

## **An Output Oriented Super-Efficiency Model for Considering Time Lag Effect**

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**Abstract :** There exists some time lag between the consumption of inputs and the production of outputs. This time lag effect should be considered in calculating efficiency of decision making units (DMU). Recently, a couple of DEA models were developed for considering time lag effect in efficiency evaluation of research activities. However, these models can't discriminate efficient DMUs because of the nature of basic DEA model in which efficiency scores are limited to '1'. This problem can be resolved a super-efficiency model. However, a super efficiency model sometimes causes infeasibility problem. This paper suggests an output oriented super-efficiency model for efficiency evaluation under the consideration of time lag effect. A case example using a long term research project is given to compare the suggested model with the MpO model

**Keywords :** DEA, Super-efficiency, Time Lag, research activities

**Conference Title :** ICOMIE 2014 : International Conference on Operations Management and Industrial Engineering

**Conference Location :** Istanbul, Turkey

**Conference Dates :** January 26-27, 2015