

Efficiency analysis of terminal containers in the Port of Dakar using Data Envelopment Analysis (DEA) and Bootstrap approach.

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Abstract: Port efficiency can be analyzed by two categories of methods (parametric and nonparametric). Data Envelopment Analysis (DEA) method is one of the most widely used method for evaluating efficiency of a unit of multiple-inputs simultaneously. In this paper, we evaluate the efficiency of terminal containers in the Port of Dakar applying the two models of the DEA i.e. the CCR (Charnes, Cooper and Rhodes in 1978) and the BCC model (Banker, Charnes and Cooper in 1984). We apply the bootstrap approach for bias correction and for confidence intervals creation of our estimates. Both models led to the following results: The autonomous port of Dakar has obtained two efficient DMUs (Decision-Making Units) with the CCR model and three efficient DMUs with the BCC model.

Keyword: Data Envelopment Analysis, optimization, port, efficiency, terminal containers, bootstrapping.