

عنوان مقاله:

The Evaluation Model of the Effect of Considering Relationship between the Client and Contractor on Improving Time, Cost and Quality Indicators in the Construction of Civil Projects Using ANFIS

محل انتشار:

چهارمین کنفرانس ملی پژوهشهای کاربردی در مهندسی عمران، معماری و مدیریت شهری (سال: 1395)

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خلاصه مقاله:

This study seeks to find a proper solution to achieve design pattern and optimal and proper implementation in a way that completely transparent specifies the policy of contractors and clients in the face of three important indicators of cost, time and quality in the construction of civil projects. In this study, first we collect theoretical foundations using library studies method and then we use field studies to collect data through completing questionnaire by experts. The population consists of professors, clients, contractors, construction managers and experts of Alborz province in Islamic Republic of Iran. After weighting the data by method of Multi Expert–Multi Criteria Decision Making (ME-MCDM), we analyze data statistically using SPSS v.23 software. Finally, to evaluate the model, we analyze the data using Adaptive Neuro-Fuzzy Inference System (ANFIS) in application MATLAB R2016a. Our findings suggest that The ANFIS-f10 with Fuzzy c-means clustering based TCQ1 evaluation produces better RMSE, and than the the ANFIS-s10 with Subtractive clustering prediction model. Fuzzy mathematics due to the continuous nature of the decisions are a proper tool for modeling the effect of considering relationship between the client and contractor on a combination of three indicators: time, cost and quality in construction. Also in this study, inference system can help management systematically to measure effective criteria in the construction. If there is no quality in the construction, it causes damage to project and in the phase of damage to the country. Therefore, it can be achieved a clear image of quality by taking advantage of ANFIS to evaluate the model. it should be noted that the importance degree of criteria identified Probably in other population is different

کلمات کلیدی:

Relationship between the client and contractor, civil project, ANFIS

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