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Title: Does Self-Interest Attract More Sunlight? A Field Experiment on Solar Adoption

Abstract: Despite considerable federal and state subsidies, only around 1 in 50 U.S. houses has rooftop solar. Because of this relatively low uptake rate, policy makers are often considering non-monetary incentives, such as informational campaigns. This paper investigates a large-scale randomized controlled trial designed to increase the adoption of rooftop solar by informing people about the benefits of solar. In this behavioral field experiment, we focus on the effectiveness of different messages. Town residents in 19 towns all over Connecticut learn about solar PV through local community-based campaigns that either focus on the individual or the community benefits of installing rooftop solar. We find that individual-focused messaging more than doubles the installation rate and the installed capacity. Combining our panel dataset with Google Sunroof data, we also find that individual-focused messaging leads to installations with a 2% higher capacity factor and an 18% higher economic value. In total, a four-month campaign leads to an additional lifetime generation of around 500 MWh per 1000 owner-occupied houses. Community-focused messaging has no significant effect on both the installation rate and the characteristics of installations, but leads to a significant higher number of recommendations and a higher satisfaction with the installation. The positive effects of individual-focused messaging are highest for high-income towns, census tracts and families, but still significant for lower-income ones. In a post-campaign survey, we find that individual- and community-focused households share the same beliefs about the individual and community benefits of solar, but that a significantly higher share of individual-focused households install solar for financial reasons. In addition, comparing adopters and non-adopters, we find that adopters are richer and more educated, and that they have more positive beliefs about the benefits of solar. Our findings indicate that policy-makers and practitioners should focus information campaigns on the private financial benefits if they want to increase solar adoption efficiently.