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Research Report

Food Price Shocks-Induced Poverty Traps: Analysis Using a Panel Dataset from Uganda

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Food Price Shocks-Induced Poverty Traps: Analysis Using a Panel Dataset from Uganda

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This paper uses longitudinal data collected in Uganda (2005-2012) and develops a modified standard Ramsey model to analyze households' welfare growth and test the assumption that differential exposure to food price shocks leads to different welfare trajectories and to potentially increased risks of poverty traps. The study focuses on two welfare indicators, namely consumption and asset indices, and employs a battery of econometric methods, ranging from parametric GMM fixed effects models to locally weighted scatterplot smoother (LOWESS), local polynomial regressions, and Ruppert et al's (2003) semi-parametric penalized splines to address non-linearities in welfare dynamics, identify and locate critical welfare thresholds, and test for the presence of single against multiple poverty traps. Using the full sample, I find nonlinearities in welfare dynamic pathways and reduction in the growth rates of both consumption levels and assets holdings as a consequence of exposure to food price shocks and different asset shocks.

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.../... However, there is no evidence of poverty traps or bifurcated welfare trajectories in the data, but instead I identify only a single dynamic stable equilibrium, located slightly above the official poverty line (1 USD PPP per capita/per day converted in Ugandan Shillings, UShs) at around 30,500UShs of monthly real consumption per adult equivalent and 1.14 Poverty Line Units for asset index. Furthermore, the empirical results reveal that Ugandan households are converging towards specific welfare equilibria, depending on their initial conditions, demographic characteristics, the extent of their vulnerability and differential exposure to food price shocks. Particularly, I found that, in terms of consumption, households highly exposed to food price shocks were expected to move to welfare equilibria located on average at 15.1% lower levels than those less exposed but only at 3.3% lower in terms of assets accumulation.

These empirical findings have straightforward policy implications. First, the fact that the welfare equilibria of most households are located just slightly above the poverty lines (official and asset-based poverty lines) suggests that policy interventions should primarily focus not only on keeping current households located above these thresholds from falling below but also on helping them move towards higher welfare lev-

els. As of those already below these thresholds, and potentially below the poverty lines, safety nets mechanisms need to be enforced in order to extricate them from the low welfare levels they are stuck in.

The second implication is related to the impacts of both price and asset shocks, which are found to negatively affect consumption expenditures and assets holdings. As is well documented in the literature, when hit by shocks, poor households may deteriorate their already-critical welfare conditions by modifying for example their consumption behavior to smooth their assets (Amare and Waibel, 2013). One possible way might be to build their resilience to these shocks and other stressors by increasing ex ante their capacities to manage risks and by helping them ex post to minimize the adverse consequences of shocks. Stimulating households to engage into diversified activities (for example, combination of farm and non- or off-farm activities) or developing targeted programs that aim at improving the structural characteristics of the country such as better access to land, credit, or insurance markets, improvements in health coverage or infrastructure coverage may also help reduce the vulnerability of households to both food price and asset shocks.



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