ABSTRACT

In the realm of research, the exploration of innovation has captured the attention of numerous scholars, fostering a vast body of knowledge that has unraveled its intricacies and potential. Innovation, by its very nature, is a complex and multifaceted phenomenon that encompasses various dimensions, far beyond the scope of green supply chain integration alone. While the examination of this particular aspect has undoubtedly shed light on the sustainable practices and environmental impact within supply chains, it is vital to acknowledge that technological innovation permeates numerous domains, industries, and disciplines. It has been identified that the scant number of studies focus on how internal knowledge sharing, and digital transformation come to the context of the green supply chain and technological innovations. The study is based on survey data collected from 147 manufacturing organizations in Sri Lanka to achieve the purpose of the study. The data cleaning process, descriptive and demographic analysis, and multivariate assumptions have been tested using IBM SPSS 23.0 as the initial step of the data analysis process. After analyzing the validity and reliability of the model through Smart PLS 4.0, structural equation modelling has been utilized to test the hypothesis of the study. Specifically, the findings evaluated that the green supply chain integration has positive impact on the technological innovation. Compared to the direct influence, it has been identified that intervening aspects can influence methodically to enhance technological innovations within manufacturing industry. Accordingly, the study findings emphasized that supply chain knowledge sharing act as a mediator between green supply chain integration and technological innovations. Further, due to contextual limitations in Sri Lanka, the intervening aspect of digital transformation does not support in manufacturing sector. The study addresses the research gaps and shows how organizations can become innovative in terms of product and process innovations. Based on Organizational information theory, this study proposes and tests the way of manufacturing organizations to achieve technological innovation through information processing capabilities when implementing GSCI. Accordingly, the findings suggested that supply chain managers should facilitate the knowledge sharing process with GSCI efforts for enhancing product and process innovations. Specifically, the managers have to place more emphasis on specific knowledge sources to encourage the knowledge sharing process within the supply chain of the manufacturing organization.