

Developing a new method using Artificial Immune System in order to High Productivity of Inefficient Units in Network DEA approach

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Abstract

Most traditional DEA models treat their reference technologies as black boxes. To open the “black box” and get greater insight in to the production process, the network DEA model is constructed. This paper describe the operation analysis of the NDEA that mainly it’s aim is detecting of the efficient units in a network. In this paper, a new method based on the Network Data Envelopment Analysis and Artificial Immune system (FNDEA-AIS), for evaluating of DMUs efficiency and increasing the performance of inefficient units, is presented. Finally a numerical example will be presented for illustration the advantages of the presented method.

Keywords: Fuzzy Network Data Envelopment Analysis, Artificial Immune System, Efficiency