

An Empirical Analysis of Household Energy Consumption Choice in Sri Lanka

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It is important to understand the factors affecting household energy consumption choice and fuel switching dynamics over the years in developing countries because many households in developing countries lack access to clean energy sources and rely on so called “dirty energy” sources for cooking, lighting and heating purposes. This is an interesting case study because Sri Lanka has no, known fossil fuel and required energy supply is mainly fulfilled through petroleum, biomass, coal, hydro-electricity and new renewable energy sources. Accordingly, the main objective of this paper is to analyze the patterns and determinants of household energy consumption choice on different energy sources in Sri Lanka over the years. The study uses data from three nationwide household data covering the period from 1990 to 2013 and traces the household energy consumption dynamics. The results reveals that there has been a significant increase in use of modern clean energy sources such as electricity and LP gas and a substantial reduction in dirty energy sources such as kerosene and firewood over the years. Richer households tend to choose clean energy sources such as electricity and LP gas compared to poor households who tend to choose dirty energy sources such as firewood and kerosene. Results also show that age of the household head, household size, location of the household reside and ethnic background are other driving factors of the household energy consumption choice. As policy recommendations, government and donor agencies could consider enhancing poverty reduction programs as well as promote cost-effective solar energy products to engender sustainable energy use.

Keywords: energy choice; Sri Lanka; electricity; firewood; household survey