

Proposing Green Supply Chain Contracts by the application of Evolutionary Dynamics

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Abstract :

The emphatic consideration of ecological sustainability amidst increasing desires to churn profits has led to environment oriented research with key focus being ecological sustainability. Management research evolving over the conventional research has now penetrated into the novel domain that incorporates sustainability and supply chain management to arrive at revolutionary insights. This paper aims at a synergetic alliance between the environmental and commercial benefits by establishing coordination between the producer and the retailer to adjudicate their strategies to trigger green practices. In order to provide a computational paradigm to the scenario, a two player game has been developed. Evolutionary dynamics has been adopted extensively to locate the optimal and the most stable point offering the best economic gains. The consumer psychology towards the green products has been incorporated to provide a holistic analysis of the practical situation. The economically suitable solutions are then substantiated and compared in terms of their respective ecological degradation and hence offer a holistic view into supply chain dynamics from the perspective of environmental management. The model has been capaciously used to explore and establish possible symbiotic coalesce between ecology and economy.