Inter-American Development Bank

Energy-Efficient Housing in Mexico

Evaluation Survey ME-L1121

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Office of Strategic Planning and Development Effectiveness

DATABASE

May 2020

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Energy-Efficient Housing in Mexico – Data & Code

This data archive provides all data and code to produce the results in "How Effective is Energy-Efficient Housing? Evidence from a Field Trial in Mexico" by Lucas Davis, Sebastian Martinez, and Bibiana Taboada, published in the Journal of Development Economics.

Description:

These data were collected for the evaluation of a field trial in Mexico in which a quasi-random sample of new homes was provided with insulation and other energy efficiency upgrades. The field trial took place in a large housing development in Northeast Mexico in the state of Nuevo Leon. The evaluation survey includes a rich set of demographic, socioeconomic, and electricity variables. Temperature and humidity measurements from data loggers were also recorded.

Methodology:

The developer distributed upgrades in a "quasi-random" pattern as widely as possible throughout the development. Despite not using explicit randomization, upgrades were quite widely distributed without any systematic pattern. Along most streets there is a mix of homes with and without upgrades, and the pattern of upgrades does not follow any regular sequence.

The initial household survey took place between June and August 2016. Data loggers were installed by trained technicians from the same firm after the application of the survey. Information from the loggers was then downloaded every three to four months over a 16+ month period. Data were also collected on outdoor temperature from a meteorological station that was installed on the roof of one of the homes in the development. A follow-up survey was administered in the summer of 2017 to understand how households in the housing development use their windows.

Source: Evaluation Survey ME-L1121

Country: ME

Number of Countries: 1

Time Period Covered: 2013-2017

Contact: Sebastian Martinez, smartinez@iadb.org

Folder Structure:

The folder *rawsurvey* contains all the raw data from the initial household survey along with the final survey instrument and other information.

The folders *other materials RDD1 and RDD2, other materials RDD3,* and *other materials RDD4* contain additional data received at the same time we received the data from the temperature and humidity loggers. This includes, for example, information about electricity consumption and weather data from the housing development.

The folder *intermediate* is where all intermediate Stata files will be saved while running the code.

Due to file size limitations, the raw sensor data from the temperature and humidity loggers from the four collection phases were combined and collapsed to one observation per household per hour. The code that was used to produce this data set is included in *code.do* and the output file, *sensor.dta,* is in the *intermediate* folder.

The Stata do file, *code.do*, inputs all the raw data, cleans and organizes it, performs all analyses, and creates figures and tables. After unzipping the downloaded folder "Energy-Efficient Housing in Mexico-Data & Code" and updating the file path, you should be able to run the .do file and reproduce all results in the paper.