

Evidence of a Homeowner-Renter Gap for Electric Appliances

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This paper provides the first empirical analysis of the homeowner-renter gap for electric appliances. Using U.S. nationally representative data, the analysis shows that renters are significantly more likely than homeowners to have electric heat, electric hot water heating, an electric stove, and an electric dryer. The biggest gap is for electric heating. Whereas 49% of U.S. renters heat their homes primarily with electricity, only 29% of U.S. homeowners do the same.

The research documents a considerable homeowner-renter gap with renters between 9 and 20 percentage points more likely to have electric appliances. The gap is statistically significant at the 1% level for all four appliance categories, prevalent across regions, and persists after controlling for the type, size, and age of the home, as well as for climate and household characteristics.

This homeowner-renter gap likely arises from the same split incentives that lead to underinvestment in energy-efficiency. Researchers have long bemoaned the “landlord-tenant problem”, pointing out that landlords have too little incentive to invest in energy-efficiency when their tenants pay the energy bills (Blumstein et al., 1980; Jaffe and Stavins, 1994; Gillingham et al., 2009; Allcott and Greenstone, 2012; Gillingham and Palmer, 2014; Gerarden et al., 2017).

By the same argument, landlords tend to prefer electric appliances because they are less capital-intensive. Electric resistance heating is cheaper to install than a natural gas furnace, and electric dryers and electric hot water heaters are cheaper to install than natural gas. Although in theory, the higher capital cost of natural gas appliances could be passed on in the form of higher rents, it can be difficult for landlords to effectively convey this type of information (Myers, 2020).

These findings are relevant for an emerging set of policies aimed at reducing carbon emissions through building electrification. In California, more than 40 cities have passed measures prohibiting or restricting natural gas in new homes, and policymakers are retooling state building codes to favor all-electric homes. In addition, the Biden administration announced in May 2021 its support for building performance standards and other initiatives aimed at building electrification.

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