

Monetary and Moral Incentives of Behavioral Interventions: Field Experimental Evidence from Energy Conservation?

Abstract

Growing electricity consumption in the commercial sector has become a concern in many countries. However, behaviors of electricity customers in the commercial sector have been underinvestigated. This study adds to the literature by providing some empirical evidence from hotel guests. Hotel guests tend to have little incentive to reduce electricity consumption as their hotel fees will not be discounted even if they save electricity during their stays. We conduct a field experiment to investigate how different treatments can reduce their electricity consumption.

In the first treatment, a message was put in a guest room to encourage energy saving. In the second treatment, a hotel guest receives 600 Japanese yen (about 6.45 US dollars) if the guest's electricity consumption is less than the average daily electricity consumption in the same month of the previous year. In the third treatment, the hotel donates 600 Japanese yen to the World Wide Fund for Nature (WWF) if the guest's electricity consumption is less than the average daily electricity consumption in the same month of the previous year. All the guest rooms used in the experiment have smart meters to show real-time energy usage to guests.

The results show that monetary incentive and donation are particularly effective in reducing electricity consumption. To our surprise, the effects of monetary incentive and donation on electricity saving are almost the same. In contrast, displaying an energy saving message has no effect on reducing electricity consumption.