

# PERFORMANCE EVALUATION AND RANKING OF SUPPLIERS IN A PROJECT ENVIRONMENT USING DATA ENVELOPMENT ANALYSIS (DEA)

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## **Abstract**

*Supplier performance evaluation and selection plays a vital role in the establishing an effective project delivery in an organization. More also, selecting the right supplier for an assignment, as well as evaluating this supplier's performance while the contract is being implemented, plays an important role in ensuring a good project outcome. The evaluation of a supplier is important for an enterprise to survive in a competitive market in a global project environment. One of the techniques that can be used for supplier performance evaluation and selection is data envelopment analysis (DEA). In this paper, the benefit of data envelopment analysis in evaluating the performance of decision-making units (DMUs). DEA is a mathematical programming tool applied in performance measurement. The problem identified is establishing business support units, a case study is presented to exhibit the efficiency of the model for supplier selection problem in a project environment. The case study demonstrates that the model can measure effectiveness, efficiency and productivity in a project environment. It shows that the model decision makers to deal with economic, social and environmental factors when selecting suppliers.*

**Keywords:** Suppliers; Performance Evaluation; KPI; Data Envelopment Analysis model; decision-making units; Setraco Nig. Ltd.; Abuja