

Efficiency of DMUs in Presence of New Inputs and Outputs in DEA

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Abstract : Examining the impacts of data modification is considered as sensitivity analysis. A lot of studies have considered the data modification of inputs and outputs in DEA. The issues which has not heretofore been considered in DEA sensitivity analysis is modification in the number of inputs and (or) outputs and determining the impacts of this modification in the status of efficiency of DMUs. This paper is going to present systems that show the impacts of adding one or multiple inputs or outputs on the status of efficiency of DMUs and furthermore a model is presented for recognizing the minimum number of inputs and (or) outputs from among specified inputs and outputs which can be added whereas an inefficient DMU will become efficient. Finally the presented systems and model have been utilized for a set of real data and the results have been reported.

Keywords : data envelopment analysis, efficiency, sensitivity analysis, input, out put

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