Identifying Fuel Poverty Using Objective and Subjective Measures

BACKGROUND

- The government defines fuel poverty as occurring when a household needs to spend more than 10% of its income on all fuel use in the home. The government is committed to removing all vulnerable households from fuel poverty by 2010 (a vulnerable households includes children or those who are elderly, sick or disabled), and all others by 2016.

- This paper explores the relationship between an objective measure based on this official criterion and whether or not householders believe that they can afford sufficient energy to meet their needs. This subjective belief may have an important impact on the acceptability of government policies.

- Although retail energy prices fell in early 2007, the long term trend is likely to continue the upward trajectory of 2005-06, reflecting concerns about security of supply and the environment. Against this background, it is even more important to ensure that the limited resources of government and companies are appropriately targeted and that fuel poor households are correctly identified.

METHODOLOGY

- The main data used in this study were the responses to a questionnaire, administered to low income consumers, which had been designed to yield information on issues associated with fuel poverty.

- The paper first defines a new subjective concept of fuel poverty; second, uses a unique data set and compare its results with those of the Family Expenditure Survey; and third, uses data mining techniques to explore potential determinants of fuel poverty.

- While the incidence of fuel poverty has changed since the data were collected, the official definition of the objective measure of fuel poverty has not, and it is likely that subjective experiences of feeling fuel poor are also broadly stable.

KEY FINDINGS

Expenditure Fuel Poverty and Feeling Fuel Poor

- Of the respondents whose answers could be included, 28% spent more than 10% of their income on energy, and 16% reported feeling fuel poor.

- Those who are expenditure fuel poor (EFP) have on average both lower income and higher fuel expenditure than those who are not EFP within the low income sample.

- In contrast, those who only feel fuel poor (FFP) have similar expenditure to those who are not fuel poor, higher income than the EFP households, but slightly lower income than those who are not fuel poor by either measure.

- Those who feel fuel poor but are not EFP are less likely to be prepayment customers.

- The likelihood of feeling fuel poor and of expenditure fuel poverty are both reduced by higher income, and increased by being on income support.

- Those using prepayment and standard electricity tariffs are more likely to feel fuel poor.

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June 2007
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CCP Policy Briefing

- Comparison with analysis of the corresponding Family Expenditure Survey (FES) showed contrasting results in two respects:

    - Across households in the FES, using prepayment increases the probability of being EFP, whereas the probability of being EFP was not affected by payment method in the low income sample; and

    - Within the FES, large families are more likely to be fuel poor, other things being equal, while family size had no effect on whether or not a household from the low income sample was EFP.

POLICY ISSUES

- The subjective measure of feeling fuel poor defined in this paper gives very different results from the objective '10% rule' for expenditure fuel poverty.

- If the government focuses on increasing income rather than reducing expenditure to meet its EFP targets, it may move people out of EFP but impinge little on how many people feel fuel poor.

- When other factors are included in the analysis, self-disconnection, central heating provision and switching supplier do not affect either objective or subjective measures of fuel poverty. Since the data mining technique found *ex ante* associations with these factors, this confirms that they are associated with other characteristics which help to explain whether households are fuel poor. For example, those who switch supplier are more likely for other reasons not to be fuel poor. This suggests that policy directed at reducing fuel poverty may appropriately be directed at the factors which determine self-disconnection, heating provision and activity in markets, rather than necessarily directly at these associated elements.

- The findings are directly relevant to current policy: many people who will not be targeted through the government's drive to eliminate (expenditure) fuel poverty will remain feeling unable to afford adequate heating.

- Such subjective emotions as feeling fuel poor are not subject to the same influences as EFP, and could have an important effect on the effectiveness of policies both for alleviating poverty and for reducing carbon emissions.

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