



RESEARCH HIGHLIGHTS

Moral Suasion and Economic Incentives: Field Experimental Evidence from Energy Demand

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Are non-price measures an effective way to achieve conservation?

Context

Consumers around the world are often encouraged to conserve energy. At times, this is in response to emergencies, such as during the 1970s energy crisis, when President Nixon famously asked Americans to turn down the thermostat. More recently, California employed similar pleas during the 2000-2002 energy crises. Japanese policymakers asked consumers to conserve amid the supply crunch following the Fukushima nuclear disaster in 2011. Other times, governments or utilities encourage conservation for policy priorities, such as reducing pollution and grid costs during peak operating hours.

While economic theory suggests that price signals are the most effective means of encouraging conservation, increasing prices is sometimes politically challenging. So, policymakers turn to non-pecuniary measures, including appeals to consumers' altruistic instincts, or moral suasion.

Method

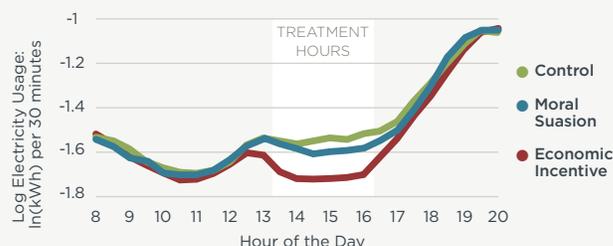
To shed new light on this question, researchers in this study conducted a random assignment field experiment across 700 households in Kyoto, Japan. Households were randomly assigned to one of three groups: (1) a control group; (2) a treatment group that received monthly messages requesting them to voluntarily conserve energy during peak-demand hours; and (3) a second treatment group that was instead charged higher prices for electricity use during the same peak hours.

Key Findings

The study finds that financial incentives are the most effective way to encourage significant, long-lasting changes in electricity consumption. In particular:

- Households that received the messages encouraging conserva-

The Effects of Moral Suasion and Economic Incentives on Electricity Usage



tion reduced their electricity use by 8 percent in the short term, but they quickly resorted back to their usual habits. Over the long-term, the messages to voluntarily reduce electricity had near zero impact.

- Those who experienced a hike in the price of electricity during peak hours reduced their electricity use by as much as 17 percent, and the effect is much more sustained over time.
- Finally, higher prices resulted in a change in habits that outlasted the intervention. Even after the intervention ended, households in this group continued to conserve energy. The researchers find that this is not related to a change in capital stock (i.e., new appliances), but rather changes in behavior. The messaging group experienced no change in behavior.

CLOSING TAKE-AWAY

During emergencies and periods of especially high demand, policymakers sometimes target demand reductions through conservation. Efforts that rely on customers to make voluntary lifestyle changes to reduce electricity use can have small, temporary effects. However, financial incentives achieve larger effects that last longer and also persuade customers to form habits that are more energy efficient.