

Bi-Objective Optimization for Sustainable Supply Chain Network Design in Omnichannel

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Abstract : The evolution of omnichannel has revolutionized the supply chain of the organizations by enhancing customer shopping experience. For these organizations need to develop well-integrated multiple distribution channels to leverage the benefits of omnichannel. To adopt an omnichannel system in the supply chain has resulted in structuring and reconfiguring the practices of the traditional supply chain distribution network. In this paper a multiple distribution supply chain network (MDSCN) have been proposed which integrates online giants with a local retailers distribution network in uncertain environment followed by sustainability. To incorporate sustainability, an additional objective function is added to reduce the carbon content through minimizing the travel distance of the product. Through this proposed model, customers are free to access product and services as per their choice of channels which increases their convenience, reach and satisfaction. Further, a numerical illustration is being shown along with interpretation of results to validate the proposed model.

Keywords : sustainable supply chain network, omnichannel, multiple distribution supply chain network, integrate multiple distribution channels

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