



Objective vs. Subjective Fuel Poverty and Self-Assessed Health

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In recent years, fuel poverty has increasingly attracted social policy attention especially in the European Union and its member countries. Fuel poverty refers to households that cannot afford to heat their homes to an adequate standard of warmth and meet other energy needs in order to maintain their health and well-being. This debate is partly motivated by the increases in energy prices in general as well as the effect of renewable energy support mechanisms on end-use prices. It is important to avoid that the burden of the internalisation of external costs of carbon emissions from climate change policies mainly fall on some of the most vulnerable groups of the society.

The specific policies aimed at reducing the level of fuel poverty are often based on some relative or absolute measures or indicators. The effectiveness of the official indicators in identifying fuel poor households and assessing its impact on health is also an important social policy issue. Most of these measures inevitably abstract away from the heterogeneities among the fuel poor population. In this paper we analyse objective and perceived fuel poverty as determinants of self-assessed health in Spain. Contrary to common beliefs, fuel poverty is also a source of deprivation and health issues in milder climates. In 2014, 5.1 million of her population could not afford to heat their homes to an adequate temperature.

We propose a latent class ordered probit model to analyse the influence of fuel poverty on self-reported health in a sample of 25,000 individuals in 11,000 households for the 2011-2014 period. This original approach allows us to include a 'subjective' measure of fuel poverty in the class membership probabilities and purge the influence of the 'objective' measure of fuel poverty on self-assessed health.



The results show that poor housing conditions, fuel poverty, and material deprivation have a negative impact on health. Also, individuals who rate themselves as fuel poor tend to report poorer health status. The effect of objective fuel poverty on health is stronger when unobserved heterogeneity of individuals is controlled for. Since objective measures alone may not fully capture the adverse effect of fuel poverty on health, we advocate the use of approaches that allow a combination of objective and subjective measures and its application by policy-makers. Moreover, it is important that the policies oriented to tackle fuel poverty take into account the different energy vectors and the prospects of a smart and integrated energy system in the near future.

The extension of the link between perceived health and (objective/subjective) fuel poverty analysed in this paper has not been explored previously and can be used to help target the affected individuals and groups more accurately. Classifying households using a subjective measure of fuel poverty yields different results than when using objective measures, even when there is a positive correlation between both measures.

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