

Fuel Poverty Measurement in Europe: a Pilot Study

Research Summary

This study of European fuel poverty set out to address the issue of inconsistent and inaccurate measurement of fuel poverty that occurs across Europe, and to disseminate best practice on how to identify fuel poverty. A number of key outputs were produced, including an evidence review, a pilot survey to test the wording, translation and format of fuel poverty variables, and introductory toolkits on identifying fuel poverty.

Acknowledgements

We would like to thank Eaga Charitable Trust for funding this pilot study and for the support provided by the Trustees and Naomi Brown during the project.

Special thanks are due to the project steering group for their support and for taking the time to share their expertise on fuel poverty measurement.

Background

At the European level, there is no dedicated survey of fuel poverty or energy poverty, and no standardised household micro data on energy expenditure. Whilst self-reported indicators of fuel poverty are available and have been used to show the prevalence of fuel poverty problems across Europe, the quality has been questioned. At the national level, attempts to measure fuel poverty have been made in just six of the twenty-eight Member States, and with the exception of the UK, studies in the remaining countries have nearly

always incorrectly applied the UK's 10 per cent definition, with authors using a 10 per cent (actual) fuel expenditure threshold, without transferring the underlying methodology.

It is evident that the measurement of fuel poverty at the European scale is constrained by a lack of suitable data, whilst at the national level, knowledge and understanding of fuel poverty measurement is at an early stage in the majority of countries.

Project aims

This project set out to:

- Review the existing research that has been produced on fuel poverty measurement.
- Develop and pilot a survey of fuel poverty in eight EU countries, with English, French and German language versions, in order to test the wording and format of variables.
- Create an introductory toolkit to promote best practice in measuring fuel poverty.

- Produce a final report with recommendations for the design of future EU household surveys of fuel poverty.

Methodology

A number of methods were used during the project:

- A rapid evidence review of fuel poverty measurement, which used academic, policy and 'grey' literatures to consider what approaches have been used to date in measuring fuel poverty, and how to capture different elements of fuel poverty.
- Consultation with an expert steering group comprised of representatives from Universities and research organisations from across Europe.
- An online pilot survey of individuals from all over Europe. As the main purpose of developing a pilot survey was to pre-test fuel poverty variables rather than to collect representative data, non-probability convenience sampling was used.

Key findings

The main findings of the rapid review were:

- Only three national level definitions of fuel poverty exist, in France, the Republic of Ireland and the United Kingdom, whilst at the European level, attempts to create a pan-European definition of energy poverty have been blocked by the European Commission.
- The analysis of fuel poverty across Europe is lacking, at both the pan-European and national level.

- Attempts to measure fuel poverty have been made in just six Member States.
- Many researchers have incorrectly transferred the UK's 10 per cent methodology in national level analyses.
- All five existing pan-EU analyses of fuel poverty have used data from before 2008, which predates the worst increases in energy prices as well as the global financial recession.
- In terms of collecting consensual data, the review has highlighted the importance of distinguishing between people who lack items out of personal preference, and people who lack necessities because they cannot afford them.
- Whilst the use of modelled required energy expenditure is desirable, it is not currently practical as most countries do not collect sufficiently detailed housing and energy efficiency data.

The key findings from the pilot survey were:

- Overall, the concepts and survey questions translated well into French and German. For the German translation, the main difficulties were trying to find a neutral term for property/dwelling that did not necessarily imply ownership, and how to ask if a flat is purpose built or a converted house. For the English to French translation, some of the energy efficiency measures were difficult to translate, in particular, central heating, district heating, and heating controls/programmer.
- Whilst the pilot survey had only been targeted at eight Western European countries, it achieved broad geographical

coverage, with participants from twelve different countries, including Sweden, Greece and Bulgaria.

- Using a multi-item scale variable rather than a binary-response variable is more suitable for subjective questions as the former can capture households that are intermittently fuel-poor as well those that are persistently fuel poor.
- A number of survey respondents stated they were part of a district heating network, which has implications for the design of heating variables, as district heating is distinctly different from individual central heating systems.
- Some respondents reported difficulties maintaining an adequately cool indoor temperature during summer months. The issue of summertime fuel poverty is underexplored and needs further examination.
- A range of energy sources were listed by respondents, including coal, wood, oil and bottled gas. This suggests a need to broaden the focus of policy away from just mains gas and electricity.

Recommendations

The rapid review of knowledge and practice revealed that a lack of good quality data is preventing rigorous assessment of fuel poverty across the European Union. Based on discussions with the expert project steering group, and the research findings produced throughout the project, a number of practical recommendations have been outlined in the final report for improving the measurement of European fuel poverty and its impacts.

- *Recommendation 1: Amend and harmonise existing surveys*

The majority of suggestions in this category concern adaption of the EU Statistics on Income and Living Conditions (EU SILC). When considering how EU SILC could be adapted to be fit for purpose, one of the key criteria was that the proposed amendments should not deviate too substantially from the existing formats, in order to maintain comparability across survey years for longitudinal analysis and to avoid complex and costly changes.

Most of the proposed changes concern existing variables; these amendments range in complexity from splitting a variable into three separate components, through to reviewing question wording. In addition, a number of new topics have been proposed, such as energy performance ratings.

Suggestions are also given for how users of EU SILC can adapt and expand the data for fuel poverty measurement, namely incorporating energy efficiency data and heating and cooling degree-days data.

Aside from EU SILC, the final report also suggests harmonising Household Budget Surveys (HBS) to produce a pan-EU dataset of actual fuel expenditure across Europe, and discusses the potential for pan-European monitoring of cold-related morbidity and mortality.

- *Recommendation 2: Collect new data*

Given the limitations of existing data, and the difficulties associated with amending current surveys, it is suggested that a new dedicated pan-EU household survey of fuel poverty should be given consideration. The key advantage of this approach is that it would allow stakeholders to develop an evidence-based dataset that is relevant and appropriate for monitoring fuel poverty trends.

The final report provides suggestions for the topics that need to be addressed in a dedicated survey, with emphasis on the need to move towards an all year round, whole house consumption approach.

Further information

All project outputs can be found on the Eaga Charitable Trust website:
<http://www.eagacharitabletrust.org/index.php/projects/item/european-fuel-poverty-measurement-pilot-project-western-europe>

For further information, please contact Harriet Thomson:

E-mail: hrt500@york.ac.uk

Twitter: [@harrimus](https://twitter.com/harrimus) or [@fuelpoverty_eu](https://twitter.com/fuelpoverty_eu)

**Harriet Thomson and Carolyn Snell,
May 2014**