Utilization Multifactor Linear Regression Technique for Prediction the Earned Value in Bridges projects

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Abstract

Earned value analysis is an extremely significant part in the operations of bridges projects management principally with respect to EAC, this study aims at developing EAC model for bridges projects using Multifactor Linear Regression Technique (MLRT). One MLR model was built up based upon 43 set of database gathering between 2013 and 2016 from bridges and roads directorate in Iraq construction sector. Only five affect factors were applied with regard to prediction by MLRT as independent factors F1: AC, Actual Cost, F2: EV, Earned Value, F3: PV, Planning Value, F4: BAC, Budget at Completion AND F5: D, Duration of project. Only single model was constructed for forecasting with EAC for bridges projects. It was found that MLR have the ability to predict the EAC with excellent rank of accuracy for the correlation coefficient (R) was 93.91%, with Average Accuracy (AA%) equal to 93.86%