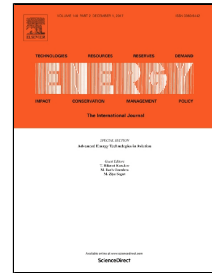


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# Electricity residential demand elasticities: urban versus rural areas in Portugal

Susana Silva<sup>1</sup>, Isabel Soares<sup>2</sup>, Carlos Pinho<sup>3</sup>

## ABSTRACT

We study the difference between urban and rural elasticities for electricity residential consumption in Portugal. Our sample covers the period from 1989 to 2010 and consists of five independent surveys. We adopt the pseudo-panel methodology creating 350 cohorts based on the size of the household, the type of location (rural or urban), the region, and the income quintile. Our results indicate that rural and urban populations have different behaviors. In particular, rural households are more sensitive to price changes than urban ones. This may happen because rural populations can more easily use other energy sources, for example, wood, for cooking and heating. As a consequence urban populations will be more affected by electricity price changes.

**Keywords:** Households electricity consumption; Price elasticities; Income elasticities; Rural; Urban

**JEL Classification:**H3; Q4; R2

## 1. Introduction

Environmental problems and supply security concerns have raised special attention to energy consumption. For that reason, governments have promoted efforts to reduce emissions in energy generation (through e.g. renewable energy sources), and to increase efficiency. Several instruments have been used, including energy taxes. The household sector, which is the focus of this paper, is one of the main energy consumers. Hence,

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