

Building a Conceptual Model for Adopting Green Supply Chain Practices

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Abstract

Green supply chain management is becoming more popular in South East Asian region and it is a way to display the genuine commitment to sustainability of any organization and the environment in this region. Most of the developed and developing countries tend to adopt green supply chain practices as a solution for serious environmental problems. Therefore this study supports for the potential organizations to adopt green supply chain practices and strengthen the extant body of knowledge on green supply chain management. This paper presents a conceptual model for identifying the key drivers that influence to adopt green supply chain practices based on the existing literature. The proposed model addresses the key drivers as external and internal factors based on theoretical background of institutional theory and resource based view theory. It is expected that proposed model will be more contributed to enhance the adoption of green supply chain practices by manufacturers, suppliers and government.

Key words: Green supply chain management, Institutional theory, Resource based view theory

1. Introduction

Attention towards environmental concerns is increasingly grown due to issues raised through process of delivering products to end user. As cited in Abu Seman & Aslinda, 2012 Green supply Chain Management (GSCM) has been progressively accepted and practiced by forward thinking organizations as an emergent environmental approach in supply chain management. Hence various studies have been conducted on different aspects of GSCM (Hervani, et al., 2005; Bowen, et al., 2001; Sakis, 2009; Cai, et al., 2008). These different studies show the increasing interest of academics on this area. Although an ample number of studies

available on GSCM, this conceptual model development focuses to study the adoption of green supply chain practices based on extant body of knowledge due to contradictory findings of some studies (Bowacten, et al., 2001; Khidir & Zailani, 2011). Based on the literature researcher intends to develop conceptual model to identify the factors that influence to adopt green supply chain practices and to identify the level of adoption. Moving along with the literature the researcher identifies the drivers that affect to the adoption of green supply chain practices can be emerged in internally or externally. However the findings derived through the empirical studies are contradictory. Since number of studies were conducted by mixing of both factors researcher

try to build the model to test the impact separately. Through this development researcher expects to test the model to decide driving forces of adopting green supply chain practices and level of adoption in near future.

2. Theoretical Background

2.1 Green supply chain management

Green supply chain management involves environmental concerns for traditional supply chain management (Gilbert, 2000). The definition and scope of the green supply chain management in literature has ranged from green purchasing to integrated green supply chains from supplier to manufacturer to customer (Zhu & Sarkis, 2004). Several studies have examined the green supply chain management with in different components as green purchasing, green design, green manufacturing and mixture of these components (Bowen, et al., 2001). As an equation, green supply chain management consists of green purchasing, green manufacturing, green distribution and reverse logistics (Hervani, et al., 2005).

2.2 External Drivers of GSCM Practices Adoption

As a good starting point for the discussion, institutional theory (DiMaggio & Powell, 1983) can be used to explain the key drivers for adopting green supply chain practices. Institutional theory states that firms adopt initiatives in order to gain legitimacy or social acceptance. Accordingly normative, coercive, and mimetic pressures can be identified as external drivers that influence to the adoption of green supply chain practices (DiMaggio & Powell, 1983).

Normative Pressures

Normative pressures are exerted by firms in the similar industry or people in the similar groups. For the green supply chain practices adoption, the information on costs and benefits of adopting green practices are likely to be shared within the same industry. Furthermore sharing these norms among members of similar network facilitates potential influence on adopting green supply chain practices (Cai, et al., 2008). Therefore prevalence of green supply chain practices with in the industry is used as a key driver of normative pressure.

Coercive Pressures

Coercive pressures exerted by external bodies through formal or informal power. Government agencies or rules and regulations are example for normative pressures that influence to organizational behavior. Most of the literature support the regulatory forces as coercive pressure (DiMaggio & Powell, 1983), (Cai, et al., 2008). Thus Environmental and other regulations are used as a key driver for coercive pressure.

Mimetic Pressure

Mimetic pressures occur when an organization follow successful competitors in the industry. Firms may imitate successful competitors through benchmarking in order to reduce the risk of adopting green supply chain practices or gain second mover advantages (Cai, et al., 2008). Therefore perceived success of green supply chain pioneers is used as a key driver for mimetic pressures.

Although there are ample studies based on institutional theory, different studies have used different drivers for adopting green supply chain practices. Drivers are defined as stimuli that motivates business organizations to adopt green supply chain practices. Cai, et al., (2008) found six key drivers of green supply chain strategy adoption based on the institutional theory. They are perceived success of GSC pioneers, Regulatory factors, the extent of strategic alignment with customers who adopted GSC strategy, the extent of strategic alignment with suppliers who adopted GSC strategy, Prevalence of GSC strategy adoption within the industry and public concerns.

The study carried out by Khidir & Zailani, (2011) has identified 30 studies that empirically investigate the drivers for green initiatives as regulations, customer pressure, expected business benefits, social responsibility, community pressure, competition and employee pressure. However the results of the study of Khidir & Zailani, (2011) discloses that the top drivers for motivating to adopt the green supply chain practices are regulations, expected business benefit, customer pressure and social responsibility. Even though this study has identified that there is a significant effect of the above top four drivers, Bowen, Cousins, Lamming, & Farukt, (2001) has identified that no significant relationships between regulations and green purchasing. Similarly Zhu & Sarkis, (2004) found no significant relationships between external pressures (regulatory, market and supplier pressures) and green supply chain initiatives.

2.3 Internal Drivers of GSCM Practices Adoption

As a support for identifying internal drivers to adopt green supply chain practices, resource based theory has been used. Resource based theory asserts that sustainable competitive advantage may be achieved through harnessing the resources which are valuable, rare, imperfectly imitable and non-substitutable (Barney, 1991). Resources in turn, comprise three sub groups namely tangible resources, intangible resources and competencies. Tangible resources includes fixed and current assets that have long run capacity (Wernerfelt, 1984). For Example, plant, equipment, land, stock. Intangible resources include intellectual property such as trademarks and patents as well as brand image and reputation, company networks (Hall, 1992). Capabilities encompasses skills of individuals or groups as well as organizational routines and interactions through which all the firms' resources coordinated (Grant, 1991).

In addition Knowledge and capabilities for adoption of green supply chain practices of a firm is considered as resources according to the resource based view (Lai, et al., 2010). Another internal influential factor is top management commitment. Top management is essentially important for green supply chain practices since it has significant ability to influence and support for adopting green supply chain practices (Sakis, 2009). Walker, Sisto, & McBain, (2008) identify economic benefit as an internal driver for adopting green supply chain practices and (Rao & Holt, 2005) identified brand image and reputation as an economic benefit gain

through green supply chain practices. Therefore researcher considers brand image and reputation as a key internal driver in resource based view.

3. Conceptual Model

Based on the above theoretical background conceptual model is built as follows. In order

External Factors

Normative Pressure

Coercive Pressure

Mimetic Pressure

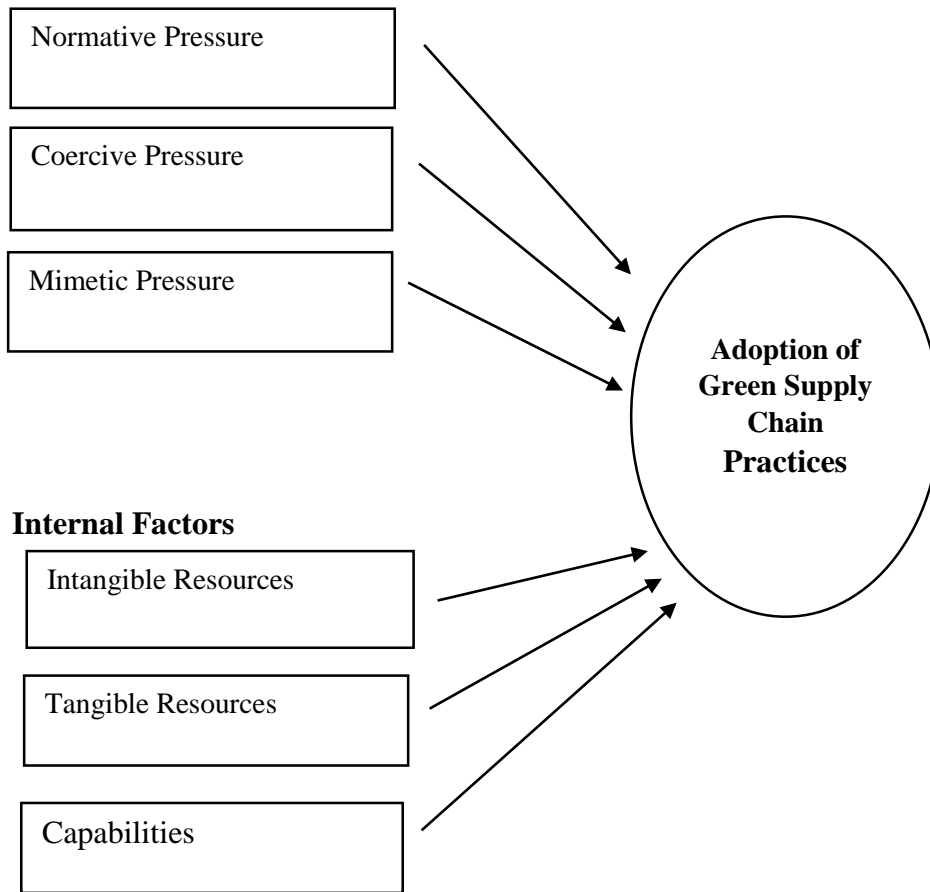
Internal Factors

Intangible Resources

Tangible Resources

Capabilities

to identify key drivers that influence to adopt green supply chain practices, external factors are broadly categorized in to normative, coercive and mimetic pressures while internal factors are broadly categorized in to intangible resources, tangible resources and capabilities.



4. Conclusion

Identifying the trend that the world need to be changed for environmental aspects due to global issues, It is important to study the drivers that influence to adopt green supply chain management practices since it is one way to reduce environmental impacts of the global trend of greening, researcher assumes

that all the manufacturing companies have to adopt green supply chain practices in the future. Therefore potential adopters will be benefited by identifying the key drivers for that. The researcher further anticipates that proposed model will be more contributed to enhance the adoption of green supply chain

practices by manufacturers, suppliers and government.

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