Lesson from a pilot program to induce stove replacements in Chile: design, implementation and evaluation

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Abstract
We present the design, implementation, and evaluation of a subsidy program to introduce cleaner and more efficient household wood combustion technologies. The program was conducted in the city of Temuco, one of the most polluted cities in southern Chile, as a pilot study to design a new national stove replacement initiative for pollution control. In this city, around 90% of the total emissions of suspended particulate matter is caused by households burning wood. We created a simulated market in which households could choose among different combustion technologies with an assigned subsidy. The subsidy was a relevant factor in the decision to participate, and the inability to secure credit was a significant constraint for the participation of low-income households. Due to several practical difficulties and challenges associated with the implementation of large-scale programs that encourage technological innovation at the household level, it is strongly advisable to start with a small-scale pilot that can provide useful insights into the final design of a fuller, larger-scale program.

Palabras clave
Palabras clave de autor: environmental policy; urban pollution; energy; subsidy; households; technology adoption

KeyWords Plus: RESIDENTIAL WOOD COMBUSTION; SOUTH-CENTRAL CHILE; PARTICULATE MATTER; EMISSION FACTORS; AIR-POLLUTION; PARTICLES; POLICY; SMOKE