

Energy efficiency labels - who cares? A demographic assessment of consumer attitudes to existing and novel efficiency labels

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Overview

This research project involves a randomised control trial investigating the impact of an alternative energy efficiency label for household appliances and an in-store consumer survey exploring attitudes towards existing and proposed labels.

The hypotheses of this research is that consumers do not understand or correctly interpret the information provided in mandatory EU energy efficiency labels for household appliances (example in Figure 1), in particular in relation to how much the appliance will cost to operate. This project investigates an alternative method of relaying efficiency information to consumers by indicating the usage cost of the appliance over a multi-year time horizon (see Figure 2 below for the new monetary cost label utilised in this trial).

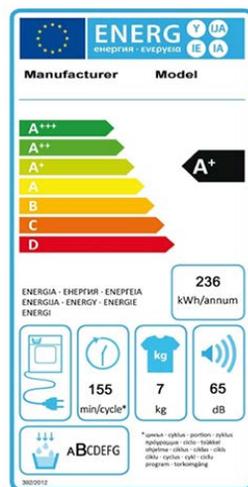


Figure 1: current EU label

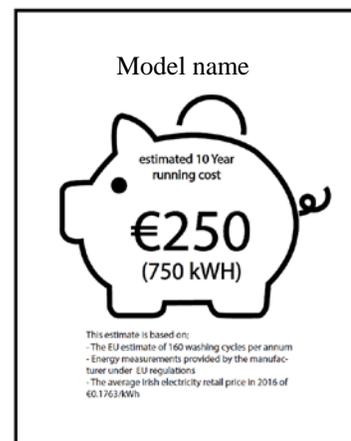


Figure 2: Monetary cost label in this study

Household failure to minimize the total costs of their energy-consuming investments has become known as the 'Energy Efficiency Gap'. The literature examines a range of explanations for this gap including hyperbolic discounting, asymmetric information, imperfect information, choice under uncertainty (prospect theory), and inattention. Building on the literature, the fundamental research question in this project is – would a continuous comparative indicator that is universally understood (money) lead to a greater shift towards efficient purchases?

Specifically, it will address the following:

- Do consumers value and act upon monetary information relating to efficiency?
- How should that information be relayed?
- What appliances are affected by monetary information – all, none, high ticket, low ticket?
- What role does demographics play in engagement with labelling? – gender, income, education, age and family composition for example
- What role does the monetary information play in the landlord-tenant dilemma?

Methods

This research is conducted in collaboration with an electrical retailer in Ireland. Randomised stratified sampling is used to select eight treatment stores to receive the monetary usage information labels (as seen in Figure 2) on a range of appliance categories. The monetary label illustrates the multi-year consumption cost of each appliance, since the stated preference analysis of Heinzle (2012) demonstrates that the duration of the forecast matters – the longer the duration of the forecast the larger the willingness-to-pay for efficiency improvements.

Consumer level information is also being collected at the point of sale in both treatment and control stores in order to investigate the role of demographics on appliance purchasing decisions. Thus, the impact of the monetary labels will be determined both at a store level (i.e. on the average efficiency of appliances sold) and also at an individual level (by comparing treated and non-treated individuals across stores).

The monetary cost label does not include a discount rate. The concept of discounting is unlikely to be understood by the general public and as such it is not included as it is likely to lower the clarity of the label and therefore buyer engagement (and possibly sales staff engagement). The consumer survey thus also investigates consumers' risk preference and time inconsistency to examine the role of discounting in the energy efficiency gap.

Results

The randomised control trial and consumer surveying are currently underway however, preliminary results from a pilot trial by Carroll et al. (2016) suggest that monetary usage information labels have a greater influence in treatment stores in areas with higher than average income and education. However, that pilot trial did not collect consumer level information, thus the results of this study will shed more light on the the impact of the label across different demographic groups.

Conclusions

Energy policy, and in particular issues surrounding energy efficiency improvements, are a critical area of concern for policy makers across the EU and further afield. If the results of this project indicate that providing monetary cost information results in a shift towards more efficient purchasing behaviour it would be a simple and virtually cost-free method of reducing Irish (and European-wide) greenhouse gas emissions. Of particular interest in this study is the role of demographics (income, education, age, tenant/owner/landlord) in engagement with labels so that policies can be designed and implemented with maximum effectiveness.

References

- CARROLL, J., DENNY, E. & LYONS, S. 2016. The Effects of Energy Cost Labelling on Appliance Purchasing Decisions: Trial Results from Ireland *Journal of Consumer Policy*, 39, 23-40.
- HEINZLE, S. 2012. Disclosure of energy operating cost information: a silver bullet for overcoming the energy-efficiency gap? . *Journal of Consumer Policy*, 35, 43-64.