

عنوان مقاله:

Evaluation of Legislation Adequacy in Managing Time and Quality Performance in Iraqi Construction Projects- a Bayesian Decision Tree Approach

محل انتشار:

ژورنال مهندسی عمران، دوره 4، شماره 5 (سال: 1397)

تعداد صفحات اصل مقاله: 13

نویسندگان:

Zainab Hassan - *Civil Engineering Department, University of Diyala. Baqubah, Iraq*

Amer M.Ibrahim - *Civil Engineering Department, University of Diyala. Baqubah, Iraq*

Hafeth I Naji - *Civil Engineering Department, University of Diyala. Baqubah, Iraq*

خلاصه مقاله:

Delay and quality defects are significant problems in Iraqi construction projects. During the period from 2003-2014, legislation has been changed to enhance the performance of construction project. This change is done by modifying some clauses of legislation and adding or deleting the others. The aim of this study is to evaluate the adequacy of these changes by using questionnaire and Bayesian decision tree model. 30 projects were taken for the period from 2003-2014. Performance of construction project was assessed on one hand by conducting a questionnaire which depend on the impact of legislation clauses on the time and quality performance, while on the other hand Bayesian decision tree model was developed in which qualitative estimate of time and quality performance by using KNIME program. The results of questionnaire estimate the delay from very low to very high and quality from very low to high in Iraqi construction industry. The results of Bayesian decision tree model reveal that the high percentage of construction projects were implemented with very high delay and high level of quality. The model gives good accuracy in prediction time and quality performance about 86.7%. These results show the enhancement in the quality performance is greater than the time performance under the legislative change. The model can assist the Iraqi legislator in evaluation the impact of legislation on time and quality performance of construction project.

کلمات کلیدی:

Time Overrun; Quality; Legislation; Naive Bayes; Gradient Boosting Decision Tree

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/804078>

