

## An analysis of household demand for energy in Sri Lanka

Karthiyayini Rajmohan<sup>1</sup> and Jeevika Weerahewa<sup>1</sup>

Price hike of crude oil and other emerging issues in the energy sector have imposed a negative impact on the wellbeing of the consumers. Thus, the purpose of this study is to identify the possibilities of improving the welfare status of households in Sri Lanka, by understanding the nature of energy consumption. The study examines the pattern of household energy consumption among urban, rural and estate sectors, over time and across income groups in Sri Lanka. The relevance of the 'energy ladder' hypothesis to Sri Lanka and how fuel budget elasticities vary were tested. Data from the consumer finances and socio-economic survey reports of 1978/79, 1981/82, 1986/87, 1996/97 and 2003/04 were used for the analysis. Results pertaining to the testing of the energy ladder hypothesis reveal that the prediction from the hypothesis holds. It is also evident that Sri Lanka as a whole is moving towards modern fuels such as liquefied petroleum gas (LPG) and electricity, while the urban sector proceeds much faster than the rural. The estate sector shows a fluctuating pattern of energy consumption and they are still at the bottom of the energy ladder. Finally, Engle functions were econometrically estimated for individual fuels and for different sectors and the budget elasticities were used to explain their consumption pattern. The elasticity values were negative for firewood and kerosene as expected, except for the estate sector showing that they are inferior goods. LPG and electricity had positive budget elasticities indicating that they are normal goods. The estimates for the estate sector were insignificant eliciting that certain other factors might be influencing their fuel budget decisions rather than the income merely. Thus, eliminating the existing disparity in the availability of energy sources among sectors would improve the welfare status of the country, making an upward shift in the energy ladder.

**Key words:** Household energy consumption, Energy ladder hypothesis, Fuel budget elasticity, Welfare status, Energy sources.

<sup>1</sup> Department of Agricultural Economics and Business Management, Faculty of Agriculture, University of Peradeniya, Sri Lanka