



# An IO–Modification of Potential Method

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## Abstract

In this paper we are performing some modification of Potential Method so that it can be recognized as an Input-Output method. This approach is tested on the 'Japan City Banks' example taken from Cooper and all. [2]. where authors are using Data Envelop Analysis technique. It is known that DEA is not capable to distinguish 'efficient' Decision Making Units among themselves. In our approach this is not the case — we obtain the ranking of all units in consideration.

*Keywords:* Multi-criteria decision making, DEA, Potential Method  
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## 1 Introduction

In Data Envelopment Analysis (DEA) the weighted efficiency of a Decision Making Unit (DMU) is expressed as a fraction of arithmetic mean of inputs divided by arithmetic mean of outputs where inputs and outputs have, in general, different weights. Maximizing this efficiency with respect to input those weights we obtain optimal weights for this DMU and optimal efficiency which is less or equal to one. Those DMUs which have efficiency equal to one are known as efficient and they define a boundary of a production set. Optimal

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