Temporal Stability of Preferences - A difference-in-difference analysis of an improved stove choice experiment from Ethiopia

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Abstract:
There is a growing effort in the non-market valuation literature to better understand the stability and evolution of preferences over time. A small number of studies (Bliem et al. 2012, Brouwer and Bateman 2005, Morkbak and Olsen 2014, Price et al. 2016) have used the test-retest method to analyze stability of preferences but have found mixed results. We use a combined repeated choice experiment and a RCT on stove adoption to analyze both the stability and the evolution of preferences. Respondents were given the exact same choice question in 2013 and 2016 and the treatment group in the RCT received improved firewood stoves whereas the control group continued to use traditional stoves. This setting allows us to use a difference-in-difference framework to analyze the results from the choice experiment, the first instance of a difference-in-difference choice experiment analysis that we are aware of. We conduct a national survey in Ethiopia starting with 504 households in 36 communities in 2013 and are able to conduct the study with 486 of the same households in 2016, giving an extremely low attrition rate of just 4%. We estimate the difference-in-difference choice experiment using a generalized multinomial logit estimator in R. Preliminary results show that preferences for the control groups are stable over the study period and that the preferences of the treatment group evolve. We are currently exploring the heterogeneity in use in the treatment group and expanding the analysis to account for information spillovers to better test the robustness of the results. Current results support the use of values obtained from non-market studies over multiple years and also highlight that preferences evolve in response to use.