

Electricity savings in households with everyday IT, report from a field experiment

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Overview

The paper presents IT-based communication with households about their electricity consumption. It describes the technological platform used, the design and the implementation of the experiment. Finally, it will contain an answer to the question whether the IT-based communication with everyday technology generates electricity savings.

We have selected five representative groups of households, including two control groups. The three experiment groups are getting the feedback about their electricity consumption in different ways, but using cell phone text messages (in Europe called SMS), e-mails and a website in all experiment groups. The electricity consumption is measured over two years. The first year, the households do not get any further information.

The paper will present the experiment, the implementation of the experiment and the final econometric estimations, using the panel structure of the data

Methods

A controlled experiment

The design: 3 experiment groups with different types of feedback on electricity consumption and 2 control groups

Control period of 12 months in 2007

Different types of feedback (sms, e-mails and a homepage)

Random selection

Number of participants, response rate

The Electronic platform facilitating the experiment

Description

Graphic representation

Implementation

Pre test of the experiment

Selection of participants

Invitation-process

The role of Southern Energy (the electricity company)

Results

Visits at the homepage

Descriptive statistics

Mean electricity consumption 2006/2007

Difference in individual consumption 2006/2007

Final econometric analysis. Showing small (and with a few exemptions) insignificant savings (max 2,2%)

We have previously in Taipei presented very preliminary results at 1st IAEE Asian Conference, Taipei, 5-6 November 2007

Conclusions

We discuss to which extent the savings in the project can be used as an argument for so-called intelligent meters to facilitate energy savings by everyday IT-technology.

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