Past, present, and future low carbon supply chain management: A content review using social network analysis

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ABSTRACT

The aim of this study is to identify the past, present, and future research trends for low carbon supply chain (LCSC) management. The literature on low carbon supply chain management has expanded, however, a systematic review of lessons learned and future research opportunities is necessary. We do this using a review of the literature and social network analysis. The data for this study consists of English articles published by multiple databases found through the Web of Science and Scopus. We reviewed, collected, and sorted articles from 124,793 publications and then identified 2199 as being relevant to the scope of work for this study. Next, we utilized a social network analysis of the data. The results uncovered six main domains of LCSC: sustainability, climate change, green supply chain management, supply chain management, innovation, sustainable development, and environmental management. Contributions of this study include the development of these domains along with several important themes. The insights uncovered by our analysis primarily focus on LCSC modelling, low carbon energy, and carbon emission measurements. Numerous sustainability management practices are associated with low carbon energy use and actions to avoid increasing the rate of climate change. Paradoxically, we find limited evidence in the literature on how the LCSC practices can achieve integrated levels of performance that should also include carbon performance indicators.

KEYWORDS:

Low carbon supply chain; Content analysis; Low carbon energy; Low carbon performance; Low carbon measurement; Sustainable operations; Social network analysis; Data science