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The Long-Run Impact of Adult Mortality

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Research on the socioeconomic impact of AIDS is wide and varied, and can be partitioned into estimates of macroeconomic costs and analysis of household (microeconomic) impacts. Most of the empirical analysis of the economic impact of high prime-age adult mortality due to HIV/AIDS and other fatal illnesses has been at the macroeconomic level with mixed conclusions. The underpinnings of the macroeconomic studies are the behaviors of individuals affected by HIV/AIDS, those who are infected or those with socio-economic ties to infected persons. While there is increasing evidence of short-run economic impacts due shocks such as large-scale fiscal crises, morbidity shocks, and weather variation, evidence about the impact of HIV/AIDS is often largely anecdotal, or sometimes simply speculative. Furthermore, the available evidence relates to the impact of HIV/AIDS in the short-run, and not in the long-run. If households have short-run coping strategies (such as selling off assets, borrowing, increased remittances from relatives) that are not sustainable in the long-run, the true impact of these shocks may be quite different from the short-run outcomes. Long-run impacts could evolve if this shock results in changes in income or asset strategies, such as taking less risk, holding more liquid and less productive assets, or less investment due to lower access to credit.

The lack of quantitative studies of the impact of an adult death at the household or individual level perhaps stems in large part from the difficulty in collecting data with the appropriate information to analyze the impact of adult mortality within households. To this end, this research draws on a unique set of panel data collected in the northwest region of Tanzania originally designed to assess the short-run impact of an adult death.

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The goal of this study is to understand how households are affected in the long-run by health shocks due to HIV/AIDS, drawing on analysis of a 2004 re-survey of the panel of respondents originally surveyed in the Kagera region of Tanzania in 1991-1994. This study will add to our understanding of coping processes and long-term outcomes of this major health shock and address important questions: Do long-run coping mechanisms differ from short-run adjustments? Are some types of households buffered from shocks more than others? Does AIDS increase poverty despite short-run coping and is AIDS a poverty trap for future generations?

The key issue focus of this study is assessing whether individuals who lived in households experiencing an adult death during the baseline survey rounds have different long-term outcomes in terms of consumption poverty, labor activities, and asset positions. The evidence obtained will contribute to the understanding of how serious idiosyncratic shocks affect outcomes directly as well as via long-term changes in economic and social opportunities.

The KHDS 2004 survey attempted to re-interview all surviving respondents from the baseline households, including those how have migrated, thus expanding the sample of household to about 2,800 households from the baseline of about 900. In addition, the community, price, and primary school questionnaires were again conducted in the baseline communities.

The KHDS data is unique in that it will allow us to link *individual* positions over time. By tracking people to their current location, we interview individuals that have split-off from the original households or individuals from households that have dissolved.[1] Out-migration from the village, dissolving of households, and even marriage, may be responses to adult mortality. For example, in some cases, migration is the strategy of last resort and only the worst affected households will opt for it. Failing to include migrant respondents in the re-survey would thus bias the effect of the impact of adult mortality downwards, creating a false picture of HIV/AIDS having little impact on economic welfare. Additionally, having information on these cases will give a unique opportunity to look at intergenerational income mobility and how it is affected by adult mortality.

The success of panel surveys is often measure in terms of re-contact of households, rather than individuals therein. By this measure, excluding households in which all previous members are deceased (18 households with 27 people), the KHDS 2004 survey re-contacted 94% of the

baseline households after 10 years. The KHDS panel has an attrition rate that is much lower than that of other well-known panel survey summarized in Alderman *et al*. (2001) in which the rates ranged from 17.5% attrition *per year* to the lowest rate of 1.5%;most of these surveys covered considerably shorter time periods (2-5 years). Among all surviving respondents, we re-interviewed about 82%. Including those who died as a re-contact, we re-contacted 84% of panel respondents.

A generic framework will be used to derive a number of specifications to investigate the impact of adult mortality shocks on the path of specific outcomes and assets over time and on changes in labor allocation and activity choice. In particular, the generic model will be developed further below distinguishing the following outcomes: asset holdings and investment, such as in coffee or improved banana varieties; consumption or income per capita; and, labor allocation and portfolio choice, such as entry in off-farm business and wage employment. The key testable hypothesis from the model is that the path over time of individual outcomes as well as the path of asset holdings over time will be different for those individuals experiencing an adult death in their household from others, appropriately controlling for sources of observable and unobservable heterogeneity and prices over time. Although the resulting panel data will consist of individuals linked over time, a number of issues related to inter-temporal welfare comparisons in the sample will pose unique challenges. Appropriate methods are used to address these issues.