**عنوان مقاله:**

An Integrated Adaptive-Network-Based Fuzzy Inference System-Genetic Algorithm for Performance Assessment

**محل انتشار:**

پنجمین کنفرانس بین المللی مدیریت (سال: 1386)

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**خلاصه مقاله:**

Performance measurement and assessment are fundamental to managementPlanning and cotrol activities, and accordingly, have received considerable attention by both management practitioners and theorists. There have been many efficiency frontier analysis methods reported in the literature.However, each of these methodologies has its strength as well as major limitations. This study proposes a non-parametric efficiency frontier analysis methods based on Adaptive-Network-based Fuzzy Inference System (ANFIS) and Genetic Algorithm Clustering Ensemble (GACE) for measuring efficiency as a complementary tool for the common techniques of the efficiency studies in the previous studies. The proposed ANFIS-GA algorithm is able to find a stochastic frontier based on a set of input-output observational data do not require explicit assumptions about the functional structure of the stochastic frontier. Furthermore, it uses a similar approach to econometric methods for calculating the efficiency scores. Moreover, the effect of the return to scale of decision making unit (DMU) on its efficiency is included and the unit used for the correction is selected by notice of itd scale (under constant return to svale assumption). Also, in this algorithm, for increasing DMUs homogeneousness, GACE is used to cluster DMUs. The proposed approach is applied to a set of actual conventional power plants to show its applicability and superiority.

**کلمات کلیدی:**

Performance Assessment , ANFIS , Genetic Algorithm , Clistering Ensemble , Decision Making Units

**لینک ثابت مقاله در پایگاه سیویلیکا:**

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