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## Energy demand determinants in Mexican households, 2008-2014

Rafael Perez-Pena and Benjamin Widner  
New Mexico State University, USA

**S**tatement of the Problem: Substitutability and complementarity between different energy sources and energy access are relevant factors explaining the household energy demand in developing countries. Previous researchers analyse the relationship between different energy sources and the Mexican government as well as international agencies compute energy access indicators and based on these results establish energy policies and goals. Mexico has the highest ranking in energy access terms as pointed out by the World Bank (WB) and the International Energy Agency (IEA). The main purpose of this paper is to analyze the relationship between the demand for energy and the energy price, energy access, household income, education of the household head, and size of the localities of Mexican households from 2008 to 2014. Methodology & Theoretical Orientation: This research uses an econometric model, computes an average energy price variable and an alternative energy access variable. The average energy price is used to test for complementarity and substitutability between energy sources (coal and fuel wood and natural gas, LPG, and electricity). The energy access indicator serves as an alternative measure to those conducted by the WB and the IEA and can be used to examine feasibility of international goals and national energy policies. Preliminary results suggest that modern energy sources (natural gas, LPG, and electricity) are substitutive goods between each other but they are complementary goods to traditional energy (coal and fuel wood). In addition, energy access is one of the most significant determinants of energy demand in Mexican households. Energy access impact varies when alternative energy access indicators are used. Recommendations: energy access indicators in Mexico should be revised for different energy sources. Renewable energy can contribute to improve energy access in Mexican households.

### Biography

Rafael Perez is a doctoral candidate in economic development at the Economics, Applied Statistics & International Business Department (EAS&IB) of New Mexico State University (NMSU). His research interests are energy economics, agricultural and resource economics, economic development, international economics and macroeconomics. Mr. Perez is a young researcher from the US-Mexico border region so he is particularly passionate about the US and Latin-American economic relations. Mr. Perez has collaborated in energy-related projects for the United States Department of Agriculture, the United Nations, and academic institutions in the US, Mexico, and Brazil. Benjamin Widner is a faculty member at the EAS&IB of NMSU. Dr. Widner obtained his Ph.D. at Colorado State University. His research interests are urban/regional economics, public finance, microeconomics, development, econometrics, managerial economics, environmental economics, macroeconomics.

rperez89@nmsu.edu

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