

Seasonality, precautionary savings and health uncertainty in Central Kenya

Lydia Ndirangu (KIPPRA, Kenya)

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Seasonality Re-visited
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Introduction

- People who live in low income economies often have to cope, not only with severe poverty, but also with extremely variable income
- Income variability implies consumption variability only if households do not use mechanisms to insulate consumption from income fluctuations; *Ex ante or ex post*

Research Gap

- The bulk of the work providing most of the insights on consumption smoothing use weather as the major source of income variability
- While weather is an important source of risk in rain-fed agriculture, with the spread of HIV/AIDS, health uncertainties also important
- Paper investigates whether households are forward looking by examining how savings respond to weather and health uncertainty



Methods

- Marginal propensity to save out of transitory income (MPS_T) used to assess whether people facing more uncertain income save more
- PIH: the closer MPS_T is to 1 the higher the precautionary motive i.e. all transitory income is saved
 - Effect of shocks on income=savings & consumption in unaffected
- Magnitude of MPS_T relevant for policy
 - Degree of completeness of credit and insurance markets (Morduch, 1991)

Data

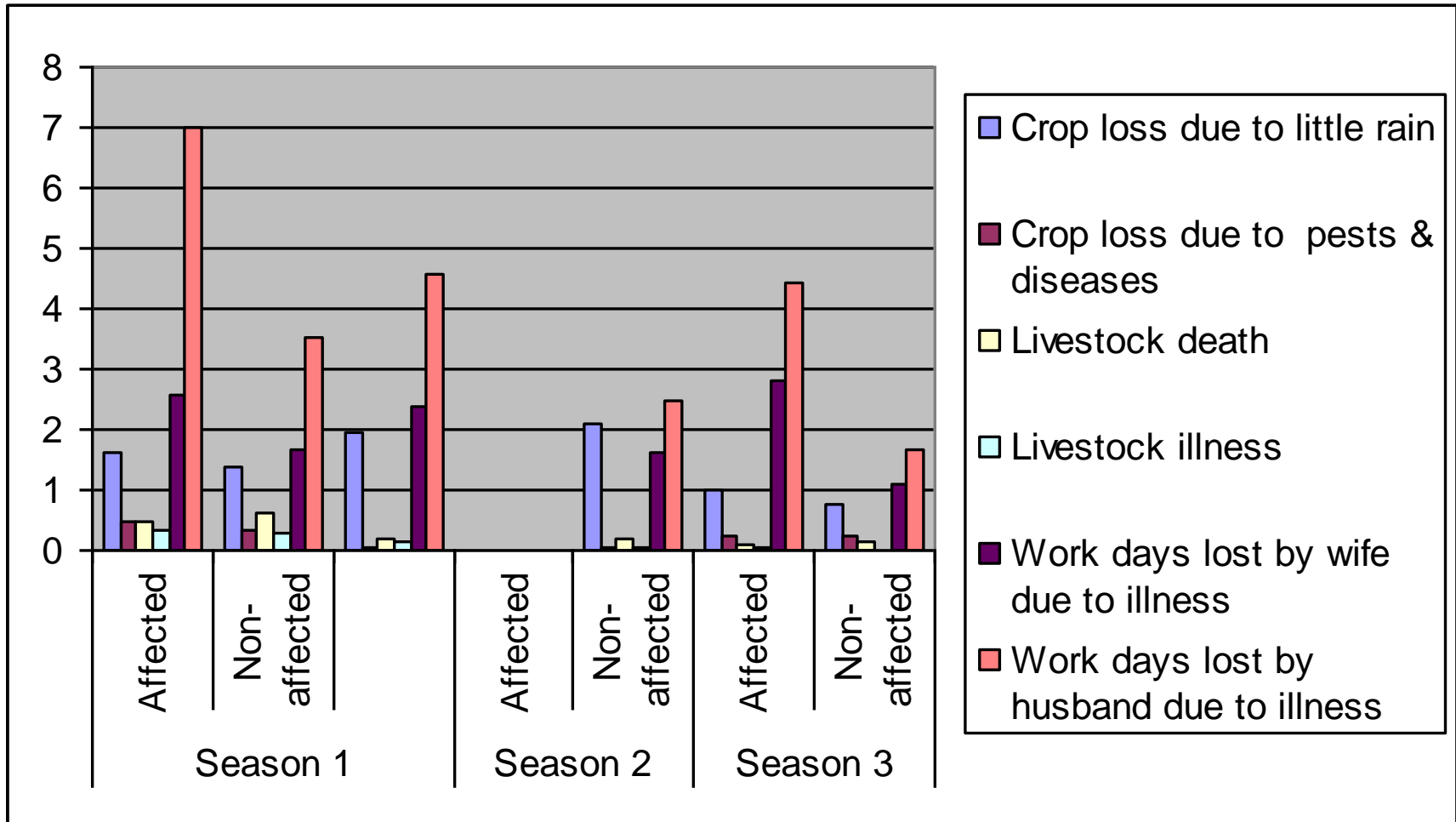
- Seasonal panel 200 HH: 3 surveys -May 2004 to April 2005 in 2 districts in Central Kenya
- bimodal rainfall
 - 1st & 3rd Surveys- short rains season (Oct to Mar) of 2003/2004 and 2004/2005
 - 2nd Survey main cropping season (Apr to Sept, 2005)
- HIV/AIDS prevalence in 2003 \approx 8.5%
National average \approx 7%
 - Commercial farms – HIV nodal points
- Qualitative data

Data

- Shocks
 - Farm specific crop and livestock shocks
 - Regional rainfall shock
 - Rainfall deviation from 14 year average at planting and weeding time (10 weather stations)
 - (drought in 2005 main cropping season)
 - Lost working days lost due to illness
- Uncertainty
 - Rainfall variability (CV)
 - If HIV/AIDS (husband or wife)

Recorded shocks

Computed indices for severity of shock & lost work days



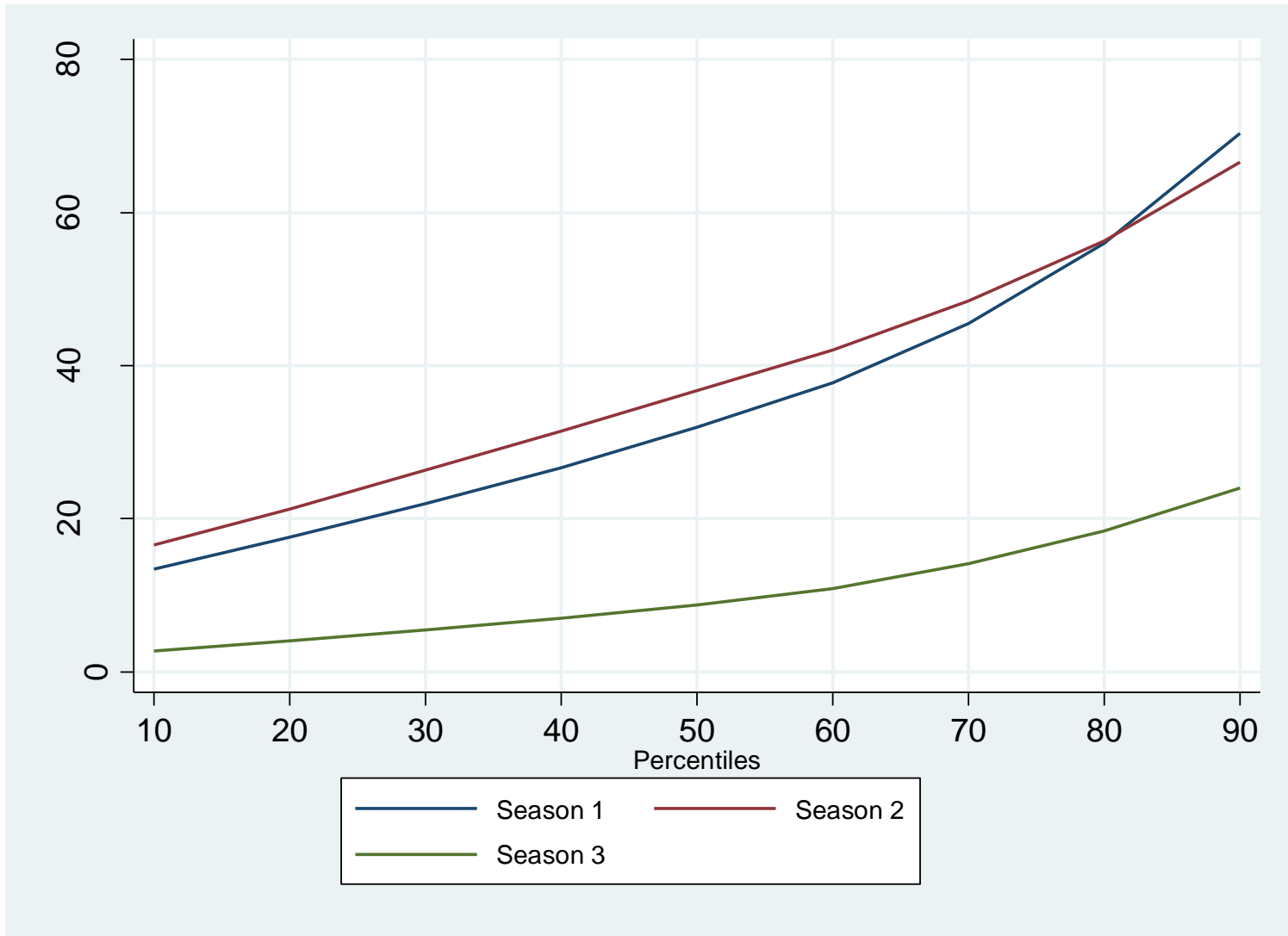
Consumption mobility

	Seasons 1–2			Seasons 2–3			Seasons 1-3		
	Affected	Non-affected	All	Affected	Non-affected	All	Affected	Non-affected	All
Shorrocks's Index	0.72	0.59	0.64	0.72	0.52	0.64	0.65	0.54	0.59
H_0 : Random transition χ^2	109.9**			69.7**			113**		

- $\approx 60\%$ HH of the households move between consumption quintiles from season to season
- Mobility higher for HIV/AIDS affected HH; expected for a shock affecting permanent income.



Welfare decline due to shocks



Regression results: Weather uncertainty

- Estimated seasonal average $MPS_T = 0.33$
 - 0.35, 0.29 and 0.34 for Season 1, 2 and 3
- High rainfall variability (CV) positively related to savings
- CV interacted with wealth
 - 1st season: effect negative
 - => poorer farmers hold more of their wealth in liquid form compared to wealthier ones
 - But as the season deteriorates, the effect of CV interacted with wealth is insignificant
 - Suggestive of vulnerable asset base

Health uncertainty

- Health uncertainty
 - -ve but insignificant HIV effect on savings
 - +ve and significant effect on consumption
 - => asset smoothing?

Conclusion (1)

- Some level of precautionary motives but MPS_T is about a third of what theory postulates \Rightarrow HH are not able to smooth consumption between seasons
 - Providing substantial scope for remedial public action e.g. credit market intervention
- Although wealth matters for precautionary behaviour the results point to vulnerable asset base

Conclusion (2)

- \uparrow consumption and \downarrow savings in response to HIV/AIDS points to HH whose desire to smooth the health (asset) stock may outweigh ability to smooth future consumption through savings
- Consequently more volatile consumption $\Rightarrow \uparrow$ vulnerability

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