Energy Policy 52 (2013) 563–572

Contents lists available at SciVerse ScienceDirect

Energy Policy

journal homepage: www.elsevier.com/locate/enpol

Quantifying the prevalence of fuel poverty across the European Union

Harriet Thomson *, Carolyn Snell [1]

The Department of Social Policy and Social Work, The University of York, Heslington, York, YO10 5DD, UK

HIGHLIGHTS

- This research is the first comparative analysis of European fuel poverty since 2004.
- Fuel poverty is a particular problem for eastern and southern European member states.
- Recommendations include the improved integration with current EU climate policies.

ARTICLE INFO

Article history:
Received 2 April 2012
Accepted 2 October 2012
Available online 25 October 2012

Keywords:
Fuel poverty
EU-SILC
European Union

ABSTRACT

The literature and policy base for fuel poverty in the UK and Ireland is well established, and there is a growing body of single country studies beyond these two EU member states (for example Brunner et al. (2012), Dubois (2012), and Tirado Herrero and Ürge-Vorsatz (2010)), however, on a European level, the last analysis of fuel poverty was conducted in 2004, prior to the enlargement of the EU. Using survey data this paper presents an updated overview of the prevalence of European fuel poverty in the context of the accession of numerous former social states, and rising fuel prices.

Analysis reveals the phenomenon of fuel poverty is occurring across the EU, with particularly high levels of fuel poverty found in Eastern and Southern European states. It is argued that there are both EU and national policy frameworks in place that address climate change and these could be used as a starting point for countries to address fuel poverty through improved domestic energy efficiency measures.

This paper reflects research undertaken in 2011, supported by eaga Charitable Trust, within the umbrella of work examining issues of poverty and social exclusion across the EU, which has enabled access to the EU-SILC dataset.

1. Introduction

Of the 27 EU member states, only three have an official definition of fuel poverty (the United Kingdom, Republic of Ireland and France), and national levels of awareness regarding fuel poverty are varied. Yet, the drive towards a single liberalised energy market, the accession of numerous former socialist countries and the subsequent removal of subsidised energy tariffs, means it is increasingly likely that fuel poverty is a European-wide phenomenon (European Economic and Social Committee, 2011). However, there is a distinct gap in knowledge regarding the extent of fuel poverty on a European scale, which this paper will begin to address, using standardised EU Statistics on Income and Living Conditions (EU-SILC) data.

Over the last decade the EU has taken a prominent role in promoting energy security, climate change mitigation and sustainable development. Policy has been implemented in a range of areas, from the European Council Directive (2009a) on common rules for the internal market in electricity, which requires Member States to undergo electricity market liberalisation, the European Council Directive (2003) establishing a scheme for greenhouse gas emission trading for energy intensive industry, to the Europe 2020 strategy, which amongst other objectives, aims to reduce greenhouse gas emissions by 20 per cent, increase the share of renewable energy in the energy mix to 20 per cent and achieve a 20 per cent increase in energy efficiency by the year 2020 (European Commission, 2010a). By contrast, policy specifically addressing fuel poverty has been limited, despite the potential tension between climate change and fuel poverty policy objectives. This is also despite existing literature (see for example Fitzpatrick and Cahill (2002), Fitzpatrick (2011)) that suggests that in order to reconcile and achieve the policy goals of reduced fuel poverty and carbon emissions their interaction must be recognised. Policies that fail to do this may have the unintended

* Corresponding author. Tel.: +44 1904 321264.
E-mail addresses: hrt500@york.ac.uk (H. Thomson), Carolyn.snell@york.ac.uk (C. Snell).
[1] Tel.: +44 1904 321249.

0301-4215/$ - see front matter © 2012 Elsevier Ltd. All rights reserved.
http://dx.doi.org/10.1016/j.enpol.2012.10.009

consequence of increased levels of fuel poverty or carbon emissions—for example, climate policies that increase household energy bills are often found to be regressive if they do not protect poorest customers, conversely, fuel poverty policies that simply remunerate customers may lead to an increase in carbon emissions (see Tol (2007), Wier et al. (2005), Gough et al. (2008), Ürge-Vorsatz and Tirado Herrero (In press)).

Certainly, there have been discussions on fuel poverty, particularly with regard to social exclusion, with the European Commission stating "fuel poverty, which risks depriving households not only from heating or cooling but also from hot water, lights and other essential domestic necessities, is another manifestation of severe deprivation" (European Commission, 2010b). The same communication on poverty and social exclusion, later states: "energy policy will continue to contribute to address the consumer needs and, where appropriate, address the risks of energy poverty" (European Commission, 2010b).

To date, policy has been piecemeal, with no specific policy package addressing fuel poverty. European Council Directive (2009a,b) both acknowledge fuel poverty exists and require affected Member States to develop action plans, however, as Bouzarovski et al. (2012, p. 3) state, the EU has "stopped short of providing a common definition of the problem, which might give it better visibility at the member-state level", and likewise, no criteria for an 'affected Member State' is given. Similarly, in these directives, Member States are required to define a vulnerable customer possibly in relation to fuel poverty, but no guidance is provided on who is likely to be a vulnerable customer.

Fuel poverty is likely to be an increasing issue on a European level, and as such, this paper fills a significant gap in knowledge. In the following section, the causes, consequences and extent of fuel poverty will be discussed, with particular reference to the limitations of the existing literature on European-wide fuel poverty.

2. Background

2.1. Use of terms

Before addressing the causes of fuel poverty, the use of terms requires some discussion. At the EU level, there is a conflicting use of the terms energy poverty and fuel poverty. This exists even within EU institutions such as the European Commission, with both terms used in a communication concerning social exclusion (European Commission, 2010b). It has previously been stated that fuel poverty is a narrow measure (Ürge-Vorsatz and Tirado Herrero, In press) however this assertion was based on a misunderstanding of fuel poverty measurement in the UK; in addition to space heating needs, water heating, lighting and energy for appliances and cooking are also taken into account (Department of Energy and Climate Change, 2012) when considering the level of spending required on fuel in order to achieve a basic standard of living.

Given that fuel poverty is considered the most commonly accepted term throughout the industrialised world (Liddell et al., 2012), this paper will make reference to the term fuel poverty when describing the phenomenon whereby a household struggles to afford adequate services.

2.2. Defining fuel poverty

The main driver of fuel poverty is a "complex interaction between low income and domestic energy efficiency" (Healy and Clinch, 2002, p. 4), in addition to other contributory factors such as "the absence of savings and living in rented accommodation, both of which limit an occupant's opportunities to improve the property" (Boardman, 2010a, p. 21). The drivers of fuel poverty are likely to be similar throughout the EU, although, variation in the severity of each driver may exist between member states, for example in south-eastern Europe, the legacy of communism creates specific drivers of fuel poverty (Bouzarovski et al., 2012).

As highlighted above only three of the 27 EU member states have an official definition of fuel poverty, despite increasing concerns about its prevalence. The three definitions that do exist reflect the relationship between energy efficiency and low income.

The Irish government defines fuel poverty as "the inability to afford adequate warmth in a home, or the inability to achieve adequate warmth because of the energy inefficiency of the home" (Office for Social Inclusion, 2007, p. 67), whilst in France a person is considered fuel poor "if he/she encounters particular difficulties in his/her accommodation in terms of energy supply related to the satisfaction of elementary needs, this being due to the inadequacy of financial resources or housing conditions" (Plan Bâtiment Grenelle, 2009, p. 16). Finally, in the United Kingdom, a fuel poor household is: "one that cannot afford to keep adequately warm at reasonable cost. The most widely accepted definition of a fuel poor household is one which needs to spend more than 10% of its income on all fuel use and to heat its home to an adequate standard of warmth." (Department of Trade and Industry (DTI), 2001, p. 6)

There is much discussion on how to define and identify fuel poverty, with commentators generally favouring either an expenditure approach that uses actual or required fuel spend, or a consensual approach that utilises subjective indicators. There are numerous criticisms levied at the expenditure approach, as currently used by the United Kingdom, including its inability to "capture the deprivation and social-exclusion elements of fuel poverty" (Healy and Clinch, 2002, p. 9). There are also issues raised concerning the use of actual or required fuel spend; actual fuel spend is said to be a poor indicator of fuel poverty as households often spend less on fuel than is required (see for example Moore (In press) or Liddell et al. (2011)), whilst a measurement based on required fuel spend necessitates national housing condition surveys from which to calculate accurate required fuel spend (Moore, In press).

Due to the limitations of an expenditure approach, some authors advocate a consensual fuel poverty measurement grounded in the consensual poverty approach pioneered by Gordon et al., based on the inability "to afford items that the majority of the general public considered to be basic necessities of life" (Gordon et al., 2000, p. 7). Healy and Clinch's work at the EU level (Healy and Clinch, 2002) used a consensual approach to fuel poverty by analysing subjective and objective data on the presence of mould, the absence of central heating, and ability to keep warm. This approach is not without its flaws, including the likelihood of error of exclusion, with households not identifying themselves as fuel poor (Dubois, 2012). However, the use of a consensual measure of fuel poverty enabled Healy and Clinch to produce the first estimate of fuel poverty across the EU14 as standardised European data concerning household fuel spend was (and still remains) unavailable. Arguably, this is the key advantage of a consensual fuel poverty measure, particularly for cross-comparative research.

2.3. Consequences of fuel poverty

Although it has been found fuel poverty is not synonymous with general poverty (Hills, 2012), the two do certainly exacerbate each other; a low household income can cause households to restrict their use of appliances and heating and/or for debts to accrue, whilst high fuel costs, perhaps resulting from an energy inefficient property, can put pressure on household budgets,