The effect of Green Supply Chain management on Environmental Performance: Evidence from Bangladesh

Md. Alauddin, Md. Iftekhar Arif

Assistant Professor
Department of Business Administration International Islamic University Chittagong
Assistant Professor
Institute of Education and Research University of Chittagong

Abstract
This study aims to examine the relationship between green supply chain management (GSCM) practices and environmental performance (ENP) in Bangladesh's manufacturing industry. Data were gathered from 220 managers using survey methods. The results show that GSCM techniques have a beneficial impact on ENP. The findings also show a strong correlation between green marketing and ENP. Additionally, this study will support the implementation of GSCM methods by supply chain managers, policy makers, and practitioners in order to enhance ENP. The implications of GSCM are examined, along with suggestions for further study.

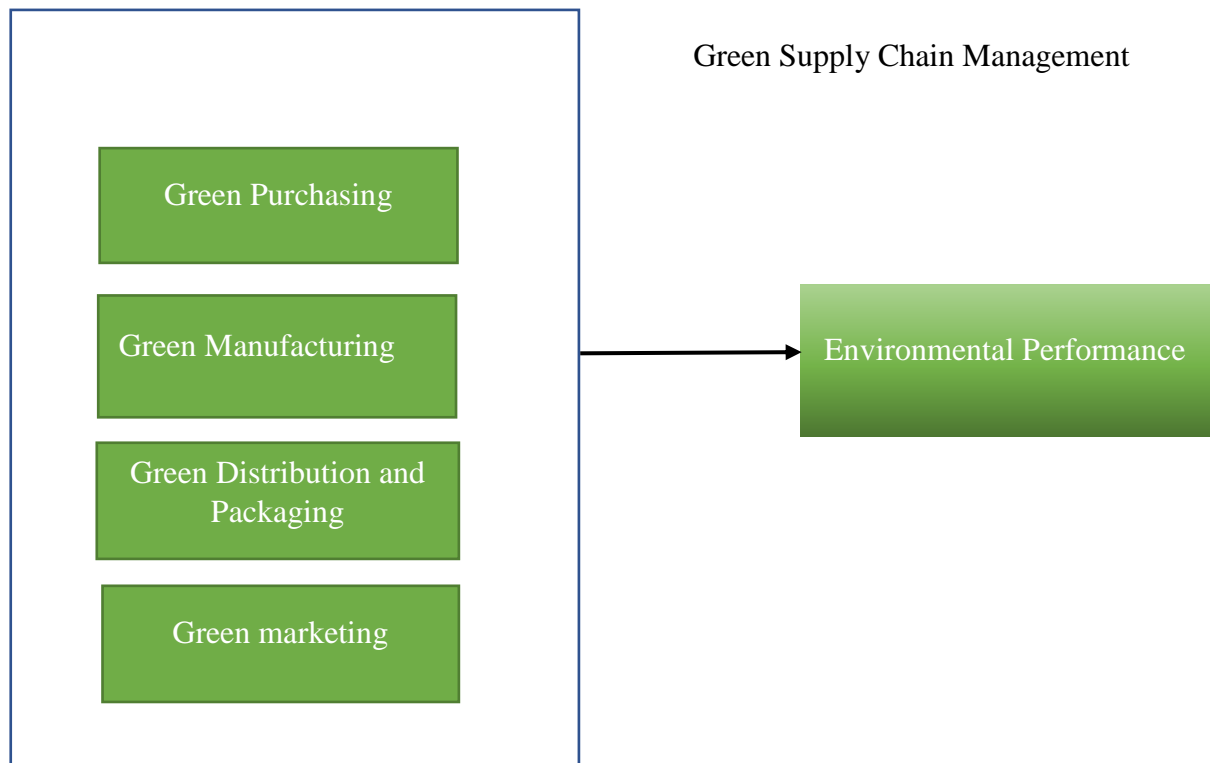*Keywords*: Green purchasing (GPU), Green manufacturing (GMF), Green distribution and packaging (GDP), Green marketing (GMK), Environmental performance (ENP)

Introduction
In recent years, researchers and professionals have been paying more and more attention to sustainability. Rapid industrial change has resulted in harmful environmental effects, such as the release of greenhouse gases, noxious pollutants, and chemical spills (Peng & Lin, 2008). Sustainability is likely to become a crucial component of commerce and supply chain since stakeholders are becoming more concerned about the environment and society (Golicic & Smith, 2013). In this environment, the idea of GSCM is growing and becoming more well-known (Zhu & Sarkis, 2004). In light of the supply chain, GSCM is based on environmental management best practices (Eltayeb et al., 2011). It contributes significantly to preserving ENP. Many businesses are using GSCM to satisfy stakeholder needs for environmentally sustainable goods and services, and doing so improves environmental performance (Green et al., 1998; Mirhedayatianet al., 2014). Therefore, in order to reduce emissions of greenhouse gases and solid waste, each company should be required to do GSCM assessments (Cote et al., 2008).

Bangladesh is growing economy country. Some rapidly expanding manufacturing industries of Bangladesh are ready-made clothing, steel, and pharmaceuticals. These industries, sadly, contribute to industrial pollution. The practice of GSCM is urgently required in light of Bangladesh's increasing environmental pollution rate today. The GSCM procedures can assist in meeting the needs of domestic and foreign customers as well as in preserving the environment. Although the importance of GSCM in decreasing pollution is well acknowledged (Eltayeb & Zailani, 2010), it is still not widely used, especially to reduce waste in the industrial sector. Many academics have already studied the relationship between GSCM and corporate performance (Green et al., 2012; Novitasari & Agustia, 2021; Cankaya & Sezen, 2018). A little amount of research has, however, been done in relation to Bangladesh. As a result, the primary objective of this study is to look at how GSCM and ENP interact in manufacturing firms. This study investigates the relationship between GSCM and ENP based on RBV. We add to the prevailing literature by analyzing how GSCM affects ENP in Bangladesh's manufacturing sector.

Figure: Conceptual framework

Green Supply Chain Management

Green Purchasing

Green Manufacturing

Green Distribution and Packaging

Green marketing

Environmental Performance

Literature Review
Green SCM

A supply chain is described as a group of businesses cooperating to accomplish a common objective (Chan & Chan, 2010). According to Srivastava (2007), the term green supply chain management (GSCM) encompasses "green design, green purchasing, green production, green distribution, logistics, marketing, and reverse logistics". The GSCM techniques assist to not only assure ENP but also to cut costs and eliminate waste (Rao & Holt, 2005). GSCM evolved as "an essential new model for firms to accomplish profit and market share objectives by reducing their environmental risks and consequences while boosting their ecological efficiency" according to (Zhu et al., 2005, p. 450).

Green Purchasing (GPU)

GPU is defined as "encompass all environmental considerations regarding supply management decisions, along with traditional purchasing factors such as product price and supplier location" (Yook et al., 2018, p.1). GPU that lessens waste sources and encourage recycling and reuse of materials (Min & Galle, 2001). It may be characterized as incorporating ecological issues and concerns into the purchasing process (Rao & Holt, 2005). It is described as the practice of purchasing environmentally friendly goods or materials and cultivating trustworthy connections with suppliers (Green et al., 2012). A firm manager cannot ensure proper GSCM without GPU.

Green manufacturing

The main focus of GSCM operations is green manufacturing. According to (Maruthi & Rashmi, 2015, p. 3351), "Green manufacturing is a method for manufacturing that minimizes waste and pollution through product and process design. It aims to create environmentally friendly goods with a minimum amount of resources and waste (Routroy, 2009).

Green Marketing

Green marketing is a strategy used by businesses to offer clients with eco-friendly goods and services that have minimal negative social effects (Grewal & Levy, 2008). Menon and Menon (1997) state that "green marketing refers to the process of conceiving and conducting entrepreneurial and ecologically advantageous activities with the purpose of earning revenue by delivering exchanges that fulfil firm's economic and social performance objectives" (p. 54). GMK entails meeting human needs while having as little of an adverse impact on the environment as possible (Singh & Pandey, 2012). It is a system that guarantees all-around sustainable development.

Green distribution and Packaging

The performance of GSCM is ensured by the strategic function that green distribution plays. It covers all initiatives to reduce environmental harm and waste through shipping (Gao et al., 2009). Green distribution entails providing the goods to the appropriate customers at the appropriate locations, primarily individuals who are ecologically conscious (Yazdanifard & Mercy, 2011). Green packaging is a crucial element of the value chain since it directly impacts the environment and is interconnected with the other parts of the chain (Sarkis, 2003). The concepts of green packaging include "simple packaging, biodegradability, no unnecessary packaging, the use of paper wrappings, decreased amounts of polystyrene, sterilized wrapping materials, easy disassembly, and the use of simplified packaging materials," according to (Kung et al., 2012, p.115).

The environmental performance

It often focuses on energy conservation as well as lowering waste, pollution, and emissions. The environmental performance also includes lowering air emissions, water wastes, and solid wastes, as well as lowering consumption of hazardous materials, while combining supply chain performance with industrial sectors (Zhu, et al., 2005). Measures of ENP included indications of energy conservation including lowering emissions, waste, and pollution (Zhu et al., 2005; Lee et al., 2012). Reduced air emissions, wastewater generation, solid waste generation, consumption of hazardous products, and the frequency of environmental mishaps are all ways that a business might improve its environmental performance (Ninlawan et al., 2010).

Research Hypothesis
Green Purchasing and Environmental Performance

Green purchasing is the practice of buying environmentally friendly goods and establishing stronger relationships with green suppliers (Green et al., 2012). The collaboration with the supplier is intended to create ecologically beneficial items (Zhu et al., 2008). Green purchasing refers to the use of environmentally friendly raw materials, the certification of suppliers' environmental performance, and the fulfilment of environmental goals (Min & Galle, 2001) Additionally, green buying is necessary for efficient GSCM since it ensures eco-friendly products and services (Yang & Zhang, 2012) By utilizing long-lasting, recyclable, and reusable components, it seeks to minimize any harmful environmental effects throughout the production and shipping processes (Sarkar, 2002). Previous research suggested that a supplier for ecological products might help a company operate better (Qin et al., 2017). Therefore, we may claim that
H1: GPU has a positive influence on ENP

Green manufacturing and environmental performance

In order to improve production efficiency, a company must be able to use modern manufacturing technologies, consume less energy, and utilize less toxic chemicals and hazardous materials (Größler & Grübner, 2006). GMF standards provide for as little environmental harm as possible, waste recycling, and waste disposal during the production process (Gao et al. 2009). The use of green manufacturing techniques can result in less waste, less energy and resource use, and less environmental contamination. According to prior research, GMF can assist the company in enhancing ENP (Sezen & Cankaya, 2013; Cankaya, & Sezen, 2018). Consequently, we can suggest that
H2: GMF has a positive influence on ENP

Green distribution and packaging and environmental performance
The goal of green distribution is to prevent environmental harm and destruction during shipping (Gao et al., 2009). By minimizing environmental harm, GSC will enable businesses to project a more favourable image to stakeholders, customers, society, community members, and the government (Cankaya & Sezen, 2018). On the other hand, "simple packaging, biodegradability, no superfluous packaging, the use of paper wrappings, etc." is among the green packaging principles (Kung et al., 2012, p.115). Previous research reveals a beneficial relationship between GDP and ENP. (Zhu & Sarkis, 2007)
H3: GDP has a positive influence on ENP

Green marketing and environmental Performance
In order to lessen or prevent negative environmental effects, green marketing is a crucial component of environmental management practices (González-Benito & González-Benito, 2005). Companies implement green marketing strategies to provide clients with environmentally friendly products that are also good for society (Grewal & Levy, 2008). GMK might result in the development of new goods and procedures that help the environment be cleaned up, heal, and recover (Rehman et al., 2021). Green marketing techniques improve ENP results (Yu & Ramanathan, 2015). Consequently, we can suggest that
H4: GMK has a positive influence on ENP

Research Methodology
4.1 Population and sampling
The data were obtained from the manufacturing firm Bangladesh. The respondents of the study were the companies working in the ready-made garments, steel industry and electronics sectors in Bangladesh. By using face-to-face and online surveys, we gathered information from 220 respondents from manufacturing companies in Dhaka and Chittagong. A previous study shown that any sample size greater than 200 for "structural equation modelling (SEM)" based variables is appropriate for any investigation (Sultan et al., 2021). As a result, sample size is not a concern for the current investigation. The information was gathered between September 2021 and April 2022 using a convenience sampling approach. Two academics and two supply chain experts verified the instruments in the beginning in order to comprehend the factor structure. The questionnaire consisted of 22 items, each rated from "strongly disagree" to "strongly agree" on a scale of 1 to 5.

4.2 Measures
Using its 22 items, GPU, GMF, GDP and GMK were adopted from (Cankaya & Sezen, 2018) and ENP was adopted from (Zhu et al., 2008) are all measured on a 5-point Likert scale.

4.3 Common method bias (CMB)
CMB problems are likely to occur since this study obtained information on both independent and dependent components using data from a single source. The single factor test by Harman was used to assess CMB (Podsakoff et al., 2003). It could improve the relationship between the variables being measured (Conway & Lance, 2010). The results show that one factor may account for 31% of the variation, which is less than the maximum criterion of 50% that ensures there are no issues with CMB (Podsakoff & Organ, 1986).

4.4 Sample Characteristics and data collection
A survey was used to gather information on the research hypothesis. The questionnaire was distributed to the management of industrial businesses. Those that responded to the poll were senior executives (Managers, general managers or top executives).

Table-1: Sample Characteristics

Characteristics of firms	Classifications	Frequency	Percentage
	Less than 100	10	4.5
Firm size (Number of employees)	101-500	85	38.63
	501-1000	95	43.18
	1001-2000	15	6.8
	Above 2000 Total	15 220	6.8
	Less than 5	20	9.09
	6-10	50	22.72
Firm age (year)	11-15	75	34.09
	15-20	45	20.45
	Above 20 Total	30 220	13.63
Job Position	Purchasing Manager Plant manager Operation manager Supply chain manager Logistics manager total	45 30 50 70 25 220	20.45 13.63 22.72 31.81 11.36

Characteristics of the sample (N = 220)

Table 1 provides a summary of the business size, firm age, and job position characteristics of the research sample's (n = 220) demographics. Notably, 38.63% of the firms had employees in the range of 101-500, while 95 (43.18%) of the organizations had 501-1000 employees. Only 4.5 percent of the company had less than 100 workers. The proportion of firm age between the ages of 11 and 15 that is greatest is 34.09%. Only 9.09% of businesses were under 5 years old. 30 plant managers, 45 purchasing managers, 50 operations managers, 70 supply chain managers, and 25 logistics managers were among the respondents to our study.

Analysis and Results
5.1 Measurement Model
In order to ascertain the constructs' reliability, validity, and dimensionality, this study employed (CFA) using IBM AMOS version 24. The factor loadings of all the constructions were over 0.7, according to table 2. Cronbach alpha values of all constructs are found over 0.7, representing the reliability of constructs' measure (Nunnally & Bernstein, 1967). Convergent validity is ensured by the AVE of each construct being above 0.5 and the composite reliability value of each construct being above 0.7. (Hair et al., 2010, 2017). The square root of the AVE of any latent variable is larger than its correlation with other latent variables, according to testing of discriminant validity. As a result, neither convergent nor discriminant validity was problematic (Hair et al., 2014). The measurement model's unidimensionality is supported by the goodness-of-fit indices (CMIN/DF=2.76, CFI=0.925, GFI=0.826, TLI=0.912, SRMR=0.065, RMSEA=0.056) (Hair et al., 2010; Afsar et al., 2020). Table 3 demonstrates how closely related the constructs are to one another. However, none of the correlations are more than 0.9, probing that these variables are not multicollinear (Tabachnick & Fidell, 2012).

Table-2: Summary of the Measurement Model

Constructs	Items	FL	AVE	CR	α
Green Purchasing	GPU1	.849	.598	.851	.850
	GPU2	.709			
	GPU3	.887			
	GPU4	.900			
Green Manufacturing	GMF1	.948	.752	.930	.932
	GMF2	.827			
	GMF3	.876			
	GMF4	.960			
Green distribution and Packaging	GDP1	.930	.749	.922	.919
	GDP2	.909			
	GDP3	.839			
	GDP4	.893			
Green Marketing	GMK1	.813	.750	.937	.937
	GMK2	.893			
	GMK3	.896			
	GMK4	.980			
	GMK5	.837			
Environmental performance	ENP1	.950	.759	.940	.942
	ENP2	.835			
	ENP3	.837			

	ENP4	.942			
	ENP5	.904			

Table-3: Descriptive statistics and correlation matrix for the study constructs from CFA

Construct	Mean	SD	GMK	ENP	GDP	GMF	GPU
Green Marketing	0.937	0.750	0.866				
Environmental performance	0.940	0.759	0.453***	0.871			
Green distribution and packaging	0.922	0.749	0.235**	0.434***	0.865		
Green manufacturing	0.923	0.752	0.409***	0.398***	0.248***	0.867	
Green Purchasing	0.862	0.616	0.146*	0.335***	0.247**	0.205**	0.774

***Correlation is significant at p < 0.001, ** p < 0.01, * p < 0.05**

Legends: "GMK=Green marketing, ENP= Environmental performance, GDP= Green distribution and packaging, GMF= Green manufacturing, GPU= Green purchasing".

5.2 Hypothesis assessment

In order to evaluate the study framework and hypotheses, we employed structural equation modelling. Table 4 displays the outcomes for the structural model. According to the measurements of overall fit, the structural model fit was satisfactory (CMIN/DF=2.75, CFI= 0.925, GFI= 0.826, TLI= 0.912, SRMR= 0.065) (Hair et al., 2010). Table 4 demonstrates that GPU positively influence on ENP (β= 0.231, CR=3.078) and green marketing is strongly associated with ENP (β= 0.334, CR=4.443), again GDP is positively related to ENP (β= 0.313, CR=4.459) and finally GMF is significantly linked to ENP (β= 0.163, CR=2.69). Thereby, hypothesis H1, H2, H3 and H4 are supported.

Table-4: Hypothesis testing

Hypothesis	Path relationships	β	S.E	*C.R.*	*P*-Value	Decisions
H1	Green Purchasing ➜ Environmental Performance	.231	.075	3.078	.002	Significant
H2	Green Manufacturing ➜Environmental Performance	.163	.060	2.695	.007	Significant
H3	Green distribution and Packaging ➜Environmental Performance	.313	.070	4.459	***	Significant
H4	Green Marketing ➜Environmental Performance	.334	.075	4.443	***	Significant

Discussion

This study examines how GSCM affects ENP based on the resource-based view (RBV) and GSCM literature. In order to assess the performance of the environment, we have looked at several hypotheses. We started by looking at how green purchasing has affected ENP. The findings support this idea, showing that green purchasing significantly and favourably affects ENP. A strong GPU is crucial to ensuring GSCM. A company manager may assure it by working with green suppliers. Managers should retain their connections

with eco-friendly suppliers and work to improve their relationships with them. Green purchasing is crucial for improving the results of ENP (Green et al., 2012). Second, we looked at how green manufacturing affected ENP. No business can attain eco-sustainability without effective green manufacturing. The results demonstrate that GMF has a favorable impact on ENP. We also looked at the impact of green packaging and distribution on ENP. One important aspect of the GSCM that increases ENP is GDP. Our findings show that GDP and ENP are considerably and favorably correlated. Green packaging is produced using an environmentally conscious packaging approach, which lessens the impact of packaging on the environment (Cankaya & Sezen, 2018). Our findings confirm those of earlier studies. Finally, we looked at GMK impact on ENP. We discover that GMK has a positive correlation with ENP and that it has the strongest influence (B=.334) on environmental performance. The findings of our results are supported by Shang et al. (2010). Previous studies have shown that GSCM enhances ENP (e.g. Geng et al., 2017; Zhu & Sarkis, 2004).

Theoretical contribution and Managerial Implication
This study will aid supply chain managers in learning more about GSCM implementation. The results show that GSCM has a good impact on ENP. Therefore, it is imperative that company managers put effective GSCM into place in order to safeguard ENP and preserve the environment. A crucial component of supply chain management is the supplier. Managers of businesses need to choose suppliers carefully. For the corporation to implement GSCM, business managers must select environmentally friendly suppliers. GSCM also uses green manufacturing as a tool. The findings suggest that GMF has to grow via careful planning, which might assist to lessen its impact on the environment.
In order to maintain environmental sustainability, company managers in Bangladesh should improve their relationships with their manufacturers, channel members, and manufacturers. GSCM can be developed if the firm managers arrange seminars, training with stakeholders on the implementation of GSCM. It will help the employees develop their green skills as we as stakeholders gains knowledge on GSCM. To ensure effective GSCM, green marketing is one of the major components so firm managers should take proper initiatives to develop the green marketing to enhance ENP.

Limitation and Future Research
The purpose of this study was to investigate the connection between ENP and green supply chain management. The relationship between GSCM and ENP has been explained using a model that has been put out. The results of the study showed the acceptance of all the hypotheses that ensure that GSCM is positively related to ENP. First of all, only the direct impact of GSCM on environmental performance was studied in this study. To further understand the impact of GSCM and ENP, future research can incorporate certain mediating and moderating variables. Furthermore, Bangladesh, a nation with a unique culture, was the location of the current study. Comparable study can be done in the future in other countries to track trends. In light of the use of survey methodologies in this study, it is suggested that future research combine qualitative and quantitative data to reduce the likelihood of method bias.

Reference

1. Afsar, B., Maqsoom, A., Shahjehan, A., Afridi, S. A., Nawaz, A., & Fazliani, H. (2020). Responsible leadership and employee's proenvironmental behavior: The role of organizational commitment, green shared vision, and internal environmental locus of control. *Corporate Social Responsibility and Environmental Management*, *27*(1), 297-312.
2. Cankaya, S. Y., & Sezen, B. (2018). Effects of green supply chain management practices on sustainability performance. *Journal of Manufacturing Technology Management*, *30*(1), 98-121.
3. Chan, H. K., & Chan, F. T. (2010). Comparative study of adaptability and flexibility in distributed manufacturing supply chains. *Decision support systems*, *48*(2), 331-341.
4. Choi, D., & Hwang, T. (2015). The impact of green supply chain management practices on firm performance: the role of collaborative capability. *Operations Management Research*, *8*(3), 69-83.
5. Conway, J. M., & Lance, C. E. (2010). What reviewers should expect from authors regarding common method bias in organizational research. *Journal of Business and Psychology*, *25*(3), 325-334.

6. Cote, R. P., Lopez, J., Marche, S., Perron, G. M., & Wright, R. (2008). Influences, practices and opportunities for environmental supply chain management in Nova Scotia SMEs. *Journal of Cleaner Production*, *16*(15), 1561-1570.

7. Eltayeb, T. K., & Zailani, S. (2010). Investigation on the drivers of green purchasing towards environmental sustainability in the Malaysian manufacturing sector. *International Journal of Procurement Management*, *3*(3), 316-337.

8. Eltayeb, T. K., Zailani, S., & Ramayah, T. (2011). Green supply chain initiatives among certified companies in Malaysia and environmental sustainability: Investigating the outcomes. *Resources, Conservation and Recycling*, *55*(5), 495-506.

9. Gao, Y., Li, J., & Song, Y. (2009, August). Performance evaluation of green supply chain management based on membership conversion algorithm. In *2009 ISECS international colloquium on computing, communication, control, and management*, IEEE, Sanya, pp. 237-240.

10. Geng, R., Mansouri, S. A., & Aktas, E. (2017). The relationship between green supply chain management and performance: A meta-analysis of empirical evidences in Asian emerging economies. *International Journal of Production Economics*, *183*, 245-258.

11. Golicic, S. L., & Smith, C. D. (2013). A meta-analysis of environmentally sustainable supply chain management practices and firm performance. *Journal of supply chain management*, *49*(2), 78-95.

12. González-Benito, J., & González-Benito, Ó. (2005). Environmental proactivity and business performance: an empirical analysis. *Omega*, *33*(1), 1-15.

13. Green, K. W., Zelbst, P. J., Meacham, J., & Bhadauria, V. S. (2012). Green supply chain management practices: impact on performance. *Supply chain management: an international journal*, *17*(3), 290–305.

14. Green, K., Morton, B., & New, S. (1998). Green purchasing and supply policies: do they improve companies' environmental performance? *Supply Chain Management: An International Journal*, *3*(2), 89-95.

15. Grewal, D., & Levy, M. (2008). Marketing. Boston, MA: McGraw-Hill

16. Größler, A., & Grübner, A. (2006). An empirical model of the relationships between manufacturing capabilities. *International Journal of Operations & Production Management*, *26*(5), 458-485.

17. Hair, J. F., Hult, G. T. M., Ringle, C. M., Sarstedt, M., & Thiele, K. O. (2017). Mirror, mirror on the wall: a comparative evaluation of composite-based structural equation modeling methods. *Journal of the Academy of Marketing Science*, *45*(5), 616-632.

18. Hair, J., Black, B., Babin, B. & Anderson, R. (2010). Multivariate Data Analysis (7th Edition). Upper Saddle River, NJ : Pearson Prentice Hall, Inc.

19. Kung, F. H., Huang, C. L., & Cheng, C. L. (2012). Assessing the green value chain to improve environmental performance: Evidence from Taiwan's manufacturing industry. *International Journal of Development Issues*, *11*(2), 111-128.

20. Lee, S. M., Kim, S. T., & Choi, D. (2012). Green supply chain management and organizational performance. *Industrial Management & Data Systems*, *112*(8), 1148-1180.

21. Maruthi, G. D., & Rashmi, R. (2015). Green Manufacturing: It's Tools and Techniques that can be implemented in Manufacturing Sectors. *Materials Today: Proceedings*, *2*(4-5), 3350-3355.

22. Menon, A., & Menon, A. (1997). Enviropreneurial marketing strategy: The emergence of corporate environmentalism as market strategy. *Journal of Marketing*, *61*(1), 51-67.

23. Min, H., & Galle, W. P. (2001). Green purchasing practices of US firms. *International Journal of Operations & Production Management*, *21*(9), 1222-1238.

24. Mirhedayatian, S. M., Azadi, M., & Saen, R. F. (2014). A novel network data envelopment analysis model for evaluating green supply chain management. *International Journal of Production Economics*, *147*, 544-554.

25. Ninlawan, C., Seksan, P., Tossapol, K., & Pilada, W. (2010, March). The implementation of green supply chain management practices in electronics industry. In *World Congress on Engineering 2012. July 4-6, 2012. London, UK, 2182,*1563-1568.

26. Novitasari, M., & Agustia, D. (2021). Green supply chain management and firm performance: The mediating effect of green innovation. *Journal of Industrial Engineering and Management*, *14*(2), 391-403.

27. Nunnally, J. C., & Bernstein, I. H. (1967). McGraw-Hill series in psychology. Psychometric theory. New York, NY, US: McGraw-Hill.

28. Peng, Y. S., & Lin, S. S. (2008). Local responsiveness pressure, subsidiary resources, green management adoption and subsidiary's performance: Evidence from Taiwanese manufactures. *Journal of Business Ethics*, *79*(1), 199-212.

29. Podsakoff, P. M., & Organ, D. W. (1986). Self-reports in organizational research: Problems and prospects. *Journal of Management, 12*(4), 531-544.

30. Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: a critical review of the literature and recommended remedies. *Journal of Applied Psychology*, *88*(5), 879.

31. Qin, J., Liu, X., & Pedrycz, W. (2017). An extended TODIM multi-criteria group decision making method for green supplier selection in interval type-2 fuzzy environment. *European Journal of Operational Research*, *258*(2), 626-638.

32. Rao, P., & Holt, D. (2005). Do green supply chains lead to competitiveness and economic performance? *International Journal of Operations & Production Management*, 25(9), 898-916

33. Rehman, S. U., Kraus, S., Shah, S. A., Khanin, D., & Mahto, R. V. (2021). Analyzing the relationship between green innovation and environmental performance in large manufacturing firms. *Technological Forecasting and Social Change*, *163*, 120481.

34. Routroy, S. R. I. K. A. N. T. A. (2009). Antecedents and drivers for green supply chain management implementation in manufacturing environment. *ICFAI Journal of Supply Chain Management*, *6*(1), 20-35.

35. Sarkar, A. N. (2012). Green supply chain management: A potent tool for sustainable green marketing. *Asia-Pacific Journal of Management Research and Innovation*, *8*(4), 491-507.

36. Sarkis, J. (2003). A strategic decision framework for green supply chain management. *Journal of Cleaner Production*, *11*(4), 397-409.

37. Sezen, B., & Cankaya, S. Y. (2013). Effects of green manufacturing and eco-innovation on sustainability performance. *Procedia-Social and Behavioral Sciences*, *99*, 154-163.

38. Shang, K. C., Lu, C. S., & Li, S. (2010). A taxonomy of green supply chain management capability among electronics-related manufacturing firms in Taiwan. *Journal of Environmental Management*, *91*(5), 1218-1226.

39. Singh, P. B., & Pandey, K. K. (2012). Green marketing: policies and practices for sustainable development. *Integral Review*, *5*(1), 22-30.

40. Srivastava, S. K. (2007). Green supply-chain management: a state-of-the-art literature review. *International Journal of Management Reviews*, *9*(1), 53-80.

41. Sultan, P., Wong, H. Y., & Azam, M. S. (2021). How perceived communication source and food value stimulate purchase intention of organic food: An examination of the stimulus-organism-response (SOR) model. *Journal of Cleaner Production*, *312*, 127807.

42. Tabachnick, B.G., & Fidell, L.S. (2012). Using multivariate statistics (6th ed.). New York, NY, U.S.A: Pearson Education, Inc.

43. Yang, W., & Zhang, Y. (2012). Research on factors of green purchasing practices of Chinese. *Journal of Business Management and Economics*, *3*(5), 222-231.

44. Yazdanifard, R., & Mercy, I. E. (2011, June). The impact of green marketing on customer satisfaction and environmental safety. In *2011 International Conference on Computer Communication and Management, 5(1),* 637-641.

45. Yook, K. H., Choi, J. H., & Suresh, N. C. (2018). Linking green purchasing capabilities to environmental and economic performance: The moderating role of firm size. *Journal of Purchasing and Supply Management*, *24*(4), 326-337.

46. Yu, W., & Ramanathan, R. (2015). An empirical examination of stakeholder pressures, green operations practices and environmental performance. *International Journal of Production Research*, *53*(21), 6390-6407.

47. Zhu, Q., & Sarkis, J. (2004). Relationships between operational practices and performance among early adopters of green supply chain management practices in Chinese manufacturing enterprises. *Journal of Operations Management*, *22*(3), 265-289.
48. Zhu, Q., & Sarkis, J. (2007). The moderating effects of institutional pressures on emergent green supply chain practices and performance. *International Journal of Production Research*, *45*(18-19), 4333-4355.
49. Zhu, Q., Sarkis, J., & Geng, Y. (2005). Green supply chain management in China: pressures, practices and performance. *International Journal of Operations & Production Management*, *25*(5), 449-468.
50. Zhu, Q., Sarkis, J., & Lai, K. H. (2008). Confirmation of a measurement model for green supply chain management practices implementation. *International Journal of Production Economics*, *111*(2), 261-273.
51. Zhu, Q., Sarkis, J., Cordeiro, J. J., & Lai, K. H. (2008). Firm-level correlates of emergent green supply chain management practices in the Chinese context. *Omega*, *36*(4), 577-591.