

Subsidies to Electricity Consumption and Housing Demand in Bogotá

Working Paper No. 847 Keep in mind

The series Working Papers on Economics is published by the Office for Economic Studies at the *Banco de la República* (Central Bank of *Colombia*). It contributes to the dissemination and promotion of the work by researchers from the institution. This series is indexed at Research Papers in Economics (RePEc).

On multiple occasions, these works have been the result of collaborative work with individuals from other national or international institutions. The works published are provisional, and their authors are fully responsible for the opinions expressed in them, as well as for possible mistakes. The opinions expressed herein are those of the authors and do not necessarily reflect the views of Banco de la República or its Board of Directors.

AUTHOR OR EDITOR Camila Casas AUTHORS AND/OR EDITORS Casas-Lozano, María Camila

In this paper, I estimate the demand for housing in Bogotá, modeling electricity consumption explicitly to take into account the crossed subsidies included in Colombian utility rates. I use household level data on housing prices, observable dwelling attributes, and demographic variables to recover the willingness to pay for housing characteristics following the three-step estimation procedure suggested by Bajari and Kahn (2005). First, I regress the price of housing against different observable dwelling characteristics to recover the implicit price of each feature. Next, I infer household-specific preference parameters from the utility maximizing first-order conditions, where a household's utility depends on these observable characteristics. Finally, I analyze the relationship between demographic variables and the taste parameters estimated in the previous step. In order to study the impact of subsidies on households' housing decisions, I focus on the impact of changes in the price of electricity on the choice of dwelling size. I find that subsidized households choose bigger dwellings than they would in the absence of subsidies, while those who are taxed choose smaller ones.

The opinions expressed here do not necessarily correspond neither to the Banco de la República nor its Board of Directors.