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The Moderating role of commitment to management and mediating effect of Green Organizational Citizenship Behavior on the relation between green supply chains Practices and organizational performance of freight forwarding industry of Malaysia

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Abstract

The concept of SCM is relatively new in Malaysia despite the fact that Malaysia is among the 30 countries hurting by the air pollution. "Additionally, two of the cities of Malaysia are among the top 10 polluted cities of the world" (Vidal, 2016). This has negatively affected the climatic conditions of the country. Besides, Malaysia is an emerging economy and meeting economic growth will demand her to progress on industrialization. In this era of globalization and industrialization, finding ways to adopt sustainability is the aim of every organization, be it a freight forwarding industry of Malaysia Company or an FMCG concern company. "Addressing the environmental aspect helps in recognizing new opportunities, which leads towards competitive advantage" (Choi and Hwang, 2015). There are several international laws, which include agreements related to international transport and disposal of hazardous waste such as Basel Convention, which is an international treaty that was designed to reduce the hazardous waste between nations. Initiating policies within a country i.e. cleaner production, recycling waste, solid waste management and disposed material treatment can help the firm achieve environmental objectives.

INTRODUCTION

General Motors, an American multinational in automobile industry is actually able to deploy sustainable supply chain practices in their operations across the globe. "We aspire to be a zero-waste company with all freight forwarding industry of Malaysia plants achieving landfill-free status," said Dane Parker, vice president, Sustainable Workplaces.

"That zero mindset is driven by our local teams and their efforts to find innovative and sustainable solutions that improve the communities where we live and work." According to International Energy Agency "Driven by higher energy demand in 2018, global energy-related CO₂ emissions rose 1.7% to a historic high of 33.1 Gt CO₂. While emissions from all fossil fuels increased, the power sector accounted for nearly two-thirds of emissions growth. Coal use in power alone surpassed 10 Gt CO₂, mostly in Asia. China, India, and the United States accounted for 85% of the net increase in emissions, while emissions declined for Germany, Japan, Mexico, France and the United Kingdom." The most well appreciated effort has been done by Germany in EU zone, where it was able to reduce carbon emissions from 1,018 (Mton) in 1990 to 752.65 (Mton) in 2018, reduction of about 31 %. Speaking of renewables, Schulze, Environment Minister of Germany said: "In 2018, Germany attained decidedly more energy from wind and solar and simultaneously burned less coal, oil, and gas. Climate protection measures such as the expansion of green energy, phasing out coal, and carbon trading are having an effect."

BACKGROUND OF THE STUDY

GSCM activities developed significant importance in the mid period of 1980's, as the government deregulated the freight forwarding industries and encouraged the private firms to participate in the process independently (Bask, 2001; Laarhoven et al, 2000; Berglund et al, 1999). This is the major fact that GSCM viewed as a powerful approach to minimize the transportation costs and increase competitive advantage (McKinnon, 2001; Crouse 1991; Elmuti et al, 1998; Razzaque and Sheng, 1998). Outsourcing and freight forwarding institute highlighted the importance that companies/ organization using their service can easily gain a 10% cost saving and a 16% increase in their quality of product delivered and firm capacity on average by using third party logistic service (Elmuti et al, 1998). Correspondingly, the demand and usage of GSCM requirement increased from approximately 35 percent in the mid 1990 (Lleb, 1992) to approximately 80 percent in 2005 (Lieb & Bentz, 2005). Predominantly in the United Kingdom, the Freight forwarding industry is one of the most important sectors of economy as far as Gross Domestic Product (GDP) is considered and it is responsible for approximately seven percent of it.

Despite the growth of logistics, the customer's overview of the United Kingdom logistics freight forwarding companies has received very less attention in the academic literature (Fernie, 1999). According to Murphy and Poist (2000), there has been a minimum amount of empirical research on GSCM. With specific reference to the UK market (Meczes, 2002). Shown a glooming portrait of GSCM providers in terms of level of satisfaction among their customers, many customers, like retailers, have shown their dissatisfaction with the services offered to them (Meczes, 2002).

The research has structured in following way. In the coming sections, we present a detailed description of the Malaysian freight forwarding environment pursue by a review of the applicable segments of literature. Consequently, we outlined the research method, which is implemented to find the results which are completely based on data analysis, from the survey. Finally, upcoming development and conclusions resulting from this research are presented in the study. Malaysia has become the polluted country of the world according to AirVisual, an independent provider of air quality data. And according to Environmental Performance Index 2018, Malaysia got a ranking of 169 and a score of 37.50, which is quite unsatisfactory. To curb inflationary trends in these figures,

activities of the green supply chain need to be embraced by production firms in Malaysia. Majority of the research held in this context find a considerable positive relationship among the activities of green supply chain management (GSCM) and economic efficiency (Zhu and Sarkis, 2004; Kirchoff et al., 2016; Bose and Pal 2012; Laari et al. 2016; Ton and Harrow, 2010; Yang et al. 2016; Geng et al., 2017). "GSCM includes green design, green purchasing, green production, green distribution, logistics, marketing and reverse logistics" (Srivastava, 2007). In Malaysia, Implementation of GSCM practices and their impact on organization's performance is inadequate due to lack of research in this area. Therefore, the aim of this research is to examine the impact of GSCM practices such as Green distribution, Green purchasing, and Green integration freight forwarding industry of Malaysia on the freight forwarding industry of Malaysia firms' performance of Malaysia

CONCEPTUAL FRAMEWORK

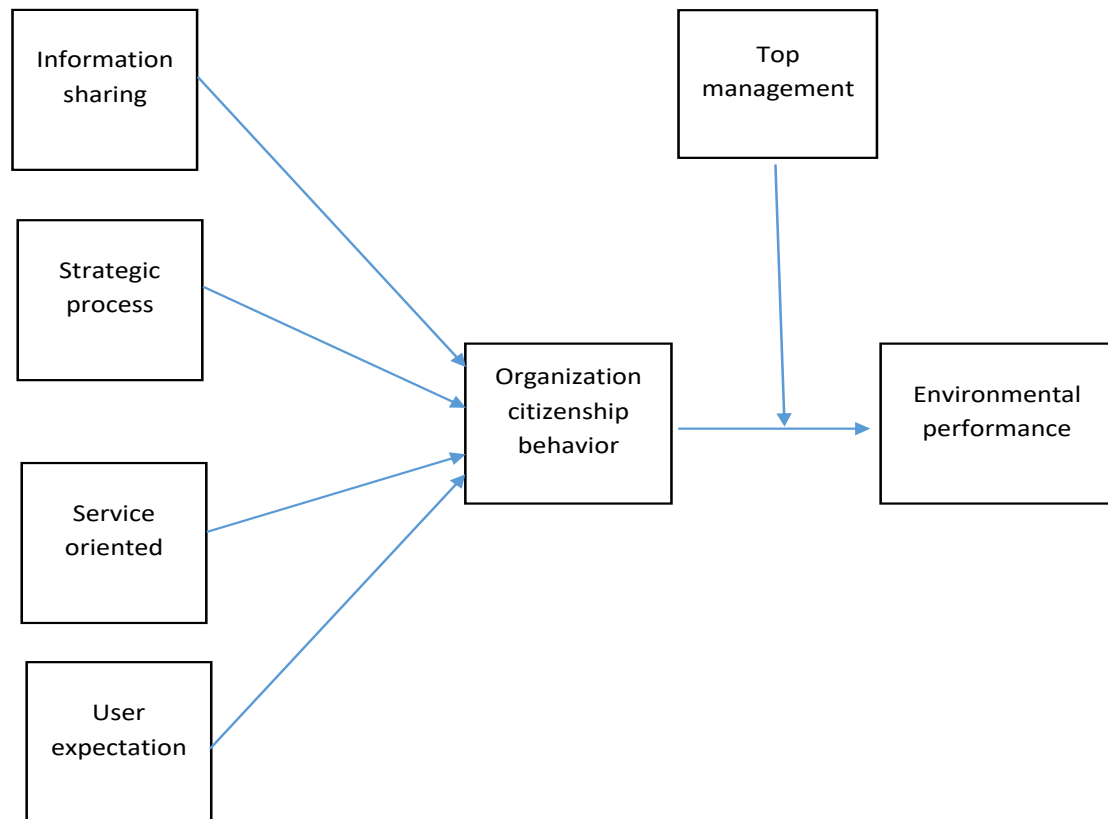


Figure 1.
Conceptual framework

LITERATURE REVIEW

The use of external logistics services is a strategic decision. Therefore, their impact on business performance must be monitored and quantified. The goal of engaging in external relations is rarely just a cost reduction, but a combination of service

improvements and operational efficiency (Larsen, 2000). Lieb et al. (1993), Dapiran et al. (1996), and Bhatnagar et al. (1999) found that the future utilization of outside logistics administrations is subject to the present dimension of business fulfillment with the logistics specialist organization. The creators likewise researched the development of the dimension and the kind of redistributing of logistics benefits by the client organizations. All the above investigations demonstrate an abnormal state of fulfillment among outer logistics specialist co-ops, which will prompt additionally re-appropriating. All in all, organizations begin re-appropriating some logistics administrations and afterward swing to exercises that have the best effect on logistics execution and in this manner grow the extent of logistics administrations, which has an unmistakable and quantifiable effect on generally speaking business execution.

Strategic Process

The vital procedure is characterized as the long-haul relationship intended to abuse the key and operational capacities of the individual taking an interest association so as to acquire noteworthy advantages for each gathering (Li et al., 2006b, 2005). A genuine association with providers, animates common arranging and critical thinking endeavors (Gunasekaran et al., 2001) and is fundamental to serve a main production network. Azar et al. (2009) researched the impact of provider the board on execution and found that successful provider the executives is straightforwardly identified with higher execution. Additionally, Boddy et al. (2000) and Bordonaba and Cambra (2009) likewise, observed the inventory network organization to be urgent (a more broad idea of key provider associations), contending that such vital joint effort would enhance execution. Accomplish in the store network, most likely it will move forward. From the perspective of the RBV, the SSP is seen as the organization's capacity to facilitate its assets and coordinate with its individual accomplices. Griffith and Harvey (2001) found that the capacity to viably facilitate inter organizational connections was one of the primary wellsprings of business. The limit of the chain and the SSP allude to the capacity to arrange the exercises of the accomplices identified with the exchange. These highlights enhance operational proficiency and execution between accomplices. In like manner, RBV supporters thought about the capacity to incorporate systems to together play out an aggregate movement as an imperative resource (Concede, 1996). PAS speaks to this capacity in a comparative idea. For instance, key organizations with providers will enhance production network endeavors for better execution. The accompanying speculation was created with respect to this beginning stage:

H1. The Strategic process has positive relationship with Supply chain performances.

Information Sharing

IS refers to the degree to which basic and classified data are transmitted to individuals in the network of available stores, items, and customers (Mentzer et al, 2001, Li et al, 2006a.). RBV revolves around the capacity of organizations to produce new learning and develop new capabilities to encourage data frameworks. Securing, osmosis, change and learning abuse, defined as a retention limit in writing on the RBV, are critical elements of the allowed limit. As a result, the RU and its accomplices are considered an essential part of the inventory network boundary. Wu et al. (2006) considered data commerce as one of the ideas that demonstrate the capacity of the inventory network. The willingness

to give data and perceptibility to different parts of the production network takes into account faster and more accurate business choices that give an edge (Moberg et al., 2002). Thus, the articulation "whiplash" (Fiala, 2005) is taken into account, which reduces the general expenses of the store network to ensure the success of the SCP (Gavirneni, 2006). This survey proposes the accompanying theory:

H2. The Information sharing has positive relationship with Supply chain Performances.

Service Obtained.

The administration gave alludes to the level of precision, convenience, familiarity and data trade (Li et al., 2006b). Various investigations (Li et al., 2006a; Lyons et al., 2004; Moberg et al., 2002) have demonstrated that great IQ the executives inside and outside the body would prompt quick enhancement. from CPD. Furthermore, Forslund and Jonsson (2007) in their ongoing examination showed that few IQ insufficiencies may impact the helpfulness of forecasts and their capacity to impact PCD. Accordingly, supervisors will likewise give explicit business choices to successful store network the executives (Raisinghani & Meade, 2005). In light of this theory, the accompanying speculation has been produced:

H3. The Service obtained has positive relationship with Supply Chain Performances.

Users Expectations

User Expectations are characterized as overseeing client protests, building up long haul client connections and enhancing consumer loyalty (Tan et al., 1998b). With Close CR, an organization can recognize its item from its rivals, essentially increment the esteem it gives to its clients, and fabricate client devotion through consumer loyalty (Cox, 2004; Dadzie & Winston, 2007). The RBV considers the organization's dynamic capacity to reconfigure assets to meet advancing client needs (Zahra & George, 2002). The capacity to gain from and coordinate with clients is an interesting type of business assets.

The capacity to react to changing client necessities likewise enables organizations to grow new items and procedures. Thusly, keeping up great CR and input from clients is an important element of SCMP. This construct likewise records the expertise learning of RBV. An investigation of experimental information gathered in Hong Kong (Button et al., 2004) has demonstrated that keeping up viable CR can advance open correspondence between production network individuals and eventually lead to joint outcomes. Critical thinking with long haul duty, along these lines, client relationship practices can significantly affect the administration of all production network organizations to enhance inventory network execution. In light of the above discourse, this investigation proposes the accompanying theory:

H4. The User Expectations has positive relationship with Supply chain performance.

Underpinning Theory: Theory of Planned Behavior (TPB) (Ajzen, 1985)

This theory is used to forecast and recognize behaviors. It describes that actions are instantly recognized by behavioral objectives, which in turn are controlled by a blend of three factors: attitude, personal norms and apparent behavioral control. This theory is applied to educations of the relationship between beliefs, attitudes, behavioral

intentions and behaviors in different domains such as sustainability, marketing, healthcare, and management. It assists us to comprehend how a change can happen in an individual's behavior.

Support Theory: Social Cognitive Theory (SCT) (Bandura, 2005)

Social Cognitive Theory (SCT) started as the Social Learning Theory (SLT) in The 1960s by Albert Bandura. It developed into the SCT in 1986 and posits that learning occurs in a social context with a dynamic and reciprocal interaction of the person, environment, and behavior. The Social Cognitive Theory is composed of four processes of goal realization: self-observation, self-evaluation, self-reaction and self-efficacy (Redmond, 2010). The four components are interrelated and all have an effect on motivation and goal attainment (Redmond, 2010).

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Consent to Participate: Yes

Consent for publication and Ethical approval: Because this study does not include human or animal data, ethical approval is not required for publication. All authors have given their consent.

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QUESTIONNAIRE

A – STRATEGIC PROCESS (mwaura et al, 2016)

Please indicate the level of Practice using in your company, and use 1-5 point scale

(1= strongly unimportant, 2= unimportant 3= no opinion 4= important 5=strongly important)

S.NO.	Pl. rate the following strategies which you	Strongly unimportant	Unimportant	No opinion	Important	Strongly Important
		1	2	3	4	5
GD1	The organization uses minimum transportation packaging materials to preserve the natural resources which has reduced the cost of transportation					
GD2	The organization packaging materials are biodegradable which has increased sales					
GD3	The organization uses minimum packaging materials on the products to preserve the natural resources which increases delivery of goods. Mwaura (2016)					

GD4	The organization uses local products to *reduce transportation costs					
GD5	The organization's warehouse has been rearranged leading to better utilization of space which has led to reduced costs					
GD6	The organization is using green fuel as an alternative to fossil fuel					
GD7	The organization uses green label as an indicator of environmental friendliness thus increasing sales					

B – Information sharing Jaiswal, D., & Kant, R. (2018)

S.NO.	Pl. rate the following strategies which you	Strongly unimportant	Unimportant	No opinion	Important	Strongly Important
		1	2	3	4	5
GP1	I am worried about the worsening quality of the environment in Pakistan.					
GP2	Pakistan's environment is my major concern.					

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GP3	I use the products which are not hazardous to the environment					
GP4	Brand image makes me purchase the product					
GP5	I would consider switching to other brands for ecological reasons.					
GP6	Stringent government regulations on recycling, environmental protection and consumer rights protection force our company to implement green					
GP7	Competitors have a strong influence on our company's green practices implementation.					

Service Oriented (Huo,2017 et al)

S.NO.	Pl. rate the following strategies which you	Strongly unimportant	Unimportant	No opinion	Important	Strongly Important
		1	2	3	4	5
SI1	Internal integration. To what extent does your company use the following practices					

SI2	Data integration among internal functions					
SI3	Enterprise application integration among internal functions					
SI4	Integrative inventory management					
SI5	Real-time integration and connection among all internal functions from raw material management through production, shipping, and sales					
SI6	The use of periodic interdepartmental meetings among internal functions					
SI7	The use of cross-functional teams for product design					

User expectation (Vijayvargy, Thakkar & Agarwal (2017))

S.NO.	Pl. rate the following strategies which you	Strongly unimportant	Unimportant	No opinion	Important	Strongly Important
		1	2	3	4	5
GM1	ISO 14001 certification					
GM2	Environmental Management System exist					

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GM3	Suppliers ISO 14001 certification.					
GM	Design of products to avoid or reduce use of hazardous products and /or their freight forwarding industry of Pakistan process.					
GM5	Cooperation with customer for eco-design.					
GM6	You are burning lesser fossil fuel and thinking about alternative energy modes*					
GM7	Sale of scrap and used materials.					

Organizational citizenship behavior towards the environment (Boiral and Paille, (2012)

S.NO.	Pl. rate the following strategies which you	Strongly unimportant	Unimportant	No opinion	Important	Strongly Important
		1	2	3	4	5
OC1	He/she actively participates in environmental events organized by the company (or department)					

OC2	He/she volunteers for projects, endeavors or events that address environmental issues in the organization					
OC3	He/she voluntarily participates in environmental events outside the organization to contribute to the image of the organization (or department)					
OC4	He/she spontaneously gives his/her time to remind colleagues to pay attention to environmental protection at work.					
OC5	He/she makes suggestions to his/her colleagues about ways to protect the environment more effectively, even when it is not his/her direct responsibility.					
OC6	He/she will persuade the company or colleagues to buy environmental Products					

Top management Commitment

Liang et al. (2007).

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S.NO.	Pl. rate the following strategies which you	Strongly unimportant	Unimportant	No opinion	Important	Strongly Important
		1	2	3	4	5
TMC1	Expresses how green supply chain partnering will create a significant competitive arena 0					
TMC2	Articulates vision for green supply chain collaboration					
TMC3	Establishes the metrics to monitor green supply chain success through partnering					
TMC3	Formulates strategy for organizational information sharing					
TMC4	Cooperation with customer for eco-design.					
TMC5	You are burning lesser fossil fuel and thinking about alternative energy modes*					

Organizational performance

(Lumpkin and Dess, 1996)

S.NO.	Pl. rate the following strategies which you	Strongly unimportant	Unimportant	No opinion	Important	Strongly Important

		1	2	3	4	5
OP1	(OP) Market position improvement					
OP2	Enhancing sale volume					
OP3	Enhancing the profit rate					
OP4	Enhancing the reputation					



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