

Sustainable Green Supply Chain Management and Impact on Organisations

Suzari Abdul Rahim¹, Yudi Fernando¹ and Rohaizah Saad²

¹Senior Lecturer, Graduate School of Business (GSB), Universiti Sains Malaysia (USM), Penang Malaysia.

²Senior Lecturer, Graduate School of Business (GSB), Universiti Sains Malaysia (USM), Penang Malaysia.

³Senior Lecturer, School of Technology Management and Logistics, College of Business University Utara Malaysia, Sintok Kedah Malaysia.

Corresponding Author: Suzari Abdul Rahim

Abstract

Nowadays, sustainable development has become a subject of focus and concern for governments, organisations, companies, communities as well as individuals. As a result of this, manufacturing companies and industries are the first to receive criticism due to manufacturing activities being assumed to be a major culprit in creating environmental and ecological issues. In the current century, limitations on resources and environmental concerns are one of the main trepidations of industries. Strained by the stress of limited resources, energy and very pressing environmental issues, Green Supply Chain Management (GSCM) actually revealed that the implications of green practices can save money, reduce cost, increase efficiency, reduce delivery lead time and sustain the business longer. Green Supply Chain Management (GSCM) has appeared as an environmental innovation which integrates environmental concerns into supply chain management. The purpose of this study is to review various literatures about Green Supply Chain Management (GSCM) that help to determine the benefit and implications that organizations receive when they implement GSCM practice process. Furthermore, this study aims to investigate the initiatives in the GSCM practices and what elements of it enable the improvement of organisational performance and business sustainability. Therefore, manufacturing companies need a comprehensive evaluation system to measure the outcome of the green supply chain activities that are implemented. This study employed the mixed method of research design which combined the qualitative and quantitative methods. From the research on the study, the results showed that green supply chain management practices and its elements can improve organisational performance and help sustain the business. The proposed model may be helpful to some extent for organizations analysing the benefits of investing in Green Supply Chain Management. On a global scale, environmental sustainability is also a trending subject of focus, so further research in the topic will not only help organisations sustain their businesses, but they will be able to sustain the world for better living.

Keywords: green supply chain management, supply chain management, environmental management, business sustainability, green business

INTRODUCTION

The world population (the total number of living humans on Earth) was 7.349 billion as of July 1, 2015 according to the medium fertility estimate by the United Nations Department of Economic and Social Affairs, Population Division. In order to fulfill the demand of consumers that continue increasing leading by population, more industries and organisations are rising; both domestically and globally. Hence, the economy increases the level of energy and material consumption following the growth of the industries, which contributes to the environmental issues and resource depletion problems. Currently, it's a norm for organisations to face competition, tight regulations and

community pressures. The organisations not only need to produce quality products / services that fulfill customer needs and satisfaction, but also to produce products / services with shorter lead times and limited resources in the way of environment and sustainability. The appropriate method that helps is to invest in the right green technology with the aim to minimise or eliminate wastages including hazardous, chemical, emissions; energy and solid waste along various stages the supply chain. These stages include product design, material resourcing and selection, manufacturing processes, delivery of final products and end-of life management of the products.

Industries have shown growing concern for the environment over the last decade. Recently, supply chain management has directed its attention to the role of the supply chain that impacts on the natural environment. A supply chain can be described as a network that consists of all departments such as procurement, buyer, supplier, manufacturer, finance, distributor, forwarded wholesaler, retailer or even customer that can be classified as upstream and downstream through physical product distribution or flow of information.

According to Copra (2010), a typical supply chain includes 5 stages: component / raw material suppliers, manufactures, wholesalers / distributors, retailers and customers. These five stages are connected through flows of products, information and cash. Managing a supply chain network is complex and difficult since the network involves various systems, activities, relationships and operations. However, SCM practises include a set of approaches and activities utilised by a firm to effectively integrate supply and demand for improving the management of its supply chain. The main focus of SCM is to provide the right product to the right customer, with the right form at the right cost, with the right time and quality. In addition, the major focus of SCM is to reduce cycle time and inventory and thus increase productivity, while the long term goal is to enhance profit through improved market share in the industry and the ability to fulfill customer satisfaction.

By adding a green component into SCM practices, GSCM practices can be described as a set of green activities in procurement, manufacturing and distribution. Following the research paper by (Ai Chin, 2015), Green supply chain management is described as born to be basic need for a successful organisation. Whilst competition increased in the 1990's, the heightened awareness of green practices prompted organisations to act ethically and with social responsibility within their supply chains. From the beginning of 1995, GSCM had caught the attention of scholars following the importance on focusing on the environment. During 2010, organisations developed environmental management strategies in response to the drastic global weather change that contributed to the change of customer purchasing behaviour, forcing organisations to implement environmental requirements in their Supply Chain Management.

SCM acquired lower supply chain costs, increased efficiency of overall productivity, high turn-over of inventory in organisations (producing product following customer demand at right time at right quantity), overall on hand inventory reduction, better inventory

management and forecast accuracy. Furthermore, it acquired prompt delivery performance, shorter cycle time, order fulfilment, increased customer service and responsiveness, improved supply chain communication, risk reduction, reduced cycle time process, increased flexibility, and cost saving mainly on reduction in duplication, following effectiveness of supply chain communication. Meanwhile, green supply chain management also actually helps companies reduce waste, energy and pollution, minimise environmental risks and improve community life. Following (Copra, 2010), the collaboration within organisations actually promotes a mutual environment that receives benefit from cost saving (raw material, material, energy) and decreased environment liability.

Problem Statement

Organisations continue investing to be sustainable in the challenging industries and market. However, an organisation is likely to invest more in technology to sustain its business and stay competent in its industry. This research is conducted to elaborate on Green Supply Chain Management that an organisation can implement and the benefit the organisation can gain.

Objective

The objective of this paper is to identify and understand more detail on Green Supply Chain Management and the impact on organisations that implement Green Supply Chain Management. The study also tries to point out the benefits of implementing the concept of GSCM and ways of overcoming the obstacles identified by the companies for implementing the concept.

LITERATURE REVIEW

Green Business

The concept of green business is extremely important to be evaluated, in the sense that the green concept itself will be deeply rooted in their green strategy, which leads to green measures and implementation. Brown and Ratledge defined green business as "an establishment that produces green output" (Brown & Ratledge, 2011) while Makower and Pyke mentioned that "a green business requires a balanced commitment to profitability, sustainability and humanity" (Makower & Pyke, 2009).

Slovik (2013) proposed that the process of environmental sustainability demand that is also relevant to social responsibility. "Green business" could be defined as an organisation that used renewable resources (environmentally sustainable) and holds itself accountable for the human resource aspect of their activities "(socially responsible)" (Slovik, 2013). Based on another study, green business would be defined as an

organisation committed to the principles of environmental sustainability in its operational activities, trying all ways possible to use renewable resources, and putting great efforts into minimising the negative environmental impact of its activities. The shift of a business to the green trend should be regarded as the outcome of the interaction of three main agents of the process: consumers, governments, and the business itself, the first two contributing to the formation of “green request” to business and the latter implementing green practices. The uneven proliferation of green business practices in the world can partly be explained by the aforementioned ambiguity of the concept itself and, what is even more important, by the cultural, political and economic differences of the countries (Linás et al., 2014).

Supply Chain Management (SCM) and Green Supply Chain Management (GSCM)

Supply Chain Management takes an important role in managing the business in organisations as it actually focuses on the full operation of the organisation. An update from (Webber, 1982), described SCM as follows: “Supply chain management is the process of planning, implementing, and controlling the operations of the supply chain with the purpose to satisfy customer requirements as efficiently as possible. Supply chain management control all movement and storage of raw materials, work-in-process inventory, and finished goods from point to point.” These actually describe SCM as a vital component of competitive and logistics strategy of major companies. In other words, SCM is the management of operations such as delivering raw materials, designing products, manufacturing products, and delivering products to end-users.

Environmental consideration in the context of SCM has taken a leading attention from multinational enterprises as public pressure grew, for better products. Pressures from consumers, regulators, and other communities led companies to re-think their strategy on environmental SCM which brought about the establishment of the new concept, green supply chain management (GSCM). Following the journal (Webber, 1982) the new GSCM concept has taken great attention, describing GSCM as “Integrating environment thinking into supply chain management, including product design, material sourcing and selection, manufacturing processes, delivery of the final product to the consumers, and end of-life management of the product after its useful life”.

GSCM has become nearly compulsory for most of the organisations to implement GSCM practices so that they can stay competitive in the industry. Organisations with GSCM enjoy benefits such as positive image,

market share, and better efficiency, while, the other organisations may suffer from losses such as regulatory compliance costs and costs from implementing the environmental plan. It was found that organisations without an environmental strategy may continue to lose business and be hit by pressure from certain groups.

Following a study by (Srivastava, 2007), he divided pressure groups into two categories: external pressures; such as regulators, community, consumer and suppliers, while internal pressures include shareholders, management, and employees. The study identified four pressure groups which positively influence organisation formulation of an environmental plan as i) regulatory pressure group: that set regulations and standards for firms to follow; ii) customer pressure groups with customer satisfaction being the main focus, and organisations needing to take full responsibility not only to fulfill customer demand but to support what customers need. As environmental elements will be the main focus from customers, the organisation will be responsible to produce a product greenly. The other two pressure groups are: iii) Shareholder pressure group, which is directly related to an organisation that influences organisation’s strategy, and iv) community, who actually will mobilise public opinion against the organisations environmental policies.

Green Supply Chain Management (GSCM) Practices

GSCM is the integration of environmental practices into supply chain management, such as product design, material sourcing and selection, manufacturing processes, delivery of the final product to the consumers, and end-of-life management. Environmental thinking in supply chain management gave birth to new concept, ‘green’ supply chain management which in turn transmitted supply chain into ‘green’. New concepts of greening implemented practices of green design, green purchasing, green logistics, green packaging, etc. GSCM require an involvement of the strategic collaboration of partner firms in a supply chain to manage the operational and environmental impacts of supply chain activities by coordinating the intra- and inter-organisational processes (Wong, 2015).

Following (F.E. Bowen, 2001) studies on Green Supply Chain, it can be divided into 3 main focuses: green supply process, product-based green supply, and advanced green supply. Green supply is adaptations made to the company’s supplier management activities in order to incorporate environmental considerations, which include collecting environmental information on suppliers, assessing, ranking, and choosing according to supplier’s environmental performance.

The second type of green supply is based on the changes in the product supplied, which is managing supplied inputs such as packaging and recycling, this needs cooperation with suppliers. The third type of green supply includes more proactive measures such as introducing environmental criteria to buyers, for example, introducing products that consume clean technology programs. Following the research, all three types of green supply will be considered to examine environmental practices that organisations may undertake to improve their own or their supplier's environmental performance.

In-bound function of the supply chain management takes an important role in waste minimisation and cost saving. A large part of inbound function is concentrated on green purchasing strategies where building long-term strategic relationships with suppliers is essential. Inbound function includes the following activities: supplier selection, material selection, outsourcing, negotiation, delivery, inventory, and supplier involvement in design. The manufacturing phase of supply chain is very important to manage environmental issues as it is integral to organisation's operations, and proper management of manufacturing will minimise waste, pollution, and noise.

As a part of that, concentrating on outbound supply chain analysis as location analysis, warehousing, transportation, packaging, and inventory management are out-bound functions of the supply chain through eco-friendly packaging, labelling, logistics, and consumer education. These can address environmental issues such as waste management, cost savings, and consumer awareness of eco-friendly production. Therefore, no less attention is paid to the study of the out-bound function of the supply chain which is external to an organisation.

GSCM also practices initiatives and focuses on environmental performance, concentrating on producing eco-friendly products, eliminating usage of hazardous materials in packaging and minimising wastage in the process of production and distribution. Following the study of (Darnell, 2008), the process of greening the supply chain involves the integration of environmental and organisational buying decisions and long-term relations with suppliers. In fact, suppliers of an organisation actually contribute to environmental modernisation through a wide range of activities which may include materials handling, manufacturing, warehousing and preserving, packing, transporting and distributing, technology acquisition and transfer to suppliers.

Modern organisations operating globally are required to maintain a sustained customer-relationship management, supplier-relations management and internal supply chain through effective Green supply chain practices. Outsourcing of both core and non-core business activities have become order of the day for many industrial establishments, irrespective of their size and magnitude of operations. This main need to maintain an effective GSCM is by maintaining the entire component in supply chain including suppliers and customers.

Competitive Advantage

According to (J.Sarkis, 2003), 'the capacity of an industrial undertaking to generate a distinguishable unassailable position over its competitors through precarious management decisions are termed as "Competitive advantage"'. Following this statement, it shows that price, cost of product, delivery, quality, timeliness in introducing the product and flexibility are important components for an organisation to be able to compete.

As mentioned above, time-based competition has also been included as an important component of competitive advantage based on study by (R.Rao, 2006), who developed a research framework for testing the relationships between competitive and performance. Extensive review of available literature has shown that competency on cost/price, delivery dependability, product innovation, quality and time for product enter to market will help organisations compete in the market.

Furthermore, a study by (R.Rao, 2006) has found that South East Asian organisations have started using eco-friendly raw materials, greening their production process, emphasising on a cleaner environment through reduced pollution and wastage in their income logistics activities, implementing greening of outbound logistics through eco-friendly waste disposal and waste water treatment. However, most organizations try to reduce emissions of greenhouse gases to avoid impact of pollution, and regard this as a main concern. These activities by organisations fulfil their social responsibility by improving environmental conditions as well as ensuring their compliance with environmental regulations, which eliminates the threat of penalty or closure of the organisation.

Overall, GSCM measures organisations and improves their abilities to be more competitive. Bowen found that GSCM practices have a significant positive relationship with supply chain performance parameters, environmental and economic performance dimensions by collecting primary data of 159 executives

manufacturing industry. This data was tested with structural equation modeling and results showed that adoption of GSCM will impact on the environmental and economic performance.

CONCEPTUAL FRAMEWORK

The proposed framework for this research is illustrated in Figure 1 as below. The Hypothesis model shows the relationship between GSCM practices, environmental collaboration and the implications to organisations on competency, customer satisfaction and organisation sustainability. The GSCM practices are conceptualised to include green purchasing, green manufacturing, green distribution and green logistics. The sustainability

performance is investigated from the perspectives of economic, environmental and social from the case study done before.

The model is mainly within the relationship with inter-organisational linkages. The relational view theory was first articulated by Dyer and Singh (1998) to suggest that established long-term collaborative relationships characterised by strong inter-organisational interactions could facilitate firms to pursue GSCM practices. In general, the relational view provides insight into how an organisation develops value to be competitive, satisfy customers and sustain the business.

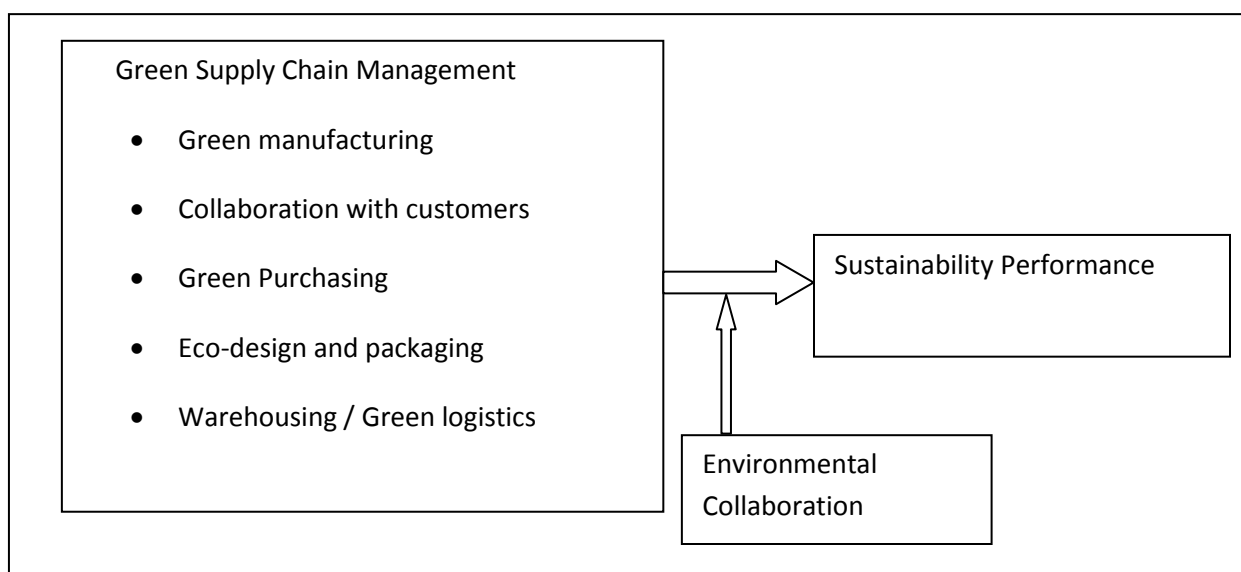


Figure 1: Proposed Conceptual Model on impact of Applying Green Supply Chain Management

RESEARCH HYPOTHESIS

Hypotheses Development GSCM practice is a multi-dimensional concept which can be measured from different perspectives. Different dimensions of GSCM practices have been highlighted in the past literature (Xhu Q, Sarkis J, Geng Y, 2005). Following Zhu, he proposed four-dimensional GSM practices, namely internal environmental management, external GSCM, eco- design and investment recovery. On the other hand, (R.Rao, 2006) suggested internal environment management practices, logistics, green supplier, green procurement and logistics policies, education and mentoring, and industrial networks as important GSCM practices.

According to (SK., 2007), green procurement, green manufacturing, green distribution and green logistics are important dimensions of GSCM practices needed by

manufacturing sectors to achieve enhanced sustainability performance. (F.E. Bowen, 2001) suggested that GSCM practices should include internal environmental management, green information systems, green purchasing, cooperation with customers, eco-design and investment recovery. GSCM practices are composed of corporate and operational strategies to improve environmental sustainability such as internal environmental management, green purchasing, cooperation with customers and eco-design.

Taking the information together, these studies are representative of the fact that organisations can afford to practice interesting dimensions of GSCM as a result of the impact that organisations received. Based on the literature review of GSCM practices, this study has portrayed GSCM practices from four important

perspectives: green procurement, green manufacturing, green distribution and green logistics.

Green procurement is defined as a set of supply-side practices utilised by an organisation to effectively select suppliers based on their environmental competence, technical and eco-design capability, environmental performance, ability to develop environmentally friendly goods and ability to support local company's environmental objectives. Furthermore, the 3Rs (reduce, reuse, recycle) are also a part of the process of green procurement in terms of paper and parts containers (plastic bag/box), place purchasing orders through email (paperless), eco labelling of products, suppliers environmental compliance certification and internal environment auditing plays a main part of the rules in the organisation.

Green manufacturing is a production process which converts inputs into output by reducing hazardous substances, increasing energy efficiency in lighting and heating, practicing the 3Rs, minimising waste, and actively designing and redesigning green processes. According to Zhu (Xhu Q, Sarkis J, Geng Y, 2005) green manufacturing requires manufacturers to design products that facilitate the reuse, recycle and recovery of parts and material components; avoid or reduce the use of hazardous products within production processes and minimise the consumption of materials as well as energy.

Green distribution consists of green packaging with the aim to downsize packaging, use "green" packaging materials, promote recycling and reuse programs, cooperate with vendors to standardise packaging, encourage and adopt returnable packaging methods, minimise wastage (use of material), use recyclable pallet systems and save energy in warehouses. As for green logistics/transportation, it is about delivering goods directly to the user using alternative fuel vehicles, grouping and supporting orders in full batches rather than smaller or small lots, investing in vehicles that are designed to reduce environmental impacts and planning vehicle routes.

As stated by (Thoo Ai Chin, 2015), green logistics is about reverse logistics, which includes collecting used products and packaging from customers for recycling, returning packaging and products to suppliers for reuse, and requesting that suppliers collect their packaging materials.

Researchers have recommended sustainability performance, organisation competency and customer satisfaction as important performance indicators. The

proposed model may not show a complete set of measurement scales due to the constraint of other GSCM practices and sustainability performance in this study.

The GSCM interact with each other and can hold an organisation together for sustainability performance, where the interaction was found to lead significantly to firm performance. Following (Laosiri T, Adebajo D, Tan KC., 2013), Laosiri found that the pro-active (reverse logistics) practices do not have a significant impact on GSCM performance. Thus, this examines the differences of green logistics findings in greater detail. The above discussions develop the basis of the following hypothesis:

H1: GSCM practice is positively related to organization sustainability

The benefits that can be derived from environmental collaboration have been recognized in the GSCM literature. Researchers have emphasised the direct relationship between GSCM practices and performance. (SK.,2007) used external GSCM to see the impact of environmental collaboration on firm performance. According to Paulraj (Paulraj, 2011), the moderating affects the relationship between sustainable supply management and sustainability performance.

In contrast to these studies, environmental collaboration is proposed as a moderator of the link between the GSCM practices and sustainability with a view that the presence of the environmental collaboration could facilitate GSCM practices and organisations which form collaborative relationships with suppliers will find it easier to implement GSCM practices. In this context, environmental collaboration, as a key relational capability could be advantageously positioned to facilitate the GSCM strategic formulation and execution. Therefore, the following hypothesis is proposed:

H2: Environmental collaboration moderates the relationship between GSCM practice and sustainability performance

METHODOLOGY

This study adopts the positivist philosophy and deductive approach. Thus it employed the mixed method of research design which combined the qualitative and quantitative methods. The items and variable development were mainly based on the existing literature and the main data will be collected from the survey questionnaires. Secondary data has been used in the form of literature, books, articles, case studies and

websites to help prepare the theoretical and conceptual framework for the whole study.

RESULTS AND FINDINGS

From this research, the main objective that has been focused on is the impact of green supply chain management practices on organisational performance. The model and hypothesis were developed based on the dimensions of green supply chain management practices. From the research on the study, the results showed that green supply chain management practices and its elements are able to improve organisational performance and sustain the business.

Implications

In this research a new factor called environmental collaboration has been added as a moderator, in addition to making a new model and a new study for future research. This study will play an important role for managers and organisations, and their ability to contribute to increasing the sales and profit through understanding green supply chain management and the highest benefits of implementing it.

Significance of the Study

Since an effective green supply chain management process is detrimental to achieving good company performance and sustain the business, organisations is required to take an appropriate strategic approach to the supply chain management in order to mitigate long term risks in terms of availability of supply. Some organisations have gone the extra mile by adopting aggressive green supply chain concept along with the entire end to end supply chain in the global market to achieve cost efficiency in production in an effort to achieve sustainable competitive advantage over their competitors.

With the green supply chain management seek to incorporate environmentally conscious thinking in all processes of the supply chain initiating green supply chain management and practices such as green material management, green procurement, green manufacturing, green marketing, green distribution and green logistics. It is also consider waste reduction in all stages and involved cradle product management in the supply chain management (S. Mayam Masomik, 2014). In view with the green logistics will also include the handling and disposition of product without harmful impact to the social and environment.

Effective green procurement, while ensuring continuous supply of products and services, also have a bearing on the company's bottom line by reducing its cost and increasing its competitive advantage. Therefore, the

assessment of green supply chain criteria which influence supplier selection must be given due emphasis since this measure can help determine the success of an organisation in implementing the green supply chain management. Hence, selecting the sustainable and green concept suppliers, local or overseas, may provides both direct and indirect impact on an organization's business performance.

From a theoretical perspective, this study has sought to further the understanding of these points and add new knowledge to the field of green supply chain management. It seeks to identify critical element which lead to implementation of green supply chain management and understand how the green supply chain management affects an organisation's business performance.

RECOMMENDATIONS

The recommendation is to further continue to coordinate green supply chain management between different administrative levels in order to achieve the highest level of quality, collaboration, flexibility and environmental raw materials, with eco-friendly and sae products. Management should increase the budget for scientific research in the field of green supply chain to find out more and further improve supply chain in the context of the environment.

Future Research Directions

In conclusion, the proposed model may prove helpful to some extent for organizations looking at the benefits of investing in Green Supply Chain Management. On a global scale, the main focus is currently on environment sustainability, so further research in the topic will not only help the organisation to sustain the business, but it will help sustain the world as a better place to live in.

CONCLUSION

The literature review demonstrates that GSCM and sustainability performance are, in fact, two related SCM concepts. As noted earlier, the majority of research that has been reviewed shows that there is indeed a significant relationship between these two constructs. However, some issues have been raised which need to continue to be looked into with further research. These issues involve the collaboration with suppliers in designing green products and adopting environmental practices into processes. In this paper, environmental collaboration has been proposed as a moderator of the link between GSCM practices and sustainability performance.

In the presence of environmental collaboration, it is expected that GSCM practices will be facilitated, which

would ease the implementation of GSCM practices. The proposed conceptual model mainly follows the relational view theory by Dyer and Singh (JH Dyer, H Singh, 1998). Their theory states that the establishment of long-term collaborative relationships is characterised by strong inter-organisational interactions, which would enable companies to pursue GSCM practices. This theory demonstrates that organisations can collaborate with each other to achieve maximum profit, good collaboration with suppliers and customers, customer satisfaction, and effective organisation management. In turn, all of these improvements enable organisations to develop and increase in value.

ACKNOWLEDGEMENTS

This research work was supported by the fundamental research grant scheme (FRGS) phase 1/2014(Ministry of Education), 203/PPAMC/6711434.

REFERENCES

Ai Chin, Thoo. (2015). Environmental Collaboration and Sustainability Performance. *Green Supply Chain Management*, 695-699.

Brown, D.T, Ratledge, E.C., 2011. Energy, the environment and delaware jobs: Defining and describing green business. University of Delaware, 116 p., retrieved 15 July 2013; http://128.175.63.72/projects/DOCUMENTS/Green_business.pdf

Carter, C. R. and Rogers, D.S., (2008). "A framework of sustainable supply chain management: Moving toward new theory", *International Journal of Physical Distribution & Logistics Management*, Vol. 38 No. 5, pp. 360-387

F.E. Bowen, P. C. (2001). The role of supply management capabilities in green supply. *Journal of Production and Operations Management*. [Volume 10, Issue 2](#), pages 174–189.

Green, K., Jr., Whitten, D., & Inman, R. (2008). The impact of logistics performance on organizational performance in a supply chain context. *Supply Chain Management: An International Journal*, 13(4), 317-327

J.Sarkis. (2003). A Strategic decision making framework for green supply chain management. *Journal of Cleaner Production*, 397 - 409.

JH.Dyer, H Singh. (1998). The rational view: cooperative strategy and sources of interorganisational competitive advantage. *Academy of Management Review*, 660-679.

Laosiri T, Adebanjo D, Tan KC. (2013). Green supply chain management practices and performance. *SME Annual Report 2011/12*.

Lai KH, Lun VYH, Wong CWY, Cheng TCE., 2011. Green shipping practice in the shipping industry: conceptualization, adoption and implications. *Resource Conservation Recycle* 55(6): 631-38. Retrieved from <http://dx.doi.org/10.1016/j.resconrec.2010.12.2004>

Lai, K. H., & Wong, C. W. (2012). Green logistics management and performance: Some empirical evidence from Chinese manufacturing exporters. *Omega*, 40(3), 267-282.

Linās Cekanavicius, (2014). Green Business: Challenges and Practices. ISSN 1392-1258. *EKONOMIKA* 2014 Vol. 93(1)

Makower, J.; Pike, C. (2009). *Strategies for the Green Economy: Opportunities and Challenges in the New World of Business*. New York, McGraw-Hill. 290 p.

Paulraj, A. (2011). Understanding the relationships between internal resources and capabilities, sustainable supply management and organizational sustainability. *Journal of Supply Chain Management*. Volume 47, Issue 1 Pages 3–95.

R.Rao. (2006). Greening of suppliers / in-bound logistics - In the South East Asian Context. *Geening the Supply Chain*, 189-204.

Rodrigue, J.-P., Slack, B., Comtois, C., (2001). Green logistics. In: Brewer, A.M., Button, K.J., Hensher, D.A. (Eds.), *The Handbook of Logistics and Supply-Chain Management*. In: *Handbooks in Transport*, vol. 2. Pergamon/Elsevier, London.

Seuring S., Muller M. (2008). From a literature review to a conceptual framework for sustainable supply chain management. *Journal of Cleaner Production*. Vol 16. Pages 1699–1710.

Sheu, J. B., Chou, Y. H., Hu, J. J., 2005. An integrated logistics operational model for green supply chain management. *Transportation Research*, Vol 41(4), Pages 287–313

SK. Srivastava (2007). Green supply-chain management: A state-of-the-art literature review. *International Journal of Management Reviews*, [Volume 9, Issue 1](#), pages 53–80.

S. Mayam Masoumik, S.H.Rashid, E.U Olugu, and Raja Ariffin (2014). Sustainable Supply Chain Design: A Configurational Approach. The Scientific World Journal Volume pages 1-15.

Slovik, K. (2013). Nine Steps to Greening Your Business, July 2013, <http://www.startupnation.com>

Wong, Chee (2015). Survey of green supply chain integration practices in the UK. [Data Collection]. Colchester, Essex: UK Data Archive. 10.5255/UKDA-SN-852022

Xhu Q, Sarkis J, Geng Y. (2005). Green supply chain management in China : pressures, practices and performance. International Journal of Operation.