Flare 2018 Annual Meeting Abstracts

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Title: Catalyzing Energy Access Among the Ultra-Poor in Malawi

Households in sub-Saharan Africa have lower rates of energy access than any other region in the world. Energy poverty among the ultra-poor presents a particularly vexing problem for program implementors, policy makers and the private sector due to lack of capital for investments in household energy. Our study uses baseline and midline data from an ongoing impact evaluation of a household energy intervention targeting the ultra-poor in Malawi. We leverage baseline data from 900 social cash transfer recipient households (the ultra-poor), and 2,671 better-off households to explain baseline differences in demand and supply-side determinants of energy poverty, and to understand the impact and spillover effect of an improved cookstove intervention targeting the ultra-poor. Our research questions are: 1) do ultra-poor households experience greater depth of energy poverty than other households?; 2) what demand and supply-side factors mediate energy poverty for ultra-poor and better-off households? 3) Does the offer of a subsidized improved cookstove (ICS) increase adoption of ICS for ultra-poor (target) and better-off (spillover) households, and reduce time burden collecting fuelwood?

Our analysis suggests that at baseline there are no significant differences in time spent or distance travelled to collect fuelwood between better-off and ultra-poor households. We observe statistically significant differences in ICS ownership (31.5% vs. 16.2%) and electricity access (11.3% and 3.6%) for better-off and ultra-poor households respectively at baseline. We estimate a series of OLS and Logit regressions models and find that household size, female head, and engaging in a biomass burning business are positively associated with time to collect fuelwood. The ultra-poor, spend significantly less time collecting fuelwood than better-off households. Improved cookstove ownership and electricity access are strongly positively associated with land ownership, education, and asset ownership. High deforestation is associated with improved cookstove ownership. The analysis we will present in October will include integration of our midline survey data and use difference-in-difference models to estimate the impact of this program. If it is successful, it presents a novel and highly effective way to improve energy access for the ultra-poor, who are most likely to be left out of energy transitions.