

عنوان مقاله:

Evaluation of the Impacting Factors on Sustainable Mining Development, Using the Grey-Decision Making Trial and Evaluation Laboratory Approach

محل انتشار:

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خلاصه مقاله:

Due to great effect of mining operation on environment and dependent sides, paying attention to the aspects of sustainable development (SD) is important. A conjugation of Grey theory and Decision-Making Trial and Evaluation Laboratory (DEMATEL) is able to find out cause and effect relations among the triple mining SD components and their effective factors. Grey-DEMATEL approach has been used in order to effectively quantify indicators of sustainable development of a copper mine located in south east Iran. This systematic approach transformed the quantitative and qualitative information into a analogous scale and measured the interrelationships among the SD components and their factors. Hierarchical Grey-based DEMATEL compensated the incomplete and uncertain environmental and socio-economic information. The obtained results indicated that social component with an R value of 10 is relatively strong direct influencer on the other components and the economic component is the least direct influencer with R= 8.49. Among the social impacting factors, employment of local work forces is the most important factor that needs to be consider with sustainable development objectives.

کلمات کلیدی:

Decision-making Trial & Evaluation Laboratory, Economic, Environment, Grey theory, sustainable development

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