A Multicriteria Framework to Evaluate Supplier's Greenness

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ABSTRACT

Environmental protection is becoming more and more important for enterprises because of stronger public awareness, competitors and communities, and government regulations. For this purpose, some programs have become more popular for raising environmental awareness including total quality environmental management and green supply chain management. Reducing the environmental pollution from upstream to downstream during procuring raw materials, producing, distribution, selling products, and products depreciation is the most important goal of Green Supply Chain Management (GSCM). The main contribution of this study is introducing the main factors in green supply chain management that are very important in environmental attributes by providing an evaluation framework to select the most eligible green suppliers by examining the influential and important criteria and subcriteria among ten elements of two main GSCM practices, namely, green logistics and environmental protection. First, these factors are divided into two groups, that is, green logistics and environmental protection, and then by applying DEMATEL technique, the complex causal relationship between all factors dependencies and feedbacks among them is examined. Finally, by drawing the impact relationship map the most important and influential factors are determined for improving green supply chain environmental aspects.

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