

## **A REVIEW ON GREEN SUPPLY CHAIN MANAGEMENT, SOCIAL CAPITAL AND SUSTAINABLE PERFORMANCE**

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### **ABSTRACT**

*Nowadays, companies start to recognize green supply chain management as a business imperative and one of the factors to the sustainable performance of the organizations. However, in maintaining the integrity of the supply chain, it is important to build social capital among organization as the chain can be strengthened by strong relationships. This paper discusses the influence of social capital on the green supply chain management (GSCM) and sustainable performance. The study reviews past literatures related to the link between GSCM and sustainable performance, and eventually, examines the role of social capital on this linkage. The literature indicated that social capital plays a significant role towards organizational sustainable performance. As the green supply chain itself involves cooperation and collaboration from internal and external parties, strong social capital would ensure understandings among these parties. In addition, this paper provides recommendations for future research to be conducted on this field.*

**Keywords:** *green supply chain, social capital, sustainable performance, business*

### **INTRODUCTION**

Business sustainable performance happens when a company or firm forms ongoing value for its stakeholders and shareholders while keeping up with environmental requirements (Brent & Labuschagne, 2004). Sustainability is a brilliant way of performing business, and one of the essential parts of sustainability transition process is developing innovative and constructive corporate culture through integration (Chen, Okudan & Riley, 2010). These healthy cultures would be able to create better organizational performance and make optimum use of existing assets for the good outcomes of economic, environment, and society (Dunphy, 2011). The result from having economic, environmental, and social sustainability would ensure satisfaction among the shareholders, supplier, customer, employee, and society.

Firms have progressively reconsidered their supply chains in response to a number of environmental challenges such as global environmental regulations, green consumerism and climate change. In fact, firms might face a wide range of environmental risks

associated with their supply chains (Handfield et al., 2005). A number of firms have changed their managerial behavior toward greener supply chains by introducing environmental audits and certification schemes (ISO 14001), as well as providing their suppliers with environmental support and fostering environmental collaboration (Wu et al., 2012). Besides, there has been an urgency to integrate environmental initiatives as the companies have often been arraigned for the environmental obligations of their suppliers (Rao, 2008).

GSCM and social capital can be understood to be fundamentally parallel to one another. Social capital is accumulated through a process of firms building social relationships in ongoing networks. GSCM is basically a reciprocal program between supply chain partners, thereby facilitating the inclusion of a partner company in the supply chain. Social capital is believed to be promising and important theoretical underpinning for strengthening research in GSCM (Sarkis et al., 2011). However, the number and scope of GSCM studies considering monitoring and collaboration approaches, in particular empirical studies withstand insufficient (Vachon & Klassen, 2008). Given these gaps in the literature, this study aimed to look in detail the particular effects of social capital on GSCM and sustainable performance.

### **Green Supply Chain Management**

GSCM is commonly understood as a set of practices in management that combine environmental concerns into supply chain management to make certain environmental compliance and to cultivate environmental competency of the whole supply chain. According to Zhu et al. (2008), green supply chain management can be defined as “delivering products and services from suppliers, manufacturers to end customers through material flow, information flow and cash flow in the context of environment” while Srivastava (2007) referred the GSCM as “integrating environmental thinking into supply-chain management, including product design, material sourcing and selection, manufacturing processes, delivery of the final product to the consumers as well as end-of-life management of the product after its useful life”. In other words GSCM is the synthesis of two significant evolving approaches those are productivity improvement and environmental protection.

The growing importance of GSCM is driven mainly by the escalating deterioration of the environment, such as increasing levels of pollution, overflowing waste sites, and diminishing raw material resources. However, it is not just about being environmentally friendly; it is about good business sense and higher profits. In fact, it is a business value driver and not a cost center (Wilkerson, 2005). The regulatory requirements and customers pressures increased the interest among researchers and practitioners of operations and supply chain management to put more attention on GSCM. Numerous literatures exist about various perspective and aspects of GSCM can be found on several issues that have been published as shows in Table 1.

Table 1  
Focus Area on Green Supply Chain Management

| Focus   | Authors                                |
|---|--|
| Green manufacturing and product recovery            | Guide, Spencer, Srivastava, (1996)     |
| Green design  | Zhang, Kuo, & Huang (1997)             |
| Production planning and control for remanufacturing | Bras & McIntosh (1999)                 |
| Logistics network design                            | Jayaraman, Patterson, & Rolland (2003) |

### **Social capital**

Social capital is a concept that has significant implications for enhancing the quality, effectiveness and sustainability of operations, particularly those that are based on community action. Putnam (2000) put forward social capital as the network of relations, activities or associations that bind people together as a community through certain norms and psychological capabilities particularly trust which are essential for civil society, and productive of future collective action or goods. In 1990s there is passionate development in social capital. Nahapiet and Ghoshal (1998) define social capital as the resources available and potentially available from the network of relationships found in the individual or community.

As has been deliberated by a number of scholars (Coleman, 1988; Putnam, 1995; Nahapiet & Ghoshal, 1998, etc.) social capital is not a one-dimensional concept. Social capital has many attributes associated with complicated social context. It covers many aspects of the social context such as social ties, trusting relationships, value systems that facilitate actions of individuals, it is therefore important to clarify the dimensions of social capital (Tsai & Ghoshal, 1998).

Nahapiet and Ghoshal (1998) propose three dimensions of social capital which are structural, relational, and cognitive aspects. This three-dimensional framework was used to examine the relationship between social capital and inter-organization phenomena, like the establishment of intellectual capital (Nahapiet & Ghoshal, 1998), the interchange of resources between divisions (Tsai & Ghoshal, 1998), and organizational citizenship behavior (Bolino *et al.* , 2002).

Table 2 summarizes the components of social capital in the three-dimensional framework employed by former scholars.

**Table 2**  
**The Summary of Components of Social Capital**

| Origin                    | Structural dimension   | Relational dimension  | Cognitive dimension                          |
|---------------------------|--|---|--|
| Coleman (1988)            | The information potential and the authority relationships          | Trust, norms, punishment mechanisms, obligations and expectations | —  |
| Tsai & Ghoshal (1998)     | Social interaction   | Trust and dependency  | Common vision                                |
| Gulati et. al (2000)      | Mosaic structure   | Mosaic relationship   | —  |
| Nahapiet & Ghoshal (1998) | Network connectivity, network patterns, organization relationships | Trust, norms, obligations, recognition                            | Common coding and language, common narrative |
| Adler & Kwon (2000)       | Network  | Norms, rules, trust   | Faith  |

Source: Li and Zhu (2009).

### **GSCM and Social Capital**

GSCM is basically a reciprocal program requiring mutual recognition by supply chain partners. Through a transparent evaluation of performance and an effective feedback system for GSCM, supply chain partners share common environmental goals and thus can reach a common philosophical understanding. This is because such an evaluation and feedback process can enable suppliers to become aware of their performance level and the buyer's performance expectations in environmental and economic areas. GSCM also emphasizes open communication and information sharing. Potential conflicts between the supply chain parties can be minimized if better mutual understanding and an open channel of communication regarding to environmental requirements achieved (Wu & Ragatz, 2010) and, thus, increase the strength of relationships.

GSCM practices focus more on developing future technical, product development, and management capabilities than on improving current quality, cost and environment (Lee & Klassen, 2008). The greater the scope of support or joint activities, the more likely the buyer is to perceive its suppliers as partners than as contractors and thus to move toward a closer relationship (Nyaga et al., 2010). Similarly, suppliers are likely to perceive buyers' direct involvement and joint events, including training, education and technical assistance, as a signal of long-term commitment and partnership (Krause et al., 2007). Therefore, GSCM practices is likely to be easily implemented through social capital as managing supply chain means integrating all key processes which require good and strong relations among the suppliers as social capital limits uncertainty in social life and economic life (Baraniecka, 2016). From the above discussion a prepositions proposed is as followed:

P1: Social capital has significant impact on the success of green supply chain management.

### **Social capital and Sustainable Performance**

Sustainability in business is a dynamic state that occurs when a company creates ongoing value for its shareholders and stakeholders. While an essential aspect of sustainable value is that by doing well for society and the environment, the company does even better for its customer and shareholders than it otherwise would. Sustainability as stated by Dunphy (2011) in his book 'Conceptualizing Sustainability: The Business Opportunity', consists of actions that extend socially useful life of the organization, enhance the planet's ability to maintain and renew viability of the biosphere and protect all living species, enhance society's ability to maintain itself and to solve its major problem and to maintain a decent of welfare, participation and personal freedom for present and future generations of humanity. In such, sustainability is a better way of doing business, and an important part of making the change to sustainable enterprises is to develop constructive, innovative corporate cultures. These cultures create high performance and make maximum use of existing assets in ways that have good outcomes for the environment, society and economic (Dunphy, 2011).

When strong interaction ties and trust are built based on a long-term-based relationship, suppliers are in the offing to be inspired to generate new ideas, work together to clarify and solve complex problems and improve the environment as well as economic performances. In order to acquire human and financial resources, firm can use its social capital (Burt, 1992). Inadequate social capital defines weak interaction among the firm members and with external parties. Meanwhile, close social interactions permit actors to know one another, to create a common point of view (Tsai & Ghoshal, 1998). As such, firms may produce more social capital and ensure positive firm performance.

A numbers of scholars established the social capital–performance relationship to a positive relationship (e.g., Park & Luo, 2001) and to a negative relationship (e.g., Rowley, Behrens, & Krackhardt, 2000). The review on literature revealed that there are relationship between social capital and sustainable performance. The literature indicated that social capital plays significant role towards organizational's sustainable performance. From the above assertions the following prepositions proposed is:

P2: Social capital has significant impact on sustainable performance.

### **CONCLUSION**

This paper reviews past literatures related to the link between GSCM and sustainable performance, and eventually, examine the role of social capital on this linkage. Due to

policy and obligation on environmental, social capital would be a crucial factor as cooperation among internal and external parties are required for the organizations to have a good GSCM and to achieve greater sustainable performance. Apparently, social capital may influence the strength of chains in GSCM and successful of sustainable performance. As of now, manufacturing sector and services sector are going for environmentally-friendly business orientation, hence more comprehensive study on this field is needed.

## REFERENCES

- Baraniecka A. (2016) How to measure the social capital in a supply chain. *International Scientific Journal about Logistics*, 3(4), 23-30.
- Brent', A. C., and Labuschagne', C. (2004). *Sustainable Life Cycle Management: Indicators to assess the sustainability of engineering projects and technologies*. Paper presented at the International Engineering Management Conference.
- Burt, R. S. (1992). V The Social Structure of Competition.
- Chen, Y., Okudan, G. E., and Riley, D. R. (2010). Sustainable performance criteria for construction method selection in concrete buildings. *Automation in Construction*, 19(2), 235–244.
- Cote, R. P., Lopez, J., Marche, S., Perron, G. M., and Wright, R. (2008). Influences, practices and opportunities for environmental supply chain management in Nova Scotia SMEs. *Journal of Cleaner Production*, 16, 1561-1570.
- Dunphy, D. (2011). *Chapter 1 Conceptualizing Sustainability: The Business Opportunity*", Gabriel Eweje, Martin Perry, in (ed.) *Business and Sustainability: Concepts, Strategies and Changes (Critical Studies on Corporate Responsibility, Governance and Sustainability (Vol. 3): Emerald Group Publishing Limited*.
- Inkpen, A. and Tsang, E. (2005) Social Capital Network and Knowledge Transfer. *Academy of Management Review*, 30, 146. <http://dx.doi.org/10.5465/AMR.2005.15281445>
- Krause, D.R., Vachon, S. and Klassen, R.D. (2009), "Special topic forum on sustainable supply chain management: introduction and reflections on the role of purchasing management", *Journal of Supply Chain Management*, Vol. 45 No. 4, pp. 18-25.
- Lee, S.Y. and Klassen, R.D. (2008), "Drivers and enablers that foster environmental management capabilities in small-and medium-sized suppliers in supply chains", *Production and Operations Management*, Vol. 17 No. 6, pp. 573-586.
- Nahapiet, J., & Ghoshal, S. (1998). Social capital, intellectual capital, and the organizational advantage. *Academy of management review*, 242-266.
- Park, S. H., & Luo, Y. (2001). Guanxi and organizational dynamics: Organizational networking in Chinese firms. *Strategic Management Journal*, 22(5), 455-477.
- Rao, P. H. (2008). *Greening the supply chain: A guide for Asian managers*. New Delhi: SAGE Publications.
- Rowley, T., Behrens, D., & Krackhardt, D. (2000). Redundant governance structures: an analysis of structural and relational embeddedness in the steel and semiconductor industries. *Strategic Management Journal*, 21(3), 369-386.

- Sarkis, J., Torre, P., and Diaz, B. A. (2010). Stakeholder pressure and the adoption of environmental practices: The mediating effect of training. *Journal of Operations Management*, 28(2), 163-176.
- Srivastava, S. K. (2007). Green supply-chain management: A state-of the-art literature review. *International Journal of Management Reviews*, 9(1), 53-80.
- Tsai, W., & Ghoshal, S. (1998). Social capital and value creation: The role of intrafirm networks. *Academy of Management Journal*, 464-476.
- Tsai, W. and Ghoshal, S. (1998) Social Capital and Value Creation: The Role of Intrafirm Networks. *Academy of Management Journal*, 41, 464-476.
- Vachon, S. and Klassen, R. D. (2006). Green project partnership in the supply chain: the case of the package printing industry. *Journal of Cleaner Production*, 14, 661-671.
- Vachon, S. and Klassen, R. D. (2008). Environmental management and manufacturing performance: The role of collaboration in the supply chain. *International Journal of Production Economics*, 111(2), 299-315.
- Wilkerson, T. (2005). Can One Green Deliver Another? Harvard Business School Publishing Corporation Harvard Business School Publishing Corporation. from <http://www.supplychainstrategy.org/>
- Wu, G-C. (2013). The influence of green supply chain integration and environmental uncertainty on green innovation in Taiwan's IT industry. *Supply Chain Management: An International Journal*, 18(5), 539-552.
- Zaheer, A., Gulati, R., & Nohria, N. (2000). Strategic networks. *Strategic Management Journal*, 21(3), 203.
- Zhu, Q., Sarkis, J., Cordeiro, J. J., and Lai, K. (2008). Firm-level correlates of emergent green supply chain management practices in the Chinese context. *Omega*, 36, 577-591.