Feasibility techniques with constant constant values In Data Envelopment Analysis

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Abstract This dissertation develops a DEA (data envelopment analysis) model to accommodate competition over outputs. In the proposed model, the total output of all decision making units (DMUs) is fixed, and DMUs compete with each other to maximize their self-rated DEA efficiency score. In the presence of competition over outputs, the best-practice frontier deviates the classical DEA frontier. We also compute the efficiency scores using the proposed fixed sum output DEA (FSODEA) models, and discuss the competition strategy ion rule. The model is illustrated using a hypothetical data set under the constant returns to scale assumption and medal data the 2000 Sydney Olympics under the variable returns to scale assumption.

Keywords : Data Envelopment Analysis (DEA), Performance Evaluation, Competition, Fixed Total Output.