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# A conceptual framework for measuring sustainability performance of supply chains

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## Abstract

Supply chains are critical driving forces behind business competitive advantages, hence their sustainability measurement and management is vital. Determining the sustainability performance of supply chains is challenging. It requires appropriate tools for capturing and analyzing data for every supply chain activity and for each sustainability aspect. This study analyzes measurement approaches that are used to assess sustainability performance of supply chains. Using Content, Context and Process framework, we have studied 104 peer-reviewed articles, published in the literature on sustainable supply chain management (SSCM) and green supply chain management (GSCM). The results show that various measurement approaches are used to assess sustainability in different sectors and supply chain echelons. The application of multi-criteria decision-making methods is increasing and several promising measurement frameworks have been proposed. The most used approaches include Life Cycle Assessment, Analytical Hierarchy Process, Fuzzy set approach, Balance Scorecard, and Data envelopment analysis. Additionally, this study proposes a novel conceptual framework and provides a concise guideline for assessing sustainability of supply chains. Key challenges that need to be solved by future measurement approaches include sustainability data collection and sharing, metrics standardization, and collaboration among supply chain members per se and stakeholders. This study creates better comprehension of how existing approaches evaluate sustainability of supply chains and provides new insights into sustainability performance measurement approaches, supply chain configuration, and metrics selection.

**Keywords:** Sustainable supply chain management; Green supply chain management; Performance measurement; Framework; Metrics; Multi criteria analysis

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