

Evaluation of Green Logistics Performance: An Application of Analytic Hierarchy Process Method for Ranking Environmental Indicators

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Abstract : The search for minimizing harmful impacts on the environment has become the focus of global society, affecting mainly how to manage organizations. Thus, companies have sought to transform their activities into environmentally friendly initiatives by applying green practices throughout their supply chains. In the logistics domain, the implementation of environmentally sound practices is still in its infancy in emerging countries such as Brazil. Given the need to reduce these environmental damages, this study aims to evaluate the performance of green logistics (GL) in the plastics industry sector in order to help to improve environmental performance within organizations and reduce the impact caused by their activities. The performance tool was based on theoretical research and the use of experts in the field. The Analytic Hierarchy Process (AHP) was used to prioritize green practices and assign weight to the indicators contained in the proposed tool. The tool also allows the co-production of a single indicator. The developed tool was applied in an industry of the plastic packaging sector. However, this tool may be applied in different industry sectors, and it is adaptable to different sizes of companies. Besides the contributions to the literature, this work also presents future paths of research in the field of green logistics.

Keywords : AHP, green logistics, green supply chain, performance evaluation

Conference Title : ICSSC 2019 : International Conference on Sustainable Supply Chains

Conference Location : Paris, France

Conference Dates : June 25-26, 2019