

Security of Widows' Access to Land in the Era of HIV/AIDS: Panel Survey Evidence from Zambia

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Outline

- Background
- Why study this issue
- Objectives of study
- Data and methods
- Findings and conclusion

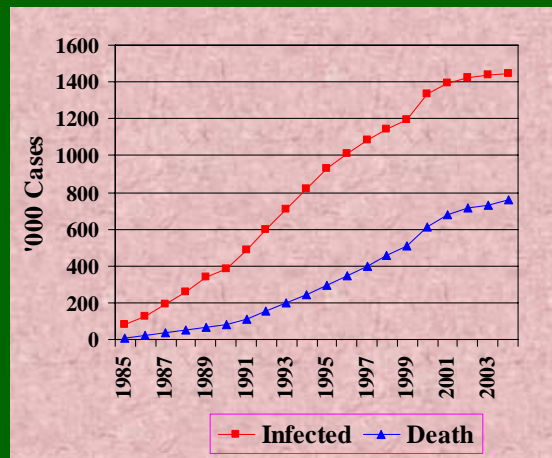
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HIV/AIDS Situation in Zambia

...Background

- First confirmed case in 1984
- End of 1989
 - 450 000 infected
- End of 2001
 - About 1.3 million infected, 85% adults
 - Orphans – more than 1 million
- Averaging 78 000 HIV infections and 42 000 deaths per year over the entire period
- Currently, about 1.5 mil infected
- Encouraging news: there are signs that infection rates have leveled off and ‘declining’

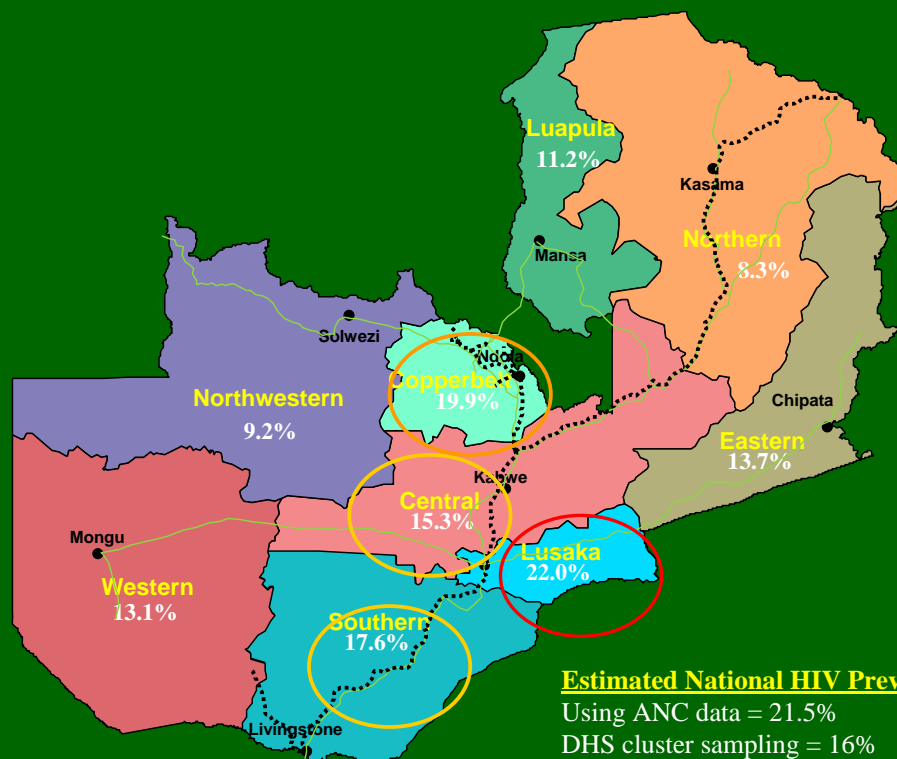
Fig 1: Numbers of HIV/AIDS infection and AID-related Deaths in Zambia, 1985-2004



Source: Ministry of Health and CSO, Zambia

HIV/AIDS Prevalence in Zambia

...Background



Land Inheritance Patterns in Zambia

- In Southern Africa, 60% of small farmers are women and they make up about 75% of the food production and processing workforce (UNECA, 2003).
- Women rarely own or have control over land they cultivate
 - Inheritance of property, land and other productive assets is almost always the prerogative of the deceased man's male kin.

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.....Land Inheritance Patterns in Zambia

- Two land tenure systems exist in Zambia :
 - Customary (94%) -almost all HHs in our sample fall in this system
 - Statutory (6%)
- Customary land tenure system
 - traditional authorities (chiefs and/or village headman) allocate vacant land to families and individuals
 - No title deeds to the land and the land cannot be sold.
 - 94% of total land area under this system
 - Tribal authorities rarely allocate land directly to women (Mutangadura, 2004).
 - Virilocal marriages in both patrilineal and matrilineal communities tend to reinforce the lack of women's direct access to, control over, and ownership of land in Zambia.

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Why study this issue?

- The HIV/AIDS pandemic has substantially increased the number of widow-headed households in Africa.
 - Using nationally representative rural survey data: rose from 9.4 % to 12.3% between 2001 and 2004 in Zambia
- Huge number of conceptual and qualitative studies highlight gender inequalities in property rights.
 - that widows face difficulties in retaining access to land after the death of their husbands
 - eg. Milimo, 1990, Amstrong, 1992 Mutangadura, 2004; WLSA, 1997; Shezongo-Macmillan, 2005; UNECA, 2003

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.....why study issue?

- However, there remains limited quantitative evidence on:
 - the extent to which widows lose their rights to land after the death of their husbands
 - whether widows lose all or part of the land they were formerly controlling?
 - the characteristics that influence the likelihood of widows losing land rights after the death of their husband

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Objectives of study

Three (3) Objectives:

1. To assess how households' land access is affected after the death of the male household head (and headed by a widow) compared to households not incurring mortality
2. To determine the characteristics that influence the extent to which widows lose their access to land
3. To identify implications for social protection of widows, poverty alleviation and HIV/AIDS mitigation strategies

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Data

- Nationally-representative panel data of smallholder rural farm households in Zambia
 - CSO/MACO/FSRP/MSU
 - surveyed in May 2001 and May 2004
- 5342 households were successfully re-interviewed
 - Of which:
 - 574 households incurred illness-related prime-age mortality.
 - 91 households incurred male head of household death (73 widow-headed, 18 headed by another person)
 - Our interest is the 73 widow headed households

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Estimation Model

- DID reduced form model
 - $L_{it} = \alpha_t + t * D_i^w \beta + t * D_i^o \gamma + \mu_i + \varepsilon_{it}$ (1)
 - Differencing the time time 1 and 0 yield
 - $\Delta L_i = \alpha + D_i^w \beta + D_i^o \gamma + \Delta \varepsilon_{it}$ (2)
 - Comparison of the change in landholding size (L) over time between the treatment group (D^w) and control group (HH without PA mortality) provides an estimate of the impact of male head of HH death among widow headed HHs (β)

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.....Estimation model

- Cannot just use this simple DID estimator in equation (2) because rural HH are heterogeneous in many ways.
- Growing evidence of systematic differences between afflicted and non-afflicted HH with respect to:
 - wealth status,
 - education levels and
 - age group
 - some may be correlated with widow headed HHs
 - Examples: .Ainsworth and Dayton 2000, Yamano and Jayne 2004 and 2005, Beegle 2005, Chapoto and Jayne, 2008 (EDCC forthcoming)

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.....Estimation model

- Therefore a vector of HH initial covariates (X^h) and widow/HH head characteristics (X^w) are introduced and interacted with the treatment variables (D^w and D^o) as follows:

$$\cdot \Delta L = \alpha + \beta D^w + D^w * X^w \beta' + D^w * X^h \beta' + \dots$$

- Estimated treatment effect among widow headed HH remains β but it is now interpretable as ceteris paribus effect

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Factors hypothesized to influence widow's ability to retain land

- Widow characteristics (X^w)
 - Age
 - Years of education
 - Widow's relation to village headman
- Initial household characteristics (X^h)
 - Wealth status
 - Household composition (number of PA adults and children)
 - Deceased husband's relation to the village headman
 - Number of years settled in locality
 - HHs in villages adhering to matrilineal vs. patrilineal land inheritance rules

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Measurement of Landholding size

- Proxy for landholding size= cropped land + fallow land
- Why? –HH total landholding size not recorded in second wave
 - Fortunately about 74% of the HH in first survey wave have virgin land plus rented land=0

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.....landholding size

- The sum of land cultivated and fallow land may not reflect total land access but rather a shortage of labor.
- So we consider a set of variables related to social ties and how they interact with mortality shocks.
 - widow's and deceased husband's relation to the village headman
 - matrilineal vs. patrilineal land inheritance rules
 - number of years in which the households' clan settled in the area

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FINDING 1

- Landholding size between 2001 and 2004 declined among both afflicted and non-afflicted but declined most among households becoming widow headed .

Table 1: Average Δ in landholding size by HH type

Household Type	Change between 2001 and 2004
Non-afflicted	-12.7%
Other deaths (not widow headed)	-18.7%
Male head death (widow headed)	-39.3%

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FINDING 2

□ Widow-headed households:

- were least likely to increase their landholding size
- most likely to reduce their landholding size
- most likely to suffer a greater than 50% decline in land holding size

Table 2: Changes in landholding size: % HHs by HH type

Household Type	% HH increased landholding size	% HH reduced landholding size	% HH with more than 50% decline in landholding size
Non-afflicted (no deaths)	45.7	50.3	23.8
Other deaths (not widow headed)	40.6	52.7	23.6
Male head death (widow headed)	27.5	65.0	30.4

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FINDING 3

- To some extent, older widows are protected against loss of land access compared to younger widows.

Table 3: Simulations of the %age change in landholding size

Profile	Widow age 50 & above	Wealth status	Children age 6-14	Widow related to head	Δ in Landholding size
*1	No	Mean	Mean	Mean	-54.8%
2	Yes	Mean	Mean	Mean	-29.9%

*Age of widow: 16-39

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FINDING 4

- Having more children age 6-14 does not protect the widow from losing land access after the death of her husband.
- Number prime-age male and females-the impact is negative but insignificant – **does not support labor shortage hypothesis**

Table 4: Simulations of the %age change in landholding size

Profile	Widow age 50 & above	Wealth status	Children age 6-14	Widow related to head	Δ in Landholding size
1	Yes	Non-poor	Mean (2.2)	Mean	-48.4%
2	Yes	Non-poor	5.00	Mean	-62.3%

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FINDING 5

- Initially relatively wealthy households are particularly vulnerable to losing land access.

Table 5: Simulations of the %age change in landholding size

Profile	Widow age 50 & above	Wealth status	Children Age 6-14	Widow related to head	Δ in Landholding size
1	Yes	Poor	Mean	Mean	-11.9%
2	Yes	Non-poor	Mean	Mean	-48.4%

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FINDING 6

- Widows whose family has kinship ties to the village authorities are less likely to face a severe decline in landholding size after the death of their husbands.

Table 6: Simulations of the %age change in landholding size

Profile	Widow age 50 & above	Wealth status	Children Age 6-14	Widow related to head	Δ in Landholding size
1	Yes	Non-poor	5	No	-66.4%
2	Yes	Non-poor	5	Yes	-24.3%

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FINDING 7

- Duration of household's settlement in the locality tends to exacerbate widow's ability to retain land. Result is weakly statistically significant, the greater the number of years settled in the village, the greater the percentage decline in landholding size.

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FINDING 8

- Widows in patrilineal and matrilineal villages are equally likely to lose their rights to land.
 - brothers and/or uncles may still grab the land.

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CONCLUSION

- The view that widows and their dependents in rural areas of Africa face greater livelihood risks in the era of HIV/AIDS is somewhat supported by the nationally-representative survey results in Zambia.
- Efforts to safeguard widows' rights to land through land tenure innovations involving village elders/chiefs and other community authorities may be an important component of social protection, poverty alleviation, and HIV/AIDS mitigation strategies.
 - Any legislative approach that ignores village elders/chiefs may not be successful in protecting the land rights of widows (and women in general)

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.....Conclusion

- The Poverty Reduction Strategies being conceived and implemented in many African countries may provide a vehicle for addressing property grabbing and widows' access to land and other productive assets.
- Rural communities' resilience and resistance to the AIDS epidemic tend to be related to how they treat the most vulnerable parts of the community:
 - so mobilizing support among traditional authorities to better understand the social and economic impacts of existing land inheritance institutions may have high economic, social, and health payoffs.

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WANT TO KNOW MORE??

Food Security Group of Related Research :

<http://aec.msu.edu/fs2/index.htm>

Corresponding Author: chaptoa@msu.edu

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Table 8: Descriptive statistics

Attributes	Mean	10pctile	90pctile
Widows age 16-38 (=1)	0.39	-	-
Widows age 39-49 (=1)	0.26	-	-
Widows age 50 and above (=1)	0.45	-	-
Children 6 to 14 years in 2000	2.23	1	5
Prime-age males excluding deceased	1.17	0	2
Prime-age females excluding deceased	1.22	0	2
Husband related to headman (=1)	0.31	-	-
Spouse/Widow related to headman (=1)	0.098	-	-
Number of years settled in locality	14.6	5	31
HH in matrilineal inheritance village (=1)	0.62	-	-

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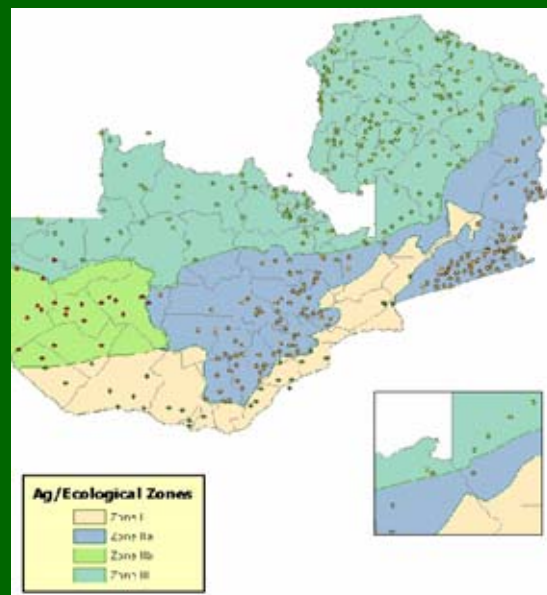
Table 9: Excerpt of DID-regression results

Covariates	A	B	C
PA male head death: Widow headed (=1)	-0.346**	-0.368**	0.424
All other PA death: Not Widow headed (=1)	-0.073	-0.017	0.086
Initial Head/Widow, HH attributes included	No	Yes	Yes
Interaction terms	No	No	Yes
Widow * Age 39—49			0.009
Widows* Age 50 and above			0.249*
Widow*1-3 years of education			-0.056
Widow*4-6 years of education			-0.003
Widow*7 years and above of education			-0.422
Widow*Children under 5			-0.110
Widow*Children 6 to 14			-0.078*
Widow*PA males			-0.161
Widow*PA females			-0.017
Widow*Wealth Status			-0.365+
Widow*Head related to headman			0.011
Widow*spouse related to headman			0.421**
Widow*Number of years settled in locality			-0.009
Widow*Matrilineal village		-	-0.107-

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.....Data

Map of CSO Statistical Enumeration Areas (SEAs) Sampled in the CSO/MACO/FSRP Post Harvest and Supplemental Surveys in 2001 and 2004 by Zambia's Agro-Ecological Zones



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