

Classifying and Predicting Efficiencies Using Interval DEA Grid Setting

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Abstract : The classification and the prediction of efficiencies in Data Envelopment Analysis (DEA) is an important issue, especially in large scale problems or when new units frequently enter the under-assessment set. In this paper, we contribute to the subject by proposing a grid structure based on interval segmentations of the range of values for the inputs and outputs. Such intervals combined, define hyper-rectangles that partition the space of the problem. This structure, exploited by Interval DEA models and a dominance relation, acts as a DEA pre-processor, enabling the classification and prediction of efficiency scores, without applying any DEA models.

Keywords : data envelopment analysis, interval DEA, efficiency classification, efficiency prediction

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