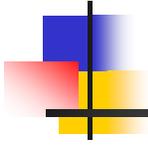


# Does Food Assistance Lessen the Adverse Impacts of Adult Morbidity and Mortality on Household Welfare in Zambia?



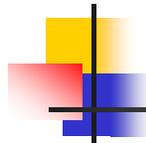
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Department of Agricultural Economics & Extension Education

Presented at  
The Workshop  
*HIV/AIDS and Development in Zambia: Taking Stock and Rethinking Policies*

Held at the TAJ Pamodzi Hotel, Lusaka, Zambia  
February 4, 2010

## Introduction

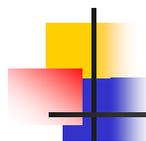
- HIV/AIDS prevalence is very high in many parts of Africa
  - A major concern especially for rural livelihoods
- Three broad categories of responses
  - Prevention (vaccines, behaviour change)
  - Treatment (ARV therapy)
  - Mitigation (food aid)
- Food aid has become a central mitigation strategy of some NGOs



## Introduction (2)

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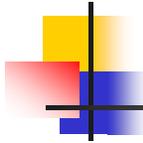
- Few rigorous studies on the payoffs of these interventions
  - Recent panel data evidence indicates some significant adverse effects of HIV/AIDS
  - Effects of food aid on rural livelihoods still an empirical issue
- Policy and programming could benefit from empirical evidence



## Objectives of the study

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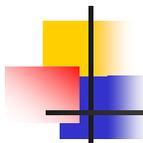
- Identify household community characteristics relevant for explainign food aid allocations and prime-age mortality
- Measure the impact of food aid on households that have suffered prime-age mortality and morbidity



## Data

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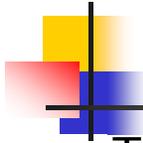
- The study uses three period panel surveys by CSO and FSRP
  - 2001 -- > 6,922 complete interviews
    - Two-stage cluster sampling
  - 2004 -- > 5,420 re-interviewed
  - 2008 -- > 4,340 re-interviewed
- Present an opportunity to measure impact



## Data

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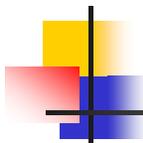
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## Methods and procedures

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- Three major empirical issues
  - Attrition among the three surveys
  - Selectivity bias
    - HIV/AIDS-afflicted households not randomly selected
    - Food-aid recipients not randomly selected
    - HIV/AIDS and Food aid intervention cannot be argued to be mutually exclusive!
  - Complex surveys involving clustering and stratification



## Attrition and sample design

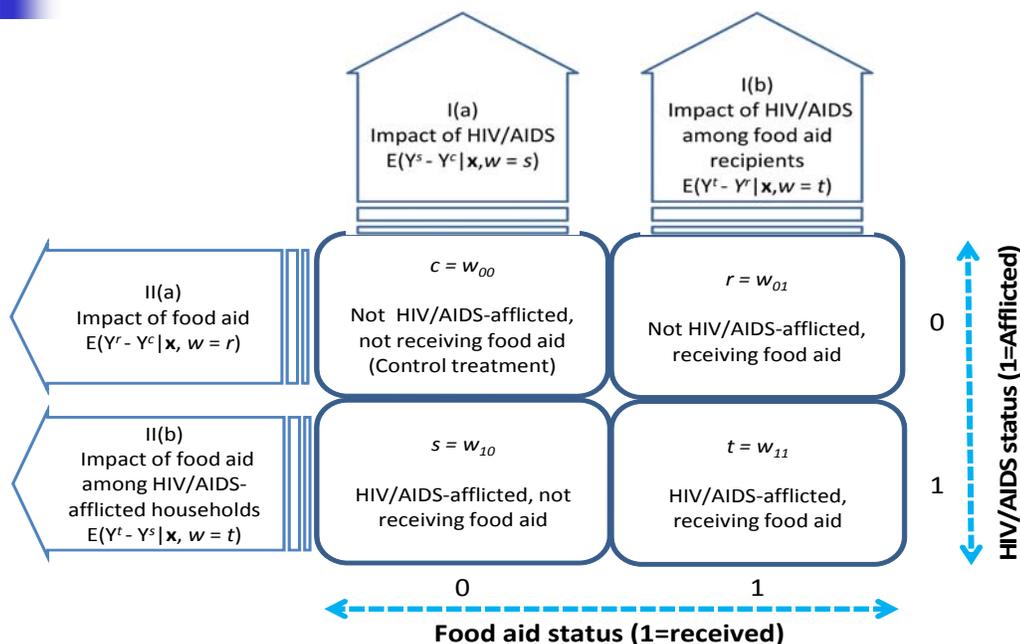
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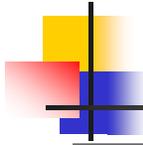
Province	2001-2004		2004-2008		Total attrited households (2001-2008)
	2001 sample	Attrited households (2001-2004)	2004 sample	Attrited households (2004-2008)	
	(1)	(2)	(3)	(4)	(5)
Total	6,922	1,503	5,419	1,079	2,582
		(21.7)		(19.9)	(37.3)

## Attrition and sample design (2)

- Those not re-interviewed had
  - Younger heads
  - Smaller household sizes
  - Less landholding and assets
- Estimation strategy corrects for these and other sources of bias

## Estimation strategy

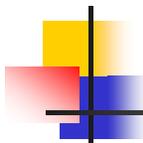




## Estimation strategy (2)

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	Food aid		
	Non-recipients	Recipients	Total
Non-afflicted	2,978	595	3,573
HIV-afflicted	617	150	767
Total	3,595	745	4,340

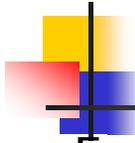


## Estimation strategy (3)

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$$\ln(y) = \gamma + \lambda_1 w_1 + \lambda_2 w_2 + \lambda_3 (w_1 * w_2) \\ + \phi_1 PS_1 + \phi_2 PS_2 + \phi_3 (PS_1 * PS_2) + \mu$$

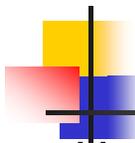
$\hat{\lambda}_3$  = Impact of food aid on HIV/AIDS-afflicted households



## Results – Descriptives

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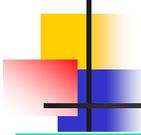
- Food aid recipients are more likely to
  - Be less educated
  - Have higher dependency ratios
  - Live in densely populated areas
  - Live in areas with lower HIV prevalence
  - Be in regions 2 and 3



## Results – Descriptives (2)

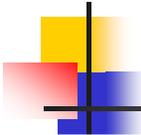
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- Households with adult mortality are more likely to
  - Have uneducated heads
  - Have chronically ill children
  - Be located closer to main roads
  - Be located in regions 2 and 3
  - To be male headed



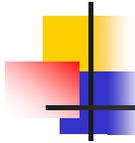
## Results – Impact crop production

Variable	Crop prod	Cereal prod	Cultivated area
PA Death (W1)	-0.25***	-0.20***	-0.01
Food Aid (W2)	0.08	0.13*	-0.04***
W1 * W2	-0.37**	-0.46***	0.05***



## Results – Assets, livestock and income

Variable	Assets	Livestock income	Off-farm income	HH income
PA Death (W1)	-0.19***	-0.012	-0.05	-0.21***
Food Aid (W2)	0.07	0.14*	0.10	0.10
W1 * W2	-0.35**	-0.40**	-0.35*	-0.39**



## Concluding remarks

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- The results confirm the –ve impact of prime-age adult mortality
  - Significant for crop production, assets & income
- Food aid has positive effects
  - Significant for cereal production and livestock
- However, this is not enough to mitigate the effects adult mortality
  - Cultivated land area the only exception
  - Productivity???