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BOOK OF ABSTRACTS

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ABSTRACT

Objective: To examine whether or not universal insurance coverage mandates lead to a more productive use of hospital resources. Data sources: The American Hospital Association's Annual Survey and the Centers for Medi-care and Medicaid Services' case mix index for fiscal years 2005 through 2008 were used. Study design: A Malmquist approach is used to assess hospitals' productivity in the U.S. as well as Massachusetts over the sample period. Propensity score matching is used to 'simulate' a ran-domized control group of hospitals from other markets to compare with Massachusetts. Compar-isons are then made to examine if productivity differences are due to universal health insurance coverage mandate. Principal findings: In the early stages, Massachusetts' coverage mandates lead to a significant drop in hospitals' productivity relative to comparable facilities in other states. In 2008, Massa-chusetts functioned 3.53 percent below its 2005 level, whereas facilities across the U.S. have seen a 4.06 percent increase over the same time period. Conclusions: If the individual mandate is implemented nation-wide, the Massachusetts' experi-ence indicates that in a near-term decrease in overall hospital productivity will occur. As such, current cost estimates of the Patient Protection and Affordable Care Act's impact on overall health spending are potentially understated.

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ABSTRACT

Over the past few years, growing competitiveness and globalization of the retailing companies has given rise to a market scenario where it is extremely difficult for the companies to survive. The ever rising consumers' demands are one of the major contributors to these globalized markets. With the growing competition world-wide, importance of services and the lack of productivity in this sector, area of retail performance have gained the interest of number of researchers. Retailing is mainly a local phenomenon and therefore any macro level finding in this field is of little interest to ...

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ABSTRACT

This project aimed to analyze the efficiency of the four Vale's railways. Vale is the biggest mining company in Brazil and the second biggest in the world. The railway is an essential part of iron ore (Vale`s core business) supply chain, which highlights the importance of efficient railways for the company's results. For the development of this project, was used Data Envelopment Analysis with VRS product oriented. Once DEA is a methodology of analysis of relative efficiency, was used data from all 12 Brazilian railroads. Moreover, in order to enrich this result, was also calculated the Malmquist index to analyze the evolution of efficiency over the time. Finally, was performed an analysis of correlation between the efficiency scores and the number of accidents on the railways. As a result, this project produced quantitative production targets and guidelines for Brazilian railways to improve their operations based on benchmarks performance.

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ABSTRACT

The beef cattle productive chain comprises various stages. By means of panels conducted in some Brazilian municipalities, 21 modal production systems were described. DEA was the model to measure the efficiency. The input of the DEA-CRR model was the number of sires, and the outputs were the number of male calves produced for

sale and the number of cull cows. The efficiency profiles generated by the cross-evaluation matrix were used to put production systems into homogeneous groups. The square matrix of the normalized efficiencies was submitted to the factor analysis, with the extraction of the factors. Two factors indicated the existence of three groups. The first group, comprised of 14 systems, can be considered the one with extensive production. The second consists of 4 systems, which had the higher value of calves' productivity. The third type, comprised of 3 systems, was the one with the lowest productivity.

075 RECONCEPTUALISING THE DEA BOOTSTRAP FOR IMPROVED ESTIMATIONS

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ABSTRACT

This paper emphasizes the sensitivity of the Data Envelopment Analysis (DEA) efficiency scores due to sampling variations of best-practice frontier. Despite its non-parametric nature, it has been proven that DEA yields consistent estimators when large sample sizes are used. A DEA Bootstrap method is being widely applied to tackle inaccuracy of DEA estimators. The combination of DEA and a modified Bootstrap expression enhances the statistical properties of DEA estimators without overcoming the inherent limitations of each of the two methods. This paper provides a non-resampling multi-parametric methodology to deal with the sensitivity of DEA estimators when small samples are available. The new method is applied in scaled samples and the convergence of the obtained estimators is cross-checked with population efficiency scores. A comparative analysis between the DEA Bootstrap and the new method's estimations convergence rate shows that the new method outperforms the DEA Bootstrap in the presence of small samples.

076 EVALUATING LONG-TERM EFFICIENCY OF ORGAN TRANSPLANTATION ACTIVITY IN BRAZIL

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ABSTRACT

Objectives: The Brazilian National Transplantation System (SNT) is among the greatest public organ transplantation program in the world. SNT faces great challenges since the mean waiting times are very long and a great backlog of patients has been observed. We use DEA models to assess the time path of efficiency in transplant activities in Brazil.Methods: We used DEA to realize a relative in time evaluation of the efficiency related to various organ and tissues transplantation procedures in Brazil. The inputs are the transplant expenses. The quantities of various organs and tissues transplanted are employed as output measures.Results: The overall performance deteriorated, but SNT improved its performance in the last three years under analysis. We estimated heavy transplant losses throughout the entire period. No previous work like this exists in Brazil.

077 STUDY OF TECHNICAL EFFICIENCY IN PRODUCT DEVELOPMENT IN STEEL COMPANY, WITH APPLICATION OF DATA ENVELOPMENT ANALYSIS (DEA)

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ABSTRACT

This study applied the methodology Data Envelopment Analysis (DEA) in Steel Industry. The DEA is based on non-parametric mathematical models. It evaluates the performance of each unit of observation with a multidimensional perspective. The study used a portfolio of 12 projects for which were obtained the scores of technical and scale efficiency. The technical efficiency scores indicated the "benchmarks" projects, demonstrating the potential of DEA. For purposes of analysis, the search used the Data Envelopment Analysis with BCC (Banker, Cooper, Rhodes) input-oriented model; content analysis and the NTCR model (News, Technology, Complexity