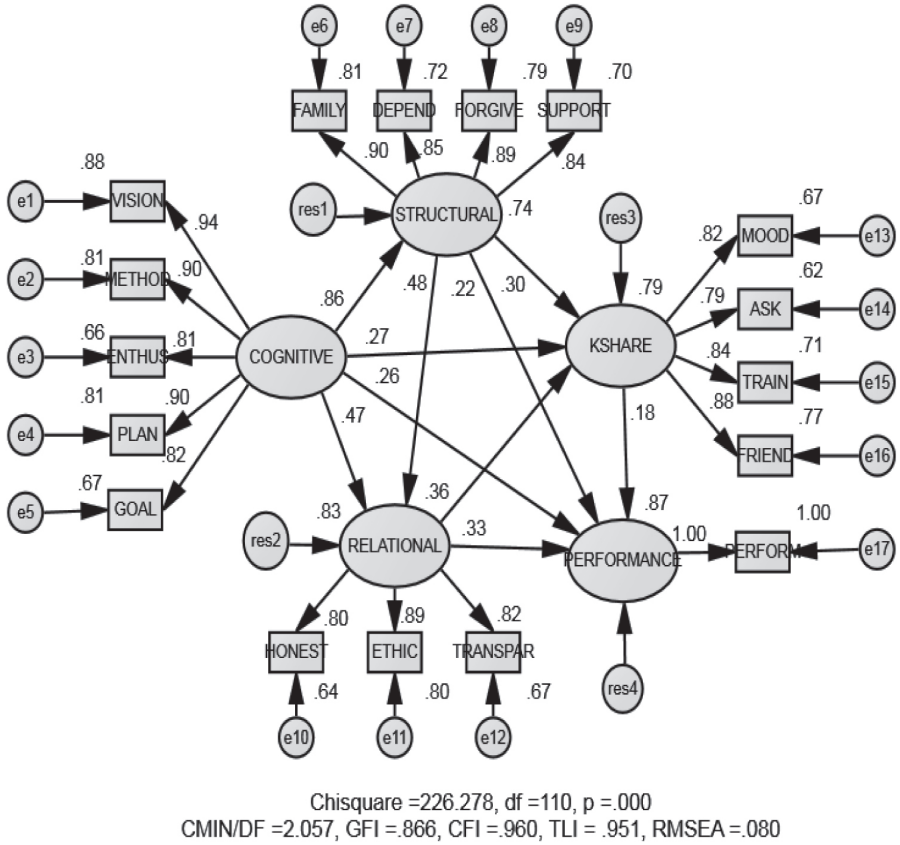

Figure 4. The results of the structural model

The hypotheses were confirmed by interpreting the path coefficients. All path coefficients were significant at the level of .001, .01, and .05 (*** p<.001, ** p<.01, * p<.05,). In terms of the relationships among factors, the results showed that all factors were positively associated with organizational performance. As such, all hypotheses were supported.

Cognitive social capital as the sole exogenous variable influenced the four endogenous variables: structural social capital, relational social capital, knowledge sharing, and their roles in promoting performance. Structural social capital

had a significantly positive impact on relational social capital, knowledge sharing, and performance. Similarly, relational social capital showed a strong positive effect on knowledge sharing and performance, while knowledge sharing exhibited a positive and significant path to performance.

The explanatory power of the research model also accounts for the high percentage of variance of the model. Table 7 shows that the SEM model explained approximately 87 percent of variance in performance. Approximately, R-square values were 79, 83, and 74 percent of variance in knowledge sharing, relational social capital, and structural social capital were explained by the model.

The estimate and the standardized regression coefficients were explained in order to determine the validity of the hypothesized paths. Standardized estimates are used when comparing direct effects on a given endogenous variable in a single group study. Table 8 shows that the critical ratio (CR) value is greater than 1.96 for a regression weight, and that the path was significant at the .05 level or better. In the standardized estimate column, three asterisks (***) indicate a significance smaller than .001; two asterisks indicate significance at the level of .01. All paths in the hypothesized model are significant at the level of .001, .01, and .05.

Table 7. Squared multiple correlations of the model

	Estimate
PERFORMANCE	.87
KSHARE	.79
RELATIONAL	.83
STRUCTURAL	.74

The predictors of cognitive social capital showed a significant amount of variance in the full structural model. The path flowing from cognitive social capital to structural social capital (standardized estimate .86, C.R.= 11.99, p=.001); the

path flowing from cognitive to relational social capital(standardized estimate .47, C.R. = 4.18, p =.001); the path flowing from cognitive social capital to knowledge sharing (standardized estimate .27, C.R.= 2.07, p=.05); and the path flowing from the cognitive social capital to performance (standardized estimate .26, C.R.= 2.91, p=.01).

Similarly, the path flowing from structural social capital to relational social capital (standardized estimate .48, C.R. = 4.20, p=.001); the path flowing from structural social capital to knowledge sharing (standardized estimate .30, C.R. = 2.23, p=.05); and the path flowing from structural social capital to performance (standardized estimate .22, C.R. = 2.34, p=.05) were significant.

The analysis also showed that the path flowing from relational social capital to knowledge sharing (standardized estimate .36, C.R. = 2.25, p=.05), and the path flowing from relational social capital to performance (standardized estimate .33, C.R. = 2.82, p=.01) were significant. Finally, the path flowing from knowledge sharing to performance was significant at the level of .05; the standardized estimate = .18, C.R. = 2.02.

Table 8. Standardized regression weights of the structural model

Parameter			Estimate	Standardized Estimate	S.E.	C.R.
COGNITIVE	→	STRUCTURAL	1.04	.86***	.08	11.99
COGNITIVE	→	RELATIONAL	.47	.47***	.11	4.18
STRUCTURAL	→	RELATIONAL	.40	.48***	.10	4.20
COGNITIVE	→	KSHARE	.30	.27*	.14	2.07
RELATIONAL	→	KSHARE	.39	.36*	.17	2.25
STRUCTURAL	→	KSHARE	.28	.30*	.12	2.23
COGNITIVE	→	PERFORMANCE	.49	.26**	.17	2.91
KSHARE	→	PERFORMANCE	.31	.18*	.15	2.02
RELATIONAL	→	PERFORMANCE	.62	.33**	.22	2.82
STRUCTURAL	→	PERFORMANCE	.35	.22*	.15	2.34

Note: * p<.05, ** p<.01, *** p<.001

Table 9. Standardized effects on performance

	EFFECT ON PERFORMANCE		
	DIRECT	INDIRECT	TOTAL
COGNITIVE	0.26	0.63	**0.89**
STRUCTURAL	0.22	0.24	0.46
RELATIONAL	**0.33**	0.06	0.39
K-SHARING	0.18	0.00	0.18

Several causal relationships between factors were found to be significant. An analysis was made of direct, indirect, and total effects to explain how the exogenous variable influenced the endogenous variables. Additionally, latent variables are a hypothetical construct derived from other observed indicators in a full causal model. The analyses of the direct, indirect, and total effects are presented in Table 9. For instance, the cognitive social capital had the strongest total effect on performance value at .89, whereas the other factors—structural social capital, relational social capital, and knowledge sharing totally affected performance at .46, .39, and .18, respectively.

The path coefficients in Table 9 indicate that relational social capital, with the strongest direct effect, had a significant influence on performance at 0.33, whereas cognitive social capital, structural social capital, and knowledge sharing had a direct effect on performance at 0.26, 0.22, and 0.18, respectively.

In addition, the path diagram decomposed the associations among several factors in the model to explain the magnitude of the indirect effects. The magnitude of the indirect effects was determined by taking the product of the path coefficients along the pathway between the causally related variables. Table 10, showing the magnitude of the indirect effect between cognitive social capital, structural social capital, and relational social capital, was estimated by multiplying the path coefficient from one factor through its effect on the other. The results also indicate that the cognitive social capital affects organizational performance directly and indirectly via its direct effect on structural, relational, and knowledge sharing. The indirect effect of cognitive social capital was .63, which was greater than the direct effect (.26). The indirect routes were generated into 7 paths. The indirect path from cognitive-structural-performance gave the highest value weighted .19 to .63, indicating

Table 10. Indirect effect path

Indirect Path					effect	%
Cognitive to Performance					**0.63**	
cognitive=.86	struct =.22	perform			0.19	**0.30**
cognitive=.47	rela =.33	perform			0.16	0.25
cognitive=.27	kshare=.18	perform			0.05	0.08
cognitive=.86	struct =.48	rela = .33	perform		0.13	0.21
cognitive=.86	struct =.30	kshare=.18	perform		0.05	0.08
cognitive=.47	rela =.36	kshare=.18	perform		0.03	0.05
cognitive=.86	struct =.48	rela = .36	kshare = .18	perform	0.02	0.03
Structural to Performance					**0.24**	
struct=.48	rela =.33	perform			0.16	**0.66**
struct=.30	kshare=.18	perform			0.05	0.22
struct=.48	rela =.33	kshare=.18	perform		0.03	0.12
Relational to Performance					**0.06**	
rela= .36	kshare=.08	perform			0.06	

that this path contributed 30% to the total indirect effect. The results also showed that the association of the three dimensions of social capital that resulted from the cognitive social capital effect on performance was 76%. The relationships of the linkages of social capital indirectly via knowledge sharing can be boosted 24%.

An hypothesis of this study is that organizational performance is directly affected by structural social capital, and indirectly via its direct effect on relational social capita and knowledge sharing. The results of the multivariate analysis

in this study indicate that the indirect effect of structural social capital was .24, which was greater than the direct effect (.22). The indirect routes were generated into 3 paths. The indirect path from structural–relational–-performance gave the highest value, weighted .16 to .24, indicating that this path contributed 66% to the total indirect effect. The relationships between structural social capital and relational social capital indirectly via knowledge sharing boosted organizational performance by 34%.

In this study it was also hypothesized that organizational performance is directly affected by relational social capital, and indirectly via its direct effect on knowledge sharing. One indirect route was calculated via its direct effect on knowledge sharing. The results showed that the indirect effect of relational social capital was .06, which was less than the direct effect (.33).

5. Discussion

Overall, the findings generally supported the proposed model, which was deeply rooted in the theoretical foundations of social capital theory and knowledge sharing. The study was able to sufficiently capture the diversity of the different dimensions of social capital. The results are a significant step in illustrating how information sharing may be a mediating variable that helps to explain the different and occasionally inconclusive empirical results of the link between social capital and performance in the literature. More importantly, the study shows that different dimensions of social capital have different degrees of reliance on information sharing as the mediator that extends their respective effects on the improvement of competitiveness. In conclusion, this study provided an alternative explanation for the divergent and conflicting empirical results concerning the link of social capital and knowledge.

This study also produced findings that would be interesting from theoretical and practical perspectives. First, the results support the importance of social capital and knowledge sharing in explaining the behavior of GSB bank staff in the organization. The findings also offer insights into the value of cognitive

social capital, which causes the linkages of the three dimensions of social capital and its effect on knowledge sharing and organizational performance.

The findings further indicate that cognitive social capital has the strongest effect on organizational performance—cognitive social capital builds strong social ties among network actors in the GSB, and affects trust in and commitment to the organization. There is a positive correlation between cognitive social capital, ties to the organizational network, and trust and commitment to the organization. Specifically, the stronger the cognitive social capital, the stronger are the ties to the organizational network, and the higher are the trust and commitment to the organization. Cognitive social capital increases knowledge sharing, which can increase employees' competence in improving performance; and it is noteworthy that cognitive social capital may be an organizational resource that can also facilitate employees' capabilities within the banking service system.

The statistical research results show the linkage of three dimensions of social capital. Scholars and practitioners in the banking industry have not adopted an integrative model that explores the effectiveness of organizational performance from a holistic point of view, and few studies have investigated the linkages of the three dimensions of social capital or the effects of social capital on knowledge sharing. It is a challenge for organizational study to examine the linkage of the three dimensions of social capital in terms of the enhancement of organizational performance.

This study also investigated the individual's attitudes in each branch and combined these attitudes for group or unit analysis. As seen in the study, performance is a result of the behavior of the members in the network, and the social capital and knowledge sharing in each branch also derived from the individual as the total efforts to achieve organizational performance. A number of studies have treated social capital and knowledge sharing as an individual effort and not in terms of collective resources; they have failed to identify social capital and knowledge sharing as effects that derive from the action of individuals.

Again, it would be interesting for future research to investigate social capital and knowledge sharing from the point of view of collective resources.

The findings indicate that all of the dimensions of social capital are strongly associated with knowledge sharing and have a strong effect on organizational performance. It is remarkable that social capital and knowledge sharing can enhance organizational performance, and this framework is an under-researched subject in the area social capital and knowledge sharing vis-à-vis the support of organizational performance (Kim and Lee, 2013). For this reason, it is necessary to scrutinize this issue in a deeper fashion.

This research differs from previous studies in that it simultaneously investigates the attribution factors that exert an influence on organizational performance, and it helps to expand the studies that examine the latent variables in each factor constructed. The structural model that was developed in this study can be of benefit for academic resources in terms of testing or postulating relationships among categories of variables.

The research results also reinforce the concept of self-efficacy in the areas of cognitive development (Bandura, 1983, 1986, 1989, 2001). Cognitive processes take a variety of forms, and much of human behavior is regulated by the force of the thought that embodies perceived goals. Personal goal setting is influenced by a person's own appraisal of his or her capabilities, and a strong sense of self-efficacy can enhance one's personal accomplishments in a variety of ways. For example, people with a high sense of self-efficacy have a positive attitude that guides and supports them in achieving their desired performance level.

The findings also support the proposal of Tsai and Ghoshal (1998), which is that the three dimensions of social capital are linked. They also underline the findings of Uphoff and Wijayaratna (2000) and Krishna and Uphoff (2002), who have asserted that cognitive social capital predisposes people to collective action that is beneficial to all parties. Consequently, it is suggested here that cogni-

tive social capital has a strong influence on the structural and relational social capital within the organization.

The findings of this study additionally reveal that knowledge sharing in the organization is one of the key driving forces regarding the improvement of organizational performance, and that relational social capital has the strongest effect on knowledge sharing. This finding also supports the idea that the organization requires trust on the part of everyone in order to create an organizational environment that enhances knowledge sharing (Serrat, 2009).

This study has identified four key factors associated with organizational performance, and a model has been developed that is coherent enough to challenge the prevailing view and provide insights into an alternative basis for organizational design. The approach taken in the present study can be seen as a move away from command- and control-type organizations to those in which cooperation constitutes the social capital and knowledge management within the organization. The results suggest that this represents a major challenge for theory and for practice. The present author believes that other theories might also benefit from this model. In general, the theory of organizational behavior, including the resource-based view theories that include strong cognitive social strong ties, trust, and knowledge sharing in terms of process or outcome variables, can benefit from the clarification of their relationships.

Implications

With regard to academic and theoretical implications, this study makes the following three contributions: first, it formulates a valid factor structure for three dimensions of social capital and knowledge sharing; second, it validates the measurements of each factor in a bank setting; and third, it develops a structural model involving the three dimensions of social capital, knowledge sharing, and performance.

From a review of previous research literature, it appears that the aforementioned structural model has never been empirically tested in any kind of set-

ting. Therefore, based on organizational practice, the major contribution of this research was to explore a valid factor structure of social capital and knowledge sharing in the Thai context by utilization of a Structural Equation Model (SEM) with one simple data set, and to confirm this factor structure using CFA models while fulfilling statistical requirements.

Regarding the academic contributions, the research extended the validation of these measurement models by using the multitrait-multimethod matrix approach to examine validity and evaluate discriminant validity as well as to measure nomological validity before exploring the SEM.

The final academic contribution was to develop the linkage of the three dimensions of social capital and to test the hypothesis that cognitive social capital is the exogenous variable constituting structural social capital and relational social capital.

Regarding the practical implications, the research results may provide human resource management and leaders with insight into how cognitive social capital influences other factors. The three dimensions of social capital as well as knowledge sharing can be created via organizational interventions.

Limitations

In spite of the compelling results that were obtained herein, there are a few limitations that should be considered when generalizing the findings to other populations. Even though this research study encompassed convergent validity along with discriminant validity and nomological validity, it is expected that the present results will be generalizable across banks and other institutions. The issue of external validity may be of concern when considering the applicability of research conducted on a bureaucratic banking sample. Without comparative studies, a similar claim cannot be made for bank institutions. Thus, care should be taken to ensure that the results are not interpreted beyond the limits of this study. The present author's focus was on examining whether the model of relationships among variables was consistent with specific causal relationships.

Although the unit analysis was carried out at the branch level, subsequent research could build on exploratory study by using multi-level modeling. This could furnish valuable quantitative evidence on the relative importance of the individual versus organizational determinants of organizational outcomes. It would also be necessary to conduct more detailed investigation at different levels of the organizational hierarchy to fully explore how social capital translates into better performance.

Nonetheless, the data of this study were collected from one bureaucratic organization. Furthermore, the data were "convenience collected" since regional GSB managers were willing to help collect the data. The analysis has examined a particular group of bank staff during a specific time period. It would therefore be important to identify whether the relative importance of organizational social capital and structure may differ over time and time periods and in other organizational settings, as well as the leadership in the organization. For example, further research in other bank units or different banks could cast light on the comparative generalizability of the results presented here. The degree of social capital within the organization analyzed here may therefore be unrepresentative of that found in other organizations or institutions.

Another limitation of the study is that the cross-sectional analysis was of a static nature. However, longitudinal studies could serve to provide temporal separation of measurement whereby bank staff could provide information on the predictor and criteria variables at different points in time, and hence the data and information would be more useful than in a study like this one. As this study was limited to a focus on sample units in Thailand's Government Savings Bank, its findings are constrained by specificities that might detract from possible generalization of the findings.

The present findings are an initial step on the road to causality determination. This should be considered when generalizing the findings to other populations because this sample served as a convenience sample for developing a preliminary framework that can be used in understanding the importance of

competitive resources in an organization. The comparative models served as a preliminary source of understanding the potentiality of the Amos 21.0 program. Model invariance is considered to be the preferred mode of analysis for assessing whether measurement and structural models are equivalent across groups.

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