The Relation Between Social Capital And Innovation Capacity To Business Performance: A Case Study Of Small And Medium Enterprises In Mekong Delta, Viet Nam

Khanh Tiet Pham [1], Ha Hong Nguyen [2], Ky Nguyen [3]

[1] Associate Professor, Rector of Tra Vinh University, Vietnam.

[2] Corresponding Author. Associate Professor, Vice Dean, School of Economics and Law, Tra Vinh University, Vietnam.

[3] Ph.D. Student, Tra Vinh University, Vietnam; Lecturer, Faculty of Business Administration, Nguyen Tat Thanh University, Vietnam.

Abstract

The objective of this study was to examine the relationship between Social capital and innovation capacity through business performance in small and medium enterprises in the Mekong Delta, Vietnam. This study concentrates on exploring social capital on business performance in the context of of small and medium enterprises in the Mekong Delta, Vietnam. The study was conducted by surveying 350 managers who are members of the Board of Directors who directly run small and medium enterprises in the Mekong Delta, Vietnam collected from November 2021 to May 2022. The authors used confirmatory factor analysis (CFA) to determine the most common observed variables of each factor. Research results indicated that social capital impacted business performance. These findings kindly contribute to theoretical and practical bricks of building determinants of Social Capital and Business Performance in small and medium enterprises in the Mekong Delta, Vietnam. From the above results, the research has suggested managerial implications to further improve the investment in developing Social Capital and Business Performance to achieve high business performance in small and medium enterprises in the Mekong Delta, Vietnam in the future.

Keywords: Social capital, Innovation capacity, Business Performance, small and medium enterprises, Mekong Delta,…

1. Introduction

Since they are one of the key drivers to economic growth, small and medium-sized enterprises (SMEs) play a vital role in economic development (Saad et al., 2017). In intensely competitive contexts, innovation is critical not only for survival but also for capturing new possibilities, protecting knowledge assets, and gaining a competitive advantage in the market (Teece et al, 2000; Samson & Gloet, 2014). The important to create and launch innovative new products using cutting-edge technology before or shortly after foreign competitors is critical to gaining first-mover advantages, achieving product success, gaining market share, consistently increasing return on investment, and long-term survivability (Allocca and Kessler, 2006; Akar and Ertürk, 2010). To become creative, a business must improve its innovation capability (IC) (Saunila and Ukko, 2013). Within an organization, innovation is an evolutionary process that involves the acceptance of any new product, technique, policy, or service (Calantone et al., 2002; Saunila and Ukko, 2013). As a result, because it is a process that deploys resources with a new potential to produce value, innovation may be regarded an organizational competency (Yang et al., 2006).

Due to the obvious importance of innovation, academics have attempted to uncover distinct innovation driving forces (Becheikh et al., 2006; Kim et al., 2012). Quality and innovation development are fast

expanding activities for all firms, and they are deeply connected to achieving a competitive advantage (López-Mielgo et al. 2009; Kumar and Sharma, 2017; Psomas et al. 2018). Both should be interpreted as dynamic organizational capacities based on continuous learning and progress (López-Mielgo et al., 2009). Because of the importance of creativity, academics have attempted to uncover numerous innovation driving forces (Becheikh et al., 2006; Kim et al., 2012). Absolutely critical, innovation is required for high-quality performance. Because of its nature of inciting the success of innovation, this distinguishing attribute of market research and development competence assists organizations in gaining a competitive edge (Zehir et al., 2015). As a consequence, it is not unexpected that many forward-thinking manufacturing and service firms throughout the world, such as Vinfast and Viettel in Vietnam, place a premium on innovation capabilities.

Social capital (SC) has come to be recognized as a key component in explaining performance in a wide range of fields of interest to organizational scholars. Organizations can just get new expertise and enhance their performance by establishing business relationships with certain other entities (Maurer et al., 2011). Furthermore, a firm's network system, including with highly engaged, cohesion, and believe (Adler & Kwon, 2002), and a common vision, can assist firms in detecting innovation opportunities and trying to adapt to changes in the environment (Adler & Kwon, 2002). As a result, the following information will be used to formulate the research question for this study:

RQ1: Is there a positive effect of social capital practices on the development of innovation capability of the small and medium enterprises?

RQ2: To what extent innovation capability may mediate the influence of social capital and business performance of the small and medium enterprises?

2. Literature review

2.1. Resource-based theory (RBT) & social capital theory

RBT regards a business as a bundles of resources, including tangible and intangible assets, and capabilities, i.e., the firm's capacity to use its resources efficiently to achieve its goals (Barney & Clark, 2009). RBT places a premium on distinctive company characteristics, i.e., various businesses have diverse resources and skills (Eisenhardt & Martin, 2000; Leiblein, 2011). As a result, a company's business model should be centered on its distinct resources and competencies. If a business has the ability to adapt correctly to its external environment, the uniqueness of its resources and skills will begin to drive greater performance (Barney & Clark, 2009; Feng et al., 2017; Helfat & Martin, 2015). The firm's resources and competencies stand out for their worth, scarcity, uniqueness, and non-substitutability (Eisenhardt & Martin, 2000; Leiblein, 2011). In recent years, scholars have utilized RBT to define the link between business resources and capabilities and performance (Song et al., 2005).

The social capital theory is applicable to research in a variety operations management and supply chain management areas, including product innovation, quality management (Choo et al., 2007; Gutiérrez et al., 2009), human resource management), and innovation. With greater social capital, network members are more willing to act in ways that benefit other members in order to keep the relationship in their social network. The organizational research literature acknowledged social capital as a beneficial asset for gaining access to resources (Lawson et al., 2008), and verified the utility of social capital theory in defining inter-firm connections and activities (Nahapiet & Ghoshal, 1998; Matthews & Marzec, 2012). Social capital theory, in particular, provides a theoretical framework for investigating the link between network-based social exchange and knowledge sharing.

2.2. Social Capital (SC)

According to Nahapiet & Ghoshal (1998), social capital has three dimensions: structural capital, relational capital, and cognitive capital. The structural dimension of social capital is the entire pattern of connections among players in a social network: who you

reach and how you reach them. As the same, structural capital is often reflected through network relationships among network members, and it is based on the existence and configurations of connections within a social structure, such as social interaction among members (Lawson et al., 2008; Yim & Leem, 2013). Social interaction relates to the regularity with which network members communicate, the quality of their relationships, and the amount of time they spend together. The higher the structural feature of social capital, the bigger the social interaction (Coleman, 1988). Social interaction relates to the regularity with which network members communicate, the quality of their relationships, and the amount of time they spend together. The higher the structural feature of social capital, the bigger the social interaction (Coleman, 1988). Respectful and friendly relationships impact network members' conduct and enable them to get important assets from one another. Trust is an important aspect of relational capital and is widely used to quantify the relational component of social capital (Nahapiet and Ghoshal, 1998). These forms of relationships can even outperform hereditary familial attachment and can be used to gain a competitive advantage. The cognitive dimension of social capital is defined as "those resources that enable partners to exchange representations, interpretations, and systems of meaning" (Nahapiet and Ghoshal, 1998). Social capital is created when network members have a common vision and have comparable goals and objectives (Tsai and Ghoshal, 1998; Lawson et al., 2008). The "common aims and ambitions" that generate comparable views and mutual understanding among network members are referred to as the shared vision, and it is used to assess cognitive capital.

2.3. Innovation capability (IC)

Organizations with high levels of innovativeness demonstrate a readiness to offer new ideas and create systems for their implementation (Samson & Gloet, 2014). Innovation capability is defined as the ability to employ a set of interrelated procedures to develop and deploy new goods and improve the quality of existing ones (Wang, 2016). In other words, it is a concept of continual improvement that is critical to corporate progress (Subramaniam & Nilakanta, 1996). The capacity to conceive and implement new ideas leads to innovation, the spread of which benefits the organization (Tsai at al., 2001).

Furthermore, based on Samson's (1991) notion of innovation and Tsai at al. (2001) describe innovation capabilities in terms of product innovation, process innovation, and management innovation. This is the strategy we follow in our study. Much research has been done on the effect of absorptive capacity on invention (or innovation capability). Nonetheless, few, if any, empirical studies have been done to validate the influence of absorptive ability on product, process, and management innovation (Nguyen, K., & Nguyen, H. H., 2022).

2.4. The relationship between SC, IC and BP

According to SC literature, innovation is the outcome of linkages, interdependence, and information transfers amongst a range of components in various situations. Thus, the impact of SC on knowledge creation and innovation has received extensive attention in a number of academic papers (Nahapiet and Ghoshal, 1998). In this regard, several researches have proven the influence of internal (intra) SC on innovation. However, we can not discover solid empirical evidence addressing the nature of the relationship between this type of SC and innovation, or how this connection works. Additionally, SC allows people of an organization to gain new information, but its influence on organizational performance is dependent on how this knowledge is internalized and applied by the company. Different types of information (tacit, explicit) can also have varying effects on innovation performance. The degree to which a firm's operations can accomplish the goals of being right, fast, on time, productive, and adaptable is referred to as operational performance (Nguyen, K., & Nguyen, H. H., 2022; Slack at al., 2010).

We contend that social capital with suppliers directly improves operational

performance by increasing supply chain cooperation (Yeung et al., 2009). Social capital, in particular, helps to perform to comply with agreements and eliminates the need for formal controls (Matthews & Marzec, 2012). It also enables identification with and internalization of a firm's aims and values, allowing suppliers to comprehend the firm's activities (Adler & Kwon, 2002). As a result, social capital enables a corporation and its suppliers to prevent misunderstanding of events, agree on expected consequences of collaboration, and ensure that suppliers meet their obligations and act predictably (Cousins et al., 2006; Krause et al., 2007). A supply chain may also foster a shared sense of what constitutes progress and how to achieve it (Krause et al., 2007). Social capital, as a relational lubricant for long-term cooperative connections, encourages mutually beneficial behavior and lowers supply chain defections such as free-riding, hold-ups, and leakages (Edelman et al., 2004), allowing a business to increase performance (Tsai and Ghoshal., 1998). Furthermore, researchers have discovered that social capital may increase cost, quality, service, and flexibility performance (Krause et al., 2007; Villena, Revilla, & Choi., 2011). As a result, we suggest the hypothesis follows.

H1: In door manufacturing enterprises, there is a positive relationship between SC and IC.
H3: In door manufacturing enterprises, there is a positive relationship between SC and BP.

2.5. Relationship between IC and BP towards the mediation role of IC

As according Vicente et al. (2015), IC is a company's ability to create a new product through a mix of innovative behavior, strategic capabilities, and internal technology processes. Based on a meta-analysis, Saunila (2014) proposed a research framework for measuring IC that includes seven dimensions, including interactive leadership culture, ideation and organizational structures, work climate and well-being, know-how development, regeneration, external knowledge, and individual activity, all of which are used in the current study. IC is one of the most essential characteristics that enables SMEs to compete successfully in both domestic and international markets (Cakar & Ertürk, 2010). Organizations that invest in the development of their IC stand a higher chance of future success (Saunila & Ukko, 2013). Indeed, there is a wealth of data in academic literature suggesting a favorable association between a business's IC and firm success in the manufacturing industry (Cheng et al., 2010; De Clercq et al., 2011).

In contrast, other research find a negative relationship or no relationship at all (Capon et al., 1990; Chandler and Hanks, 1994; Subramanian & Nilakanta, 1996; Zhang, 2011). Nonetheless, a substantial body of practitioner-oriented literature says that innovation is the only way to survive and thrive in increasingly competitive marketplaces (Kim at al.,2012; Rosenbusch et al., 2011). Based on these claims, this study posits that SMEs developing IC may increase company performance, leading to the following hypothesis.

H2: In door manufacturing enterprises, there is a positive relationship between IC and BP.
H4: In door manufacturing enterprises, IC takes a mediating role towards SC and BP.

Conceptual framework
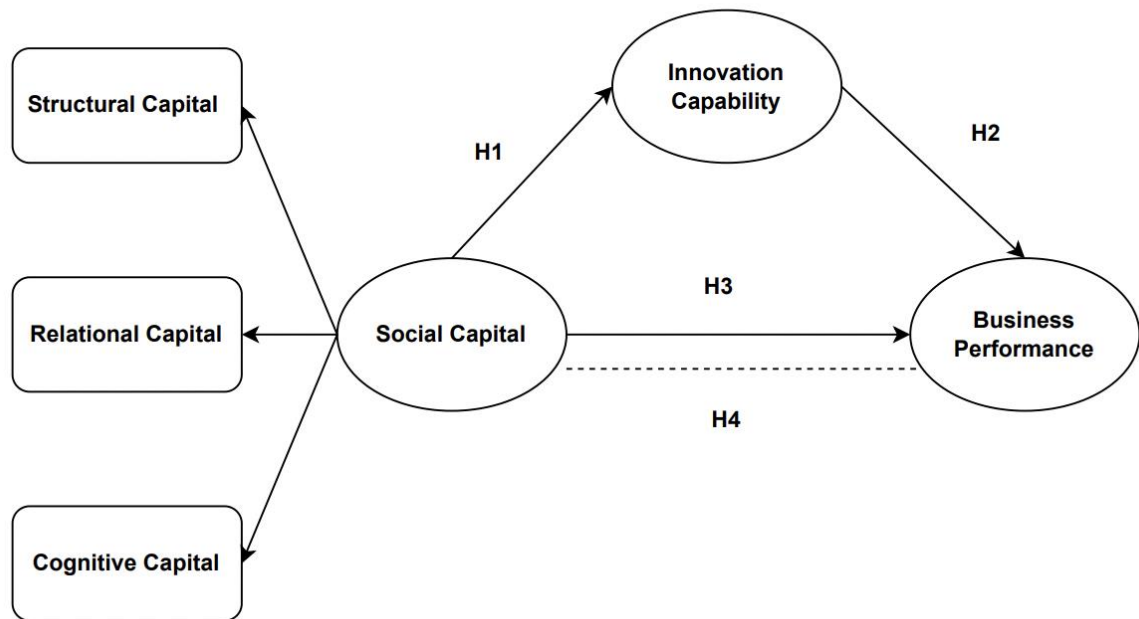
3. Methodology

3.1. Sample

To gather data for the purpose of verifying the measurements and examining the net impacts as well as the level of importance of one criterion – innovativeness competence – for company success. To achieve a high degree of dependability, the author employed approximately 380 survey questionnaires in Mekong Delta, Viet Nam in this study. 350 correct response sheets were recorded, yielding a survey success rate of 96.25 percent. Face-to-face interviews and a key informant (a senior management) technique were employed. Self-completion questionnaires are e-mailed/ Zalo to leaders/CEOs who directly operate Small and Medium enterprises in Mekong Delta. They have the authority to make direct business decisions. Semi-structured questionnaires were employed to provide respondents the freedom to react to the questions given. Respondents were given time to complete the questionnaire while maintaining their privacy. The questionnaire was administered between November 2021 to May 2022. To achieve a high degree of dependability, the author employed approximately 350 survey questionnaires in Mekong Delta, Viet Nam in this study.

3.2. Measures

Business performance, social capital, and innovativeness capability were the constructs studied. Five factors were utilized to measure company success based on the work of Tho & Trang (2011). Social capital was a second-order concept with three components: structural capital (four items), relational capital (four items), and cognitive capital (measured by three items) that were followed by Alavi & Leidner (2001). Finally, twenty-one elements were used to assess innovativeness capability (Lin et al., 2005). All items were scored on a five-point Likert scale, with 1 being strongly disagree and 5 being strongly agree. The origin of the questionnaire was referenced in research journals in English. Because the managers in this market do not speak English well, the questionnaire was translated into Vietnamese. A respondent who was fluent in both languages did the translation, and back translation was also undertaken to confirm meaning equivalency. It should also be mentioned that the items on the questionnaire were allocated at random in order to decrease the agreement tendency bias.

3.3. Data analysis

The concept measures utilized in this study were updated and evaluated with Vietnamese enterprises by Tho & Trang (2011). This study borrowed these measures and proved their reliability and validity using confirmatory factor analysis (CFA). The validation of the measures was done in two parts. The CFA model of marketing capability was tested first before being integrated with two first-order constructs (i.e., innovativeness capability and firm performance) to generate the final measurement model. The maximum likelihood estimation approach was employed since the screening procedure indicated that the data exhibited slight deviations from normality, but all univariate kurtosis and skewness were within the range of [1, 1]. (Muthen and Kaplan, 1985).

4. Results and Discussion

4.1. Construct validity of social capital
Exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) were used to assess construct validity (Hair et al., 2010, 2013). Throughout this study, the major goal of component analysis is to analyze how different items within each construct interact with one another and to develop scales (by merging several strongly linked items) for use in the future linkage analysis. The EFA was used to extract factor loadings using varimax rotation. Factor analysis explains the eigenvalues, percent of variance, and cumulative percent of variance. As indicated in Table 1, the loadings for social capital for all primary components are larger than 0.674, meeting the minimal loading criterion. Social capital is responsible for 82.897% of the overall variation. KMO index = $0.960 > 0.5$, and Sig (Bartlett test) = $0.00 < 0.05$. The mean of each component of social capital is more than 3, implying that these CEOs prefer to agree with this variable. Cronbach Alpha was also used to assess the consistency of the measurement scale. Cronbach Alpha for each component is at least 0.766, and respondents' ratings for each item are consistent.

Table 1: Mean, reliability test and factor analysis of social capital

Items	Structural capital	Relational capital	Cognitive capital
CS1	.864		
CS2	.842		
CS3	.825		
CS4	.831		
CR1		.722	
CR2		.869	
CR3		.883	
CR4		.860	
CC1			.674

CC2			.818
CC3			.931
Eigenvalue	8.929	4.433	1.628
% of variance	38.821	19.274	7.078
Cumulative %	38.821	58.094	65.127
Mean	3.04	3.34	3.53
Cronbach alpha	0.863	0.861	0.766

Due to convergent validity, each item loading must be more than 0.5 for satisfactory validity and greater than 0.7 for exact validity. Furthermore, each factor's Average Variance Extracted (AVE) index must be larger than 0.5 to assure reliability and validity. Due to discriminant validity, the square root of the AVE for a component must be larger than the shared variance among all conceptions in the conceptual framework. Table 2 displays the items imply for each construct with Cronbach's alpha, Composite Reliability (CR), and AVE actually scored and reports that all constructs are completely accurate for this study, with Cronbach Alpha values greater than 0.7, CR greater than 0.7 (Nunnally & Bernstein, 1994), and AVE significantly larger than 0.5. (Fornell & Bookstein, 1982). Furthermore, Table 2 displays the correlations among internal constructs to evaluate discriminant validity and asserts that all standardized factor loadings are greater than the recommended > 0.50 threshold (Gefen et al., 2000). Finally, convergent or discriminant invalidity issues are discovered. As a result, the data is particularly adequate for further investigation.

Table 2: Construct validity of social capital

	CR	AVE	MSV	MaxR(H)	CS	CR	CC
CS	0.843	0.643	0.207	0.855	**0.802**		
CR	0.934	0.825	0.207	0.934	0.455	**0.908**	
CC	0.871	0.628	0.002	0.875	-0.028	0.034	**0.832**

After determining the construct's validity, model fit was evaluated using five incremental fit indices: chi-square/degree of freedom (CMIN/DF), Goodness-of-Fit Index (GFI), Adjusted Goodness-of-Fit Index (AGFI), Comparative Fit Index (CFI), and Root Mean Square Error of Approximation (RMSA) (RMSEA). It is recommended that the following thresholds be met for a good model fit: CMIN/DF = 3, TLI = >.80, CFI = >.95, and RMSEA =.08. (Hair et al., 2010). Following that, the model achieved a good model fit with the following indices: CMIN/DF = 1.490, TLI = 0.990, CFI =.993, and RMSEA =.036; thus, strong support for social capital confirmatory factor analysis.

4.2. Quantitative findings

Table 3 displays the standard deviation, mean, and bivariate correlation, as well as Cronbach's and KMO values for the IC, SC, and business performance constructs. IC has a mean value of 3.41, while BP has a mean value of 3.32. This result implied that these CEOs have a tendency to agree with IC and BP.

The composite reliabilities (CR) varied from 0.843 to 0.981, exceeding the specified cut-off value of 0.7. For all constructs, the average variance extracted (AVE) was larger than 0.628, above the 0.5 minimum criteria for convergent validity. Cronbach's alpha varied from 0.784 to 0.914, suggesting high internal consistency and scale stability.

Table 3 demonstrates that discriminant validity was established by comparing the square root of AVE to the concept correlations. Because the correlations between the latent constructs' composite and all other constructs were less than 0.7, the diagonal insertions of the matrix (in bold), representing the square root of AVEs, were all greater than the corresponding inter-construct correlations, indicating discriminant validity and constructs that differed sufficiently from one another. Furthermore, discriminant validity was proved by evaluating the cross-loadings and establishing that all indicator loadings exceeded their corresponding cross-loadings.

The resulting measurement model fit well: CMIN/DF = 3.403, p 0.001, TLI = 0.882, CFI = 0.912, and RMSEA = 0.079, and was thus deemed suitable for further structural equation modeling.

Table 3: Construct validity

	Mean	Alpha	CR	AVE	MSV	MaxR(H)	BP	CS	CR	CC	IC
BP	3.32	0.978	0.978	0.897	0.486	0.979	**0.947**				
CS	3.04	0.855	0.926	0.807	0.486	0.927	0.697	**0.898**			
CR	3.34	0.817	0.871	0.628	0.091	0.875	0.302	0.043	**0.866**		
CC	3.53	0.837	0.875	0.701	0.208	0.888	0.456	0.317	0.044	**0.707**	
IC	3.41	0.981	0.981	0.797	0.246	0.982	0.496	0.42	0.167	0.334	**0.876**

Model testing

The next model fit of the structural equation reveals CMIN/DF=2.928, TLI = 0.90, CFI = .912, and RMSEA = .071. For hypothesis testing, path coefficients reveal that social capital (β = 0.133, p = .002) and innovation capability (β = .089, p = .080) are all significant predictors of business performance. Therefore, Hypotheses H2 and H3 are completely supported. This study also explored the significant relationship between innovation capability (β = 0.230, p = .000), and social capability, hence hypothesis 1 is supported. The mediating relationship between innovation capability, and social capital is found to be significant (β = 0.223, p = .000), thus supporting H4.

Bootstrap testing

To examine the validity of the mediating relationship between innovation capability and social capital (H4), a bootstrap analysis comparing the standardized direct effects with and without the mediator, as well as the standardized indirect effect of social capital on innovation capability, is required. AMOS was used to register a sample of 2000 bootstrap numbers with 95 percent bias-corrected confidence intervals. The standardized direct and indirect effects of social capital were examined, and the p-values were calculated using the bias-corrected percentile method's two-tailed significance. Bootstrap analysis reveals that social capital has a significant direct effect on performance without the mediation of innovation capability (β = 0.034, p = 0.001). When the mediating relationship between social capital and innovation capability is directly examined, significance is maintained (β = 0.015, p = 0.001). Furthermore, social capital has a significant indirect effect on business performance (β = 0.073, p = 0.00), implying that it has both direct and indirect effects on business performance. Hypothesis H4 is completely supported by the partial mediation effect of

innovation capability.

Table 4: Summary of the results for the conceptual framework.

Hypothesis	Effect	Coefficient	P-value	Conclusion
H1	SC→IC	0.230	0.000	Supported
H2	IC →BP	0.089	0.080	Supported
H3	SC → BP	0.133	0.000	Supported
H4	IC mediates SC & BP	0.223	0.000	Supported

4.3. Discussion

The resource-based theory and social capital theory were utilized as a theoretical foundation in this study to investigate the effect of social capital and innovation capability on performance practices in the Vietnam emerging market scenario, specifically in door manufacturing. A conceptual framework for the business performance of door manufacturing enterprises in the Vietnamese market setting was designed. A conceptual framework was developed that included social capital (i.e., structural capital, relational capital, and cognitive capital) and innovation capability and business performance of door manufacturing companies; this resulted in the formulation and subsequent testing of various hypotheses (Nguyen, K., & Nguyen, H. H., 2022) . The results support most of the hypotheses and are in line with previous formulation and subsequent testing of various hypotheses. The findings support the majority of the empirical findings connected to the resource-based paradigm. Social capital emerged as the most dominant hypothesis in this investigation, which is consistent with earlier empirical findings connected to the resource-based approach (Cheng et al., 2010). These findings established the relationship between manufacturing organizations' innovation capability and business success, as well as the function of innovation capability in mediating the relationship between social capital approach and business performance. These findings are consistent with earlier research (Sahoo et al., 2019). The second strongest hypothesis reveals a positive relationship between social capital and innovation aptitude, demonstrating that if manufacturing organizations have an efficient technique to manage their own information, their innovativity in production will improve.

5. Conclusion and recommendation

Firstly, in purchasing and production systems, technology and procedures that enable a business to establish social capital with suppliers, learn information from them, and integrate knowledge internally should be used. We recommend that enterprises should organize official and informal social activities, such as training programs, workshops, conferences, and seminars, to connect with suppliers and build similar understandings regarding concepts and norms.

Secondly, door manufacturing enterprises should also hold focus groups and brainstorming meetings with close suppliers, as well as survey them on a regular basis. Procedures in installation systems should be developed to analyze suppliers' values and aims, and a business should engage and form strategic connections with suppliers that share its culture and vision, have considered its interests, and see the firm as a team member.

Thirdly, develop your capacity to innovate. The following is an overview of the management consequences for owners of door manufacturing companies: To develop and

achieve IC - a problem-solving mindset that converts ideas and customer-centric concepts into a successful product/service, process, business model, or system - manufacturing firms must develop a quality-driven culture that can motivate innovation behavior, instill a concern for improvement, and improve internal coordination with employees. This research advises a small manufacturing business on how to leverage technology and its social capital base to increase innovation results and performance.

6. Limitations

This study contains serious flaws that must be addressed. This study focused on two critical contextual factors influencing firm performance (e.g., social capital and innovation potential), which may be considered a limitation. Future study can evaluate whether other factors influence diverse organizational success. Second, due to time constraints, each target firm is represented in this study by a single responder. When investigating organizational phenomena, researchers often seek response data from informants within firms. Efforts should be made in the future to poll a large number of informants from each responding organization. Finally, the focus of this study was entirely on the relationship between independent and dependent variables, as well as mediation tests. The interrelationships between the independent variables and potential moderating effects (for example, innovation capability may impact the effects of social capital on firm performance) were not investigated in this study.

References

1. Adler, P. S., & Kwon, S. (2002). Social Capital: Prospects for a New Concept. Academy of Management Review, 27(1), 17–40.

2. Allocca, M. A., & Kessler, E. H. (2006). Innovation speed in small and medium-sized enterprises. Creativity and Innovation Management, 15(3), 279–295. https://doi.org/10.1111/j.1467-8691.2006.00389.x

3. Becheikh, N., Landry, R., & Amara, N. (2006). Lessons from innovation empirical studies in the manufacturing sector: A systematic review of literature from 1993–2003. Technovation, 26(5–6), 644–664. https://doi.org/10.1016/j.technovation.2005.06.016

4. Barney, J. B., & Clark, D. N. (2009). Resource-based theory: Creating and sustaining competitive advantage. Oxford University Press.

5. Çakar, N. D., & Ertürk, A. (2010). Comparing innovation capability of small and medium-sized enterprises: Examining the effects of organizational culture and empowerment. Journal of Small Business Management, 48(3), 325–359. https://doi.org/10.1111/j.1540-627X.2010.00297.x

6. Calantone, R. J., Cavusgil, S. T., & Zhao, Y. (2002). Learning orientation, firm innovation capability, and firm performance. Industrial Marketing Management, 31(6), 515–524. https://doi.org/10.1016/S0019-8501(01)00203-6

7. Capon, N., Farley, J. U., & Hoenig, S. M. (1990). A meta-analysis of financial performance. Management Science, 36(10), 1143–1159.

https://doi.org/10.1287/mnsc.36.10.11 43

8. Chandler, G. N., & Hanks, S. H. (1994). Market attractiveness, resource-based capabilities, venture strategies, and venture performance. Journal of Business Venturing, 9(4), 331–349. https://doi.org/10.1016/0883-9026(94)90011-6

9. Cheng, C. F., Lai, M. K., & Wu, W. Y. (2010). Exploring the impact of innovation strategy on R&D employees' job satisfaction: A mathematical model and empirical research. Technovation, 30(7–8), 459–470. https://doi.org/10.1016/j.technovation.2010.03.006

10. Choo, A. S., Linderman, K.W., & Schroeder, R. G. (2007). Method and context perspectives on learning and knowledge creation in quality management. Journal of Operations Management, 25(4), 918-931.

11. Coleman, J. S. (1988). Social capital in the creation of human capital. American Journal of Sociology, 94, 95-120.

12. Cousins, P. D., Handfield, R. B., Lawson, B., & K. J. Petersen, K. J. (2006). Creating Supply Chain Relational Capital: The Impact of Formal and Informal Socialization Processes. Journal of Operations Management, 24(6), 851–863.

13. De Clercq, D., Thongpapanl, N. T., & Dimov, D. (2011). A closer look at cross-functional collaboration and product innovativeness: Contingency effects of structural and relational context. Journal of Product Innovation Management, 28(5), 830. https://doi.org/10.1111/j.1540-5885.2011.00830.x

14. Eisenhardt, K. M., & Martin, J. A. (2000). Dynamic capabilities: What are they? Strategic Management Journal, 21(10–11), 1105–1121. https://doi.org/10.1002/1097-0266(200010/11)21:10/11<1105::AID-SMJ133>3.0.CO;2-E

15. Edelman, L. F., Bresnen, M., Newell, S., Scarbrough, H., & Swan, J. (2004). The Benefits and Pitfalls of Social Capital: Empirical Evidence from Two Organizations in the United Kingdom. British Journal of Management, 15(1), 59–69.

16. Feng, H., Morgan, N. A., & Rego, L. L. (2017). Firm capabilities and growth: The moderating role of market conditions. Journal of the Academy of Marketing Science, 45(1), 76–92. https://doi.org/10.1007/s11747-016-0472-y

17. Fornell, C., & Bookstein, F. L. (1982). Two structural equation models: LISREL and PLS applied to consumer exit-voice theory, Journal of Marketing Research, 19(4), 440-452.

18. Gefen, D., Straub, D. W., & Boudreau, M. C. (2000). Structural equation modeling and regression: guidelines for research practice, Communications of the Association for Information Systems, 4 (7), 1-70.

19. Gutiérrez, L. J., Lloréns-Montes, F. J., & Bustinza Sánchez, Ó. F. (2009). Six sigma: from a goal-theoretic perspective to shared-vision development. International Journal of Operations & Production Management, 29 (2), 151-169.

20. Helfat, C. E., & Martin, J. A. (2015). Dynamic managerial capabilities: Review and assessment of the managerial impact on strategic change. Journal of Management, 41(5), pp, 1312. https://doi.org/10.1177/0149206314561301

21. Hair, J., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2010). Multivariate Data Analysis, Pearson Prentice Hall, Upper Saddle

River, NJ.

22. Krause, D. R., Handfield, R. B., & B. B. Tyler, B. B. (2007). The Relationships between Supplier Development, Commitment, Social Capital Accumulation and Performance Improvement. Journal of Operations Management. 25(2), 528–545.

23. Kim, D. Y., Kumar, V., & Kumar, U. (2012). Relationship between quality management practices and innovation. Journal of Operations Management, 30(4), 295–315. https://doi.org/10.1016/j.jom.2012.02.003

24. Kumar, V., & Sharma, R. R. K. (2017). Relating management problem-solving styles of leaders to TQM focus: An empirical study. TQM Journal, 29(2), 218–239. https://doi.org/10.1108/TQM-01-2016-0002

25. Lawson, B., Tyler, B. B., & Cousins, P. D. (2008). Antecedents and consequences of social capital on buyer performance improvement. Journal of Operations Management, 26(3), 446-460.

26. Lin, H. F., & Lee, G. G. (2005). Impact of organizational learning and knowledge management factors on e-business adoption. Management Decision, 43(2), 171–188. https://doi.org/10.1108/00251740510581902

27. Leiblein, M. J. (2011). What do resource- and capability-based theories propose? Journal of Management, 37(4), 909–932. https://doi.org/10.1177/0149206311408321

28. López-Mielgo, N., Montes-Peón, J. M., & Vázquez-Ordás, C. J. (2009). Are quality and innovation management conflicting activities? Technovation, 29(8), 537–545.

https://doi.org/10.1016/j.technovation.2009.02.005

29. Maurer, I., Bartsch, V., & Ebers, M. (2011). The Value of Intra-organizational Social Capital: How it Fosters Knowledge Transfer, Innovation Performance, and Growth. Organization Studies, 32(2), 157-185.

30. Matthews, R. L. & Marzec P. E. (2012). Social capital, a theory for operations management: a systematic review of the evidence. International Journal of Production Research, 50(24), 7081-7099.

31. Muthen, B. & Kaplan, D. (1985). A comparison of some methodologies for the factor analysis of non-normal Likert variables. British Journal of Mathematical and Statistical Psychology, 38, 171-80.

32. Nahapiet, J., & Ghoshal, S. (1998). Social capital, intellectual capital, and the organizational Advantage. Academy of Management Review, 23(2), 242-266.

33. Nguyen, K., & Nguyen, H. H., (2022). The Impact of Knowledge Management on Business Performance: A Case Study of Door Manufacturers in Vietnam. The Journal of Asian Finance, Economics and Business, 9(6), 267-276. https://doi.org/10.13106/jafeb.2022.vol9.no6.0267.

34. Nunnally, J. C., & Bernstein, I. H. (1994). Psychometric Theory, McGraw-Hill, New York, NY.

35. Psomas, E., Kafetzopoulos, D., & Gotzamani, K. (2018). Determinants of company innovation and market performance. TQM Journal, 30(1), 54–73.

36. Rosenbusch, N., Brinckmann, J., & Bausch, A. (2011). Is Innovation always beneficial? A meta-analysis of the relationship between innovation and performance in SMEs. Journal of Business Venturing, 26(4), 441–457.

https://doi.org/10.1016/j.jbusvent.2009.12.002

37. Samson, D., & Gloet, M. (2014). Innovation capability in Australian manufacturing organizations: An exploratory study. International Journal of Production Research, 52(21), 6448–6466. https://doi.org/10.1080/00207543.2013.869368

38. Sahoo, S. (2019). Quality management, innovation capability and firm performance: Empirical insights from Indian manufacturing SMEs. TQM Journal, 31(6), 1003–1027. https://doi.org/10.1108/TQM-04-2019-0092

39. Saunila, M., & Ukko, J. (2013). Facilitating innovation capability through performance measurement: A study of Finnish SMEs. Management Research Review, 36(10), 991–1010. https://doi.org/10.1108/MRR-11-2011-0252

40. Slack, N., Chambers, S., & Johnson, R. (2010). Harlow: Pearson. Operations Management. 6th edition, 390-396

41. Song, M., Droge, C., Hanvanich, S., & Calantone, R. (2005). Marketing and technology resource complementarity: An analysis of their interaction effect in two environmental contexts. Strategic Management Journal, 26(3), 259–276. https://doi.org/10.1002/smj.450

42. Subramaniam, A., & Nilakanta, S. (1996). Organizational innovativeness: Exploring the relationship between organizational determinants of innovation, types of innovations, and measures of organizational performance. Omega, 24(6), 631–647. https://doi.org/10.1016/S0305-0483(96)00031-X

43. Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. Strategic Management Journal, 18(7), 509–533. https://doi.org/10.1002/(SICI)1097-0266(199708)18:7<509::AID-SMJ882>3.0.CO;2-Z

44. Tho, D. N., & Trang, T. M. N. (2011). The WTO, marketing, and innovativeness capabilities of Vietnamese firms. Management Research Review, 34 Issue 6, 712–726.

45. Tsai, C. T., Huang, K. L., & Kao, C. F. (2001). The relationships among organizational factors, the creativity of organizational members, and organizational innovation. Journal of Management, 18(4), 527–566.

46. Tsai, W., & Ghoshal, S. (1998). Social capital and value creation: the role of intrafirm networks. Academy of Management Journal, 41(4), 464-476.

47. Vicente, M., Abrantes, J. L., & Teixeira, M. S. (2015). Measuring innovation capability in exporting firms: The INNOVSCALE. International Marketing Review, 32(1), 29–51. https://doi.org/10.1108/IMR-09-2013-0208

48. Villena, V. H., Revilla, E., & Choi, T. Y. (2011). The Dark Side of Buyer–Supplier Relationships: A Social Capital Perspective. Journal of Operations Management, 29 (6), 561–576.

49. Yang, J., Rui, M., & Wang, J. (2006). Enhancing the firm's innovation capability through knowledge management: A study of high technology firms in China. International Journal of Technology Management, 36(4), 305–317. https://doi.org/10.1504/IJTM.2006.010269

50. Wang, Y. (2016). Investigating dynamic capabilities of family businesses in China: A social capital perspective. Journal of Small Business and Enterprise Development, 23(4),

1057–1080. https://doi.org/10.1108/JSBED-12-2015-0175

51. Yeung, J. H. Y., Selen, W., Zhang, M., & Huo, B. (2009). The Effects of Trust and Coercive Power on Supplier Integration. International Journal of Production Economics, 120 (1), 66–78.

52. Yim, B., & Leem, B. (2013). The effect of the supply chain social capital. Industrial Management & Data Systems, 113(3), 324-349.

53. Zehir, C., Köle, M., & Yıldız, H. (2015). The mediating role of innovation capability on market orientation and export performance: An implementation on SMEs in Turkey. Procedia – Social and Behavioral Sciences, 207, 700–708. https://doi.org/10.1016/j.sbspro.2015.10.141

54. Zhang, M. J. (2011). Firm-level performance impact of IS support for product innovation. European Journal of Innovation Management, 14(1), 118–132. https://doi.org/10.1108/14601061111104724.

Appendix

Appendix A. Measurement items and sources

Variable	Construct	Items	Sources
Social Capital	**Structural capital**	My company has frequent interactions with partners My company plays an important role in network My company has comprehensive R&D networks with collaborators, strategic alliances, and stakeholders My company's R&d networks help the overall operation	Chen et al. (2018)
	Relational Capital	has processes for codifying knowledge has processes for organizing knowledge has processes for assessing knowledge has processes for integrating different sources and types of knowledge	Chen et al. (2018)

Cognitive Capital	My company takes fair attitude to make collaboration My company and partners could keep promise and believe in one another My company has a good partnership with partners My partners increase our competitive advantages My company and partners provide complementary resources to upgrade each other's R&D capability	Chen et al. (2018)
Business Performance	During the last three years, we have achieved the desired profits During the last three years, we have achieved the desired growth rates During the last three years, we have achieved the desired market shares During the last three years, we have developed the desired markets During the last three years, we have developed the desired new products/service	Wu and Cavusgil (2006)
Innovation capabilities	Our firm has access to the latest technology Our firm has been successful incorporating latest technology in the manufacturing of our products Our firm has been consistently able to obtain finance for business operation We possess relevant knowledges and skills necessary to conduct business operation efficiently. Our firm constantly look out for potential threats and challenges for our business We consistently strive to adapt the changes occur in the business environment. Our customers show support if we try to make innovative products Our customers give constructive feedbacks on how to improve our products and processes. Our staffs have capability to think creatively/ innovatively. We have in the past, applied creative/ innovative thinking to come up with successful products. We have capability to think of creative/innovative solutions when confronted by problem, even if unusual Our workers are motivated and engaged enough at the workplace that they may be entrusted with the processes of the firm We believe that the delegation helps in increasing the innovation	Raghuvanshi et al (2019)