

“The Impacts of Prime-age Mortality on Rural Household Income, Assets, and Poverty in Mozambique”



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Presentation to the World Bank

Workshop on Gender, Poverty and Demographics

March 25, 2008



Results of research: Rural households and loss of prime age adults

- When a man dies, a household is less likely to bring in a new adult member than when a woman dies
- Households with a male death face a significant losses of land, livestock, and all types of income
- Households with a female: often not significant, but varies by region and asset or income type

Background

- +/- 55% of population below poverty line
- 62% of women-headed HHs below poverty line
- +70% of population in rural areas
- 75% rural HH income from agriculture
- 2004 Adult HIV prevalence: est. 16%





Research Objective

- What are the impacts of HIV/AIDS and other life-threatening diseases on the households directly affected with the loss of adults?

Research Document:

“Impacts of Prime-age Adult Mortality on Rural Household Income, Assets, and Poverty in Mozambique”

by David Mather and Cynthia Donovan



Vocabulary

- “Prime age” (PA) adults
 - 15-59 years of age
- “Affected” Households (HHs)
 - Households that suffered the loss of a PA adult due to illness in the period 2002-2005, as identified by family members
- Panel data (longitudinal)
 - Households interviewed in 2002 were re-interviewed in 2005
- TIA
 - Trabalho do Inquérito Agrícola (rural household survey)



Methodology

- Identify panel households (HHs) and adjust the analyses for the attrition of HHs
- Calculate the HH-level changes from TIA 2002 to TIA 2005 for key factors (income, land, livestock, demographics, etc.):
Differences at HH level
- Comparing the differences between HHs: use regression analysis on the differences in the differences to determine the impacts of an adult illness death



Methodological Challenges

- Adjust the analyses for the attrition of HHs
 - 17% of HHs from TIA 2002 were not available for the panel in 2005
 - Use of Inverse Probability Weighting
- Relatively small number of cases
 - 6% of HHs experienced deaths in period
 - Data analysis disaggregated only to broad geographic areas (South vs Center North)
- Causal attribution difficult
 - Panel data helps to control for some aspects
 - Not a structural analysis of income and assets
 - Complications of illness effects and observation



Result on Number of Prime Age Adults

- Differentiated Demographic Impact during the panel period
 - Gender of person who died
 - Role in HH of person who died
 - Location (region)

Figure 1: Simple change in Number of PA adults in rural HHs, between 2002 and 2005

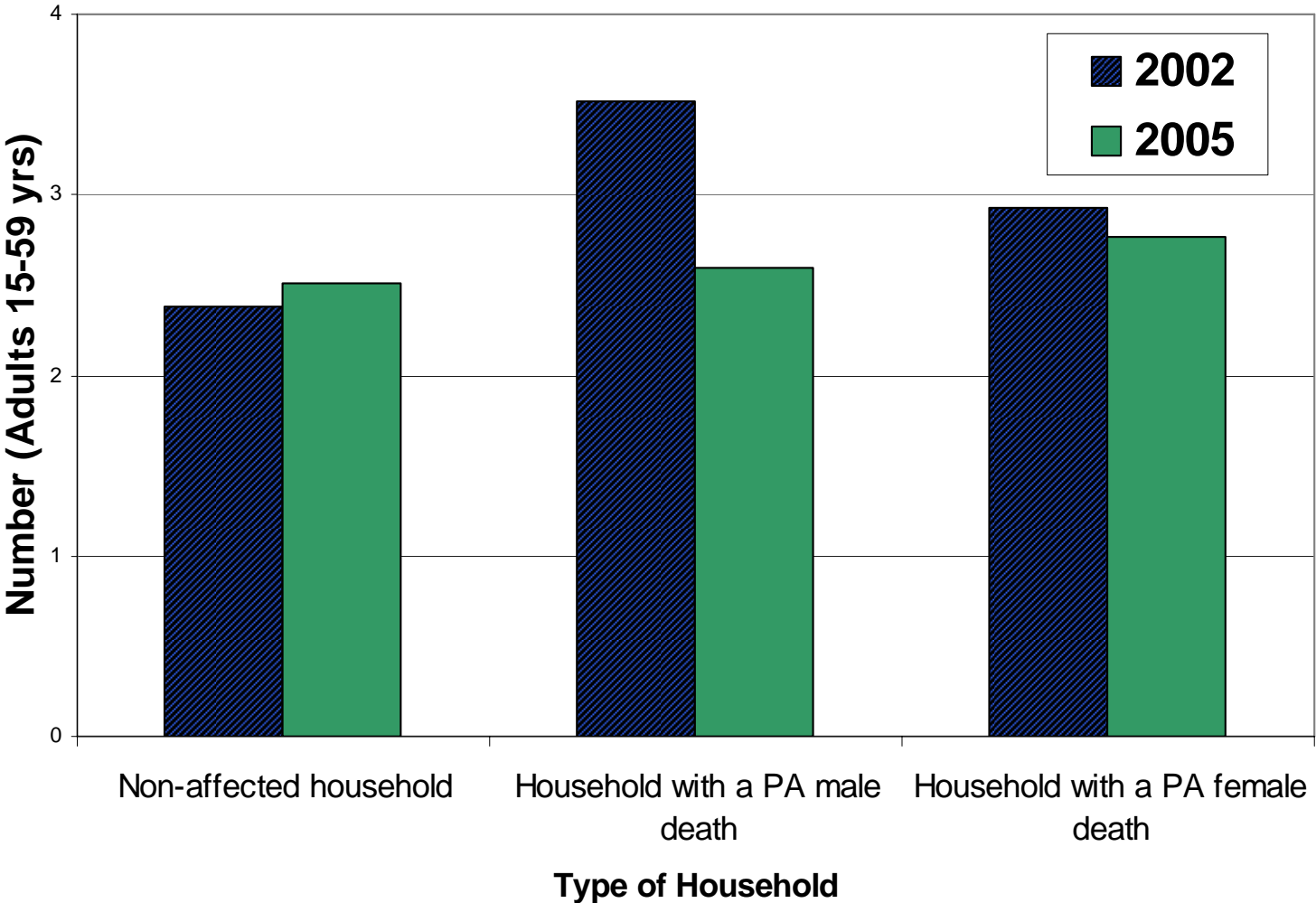


Table 1. Impacts of prime-age adult mortality on rural household number of adults

Covariates	Change in Household Number of Adults	
	(A)	(B)
<i>Prime-age Adult Mortality</i> ¹		
Male adult	-1.049**	
Female adult	-0.254+	
Male heads/spouse		-0.935**
Female heads/spouse		-0.361*
Other adult male		-1.273**
Other adult female		-0.109
2 or more PA deaths	-0.753**	-0.755**
<i>Elderly mortality</i>		
Elderly male	-0.858**	-0.868**
Elderly female	-1.085**	-1.081**
Chronically ill PA male adults (=1)	0.482**	0.480**
Chronically ill PA female adults (=1)	0.104	0.098
Constant	-0.059**	-0.059**
Village X time dummies	Yes	Yes
F-test on PA mortality	0.000	0.000
R-squared	0.21	0.21
Number of observations	4042	4042



Demographic Changes based on Econometric Estimations

- Death of a PA man:
 - Overall loss of adults: 1.05
- Death of a PA woman:
 - Loss of adults: 0.25
- Impact is strongest when head/spouse dies
- Regional effects are variable



Results on other aspects

- Demographics
 - Number of adults
- Assets
 - Land
 - Livestock
- Income
 - Crop
 - Nonfarm
 - Total



Table 2: Impact of a Death on PA Adults across the Nation

	National	
	PA male	PA female
No. of adults	-1.049 ***	-0.254 *
Landholding	-20.5% **	-18.3% *
Livestock	-34.3% **	9.7% ns
Crop income	-41.5% **	-8.0% ns
Non-farm income	-72.9% **	25.7% ns
Total income	-25.2% **	18.4% ns
Total income/AE	3.8% ns	37.4% ns



Implications for Agricultural Policy

- Loss of land and other assets
 - Increased vulnerability
 - Need to ensure women's access to HH assets: land use rights and rights to HH assets
- Loss of adults
 - HH labor loss with longer term effects, especially in HHs with male death
 - Need to develop and diffuse technologies and investments that reduce women's labor demand
 - (Not necessarily in agriculture)
- Income
 - Increase income opportunities for women



Additional Implications

- Poverty in Mozambique is a general problem in rural areas, not just a problem due to HIV/AIDS
 - Agricultural productivity growth of key staples critical for broad-based poverty reduction
 - Non-farm income sources important, and women generally do not have access to the higher return activities

Acknowledgements

- World Bank for research funds and ideas
- USAID/Maputo for additional funding for preliminary analyses
- MINAG/TIA team for data collection in difficult circumstances
- Jaquelino Massingue, Ellen Payongayong and Margaret Beaver for research support



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