Abstract

This paper presents Data Envelopment Analysis (DEA) has been used in a wide variety of applied research and it is a linear programming methodology that has been widely used to evaluate the performance of a set of decision-making units (DMUs). It requires crisp input and output data. However, in reality input and output cannot be measured in a precise manner. Firstly using DEA to evaluate the efficient and inefficient decision-making units (DMUs) with the (CCR) model. Secondly the resulted weights for each input and output are considered as fuzzy sets and are then converted to fuzzy number. Thirdly using Fuzzy multi-objective approach to find the highest and lowest of the weighted values. Fourthly usingthe results from stage it to rank from highest to lowest. An application from banking industry is presented.


**Index Terms**

Computer Science

Fuzzy Systems

**Keywords**

Data envelopment analysis; ranking methods in DEA; Multi-objective data envelopment analysis; Fuzzy data envelopment analysis; Fuzzy multi-objective approach.