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The impact of economic growth intervention on electricity demand of Sri Lanka

T M J A Cooray*
Department of Mathematics, University of Moratuwa, Moratuwa

This paper presents an estimate of electricity demand of Sri Lanka using the well known econometric model, developed by Yang (2000) and Structural time series modeling method (STSM). We find that current as well as past changes in electricity demand have a significant impact on the change in real Gross Domestic Product (GDP) and electricity price in Sri Lanka. Due to the increase in electricity demand, the preferred specifications differ somewhat and there is quite a wide range in the long-run price and income elasticities. There is also a wide range of estimates of the speed with which consumers would adjust to any disequilibrium. Furthermore, the estimated effect of the underlying electricity demand increases over time. Thus, on one hand, it is encouraging that the Sri Lanka electricity authorities can have some faith in the model used for forecasting, which, for a small electricity generation system like Sri Lanka's represents a considerable difference. Hence, the chosen econometric work does have a considerable impact of the policy decisions in the Sri Lankan electricity supply industry. This study, therefore, explores this issue by investigating how different time-series estimation methods perform in terms of modeling past electricity demand, estimating the key income and price elasticities, and hence forecasting future electricity consumption in the context of the Sri Lankan electricity supply industry. This allows for a different forecast electricity demand using these different econometric techniques to be compared indicating that the policy decisions might vary according to the chosen econometric method.

* cooray@math.mrt.ac.lk Tel: 011-2651123