ESRI Research Bulletin

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Evaluation of the Effect of the Power of One Campaign on Natural Gas Consumption[1]

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In 2006 the Irish government launched the Power of One campaign to encourage energy-efficient behaviour. The campaign targeted use of natural gas, electricity and transport fuel (petrol and diesel) both at home and at work.

The campaign was mainly run through TV and radio ads, in addition to flyers included in consumers' bills and billboard ads. It was a pure advertising campaign, with no funds dedicated to subsidising efficient appliances or improving insulation.

In this paper we focused on the effects of the campaign on natural gas consumption in the residential sector. Residential consumption of natural gas is mainly for heating. The campaign provided numerous tips on how to save electricity. The message relevant to natural gas consumption was that reducing the thermostat by 1 degree Celsius could reduce heating bills by up to 10 per cent.

We found that the campaign increased consumers' awareness of the potential savings associated with lowering the thermostat. This, however, did not translate into persistent changes in behaviour within the time frame of the data, available until the end of September 2008.

Most prior research in this area finds that the campaigns that were most effective at decreasing consumption were associated with specific monetary incentives such as subsidies (Gillingham et al., 2006). However more recent studies identified changes in behaviour even in the absence of monetary incentives, usually in the presence of peer effects or strong non-monetary incentives (Nolan et al. 2008; Ayers et al. forthcoming; Reiss and White 2008).

We examined average daily consumption of natural gas in the aggregate Non-Daily Metered sector in Ireland, which refers mostly to residential users, although

[1] Diffney, S., Lyons, S., Malaguzzi Valeri, L. Evaluation of the effect of the Power of One campaign on natural gas consumption, Energy Policy, 62, 978–988. http://dx.doi.org/10.1016/j.enpol.2013.07.099

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it includes a few small commercial establishments. Our results showed no persistent effect of the campaign. We identified a short-term effect associated with the first year of advertising leaflets included in customers' bills. We controlled for changes in weather, an important determinant of heating demand, and state-wide economic variables, such as the average level of home vacancy and average personal disposable income. No further effects were identified for the second year of the campaign. In addition the results did not show any significant effect for the TV campaign, either in its first or second year.

We also examined a series of three surveys administered to 1,000 people each before and during the campaign. We found that awareness of the savings associated with decreasing the thermostat setting increased significantly after the campaign. On the other hand, self-reported heating behaviour did not change after the first year of the campaign. One possible interpretation is that it was not lack of information, but rather preference for warmer homes, that informed consumers' decisions. However because there were changes in the wording of the surveys it is possible that our models underestimate the effects on self-reported behaviour.

We concluded that the campaign influenced awareness of the savings associated with a reduction of the thermostat setting and short-run heating behaviour, but not longer-term behaviour. We suggest that in order to be an effective tool in reducing energy consumption, such campaigns may have to be backed up by additional measures, for example comparative billing and monetary incentives to switch to more efficient boilers.

Decreasing household energy use is essential if Ireland is going to meet the lower energy use targets set by the European Union for 2020. Studies that measure the impact of government programs are valuable. They can identify which measures have been most effective thereby helping the government allocate its limited resources efficiently. Evaluation of any program is easier when consistent data are collected before and after its implementation.

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