

## Social capital, knowledge sharing and firm performance

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### ABSTRACT

This article aims to construct and empirically verify a model that demonstrates the association between social capital dimensions, knowledge sharing, and firm performance. For data collection, a questionnaire was delivered to medium and small enterprises across Ho Chi Minh City using convenience sampling. To verify the proposed relationships, the data collected from 543 middle and top managers of medium and small enterprises were then examined using Structural Equation Modelling. Overall, explicit and tacit knowledge sharing are fostered as a result of all social capital dimensions. In a similar vein, both types of knowledge sharing influence firm performance. The study proposes a guide as to how firms should achieve better performance by promoting social capital and knowledge sharing.

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## 1. Introduction

Social capital (SC) has become a crucial catalyst for firms to acquire knowledge which in turn facilitates organizational performance (Yli-Renko, Autio, & Sapienza, 2001). Firms with rich SC may achieve sustainable competitive advantage. Despite the prevalence of the concept, previous research has largely overlooked the significance of how social capital facilitates firm performance in a systematic manner (Kim, Lee, Paek, & Lee, 2013; Maurer, Bartsch, & Ebers, 2011; Van Wijk, Jansen, & Lyles, 2008). A great number of studies have explored how social capital closely interacts with knowledge sharing (Gooderham, Minbaeva, & Pedersen, 2011; Inkpen & Tsang, 2005; Wei, Zheng, & Zhang, 2011). Other inquiries have investigated the effect of knowledge transfer on organizational performance (de Zubielqui, Lindsay, Lindsay, & Jones, 2019; Grossman, 2007; Nakamura & Nakamura, 2004; Palacios-Marqués, Peris-Ortiz, & Merigó, 2013). However, very few attempts have been made to investigate the linkages among these three factors, giving rise to the following question: how do different SC dimensions affect sharing of tacit and explicit knowledge, thus leading to better firm performance? To bridge this gap, our study seeks to investigate the systematic relationships between SC, knowledge sharing (KS), and firm performance, especially in the small and medium enterprise (SME) context in Vietnam. Under the survey method, the research incorporated questionnaire responses from 543 SME middle and top managers across Ho Chi Minh City of Vietnam, which were then analyzed using Structural Equation Modelling (SEM) to verify a series of proposed relationships. Following this introduction, the second section includes a theoretical background and hypotheses development. The third section details the methodology of collecting data and developing measurement scales. The fourth section analyses data and presents research results. Finally, discussion, implications, and limitations are reported in the fifth section.

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## 2. Theoretical background and hypotheses

### 2.1 SC and KS

SC including social relations and social resources is proposed to be beneficial for both individuals and collective groups (Ali-Hassan, 2009). These social resources, especially those that enhance firm competencies, are argued to be vital in a fast-paced, competitive, and highly unstable knowledge-based economy (Subramaniam & Youndt, 2005). As shown by scholars, SC provides firms with gateway to invaluable resources such as novel and refined knowledge (Uzzi, 1997) as well as innovation-supporting information that circulates through social network nodes (Burt, 1987). SC is seen as the resources associated with the social relationship between social actors to ensure gains for entities (Adler & Kwon, 2002). SC consists of different attributes or dimensions, including cognitive, structural and relational ones (Nahapiet & Ghoshal, 1998). The structural attribute comprises network and social relations whose nodes determine whom to reach and how to search for assistance (Granovetter, 1992). The cognitive attribute encompasses the values, goals and shared visions of members within an organization. The relational attribute represents the level of trust between individuals formed through interactions: trust, norms, responsibilities, and recognition increase actors' awareness of their mutual objectives. In knowledge management research, SC encompasses close relationship and social interaction which enable adaptation in actions and beliefs among members of organization (Kim et al., 2013; Bart Van den Hooff & Huysman, 2009). The role of ties, trust and mutual interest of cognitive, structural, and relational SC dimensions has long been established in literature (Hau, Kim, Lee, & Kim, 2013). SC significantly contributes to promote the process of sharing and constructing knowledge (Ganguly et al., 2019). SC helps correctly interpret other people's knowledge by giving people relevant knowledge and understanding, and an environment of respect and mutual trust (Akhavan & Mahdi Hosseini, 2016; Bart Van den Hooff & Huysman, 2009). This is considered a powerful resource for organization, as it promotes individual interactions which are necessary for "collective" actions (Leana III & Van Buren, 1999). Various authors have conducted research about the relationship between KS and SC (Chang & Chuang, 2011; Chow & Chan, 2008; Holste & Fields, 2010; Nguyen & Ha, 2020; Bart Van den Hooff & Huysman, 2009; Yang & Farn, 2009). Chang and Chuang (2011) contended that the three SC dimensions significantly contribute to both the quantity and quality of sharing behavior in an organizational environment. These three dimension of SC were also justified to be influential to KS (Kim et al., 2013; Nguyen & Ha, 2020).

#### *Structural SC and KS*

The structural dimension includes relationships, configuration, density, and network relevance. The concept of the structural SC is based on the notion of "strength of weak relations" proposed by Granovetter (1983). The notion of the "power of weak ties" holds that weak ties make sharing of knowledge efficient since they allow approach to new information by connecting unrelated individuals and groups in an organization. Theory of social network states that relationships in the network allow access to facilities and resources rooted in these social relations (Coleman, 1988; Nahapiet & Ghoshal, 1998; Putnam, 1995). Similarly, Inkpen and Tsang (2005) contended that knowledge is among the invaluable resource emerging from social relationship. The process of sharing and creating knowledge in an organization is associated with the characteristics of social network structure (Borgatti & Cross, 2003). Reagans and McEvily (2003) found that close relationships and coherent network structures of the structural SC dimension add up to effective sharing of knowledge among network actors. In the absence of social interactions, the exchange or transfer of tacit knowledge element is less likely to happen (Kogut & Zander, 1996; Szulanski, 1996). Healthy relationships promote tacit KS better than encrypted one (Hansen, 1999; Reagans & McEvily, 2003). An intense social network with close interaction and high frequency of interaction leads to increased tacit knowledge transfer (Krackhardt, 1992; Sorenson et al., 2006). In a similar vein, Zaqout and Abbas (2012) found that social network positively affects tacit and explicit KS. Therefore, we hypothesize as follows:

H1: SC (structural) positively affects sharing of explicit knowledge.

H2: SC (structural) positively affects sharing of tacit knowledge.

#### *Relational SC and KS*

Nahapiet & Ghoshal (1998) explained the relational dimension as a "binder of relationships" in the binding strings of actors whose main features are reliability and trust. In the context of social network, Coleman (1988) contended that the influence of SC associated with the close relationships significantly contributes to individual and collective actions. In addition, the key element of Adler & Kwon's (2000) definition of SC indicates *goodwill*, and it roots in the relationship content and structure. The main characteristic of goodwill is called belief by Adler & Kwon (2000). By empirical research, Tsai & Ghoshal (1998) observed that trust has a great influence on resource exchange and association. At the same time, credibility is also closely associated with the two cognitive and structural dimensions. Moreover, the relational dimension was theorized as a reliance on resources (Hughes, Morgan, Ireland, & Hughes, 2014). It was argued that resource-dependent perspectives allow central actors to choose behavior to establish relationships and this demonstrates that trust is an opportunity to create value. Hughes et al. (2014) also show that belief is a key component in these relationships and it prevents opportunistic behavior. They argue that increasing the reliance on resources with repetitive interactions will augment sharing of knowledge between the entities. It was also believed that beliefs serve as a basis for the cohesion of relations between parties, prevent opportunistic behaviors and contribute to free knowledge exchange (Inkpen & Tsang, 2005). In terms of creating and sharing tacit knowledge, trustworthy relationships play an important role (Collins & Hitt, 2006; Holste & Field, 2010; Nonaka & Von Krogh, 2009).

The relational SC expressed by credibility and trust is indispensable to the density of social network so that it becomes an effective premise of knowledge acquisition and assimilation (Ganguly et al., 2019). Sharing of knowledge is implicitly influenced by interpersonal trust (Epstein, 2000; Foos et al., 2006). It was also found that the cohesion of relations between parties strongly affects the sharing of tacit knowledge (Dhanaraj, Lyles, Steensma, & Tihanyi, 2004). From the aforementioned arguments, the authors propose two hypotheses as follows:

H3: SC (relational) positively affects sharing of explicit knowledge.

H4: SC (relational) positively affects sharing of tacit knowledge.

### Cognitive SC and KS

A common perception reference framework is needed in order to identify and exchange or share knowledge with network actors (I. Nonaka, 1994). Common language, objectives, and understanding impact the collection and evaluation of knowledge (Kogut & Zander, 1996). The common goals and vision serve as a means of linkage for internal network sharing and new knowledge integration (Inkpen & Tsang, 2005). The process of transferring and integrating knowledge was also influenced by a common culture of beliefs, norms and shared values. Additionally, it was suggested that cognitive dimension of SC significantly promotes sharing of knowledge, particularly complicated knowledge (Wasko & Faraj, 2005). Moreover, it was observed that tacit knowledge that individuals exchange via the social exchange structure needs to have common knowledge and experience (I. Nonaka, 1994). The effects of socialization in transforming tacit knowledge requires the common background, experience and mutual understanding of members sharing cognitive schemas and goals (Ikujiro Nonaka & Toyama, 2015). Based on these theories, the authors proposed the following hypotheses:

H5: SC (cognitive) positively affects sharing of explicit knowledge.

H6: SC (cognitive) positively affects sharing of tacit knowledge.

### 2.2 KS and firm performance

In light of knowledge-based view, Felin and Hesterly (2007) contended that knowledge which consists of tacit and explicit is the principal source for business firms to gain sustained competitive advantage. While organizations can retain knowledge for value creation, knowledge exchange or sharing enhances innovation and eventually increased performance (Gao, He, & Wang, 2009). The sharing, for example, can be documents and reports, training programs, development agenda which timely respond to customer needs, and ultimately contributes to firm performance (Wang & Wang, 2012). Ganguly et al. (2019) further emphasized that KS promotes competitive advantage based on cost reduction and improved performance. The learning process for organizational development only takes place if firms invest in explicit KS for knowledge use, reuse or renewal. Explicit KS facilitates new knowledge flows and drives future actions (Wang, Wang, & Liang, 2014). This enhances the diffusion of information across members of organizations, promotes the development of shared concepts and allows the synthetization and reconfiguration of existing capabilities. Thus, explicit KS in organizations has significant impacts on commitments, values, and culture of employees. These are essential for achieving high-level performance. It was further emphasized that the interaction of flow of information and codified knowledge in explicit KS processes would significantly add values to efficiency and effectiveness in organizations (Van den Hooff & De Ridder, 2004). Unlike explicit knowledge, tacit knowledge seems subconscious and more complicated to be communicated or coded (Polanyi, 1962). Nonaka and Takeuchi (1995) identified that tacit knowledge exists at a high personal level that people take these for granted. That is the reason why people have difficulties in comprehensively express tacit knowledge in form of words and numbers. Tacit knowledge can be captured in people's actions, which include various forms such as evaluations, attitudes, opinions, experiences and skills (Koskinen, Pihlanto, & Vanharanta, 2003). In a similar vein, tacit KS is of great interest to scholars and researchers. Several authors confirmed that tacit KS substantially improves organizational performance (Dhanaraj et al., 2004; Mohsen Allameh, Khazaei Pool, Jaber, & Mazloomi Soveini, 2014; Reyjav & Weisberg, 2009). Tacit KS serves as the ultimate goal of organizational learning which once achieved promises positive impact on firm operational performance (van Woerkom & Sanders, 2010). As tacit KS was confirmed to exert positive influence on firm performance (Harlow, 2008; H. Kim & Gong, 2009; Nguyen & Ha, 2020; Wang & Wang, 2012; Wang et al., 2014), the following hypotheses were formulated:

H7: Explicit KS positively influences firm financial performance.

H8: Explicit KS positively influences firm operational performance.

H9: Tacit KS positively influences firm financial performance.

H10: Tacit KS positively influences firm operational performance.

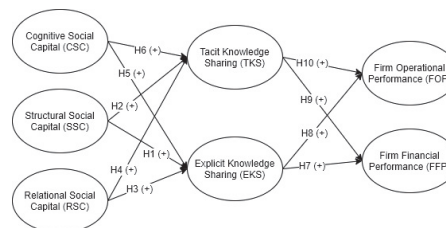


Fig. 1. Hypothesized model

### 3. Methodology

#### 3.1 Data collection and sample

The present research adopted the questionnaire-based survey to verify the hypotheses with items adapted from previous studies. The target respondents were middle and top managers of SMEs in Ho Chi Minh City, the largest and busiest city as well as the vital hub of Vietnam's economy. Prior to data collection, the questionnaire was piloted with a small, representative group of SME middle and top managers ( $n = 10$ ) using face-to-face interview. The objective of this stage was to assess whether any items were too difficult to answer due to sentence length, wording, or special terminology (Colton & Covert, 2007), thus ensuring the construct validity of the questionnaire (Shadish, Cook, & Campbell, 2002). From its originality in English, questionnaires were translated into Vietnamese for data collection (Brislin, 1970). Seven hundred questionnaires were distributed between November and December of 2019 to obtain primary data using convenience sampling method. Thanks to the pilot stage and clear instructions, the survey return rate reached 77.6%, yielding 543 valid responses. This high response rate reduced the possibility of response bias (Cheung, Gillen, Faucett, & Krause, 2006; Raheel & Naeem, 2013). All respondents are between 30 and 59 years old. Female accounts for 36% of the respondents, and male 64%.

#### 3.2 Measurements of the constructs

All indicators are measured on a five-point Likert scale. In this scale, "1" defines "strongly disagree" and "5" defines "strongly agree". All seven construct measurement scales (Table 1) with 34 variables were adapted from the literature.

**Table 1**  
Constructs and their measurement items

Construct	Code	Item	Standardized regression weights	SMC	AVE	CR
Cognitive SC (CSC) (Items adapted from Chow & Chang, 2008)	CSC1	My fellows and I are always in agreement about what matters at work. (d)			0.580	0.731
	CSC2	My fellows and I are keen to follow the common objectives and missions of the whole organization.	0.684***	0.442		
	CSC3	My fellows and I have the same vision and goals.	0.813***	0.718		
Relational SC (RSC) (Items adapted from Chow & Chang, 2008; Nahapiet & Ghosal, 1998)	RSC1	I feel like I am connected to my fellow members.	0.765***	0.584	0.607	0.861
	RSC2	I know my fellows try and help me to overcome difficulties all the time.	0.843***	0.712		
	RSC3	I will trust my fellows when I need help.	0.758***	0.575		
	RSC4	I can rely on my fellows when in need.	0.747***	0.558		
Structural SC (SSC) (Items adapted from Chow & Chang, 2008; Nahapiet & Ghosal, 1998)	SSC1	I have a really positive working relationship with my fellows in general.	0.728***	0.529	0.553	0.832
	SSC2	I am aware what skill/knowledge/ competence could be useful to which fellow member.	0.798***	0.639		
	SSC3	My fellow members know what skill/ knowledge/ competence I have.	0.711***	0.504		
	SSC4	I am aware which person within my organization possesses the skill/ competence/ knowledge that is useful for me.	0.735***	0.540		
Explicit KS (EKS) (Items adapted from Wang & Wang, 2012; Rey-chav & Weisberg, 2010)	EKS1	My network members usually share documents and reports with each other. (d)			0.533	0.774
	EKS2	My network members usually share documents and reports that they prepare by themselves with each other. (d)				
	EKS3	My network members frequently collect documents and reports from each other for their work. (d)				
	EKS4	My network members are frequently motivated by the transfer of knowledge.	0.708***	0.506		
	EKS5	My network members are usually offered various professional development and training activities/programs.	0.746***	0.556		
	EKS6	My network members are supported by information technology systems made for exchanging/sharing of knowledge.	0.736***	0.537		
Tacit KS (TKS) (Items adapted from Wang & Wang; Rey-chav & Weisberg, 2010)	TKS1	My department members often share or transfer experience-based knowledge.	0.719***	0.522	0.538	0.853
	TKS2	My department members often gather experience-based knowledge from others.	0.719***	0.588		
	TKS3	My department members often share or transfer procedural knowledge.	0.762***	0.505		
	TKS4	Members in my department often gather procedural knowledge from others.	0.790***	0.612		
	TKS5	Members in my department often share or transfer expertise-related knowledge. (d)				
	TKS6	Members in my department often gather expertise-related knowledge from others.	0.675***	0.461		
	TKS7	Members in my department will be happy to share lessons learned as necessary. (d)				
Firm operational performance (FOP) (Items adapted from Wang & Wang, 2012)	FOP1	Compared to primary rivals, our customer satisfaction is higher.	0.703***	0.494	0.541	0.779
	FOP2	Compared to primary rivals, our quality development is more effective.	0.756***	0.573		
	FOP3	Compared to primary rivals, our cost management is more effective.	0.746***	0.555		
	FOP4	Compared to primary rivals, our responsiveness is faster. (d)				
	FOP5	Compared to primary rivals, our productivity is higher. (d)				
	FOP6	Compared to primary rivals, our asset management is more effective. (d)				
Firm financial performance (FFP) (Items adapted from Wang & Wang, 2012)	FFP1	Compared to primary rivals, our return on investment is on average higher.	0.703***	0.494	0.540	0.824
	FFP2	Compared to primary rivals, our profit is on average higher.	0.670***	0.448		
	FFP3	Compared to primary rivals, our profit growth is on average more solid.	0.770***	0.594		
	FFP4	Compared to primary rivals, our return on sales is on average higher.	0.789***	0.623		

Note: \*\*\* indicates significant at  $p < 0.01$ ; (d) denotes items ignored during the validity and reliability test.

### 3.3 Data analysis

Anderson and Gerbing (1988) offered a common approach comprising of two steps for SEM analysis using IBM AMOS 24. First, it was to construct a measurement model in order to run a confirmatory factor analysis (CFA) procedure. During this procedure, relevant tests were conducted to evaluate how reliable and valid (convergent and discriminant) the measurement model is. Second, it was to assess a structural model by running a path analysis to verify a series of proposed hypotheses.

## 4. Findings

### 4.1 Measurement model evaluation

Of the 543 questionnaires completed, none of the items contained missing data. As the questionnaires were self-administered, "Harman's single-factor test" was applied to test "Common Method Variance" (CMV) (S.-J. Chang, Van Witteloostuijn, & Eden, 2010). Exploratory factor analysis on one fixed factor showed that this factor only accounted for 24.84% of variance of the 34 variables. As such, CMV seems not problematic in our factor analysis (P. M. Podsakoff, MacKenzie, Lee, & Podsakoff, 2003; Philip M. Podsakoff & Organ, 1986). As presented in Table 1, all standardized regression weights are statistically significant at 0.001 level (Anderson & Gerbing, 1988). The critical ratios (CRs) range between 0.731 (cognitive SC) and 0.861 (relational dimension) which are well above the threshold values (Fornell & Lacker, 1981). Additionally, all average variance extracted (AVEs) range between 0.533 (explicit KS) and 0.607 (relational dimension) which surpass the 0.50 threshold (Fornell & Lacker, 1981), suggesting the convergent criteria were met. None of the correlations between construct exceeded the square root of the AVE of each construct (see Table 2), suggesting satisfactory discriminant validity for all constructs (Fornell & Lacker, 1981). Model fit statistics showed that the model achieved an excellent fit by empirical data. Specifically, chi-square  $\chi^2$  was 519.928 (df = 262, p = 0.000), CMIN/df was 1.984, SRMR was 0.038, CFI was 0.964, and RMSEA was 0.038. Therefore, it can be concluded that the constructs in the hypothesized model are not only valid and reliable but also distinguished from each other (Hair, Black, Babin, & Anderson, 2014; Hu & Bentler, 1999).

**Table 2**

Results of discriminant validity

	Square root of AVE	TKS	FOP	EKS	RSC	FFP	SSC	CSC
TKS	0.733	1						
FOP	0.735	0.461	1					
EKS	0.730	0.454	0.329	1				
RSC	0.779	0.375	0.261	0.412	1			
FFP	0.735	0.264	0.321	0.138	0.306	1		
SSC	0.744	0.566	0.433	0.417	0.378	0.262	1	
CSC	0.762	0.511	0.448	0.535	0.474	0.321	0.616	1

### 4.2 Structural model evaluation

After CFA, the next step is to proceed with the structural model using maximum likelihood estimation. This step is to verify the series of hypotheses developed from the hypothesized model. Model fit indices showed that  $\chi^2$  was 519.928, p = 0.000 with 262 degrees of freedom. The  $\chi^2$ /df (1.984) lied between 1 and 3, implying parsimony of model. The RMSEA was 0.043, SRMR was 0.054, while CFI as 0.954. The findings suggested the model yields both incremental, and absolute goodness of fit as stated by Hair et al. (2014) and Hu & Bentler (1999). Except for hypothesis H7, all associations were statistically significant. Table 3 summarized the model results.

**Table 3**

Hypotheses validated results

Hypothesis	Proposed effects	Standardized regression weights	Results	Hypothesis	Proposed effects	Standardized regression weights	Results
H <sub>1</sub>	Positive	0.125***	Confirmed	H <sub>6</sub>	Positive	0.242***	Confirmed
H <sub>2</sub>	Positive	0.387***	Confirmed	H <sub>7</sub>	Positive	0.066 <sup>ns</sup>	Not confirmed
H <sub>3</sub>	Positive	0.191***	Confirmed	H <sub>8</sub>	Positive	0.178***	Confirmed
H <sub>4</sub>	Positive	0.129**	Confirmed	H <sub>9</sub>	Positive	0.271***	Confirmed
H <sub>5</sub>	Positive	0.387***	Confirmed	H <sub>10</sub>	Positive	0.416***	Confirmed

\*\*p<0.05; \*\*\*p<0.01; <sup>ns</sup>non-significant.

## 5. Discussion and implications

### 5.1 Discussion

Surprisingly, little attention has been devoted to systematically consider how KS may form a link between firm performance and SC both theoretically and empirically. To fill this research gap, our study proposed a model delineating how different dimensions of SC enable KS, which then influences firm performance. The empirical findings largely support our proposed model by demonstrating that KS mediates between all three dimensions of SC and firm performance. Simultaneously, our results underline the importance of KS as both a primary benefit of SC and a major driving force of firm performance.

### *The Mediating Role of KS*

Our results show that all three SC dimensions (namely, structural, relational and cognitive dimensions) significantly affect both tacit and explicit KS. While SC enhances both tacit and explicit KS, KS in turn is among the main mechanisms connecting SC to firm performance (see, for example, Adler & Kwon, 2002; Davenport & Prusak, 1998). Similar to previous research that has studied the mediating role of KS (Saha & Banerjee, 2015; Wu, 2008), our study provides supporting evidence as regards the essential steps to be taken for SC to affect performance of firm (Van Wijk et al., 2008). That is to say firm employees are encouraged to share the knowledge accumulated through their SC prior to any performance-related outcomes related to SC to be identified (Nguyen & Ha, 2020). In contrast to previous studies that have examined the influences of SC with respect to network ties, trust and shared vision on information sharing (Saha & Banerjee, 2015), or network ties, relationship quality and social interaction on acquisition of knowledge as in the work of Yli-Renko et al. (2001), our research has conceptualized SC with respect to cognitive, relational, and structural dimensions (Chow & Chan, 2008; Nahapiet & Ghoshal, 1998) on both tacit and explicit KS. Our work fills the research gap by constructing a model to illustrate the interactions between SC, KS and firm performance. In addition, it provides a more detailed conceptualization of KS as tacit and explicit one, and firm performance as financial and operational one. Thus, our research model can be utilized as a new theoretical one in future studies to evaluate SC, KS and firm performance. Our empirical results validated most hypotheses except one: explicit sharing of knowledge on financial performance of firm. In general, our research demonstrates a plausible explanation in which SC conduces to sharing of knowledge and performance of firm. The mediating role of KS was also substantiated. That means SC contributes to firm operational performance through both explicit and tacit KS and to firm financial performance through tacit KS.

### *5.2 Practical implications*

Our analysis provides some interesting understanding for managers dealing with SC. First, promoting sharing of knowledge (both tacit and explicit) is found beneficial for firms. Managers are encouraged to develop appropriate organizational culture and structures as well as a rewarding system to facilitate such sharing. Such development can be useful for employees to synthesize new knowledge and adopt best practices as well as new behaviors. Individuals and teams may be rewarded based on their improved performance resulting from sharing. Second, as KS mediates the effects of SC on firm performance, simply facilitating relevant activities in relation to SC may be insufficient. It is essential that firm managers are well aware of the influence of SC on KS and firm performance and invest in building mechanisms that allow KS to be properly channeled to attain the intended levels of performance.

### *5.3 Limitations and further study*

The study has inherent shortcomings which need attention for future research. First, although our results are in line with previous results, the use of survey design did not enable us to confirm the causal relationships proposed. Longitudinal designs might be used in future studies for inferring causality. Second, our study sampled SMEs in HCMC in general using convenience sampling. Future study might use random sampling method and focus on a specific industry to improve external validity (Shadish et al., 2002) and to confirm our understanding. Finally, our study uniquely contributes to a substantial body of research by investigating the linkages between SC, KS and firm performance. However, the contextual considerations, for example, corporate cultures, politics and knowledge management processes were not taken into account. Further work might benefit more by investigating the consequences of these contextual elements.

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