

# Is Supplier Social Sustainability Vital for Supplier's Financial and Social Performance? Analyzing Mediating Role of Firm Reputation in Thailand

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**Abstract- Purpose:** This study signifies the relationship between social sustainability of suppliers and its impact of supplier's financial and social performance. It also focuses on the supplier firm reputation and the role it plays between sustainability and performance. **Methodology:** Using survey method, a questionnaire has been developed by past studies and a group of experts and academics. In depth interviews were also conducted from managers related to social sustainability to develop constructs for the survey. The data was collected from the key managers of manufacturing firms in Thailand. After passing through reviewing process, the final sample size came out to be 304. The data collected was then analyzed by using various statistical tools including SPSS and AMOS. **Findings:** The results of this research reveal that there exist a significant positive association between supplier social sustainability and performance levels. The findings state that financial and social performance of suppliers have strong relationship with the social sustainability practices. It also signifies the mediation role of firm reputation among supplier sustainability and supplier performance levels. **Implications:** This study provides both theoretical and practical implications. It is considered as an extension in literature related to supplier social sustainability and its performance with the mediating roles of supplier firm reputation. It also allows managers to focus on their strategic decisions in order to develop socially sustainable supply chains to attain competitive edge. **Originality:** With the rapidly increasing trends of sustainability, limited research has been found on the significance level of this emerging issue. Therefore, this study provides awareness while emphasizing the importance of some major aspects of supplier social sustainability integrated into the supply chain management of manufacturing firms in Thailand.

**Keywords:** *Supplier social sustainability, supplier financial performance, supplier social performance, supplier firm reputation, supply chain management*

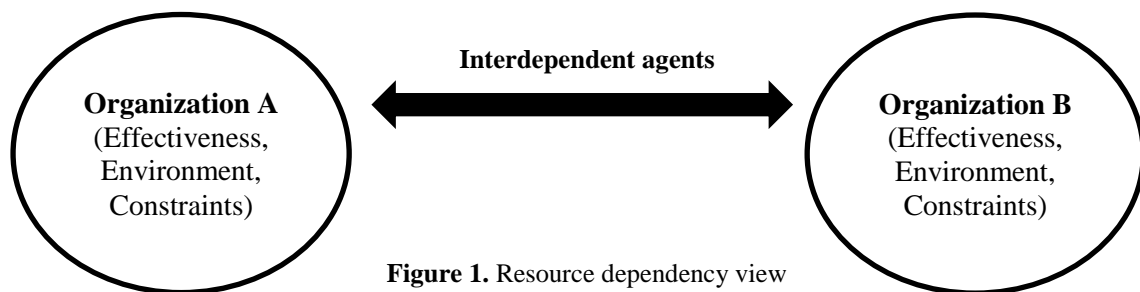
## 1. Introduction

In today's emerging economy and rapidly increasing trends of supply chain management practices in firms, sustainability has also played a fundamental role on societal and environmental issues because of its awareness in the firms today. [1,2] Moreover, with the increase in outsourcing practices and globalizations, supply chains have become more complex. With such complexities, there arises the need of some sustainable practices that allow firms to attain cost advantages. Sustainability has become a sizzling issue in supply chains because of its increasing impact on supplier firms' performance. Moreover, it also allow firms to spread out their supplier base in order to get advantages. Increase in performance level of supplier plays a significant role in the performance of firms having extended supply chains [1]. With the extension of supplier bases, there is always an increased risk to the focal company by their supplier's actions. These actions directly or indirectly affect the society and are of various types including both related to product and processes of a firm. However, with the increase in such social issues, there is a great need for supply chains to maintain their operations[2]. Few studies highlights the significance of supply chains and its connection with the upstream levels. According to them, upstream chains not only create an impact on firm strategic operations but also affect its supply chains practices. These studies however do not provide parameters to measure the sustainability levels particularly in upstream chain practices [3]. Based on literature related to social sustainability, product safety and labor conditions found a significant prominence. Studies depict that with the development of these processes in suppliers firm, there is a reduction in the level of accidents related to processes or working conditions. This will not only reduced the delivery cycles but also enhance the operational performance of supplier firm [4]. Firms not paying close attention to such damages

or accidents have to face a lot of troubles and difficulties in the form of penalties, product recalls, and loss of market share or backlash from consumers.

Studies indicate that those supplier firms investing more in sustainability efforts and corporate social responsibilities, are more prone to develop reputation and value globally [5]. Whereas in opposite, if the supplier firm produce negative results, the overall impact will be subject to parent firm as well as market [6]. Moreover, it is also explained by various researchers that supplier social sustainability not only enhances the performance but also reduces the costs associated by providing it competitive edge and a boost in market share [2]. With the increase in social performance of supplier firm, there is also a decrease in levels of accidents and an increase in

reputation as well [4]. When the working conditions get better, the employees started to motivate themselves [7]. With the adoption of social sustainability in supply chain practices, it not only reduces costs, but also enhances product quality and reputation [8]. This argue is in accordance with the resource based dependency view, which also explains that the ability of a firm to cope with its risks associated also provides benefits to all the partners associated with its supply chain by providing competitive edge to them. It also states that with the implementation and evaluation of integration efforts on sustainability in supply chain provide basic opportunities to the businesses in the form of essential resource capabilities that help organizations to attain and sustain competitive edge [9].



**Figure 1.** Resource dependency view

Numerous studies have been conducted on the social sustainability in supply chains and its related issues but most of them are in the context of European and North American states. These studies focused on the social issues including honesty, openness and integrity as ethical codes, environmental performances and diversity [10]. Usually these studies adopted qualitative methods to measure efforts on sustainability levels and social issues. A study conducted by Hall, et al. [11] on gas and oil supply chains in Brazil also adopted qualitative measures to focus on poverty, educational and health related efforts. All these researches adopted qualitative measures, however, few studies also used quantitative measures including the study of Zailani, et al. [12] in Malaysia and Mani, et al. [13] in India. These studies adopted survey methods to establish a link between sustainability and supply chain performance including environmental and social performance. Because of this, there exist a very limited research related to quantitative measures to find the influential impact of social sustainability and its related social indicators. Studies proposed by Torugsa, et al. [14] also depict that hardly any study is conducted on the financial and social performance indicators especially in context of supply chain. So, to measure financial and social performance indicators in terms of supplier sustainability, this study addresses this gap. The objective of this is study to analyze the impact of

supplier social sustainability on financial as well as social performance. It also signifies the mediation role of supplier firm reputation between supplier social sustainability and performance indicators (financial and social) as well.

The remaining study is ordered as follows; section 2 provides the critical evaluation of extensive literature on supplier's sustainability, reputation, financial and social performance, formation of theoretical framework and proposed hypotheses. Section 3 provide detail discussion on methodology adopted and research design. Section 4 explains the detailed analysis on the results generated using various tools. Finally, section 5 provide discussion and concludes the whole study by providing implications, limitations and future avenues as well.

## 2. Literature Review

### 2.1. Supplier social sustainability

The term sustainability in terms of supply chain practices means the flow of all the information related to the management of material, capital and cooperation among all the levels of supply chain while considering all the sustainable development dimensions derived from the requirements of stakeholders and customers. Moreover, it can be also stated as the extent in order to meet the needs of customers today without making compromises on the future needs of the upcoming generations

[15]. Other studies also proposed it as a source of meeting the needs of firm's stakeholders (direct and indirect) without having settlement of future stakeholders' needs [16]. Sustainability and corporate social responsibility (CSR) are the terms that are used interchangeably in literature. Social sustainability has also attained a significant importance in supply chain literature and is considered as an extension of CSR. It is associated with the behavior a firm has towards its society [17]. Few studies were conducted to identify social issues related to social sustainability. These studies focused on logistics and purchasing social responsibilities of firms and their impact on supply chain performance by keeping in consideration resource based view theory [18]. The study conducted by Hutchins and Sutherland [17] also explained that both CSR and social responsibility work in hand to develop firm's sustainability. But the confusion remains the same and the debate continues to identify that what factors are responsible to develop social sustainability in the supply chain levels [19]. So, social sustainability is defined as the ethical code of manner for the growth and survival rate of humans that are requires to be accomplished with practical collaboration [20]. However, it is also explained by few authors as the element having association with the social resources and their management involving skills of people, their abilities, social values and their relationships [21].

In term of operations in a firm, social sustainability is considered in terms of process or product aspect that focuses on the welfare, safety and wellness of people [22]. Few studies also focus on the social sustainability in terms of supply chain and developed various dimensions such as philanthropy, equity, safety, child labor, human rights and product responsibility. Moreover, it also stated that in supply chain practices, social sustainability is closely associated with the process and product responsibilities having and leaving a long term effect on humans mainly the stakeholders associated with the downstream as well as upstream levels in the supply chains [23]. In supply chain, societal issues have main concern with inter, intra levels of firm and customers. Inter levels are associated with the supplier problems whereas intra levels are concerned with the problems in one's own manufacturing. The issues related to intra levels can be easily solved by the focal firm but it can also increase the level of risks for the firm [2]. Many studies also focused on the supply chain management with respect to risk and focus on the external and internal troubles along with some failures that are caused by these risks or negative events [24]. Risk can be easily defined as the chances or happening of an uncertain or negative event that is multiplied by the severity levels or losses. These risks in supply chains consist of

various dimensions mainly product development risk, process technology risk, safety and demand related risks [25]. The literature also revealed that based on the size and market share, a firm particularly in terms of supply chains disregarding the social issues and paying no attention to them can be strongly held accountable. And can face strong penalties, backlash and loss of market share [2].

## 2.2. *Supplier financial and social performance*

Numerous studies have been conducted by the researchers that focused on the practices related to social sustainability and its adoption levels along with its impact on performance levels of supplier firm. A study that advocated the relationship between social sustainability and the supplier performance proposed that a significant positive relation has been found between them. He particularly focused on the engagement and training practices of supplier in his study [26]. According to authors, making improvements in the working environment of supplier firm can enhance the performance levels by reducing accidents, losses and delays. These factors lead to an increase in performance level of supplier firm in terms of both social and financial indicators. It also increases the reliability and value of supplier's firm [4]. With the increase in performance, there is also an increase in the motivation level of employees in that firm that can ultimately lead to the production of high quality products [7]. Based on the resource based stakeholder view, the study conducted by Carter and Jennings [18] signifies a strong association between supplier performance levels and social sustainability through focusing on factors such as error reduction, improvement in lead time and increment in efficiency etc. Moreover, few studies have also focused on this relationship and found a positive impact between social practices and performance levels. These studies clearly indicate that with the increase in social sustainability practices by the supplier firms, there is also a significant increase in the financial and social performance of those firms but this relation needs to be further elaborated both quantitatively and statistically [23]. The studies also explained that with the adoption of sustainability practices by the firm globally, these firms are locating their supplier base in the developing areas too. With the development of such bases, stakeholders are obtaining great opportunities as a result, both the social and financial performance are increasing. However, such rapid developments are also a cause of concern for the risks associated particularly to the end consumers [2]. Therefore, further investigation is to be required to emphasize this relation particularly in developing countries [10]. So, based

on extensive literature and past researches, this study hypothesized that;

**H1:** *Supplier social sustainability has significant positive impact on supplier financial performance.*

**H2:** *Supplier social sustainability has significant positive impact on supplier social performance.*

### 2.3. Supplier firm reputation

With the increase in corporate sustainability levels, it has been found that performance level of the firms adopting such sustainable efforts also increases. This relation also signifies in terms of supply chain management perspective. Studies indicate that firms associated with such practices increases the chances to build up their reputation fast as compared to other firms [5]. Studies also proposed that having large levels of sustainability efforts in the operations leads to reduction in certain costs and lead time associated with supply chain practices by enhancing qualities as a result

improving reputation [8]. Few authors are of opinion that by adopting social issues increases the chances to meet the expectations of internal as well as external stakeholders hence increasing socio economic performance. Whereas others are of opinion that addressing these issues enhances the reputations and legitimacy of those stakeholders [27]. Few studies advocate that stakeholders' collaboration with supplier firm plays a fundamental role in developing and maintaining the supplier firm reputation and performance as well [28]. Studies also proposes that the main entities in the supply chain of any firm are the suppliers. Their actions can directly create an impact on the whole supply chain performance, strategic image, reputation and customer contentment [9, 29]. Hence, we hypothesized that;

**H3:** *Supplier firm reputation significantly mediates between supplier social sustainability and supplier financial and social firm performance.*



Figure 2. Framework of this study

### 3. Methodology

In order to collect data, a survey method consisted of structured questionnaires was adopted in this study. The data was collected from the manufacturing firms in Thailand. Two conditions are used to select the target respondents. First one is the firm age. We selected those firms having not less than 10 years' experience. Secondly, firm size in the form of revenue. We focused on firms having revenue levels of more than 1 billion TBH. These conditions were taken under consideration in order to make sure that all these firms selected in this study have enough experience regarding sustainability in the target market. On the basis of past researches, who concluded that in terms of sustainability, the firms having smaller size are considered to have low impact as compared to firms with larger size and larger revenues [30]. These large size firms are more prone to sustainability as compared to smaller ones and requires more efforts to maintain their sustainability [7]. These conditions ensure the reliability of the respondents selected for this study regarding their sustainability in manufacturing firms. The respondents targeted in these firms are the management people having executive positions

in those firms who had enough knowledge about their firms operations.

#### 3.1. Instruments adopted

Due to the dilemma associated with the absence of relative measures in order to measure supplier's social sustainability in today's trends, this study adopted a measurement technique in order to develop constructs for supplier sustainability. This technique consisted of two stages. In the first stage of this approach, extensive literature review was conducted to collect data from the literature related to supply chain particularly in the upstream levels in order to develop the scales for measuring supplier social sustainability. Then we developed a panel consisting of experts who have enough knowledge about supply chains, social responsibilities and sustainability factors. These experts were the teachers having experience of two decades in these fields. This panel also included practitioners having vast experience of supply chains management functions to round about two decades as well [31]. After the development of panel in the first stage, the second stage consisted of interview procedure. These interviews were conducted from the managers of the selected firms in this study those having relative experience of

supply chain. Then these interviews were recorded and analyzed carefully. From these recorded interviews and studied literature, few measures were constructed. These measures consist of different constructs used to measure supplier social sustainability and include questions related to supplier social relations, product accountability, diversity, labor rights as well as health and safety relations [23]. These developed constructs were also discussed with the panel experts and complexities and ambiguities were debated and eliminated. So, finally on the basis of that discussion, 18 constructs were developed to measure the social sustainability of suppliers in manufacturing firms of Thailand.

However to measure the social as well as financial performance of suppliers, we used the existed measures as proposed by various other studies. These measures were adapted according to the needs of manufacturing firms and the selected respondents. To measure supplier social performance, construct were adapted from the study of [18, 26]. Four constructs were developed for this dependent variable. However, to measure financial performance of suppliers, four constructs were also adapted from the studies of [18, 32]. As these measures are already related to supply chain sustainability, so with the expert opinion, these measures along with some modifications were adopted according to the objectives of the study. Then on the basis of the study conducted by Heeler and Ray [33], these scales were allowed to pass through pilot testing. For this, these scales were allowed to go through a pilot test among managers of supply chains to ensure face validity and readability. After this testing, few modifications were made by the experts too for the final development of constructs.

### 3.2. Sample and method

Online databases have been used to collect information about the manufacturing firms in Thailand. These databases provided enough and reliable information including addresses and contact numbers about those manufacturing firms as well as their financial information. Before sending the questionnaires, former permissions

were granted on the telephone from the representatives of these selected firms. The questionnaires were sent through postal mail to these firms for collecting data. Follow ups were also conducted on regular basis through telephonic contacts with the representatives. Out of 350 questionnaires sent to these firms, 330 were returned back. Then these constructs were passed through reviewing process to sort out any error or mislaid information. Among these, those questionnaires were eliminated that were incomplete or blank leaving the total sample size to 304 questionnaires. During the collection of data from survey methods, various informant issues are considered to take place during the whole process. In order to avoid such issues, few measures including number of years a person is working in supply chains and the present designation title of that person was took under consideration to evaluate their knowledge related to supply chains [34]. Few responses were also eliminated because they were below the level of these benchmarks selected.

## 4. Data Analysis

In order to check the hypothesis status for this study, the collected data from 304 respondent was analyzed by using SPSS and AMOS, the results of demographical findings show that, there are 146 male and 158 females were participating in this study. Mostly respondent falling in the range of 21-30 years of age and 107 respondents have graduation degree, 100 have master's degree and remaining have other degrees.

### 4.1. Reliability Test

The researcher used KMO and Kaiser-Meyer-Olkin (KMO) to measure reliability of data for factor analysis and then run Rotated Component Matrix: KMO. KMO returns values between 0 and 1. A **rule of thumb** for interpreting the statistic. The results of KMO test indicated our data is suitable for factor analysis and factor analysis also good fit. See table 2 for KMO and 3 for rotated component metrics.

**Table 2.** KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.964
Bartlett's Test of Sphericity	Approx. Chi-Square	15849.882
	df	465
	Sig.	.000

**Table 3.** Rotated Component Matrix<sup>a</sup>

	Component			
	1	2	3	4
SSP1		.890		
SSP2		.885		
SSP3		.907		
SSP4		.847		
SSP5		.836		
SSP6		.865		
SSS1	.962			
SSS2	.956			
SSS3	.926			
SSS4	.925			
SSS5	.921			
SSS6	.930			
SSS7	.936			
SSS8	.939			
SSS9	.899			
SSS10	.844			
SSS11	.865			
SSS12	.798			
SSS13	.842			
SSS14	.859			
SSS15	.896			
SSS16	.873			
SSS17	.927			
SSS18	.921			
SFR1				.925
SFR2				.934
SFR3				.936
SFP1			.881	
SFP2			.850	
SFP3			.863	
SFP4			.854	

#### 4.2. Discriminant and Convergent Validity

Discriminant validity is the degree in which the variable is in fact differing from each other

experimentally. On the other hand, Convergent validity is the extent of assurance a researcher has that a characteristic is well evaluated by its measures [35].

**Table 4.** Discriminant and Convergent Validity

	CR	AVE	MSV	SFP	SSS	SFR	SSP
SFP	0.943	0.806	0.291	<b>0.898</b>			
SSS	0.910	0.848	0.171	0.396	<b>0.921</b>		
SFR	0.922	0.897	0.213	0.461	0.299	<b>0.928</b>	
SSP	0.901	0.805	0.291	0.539	0.414	0.408	<b>0.897</b>

Results prove the convergent and discriminant validity of the data, because every contract discriminate from each other, and value of AVE for all variables are greater than MSV.

**The confirmatory factor analysis (CFA)** is “a multivariate arithmetic process which is utilized in order to examine how good the studied constructs signify the figure of variables.” Following table shows the findings;

#### 4.3. Confirmatory Factor Analysis

**Table 5.** Nested Confirmatory Factor Analysis

	Model Fit Indices	Threshold Range	Observed Values
Nested Model	$\chi^2$		835.222
	Df		428
	$\chi^2 / df$	Lesser than 3	1.951
	GFI	≤ .80	.851
	IFI	≤ .90	.975
	CFI	≤ .90	.975
	RMSEA	≥ .08	.056

Above table shows the threshold range and observed value. The model above displayed the GFI=0.851; IFI=0.97; CFI=0.97 and RMSEA=.056. Above stated five indicators prove the CFA of the study except GFI, but it is near to range.

#### 4.4. Structural Equation Modeling

By using AMOS structural equation modeling test was performed in order to test the hypothesis of this study, this test at the same time provide the direct and indirect results of regression;

**Table 6.** Structural Model Results

Effects	Hypothesized Path	B	S. E	P value	Conclusion
<b>Linear Effects</b>					
Hypothesis 1 (+)	SSS→ SFP	.233	.057	.000	Accepted
Hypothesis 2 (+)	SSS→ SSP	.294	.047	.000	Accepted
<b>Mediation Effect</b>					
Hypothesis 3 (+)	SSS→ SFR→SFP	.115	.027	.010	Accepted
Hypothesis 4 (+)	SSS→ SFR→ SSP	.095	.026	.010	Accepted

Above mentioned table 6 shows the structural modeling results and finding indicated that supplier social sustainability has 23.3% positive impact on supplier financial performance, which mean that if one unit of supplier social sustainability increased it will bring 23.3% positive impact on supplier financial performance. Same as supplier social sustainability has 29.4% positive and significant impact on supplier social performance. Hypothesis 3 and 4 shows the indirect effect supplier social sustainability on supplier social and financial

performance via supplier firms' reputation. The finding of the hypothesis 3 indicated that supplier firms' reputation has 11.5% mediating effect between supplier social sustainability and supplier financial performance whereas it has 9.5% mediating effect between supplier social sustainability and supplier social performance. The following figure below is a screenshot of structural equation modeling while running in SEM in AMOS and shows the standardized regression weights between the variables.

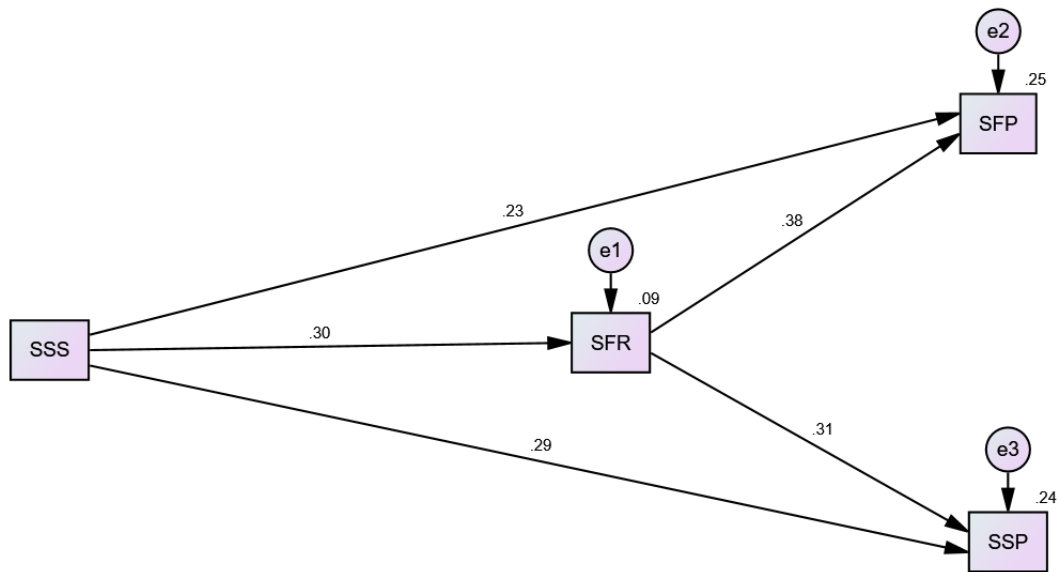


Figure 2. Structural Equation Modeling

## 5. Discussion and Conclusion

With the developing trend of supply chain management in today's economy, researchers have developed their focus on supplier social sustainability approaches and their impact on supply chain performance [14]. In order to understand the implications of sustainability, this study also focuses on the supplier's social sustainability and the influence it has on social as well as financial performance of suppliers on the manufacturing firms in Thailand. It addresses the gap by conceptualizing and testing supplier social sustainability. Since the rapid increase in world's population, economies are more focused on their trade levels especially exports so this concept gained a significant importance today. Therefore, this study covers the gap to explain the understanding about supplier social sustainability in terms of rapidly growing economies. As this study is based on resource based theory which clearly states that tangible or intangible resources that are not easily copied by other provides a firm competitive edge, so on the basis of this theory, this study adopted various constructs to measure social sustainability [36]. The results explain that having significant association between collaboration efforts in sustainability practices provide more positive results. This clearly elaborate the study conducted on resource based theory [37]. According to few authors, the performance of firms increase when the suppliers adopt the sustainability measures as developed by the firms. Such collaborations and linkages within an organization lead to high performance [38]. Reputation also plays a significant role in developing firm performance. As the reputation of a firm increases, it leads to enhancement in levels of supplier

performance and supply chain abilities. This result are supported by various other researchers who proposed that with better reputation and supplier performance, there are only few chances of disruptions in supply chains [4]. These results also stated that social sustainability also helps in developing inter organizational resources in a firm. It also signifies that organizations must focus on social sustainability levels while developing their strategies in order to get benefits from their business operations particularly supply chain management.

### 5.1. Conclusion

Despite of the importance social sustainability has on firm performance, a limited researches have been conducted on this emerging issue [10]. Moreover, because of the complexities, these social issues are considered to have different impact on different societies and economies. In order to cover this gap, this study focuses on the measures and dimensions of social sustainability. So, the aim of this study is to focus on the supplier social sustainability. This study considered the emerging issues as related to suppliers with the increase in supply chain significance among organizational units. This study also focuses on the relationship between social sustainability and performance levels. It considered the impact of sustainability on the social as well as financial performance of suppliers in supply chain practices. Based on resource based perspective, the variables in this study are measured by using valid scales as adopted and developed by past researches and a panel consisting of experts and academics. Because of the limited data in the form of quantitative research, this study is considered to have a significant impact on the theory building approach



related to social sustainability especially in the upstream levels of supply chains. Based on literature review, few hypotheses have been developed for this study. These hypotheses were then tested using statistical tools such as SPSS and AMOS. The results of these tests clearly indicate that there exist a significant positive relationship between social sustainability and performance levels to the context of supplier. The results also depicts that supplier firm reputation significantly mediates between the relation that exist between sustainability levels and performance indicators. It signifies that with the increase in levels of sustainability by the supplier's firm and its social responsibilities, the performance of the firm also significantly increases either in terms of social or financial perspective.

### 5.2. Implications

This study is considered to have significant implications in the form of both theoretical and practical. Theoretically, this study is considered to be an addition in literature related to supply chains because of less studies conducted in this perspective. Moreover, it also allow experts to focus on the emerging issues of suppliers and their impact on whole supply chain levels. Managers can well adopt this study and its constructs to focus on the issues related to the supply chain particularly at upstream levels and also preparing the ways to strategically handle such issues. It can also help managers to avoid supply related risks by focusing on their social sustainability practices in order to enhance performance and reputation in the modern era. It can also be used by new firms and their managers in Southeast Asian countries to identify the well stated issue and strongly build up their social sustainability chains. Our study also illustrates the increase or decrease in the performance benefits of a firm as the level of investments and commitments made by the focal firms while addressing supplier social sustainability practices and their adoption criteria. It can also aid and provide new directions to practitioners, having limited knowledge of sustainability efforts and its benefits, for developing competitive and sustainable supply chains.

### 5.3. Limitations and future avenues

Despite of the strengths it has, this study also has some limitations. Since this study focuses on the firms in Thailand only, other studies can be conducted in various other regions to analyze the influential impact of social sustainability on social or financial performance. Moreover, as this study focuses on the single dimension of manufacturing firms in Thailand, it can also adopt other sectors or cross cultural perspectives to further explore the

supply chain concerns and efforts required to develop competitive supply chains. Furthermore, this study is done once and is cross sectional, other studies can adopt longitudinal data analysis technique to check before and after relation after a certain period of time. It also acts as a base for future studies to identify more benefits associated with social sustainability in supply chains of the firms at both upstream as well as downstream levels. Moreover, this study also allow researchers to find ways to develop and solve some social issues in order to develop a healthy community in developing countries.

## References

- [1] Keho, Y. The Exports and Economic Growth Nexus in Cote D'ivoire: Evidence from a Multivariate Time Series Analysis. *Asian Journal of Economic Modelling*, vol. 5, pp.135-146., 2017.
- [2] R. D. Klassen and A. Vereecke, "Social issues in supply chains: Capabilities link responsibility, risk (opportunity), and performance," *International Journal of Production Economics*, vol. 140, pp. 103-115, 2012.
- [3] B. Ageron, A. Gunasekaran, and A. Spalanzani, "Sustainable supply management: An empirical study," *International journal of production economics*, vol. 140, pp. 168-182, 2012.
- [4] F. Yuan and R. W. Woodman, "Innovative behavior in the workplace: The role of performance and image outcome expectations," *Academy of management journal*, vol. 53, pp. 323-342, 2010.
- [5] Kandhro, D., & Pathrannarakul, P. The role of technology in enhancing transparency and accountability in public sector organizations of Pakistan. *International Journal of Economics Business and Management Studies*, vol. 2, pp. 20-24., 2013.
- [6] J. M. Cruz and T. Wakolbinger, "Multiperiod effects of corporate social responsibility on supply chain networks, transaction costs, emissions, and risk," *International journal of production economics*, vol. 116, pp. 61-74, 2008.
- [7] Keskin, Ö., & Akdeniz, H. Investigation of Aggression Levels of University Students (Kocaeli University Case). *Asian Journal of Education and Training*, vol. 4, pp.186-196., 2018.
- [8] C. R. Carter and D. S. Rogers, "A framework of sustainable supply chain management: moving toward new theory," *International journal of physical distribution & logistics management*, vol. 38, pp. 360-387, 2008.

- [9] K. Foerstl, C. Reuter, E. Hartmann, and C. Blome, "Managing supplier sustainability risks in a dynamically changing environment—Sustainable supplier management in the chemical industry," *Journal of Purchasing and Supply Management*, vol. 16, pp. 118-130, 2010.
- [10] S. A. Yawar and S. Seuring, "Management of social issues in supply chains: a literature review exploring social issues, actions and performance outcomes," *Journal of Business Ethics*, vol. 141, pp. 621-643, 2017.
- [11] J. Hall, S. Matos, and B. Silvestre, "Understanding why firms should invest in sustainable supply chains: a complexity approach," *International Journal of Production Research*, vol. 50, pp. 1332-1348, 2012.
- [12] S. Zailani, K. Jeyaraman, G. Vengadasan, and R. Premkumar, "Sustainable supply chain management (SSCM) in Malaysia: A survey," *International Journal of Production Economics*, vol. 140, pp. 330-340, 2012.
- [13] V. Mani, A. Gunasekaran, and C. Delgado, "Enhancing supply chain performance through supplier social sustainability: an emerging economy perspective," *International Journal of Production Economics*, vol. 195, pp. 259-272, 2018.
- [14] N. A. Torugsa, W. O'Donohue, and R. Hecker, "Proactive CSR: An empirical analysis of the role of its economic, social and environmental dimensions on the association between capabilities and performance," *Journal of Business Ethics*, vol. 115, pp. 383-402, 2013.
- [15] S. Seuring and M. Müller, "From a literature review to a conceptual framework for sustainable supply chain management," *Journal of cleaner production*, vol. 16, pp. 1699-1710, 2008.
- [16] Kabir, K. H., & Aftab, S. Exploring management strategies for freshwater wetland: Policy options for southwest coastal region in Bangladesh. *Asian Development Policy Review*, vol. 5, pp. 70-80., 2017.
- [17] M. J. Hutchins and J. W. Sutherland, "An exploration of measures of social sustainability and their application to supply chain decisions," *Journal of Cleaner Production*, vol. 16, pp. 1688-1698, 2008.
- [18] C. R. Carter and M. M. Jennings, "The role of purchasing in corporate social responsibility: a structural equation analysis," *Journal of business Logistics*, vol. 25, pp. 145-186, 2004.
- [19] C. Gimenez and E. M. Tachizawa, "Extending sustainability to suppliers: a systematic literature review," *Supply Chain Management: An International Journal*, vol. 17, pp. 531-543, 2012.
- [20] Kamel, A & Watfa, M. K Disruption-based Innovations for Incumbent Technology Businesses. *International Journal of Innovation, Creativity and Change*, vol. 4, pp. 20-50., 2018.
- [21] J. Sarkis, M. M. Helms, and A. A. Hervani, "Reverse logistics and social sustainability," *Corporate Social Responsibility and Environmental Management*, vol. 17, pp. 337-354, 2010.
- [22] D. J. Wood, "Corporate social performance revisited," *Academy of management review*, vol. 16, pp. 691-718, 1991.
- [23] V. Mani, R. Agarwal, A. Gunasekaran, T. Papadopoulos, R. Dubey, and S. J. Childe, "Social sustainability in the supply chain: Construct development and measurement validation," *Ecological indicators*, vol. 71, pp. 270-279, 2016.
- [24] P. R. Kleindorfer and G. H. Saad, "Managing disruption risks in supply chains," *Production and operations management*, vol. 14, pp. 53-68, 2005.
- [25] G. A. Zsidisin, "A grounded definition of supply risk," *Journal of Purchasing and Supply Management*, vol. 9, pp. 217-224, 2003.
- [26] M. Akamp and M. Müller, "Supplier management in developing countries," *Journal of Cleaner Production*, vol. 56, pp. 54-62, 2013.
- [27] M. C. Branco and L. L. Rodrigues, "Factors influencing social responsibility disclosure by Portuguese companies," *Journal of business Ethics*, vol. 83, pp. 685-701, 2008.
- [28] K.-H. Lee and J.-W. Kim, "Current status of CSR in the realm of supply management: the case of the Korean electronics industry," *Supply Chain Management: An International Journal*, vol. 14, pp. 138-148, 2009.
- [29] C. Busse, "Doing well by doing good? The self-interest of buying firms and sustainable supply chain management," *Journal of Supply Chain Management*, vol. 52, pp. 28-47, 2016.
- [30] H. Min and W. P. Galle, "Green purchasing practices of US firms," *International Journal of Operations & Production Management*, vol. 21, pp. 1222-1238, 2001.
- [31] A. C. Yeung, "Strategic supply management, quality initiatives, and organizational performance," *Journal of Operations Management*, vol. 26, pp. 490-502, 2008.
- [32] A. S. Carr and L. R. Smeltzer, "An empirical study of the relationships among purchasing skills and strategic purchasing, financial performance, and supplier responsiveness," *Journal of supply chain management*, vol. 36, pp. 40-54, 2000.

- [33] R. M. Heeler and M. L. Ray, "Measure validation in marketing," *Journal of Marketing Research*, vol. 9, pp. 361-370, 1972.
- [34] D. T. Campbell, "The informant in quantitative research," *American Journal of sociology*, vol. 60, pp. 339-342, 1955.
- [35] M. G. Kim and J. Kim, "Cross-validation of reliability, convergent and discriminant validity for the problematic online game use scale," *Computers in Human Behavior*, vol. 26, pp. 389-398, 2010.
- [36] J. Barney, "The resource based view of strategy: Origins, implications, and prospects," *Journal of management*, vol. 17, pp. 97-211, 1991.
- [37] N. L. Schnittfeld and T. Busch, "Sustainability management within supply chains—a resource dependence view," *Business Strategy and the Environment*, vol. 25, pp. 337-354, 2016.
- [38] S. M. Lee, S. Tae Kim, and D. Choi, "Green supply chain management and organizational performance," *Industrial Management & Data Systems*, vol. 112, pp. 1148-1180, 2012.