



**Présenté par Sondés  
Kahouli,  
UMR 6308 AMURE**

## ➤ Fuel poverty in France: affected groups and their sensitivity to energy price fluctuations

In this paper, we aim to discuss characteristics of fuel poor households in France and to analyze their sensitivity to energy prices fluctuations.

To this end, we start in the first part of the paper by presenting a critical review dealing with poverty definitions and measures based on which we calculate and discuss fuel poverty rates in France. Then, after identifying groups of affected households, we propose a qualitative approach based on three complementary methods namely Multiple Correspondence Analysis (MCA) and Hierarchical and Partitioning Clustering Analysis (HPCA) in order to identify their common characteristics. Within this framework, we highlight the difficulty of identifying and drawing a “profile-type” of fuel poor household in the perspective of implementing public policies, and we detail, as a consequence, characteristics of some selected representative fuel poor households.

In the second part of the paper, we focus on estimating households own price elasticities of energy demand by using a panel threshold regression model. The original dimension of this model is that it permits to take into account plausible non-linearities in the energy demand function that can be induced by the income level. These non linearities give rise to the identification of different groups of households reacting differently to price variations according to their income level. Results show that we can identify two heterogeneous groups of households and that the fuel poor households belong mostly to the group of households which have the highest price elasticity.

Based on these findings, some policy recommendations are suggested.

### Keywords

Fuel poverty, Affected groups, Price elasticities, Panel threshold regression model, France.

### JEL classification

Q41; Q48; G58; C21; C22