

Market Segmentation of Rural Electricity Consumers for Mini-Grid Business Development in Tanzania

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Abstract.

The research explores the daily lives of electricity consumers in rural Tanzania, examines the characteristics of low-income consumers, and illustrates their consumption and growth potential. Rural, low-income consumers are often considered as a homogeneous market. However, the research hypothesized that there exists a great variety within rural communities and requires further market segmentation for mini-grid operators to tap the electricity consumption potential in its rural customers. Through extensive data collection across eight villages with over 600 households, which are connected to solar-powered mini-grid electricity by E.ON Off Grid Solutions (EOGS), the study first plotted a Pareto distribution of rural electricity consumption and found a large disparity among EOGS's rural consumers. It then conducted an analysis of 16 variables in relation to electricity consumption, covering a wide array of characteristics of rural consumers, from assets ownership, occupation, living condition to expenditures. The results show that housing condition, connection purpose and mobile money expenditure have strong implication on electricity consumption level. Based on the selected criteria, the research further develops a market segmentation methodology for rural electricity consumers, as an attempt to better understand a relatively new and unexplored market. Through understanding the specific needs, challenges, spending and saving pattern, and electricity consumption behaviour of each customer group, mini-grid businesses can then tailor their value propositions that unleash the most consumption and growth potential of the rural electricity consumers.

Keywords: mini-grid; rural consumers; electricity consumption

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