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Data Envelopment Analysis in the Sustainability Context - a Study of Brazilian Electricity Sector by Using Global Reporting Initiative Indicators

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Abstract

A set of stakeholders (customers, employees, suppliers, public authorities, investors and others) pursuing different economic, environmental, and social interests determines the performance of an organization. In an effort to understand the corporate sustainability performance, this research focuses an analysis of sustainability indicators published in the reports of Global Reporting Initiative, disclosed by 24 Brazilian electricity sector in 2012. Indicators were identified and analyzed following: (i) a communication of economic, environmental, and social performance; and (ii) efficiency determined through the Data Envelopment Analysis (DEA) model. The results indicate that disclosures are often incomplete, and lack a pattern for similar indicators. Based on DEA, there is no direct relationship between economic value generated and distributed and efficiency, given that there are efficient large-scale hydroelectric plants and medium. In general, partial results are consistent with the conceptual assumptions that informal systems of enterprises promote sustainability, but their formal systems apparently have a very traditional focus on financial performance.

Keywords: *Global Reporting Initiative; Data Envelopment Analysis; Triple Bottom Line; Brazilian electricity.*
