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PRIORITIZATION OF GREEN SUPPLY CHAIN INDICATORS WITH ANALYTIC HIERARCHY PROCESS (AHP) MODEL

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Abstract

Purpose Today the innovative tool used for enhancing the efficiency of Supply Chain Management is Green Supply Chain Management (GSCM). This paper, aims to identify and rank the major indicators and sub indicators that helps achieve successful implementation of Green Supply Chain Management (GSCM) in Indian manufacturing industry.

Design/methodology/approach: Analytic Hierarchy Process (AHP) is used to rank the indicators and sub indicators which have been identified through literature review and experts' opinions from industry and academicians.

Findings: The study categorizes the GSCM implementation strategies into main sixteen indicators and 116 sub indicators. Main indicators are Non-Members of Supply Chain, Top Management Perspective, Eco Product Design, Eco Procurement, Eco Manufacturing, Internal Environmental Management, Green Packaging, Eco Marketing and Communication, Eco Logistics Design, Environmental Performance, Operational Performance, Economic Performance, Performance of Human and Technological Resources, Performance of Vendor Management, Owners' Satisfaction and Customer Co-Operation. These identified indicators play an important role in greening the supply chain.

Research limitations/implications: Here we have used the opinion of the experts from academics and industry to compare pair-wise indicators.

Practical implications: The indicators and sub indicators are prioritised according to the importance of their applications. This prioritization further can be used to construct the Interpretive Structural Model (ISM) for cost and efficiency benefits in GSCM performances in Indian manufacturing industry.

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Green Supply Chain Management, Sustainability and Manufacturing, and Analytical Hierarchical Process

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