

Impacts of Border Food Price Shocks on Poverty in Uganda under Imperfect Domestic Spatial Price Transmission*

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Abstract

What impact on poverty in Uganda has an increase in food prices at the border given the strong spatial heterogeneity of the country and its limited domestic transportation and communication networks? Recently, a number of studies on the impact of international food prices on poverty in developing countries have been published. However, the role of domestic spatial price transmission in this context remains largely unexplored. This paper targets that niche.

A descriptive analysis of household survey data shows the limited dependency of the poor on food markets differentiated by regions and income quantiles. However, a regression analysis of the unit value data for foods as implicit in the household survey provides evidence for strong spatial price heterogeneity affecting the entire range of foods. Moreover, by conducting a dynamic analysis of price data for six local markets using an error correction model, we find that all markets are largely integrated but that the speed of adjustment of prices to price shocks differs strongly between markets. This time series data is also used to estimate spatial price transmission elasticities which facilitate a subsequent simulation of food price shocks at the border. Note that, even in the short-run, households likely adapt their consumption to the new price pattern. To account for such income and substitution effects, we integrate two estimated quadratic almost ideal demand systems for rural and urban households, respectively, into the simulation procedure.

In an experiment we then simulate the short-run poverty impacts of a hypothetical 50% increase as well as the observed 2008 spike in border prices for food, each under the assumptions of perfect and imperfect spatial price transmission, respectively. The results on poverty impacts assuming imperfect spatial price transmission differ substantially from those assuming perfect transmission and, in particular, display strong regional differentiation. Importantly, accounting for imperfect price transmission changes the ranking of the geographic regions in terms of poverty headcount impact and thus has implications for the targeting of development policies.

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