Measuring Energy Efficiency Performance of Mena Countries

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Abstract : DEA has become a very popular method of performance measure, but it still suffers from some shortcomings. One of these shortcomings is the issue of having multiple optimal solutions to weights for efficient DMUs. The cross efficiency evaluation as an extension of DEA is proposed to avoid this problem. Lam (2010) is also proposed a mixed-integer linear programming formulation based on linear discriminate analysis and super efficiency method (MILP model) to avoid having multiple optimal solutions to weights. In this study, we modified MILP model to determine more suitable weight sets and also evaluate the energy efficiency of MENA countries as an application of the proposed model.