

A dynamic game on Green Supply Chain Management

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Abstract

We establish a dynamic game to allocate CSR to the members of a supply chain. We propose a model of three-tier supply chain in decentralized state that is including supplier, manufacturer and retailer. For analyzing supply chain performance in decentralized state and the relationships between the members of supply chain, we use Stackelberg game and a hierarchical equilibrium solution for a two-level game. Specially, we formulate a model that crosses through multi-periods by a dynamic discreet Stackelberg game. We obtain an equilibrium point at where both the profits of members and the level of CSR taken by supply chains are maximized.

Keywords: Supply chain, CSR, Stackelberg game.

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