Selecting Engineering Partner for EPC Projects; a Fuzzy AHP Approach

Partnership with an engineering company is mostly a prerequisite of bidding EPC projects and most of the EPC projects are implemented by project oriented joint ventures. The problem of picking up appropriate engineering company is a multi criteria decision that has many uncertainties in its nature. Current paper attempts to propose a fuzzy AHP model for selecting engineering partner selection. Developed model applies Buckley's fuzzy AHP method in a multi stage partner selection problem. The model uses trapezoidal fuzzy membership functions and derives fuzzy weights and performance scores from geometric mean method. The fuzzy AHP calculations where done by a program coded in MATLAB 1.7. Developed fuzzy AHP engineering partner selection model has been implemented in a case study and experts showed enthusiasm applying the model and verified its results.

Keywords: joint-venture, partner selection, EPC project, fuzzy AHP

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