

Moderating Effect of Corporate Governance on the Relationship of Supply Chain Management Capabilities and Supply Chain Organizational Performance of the Pharmaceutical Industry of Thailand

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Abstract:

The objective of the study is to investigate the moderating effect of corporate governance in the relationship of supply chain management capabilities (SCMC) and supply chain organizational performance (SCOP) of the pharmaceutical industry of Thailand. To achieve data was collected from the 300 senior managers of pharmaceutical industry which yield a 70% response rate. For analyzing the results, Smart PLS software 3 was used by employing the structural equation modeling (SEM) technique. The direct effect findings of the study show that supply chain information technology capability (SCIN), supply chain relational capability (SCRC) and supply chain dynamic capabilities (SCDC) have a significant and positive association with the supply chain organizational performance (SCOP) of the pharmaceutical industry of Thailand. On the other hand, the indirect findings show that corporate governance (CG) is significantly moderates on the relationship of SCRC, SCDC and SCOP. Whereas, corporate governance is not significantly moderates in the relationship of SCIN and SCOP. These findings reveal that CG is considered to be a significant moderator because it has significant moderating effect in most of the exogenous variable and SCOP which shows a big contribution of the following study. These findings further could also be support to the managers of the organizations to know about the importance of the SCMC and CG for increasing the SCOP. The research limitations and future direction are also discussed at the end of the study.

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Background of the Study

The term supply chain management capability (SCMC) has appeared as one of the important

strategies necessary for operational success (Somjai & Jermstittiparsert, 2019; Ditkaew, Pitchayatheeranart, & Jermstittiparsert, 2020). It

also appeared as a worldwide strategy that connects all stakeholders, i.e. buyers, consumers and sellers into a chain type arrangement, through shared planning, partnership, and information sharing (Castorena, Enríquez, & Adame, 2014; Tracey, Lim, & Vonderembse, 2005). However, effectiveness of supply chain management (SCM) is based entirely on its ability to minimize cost, presenting innovation (Tracey et al., 2005), improving production flexibility (Naway & Rahmat, 2019), satisfying buyer; (Naway & Rahmat, 2019; Wang, Gunasekaran, Ngai, & Papadopoulos, 2016), and strengthening of relationships (Crainic & Laporte, 2016). Various researchers; (Erna, Surachman, Sunaryo, & Djajuli, 2019) have defined SCM as a network of organizations that connects every section of an organization, and at each step adds value to its strategic operations. SCM refers as an organized set of activities which starts from procurement, production and then ends to the customers (Crainic & Laporte, 2016). They also claimed that a successful supply chain, assist firms in taking knowledgeable decisions at each connection of this network.

Many preliminary authors Yun and Chuluunsukh (2018) have discussed SCMC as an operation of information flow within the organization. They also argued that systematic flow of information thus optimizes material flows and in turn minimizes cost that usually arises due to poor flow of information or information delay. A joint role is played by the increased involvement of information technology, in developing and advancing the processes of supply chain by regulating the flow of information. Whereas, the extended network of supply chain proceeds beyond individual operating firm towards inter-organization operations, including, customers, suppliers, service providers, trading partners,

manufacturers, transporters, and retailers.

The operational performance of SC can be defined as the result of efficient and effective flow of information and materials to and from different organizations, as services and processed products (Basheer, Siam, Awn, & Hassan, 2019). The SCC also significantly affect the international trade. Although, SCC is a concept, but it would be appropriate to consider it as a phenomenon, based on several subfactors and phenomena, such as agility, logistic, operation, lean, etc. During modern decades, SCM has appeared as an indispensable tool for attaining viable competitive advantages. Contribution of supply chain have been found in theory as well as in practice that has attracted practitioners and scholars to further observe it in detail. After seeking the significance of SCC for the SC organizational performance, the previous has major focus on the developed. Whereas, previous study has a little on the developing country especially on the Thailand pharmaceutical industry. In addition, the previous studies also have a more attention on direct of SCC on the SC organizational performance. However, as per the researcher's best knowledge, previous study has a little attention on the indirect moderating of corporate governance. Therefore, based on this gap, the aim of the study is to investigate the moderating effect of corporate governance in the relationship of SCMC and SC operational performance of the pharmaceutical industry of Thailand.

The pharmaceutical industry of Thailand is considered as a major contributor to Gross Domestic Product (Kerdpitak & Jermisittiparsert, 2020). The pharmaceutical industry of Thailand is delivering their products to Malaysia, China, Singapore, UK, and some other industrialized economies. The SC of pharmaceutical industry

of Thailand has gain greatest interest among other areas. The function of pharmaceutical industry of Thailand and SC operations are somehow complicated. Christopher (Agami, Saleh, & Rasmy, 2012), defined SC operational performance as an outcome of efficient, strategic, and systematic integration of standard business operations across and within the organization, that includes actions and functions related to transforming inputs into outputs. Within this research context, four constituents involving responsiveness of supply chain, reliability of SC, costs, and supply chain agility are combined to measure operational performance of supply chain, for the purpose of giving absolute performance measurement all through the research. From the variable of SC operational performance, asset management has excluded, as no emphasize is given over financial performance. As in defining the SC organizational performance model, asset management is considered more as a return to investment. This study defines supply chain reliability as the supply chains' quality in maintaining and performing absolute order fulfilment, that deliver needed requirements and products. In addition, responsiveness of SC capability referred as speed of supply chain in providing information, products and services to the supply chain members (Wu, Liao, Tseng, & Chiu, 2015). Moreover, supply chain relational capability is the ability of supply chain to readily adjust the operations and strategies in accordance with the changing market conditions. Furthermore, supply chain costs are the costs which is related to the operations of the supply chain.

The current study is divided into the following sections, literature review, research framework, research methodology, study analysis and their interpretation, and at last conclusion and limitation of the study are discussed.

Literature Review

Supply Chain Operational Performance

Performance of supply chain is generally determined by the supply chain responsiveness, reliability, asset management, cost, and flexibility (Dominguez, Cannella, & Framinan, 2014; Wu, Yenyurt, Kim, & Cavusgil, 2006). As the current study revolves around supply chain's operational performance, the aspects of flexibility, responsiveness, cost and reliability will be used as dimensions for measuring its performance. Although, in defining SCOR model, asset management is more about focusing on return on investment while operational performance is the concerned area in measuring non-financial performance. Consequently, asset management is then excluded from the variables of supply chain operational performance that are to be measured. Basically, the goal of a SC is to provide higher quality goods and services efficiently to customers with minimum cost, and at minimum time. Firms will face failure if they have less knowledge about the factors which ensure success in supply chain, these are of high quality i.e. reliability of SC; lower cost i.e. total costs of supply chain; quick response i.e. SC responsiveness; and flexibility i.e. agile nature of SC (Shee, Miah, Fairfield, & Pujawan, 2018).

Thus, the aim of SCM can also be reviewed in order to enhance operational and financial performance of all partners and for the global SC (Haseeb, Zandi, Hartani, Pahi, & Nadeem, 2019). According to Li (2013), performance measurement is highly essential for supply chains and firms for enhancing their performance. While, measurement using performance measurement systems (PMSs) are the tools for the purpose of performance assessment that are employed at the monitoring stage of SC performance (Hafeez, Basheer, Rafique, & Siddiqui, 2018). The term

performance measurement can generally be defined as “a process of quantifying the efficiency and effectiveness of actions”. Hafeez et al. (2018) further defined performance measurement system as a set of metrics that are used for quantifying efficiency as well as effectiveness of the actions. This system also provides solution for detecting any potential gaps and problems necessary for the improvement in supply chain. It also allows users to know the performance status of the supply chain involving its weaknesses, strengths, and level or status of current performance with the purpose of enabling companies to make fully informed decisions against possible threats and opportunities. Organizations can take informed decision and appropriate actions accordingly at the best possible time, for effective enhancement of their performance (Adebanjo, Teh, & Ahmed, 2018; Dubey, Gunasekaran, & Chakrabarty, 2015; Hong, Zhang, & Ding, 2018)

Supply Chain Capabilities and Supply Chain Operational Performance

SCM capabilities are refers with the network ability, to form, assimilate, and also reconfigure the internal along with the competencies which are external to address all the widely changing environment (Teece, 2007). In the same vein, Day (1994) further explained that there is an explicit link which is created between exceptional profitability and capabilities. In line with this, Dubey, Gunasekaran, and Childe (2018b) explains the capabilities into the three terms. Firstly, in the outside- process capabilities which provide help to the companies to compete through the predicting and active changes in the market by developing sound relationship with suppliers, customers, and consumers (Chiadamrong & Sophonsaritsook, 2015). Secondly, inside-out processes capabilities which consists of internal capabilities which enables to the firms in achievement of the opportunities in the contemporary competent environment (Chiadamrong & Sophonsaritsook, 2015). On the other hand, also provides help to facilitate the companies in providing information

in the proper manner which helps to brings value for the customers and convinces the capability of the organization in the long- run. Thirdly, capabilities which are called spanning process capabilities that are related with all the process which provides help to support the predicted needs that is being fulfilled through the business (Stewart, 1997). They can do so mainly by appropriately assimilating the “outside-in and inside-out capabilities.

According to RBV researchers, each firm is capable of diverse capabilities and resources which are found costly and somehow difficult to implement and imitate by the competitors (Ramayah & Omar, 2010). According to Dubey et al. (2018a), in present global platform of market, firms needs to have a competitive advantage as compared to its competitors, and for this purpose organizations must possess the ability to be highly responsive towards competition through focusing on four competitive features i.e. flexibility, quality, cost, and speed. Moreover, relational capability of supply chain is another critical factor in measuring operational performance of SC (Qrunfleh, 2010). In the meantime, factors like organizational cultural capability and IT capability are having equal importance (Qrunfleh, 2010). In the literature of SCM, it is found that several researchers proposed that improvement in customer relationship, supplier partnership, information sharing, and its quality have considerably improved the SC operational performance (Qrunfleh, 2010).

Optimized level of supply chain costs can be attained with higher and improved level of customer relationship, information sharing and supplier partnership, reliability of SC, flexibility and responsiveness in managing demand and supply uncertainties (Srinivasan, Mukherjee, & Gaur, 2011). In case of Tin companies, supplier partnership plays a critical role as it can provide quick responses in accordance with the changing market demand and conditions (Fynes, Voss, & de Búrca, 2005; Jimenez-Jimenez, Martínez-Costa, & Sanchez

Rodriguez, 2019). This evidence is further supported by (Ahmad, Kearney, & Liu, 2013). The basic advantage of supplier partnership is the fact that buyers can consistently assure quality products as well timely distribution from the suppliers (Qayyum & Manzoor, 2018). Such as the cases of Wal- Mart and Procter & Gamble, Wal-Mart is a capital and information rich retailer, while P&G is a capital and information rich manufacturer, both the companies have a win-win cooperation in terms of information sharing, getting mutual benefits and improved supply chain performance across their supply chains. Precisely, a healthy partnership towards suppliers have a positive impact on the operational performance of a supply chain (Attia & Essam Eldin, 2018; Lu & Ramamurthy, 2011). Contrarily, worst process and result is witnessed in case of less reliance on supplierpartnership.

H1: There is significant relationship between supply chain information technology and SCOP of the pharmaceutical industry of Thailand.

H3: There is significant relationship between supply chain relational capability and SCOP of the pharmaceutical industry of Thailand.

H4: There is significant relationship between supply chain dynamic capability and SCOP of the pharmaceutical industry of Thailand.

Corporate Governance, supply chain capabilities and supply chain operationalperformance

According to Bhagat and Bolton (2008) and Bhagat and Bolton (2019), a good corporate governance as a powerful corporate governance system, is a prerequisite to enhance investment from the potential investors mostly from the institutions. A level of firm to which it follows the corporate code of governance exhibits quality of its governance(Ciftci, Tatoglu, Wood, Demirbag, & Zaim, 2019). There exists a

difference between risk taking and risk bearing operations, due to which a conflict of interest arises among both the parties i.e. managers and owners (Reddy, Abidin, & You, 2015)named this conflict as agency conflict. The disseminated possession of corporation extends more benefits to the managers in acquiring wealth from the minority shareholders, making management more powerful and independent. The literature on corporate governance has suggested solution for this problem, i.e. applying a mechanism to practice external control like board of directors. Perera, Johnson, and Hewege (2018)further discussed that independence, board size, and competencies are the basic determining factors of agency conflict. Thus, from the literature it is evident, that a conflict of interest exists among managers and owners, however effective control mechanism is used by the board of directors for narrowing the existinggap(Reddy et al., 2015).

A stakeholder theory exists, other than the agency theory, which takes organization as an interconnected system that are generally known as their stakeholders (Reddy et al., 2015). Stakeholder theory states that, each involved stakeholder contributes in the success of an organization. Stakeholder theory takes organization as a multiple set of relations which goes beyond the agency theory of principal-agent relationship (Argandoña, 1998).The stakeholders of an organization include buyers, suppliers, employees, creditors, government and the community (Dalziel, 2003; Pillai & Al-Malkawi, 2018).According to stakeholder theory, success or failure of an organization is critical to the contribution of all the stakeholders, contrary to the agency theory which just confines to the subject of owners and managers (Argandoña, 1998).In Japan and Germany, a two-tier board is applicable, where composition of board is done following the aspects of stakeholder theory. in (Debnath, 2018; Yu & Lee, 2016). Senbet introduced the stakeholders'viewofcorporategovernance.Inhis study he further claimed that owners alone are

not responsible for bearing cost or enjoying profits from the supply chain, instead stakeholders also get influenced as well influences the managerial decisions of a supply chain. It is because they are sometimes either associated with the product or company, both emotionally and financially.

As agency theory assures the boards' monitoring role, on the other hand, it does not account for the boards' roles of advisory and resource provision and boards' ability of effective monitoring. Integration of resource dependence theory and agency theory was suggested by Dalziel (2003) that increase effectiveness of the board. During the examination of resource dependency and agency theory's complementary further suggested these two theories as pillars responsible for decisions regarding MNCs subsidiaries can be taken by the managers and can be clearly understood.

Board of directors in their role of resource dependence, serve in order to connect organization with the external factors that develop external dependencies and uncertainty (Argandoña, 1998). The boards' ability to fulfil this dual role highly depends on diversity, based on resource dependence theory (Dalziel, 2003). Board acts as a cohesive agent that combines the interest of stakeholders, shareholders and conveys it to the executive management. These are termed as boundary-spanners as mentioned by Marsigalia, Giovannini, and Palumbo (2019) these boundary-spanners helps in providing information to executives at required time. Board creates a linkage among firm and its external environment that further aids firm in minimizing uncertainty from the external environment.

Debnath (2018) further argued that the roles of advisory and monitoring by the board are basically operations of board capital in the form of reputation, network ties, experience, and expertise, since directors from outside the firm

are generally different from each other. (Mohan & Chandramohan, 2018) have investigated different effects of outside and inside directors, following the integration of resource independence and agency theory perspective. For this purpose, the variable of human capital over Research and Development was studied by collecting 221 samples from the US companies. The findings suggested that independence of director directly influences the extent to which directors utilize their capital i.e. human capital to affect spending on the R & D. Hafeez et al. (2018) further explained that directors of the board must possess certain skills and characteristics to be a part of the board, so they could add value to the organization. These value adding services are attracting resources towards firm using network relations from outside the firm, launching new suppliers and customers, developing political linkages, and delivering advisory services to the board executives using their skills of sound knowledge and experience, for improving value of the firm (Hillman & Dalziel, 2003), .

At the center of a sound supply chain governance approach, there exists a steering group, which generally mean a senior board team, whose task is to ensure existent success of a certain project or attainment of strategic goals and objectives. The role of this steering group is to help in decision making about the whole supply chains' strategic business units, Lines of Business (LOBs), or about geographic boundaries. However, it does not account for the individual logistic operations of company's portfolio involving: inbound transportation, procurement, warehousing, inventory control, distribution, and outbound freight, in order to bring required outcomes. Based on the previous discussion, it is hypothesis.

H4: Corporate governance significantly moderates in the relationship of Supply chain information technology and SCOP of the pharmaceutical industry of Thailand.

H5: Corporate governance significantly

moderates in the relationship of Supply chain relational capability and SCOP of the pharmaceutical industry of Thailand.

H6: Corporate governance significantly moderates in the relationship of Supply chain dynamic capability and SCOP of the pharmaceutical industry of Thailand.

Research Framework

Based in the previous discussion, the research framework of the study is formulated. Figure 1 depicts the theoretical framework of this study. The resource-based theory and agency theory are used to conceptualize the framework.

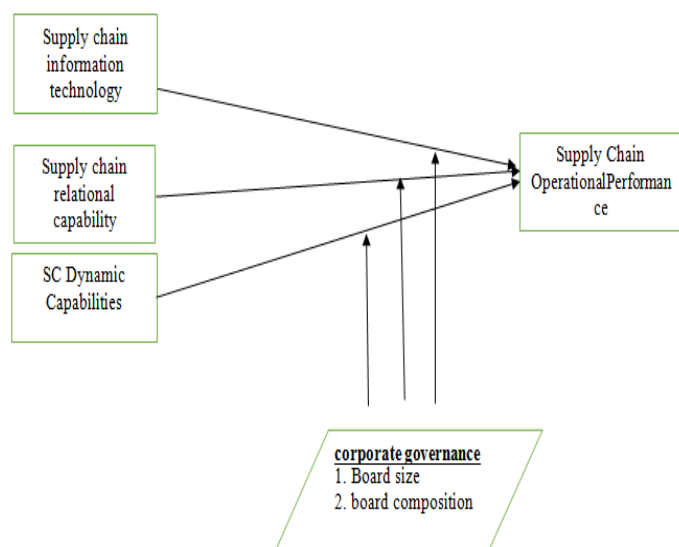


Figure:1 research framework of the study

Methodology

The results of quantitative approach method are based on the questionnaires, it is limited to numbers, statistics, the measurement of data and many forms of statistical analysis. Quantitative research design has been frame for this study, providing assistance to the researcher to thoroughly examine a large sample of respondents; opinions regarding the proposed phenomenon.

Moreover, the researcher can take a summarized perspective. In this regards, the researcher used questionnaire the

main tool in this research in order to understand the determinant factors that affect supply chain performance of pharmaceutical industry of Thailand. The questionnaire was designed according to the objectives, problem and hypotheses of the study to determine the relative importance of factors that may control the employees' performance in the manufacturing organizations of Indonesia. The data collected through the surveys by distributing among the 300 senior managers of the pharmaceutical industry of Thailand by using simple random sampling technique. The total 210 questionnaires were returned back from senior managers which yield 70 response rate. All of the questionnaires were loaded into the Microsoft Excel, the IBM SPSS, and Smart-PLS. The five point Likert scale is used to operationalize the variables and their sub constructs.

Research Analysis and Discussion

The SEM-PLS, which in modern times is one of the robust techniques to analyses the data on social issues is used as the statistical tool in current study. Recently many researchers such as Patidar and Din (2018) and Ahmed, Zin, and Majid (2016) have employed and argued that whenever we are dealing with some novelty in conceptual models or need an advance assessment of any existing phenomena, we prefer SEM-PLS over other technique such as multiple regression analysis. Patidar and Din (2018) and Ahmad, Bin Mohammad, and Nordin (2019) and Henseler, Ringle, and Sinkovics (2009) further argued that the PLS-SEM is a two-step equation, which is an advance form of multiple regression and accounts for two assessments namely the inner model assessment and the outer model assessment. The first step is estimation of the reliability and validity of the model. In Smart-PLS, after obtaining the results of reliability and validity for each construct, examining the structural model

results is necessary in order to test the hypothesis. There are five steps of procedures in examining the structural model results; (1) examine the structural model for collinearity issues; (2) the significance of path coefficients; (3) followed by examining the level of R² values; (4) assessment of f² effect size; and last but not least, (5) examining the predictive relevance (Q² and the q² effect size)(Hair, Hollingsworth, Randolph, & Chong, 2017a; Henseler et al., 2009). The reason why the SEM-PLS is preferred over the multiple regression is that the earlier handles the multiple equations simultaneously and can produce results with a simultaneous operation by producing a relationship with all direct and intervening phenomena. Reliability analysis is performed in order to find internal consistency of the items. Cronbach's alpha is the most widely used in order to test the reliability level. Although there are many findings that found that the value of composite reliability is always higher than Cronbach's alpha.

An indicator declared as valid and significant if it has a loading factor over than 0.5 on the targeted construct (Hair et al., 2017a). Thus, this study analyzed the output of the loading factors which gained thru Smart-PLS. Before testing the hypothesis, data reliability and validity was scrutinized. These steps were taken through PLS 3. It is revealed in Table 1 depicted that all the factor loadings are greater than 0.5, and also the average variance extracted (AVE) is also greater than 0.5 and in addition composite reliability (CR) is also higher than 0.7(Hair et al., 2017a). Therefore, it is concluded that present study fulfill the criteria of the convergent validity. A measure's content validity refers to the level to which the items produced for its measurement appropriately measures the concept intended to be measured. More importantly, the entire items developed

for a measurement of a construct have to load greater on their construct compared to other constructs and this is guaranteed through an extensive literature review. Through such a review, the items that have already been established in literature in terms of their validity are selected. On the basis of the results of the factor analysis, it was confirmed that in this study, the developed items correctly loaded to their respective constructs. According to Hair et al. (2017a) convergent validity can be examined through factor loadings, reliability analysis, and composite reliability. Furthermore, Average Variance Extracted (AVE) also examined as one of measure that is useful in establishing validity(Hair et al., 2017a). Since by analyzing the convergent validity, it can ensure that the variables correlate well with each other within their parent factor, either mediating or dependent variable. For the discriminant validity, HTMT, cross loadings and Fornier-Lacker have been discussed in the previous literature (Henseler, Ringle, & Sarstedt, 2015; Henseler et al., 2009). All the results for the measurement model has been depicted in the following Tables 1, 2 and 3.

Tabl:1Measurement model of the study

Measurement Scale	Items	Loadings	Cronbach's Alpha	AVE	CR
Board size	BS1	0.707	0.72	0.57	0.80
	BS3	0.725			
	BS4	0.845			
Board composition	BCO M1	0.791	0.73	0.52	0.76
	BCO M2	0.542			
	BCO M3	0.803			
	BCO M4	0.707			
	BCO M5	0.826			
	SCD C1	0.729			
SC Dynamic Capabilities	SCD C2	0.702	0.79	0.54	0.86
	SCD	0.792			

SC information technology capability	C3				
	SCD	0.759			
	C4				
	SCIN	0.758	0.75	0.5	0.83
	1			0	
SC relational capability	SCIN	0.748			
	2				
	SCIN	0.697			
	3				
	SCIN	0.747			
SC organizational performance	4				
	SSC	0.578			
	MP5				
	SCR	0.745	0.71	0.5	0.76
	C1			2	
SC organizational performance	SCR	0.723			
	C2				
	SCR	0.699			
	C3				
	SCR	0.673			
SC organizational performance	C4				
	SCO	0.780	0.80	0.6	0.79
	P1			2	
	SCO	0.747			
	P2				
SC organizational performance	SCO	0.856			
	P3				
	SCO	0.785			
	P4				
	SCO	0.901			
	P5				

Note: BS-board size, BCOM-board composition, SCDC- SC Dynamic Capabilities, SCIN- SC information technology capability, SCRC-SC relational capability, SCOP- SC organizational performance.

Table 2:Fornell and Larcker Criterion for Discriminant Validity

	BS	BCOM	SCDC	SCIN	SCRC	SCOP
BS	0.755					
BCOM	0.436	0.722				
SCDC	0.522	0.437	0.736			
SCIN	0.434	0.51	0.563	0.709		
SCRC	0.353	0.686	0.407	0.472	0.722	
SCOP	0.450	0.560	0.340	0.234	0.560	0.780

Note: BS-board size, BCOM-board composition, SCDC- SC Dynamic Capabilities, SCIN- SC information technology capability, SCRC-SC relational capability, SCOP- SC organizational performance.

Table 3:HTMT Criterion for Discriminant Validity

	BS	BCOM	SCDC	SCIN	SCRC	SCOP
BS						
BCOM	0.436					
SCDC	0.522	0.437				
SCIN	0.434	0.51	0.563			
SCRC	0.353	0.686	0.407	0.472		
SCOP	0.450	0.560	0.340	0.234	0.560	

Note: BS-board size, BCOM-board composition, SCDC- SC Dynamic Capabilities, SCIN- SC information technology capability, SCRC-SC relational capability, SCOP- SC organizational performance

Structural model

Direct Effect

The next steps in assessing the structural model are to examine the hypothesized relationships among constructs in the measurement model. The model explanatory power was resolute through inspecting how well the observed data fit the hypothesized relationship among the constructs. Following, Chin (1998), bootstrap the re-sampling approach has been hired to test all the significant of all each coefficient. As recommended by Hair et al. (2014), five thousand duplications through using the randomly selected subsamples which were performed to test all the hypothesized relationships. Table 4 depicts the beta coefficients and t-values for the first 3 direct hypotheses. As depicted, this study found support for eight out of 3 hypotheses tested.

Table 4:Estimated Path Coefficient- Direct Effect

Hypot hesis	Relatio nship	Be ta	Standard Deviation	T Statist ics	P Valu es	Resul ts
H ₁	SCIN->SCOP	0.240	0.072	3.336	0.001	Supp orted
H ₂	SCRC->SCOP	0.291	0.059	4.905	0.000	Supp orted
H ₃	SCDC->SCOP	0.132	0.059	2.248	0.025	Supp orted

Note:p<0.05, SCDC- SC Dynamic Capabilities, SCIN- SC information technology capability,

SCRC-SC relational capability, SCOP- SC organizational performance

Accordingly, SC information technology capability(SCIN) has shown significantly and positively direct effect on SC organizational performance (SCOP) ($\beta=0.24$; $t=3.336$, $p=0.001$) that supported to the hypothesis (one).In addition,the result also highlighted that SC relational capability (SCRC) was significantly related to SC organizational performance (SCOP) ($\beta=0.291$; $t=4.905$; $p=0.000$). The findings provide support for hypothesis H2. Furthermore,SC Dynamic Capabilities(SCDC) was also significantly and positively related to the SC organizational performance (SCOP) ($\beta=0.132$; $t=2.248$; $p<.025$). Therefore, hypothesis H₃was supported. All of these indicates that food industry of Indonesia played an important role to implement the SCM capabilities to enhance their SC organizational performance. The SCM capabilities play an important role to enhance the SC organizational performance. Thus, this shows that for the food industry to enhance the SC organizational performance, the SCM capabilities are considered to be important predictor. All of the results are depicted in the following Table 4.

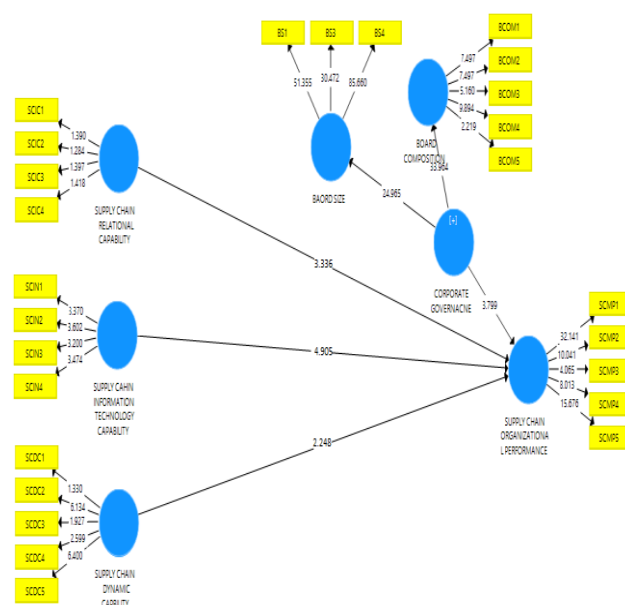


Figure 3 direct effect of exogenous variable on endogenous variable.

Indirect Moderating Effect

The research model hypothesized that information sharing moderate in the relationship of three antecedents of SCM capabilities on the business performance. The moderation test was employed by using the two stage calculation approach. This approach was employed as per the suggestion of the Hair, Hult, Ringle, and Sarstedt (2017b), who recommended that when the objective of study is whether is that moderating variable significantly moderates in the relationship of exogenous and endogenous variable. For this purpose, to test the moderation hypotheses, this study has used (Baron & Kenny, 1986) criteria to determine whether the moderation condition is exist.

The findings of the current study have shown that corporate governance (CG) is significantly moderates in the relationship of SC relational capability (SCRC)), SC Dynamic Capabilities (SCDC) and SC organizational performance (SCOP). These findings support to the hypothesis (five and six). This shows that CGis considered to be significant moderator in the relationship of SC relational capability (SCRC)), SC Dynamic Capabilities (SCDC) and SC organizational performance (SCOP) of food industry of Indonesia. On the other hand, it is found that corporate governance (CG) is not significantly

moderates in the relationship of SC information technology capability(SCIN) and SC organizational performance (SCOP). These findings do not support to the hypothesis (four). The contradiction in the hypothesis might due to the reason that food industry of Indonesia is not sharing the proper information for the information technology capability (SCIN) because it is intangible in nature. Therefore, without proper information this could not significantly effect on their relationship. Another, possible reason might be a due to the fact that it might be an overlapping of other variables. Therefore, a future research might be existed in the future in their relationship. All of these results are depicted in the following Table 5.

Table 6: Moderation tests using PLS

Hypot hesis	Relatio nship	Beta value	Stand ard Devia tion	T Statist ics	P Valu es	Resul ts
H ₄	SCIN *CG>S	0.068	0.043	1.609	0.108	Not suppo rted
H ₅	SCRC* CG - >SCOP	-0.122	0.051	2.387	0.017	Suppo rted
H ₆	SCDC* CG - >SCOP	0.48	0.074	6.47	0.000	Suppo rted

Note: p<0.05, CG-corporate governance, SCDC- SC Dynamic Capabilities, SCIN- SC information technology capability, SCRC-SC relational capability, SCOP- SC organizational performance.

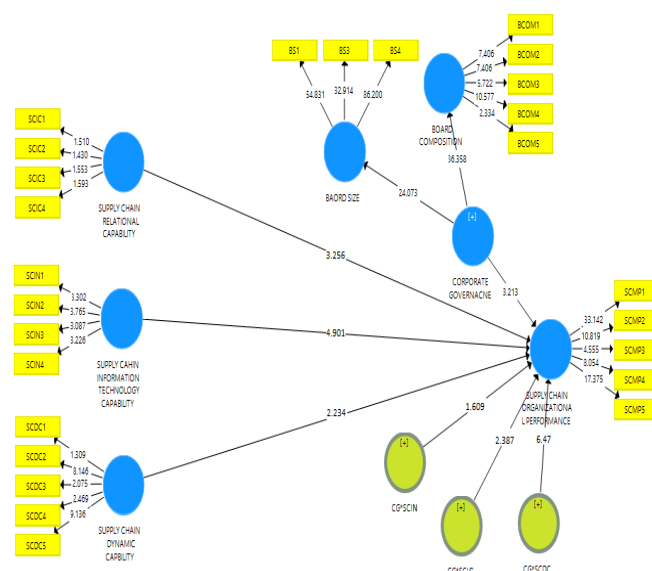


Figure 3: moderating effect of corporate governance in the relationship of exogenous and endogenous variable.

Conclusion

The objective of study was to investigate the moderating effect of corporate governance (CG) in the relationship of supply chain management capability (SCMC) and supply chain organizational performance (SCOP) of pharmaceutical industry of Thailand. To achieve this, for each of relationship was formulated. The direct effect findings of the study reveals that all the SCMC have a significant and positive association with the SCOP. On the other hand, indirect effect also shows that CG has a significant moderating effect on most the SCMC namely SCRC, SCDC and SCOP. On the other hand, CG is not significantly moderates in the relationship of SCIN and SCOP. These findings show that CG is not significant moderator for the SCIN and SCOP relationship. These findings show that there is of time to conduct a future to check this relationship again. Based on the findings of the study, this study could provide a significant implication for the managers of the pharmaceutical industry to know about the importance of CG for the SCMC to enhance their

SCOP. This study also has following limitation which could become a path of future research. Firstly, this study is cross sectional in nature which could not be employed for a longer period. Therefore, a future research could be employed that can be longitudinal in nature. Secondly, this study was on the pharmaceutical industry, therefore it generalizability for other industries is difficult, thus a future study could be employed on other to increase the generalizability of the findings

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