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The relationship between supply chain management activities and firm performance with the mediating and moderating effect

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ABSTRACT

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The performance plays a key role in the long-term survival of the organizations. If the performance of the organization increases, then the organization may lead in the global perspective. There are various factors that could lead to the performance. Among those, the supply chain management practices (SCMP) play an important role to increase the performance. The SCMP factors may also enhance the competitive advantage of the organizations. Furthermore, the manager support may provide insight to manage the SCM activities which could aid enhance firm performance (FP). Therefore, the purpose of this study is to investigate the relationship between the SCMP and FP with the moderating and mediating effect in the chemical industry of Thailand. The data was collected from the supply chain managers by using a simple random technique. The SEM direct effect shows that SCMA had a significant and positive connection with firm performance FP. In addition, SCMP does not seem to have any significant relationship with the competitive advantage. While competitive advantage has a positive and significant effect on FP. On the other hand, the indirect effect shows that SCMP and FP relationship were partially mediated from the competitive advantage. Moreover, the manager's support did not significantly moderate the SCMP and FP relationship. The current study added literature in the extant literature in the form of empirical findings which could help the researchers explore their studies in future. The study may also provide help to owners as well as to shareholders to know about the importance of the SCMP, competitive advantage and managers' support to increase their FP.

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1. Introduction

A good quality product at the lowest price and prompt response to customer requires a competitive landscape. The product delivery according to customer need and requirement is considered to be an important factor of any organization to compete, become successful and to increase their performance. These things lead to competition with whole supply chain management (SCM). In this global era to develop and compete supply chain (SC) surplus the practices of SCM have become an important directive (Anderson & Gerbing, 1988). In the early studies there were not any capable measuring tools to measure the performance of SCM practices, the recent empirical studies have more focus on measuring the effects of supply chain on measurement of operational performance (OP), like return on investment (ROI), profit on sale, the expansion of sale, market share growth and growth of return on investment (ROI) are used as market and financial measurement tools. They use these

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tools to examine the effects of SCM on OP. Due to different objectives and subjective operational performance, these results are different in past studies. According to Chau (1997), OP on the basis of SCM practices falls into these three categories. First is the performance in the shape of output which means that providing high level customer satisfaction and service. The second is resource performance which means the efficient use of resources. Third is flexibility and to what extent a firm is able to respond to market requirements and conditions. In the 1990s the competition intensified, the challenges were delivery of a product at lower cost to the right person at right time and at right place due to global market (Anderson & Gerbing 1988). It became necessary not only to improve efficiencies within the firm, but they had to make the whole SC competitive in a global village. In a global competitive race, it is very necessary to understand and practice the SCMP to survive in the international market and to enhance profits (Cachon & Fisher, 2000; Rajeev, Pati, Padhi, & Govindan, 2017).

Even though great research work has been done on the topic of SCM, the literature does not provide complete guidelines about SCMP (Handfield & Nichols Jr, 1999). In spite of this, greater attention has been devoted to SCMP. In literature a generally proper and accepted definition is not found (Hsu, Tan, Kannan, & Keong Leong, 2009; Sukati, Hamid, Baharun, & Yusoff, 2012). The conceptual mystification or the evolutionary type of SCM is the interdisciplinary derivation of SCM. Purchasing the raw material and supply management perception, logistic management are separate paths of SCM (Jharkharia & Shankar, 2006). This included transportation, inward outward and storage of goods and all inventory management functions inside organization or in the SC (Karimi & Rafiee, 2014; Li, Ragu-Nathan, Ragu-Nathan, & Rao, 2006). While the purchasing function includes all material functions and purchasing. These two functions integrate all activities of the supply chain into an incorporated system (Karimi & Rafiee, 2014; Li et al., 2006; Lippmann, 1999).

In the recent research works, there is no complete discussion about all aspects and practices of supply chain activities which reflects the evolutionary and complex nature of SCM that also seemed in research (Sucky, 2009). In many recent theoretical studies only upstream SCM is discussed or only its specific aspects or elements and in many others discussed only downstream SCM or its certain elements. Upstream SC including supplier involvement, alliance of suppliers with organization, supplier's selection (Kinyuira, 2014; Robb, Xie, & Arthanari, 2008; Vivares-Vergara, Sarache-Castro, & Naranjo-Valencia, 2016), supplier performance (Salles, Vieira, Vaz, & Vanalle, 2010; Shafei & Zohdi, 2014), purchaser performance or response (Stock, Boyer, & Harmon, 2010), in suppliers' pressure or response, type of relationship with them and their reaction (Tan, 2002), buyer and supplier relationship and effects of alliance on firm. Activities downstream include manufacturer and retailer relationship (Tyteca et al., 2002). Both upstream and downstream aspects are discussed in a few studies. Moreover, the previous studies had a major focus on the direct effect relationship but there were little attention on the indirect effect relationship. Also, previous studies had a major focus on the other developed countries but had a little attention on the developing economies especially on the textile industry of Thailand. In this regard, the study purpose is to investigate the relationship between the supply chain management activities and firm performance along with moderating and mediating effects.

2. Literature Review

2.1 Supply chain management practices

SCM practices used to integrate all the processes to supply goods and services to add value for consumers and to manage its SC, effectively (Jermisittiparsert, Siriattakul, & Sangperm, 2019; Somjai, & Jermisittiparsert, 2019). The constant flow of processes, sharing through information technology and supplier partnership is the latest advancement of the SCM practices (Zhao & Lee, 2009). They are used in the list of SC practices such as quality of product, customer relationship and purchasing of product. They also focus on the main competencies; maintain the inventory levels and control of excessive inventory by postponing customization methods and the system of shared information in their organization in the list of SC practices (Zhao & Lee, 2009). Factor analysis is normally used to identify different facets of SCMP such as integration, management of customer's service, JIT ability, SC features, and geographical nearness (Srimai, Wright, & Radford, 2013). Some studies used long term relationships of suppliers and customers, association of suppliers, role of multi-functional teams and level of communication to evaluate the supplier and customer relationship (Tyteca et al., 2002). Some previous studies approved SC leadership, process integration, collaboration, appraisals and award distribution, decided goals and missions and risk management in SCMP. In the previous literature SCMP has been discussed in different angles but the goal of all practices is finally to improve the firm performance. While analyzing the previous literature we have found five distinctive nature elements chosen to analyze the SCMP that are relationship of suppliers with customers, deliberated partnership of suppliers, postponement and quality and level of information sharing. By analyzing the previous literature all important characteristics of supply chain management like upstream and downstream of SCM, control of inventory level by using postponement technique, flow of information sharing like quality, accuracy and level of information sharing within and outside the organization and to across all SCM are covered by these five elements (Wagner, Grosse-Ruyken, & Erhun, 2012). These five elements cover the major portion of SCMP but here it is necessary to mention that these five elements could not be considered to portray a complete picture of SCMP. Other elements like JIT potential, role of multi-functional teams, geographical nearness, set goals, vision and missions, decided supply chain leadership are also discussed in literature and play an important role in SCMP. These elements are not discussed in this research work.

2.2 Strategic partnership

In the literature strategic partnership (SP) is described as the relationship between two business enterprises the suppliers and the firm that undertake the projects and make contracts to get mutual benefits and try to maintain long term relationship (Demeter, Boer, Peng, Schroeder, & Shah, 2011; Mason-Jones & Towill, 1999; Rajeev et al., 2017). SP is designed to properly use an individual's strategic and tactical abilities to get significant payback of organizational activities (Zhao & Lee, 2009). Flow of information, its sharing and its quality, market performance (Lambert & Enz, 2017), customer relationship, financial performance, competitive advantage, customer's feedback, cost and quality of product, purchasing of material and delivery of product and innovation are analyzed while making the partnership strategy (Jie et al., 2013). A good SP strategy includes the policy of creating long term relationship, mutual understanding of partners and to set goals for common interest and to solve the problem that could achieve the organizational goals effectively (Kronmeyer Filho, Fachinello, & Kliemann Neto, 2004; Kroes & Ghosh, 2010).

2.3 Customer relationship

It means that the relationship of a firm with its customers determines how an organization, or its employees treat them (Lambert & Enz, 2017). The main purpose of SCP is the management of customer relationships, developing customer satisfaction, dealing with their complaints, making strategies to build long term relationships and to make more loyal customers. Some researchers said that customer relationships (CR) is the most prominent element of SCMP because strong customer relationships give an edge to competitive advantage over competitors (Jharkharia & Shankar, 2006). The growth of strong customer relationships and mass customization is necessary for the survival of the company in this era (Tracey, Vonderembse, & Lim, 1999). To sustain loyalty for products, to get competitive edge, differentiate products from other brands and enhance value for customers CR as well as good relationship with suppliers is essential (Tracey et al., 1999; Jharkharia & Shankar, 2006).

2.4 Level and quality of information sharing

Level and quality of information sharing (LQIS) is considered as an important element in SCMP (Chau, 1997). It is divided into two aspects: the first is quality and the second is quantity of information. Both aspects are important in the flow of information. The right information and data should be sent to the right person at the right time to work effectively and more efficiently (Tan, 2002). SCM LQIS has already been considered an independent construct. The first aspect quantity (level of information) is the degree to which the proprietary and significant information is shared to the supply chain partners. Shared information can be of different nature related to general market customer information and other logistic activities (Slater & Narver, 2000). It can be strategic and tactical in nature. Up to date and accurate information at accurate time is necessary to make a flawless SC (Anderson & Gerbing, 1988; Karimi & Rafiee, 2014). Availability of information on time and sharing it timely to other parties can give competitive advantage (Hsu et al., 2009; Karimi & Rafiee, 2014). The exchange of relevant information on time can help in better understanding the needs of customers and quick response can be given to the market according to the demanding situation. Sharing of information is a building block of a strong SC relationship (Li et al., 2006). The efficient use of relevant information on right time within SC by all commercial and strategic elements is a main distinguishing factor to gain competitive advantage. The flow of information highly visible throughout the chain upstream and downstream is a key to effective SC. This includes the features of credibility, adequacy, accuracy and timeliness of information that are exchanged (Chau, 1997; Karimi & Rafiee, 2014). Sharing of information is significant, the information about what, when and to whom it is shared and how it is shared made a more important impact on SCM (Kronmeyer Filho et al., 2004; Demeter et al., 2011). In the literature many examples are discussed about deteriorated effects of incorrect and delayed information with the supply chain (Stock et al., 2010). Sometimes the opportunistic and differing interests of partners and informational dissymmetry affect the information (Kroes & Ghosh, 2010). It is recommended to give minimum distorted information to competitors as well as the customers, partners and even to employees as exposure and leak of information is alleged as loss of power (Salles et al., 2010). Information is a strategic asset of an organization so information before sharing must be ensured as it is a critical aspect of SCM (Hall, 2006). It must be shared within time and with minimum distortion.

2.5 Competitive advantage

Competitive advantage (CA) is a superior position to other similar nature businesses, a defensible and sound position over competitors (Cachon & Fisher, 2000; Kroes & Ghosh, 2010). The effective critical management decisions and different capabilities help to differentiate business from its competitors (Cachon & Fisher, 2000). In the previous literature flexibility, price and delivery and competitive capabilities are constantly discussed (Robb et al., 2008). Moreover, recent studies have discussed time-based competition. Competitive pricing, quality, production innovation, dependable delivery and premium pricing are described as competitive capability in different studies (Bukh, Johansen, & Mouritsen, 2002; Karimi & Rafiee, 2014; Kronmeyer Filho et al., 2004).

2.6 Organizational performance

Organizational performance (OP) is measured by its financial position and its achievement of goals on how well these have been achieved (Karimi & Rafiee, 2014; Chotiyaputta & Yoon, 2018; Maleewat & Banjongprasert, 2022). The SCM has two types of goals: long-term goals and short-term goals. To increase the market share and profit maximization for all members of the supply chain, long term objectives are considered while reducing cycle time and stock, increase productivity in minimum cost are the short-term goals of SCM (Lee & Whang, 2000). To measure the performance and behavior of the company over time financial matrices are considered as a measuring tool (Vivares-Vergara et al., 2016). The ultimate goal of the SCM should be to enhance the OP. In the prior research OP has been measured based on both market performance and financial performance including the growth of ROI, growth of market share, profit margin on sales, growth of sales, return on investment and competitive position of the company (Wagner et al., 2012).

2.7 Manager support

The managers are considered to be an important resource of the organization that could provide help to manage other resources of the organization (Power, 2002). This is a reason it is explained by Yammarino and Atwater (1997) that when the resources of the organization are being managed then the performance of the organization has also improved. The supply chain management activities are the important factors of the organizations which are being managed from managerial level to increase the performance of the organization (Flöthmann, Hoberg, & Wieland, 2018; Mangan & Christopher, 2005; Skjoett-Larsen, 1999). The above expressed discussion had become the foundation for the proposed hypothesis of study.

- H₁:** *The supply chain management practices have an association with the firm performance of Thailand chemical industry.*
H₂: *The supply chain management practices have an association with the competitive advantage of Thailand's chemical industry.*
H₃: *The competitive advantage has an association with the firm performance of Thailand's chemical industry.*
H₄: *The competitive advantage is significantly mediated on the relationship of supply chain management practices and firm performance of Thailand chemical industry.*
H₅: *The supply chain management practices and firm performance are significantly moderated by managers' support of Thailand's chemical industry.*

2.8 The framework

In the previous literature the direct relationship of supply chain management activities (SCMA), competitive advantage (CA) and the firm performance (FP) have been discussed. In this research, we are going to discuss the indirect relationship in which CA is a mediating variable while manager support is a moderating variable. The variables are predicted in the following Fig.1 below.

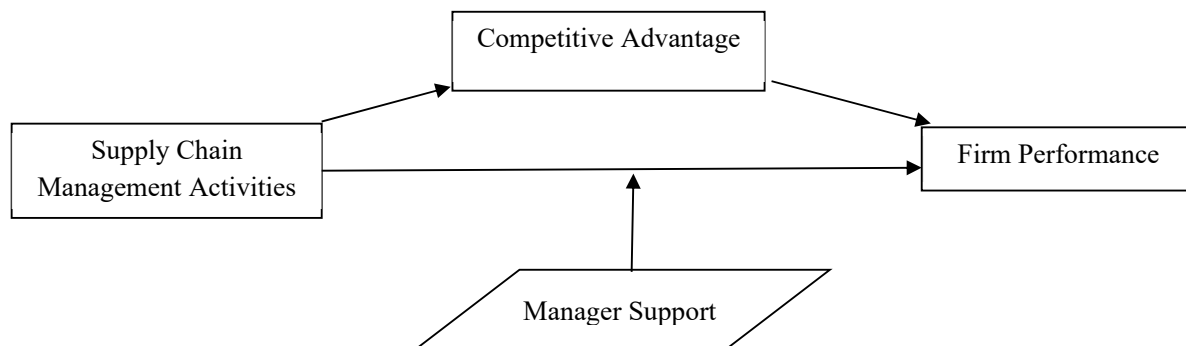


Fig. 1. Research Framework

3. Research Methodology

The quantitative research approach has been applied in the current study. Moreover, the study has adopted cross sectional research design (Jharkharia & Shankar, 2006). As the variables correlational are sought in this study, therefore the study is correlational. The researcher asked the questions from the respondents by using self-administered questionnaires. The respondents of the study were supply chain managers of the chemical industry. The supply chain managers were selected as a respondent since they know better about the SCM activities. The 609 questionnaires were distributed among the supply chain managers through using a simple random sampling technique. The researchers received 251 responses from the respondents that consist of 41.2 percent total response. During the survey, 29 employees were eliminated as respondents accomplished only a few questions and also failed to provide the demographic data. The questionnaire was adopted from the previous studies and the questionnaire was rated on a five-point Likert scale that ranged from 1 which shows strongly disagree and 5 for strongly agree.

3.1 Descriptive statistics

The descriptive analysis of the study has been conducted by using SPSS. The Table 1 shows the descriptive statistics of the research. The supply chain management activities mean value is 4.01 which explains the manager had a perception of medium level about the supply chain management activities. The competitive advantage mean score is 4.12 which shows that managers give a greater importance on competitive advantage. Moreover, manager support mean value is 3.21 which explains the manager had a perception of extraordinary level about the manager support. The firm performance mean score is 3.67 which shows the medium perception of the respondents about the firm performance.

Table 1
Descriptive statistics

Variable	Mean	SD
SCMP	4.01	0.81
CA	4.12	0.93
MS	3.21	0.81
FP	3.67	0.89

Note: SCMP-supply chain management activities, CA-competitive advantage, MS-manager support, FP-firm performance

3.2 Inferential Analysis

The inferential analysis of the study has been conducted by Smart PLS 3. The Partial Least Square (PLS)- Structural Equation Modeling (SEM) technique have been applied for conducting the inferential analysis. This section was divided into following two sections: assessment of measurement model and assessment of structural model. This model was recommended by some researchers (Henseler, Ringle, & Sinkovics, 2009). These two followings' models have been presented below.

4. Research Finding

4.1 Measurement Model

Before the assessment of the structural model, the assessment of the measurement model is necessary through checking the reliability and validity. The reliability and validity could be checked through the convergent and discriminant validity. The Cronbach alpha value could not decrease below 0.7, factor loadings could not decrease from 0.5, composite reliability could not decrease below 0.7 and lastly average variance extracted (AVE) could not decrease by 0.5. These suggested criteria have been explained in the following previous literature (Hair, Sarstedt, Hopkins, & G. Kuppelwieser, 2014; Hair Jr, Hult, Ringle, & Sarstedt, 2017). Table 2 shows that all the values fulfill the criteria of convergent validity.

Table 2
Measurement Model

Construct	Item	Loadings	Cronbach's Alpha	CR	AVE
Strategic partnership	SP1	0.921	0.761	0.799	0.504
	SP2	0.625			
	SP3	0.642			
	SP4	0.644			
Customer partnership	CP1	0.797	0.787	0.811	0.521
	CP2	0.913			
	CP3	0.919			
	CP4	0.839			
Level and quality of information sharing	LQIS1	0.815	0.787	0.855	0.545
	LQIS2	0.907			
	LQIS3	0.903			
	LQIS3	0.773			
Competitive advantage	CA1	0.816	0.913	0.929	0.766
	CA2	0.803			
	CA3	0.816			
	CA4	0.869			
	CA5	0.832			
	CA6	0.766			
Manager support	MS1	0.789	0.782	0.851	0.591
	MS2	0.683			
	MS3	0.782			
Firm performance	FP1	0.749	0.771	0.845	0.524
	FP2	0.787			
	FP3	0.733			
	FP4	0.788			
	FP5	0.675			
	FP7	0.744			
	FP9	0.845			
	FP10	0.688			

NOTE: SP-strategic partnership, CP-customer partnership, LQIS-Level and quality of information sharing, CA-competitive advantage, MS-manager support, FP-firm performance.

On the other hand, the discriminant validity could be checked through three criteria's, Fornell and Lacker, cross loadings and Heterotrait correlations (HTMT). The discriminant validity in the Fornell & Lacker could be assessed through the AVE square root that diagonal values should have greater correlations from other below values (J. F. Hair, Hult, Ringle, & Sarstedt, 2017; Henseler, Ringle, & Sarstedt, 2015). While, the recommended values for the HTMT in the discriminant value, the correlation among the construct should be less than 0.85 (J. F. Hair et al., 2017; Henseler et al., 2015). Table 3 and Table 4 present that all constructs had discriminant validity.

Table 3
Fornell and Lacker

	SP	CP	LQIS	CA	MS	FP
SP	0.768					
CP	0.037	0.724				
LQIS	0.100	0.171	0.744			
CA	0.068	0.239	0.574	0.761		
MS	0.083	0.025	0.127	0.076	0.741	
FP	0.064	0.025	0.04	0.017	0.036	0.874

NOTE: SP-strategic partnership, CP-customer partnership, LQIS-Level and quality of information sharing, CA-competitive advantage, MS-manager support, FP-firm performance.

Table 4
HTMT

	SP	CP	LQIS	CA	MS	FP
SP						
CP	0.237					
LQIS	0.130	0.171				
CA	0.069	0.139	0.274			
MS	0.073	0.125	0.127	0.176		
FP	0.262	0.325	0.104	0.217	0.037	

NOTE: SP-strategic partnership, CP-customer partnership, LQIS-Level and quality of information sharing, CA-competitive advantage, MS-manager support, FP-firm performance.

4.2 Structural Model

After the measurement model assessment, the next process is to test the structural model of the study to test the study hypotheses. For this purpose, the Bootstrap 1000 resampling technique has been applied in the SEM. The SEM direct effect has shown that supply chain management activities (SCMA) had a significant and a positive connection with firm performance (FP). In addition, SCMP did not have any significant relationship with the competitive advantage. While competitive advantage had a positive and significant effect on FP. The findings have shown that competitive advantage and SCMP are considered to be integral factors that could provide assistance to enhance the FP of the chemical industry in Thailand. On the other hand, the indirect effect has shown that SCMP and FP relationship was partially mediated from the competitive advantage. Therefore, it could be seen that competitive advantage is considered to be an important element that could provide help to the chemical industry to increase the effect of SCMP on FP. These findings are consistent with the previous studies where competitive advantages are significantly mediated among the exogenous and endogenous constructs (Kamukama, Ahiauzu, & Ntayi, 2011; Rua, França, & Ortiz, 2018). In other contexts, the managers support did not significantly moderate the SCMP and FP relationship which shows that this variable is not important for this relationship. A possible reason for this result is that respondents did not give more importance on manager support on the involvement of SCMP to increase FP. This could also have been seen from the mean score of managers which has lower values as compared to others. Another possible reason is that there could be an overlapping of other variables in the model. The above discussed values are predicted in the following Table 5.

Table 5
Hypothesis Testing results

Hypothesis	Beta	Standard deviation	T statistics	P values	Results
SCMP→FP	0.241	0.07	3.43	0.001	Accepted
SCMP→CA	0.051	0.087	0.59	0.555	Rejected
CA →FP	0.233	0.094	2.478	0.014	Accepted
SCMP→CA→FP	0.281	0.056	5.069	0.000	Accepted
CA×SCMP →FP	0.214	0.068	3.134	0.002	Accepted

Note: CA-competitive advantage, MS-manager support, FP-firm performance, SCMP-supply chain management practices

5. Conclusion

The performance played a key role in the long-term survival of the organizations. If the performance of the organization had to increase, then the organization could lead in the global perspective. There are various factors that could lead to the performance. Along with these, the supply chain management practices (SCMP) played an important role to increase their performance. These factors could also enhance the competitive advantage of the organization. Moreover, the manager support could provide help to manage the SCM activities that could provide assistance to enhance FP. Therefore, the study purpose is to investigate the relationship between the SCMP and FP with the moderating and mediating effect in the chemical industry of Thailand. For this objective, the data was collected from the supply chain managers by using a simple random technique. The SEM direct effect has shown that SCMA had a significant and positive connection with firm performance FP. In addition, SCMP did not have any significant relationship with the competitive advantage. While competitive advantage had a positive and significant effect on FP. The findings have shown that competitive advantage and SCMP are considered to be integral factors that could provide assistance to enhance the FP of the chemical industry in Thailand. On the other hand, the indirect effect has shown that SCMP and FP relationship was partially mediated from the competitive advantage. Therefore, it could be seen that competitive advantage is considered to be an important element that could provide help to the chemical industry to increase the effect of SCMP on FP. These findings are consistent with the previous studies where competitive advantages are significantly mediated among the exogenous and endogenous constructs (Kamukama et al., 2011; Rua et al., 2018).

Moreover, the manager's support did not significantly moderate on the SCMP and FP relationship which shows that this variable is not important for this relationship. The current study added literature in the extant literature in the form of empirical findings which could help the researchers explore their study in future. The study could also provide help to owners as well as to shareholders to know about the importance of the SCMP, competitive advantage and managers' support to increase their FP. Along with significant contributions, the current study still had some limitations. The study had a limitation of their findings on the Thailand chemical industry, therefore, the study had limited generalizability. A future study needs to be done on more sectors that can create more generalizability. On the other hand, the study is also limited on cross sectional research design where one-time data had to be collected, therefore, future research could be done on longitudinal research design that might create a better result.

References

- Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological bulletin*, 103(3), 411.
- Bukh, P. N., Johansen, M. R., & Mouritsen, J. (2002). Multiple integrated performance management systems: IC and BSC in a software company. *Singapore Management Review*, 24(3), 21-36.
- Cachon, G. P., & Fisher, M. (2000). Supply chain inventory management and the value of shared information. *Management science*, 46(8), 1032-1048.
- Chau, P. Y. (1997). Reexamining a model for evaluating information center success using a structural equation modeling approach. *Decision Sciences*, 28(2), 309-334.
- Chotiyaputta, V., & Yoon, Y. (2018). Women on the Board and Firm Performance of Thai Publicly Listed Companies in the SET100, 2008-2017. *PSAKU International Journal of Interdisciplinary Research*, 7(1), 149-160.
- Demeter, K., Boer, H., Peng, D. X., Schroeder, R. G., & Shah, R. (2011). Competitive priorities, plant improvement and innovation capabilities, and operational performance. *International Journal of Operations & Production Management*, 31(5).
- Flöthmann, C., Hoberg, K., & Wieland, A. (2018). Competency requirements of supply chain planners & analysts and personal preferences of hiring managers. *Supply Chain Management: An International Journal*, 23(6), 480-499.
- Hair, J., Sarstedt, M., Hopkins, L., & G. Kuppelwieser, V. (2014). Partial least squares structural equation modeling (PLS-SEM) An emerging tool in business research. *European Business Review*, 26(2), 106-121.
- Hair Jr, J. F., Hult, G. T. M., Ringle, C., & Sarstedt, M. (2017). *A primer on partial least squares structural equation modeling (PLS-SEM)*: Sage publications.
- Hall, J. (2006). Environmental supply chain innovation *Greening the supply chain* (pp. 233-249): Springer.
- Handfield, R., & Nichols Jr, E. (1999). Introduction to. *Supply Chain Management*, Prentice Hall, Englewood Cliffs, NJ.
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the academy of marketing science*, 43(1), 115-135.
- Henseler, J., Ringle, C. M., & Sinkovics, R. R. (2009). The use of partial least squares path modeling in international marketing *New challenges to international marketing* (pp. 277-319): Emerald Group Publishing Limited.
- Hsu, C.-C., Tan, K.-C., Kannan, V. R., & Keong Leong, G. (2009). Supply chain management practices as a mediator of the relationship between operations capability and firm performance. *International Journal of Production Research*, 47(3), 835-855.
- Jermstittiparsert, K., Siriattakul, P., & Sangperm, N. (2019). Predictors of Environmental Performance: Mediating Role of Green Supply Chain Management Practices. *International Journal of Supply Chain Management*, 8(3), 877-888.
- Jharkharia, S., & Shankar, R. (2006). Supply chain management: some sectoral dissimilarities in the Indian manufacturing industry. *Supply Chain Management: An International Journal*, 11(4).
- Jie, F., Parton, K. A., & Cox, R. J. (2013). Linking supply chain practices to competitive advantage. *British Food Journal*, 115(7).
- Kamukama, N., Ahiauzu, A., & Ntayi, J. M. (2011). Competitive advantage: mediator of intellectual capital and performance. *Journal of Intellectual Capital*, 12(1).
- Karimi, E., & Rafiee, M. (2014). Analyzing the impact of supply chain management practices on organizational performance through competitive priorities (case study: Iran pumps company). *International Journal of Academic Research in Accounting, Finance and Management Sciences*, 4(1), 1-15.
- Kinyuira, D. (2014). Effects of Porter's Generic competitive strategies on the performance of Savings and Credit Cooperatives (Saccos) in Murang'a County, Kenya. *Journal of Business and Management*, 16(6), 93-105.
- Kroes, J. R., & Ghosh, S. (2010). Outsourcing congruence with competitive priorities: Impact on supply chain and firm performance. *Journal of operations management*, 28(2), 124-143.
- Kronmeyer Filho, O., Fachinello, T., & Kliemann Neto, F. (2004). O mapeamento da cadeia eletrônica no RS: um estudo inicial. *ENCONTRO NACIONAL DE ENGENHARIA DE PRODUÇÃO (ENEGEP)*, XXIV, Florianópolis, 3648-3655.
- Lambert, D. M., & Enz, M. G. (2017). Issues in supply chain management: Progress and potential. *Industrial Marketing Management*, 62, 1-16.
- Lee, H. L., & Whang, S. (2000). Information sharing in a supply chain. *International Journal of Manufacturing Technology and Management*, 1(1), 79-93.

- Li, S., Ragu-Nathan, B., Ragu-Nathan, T., & Rao, S. S. (2006). The impact of supply chain management practices on competitive advantage and organizational performance. *Omega*, 34(2), 107-124.
- Lippmann, S. (1999). Supply chain environmental management: elements for success. *Corporate Environmental Strategy*, 6(2), 175-182.
- Maleewat, N., & Banjongprasert, J. (2022). The Impact of Small Size Firm and Differentiation Strategy in the Niche Strategic Implementation on the Organizational Performance. *Asian Administration and Management Review*, 5(1), 17-28.
- Mangan, J., & Christopher, M. (2005). Management development and the supply chain manager of the future. *The international journal of logistics management*, 16(2), 178-191.
- Mason-Jones, R., & Towill, D. R. (1999). Using the information decoupling point to improve supply chain performance. *The International Journal of Logistics Management*, 10(2), 13-26.
- Power, D. J. (2002). *Decision support systems: concepts and resources for managers*: Greenwood Publishing Group.
- Rajeev, A., Pati, R. K., Padhi, S. S., & Govindan, K. (2017). Evolution of sustainability in supply chain management: A literature review. *Journal of Cleaner Production*, 162, 299-314.
- Robb, D. J., Xie, B., & Arthanari, T. (2008). Supply chain and operations practice and performance in Chinese furniture manufacturing. *International Journal of Production Economics*, 112(2), 683-699.
- Rua, O., França, A., & Ortiz, R. F. (2018). Key drivers of SMEs export performance: the mediating effect of competitive advantage. *Journal of Knowledge Management*, 22(2), 257-279.
- Salles, J., Vieira, M., Vaz, R., & Vanalle, R. (2010). *Manufacturing strategies in the auto industry in Brazil and Spain*. Paper presented at the 2010 IEEE International Conference on Industrial Engineering and Engineering Management.
- Shafei, R., & Zohdi, M. (2014). Relational capabilities in market orientation to improvement of performance outcomes in SMEs. *International Journal of Business Performance Management*, 15(4), 295-315.
- Skjoett-Larsen, T. (1999). Supply chain management: a new challenge for researchers and managers in logistics. *The international journal of logistics management*, 10(2), 41-54.
- Slater, S. F., & Narver, J. C. (2000). The positive effect of a market orientation on business profitability: A balanced replication. *Journal of business research*, 48(1), 69-73.
- Somjai, S. & Jermstittiparsert, K. (2019). Role of Pressures and Green Supply Chain Management Practices in Enhancing the Operational Efficiency of Firms: Evidence from Thailand. *International Journal of Supply Chain Management*, 8(4), 437-445.
- Srimai, S., Wright, C. S., & Radford, J. (2013). A speculation of the presence of overlap and niches in organizational performance management systems. *International Journal of Productivity and Performance Management*, 62(4), 364-386.
- Stock, J. R., Boyer, S. L., & Harmon, T. (2010). Research opportunities in supply chain management. *Journal of the Academy of Marketing Science*, 38(1), 32-41.
- Sucky, E. (2009). The bullwhip effect in supply chains—An overestimated problem? *International Journal of Production Economics*, 118(1), 311-322.
- Sukati, I., Hamid, A. B., Baharun, R., & Yusoff, R. M. (2012). The study of supply chain management strategy and practices on supply chain performance. *Procedia-Social and Behavioral Sciences*, 40, 225-233.
- Tan, K. C. (2002). Supply chain management: practices, concerns, and performance issues. *Journal of Supply Chain Management*, 38(4), 42-53.
- Tracey, M., Vonderembse, M. A., & Lim, J.-S. (1999). Manufacturing technology and strategy formulation: keys to enhancing competitiveness and improving performance. *Journal of operations management*, 17(4), 411-428.
- Tyteca, D., Carlens, J., Berkhout, F., Hertin, J., Wehrmeyer, W., & Wagner, M. (2002). Corporate environmental performance evaluation: evidence from the MEPI project. *Business Strategy and the Environment*, 11(1), 1-13.
- Vivares-Vergara, J. A., Sarache-Castro, W. A., & Naranjo-Valencia, J. C. (2016). Impact of human resource management on performance in competitive priorities. *International Journal of Operations & Production Management*, 36(2), 114-134.
- Wagner, S. M., Grosse-Ruyken, P. T., & Erhun, F. (2012). The link between supply chain fit and financial performance of the firm. *Journal of Operations Management*, 30(4), 340-353.
- Yammarino, F. J., & Atwater, L. E. (1997). Do managers see themselves as other see them? Implications of self-other rating agreement for human resources management. *Organizational Dynamics*, 25(4), 35-44.
- Zhao, X., & Lee, T.-s. (2009). Developments and emerging research opportunities in operations strategy and supply chain management. *International Journal of Production Economics*, 120(1), 1-4.

