Sustainable Supply Chain Management Practice in Small and Medium Enterprises: A conceptual framework

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Abstract

The sustainable supply chain management (SSCM) practice has gained acceptance among the manufacturing sector with its adoption of ISO 14001 environmental management systems with positive environmental and economic outcomes. However, there is still a lack of research in the area of non-manufacturing companies in Malaysia, particularly in the small and medium-sized enterprises (SMEs) sector. Nevertheless, SMEs are the backbone of every country and contributed a substantial portion to its overall GDP growth. The purpose of this study is to fill the research gap in studying the drivers and barriers of SSCM implementation in the non-manufacturing sector within Malaysia. In order to gain a better understanding on their challenges in SSCM implementation, semi-structured interviews were conducted on selected respondents from different industries and sectors. Thematic analysis and cross-case analysis were used to further analyze, compare and contrast the different drivers and barriers obtained from findings. It has a causal relationship as well with the lack of management support in terms of resource allocation leading to challenges in securing adequate funding for further SSCM activities.

Keywords: Sustainable supply chain management, small and medium-sized enterprises, Practices, Malaysia.

1. Introduction

The emerging economies have been experiencing rapid economic growth for the past several decades, this including Southeast Asia and most part of emerging Asia. With rapid growth, comes industrial and commercial development across all the developing countries. As a consequence, human population has increased exponentially due to improving healthcare, better access to education and newfound opportunities. Meanwhile, globalization and rapid development has significantly increased pressure on the earth's natural resource. Society and the business communities are raising concerns and demanding for better business practices by putting pressures on companies to provide not only economic benefits, but also taking into consideration the social and environmental concerns by achieving the triple bottom line (TBL) objective of sustainability (Meixell, 2015).

Seuring and Muller (2008) defines sustainable supply chain management (SSCM) as "the management of material, information and capital flows as well as cooperation among companies along the supply chain while taking goals from all three dimensions of sustainable development, i.e, economic, environmental and social, into account which are derived from customer and stakeholder requirements". The aim of SSCM is to reduce harmful effects to the environment during the firm's business operations (Mathiyazhagan et al, 2015). SSCM practices are green purchasing, product design (eco-design), resource efficiency, waste management, eco-efficiency in operations and reverse logistics (Hsu et al., 2016).

In Malaysia, SSCM practices has started to gain acceptance among the larger manufacturing companies, with most of them being ISO 14001 certified for environmental management. However, the SMEs sector are still lagging behind

its bigger counterparts in the adoption and implementation of SSCM. This has presented a research gap in present literature regarding SSCM implantation and the firm's overall performance. There are approximately just over 900,000 SMEs in Malaysia as of 2018, with up to 89.2% consisting of services and related sector (SMEinfo). According to Department of Statistics Malaysia (DOSM), SMEs contributed 37.8% to the nation's economy with an average sector growth of 6.2% in contrast to 4.7% national GDP growth.

Drivers and barriers for SSCM implantation in SMEs from existing literature are governmental support, organizational culture, leadership/management support and commitment, employee training and development and etc. Additionally, it is very often depending on the owner's values and objectives. By applying the stakeholder theory, this research aims to investigate the barriers and challenges by gaining a better understanding from business owners and managers from selected non-manufacturing SMEs.

The research gap in current literature for SSCM are the non-manufacturing companies (SMEs or large), such as retail, services, trading and etc. Very limited studies were done on sustainable supply chain (SSC) on the firm's performance in the service sector in Malaysia (Tan. MY., 2018). A point in case would be SMEs adopting CSR and sustainability practices, particularly in the form of SSCM/GSCM approach for non-manufacturing firms in enhancing the firm's image, competitive advantage, economic benefits and consumer sentiment/public acceptance.

In addition, no studies have been performed focusing on the drivers (internal and external) and challenges in the adoption of SSCM practices among SMEs (particularly non-manufacturing sector) in Malaysia at this point of time. Hypothesis and selected frameworks can be adopted from existing literature in manufacturing sector to be tested on non-manufacturing sectors to conduct a confirmatory study on the drivers and barriers of these companies in adopting and implementing SSCM practices.

With existing literature emphasizing on manufacturing sectors and its practices, and with majority of the research originated developed economies, the decision to conduct a study into non-manufacturing SMEs in a developing economy has never been more appropriate. Studies from developing economies and its diverse industries have provided a solid understanding in the drivers and challenges faced by others.

Such knowledge and practices could be further studies, analyzed and replicated to our local context. Hence, gaining an understanding from the local SMEs stakeholders (primarily managers, owners and employees, followed by external factors such as customers, suppliers, government and others) would provide valuable information better decision making and further improvements. Hence, this study aims to address the following research questions:

i) What are the drivers and barriers (challenges) faced by non-manufacturing SMEs in SSCM implementation?
ii) How can the current situation be improved?

The significance of this study are twofold. Firstly, a good understanding in identifying the drivers and barriers (challenges) is an important first step towards SSCM implementation (Narissima, 2020). In the overall contribution to SSCM research, this study is focusing at the initial phase of overall SSCM process.

Drivers & Barriers → Adoption & Implementation → Firm's Performance (TBL)

It provides us the critical factors and reasons in the local context on the challenges faced by SMEs during implementation process. On the other hand, a better understanding would lead to more effective problem solving and would contribute to higher success rate in future implementations.

Secondly, it matters a lot where SMEs are the backbone of the country's economy (DOSM). In Europe, given its level of current development, SMEs consist of nearly 90% of all its available companies (Lee, 2016). Whereas for Malaysia, the numbers are even higher reaching a staggering rate of 98.5% as of the end of 2016 (SMEinfo) with business establishments of just over 900,000. In 2018, the overall SMEs GDP growth of 6.2% exceeded our national GDP growth of 4.7%. Its GDP contribution has reached 38.3% and was heading towards a positive growth trajectory (DOSM, 2018). More importantly, SMEs is the major job creator in Malaysia by providing job opportunities to millions of fellow Malaysians every year.

2. Literature Review

Businesses remained the primary revenue generator for the country's economy with its involvement in economic activities across the diverse industrial sectors within the local economy. With rapid economic development and higher consumers' demand for better products services, organizations are experiencing huge pressure to cater to new level of demands. As such, its business operations and supply chains are at the heart of these business activities. Implementation of sustainable practices in supply chain has gained widespread attention over the past decade or so. The sustainable practices aim to reduce environmental impacts have brought improvements in organizational performance – economically, environmentally and socially.

Sustainability in business practices has gained importance of late due to its comprehensive coverage of the triple bottom line (TBL) concept – environmental, economic and social aspects. It emphasizes a more wide-ranging focus not just on economic profit, but also providing a reasonable emphasis on social and environmental issues as well.

Three major sustainable supply chain management (SSCM) practices are green purchasing, eco design or design for environment and reverse logistics proposed by Zailani et al. (2010). These practices need to be incorporated into the corporate culture and the firm's business strategy in order to implement it effectively. On the other hand, SSCM adoption and implementation needs to be tackled from the supply chain approach instead of individual firms where it involves many stakeholders along the way. Eg: suppliers – focal company – customers. The collective sustainable practices involving different stakeholders along the supply chain will further enhance productivity, reduce and minimize wastage, better working conditions for employees and improved supplier-buyer relationship.

Sustainable Supply Chain Management (SSCM)

SSCM has been a topic of interest for with an increase in research papers both in quantitative and qualitative analysis (Genovese et al, 2017). Lead authors such as Carter et al. (2019), Dubey et al. (2017) and Walker (2015) has contributed to this young and emerging field. Wide-ranging definitions of SSCM in existing literature have been proposed by different researchers with various concepts.

Seuring (2008) states that the merging of two concepts of environmental and social aspects by integrating supply chain management and sustainable development, and also taking into consideration in developing more sustainable products and processes while minimizing environmental impacts in a sustainable manner. Carter and Rogers (2008) mentioned SSCM is the process of integrating and attaining the organization's social, environment and economic goals in a systematic coordinated manner so that the inter-organizational business decisions lead to improvement of the long-term economic performance of organizations and its supply chains.

Additionally, Dubey et al. (2017) has proposed a World Class SSCM consisting of six main dimensions: environmental, social values and ethics, economic stability, operational performance assessment, internal and external factors. The former three dimensions corresponds directly to the sustainability concept of TBL, whereas the latter three explores on different themes in the SSCM field. Analysis of literature by Jia et al. (2018) identified four major themes found in SSCM in various industries: drivers, barriers, mechanisms/practices and outcomes.

SSCM internal and external drivers

Drivers are factors which enables or motivate the focal company to achieve sustainability practices and performance. It is the driving force which pushes the organization to initiate sustainable related activities in achieving its sustainability objectives within the supply chain network. Different drivers have been identified in the extant literature (Saeed et al., 2019) where it comes in various forms, and also depending on different situation and context. Drivers is also acting as the agent of pressure in influencing organizational decision in sustainability compliance. Most notably, pressure acts as trigger points for companies launch its sustainable initiatives (Hsu et al., 2013; Koksal et al., 2017).

According to stakeholder theory, SSCM drivers can be classified into external and internal drivers. Table 1 shows the classification of drivers based on Saeed et al. (2019). The Table 1 illustrates the different types of internal and external drivers.

Table 1. Internal and External Drivers

Internal Drivers	External Drivers
• Top management commitment • Organizational culture • Resources (financial, human capital and knowledge) • Awareness	• Regulatory pressure • Customer pressure • Market pressure (competition) Stakeholder pressure

Internal drivers are factors happening within the organization and its stakeholders (top management, middle management and employees). These drivers have a profound impact on the organization's strategy and orientation towards sustainability practices. Studies indicated that top management and organizational culture has an interconnected relationship in shaping company's policies and employees' motivation towards sustainability awareness (reference needed). Resources allocation driven by top management support is also a key factor in realizing TBL within the organization.

External drivers belonging to factors that occur outside of the focal company. Regulatory pressure or compliance remained the top drivers for companies to consider in adopting sustainable practices to avoid being penalized by the law. On the other hand, depending on specific industry requirements, customer pressure and competition were found to be the principal motivator for companies to go green. The supply chain network is highly people centric consisting of different stakeholders – suppliers, customers, end users, government, NGOs and etc, stakeholders' concern and pressure is also considered to be a key external driver in influencing organizational decision towards sustainability practices.

SSCM internal and external barriers

Barriers can also be categorized into both internal and external. There are the challenges that is hindering the company to implement sustainability practices. Previous studies (reference needed) also showed financial constraints and lack of management commitment are the most significant internal barriers within the company to adopt sustainability practices. The lack of management support without proper resource (financial and human capital) allocation and planning proves to be a major stumbling block to create the appropriate culture in tackling sustainability challenges within the organization. Table 2 shows the internal and external barriers of SSCM practices.

Table 2. Internal and External Barriers

Internal Barriers	External Barriers
▪ Financial constraints ▪ Lack of resources ▪ Lack of top management commitment ▪ Lack of employee support	▪ Lack of awareness ▪ Lack of regulatory pressure and enforcement ▪ Lack of government support and initiatives ▪ Lack of supply chain integration

From the external perspective, the lack of awareness could be attributed difficulty in obtaining support with the lack of government initiatives to encourage SSCM adoption. The lack of law enforcement is also part of the challenge to get companies, especially SMEs to comply with regulation requirements. Most importantly, it is the lack of supply chain partner integration that is hindering companies towards SSCM practices. This could further tie down to lack of

information sharing and trust between suppliers and buyers. As such, these challenges are causing supply chain partners to not able to form a coherently unified goals towards SSCM implementation.

3. Conceptual Framework of Study

The conceptual framework has been developed to be the main guide for this research. Based on the stakeholder theory and perspective, an in-depth discussion with respondents will take place to investigate on the drivers and barriers with each respondent coming from different industries. Both drivers and barriers are part of the independent variables with each variable functions independently. These can further be classified into subcategory as follow

i) Internal drivers
ii) External drivers
iii) Internal barriers
iv) External barriers
v) Moderating factors

The relationship of such drivers and barriers are to be explored and discussed with respondents during data collection stage. Very often, there are moderating factors which could influence the firm's decision in implementing SSCM practices. These moderating factors would either be positive or negative as well depending to its situation and context. Figure 1. shows the conceptual framework of the study.

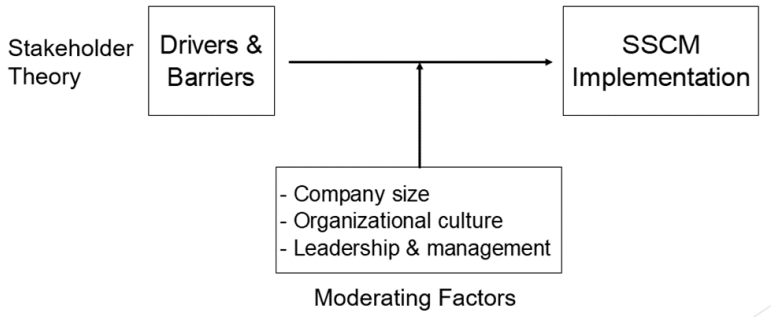

Figure 1. Conceptual Framework (adapted from Zailani et al., 2010; Nejati, 2014).

The stakeholder theory serves as general guide in answer the research questions. Different types of stakeholders (internal/external, different levels… based on literature review) serving its different purposes in its success or failure during SSCM implementation. These stakeholders will also be the main reasons contributing to the drivers and barriers, and part of the moderating factors in determining the final outcome affecting the dependent variable(s).

4. Conclusion

Rapid industrialization and urbanization has led to an urgent attention to sustainability matters. Countries and industries has to take into consideration of extracting and consuming natural resources in a sustainable manner in order to not compromise our future generations and depriving them our precious resources. This research focuses on the drivers and barriers in SSCM implementation in the context of non-manufacturing SMEs. Contribution of this study were to gain a deeper understanding and bridging the research gap in the drivers and barriers in SSCM implementation in non-manufacturing SMEs.

Knowledge and understanding in these drivers and barriers form an important first step in the overall SSCM implementation process. This leads to improve stakeholders' involvement and collaboration and further improving the integration process of supply chain activities.

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