

Consumption of commercial energy in the residential sector of Kenya: 1970--1990

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Abstract:

The general objective of this study was to determine the factors which influence residential sector consumption of commercial energy in Kenya. The specific objectives were to first, identify the main determinants and their corresponding elasticities, and to use these to generate policy measures. These objectives have achieved by first identifying the major determinants of consumption of kerosene, Liquefied petroleum Gas (LPG) and electricity individually, and secondly by calculating their corresponding elasticities. Using both nominal and constant value time-series data for the period 1970-1990, on a log- linear model, it has been found out that the latter give a better fit at 95 level of confidence. This is an indication that Kenyan households make their commercial energy consumption decisions on the basis of nominal prices and income. Using the nominal value data therefore, it has been found out that the major determinants of Kerosene consumption are wage employment level, population levels, price of LPG, and GDP. The main determinants of LPG on the other hand have been found to be:- population levels, lagged consumption and GDP while for electricity, the main determinants have been found to be wage employment levels and lagged consumption. For Kerosene and LPG it has also been found that there exist other significant determinants which have not been captured by this work hence need further research. The elasticity results indicate elastic coefficients for wage employment levels, Gross Domestic Product (GDP), and population levels in the case of Kerosene and GDP in the case of LPG. The cross price elasticity between kerosene and LPG is found to have an inelastic coefficient and so are population levels and lagged consumption in the case of LPG and wage employment levels and lagged consumption in the case of electricity.