Measuring the Performance of Worldwide Airports using Non-parametric Benchmarking Frontier Methods

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ABSTRACT

Airports present, as a rule, monopolistic features and a relevant market power. Thus, measuring their inefficiency is important for all stakeholders since it provides information about their economic performance. Inefficiencies are as resources which remain on the table. No one benefits from inefficiencies. This paper computes the efficiency of the International major airports using robust benchmarking non-parametric techniques. In total, it encompasses 141 international airports, using a data set from 2006. It employs data envelopment analysis (DEA) and the recent methods of bootstrap and order-m to provide robustness to the scores obtained. Moreover, some explanatory factors included, such as GDP, regulation, percentage of non-aeronautical revenues, etc., in order to evaluate their influence on airports’ performance. The results of the research are here discussed and some policy suggestions and recommendations are provided.

Keywords: airports; data envelopment analysis (DEA); bootstrap; order-m; performance