

## عنوان مقاله:

A Robust Reliable Forward-reverse Supply Chain Network Design Model under Parameter and Disruption Uncertainties

## محل انتشار:

ماهنامه بین المللی مهندسی، دوره 30، شماره 8 (سال: 1396)

تعداد صفحات اصل مقاله: 10

## نویسندگان:

M Fazli-Khalaf - *Department of Industrial Engineering, Faculty of Engineering, Kharazmi University, Tehran, Iran*

A Hamidieh - *Industrial Engineering group, Department of Engineering, Faculty member of Payamnoor University, Tehran, Iran*

## خلاصه مقاله:

Social responsibility is a key factor that could result in success and achieving great benefits for supply chains. Responsiveness and reliability are important social responsibility measures for consumers and all stakeholders that strategists and company managers should be concerned about them in long-term planning horizon. Although, presence of uncertainties as an intrinsic part of supply chains could adversely affect the best set plans by field experts. Accordingly, uncertainty of parameters and uncertainties caused by disruptions should be regarded in planning process of networks to prevent unpredictable negative consequences of such uncertainties for all echelons of supply chain. Based on enumerated matters, the aim of this paper is to design a reliable multi-echelon closed loop supply chain network model that maximizes social responsibility while minimizing fixed establishing and variable processing costs of network design. To cope with uncertainty of parameters, stochastic programming is applied and an effective reliable modelling method is employed to appropriately control unpleasant economic impacts of disruptions. Notably, an efficient robust programming method is applied to give the decision makers the capability to control level of risk-averseness of decisions while modelling uncertain parameters. Finally, the proposed model is solved and its outputs are analyzed on the basis of generated test problems which shows correct performance and applicability of extended model in real world problems.

## کلمات کلیدی:

,Supply Chain,Reliability,Social Responsibility,Robustness,Stochastic Programming

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/685720>

