

Determining the Environmental Performance of Indonesian SMEs influence by Green Supply Chain Practices with Moderating Role of Green HR Practices

Kittisak Jermstittiparsert^{#1, 2*}, Parinya Siriattakul^{#3}, Samanan Wattanapongphasuk^{#4}

¹Department for Management of Science and Technology Development, Ton Duc Thang University, Ho Chi Minh City, Vietnam

²Faculty of Social Sciences and Humanities, Ton Duc Thang University, Ho Chi Minh City, Vietnam
Corresponding author: kittisak.jermstittiparsert@tdtu.edu.vn

^{3,4}Political Science Association of Kasetsart University, Bangkok, Thailand

³siriattakul@hotmail.com

⁴samanan24@gmail.com

Abstract--In today's globally competitive world the phenomenon of Green Supply Chain Management (GSCM) has emerged and gained attention for environmental concerns around the globe. The research study aims to examine the relationship between GSCM and environment related outcomes among Indonesian manufacturing SMEs. Literature review depicted that there are various important and crucial factors today, important in determining the environmental performance. The current study entails the green HRM practices as moderating effect between dependent and independent constructs of the study. The data was collected by questionnaire from SMEs of Indonesia and examined the collected responses by using SMART-PLS. Interestingly; findings have been shared by the study that green supply chain practices influence the environmental performance. The study found that moderating role of Green HRM was not observed between green purchasing and environmental performance but green HR practices moderate the relationship between green logistics and environmental performance.

Key words: Environmental Performance, Green Supply Chain Practices, Green HR Practices.

1. Introduction

Green supply chain management is concern of multinational companies around the world these days due to its long lasting and strategic benefits. Multinational companies focus on improvement of

their supply chain to become effective and now struggle to greening the supply chain for gaining long term strategic objectives. Global competition has increased the concerns of firms to reduce cost, increase in growth and sustainability of environment [1]. Academician has embarked on the issue of green aspect and need to green the supply chain activities for environmental friendly activities since last decade. Number of firms has considered the concept of environmental friendly supply chain activities while focuses on environmental issues. The greening supply chain activities include green procurement, green production or manufacturing, distribution and green logistics [2]. Firms plan for adopt green supply chain activities for reduction in environmental impact and to increase competitive edge for meeting the demands of stakeholders, therefore, firms develop policies for adoption of environmental considerations. Now customers have become much more aware with green products and prefer to use green products as they believed to environmental friendly [3, 4].

Organizations adopt new value added activities in order to gain benefits and competitive advantage to manage environmental problems and for the purpose they try to avail new opportunities to adopt green practices for managing business operations including production, supplies, products and logistics. For

achievement of above stated exemplary goals firms adopt such production methods to get clean and environment friendly products and green managerial practices [3]. The organizations worldwide face global competitive environment in services or manufacturing strive to sustain their efficiency in managing global supply chain [5]. Researchers have stated that green supply chain management practices include integrated environmental thinking, green product design, resources and selection, process of manufacturing and final product delivery which includes green logistics. Researchers have stated the role of green supply chain management for sustainable development of industrial supply chain management practices [5].

Currently in business world eco-friendly product image has become important factor which integrate processes, technological adoption and systems to implement the business [6]. The firms found to be more sustainable in their practices as compare to their competitors as green practices are effective in achievement of savings and profits. The additional benefits can be generated by securing environment from pollution by adopting green supply chain activities for healthier life. The adoption of green practices in business operations brings benefits at large scale for society and it shows socially responsible side of firms [7]. The literature on green activities depicts that firms define green business activities for maximizing wealth, growth and same time preserve environment by production, design and logistics management [6]. The literature and empirical studies have shown that environmental concerns and sustainability plays critical role in organizational survival and competitiveness edge in highly competitive business environment in global market [8]. Firms strive to implement green managerial practices for effectiveness of company's survival and improvement for sustainable performance [8]. The adoption of green practices for supply chain has grown rapidly among highly competitive firms as being green is understood as source of competitiveness. Firms follow EMS system (Environmental Management System) for developing and monitoring environmental policies for green performance in firms to reduce waste and emission in atmosphere, it also helps to implement green practices within various functions of firms for better

performance in financial and environmental aspect [9, 10].

The researcher in current study intends to consider two important business functions supply chain and HR management to determine the environmental performance of firms in Indonesian manufacturing industry.

Studies have been conducted on retail store operators as supply chain is one of important factor in success of firms and it found to be contributive in consumption patterns. The studies have been conducted on green supply chain management investigation in manufacturing sector. The studies have shown that in retailer or manufacturing sector green supply chain activities have notable and considerable impact on performance of firms [11, 12]. The researchers have stated that retailers or downstream supply chain or distribution is less discussed and empirically investigated in supply chain aspect [13, 14]. The concerns for environmental issues due to business activities and taking initiatives for greening supply chain has emerged the concept of green supply chain management. Firms strive for integrating greening aspect in their business operations and supply chain on pressure of internal and external stakeholders for gaining competitive edge and long term benefits [15, 16]. The researchers have argued that firms in business of food items must prepare and serve environment friendly products for consumption and also must be able to demonstrate environmental practices in supply chain activities [17].

The firms are required to upgrade and green their upstream supply chain activities and integrate them with environmental criteria and focus on downstream supply chain activities including logistics to be green and it must in greater benefits of consumers [18]. Further, researchers have reported the gap in implementation of sustainability of supply chain and retailers must focus on supply chain management. In recent years firms has focused on green supply chain phenomenon and it has increased in implementation and further various measurement scale for different constructs have been reported in studies for measuring the green supply chain management [12, 19, 20]. The researchers have given different

viewpoints in greening the retail activities and processes link of stores specially supply chain related including logistics and purchasing related processes must be followed and conducted under greening aspect [21]. The above discussion and previous researchers focused on green purchasing [22] and sustainability aspect and it is justified to discuss green supply chain management and its impact on environmental performance as current study entails to examine the relationship.

The researcher has intend to investigate the relationship between independent variables green purchasing, green logistics and dependent variable environment performance with moderating role of green HR practices in Indonesian industry.

2. Literature Review:

Since 1990s firms voluntarily implemented environmental friendly activities in conducting their business operations for improvement in environmental performance and later many of the organizations adopted green activities in response to the pressures from internal and external stakeholders and to meet the regulations related to environmental issues. The researchers have debated on the relationship between environmental performance and financial performance, the argument against the relationship highlights the rise in additional cost, higher prices and it may cause reduction in competitiveness [23]. Contrary, environmental management raise innovation (product and process innovation) to improve environmental performance and found to be influential for sales and to reduce cost [24].

The above shortly discussed phenomenon and conflict in argument can be accessed through resource based view theory for resolve the debate. The RBV argues that the performance of firm significantly depends on organizational resources, capabilities and technological adoption in improvement of quality and reduction in cost, further greening aspect of supply chain or business activities play significant role in environmental performance which improve productivity and minimize environmental issues [24]. Further, Porter hypothesis is also suggested by various researcher to support their argument as above stated, Porter hypothesis

suggests that innovation can be made on the environmental based regulations and it can offset the cost incurred further it can improve efficiency of firms [23]. According to economic theory, it is argued that environmental performance of firm based on cost and benefit relationship to meet the regulations and firms develop their environmental management strategy [24, 25]. There is conflict between firms to gain financial gains by implementation of environmental management strategy but all of the firms couldn't enhance performance only by implementing their environmental strategy [3].

3. Environmental Performance:

Firms of manufacturing sector increasingly focus on environmental performance and economic performance as they facing competition from global market, community and regulatory authority. Internal and external stakeholders have exerted pressure on firms to adopt environment friendly production or business activities specially related to supply chain management. As a result firms found to be adopting production methods and techniques which are environment friendly and reduce the impact of their products on environment [26]. Organizations has to establish their positive environmental image therefore they assess their purpose of existence in which they present their environmental concerns and declare their activities to be taken for better environment, as these initiatives must be able add value to core business programs. Various approaches adopted in supply chain and other business activities including cleaner production, environment management and environment friendly efficiency have been considered for implementation of green management practices [27-29].

All business activities specifically supply chain management plays important and crucial role in environment as SCM has impact on product life cycle and environment. Greening the SCM has emerged as an important phenomenon which impact performance of firms including environmental performance and it found to be influential for eco efficiency aspect of the firms [30]. Supply chain activities and processes impact on environment and economic performance of firms. Previous studies have investigated relationship

between environmental and economic performance [13, 30]. Researchers have stated that measuring green performance separately economic and environmental constructs [30]. Further researchers have conceptualized these constructs differently as one argument is proposed that environmental performance criteria server as order qualifiers to be fulfilled [31]. Economic performance relates to the financial position of firms as firms operating in loss or not earning profit will not survive longer. Accordingly; it is expected as previous research also indicated that environmental performance influence economic performance.

3.1. Green purchasing and Environmental Performance:

Green purchasing or procurement is stated as an important factor in green supply chain management which must be environmentally friendly. Firms must be able to make purchasing while considering that it must not negatively affect environment so organizations must be aware of environmental issues before they make purchasing and they must be able to consider that in green purchasing phenomenon firms must be consider waste reduction, recycling, re-usage of material and green logistics [4, 32]. For green supply chain activities firms prefer to purchase raw material which should be influential in reduction of environmental footprints [33]. The reduction of negative effects on environment due to operational supply chain activities is required by stakeholders and firms focus on sustainability on production to have lower impact on environment [4]. Firms have focused on their suppliers and procurement raw material that it must fulfill environmental regulation to become environmental friendly and performance for ensuring that product must be produced and supplied in environmentally friendly manners and doesn't harm or violate any environmental regulations [31].

The aim of green supply chain such as procurement and production is reduce raw material cost and production cost with considering the reuse and recycling facility. The literature has depicted concept of 3R; which includes Reuse, Reduce and Recycle. The reuse of material to reduce cost, reduce the cost during business operation activities and recycle

products to reduce pollution and produce environment friendly products. The efficient production and procurement enable firms to gain competitive edge in highly competitive environment. For gaining long term profit and benefits all members of supply chain activities must take responsibility and participate through their effective efforts to meet environmental friendly products and services [34].

The implementation of green aspect in supply chain activities found to be expensive and its contribution for economical performance which includes cost reduction is disposal, conservation of resources and building the image of organization that positively impact the competitive position of firm. The green purchasing process includes selection of green suppliers; which refers to selection of eco-friendly raw material, products, green criteria of selection of suppliers and evaluation of supplier must be according to greening aspect [34, 35]. The researchers have stated that there is direct impact on environmental performance by investments but same time the studies have depicted that there is not direct impact on economic performance on USA sample. Contrary, the study reported that there is no positive relationship between investment and environmental performance on Chinese firm sample [34].

The current study intends to examine the relationship between green procurement and environmental performance as previous studies has mixed findings. On the basis of above discussion following hypothesis have been formulized.

***H1:** Green purchasing positively influence environmental performance at Indonesian manufacturing firms*

3.2. Green Logistics and Environmental Performance:

Various studies have been conducted on green supply chain management practices which are based on different activities associated with supply chain. Researchers have mentioned relationship between supply chain management and environmental practices [36], other researchers have focused on logistics management and greening aspect in logistics which is believed to be influential and environmental performance [37]. Various studies have examined the

GSCM practices and adopted the guidelines for adoption green practices and found to be influential for various different long term benefits. Researchers have investigated the link on Chinese textile, automobile firms, chemical and electrical and electronic industries and power generation sector for assessing the green supply chain management practices [38]. These under discussion practices include internal environmental management, greening the purchasing department, cooperation with clients, investment and eco-design which is referred as environmental friendly supply chain activities [38]. In recent years researchers have investigated green logistics practices and stated that manufacturing firms didn't consider green logistics aspect and its importance in design phase and found negative impact of logistics on environmental performance [39][61].

The extension of supply chain management which includes environmental concerns refers green supply chain management as stated by various researchers [40]. The researchers have depicted it is set of internal organizational management practices and useful for logistics management. The green logistics management has designed for environmental issues for decision making in inbound logistics management and on consumer disposal [35, 40].

Researchers have stated five green supply chain management (GSCM) practices which include integration of cross functions, eco-design, green procurement, cooperation with clients, internal management for environment and investment which used to assess the green supply chain management. The studies have found that ecological concerns plays crucial role supply chain management and now it is need of time to consider environmental concerns for managing supply chain [35, 40, 41]. Researchers have found and stated antecedents of model of green processes; which include energy and water management, management of wastage material. Further it is motivated to implement supply chain activities and these activities involve green logistics, purchasing, and cooperation with suppliers in order to be effective supply chain and to enhance the performance [4][62].

The researchers have stated that these green supply chain activities influence economical and environmental performance. The study has investigated the direction relationship between green supply chain activities and performance of firms empirically [41]. The researchers have stated that in-store activities and antecedents of green supply chain processes, which states logistical process and purchasing for strategic collaboration. Further, it is stated that specifically, energy management and green logistics constructs are related to each other. The research has shown that clear link has established that effective waste management influence performance of firms, and waste management based on related logistics operations and location of warehouse also related to effective logistics and greening the logistical operations. It is also depicted that waste management, purchasing of raw material according to green manners directly linked and logistics play crucial role, further, cooperation with suppliers also influence environmental performance. Environmental performance found to be influenced by energy resources, cooperation with suppliers for being green, purchasing and green design of product, while transportation required for raw material and to supply to end users also influence GSCM [41].

On the basis of above discussion the current study intends to investigate the relationship between independent variables including green purchasing and green logistics and dependent variable environment performance at Indonesian manufacturing firms. The following hypothesis has formulated to investigate the relationship:

H2: Green logistics positively influence the environmental performance at Indonesian manufacturing firms.

3.3. Green Human Resource Management:

Human resource is considered as key factor which contribute to the success of firm financially and non-financially as well. The researchers have shown that HR management influences the environmental performance of firms and it was establishing since mid-nineties [42]. The researchers depicted positive consequences of effective HR management on environmental performance as explored in previous

studies [43, 44]. Researchers have stated various HR practices for identified environmental values throughout the firms and to take long term benefits on the basis of effective and competitive HR and human capital [45, 46]. Researchers also stated that human resource management has influence on environmental management initiatives. Recently researchers have found empirical link and studies stated that HR practices strategically influence environmental performance; literature has stated these HR practices as Green HR management practices [47][60]. The consistent and relevant HR practices which aims to improve environment plays key role in implementing greening the organizations. The GHRM practices include different basic HR practices including green hiring, green training, green performance and green compensation [48].

Green HR practices enable firms to adopt green aspect in hiring, training, performance evaluation and compensation as green HR practice; which suggest generating synergistic effect of adopting green aspects and adoption of green practices [7]. The similar researchers have been found and suggested the Green HR practices influence sustainable performance [49][58].

On the basis of above discussion following hypothesis is formulated:

H3: Green HR practices positively influence environmental performance at Indonesian manufacturing industry.

3.4. Moderating Role of GHRM:

The greening HR phenomenon requires all employees to be aware of greening aspect and involvement of all employees is required in organization to initiate greening HR practices [44]. Each employee of the firms must consider and implement greening practices at their workplace. Green practices must be integral part of the processes and workplace; various activities such as hiring, training, compensation and performance evaluation must be kept green in order to implement GHRM practices [50][54][55][56].

A positive outcome of green HR practices should be established through effective processes [51]. Researchers have found that GHRM practices have connected to various business practices that serves as adhesives [52]. Recently researchers have stated that in order to achieve environmental performance and sustainability firms must acquire effective HR and adopt effective HR policies and practices for effective and efficient utilization of human resources. The effective HR practices enable firms to drive organization to engage in environmental behaviors which helps organizations to implement green HR practices and further influence environmental performance [53][59]. Any organization operating in business environment cannot act without involvement of employees; employees possess employee knowledge, skills, productivity and commitment towards their duties and being green and implement green HR practices [10]. Green HR practices and employee with intention to implement and adopt green aspect enhance competency with business processes, reduction in cost and waste material, eliminate any damage to environment, the greater efficiency must be achieved in order to reduce cost and adopt effective and beneficial business processes [46]. Literature has found and stated that greening function of HR plays important role in enhancing financial and environmental performance of organizations [25][57].

The current study argues that green supply chain practices influences the environmental performance, such as green purchasing and green logistics as independent variables are investigated. Further HR practices are important and crucial for success in any organization in highly competitive environment, GHRM practices believed to be influential on environmental performance at manufacturing industry of Indonesia; current study intends to investigate the moderating role between green SCM practices and environmental performance [50][51][52][53]. Therefore, on the basis of above discussion following hypothesis is formulated:

H4: GHRM practices moderate relationship between green purchasing and environmental performance

H5: *GHRM practices moderate relationship between green logistics and environmental performance*

3.5. Research Framework:

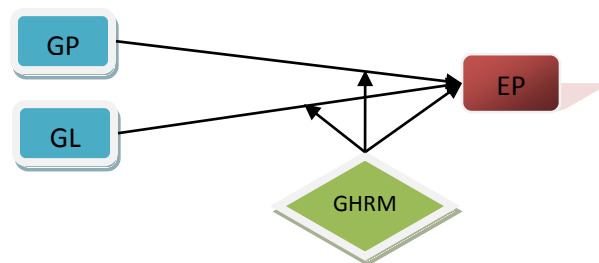


Fig 1: Research Framework

Abbreviations:

GP (Green Purchasing); **GL** (Green Logistics); **GHRM** (Green Human Resource Management); **EP** (Environmental Performance)

3.7. Research Methodology:

Measurement Scales of study:

The questionnaire was adopted of each scale to collect data from manufacturing industry of Indonesian SMEs. The survey was conducted on small and medium enterprises of Indonesia as they contribute in economy of country and provide jobs to huge population of country. The questionnaires was adopted for each scale to determine the relationship between green supply chain practices and environmental practices; the study also investigates the moderation role of green HR practices. All items of each scale was measured on five point Likert scale, where 5 represents strongly agree and 1 represent strongly disagree; as the scale was adopted from previous literature. Independent variable green production was considered as one of construct; originally derived from GSCM practices as one of the most striking practice. The scale to measure the independent constructs 'Green Purchasing' and 'Green Logistics' were adopted from the study of Zsidisin and Hendrick, (1998) and Carter et al, (2000). The constructs construct consists of four items. Environmental performance consists on six items and adopted from the study of Qinghua Zhu (2003). The moderating role of GHRM was

investigated and measurement scale of 11 items was adopted from the study of Zaid AA, (2018).

3.6. Sampling:

The study was conducted on Indonesian SMEs to measure their environmental performance based on Green SCM practices with moderating role of GHRM practices. The population of the study includes manufacturing SMEs of Indonesia which includes chemical, food and pharmaceutical industries. It has been depicted in previous studies that number of respondents for acceptable limits to be tested by using PLS-SEM. Therefore, minimum sample size for analysis required to conduct study is 80 Hair el al., (2017).

4. Statistical Analysis:

4.1. Analysis and discussion:

The collected data was analyzed by using SAMRT-PLS, while Measurement Model and Structural Equation Modeling technique was used in phases respectively. In first phase the study demonstrate the measurement model procedure to conduct analysis on collected data.

4.2. Measurement Model:

The first phase of analysis shows results of convergent validity as suggested by Gefe, Straub and Boudreasu (2000); the resulted values of both measure convergent and composite reliability must be higher than 0.7 and AVE must be higher than 0.5. The analysis is shown in the table below.

Table 1:

S#	Constructs	CR	AVE
1	GP	0.912	0.881
2	GL	0.891	0.873
3	EP	0.883	0.931
4	GHR	0.921	0.892

4.3. Discriminate Validity:

Discriminate validity and shared AVE is demonstrated in table below as part of phase 1 to determine the correlation among variables. The characteristics of discriminate validity were suggested in the study of Fornell and cha, (1994); Fornell and Lacker, (1981).

Table 2:

S#	Constructs	GP	GL	EP	GHR
1	GP	0.812			
2	GL	0.801	0.932		
3	EP	0.783	0.811	0.823	
4	GHR	0.621	0.743	0.711	0.892

5. Structural Equation Model:

5.1. Hypothesis test: Direct effects:

The second phase of the study investigates the direct relationships between constructs. The results are given in table 3; the relationship was examined on statistical grounds, the first hypothesis H1 was examined at first which investigates the influence of green purchasing on environmental performance at manufacturing industry of Indonesia. The results of PLS shows that $\beta = 4.212$, $p < 0.01$; and t-value found to be positive and higher than 1.96, and observed as 2.99; hence, H1 was accepted on statistical grounds. The second hypothesis H2 examined the relationship between green logistics and environmental performance; the results shows that $\beta = 3.201$, $p < 0.01$ and t-value was observed as 2.121 which is higher than 1.96 the cutoff point, hence H2 accepted on statistical grounds. The third hypothesis H3 investigates the relationship between GHR and environmental performance. The statistical results shows that $\beta = 3.293$ and $p < 0.01$ whereas t-value is higher than cutoff point 1.96 and observed as 2.451; therefore, H3 was accepted on statistical grounds. The Table below demonstrated the direct relationships of the study.

Table 3:

H#	Relation	β	t-value	Results
H1	GP→EP	4.212	2.99	Accepted
H2	GL→EP	3.201	2.12	Accepted
H3	GHRM→EP	3.293	2.45	Accepted

4.4. Moderating Role of GHRM: Indirect Relations

The current phase of the study examines the moderating role of green HRM practice between green SCM practices and dependent variable environmental performance at manufacturing SMEs

of Indonesia. The statistical data depicted that $\beta = -1.245$, $p < 0.01$; whereas t-value was observed as 1.456; the hypothesis H4; examines the moderating role of GHR between green purchase and environmental performance. The statistical results of the hypothesis testing demonstrated that there is no moderation between GP and EP by GHRM. Hence the H4 was rejected on statistical grounds. Further, hypothesis H5 was observed on statistical grounds as well, the H5 investigated the relationship between green logistics and environmental performance and moderation effect of GHRM. The results demonstrated as $\beta = 4.236$, $p < 0.01$; whereas t-value was found as 2.09; hence H5 was accepted statistically as all values meet the given criteria to be accepted statistically.

Table 4:

H#	Relation	β	t-value	Results
H4	GP*GHRM→EP	-1.24	1.45	Rejected
H5	GL*GHRM→EP	4.25	2.09	Accepted

6. Conclusion:

The primary task of the study was to investigate the relationship between green SCM practices adopted by manufacturing firms SMEs in Indonesia. These firms included food, pharmaceutical and chemical industries as data was collected from 80 firms from their HR managers and relative consultants. The study was focused to investigate the relationship between green SCM practice such as most striking and crucial practices were considered in the study to examine the influence on environmental performance. Environmental performance has emerged as most concerning issue among the business world. The green SCM practices considered in the present study as green purchasing and green logistics, as these two crucial supply chain nodes play important role in success of business to be green. The study presents its unique contribution by assessing moderating role of green HR practices between independent and dependent variables of the study. The results of the study found that green purchasing and logistics influence the environmental performance of firms; therefore, all direct hypotheses H1, H2 and H3 were accepted statistically. On the other hand, moderating role of green HR practices between green purchasing and environmental performance was not observed, therefore, H4 was rejected on statistical grounds. Contrary, the

hypothesis H5 was accepted on the basis of statistical grounds, as it observed moderating role of green HR practices and green logistics and environmental performance. The study assists Indonesian SMEs to be more proactive for adoption of green SMC practices and make sure employees to behave green and adopted green HR practices.

References:

- [1] Huang, X., B.L. Tan, and X. Ding, Green supply chain management practices: An investigation of manufacturing SMEs in China. *International Journal of Technology Management & Sustainable Development*, 2012. 11(2): p. 139-153.
- [2] Mafini, C. and A. Muposhi, The impact of green supply chain management in small to medium enterprises: Cross-sectional evidence. *Journal of Transport and Supply Chain Management*, 2017. 11(1): p. 1-11.
- [3] Zhu, Q., J. Sarkis, and Y. Geng, Green supply chain management in China: pressures, practices and performance. *International journal of operations & production management*, 2005. 25(5): p. 449-468.
- [4] Ariyanti, F.D. Green supply chain practices in Indonesia's industries. in *IOP Conference Series: Earth and Environmental Science*. 2018. IOP Publishing.
- [5] Yan, M.-R., K.-M. Chien, and T.-N. Yang, Green component procurement collaboration for improving supply chain management in the high technology industries: A case study from the systems perspective. *Sustainability*, 2016. 8(2): p. 105.
- [6] Anuradha, A. and A. Srivastava. The Study of Green Human Resource Management and its effect on employees' health in Automobile Industry. in *International Conference on Advances in Business, Management and Law (ICABML)*. 2018.
- [7] Rani, S. and K. Mishra, Green HRM: Practices and strategic implementation in the organizations. *International Journal on Recent and Innovation Trends in Computing and Communication*, 2014. 2(11): p. 3633-3639.
- [8] Mohamed, B. M., Rasheli, G. A., & Mwagike, L. R. (2018). Marginal Effects of Factors Influencing Procurement Records Management: A Survey of Selected Procuring Entities in Tanzania. *International Journal of Social and Administrative Sciences*, 3(1), 22-34.
- [9] Pagell, M. and A. Shevchenko, Why research in sustainable supply chain management should have no future. *Journal of Supply Chain Management*, 2014. 50(1): p. 44-55.
- [10] Young, W., et al., Changing behaviour: successful environmental programmes in the workplace. *Business Strategy and the Environment*, 2015. 24(8): p. 689-703.
- [11] Liu, Y., J.S. Srari, and S. Evans, Environmental management: the role of supply chain capabilities in the auto sector. *Supply Chain Management: An International Journal*, 2016. 21(1): p. 1-19.
- [12] Wong, C.Y., C.W. Wong, and S. Boon-Itt, Integrating environmental management into supply chains: a systematic literature review and theoretical framework. *International Journal of Physical Distribution & Logistics Management*, 2015. 45(1/2): p. 43-68.
- [13] Darkow, I.-L., B. Foerster, and H.A. von der Gracht, Sustainability in food service supply chains: future expectations from European industry experts toward the environmental perspective. *Supply Chain Management: An International Journal*, 2015. 20(2): p. 163-178.
- [14] Zhu, Q., J. Sarkis, and K.-h. Lai, Green supply chain management innovation diffusion and its relationship to organizational improvement: An ecological modernization perspective. *Journal of Engineering and Technology Management*, 2012. 29(1): p. 168-185.
- [15] Petljak, K., et al., Green supply chain management in food retailing: survey-based evidence in Croatia. *Supply Chain Management: An International Journal*, 2018. 23(1): p. 1-15.
- [16] Maloni, M.J. and M.E. Brown, Corporate social responsibility in the supply chain: an application in the food industry. *Journal of Business Ethics*, 2006. 68(1): p. 35-52.
- [17] Mokgari, M. T., & Pwaka, O. (2018). An Evaluation of Effectiveness of Oversight Committees: A Case of City of Johannesburg, Section 79 Committees. *International Journal*

- of Public Policy and Administration Research*, 5(2), 48-67.
- [18] Ashby, A., M. Leat, and M. Hudson-Smith, Making connections: a review of supply chain management and sustainability literature. *Supply Chain Management: An International Journal*, 2012. 17(5): p. 497-516.
- [19] Kirchoff, J.F., W.L. Tate, and D.A. Mollenkopf, The impact of strategic organizational orientations on green supply chain management and firm performance. *International Journal of Physical Distribution & Logistics Management*, 2016. 46(3): p. 269-292.
- [20] Miemczyk, J., T.E. Johnsen, and M. Macquet, Sustainable purchasing and supply management: a structured literature review of definitions and measures at the dyad, chain and network levels. *Supply Chain Management: An International Journal*, 2012. 17(5): p. 478-496.
- [21] Porter, M.E. and C. Van der Linde, Toward a new conception of the environment-competitiveness relationship. *Journal of economic perspectives*, 1995. 9(4): p. 97-118.
- [22] García-Sánchez, I.-M. and J.-M. Prado-Lorenzo, Greenhouse gas emission practices and financial performance. *International Journal of Climate Change Strategies and Management*, 2012. 4(3): p. 260-276.
- [23] Shrivastava, P., Environmental technologies and competitive advantage. *Strategic management journal*, 1995. 16(S1): p. 183-200.
- [24] Potoski, M. and A. Prakash, Covenants with weak swords: ISO 14001 and facilities' environmental performance. *Journal of Policy Analysis and Management: The Journal of the Association for Public Policy Analysis and Management*, 2005. 24(4): p. 745-769.
- [25] Lewis, H. and J. Gretsakis, A Global guide to designing greener goods. Design+Environment, Greenleaf Publishig Ltd, 2001.
- [26] Tatoglu, E., et al., Why do Emerging Market Firms Engage in Voluntary Environmental Management Practices? A Strategic Choice Perspective. *British Journal of Management*, 2019.
- [27] Mose, N. G. (2017). Renewable Energy and Nonrenewable Energy Consumption, Co2 Emissions and Economic Expansion Nexus: Further Evidence from Kenya. *Energy Economics Letters*, 4(4), 36-48.
- [28] Zhu, Q., J. Sarkis, and K.-h. Lai, Green supply chain management: pressures, practices and performance within the Chinese automobile industry. *Journal of Cleaner Production*, 2007. 15(11-12): p. 1041-1052.
- [29] Seuring, S. and M. Müller, From a literature review to a conceptual framework for sustainable supply chain management. *Journal of Cleaner Production*, 2008. 16(15): p. 1699-1710.
- [30] Min, H. and W.P. Galle, Green purchasing practices of US firms. *International journal of operations & production management*, 2001. 21(9): p. 1222-1238.
- [31] Kronborg Jensen, J., Product carbon footprint developments and gaps. *International Journal of Physical Distribution & Logistics Management*, 2012. 42(4): p. 338-354.
- [32] Syakila, N., The Influence of Green Supply Chain Management Practices on Firm Competitiveness Performances. 2016.
- [33] Njegovanovic, A. (2018). Hilbert Space/Quantum Theory of the Financial Decision and Role of the Prefrontal Cortex with a View to Emotions. *International Journal of Social and Administrative Sciences*, 3(1), 42-54.
- [34] Huang, X., B.L. Tan, and X. Ding, An exploratory survey of green supply chain management in Chinese manufacturing small and medium-sized enterprises: Pressures and drivers. *Journal of Manufacturing Technology Management*, 2015. 26(1): p. 80-103.
- [35] Geng, R., S.A. Mansouri, and E. Aktas, The relationship between green supply chain management and performance: A meta-analysis of empirical evidences in Asian emerging economies. *International Journal of Production Economics*, 2017. 183: p. 245-258.
- [36] Musti, B. M. (2016). The Effect of Exchange Rate Changes on Consumer Prices in Nigeria: Evidence from VECM Model. *The Economics and Finance Letters*, 3(3), 30-38.
- [37] Abdullah, N., N. Ab Halim, and S. Yaakub, REVERSE LOGISTICS: PRESSURE FOR ADOPTION AND THE IMPACT ON FIRM'S PERFORMANCE. *International Journal of Business & Society*, 2014. 15(1).

- [38] Lee, V.-H., et al., Creating technological innovation via green supply chain management: An empirical analysis. *Expert Systems with Applications*, 2014. 41(16): p. 6983-6994.
- [39] Clair, J. and J. Milliman, Best environmental HRM practices in the US, in *Greening People 2017*, Routledge. p. 49-73.
- [40] Jackson, S.E. and J. Seo, The greening of strategic HRM scholarship. *Organization Management Journal*, 2010. 7(4): p. 278-290.
- [41] Wagner, M., 'Green' human resource benefits: do they matter as determinants of environmental management system implementation? *Journal of Business Ethics*, 2013. 114(3): p. 443-456.
- [42] Fernández, E., B. Junquera, and M. Ordiz, Organizational culture and human resources in the environmental issue: a review of the literature. *International Journal of Human Resource Management*, 2003. 14(4): p. 634-656.
- [43] Bon, T., A. Zaid, and M. Jaaron. Green human resource management, green supply chain management practices and sustainable performance. in *The International Conference on Industrial Engineering and Operations Management*, At Bandung, Indonesia. Retrieved from https://www.researchgate.net/publication/323257955_Green_human_resource_management_Green_supply_chain_management_practices_and_Sustainable_performance. 2018.
- [44] Mwanja, S. K., Evusa, Z., & Ndirangu, A. W. (2018). Influence of Corporate Social Responsibility on Firm Performance among Companies Listed on the Nairobi Securities Exchange. *International Journal of Applied Economics, Finance and Accounting*, 3(2), 56-63.
- [45] Guerci, M., A. Longoni, and D. Luzzini, Translating stakeholder pressures into environmental performance—the mediating role of green HRM practices. *The International Journal of Human Resource Management*, 2016. 27(2): p. 262-289.
- [46] Combs, J., et al., How much do high-performance work practices matter? A meta-analysis of their effects on organizational performance. *Personnel psychology*, 2006. 59(3): p. 501-528.
- [47] Haseeb, M., Iqbal-Hussain, H., Ślusarczyk, B., Jermisittiparsert, K. (2019). Industry 4.0: A solution towards technology challenges of sustainable business performance. *Social Sciences*, 8(5), 154; doi: <https://doi.org/10.3390/socsci8050154>
- [48] Longoni, A., D. Luzzini, and M. Guerci, Deploying environmental management across functions: the relationship between green human resource management and green supply chain management. *Journal of Business Ethics*, 2018. 151(4): p. 1081-1095.
- [49] Wood, G., C. Brewster, and M. Brookes, Institutions and firm level HRM practice. *Human Resource Management and the Institutional Perspective*, 2014: p. 1-14.
- [50] Jadhav, J., S. Mantha, and S. Rane. Practice bundles for integrated green-lean manufacturing systems. in *IJCA proceedings on international conference on green computing and technology ICGCT*. 2013.
- [51] Ahmed, U., Isa, N. M., Majid, A. H. A., Zin, M. L. M., & Amin, B. M. (2017). Towards understanding work engagement: can HR really buffer HR? Test of a moderated model. *International Journal of Economic Research*, 14(20), 1-18.
- [52] Paillé, P., et al., The impact of human resource management on environmental performance: An employee-level study. *Journal of Business Ethics*, 2014. 121(3): p. 451-466.
- [53] Ng, V. (2018). Design/Make: An Alternative Practice to Collaborative Learning in Architecture. *International Journal of Asian Social Science*, 8(10), 828-840.
- [54] Haseeb, M., Abidin, I. S. Z., Hye, Q. M. A., & Hartani, N. H. (2018). The Impact of Renewable Energy on Economic Well-Being of Malaysia: Fresh Evidence from Auto Regressive Distributed Lag Bound Testing Approach. *International Journal of Energy Economics and Policy*, 9(1), 269-275.
- [55] Haddock-Millar, J., C. Sanyal, and M. Müller-Camen, Green human resource management: a comparative qualitative case study of a United States multinational corporation. *The*

- International Journal of Human Resource Management, 2016. 27(2): p. 192-211.
- [56] Hair Jr, J.F., et al., A primer on partial least squares structural equation modeling (PLS-SEM)2016: Sage publications.
- [57] Eketu, C. A. Perspectives on Human Nature and Implications for Research in the Behavioural Sciences. International Journal of Emerging Trends in Social Sciences, 2018. 4(1): p. 42-46.
- [58] Essayyad, M., Palamuleni, M., & Satyal, C. Remittances and Real Exchange Rates in South Asia: The Case of Nepal. Asian Economic and Financial Review, 2018. 8(10): p. 1226-1238.
- [59] Eze, P. An Analytical Model of Demand for Hospital Inpatient Care. International Journal of Social Sciences Perspectives, 2018. 2(1): p. 80-86.
- [60] Feleke, A. T. Assessment of Training and Development Practice the Case of Human Rights Commission Hawassa Branch. International Journal of Social Sciences Perspectives, 2018. 2(1): p. 38-49.
- [61] Feleke, A. T. Evaluating the Quality of Coffee Product on Marketing Performance of Ethiopian Commodity Exchange (ECX) Hawassa Branch. International Journal of Social Sciences Perspectives, 2018 2(1): p. 50-79.
- [62] Gabriel, P. Towards the Geopolitical-Economics of Conflict Over Resources: The Gate Valve Theory. Energy Economics Letters, 2017. 4(1): p. 1-8.