Sustainable supply chain management: An overview

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Abstract - The organizations are progressively concentrating on procurement as well as delivering of products and facilities in such a way to decrease the harmful effects on the society, environment as well as economy. In above outlook, the perception of sustainable supply chain management has taken consideration of the business organization due to its significance on economic, social and environmental performance. As the supply chain management is the most important for enriching the organizational competitiveness, the current work make an attempt to explore the theoretic outlooks in sustainable supply chain management.

Keywords – Supply chain management, Sustainability

1. INTRODUCTION

Sustainable supply chain management has been one of the influential area of subject for researchers, both in quantitative and qualitative (Genovese et al., 2017). Therefore, it is reasonably necessary that the concerns of sustainability should be encompassed into the main roles of the supply chain viz. purchasing, storing, warehousing, manufacturing, distributing, and recycling in addition to disposal (Linton et al., 2007). The business firms are under massive pressure so as to competent to maintain their current supply chain because of modern looks of globalization, changes of market, and economic challenges. According to Khodakarami et al. (2015), if conceptions of sustainability are incorporated into main functions of a business organization's supply chain, it attains a valuable market outlook in the global perspective. Busse et al., (2017) stated that the revolution of the usual supply chain management into

sustainable supply chain management develops heaviness on firms to fetch transformations to their current supply chain so as to meet the present sustainability demands. The sustainable supply chain management is combines of economic, social and environmental involvement (Shukla et al., 2017).

II. LITERATURE REVIEW

The traditional supply chain management mainly focuses on the economic outlooks while sustainable supply chain management is linked with the combination of the environmental and social goals reaching upto the economic aspect (Siddh, et al., 2018; Seuring and Muller, 2008). The demand of this field is growing, be it educationally, socially, or economically, which can be realized by the exponential progression of publications in the current times and particularly some of the current ones. Brandenburg et al. (2014) stated that a large extends of empirical research which employs field survey and case study; numerous other works utilize smart and mathematical models for attempt and theory-based research.

In order to study the huge openings to increase organizational sustainability, concentrated and more detailed indulgent of the common as well as distinctive modeling attributes is needed. The current sustainable supply chain management reviews in literature are mainly descriptive. In the literature various authors have studied about the integration of people and planet concerns into the supply chain such as ecological product and process advancement, ecological operations management and remanufacturing. ReVelle and Eiselt, (2005) stated that an indication on the applicability of operations research accomplishments have been displayed for

the management of natural assets, for instance water, solid wastes, in addition to air pollution as well as depicted numerous prescribed models in the significant fields. Some studies have worked out on the collective optimization concerns in the arena of green logistics that comprises reverse logistics, transportation scheduling, and waste management (Sbihi and Eglese, 2007). These were some of the initial research carry out which created aspect for inclusive sustainable supply chain management research.

By tradition, the economic outlook of sustainability was mainly concentrating by organizations as well as businesses; though, lately the social environmental facets have secured thrust despite the fact it is enormously challenging to be competent to assess them. Generally organizations are getting used to sustainable standards because of an enhanced pressure of stakeholder, to emphasis on the society and the environment (Seuring and Muller, 2008). It does not entail that the economic facet is to be totally avoided. It is obvious that the organizations who implement sustainable accomplishments by taking into consideration the society and environment have long-standing economic advances and competitive benefit (Carter and Rogers, 2008; Siddh, et al., 2017; Markley and Davis, 2007).

III. OUTLOOKS OF SUSTAINABLE SUPPLY CHAIN MANAGEMENT

There are mostly three distinctive outlooks of sustainable supply chain management that have been focused by researchers time to time, for instance, economic, social and environmental outlook.

3.1 Economic outlooks of sustainable supply chain management

The main aim of each organization, or businesses is revenue creating. Henceforth, the sustainability standards should be integrated in such a way that profitability is making sure with effectual conservation of society and environment. So as to make certain development for an extended term as well as uphold organization's economic constancy the supply chain managers should think about implementation of sustainable supply chain

management accomplishments which are valuable for a sustained phase (Carter and Easton, 2011). Numerous researchers have recognized significance of environmental as well as social sustainability plans in supply chain to attain strategic economic profits (Zailani et al., 2012; Siddh, et al., 2015; Ortas et al., 2014). Accompanied by social and environmental aspects of sustainability, researchers have also considered the economic aspects for financial competitive instance performance, advantage, and cost minimization (Winter and Knemeyer, 2013).

3.2 Social outlooks of sustainable supply chain management

According to Sharma and Ruud (2003), the sustainability has become consent for human advancement and existence. The social outlook of sustainable supply chain is comprehensive of the individuals along with the organization as a whole. The top managements as well as supply chain managers round the earth should comprehend that their judgments should not interrupt the essential humanitarian morals and integrities (Siddh et al., 2018). They are liable to uphold a healthy humanity in which their organization is operational. Hall and Matos (2010) emphasized the social facet of sustainability is one of the highly significant facets in sustainable supply chain management organizations comprise numerous stakeholders with varying aims, purposes, and viewpoints accomplishing this disparity establishes a contest.

3.3 Environmental outlooks of sustainable supply chain management

The protection of environment is considered as the environmental outlooks of sustainable supply chain management. It is essential to precede the supply chain practices in such a method that the ecology persists safe and sound (Siddh, et al., 2017). One of the main sources for cause of environmental harm is industrial development. Nowadays organizations count numerous environmental problems due to the buildup heaviness from partners regarding environmental encounters; though exist organizations that can take on sustainable practices because of the distinctive nature of methods comprised.

IV. CONCLUSION

The conception of sustainability is relatively comprehensive, as well as insight its relations with supply chain management has been crucial for the business organizations. The sustainable supply chain management comprises the combined outlook of economic, social and environmental concerns in the supply chain along with governance configure in a

vibrant business surroundings. In lieu of the fruitful execution of sustainable supply chain practices, the business organizations should work in partnership with all its partners though optimally using the assets, information as well as capitals to expand the worth plans to the clients and supply chain effectiveness. Thus, it reduces the environmental effects and improves the social parity and safety on all the partners.

REFERENCES

- [1] Brandenburg, M., Govindan, K., Sarkis, J. and Seuring, S., "Quantitative models for sustainable supply chain management: developments and directions", *European Journal of Operational Research*, Vol. 233 No. 2, pp. 299-312, 2014.
- [2] Busse, C., Schleper, M.C., Weilenmann, J. and Wagner, S.M., "Extending the supply chain visibility boundary: utilizing stakeholders for identifying supply chain sustainability risks", International Journal of Physical Distribution & Logistics Management, Vol. 47 No. 1, pp. 18-40, 2017.
- [3] Carter, C.R. and Easton, P.L., "Sustainable supply chain management: evolution and future directions", International Journal of Physical Distribution & Logistics Management, Vol. 41 No. 1, pp. 46-62, 2011.
- [4] Carter, C.R. and Rogers, D.S. (2008), "A framework of sustainable supply chain management: moving toward new theory", International Journal of Physical Distribution and Logistics Management, Vol. 38 No. 5, pp. 360-387, 2008.
- [5] Genovese, A., Acquaye, A.A., Figueroa, A. and Koh, S.L., "Sustainable supply chain management and the transition towards a circular economy: evidence and some applications", Omega, Vol. 66, pp. 344-357, 2017.
- [6] Hall, J. and Matos, S., "Incorporating impoverished communities in sustainable supply chains", International Journal of Physical Distribution and Logistics Management, Vol. 40 Nos 1-2, pp. 124-147, 2010.

- [7] Khodakarami, M., Shabani, A., Saen, R.F. and Azadi, M., "Developing distinctive two-stage data envelopment analysis models: an application in evaluating the sustainability of supply chain management", Measurement, Vol. 70, June, pp. 62-74, 2015.
- [8] Linton, J.D., Klassen, R. and Jayaraman, V., "Sustainability supply chains: an introduction", Journal of Operations Management, Vol.25 No. 6, pp. 1075-1082, 2007.
- [9] Markley, M.J. and Davis, L., "Exploring future competitive advantage through sustainable supply chains", International Journal of Physical Distribution and Logistics Management, Vol. 37 No. 9, pp. 763-774, 2007.
- [10] Ortas, E., M. Moneva, J. and Álvarez, I., "Sustainable supply chain and company performance: a global examination", Supply Chain Management: An International Journal, Vol. 19 No. 3, pp. 332-350, 2014.
- [11] ReVelle, C.S. and Eiselt, H.A., "Location analysis: a synthesis and survey", *European Journal of Operational Research*, Vol. 165 No. 1, pp. 1-19, 2005.
- [12] Sbihi, A. and Eglese, R.W., "The relationship between vehicle routing & scheduling and green logistics a literature survey, 2007.
- [13] Seuring, S. and Muller, M., "From a literature review to a conceptual framework for sustainable supply chain management", Journal of Cleaner Production, Vol. 16 No. 15, pp. 1699-1710, 2008.

- [14] Sharma, S. and Ruud, A., "On the path to sustainability: integrating social dimensions into the research and practice of environmental management", Business Strategy and the Environment, Vol. 12 No. 4, pp. 205-214, 2003.
- [15] Shukla, O.J., Jangid, V., Siddh, M.M., Kumar, R. and Soni, G., February. Evaluating key factors of sustainable manufacturing in Indian automobile industries using Analytic Hierarchy Process (AHP). International Conference on Advances in Mechanical, Industrial, Automation and Management Systems (AMIAMS) (pp. 42-47). IEEE. 2017.
- [16] Siddh, M.M., Soni, G. and Jain, R., 2015. Perishable food supply chain quality (PFSCQ) a structured review and implications for future research. Journal of Advances in Management Research, Vol. 12 No. 3, pp. 292-313, 2015.
- [17] Siddh, M.M., Soni, G. and Jain, R., Assessment of top management leadership and commitment to improve perishable food supply chain quality. International Journal of Intelligent Enterprise, Vol. 5 No. (1-2), pp. 97-107, 2018.

- [18] Siddh, M.M., Soni, G., Jain, R. and Sharma, M.K.., Structural model of perishable food supply chain quality (PFSCQ) to improve sustainable organizational performance. *Benchmarking: An International Journal*, Vol. 25 No. 7, pp. 2272-2317, 2018.
- [19] Siddh, M.M., Soni, G., Jain, R., Sharma, M.K. and Yadav, V., 2017. Agri-fresh food supply chain quality (AFSCQ): a literature review. *Industrial Management & Data Systems*, Vol. 117 No. 9, pp. 2015-2044, 2017.
- [20] Winter, M. and Knemeyer, A.M., "Exploring the integration of sustainability and supply chain management: Current state and opportunities for future inquiry", International Journal of Physical Distribution and Logistics Management, Vol. 43 No. 1, pp. 18-38, 2013.
- [21] Zailani, S., Jeyaraman, K., Vengadasan, G. and Premkumar, R., "Sustainable supply chain management (SSCM) in Malaysia: a survey", *International Journal of Production Economics*, Vol. 140 No. 1, pp. 330-340., 2012.