

عنوان مقاله:

Sustainable supplier selection using integrated data envelopment analysis and differential evolution model

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خلاصه مقاله:

Nowadays, increasing environmental and social awareness has led numerous industries to adopt Sustainable Supply Chain Management (SSCM). Sustainable Supplier Selection (SSS) is considered as a very important and primary step of achieving an SSCM. SSS is a Multi-Criteria Decision Making (MCDM) problem and is very intricate for its nature. This study aims to evaluate and rank sustainable suppliers using Data Envelopment Analysis (DEA) which is a popular model for measuring the productive efficiency of decision-making units effectively and is also able to handle MCDM problems. To avoid some inherent limitations of DEA, an evolutionary algorithm Differential Evolution (DE) is used to solve the DEA model. This integrated DEA-DE model provides more accurate efficiencies and is verified through a case study in a pharmaceutical company. Employing this easy and fast model to assess sustainable suppliers will help industries and suppliers to move forward towards achieving and maintaining sustainability and thus .will increase the overall performance of SSCM

کلمات کلیدی:

Supplier selection, Sustainability, Sustainable Supply Chain, Sustainable supplier selection, Differential evolution, Data Envelopment Analysis, Pharmacy

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