

عنوان مقاله:

Prioritizing and Determining the Optimum Composition of Products using Fuzzy Multi-criteria Decision Making Approach

محل انتشار:

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خلاصه مقاله:

Abstract: Today, due to the increasing complexity of the environment and the many variables influencing the decision making process of the managers and furthermore the need for reducing the operating costs of organizations that are considered as one of the major concerns of managers, optimization of production processes of all factories and production institutes have been in the spotlight of the managers. To reduce this complexity, the use of appropriate tools for monitoring and analyzing costs and appropriate policies in this regard, is of particular importance. Objective of this project is to use Fuzzy multiple-criteria decision-making methods to prioritize and optimize product composition of a factory. To achieve this goal, first the factors influencing the prioritization of products through observation, library research and interviews with experts were identified then importance weights of criteria was obtained by analytic hierarchy process method. In latter stage, using Fuzzy TOPSIS method and the obtained weights from the previous step products were prioritized. Then to obtain the optimum composition of production, through placing the similarity index for each product instead of an objective function coefficient a linear program affected by restrictions of production, has been offered and the optimum composition of production is obtained. Eventually the obtained answers (have been compared with the current situation through the problem solving model (favorable situation

کلمات کلیدی:

optimum composition of production, Fuzzy analytic hierarchy process, Fuzzy TOPSIS, a linear programming model

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