World Academy of Science, Engineering and Technology
International Journal of Industrial and Systems Engineering
Vol:9, No:04, 2015

Formulating Model of Green Supply Chain Impact on Chain Operational Performance, Case Study: Rahbaran Foolad Aria, Steel Industry

Authors : Seyedeh Mersedeh Banijamali, Ali Rajabzadeh

Abstract : Industrial development in recent centuries has been replaced by a sustainable development. The industry executives, particularly in the development countries are looking for procedures to protect the environment, improve their organization's performance. One of these approaches is the green supply chain management. Green supply chain management approach as a comprehensive approach to environmental management that contains all flows from suppliers to producers and ultimately to consumers, in many industries, particularly in the Steel industry, which has a strategic role in the country's industrial and economic development, has been receiving significant attention. The purpose of this study is examining the impact of green supply chain on chain operational performance in the Steel industry and formulating model for it. In this way, first the components of green supply chain (in 5 dimensions, planning, sourcing, making, delivery and return) have been prioritized through TOPSIS decision technique and then impact of these components on operational performance has been modeled with model dynamic systems and Vensim software. This research shows that green supply chain has a positive impact on operational performance and improve it.

Keywords : green supply chain, the dimensions of the green supply chain, operational performance, steel industry, dynamical systems
Conference Title : ICSCLM 2015 : International Conference on Supply Chain and Logistics Management
Conference Location : Los Angeles, United States
Conference Dates : April 03-04, 2015