# Does Institutional Pressures Leads to Better Green Supply Chain and Organizational Performance in Indonesian Manufacturing Sector: Role of Senior Management and Social Capital

Taufan Maulamin<sup>\*1</sup>, Paisal Halim<sup>#2</sup>, Syamsiah Badruddin<sup>#3</sup>, Zulkarnain Hamson<sup>#4</sup>, Imran Ismail<sup>#5</sup>

\*1 Department of Public Administration Post Graduate Institut Ilmu Sosial dan Manajemen STIAMI Jakarta, Indonesia

<sup>#2,3</sup> Faculty of Social and Political Science Nasional Jakarta, Indonesia

<sup>#4</sup> Universitas Indonesia Timur Makassar, Indonesia

<sup>#5</sup> Universitas Bosowa, Makassar, Indonesia

Corresponding author: <sup>1</sup>taufan@stiami.ac.id <sup>2</sup>paisalhalim@civitas.unas.ac.id <sup>3</sup>syamsiah\_badruddin@civitas.unas.ac.id <sup>4</sup>zulkarnain.hamson@uit.ac.id <sup>5</sup>imranismail352@gmail.com

Abstract- The research examines the influence of three organizational pressures (such as, government, customer and rivals) on performance associated with environment and operations. These three organizational forces are analyzed by adopting green supply chain management (GSCM), considering the senior management and examining social capital in the supply chain between buyers and sellers. Information was obtained by an email questionnaire from buying companies in Indonesian manufacturing sector. The analysis was based on structural equation modeling (SEM) and applied on 250 available responses from Indonesian manufacturing sector to evaluate our hypotheses. Our findings demonstrated that almost all hypotheses are accepted. Our research expands the GSCM literature by incorporating significant and latest concepts into the GSCM theory, and at the same time offering implications for policy making through empirical evidence.

*Keywords;* Institutional pressures (IP); GSCM; Firm performance (FP); Senior management's role; Social capital (SC)

## 1. Introduction

Nowadays, businesses should focus on environmental protection through green strategies [1]. The development of green production had already been under discussion from decades [2]. Environmental initiatives today obviously are outside the limits of a sole enterprise. Somewhat it has appeared a significant concern that must be addressed throughout the supply chain, as 85% of consumers blame manufacturing companies for "environmental malpractice" Numerous [3]. investigations examined whether organizational practices align with such developments or strategies in principles. sustainability [4] specified that

corporate initiatives to consistently satisfy social needs can be undermined by internal and external determinants. [5] claimed that organizations may experience multiple environmental threats linked to supply chain problems.

It is an increasing requirement to research about the GSCM in a wider context. [2] pursued to develop a framework, emphasizing that green measures. [6] focused on a problem-solving method, challenge the prevailing assertions that have already been commonly believed for the GSCM and seek to formulate an adequate alternative justification. [7] followed paradoxical interpretation to explain the contradictions underlying between the various degrees of sustainable development and various theories, understanding the significance of diverse and complex methods to GSCM issues. Theoretical concepts in the context of GSCM literature, [4] found that organizational pressure is а moderator among GSCM and firm performance. The research was conducted to empirically evaluate the influence of institutional theory in manufacturing and operating activities [8]. Modern empirical analysis based on theories, incorporates investigations performed by [9], [10] and [6], exploring the association between governance, organizational pressures and environmental efficiency, the role of senior management firm performance, and the on relationship of SC in the GSCM performance. Additionally, [11] implemented resource-based theory into a framework and discovered that organizational efficiency can be increased if expenditure in internal relationship management expertise by organizations is matched by customer-supplier social capital. [12] introduced a theoretical foundation by incorporating stakeholder theory and established the impact of procurement expenses, supply chain conservation risk

costs, collaboration advantages and incentives emerging from distributor self-promotion ripple effects, sustainability-related conditions of distributors and financial performance of buyers. [13] observed that contextual, social capital enables the flow of information from the purchaser-side to the distributor-side, consequently adding to cost minimization and innovation.

The research provides the preceding significant additions to GSCM by empirically justifying the conceptual framework on the basis of relevant theoretical perspectives. First of all, the analysis evaluates the construct based on both institutional and the SC theories, which have not yet been recognized in the similar context. The use of SC in the field of GSCM, particularly is in its infancy [6]. Although several prior investigations focused on this theory were supplemented with other factors, they primarily represented that external stakeholders usually inflict pressure or motivation on businesses that embrace or execute the GSCM. Social capital theory had been described as a significant factor in researches on SCM, even though it had barely started to be examined in GSCM [6].

These two theories combinedly offer additional information about the involvement of external determinants towards an individual organization, while the integration of two interpretations may offer a wider picture for research and implementation of green supply chain management. Adding both perspectives together in is new one context а concept in the GSCM theoretical framework. Furthermore, with respect to the ultimate dependent variable, notably corporate performance, we take into consideration operating performance instead of EP in terms of giving management an additional perspective that GSCM offers reliable and valuable outcomes alongside green performance. It will help to settle the current discussion on trade-offs between EP and OP, with inconsistent outcomes in earlier academic research works [14].

# 2. Literature Review

## 2.1. GSCM

GSCM is an extremely important subject for firms [1, 2]. GSCM may be considered as a collection of organizational activities integrating environmental problems with supply chain management (SCM) to ensure conformity with the environment and to enhance the environmental competence of the overall supply chain [1, 6]. GSCM incorporates product development, material procurement and selection, production techniques as well as product depreciation. [2] utilized structural equation models for a group of 350 Singaporean manufacturing firms and observed that both integrated processes and GSCM had a positive impact on the environmental and financial performance of businesses. Two unique but distinct techniques are incorporated extensively in GSCM

practices namely controlling and coordinating techniques [2]. In the monitoring technique, the purchasing firm collects and stores distributor data, determines the distributor evaluation criteria and analyses distributors and their goods sustainability performance. As a fundamental precept of GSCM supervision, purchasing companies want their manufacturers to confirm green production by ISO 14001, an international standard for manufacturing [6].

This primarily emphasizes on the long-term objectives such as developing capacity and capabilities of manufacturing firms [2]. The collaborative strategy incorporates a variety of initiatives that include learning and education projects, information and networking workshops as well as technological and monetary support to develop and implement several key green management strategies and to achieve appropriate environment competitive advantage [15].

# 2.2. Institutional Theory

[12] proposed that businesses understand the importance of social legitimacy as well as financial benefits. Therefore, the theoretical approach is most effective to understand the effect of social networks and is a far better systematic approach to understand corporate activities particularly in comparison to the logical approach that only illustrates the financial impact. While incorporating appropriate interested parties in institutional theory, [16] promoted the concept of separating dominant factors of institutional influence on policy-makers. Moreover, the business is run in a social setting and is therefore eventually faces both explicit and implicit additional stress from other organizations, like state agencies and statutory guidelines. The state institutions emphasize precisely that influential organizations can control a firm's activities [16].

Additionally, there is societal pressures due to highly qualified laws which suppose that researchers comply by strict guidelines closely associated with formal training events and the highly qualified social group [16]. The organization is supposed to acknowledge or contribute to laws, values and preferences of its potential stakeholders linked to social integrity [17]. In addition, consumer interest develops a primary sociological pressure [4]. This research discovered that distinctive variations are associated with GSCM performance and sustainability performance in product category, geographical region, and supplier's influence in the market.

Finally, mimetic pressure stems when a firm duplicates another competitive firm in the business sector. Because businesses are set up in socioeconomic systems, businesses in these environments seem to replicate the activities of other representatives of the community [17]. Particularly, where the firm fails in consistency in developing its strategic and tactical objective or in comprehending the technological advancements, there is a higher likelihood of mimicking other businesses [16].

#### 2.3. Higher Management Assistance

Executives, notably the "chief executive officer (CEO) and his immediate subordinates in charge of business policy," intervene as significant players in instituting heterogeneous management techniques that affect organizational success. Senior executives perform a critical role in protecting the financial and human capital considered necessary [18]. Higher management assistance in diverse industrial sectors has been observed, which include the relationships with customers, research and development in production, information technology and operational performance [19].

[20] also indicated that this understanding results in when increased performance senior managers show interest in occupational training and when it is exchanged through the organizational training schedule, infrastructure and cultural values. In the GSCM research area, senior management help is extensively regarded as a vital characteristic of GSCM, enabling the distribution of expenditure resources and capital into environmental activities [21].

## 2.4. SC Theory

SC can be explained as a highly valued resource that arises from social exposure to assets by the use of social interactions. Implementing the principle of SC in literature has presented a better view to investigate the corporate performance obtained by making use of its social channels. [13] concluded that It is possible to divide social capital into three parameters: analytical, systemic and relational.

The analytical aspect of SC refers to shared interests, vision and beliefs among participants in the social system, which provide common perceptions, mutual understandings and meaningful mechanisms [22]. [23] observed that both distributors and construction firms must share information constantly to manage and cultivate consistent insights on distributors ' environmental expertise. CSC outlines appropriate methods for purchasers and sellers to exchange and communicate the information of one another, facilitating the integration of mutual ideas and common understanding [13]. The coalition of objectives helps to reduce the likelihood of dispute and improve bilateral profits for both groups, as both groups observe collaborative ability of their partnerships [22].

Furthermore, SSC identifies the method of cooperation between both parties, this is, the method that addresses the issue of whom to access and how to access [13]. Collaborating frequently and in varying circumstances at multiple levels and operations enables quick and efficient sharing of information and resources, that provides as an opportunity and inspiration to strengthen the partnership between two groups [24]. The potential of cooperation is harnessed by carefully formulated organizational social gatherings, teamwork, mutual problem-solving seminars and cross-functional teams [11, 25]. These relationships promote Supply Chain participation and collaborative effort. SSC identifies the benefits of networking contacts, continuous interaction, information exchange and social engagement. [26].

Subsequently, the relational aspect has to do with the ethical dimension of interpersonal relations between participants, such as integrity, responsibility, loyalty and fellowship. Trust, for example, is indeed one of the most significant elements of RSC [13]. Trust arising from continuous interactions is expectation of deceitful behavior, facilitates open information sharing and enhances psychological aspirations of deceitful behavior, encourages open sharing of information and enhances transparency between both groups [27]. Trust originating from recurrent encounters limits the aspirations of deceitful behavior, facilitates active information sharing and enhances transparency of behavior between both groups [27].

Respect and cooperation are also reinforced by continuous transaction processing and lead to long-term relationships. Additionally, RSC emphasizes on long-term strategic alliance-based relations to develop reliance, reverence, fellowship and cooperation through continued transaction processing. Therefore, this helps to reduce trading expenses by promoting mutually beneficial activities [9].

# 2.5. Conceptual Framework and Development of Hypothesis

The conceptual framework is premised on the relevant theories. Figure 1 illustrates the framework.

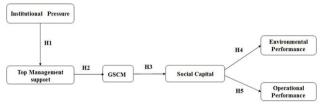


Figure 1. Conceptual framework.

# 2.6. Institutional Pressures and Senior Management Support (SMS)

It can be significant to investigate if there is a positive correlation between organizational pressures and GSCM adoption, on the basis of active cooperation from senior management in the implementation of environmental strategies. Consequently, their encouragement can differ according to various types of administrative pressures. In this context, this article scientifically measures that how resilient the responses of senior management are to highly diverse organizational pressures are, which effectively handles this as a source of evaluating the consequences of senior management on GSCM application [18].

Whereas state laws highly validates unconventional environmental activities, executives actually find the law to be the most clear external factor influencing their firms' green policies [4]. Lawfully, firms are supposed to adopt the environmental standards of the state, or else they will suffer statutory punishments and sanctions or may even be excluded from the marketplace. [4] states that monopolistic pressure has a positive impact on the attitude of higher management.

Meanwhile, consumers ' demands are attributed as a significant or motivating factor for the implementation of green practices [28]. As the broader extent of environmental awareness in societies rises, customers as well as external supply chain stakeholders should purchase environmentally sustainable goods. Furthermore, [29], concluded that the company can adopt the highest quality GSCM practices that can lead to the highest possible performance improvement through a mimetic strategy. Thus, the following hypotheses can be developed:

Hypothesis 1(a). Coercive pressure positively impacts the senior management support.

*Hypothesis 1(b). Normative pressure positively impacts the senior management support.* 

Hypothesis 1(c). Mimetic pressure positively impacts the senior management support.

# 2.7. Senior Management Assistance and adoption GSCM practices

The involvement of senior management in order to determine the acceleration and applicability of environmental activities is extremely emphasized. Whereas flexibility and motivation may be developed from any level in the business, corporate management determination performs the most significant part because it governs operations from allocation of resources to implementation that trigger improvements in environmental policies [12, 30]. Higher management enables the mechanism approval of projecting organizational resistance of GSCM into the company and

implementing organizational activities [31]. Contrarily, a lack of concern from senior management may lead to greater reluctance from the organization in the incorporation of institutional pressure and the inability to incorporate green manufacturing strategies. Senior management commitment is one of the key motivating factors for businesses to introduce various types of environment strategies [32]. Thus, the following hypotheses can be developed:

*Hypothesis 2. Senior management assistance positively impacts the adoption of GSCM.* 

## 2.8. GSCM practices and SC

GSCM is fundamentally a collaborative system enabling common understanding of supply chain partners, as well as responsive performance assessments and an effective response mechanism. This leads to common environmental objectives and mutual perception for the two supply chain participants [6]. According to [33], concluded that better perception and open correspondence to fulfill environmental demands can minimize potential disputes between the partners, thereby strengthening the supply chain network engagement.

The GSCM method focuses more on building prospective, long-term strategies than on enhancing existing performance or minimizing existing expenses [2]. More resources and shared performance such as learning and development, in response to technological support during the implementation of GSCM, will strengthen long-term relationships and trust for both buyers and sellers [11]. Consequently, mutual relations between buyers and sellers would promote the development of relational social capital (RSC). Improved relationships always lead to different organizational conventions, team work, combined seminars and crossfunctional teams [11].

In addition, [6] has demonstrated encouragement for the function of SC arbitration among GSCM and FP. [6] observed that GSCM had a significant effect on the development of RSC and SSC. In this study we therefore take into consideration cognitive social capital (CSC) and attempt to present a more detailed mechanism. Thus, the following hypotheses can be developed:

*Hypothesis 3(a). GSCM activities positively impacts the accumulation of CSC.* 

*Hypothesis 3(b). GSCM activities positively impacts the accumulation of SSC.* 

*Hypothesis 3(c). GSCM activities positively impacts the accumulation of RSC.* 

#### **2.9. SC on Environmental Performance (EP)**

Some academics exhibit increasing interest in investigating manufacturing companies ' participation in the improved performance of the buying companies [11].

Whereas only a few researchers have revealed evidently that SC has a significant impact on EP. [34] He has demonstrated that cooperation between suppliers has a significant impact on EP, in particular on green product development and logistical support.

In essence, the CSC acquired by green supply chain management will increase EP. SSC supported by regular correspondence, exchange of information and combined operations will contribute to knowledge sharing, that can help to examine and discover alternatives for obtaining environmental capabilities and performance [32]. Longterm, trust-based partnerships, involving relational social capital, will enhance cooperation between the two partners and offer opportunities for developing environmental competencies [8]. Generally, potent relationship-based cooperation, information exchange, better correspondence and trust will provide alternative approaches to diverse environmental problems [11]. This therefore provides significant environmental quality advancements.

Thus, we speculated that:

Hypothesis 4(a). CSC positively impacts EP of GSCM.

*Hypothesis 4(b). SSC positively impacts EP of GSCM. Hypothesis 4(c). RSC positively impacts EP of GSCM.* 

#### 2.10. SC on Operational Performance (OP)

In context of OP, various research works have supported the hypothesis that SC plays as an influential role in OP [11, 25]. CSC enables buyers and sellers to express their perspective, integrate their thought processes and pursue the convergence of resources [13]. This coalition of objectives directed at a synergetic impact helps reduce the likelihood of disputes and help to increase the bilateral profits for both partners, increasing readiness both partners to mutually strengthen FP and OP [22, 25].

SSC, that functions as a network for correspondence and knowledge exchanging, provides help in goal setting, planning and issue solving that can enhance buyer and seller performance [35]. Relationships, like technological exchanges, are variables which can impact the efficiency of the supply chain. A numerous investigations have demonstrated that relational social capital has profound impacts on improving quality, reducing cost, versatility and manufacturing performance [35]. [27] He illustrates that relational social capital minimizes deceitful attitudes and expenses of auditing, that is the primary reason for improving operations.

Generally, social capital, generated by regular communication, prompt exchange of information, mutual conflict resolution and strong partnerships, offers incentives for increased organizational performance [11]. Thus, the following hypotheses can be developed: Hypothesis 5(a). CSC positively impacts the OP of green supply chain management.

*Hypothesis* 5(*b*). SSC positively impacts the OP of green supply chain management.

Hypothesis 5(c). RSC positively impacts the OP of green supply chain management.

### 3. Research Model

#### 3.1. Questionnaire Design

To carry out our research, we formulated a series of questions consisting the five core instruments: Organizational pressures, senior management assistance, GSCM, social capital and performance constructs are from [9], [10], and [36].

#### 3.2. Sampling and Data Collection

Our specified businesses were manafacturing companies in Indonesia. Information was obtained through the use of an email by sending 1650 questionnaire. Finally, 266 correct submissions were remaining after filtering the responses. Moreover, 150 questioners are necessary to carry out the hypotheses evaluation of empirical study [36]. Table 1 reveals the participant companies' statistical data of responses.

Characteristics No. of employees % 69% <260 260-1100 11% >1100 20% **Company type** 25% Big Firm 36% Medium-Size-Firm Small Firm 39%

#### Table 1. Profiles of the respondents.

## 3.3. Non-Response Bias

To evaluate non-response bias, we tried to compare the earlier and delayed responses from the questionnaires that were recovered [37]. As per the dates when answers were obtained, we identified the final dataset and performed a comparison the initial 30% responses against the last 30%. We performed t-test and focused on random selection of sixteen variables and the findings show no statistical and substantial variations between two classes at confidence intervals of 90 percent, illustrating that non-response bias was not present.

#### 4. Data Analysis

#### 4.1. Evaluation of Data Normality

Before measuring the accuracy and relevance of the measurement tools, the normality assumption must be verified to fulfill the requirements of maximum probability estimation approach for SEM. The highest value of the skewness is 0.612 and the highest value of the kurtosis is 3.543, that is completely inside the limitations to verify the normality supposition (skewness < 2, kurtosis < 7) [38]. Multivariate skewness and kurtosis were evaluated by employing the methodology of [39] And stated that the multivariate kurtosis indices is 531.469, that is higher than the normal value of 2.58 at P=0.01, concluding that data not normal. nevertheless, some samples fulfill multivariate standards. We implemented the principle that, when the principle of univariate normality is achieved, it is adequate to conclude that the presumption of multivariate normality is achieved.

# 4.2. Model Validity

The model fit index r2 = 2135.06 based on SRMR = 0.0709, CFI = 0.928, TLI = 0.919 and RMSEA = 0.075, that are within the range. Moreover, we determined to strengthen the model fit by rejecting inappropriate items proposed by the Modification Indices. Consequently, the model fit improved to r2 = 1140.679 based on SRMR = 0.0459, CFI = 0.968, TLI = 0.959, IFI = 0.968, and RMSEA = 0.063. [36]. All standardized regression values are higher than 0.5, that demonstrates the convergence validity. Almost every composite reliability variable is higher than 0.7, demonstrating convergence validity. To test the discriminating validity, we examined the AVE and found values in normal range [40]. Table 3 summarizes our measurement model, whereas Table 4 demonstrates the AVE.

**Table 2.** Constructs factor loadings and reliabilityindicators, composite reliability (CR) and averagevariance extracted (AVE).

		Standardi	Composit	
		zed Factor	re	
Scale	Items	Loadings	Reliability	AVE
Normative	NP3	0.864	0.853	0.475
Pressure	NP2	0.893		
(NP)	NP1	0.891		
Mimetic	MP2	0.930	0.888	0.696
Pressure	MP1	0.924		
(MP)	MP3	0.892		
Structural	SS4	0.915	0.929	0.719
Social	SS3	0.915		
Capital	SS2	0.873		
(SS)	SS1	0.918		
	OP5	0.867	0.928	0.665
Operationa	OP4	0.882		
1	OP3	0.936		
Performanc	OP2	0.928		
e (OP)	OP1	0.914		

Coercive	CP3	0.834	0.833	0.605
Pressure	CP2	0.885		
(CP)	CP1	0.902		
Тор	TMS6	0.913	0.928	0.716
Manageme	TMS5	0.929		
nt	TMS4	0.947		
Support				
(TMS)	TMS2	0.902		
Green	GSCM1	0.887	0.940	0.697
Supply	GSCM2	0.950		
Chain	GSCM3	0.913		
Manageme	GSCM4	0.929		
nt (GSCM)		0.897		
Cognitive	CS4	0.926	0.898	0.717
Social	CS3	0.899		
Capital				
(CS)	CS1	0.854		
Relational	RS4	0.863	0.911	0.677
Social	RS3	0.889		
Capital	RS2	0.837		
(RS)	RS1	0.920		
Environme	EP5	0.902	0.872	0.670
ntal	EP3	0.893		
Performanc		1		
e (EP)	EP1	0.854		

Table 3. Discriminant validity.

		-		-	1	_	_	-		
Constructs	1	2	3	4	5	6	7	8	9	10
Normative										
Pressure (1)	0.476									
Mimetic Pressure										
(2)	0.515	0.697								
Structural Social			0.71							
Capital (3)	0.286	0.226	9							
Operational			0.23	0.66						
Performance (4)	0.030	0.068	9	6						
Coercive Pressure				0.02						
(5)	0.553	0.394	2	9	0.605					
						0.				
Top Management				0.19		71				
support (6)	0.274	0.274	4	2	0.137	7				
						0.	0.			
				0.23			69			
GSCM (7)	0.313	0.313	3	2	0.179	2	8			
~ ~						0.	÷.			
Cognitive Social				0.28		-		0.7		
Capital (8)	0.263	0.261	8	5	0.134		_	17		
			0.00	0.01		0.	-	0.5	0.6	
Relational Social		0 175		0.31					0.6	
Capital (9)	0.214	0.1/5	7	4	0.103	5	6	84	78	
						0.	0.			
Environmental			0.45	0.20			-	0.4	0.5	0.67
	0.424	0 200		0.20 9	0.202			-	0.5 18	
Note: the square				-						

Note: the square roots of AVEs are on the diagonal and correlation coefficients on the off diagonal.

# 4.3. Hypotheses Test

To examine the structural equation model, we utilized the highest possible statistical measures to evaluate the correlations in our theoretical framework. Here we investigated the methodology that allows significant relationships between GSCM practices and EP as well as organizational success to evaluate whether SC facilitates GSCM and the two firm performance models. However, though this is not component of the theory and methodology, we have however aimed to investigate the correlation between EP and FP, as prior scientific analyses have provided contradictory outcomes that exacerbate current discourse [41]. The model fit index of our SEM is x2= 1270.847 with df=625, CFI= 0.956, TLI = 0.949, IFI= 0.957 and RMSEA = 0.068 that are higher than the standard values. The SRMR value is 0.989 that is acceptable.

Table 4. Regression Result	Table	4. Reg	ression	Result
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Hypotheses	Beta Coefficients	Results
H1 a	-0.105	Not supported
H1 b	0.399***	Supported
H1 c	0.329***	Supported
H2	0.689***	Supported
H3 a	0.691***	Supported
H3 b	0.665***	Supported
Н3 с	0.557***	Supported
H4 a	0.179*	Supported
H4 b	-0.05	Not supported
H4 c	0.438***	Supported
H5 a	0.219*	Supported
H5 b	-0.140	Not supported
Н5 с	0.479***	Supported

\*\*\*, 1% significance level, \*, 5% significance level,

Table 4 presents that 2 of the 3 organizational pressure which include customer and competitor show a positively significant association with higher management assistance coefficient=0.399 for GSCM, path and 0.329 found statistically positive (p<1%). Moreover, there was no association between government pressure and assistance from senior management. The association between higher management assistance and GSCM was significantly related with the coefficient=0.689 that was determined to be positive (p < 1%). The finding further demonstrates that GSCM contributes towards that directs to all three types of SC (CSC, SSC and RSC) among the consumer and vendor association, related with path coefficients = 0.691, 0.665 and 0.557, all of them are statistically positive (p < 0.01). The direct coefficients among GSCM and 2 performance models demonstrated positive coefficients of 0.367 and 0.238 (p < 0.01, p < 0.05). CSC and RSC demonstrated strong and positive association to EP, with coefficients of 0.179 and 0.438,

that were positively significant (p<0.1, p<0.01). SSC demonstrates no positive association with EP. Likewise, CSC and RSC again demonstrated positive association with OP, with coefficients of 0.219 and 0.479, that were statistically positive (p<0.1, p< 0.01). Therefore, SSC does not have a positive association with OP. In addition, the findings revealed no association between EP and OP in this research.

## 5. Discussion and conclusions

The statistics strongly endorse hypothesis 1 (b & c), whereas hypothesis 1(a) has not been embraced. [42] identifies the association between statutory, customer, competitor and supplier influences and the practices associated to the environment. He discovered that only customer-related pressure had a favorable and substantial effect on green procurement. Similarly, we can conclude that Indonesian manufacturers effectively appear to characterize environmental laws as being commonly flexible and the extent of implementation of the laws is comparatively weak. The outcome strongly supports hypothesis 2, indicating that senior management performs a significant role in the implementation of GSCM, endorsing past evidence by [4]. Findings further authenticate that GSCM accumulates all three types of SC (CSC, SSC and RSC) between the buyer and seller correlation, providing significant support for Hypothesis 3 (a, b & c). This confirms that GSCM strengthens joint coordination, collaborative effort and participation, thereby developing SC throughout the supply chain [8, 11, 13, 25]. Hypothesis 4 (a & c) and were therefore endorsed whereas Hypotheses 4b was not found significant. We might deduce that CSC and RSC perform conflict resolution tasks between GSCM and EP. It reveals that SC improves EP which include mutual leadership concepts and vision, shared respect and trust [6, 11]. Hypothesis 5 (a and c) were therefore accepted, and Hypothesis 5 (c) were not accepted. The ideologies and vision of mutual corporate leadership, shared interests, respect and strategic alliance-oriented relations strive not only to strengthen EP and OP. Generally, It indicates the prior conclusions that relational social capital performs a vital part in favorably impacting operating performance [6, 25]. There are many shortcomings in this research, as we used three unique variables for organizational pressure and SC, some sections have been abandoned to be discussed further. The dataset of this research is restricted to about 250 Indonesian manufacturing sector as well as further scholarly articles, either scientific researches or case studies, are required for the outcomes to be tested in other countries and with more data in other sectors as well.

## REFERENCES

- [1] Q. Zhu and J. Sarkis, "An inter-sectoral comparison of green supply chain management in China: drivers and practices," Journal of Cleaner Production, Vol. 14, pp. 472-486, 2006.
- [2] A. M. Deif, "A system model for green manufacturing," Journal of Cleaner Production, Vol. 19, pp. 1553-1559, 2011.
- [3] K. Kankanit and P. Busba, "The critical factors affecting green supply chain management implementation in electrical and electronic industry in Thailand," SWU Engineering Journal, Vol. 10, pp. 1-11, 2015.
- [4] G.-C. Wu, J.-H. Ding, and P.-S. Chen, "The effects of GSCM drivers and institutional pressures on GSCM practices in Taiwan's textile and apparel industry," International Journal of Production Economics, Vol. 135, pp. 618-636, 2012.
- [5] V.-H. Lee, K.-B. Ooi, A. Y.-L. Chong, and C. Seow, "Creating technological innovation via green supply chain management: An empirical analysis," Expert Systems with Applications, Vol. 41, pp. 6983-6994, 2014.
- [6] C. Woo, M. G. Kim, Y. Chung, and J. J. Rho, "Suppliers' communication capability and external green integration for green and financial performance in Korean construction industry," Journal of Cleaner Production, Vol. 112, pp. 483-493, 2016.
- [7] S. Luthra, D. Garg, and A. Haleem, "The impacts of critical success factors for implementing green supply chain management towards sustainability: an empirical investigation of Indian automobile industry," Journal of Cleaner Production, Vol. 121, pp. 142-158, 2016.
- [8] S. R. Colwell and A. W. Joshi, "Corporate ecological responsiveness: Antecedent effects of institutional pressure and top management commitment and their impact on organizational performance," Business Strategy and the Environment, Vol. 22, pp. 73-91, 2013.
- [9] H. P. Bulsara, M. Qureshi, and H. Patel, "Green supply chain performance measurement: an exploratory study," International Journal of Logistics Systems and Management, Vol. 23, pp. 476-498, 2016.
- [10] S. Luthra, D. Garg, and A. Haleem, "An analysis of interactions among critical success factors to implement green supply chain management towards sustainability: An Indian perspective," Resources Policy, Vol. 46, pp. 37-50, 2015.
- [11] R. Lunnan and T. Barth, "Managing the exploration vs. exploitation dilemma in transnational "bridging teams"," Journal of World Business, Vol. 38, pp. 110-126, 2003.
- [12] M. Richards, T. Zellweger, and J. P. Gond, "Maintaining moral legitimacy through worlds and words: An explanation of firms' investment in sustainability certification," Journal of Management Studies, Vol. 54, pp. 676-710, 2017.

- [13] J. Liao and H. Welsch, "Roles of social capital in venture creation: Key dimensions and research implications," Journal of Small Business Management, Vol. 43, pp. 345-362, 2005.
- [14] A. Goerzen and P. W. Beamish, "Geographic scope and multinational enterprise performance," Strategic Management Journal, Vol. 24, pp. 1289-1306, 2003.
- [15] G. D. Gregory, L. V. Ngo, and M. Karavdic, "Developing e-commerce marketing capabilities and efficiencies for enhanced performance in businessto-business export ventures," Industrial Marketing Management, Vol. 78, pp. 146-157, 2019.
- [16] O. C. Uzochukwu, N. Alloysius, and E. Olohi, "Re-Engineering Nigeria Economy through Fourth Industrial Revolution: A Case of Agro-Allied Firms in Nigeria," International Journal of Applied Economics, Finance and Accounting, Vol. 5, No. 1, pp. 14-30, 2019.
- [17] D. Matten and J. Moon, "Reflections on the 2018 decade award: The meaning and dynamics of corporate social responsibility," Academy of Management Review, Vol. 45, pp. 7-28, 2020.
- [18] H. Hansmann and R. Kraakman, "The essential role of organizational law," The Yale Law Journal, Vol. 110, pp. 387-440, 2000.
- [19] V. Grover, R. H. Chiang, T.-P. Liang, and D. Zhang, "Creating strategic business value from big data analytics: A research framework," Journal of Management Information Systems, Vol. 35, pp. 388-423, 2018.
- [20] O. Oyemomi, S. Liu, I. Neaga, H. Chen, and F. Nakpodia, "How cultural impact on knowledge sharing contributes to organizational performance: Using the fsQCA approach," Journal of Business Research, Vol. 94, pp. 313-319, 2019.
- [21] P. Venkat, "Educating students to work with diverse communities -building reflexive practice," International Journal of Innovation, Creativity and Change, Vol. 3, No. 4, pp. 144-176, 2018.
- [22] S. S. Gao, M. C. Sung, and J. Zhang, "Risk management capability building in SMEs: A social capital perspective," International Small Business Journal, Vol. 31, pp. 677-700, 2013.
- [23] N. Oelze, S. U. Hoejmose, A. Habisch, and A. Millington, "Sustainable development in supply chain management: The role of organizational learning for policy implementation," Business Strategy and the Environment, Vol. 25, pp. 241-260, 2016.
- [24] L. Aarikka-Stenroos, L. Aaboen, B. Cova, and A. Rolfsen, "Building B2B relationships via initiation contributors: Three cases from the Norwegian-South Korean international project business," Industrial Marketing Management, Vol. 68, pp. 74-85, 2018.
- [25] M. J. Keith, G. Anderson, J. Gaskin, and D. L. Dean, "Team Video Gaming for Team Building: Effects on Team Performance," AIS Transactions on Human-Computer Interaction, Vol. 10, pp. 205-231, 2018.
- [26] A. Zimmermann, I. Oshri, E. Lioliou, and A. Gerbasi, "Sourcing in or out: Implications for social capital and knowledge sharing," The Journal of Strategic Information Systems, Vol. 27, pp. 82-100, 2018.

- [27] S. Y. Tse, D. T. Wang, and T. J. Zhang, "The effects of distributor relationship commitment and relationship exploration on opportunism: The moderating roles of exchange uncertainties and network factors," Industrial Marketing Management, Vol. 83, pp. 301-313, 2019.
- [28] R. E. Hoskisson, W. P. Wan, D. Yiu, and M. A. Hitt, "Theory and research in strategic management: Swings of a pendulum," Journal of Management, Vol. 25, pp. 417-456, 1999.
- [29] A. Raj, I. Biswas, and S. K. Srivastava, "Designing supply contracts for the sustainable supply chain using game theory," Journal of cleaner production, Vol. 185, pp. 275-284, 2018.
- [30] R. Dubey, A. Gunasekaran, T. Papadopoulos, and S. J. Childe, "Green supply chain management enablers: Mixed methods research," Sustainable Production and Consumption, Vol. 4, pp. 72-88, 2015.
- [31] C. Blome, D. Hollos, and A. Paulraj, "Green procurement and green supplier development: antecedents and effects on supplier performance," International Journal of Production Research, Vol. 52, pp. 32-49, 2014.
- [32] M. A. Berry and D. A. Rondinelli, "Proactive corporate environmental management: A new industrial revolution," Academy of Management Perspectives, Vol. 12, pp. 38-50, 1998.
- [33] J. Bundy, R. M. Vogel, and M. A. Zachary, "Organization-stakeholder fit: A dynamic theory of cooperation, compromise, and conflict between an organization and its stakeholders," Strategic Management Journal, Vol. 39, pp. 476-501, 2018.
- [34] J. Li and Z. Lin, "Social benefit expenditures and stagflation: Evidence from the United States," Applied Economics, Vol. 48, pp. 5340-5347, 2016.
- [35] D. S. Preston, D. Q. Chen, M. Swink, and L. Meade, "Generating supplier benefits through buyerenabled knowledge enrichment: A social capital perspective," Decision Sciences, Vol. 48, pp. 248-287, 2017.
- [36] H. W. Marsh, "Confirmatory factor analyses of multitrait-multimethod data: Many problems and a few solutions," Applied Psychological Measurement, Vol. 13, pp. 335-361, 1989.
- [37] R. Dubey, A. Gunasekaran, P. Helo, T. Papadopoulos, S. J. Childe, and B. Sahay, "Explaining the impact of reconfigurable manufacturing systems on environmental performance: The role of top management and organizational culture," Journal of Cleaner Production, Vol. 141, pp. 56-66, 2017.
- [38] N. Nalpas, L. Simar, and A. Vanhems, "Portfolio selection in a multi-moment setting: A simple Monte-Carlo-FDH algorithm," European Journal of Operational Research, Vol. 263, pp. 308-320, 2017.
- [39] M. Hanke, S. Penev, W. Schief, and A. Weissensteiner, "Random orthogonal matrix simulation with exact means, covariances, and multivariate skewness," European Journal of Operational Research, Vol. 263, pp. 510-523, 2017.
- [40] F. Ye, X. Zhao, C. Prahinski, and Y. Li, "The impact of institutional pressures, top managers' posture and

*reverse logistics on performance—Evidence from China,*" International Journal of Production Economics, Vol. 143, pp. 132-143, 2013.

- [41] T. K. Eltayeb, S. Zailani, and T. Ramayah, "Green supply chain initiatives among certified companies in Malaysia and environmental sustainability: Investigating the outcomes," Resources, Conservation and Recycling, Vol. 55, pp. 495-506, 2011.
- [42] J. Hall, "Environmental supply chain dynamics," Journal of Cleaner Production, Vol. 8, pp. 455-471, 2000.