An evaluation of grid-based rural electrification adoption dynamics in Meru-South sub-county

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ABSTRACT

Electricity services are crucial for human well-being and to a country's socio-economic development. Despite its importance, low levels of electricity adoption continue to prevail in most rural areas in SSA. Low socio-economic development has been attributed among others factors to lack of modern energy sources especially electricity among rural households, which has been identified as a major setback in propelling empowerment and development at household and community level. There is minimal or no research conducted to understand the socio-economic dynamics of electricity adoption among households in Meru-South Sub-County. Household interviews were conducted from 150 randomly selected households using closed and opened ended questionnaires. Data collected was analyzed using descriptive statistics and regression. Result revealed that the largest proportion of the respondents were non-adopters. Possible predictor factors that significantly influenced adoption were distance from the transformer, education level, gender, household size, and income. Results further indicated that accessibility (proximity of the transformer) and cost of connection were perceived as the utmost prior challenges to electricity adoption by households. It was recommended that rural electrification project should be in considerate of household level characteristics in process of planning for electricity dissemination in rural areas to ensure heterogeneity in electricity adoption.

Keywords: Adoption; electricity; grid