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#### **ACCEPTED MANUSCRIPT**

# Efficiency Performance and Cost Structure of Portuguese Energy "Utilities" – Non-Parametric and Parametric Analysis

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Area: Regulation and Competition

#### **ABSTRACT**

The analysis of regulated companies' performance in the natural gas and electricity sectors requires a deep knowledge of these companies' efficiency performance and cost structure. First, this research paper presents a study based on a sample of natural gas distribution portuguese companies (DSO). This study analyzes how efficient these companies are. To evaluate the companies' efficiency, this study employed both parametric and non-parametric methodologies, such as panel data regression, and *Data Envelopment Analysis* (DEA). Second, this research paper seeks to understand the cost structure of two samples of companies (DSO and retailers). To reach this aim two different types of analysis were carried out. One such analysis relied on a parametric methodology, which involved estimating a data panel regression. This second analysis entailed evaluating data related to the companies' cost structures which was obtained through a questionnaire previously circulated to retailers and last resort suppliers. Results obtained through such analysis suggest that fixed costs tend to represent one third of total operating costs. Regarding retailers, results show that the number of clients is the main cost inductor and that fixed costs represent, on average, from 21% to 34%, depending on whether they are regulated and on the sector they operate.

**KEYWORDS**: efficiency, cost structure econometric methodologies, energy utilities.

JEL Classification: D24, D61, M21

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