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# Poverty traps and their implication for livestock livelihoods research and policy

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# Why is poverty so persistent?

**The design of appropriate policy and research to combat poverty depends on its origins.**

**Is poverty something ...**

**... purely transitory?**

**... all people naturally grow out of in time (unconditional convergence)?**

**... some people grow out of in time (conditional convergence)?**

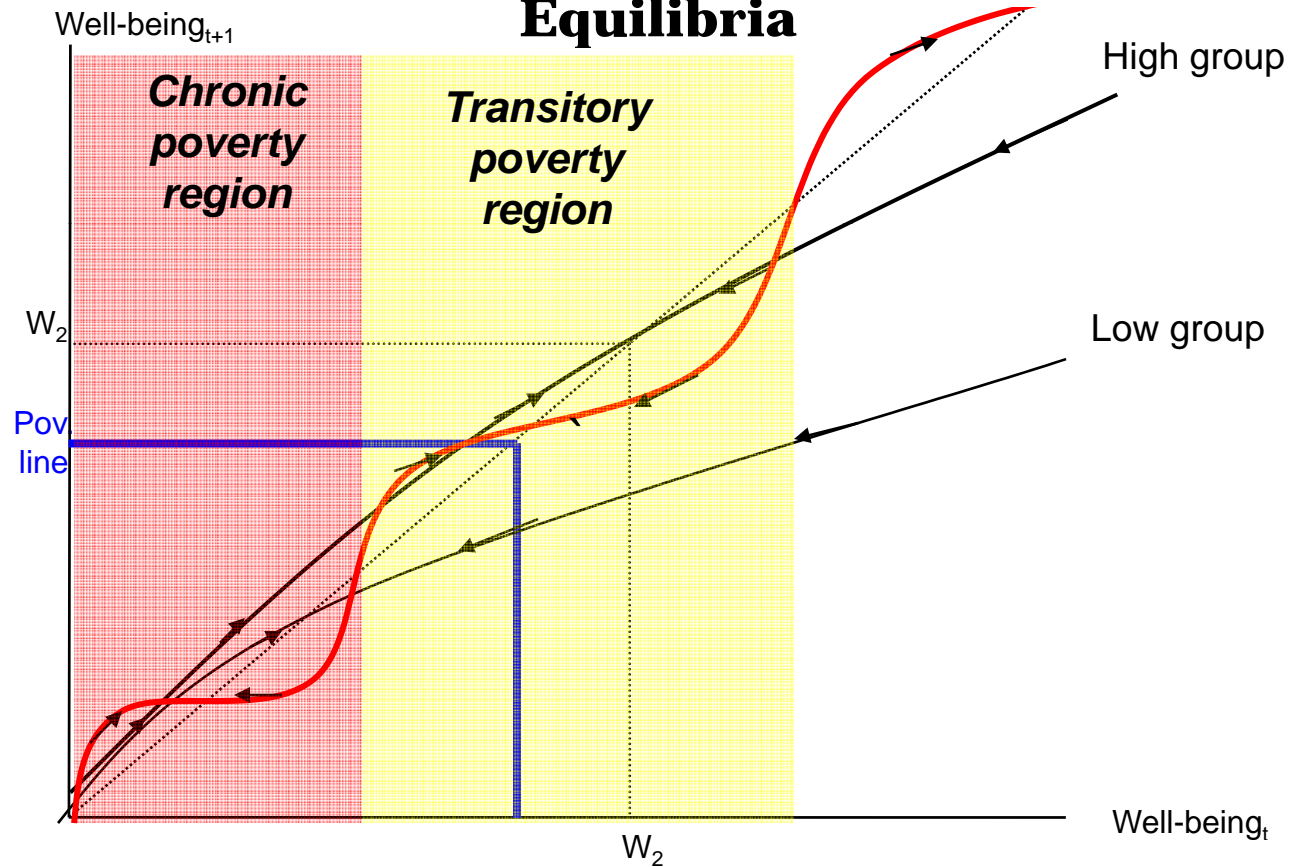
**... some people can be trapped perpetually (poverty traps due to multiple equilibria)?**





# Brief theoretical background

## Welfare Dynamics With Multiple Dynamic Equilibria



Key: unique common path dynamics with a single stable equilibrium that differs from the stable point of individuals



# Practical Implications of Theory

These alternative theories of poverty's origins carry very different policy and research implications.

- need for/design of safety nets for asset protection
- need for/methods of targeting cargo nets for asset building, productivity growth (via improvements in markets/technologies/institutions)
- prospective importance of social exclusion/isolation in keeping people from getting ahead

**Two big questions:**

**(1) Are there poverty traps? If so, where, for whom and why?**

**(2) What are best bet interventions for different types of traps and target populations?**



# Case study: PARIMA findings



Long-term (1997-2006) study of southern Ethiopia/northern Kenya pastoralists.

- Highly variable productivity due to climate fluctuations, disease, forage/water access, etc.
- Minimum herd sizes necessary for migration
- Weak institutional/physical infrastructure
- Absence of viable non-pastoral livelihoods
- Those who collapse to a small herd size turn to low-return livelihoods and become trapped.
- Intervention design/M&E demands research.

*Biophysical priorities: animal nutrition, disease control, range/water management*

*Institutional/ policy priorities: marketing, developing viable nonpastoral livelihoods, risk management, resource governance.*



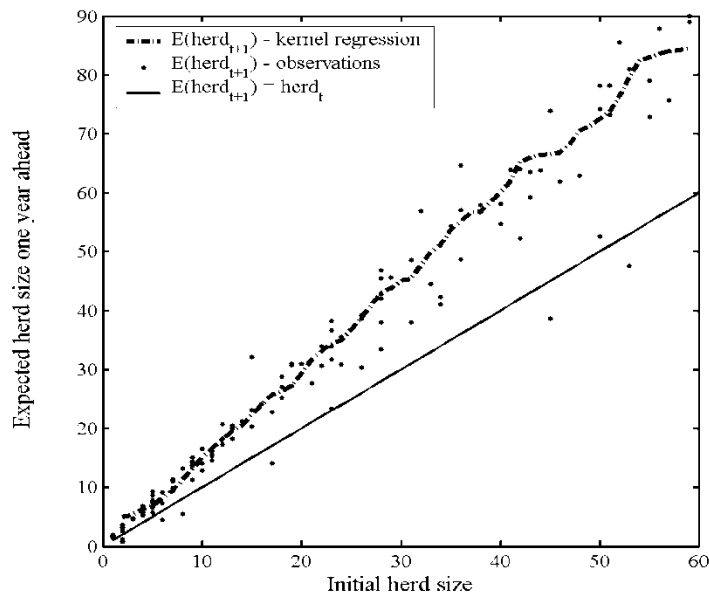
# Multiple causes of poverty traps

## Shocks are one major cause:

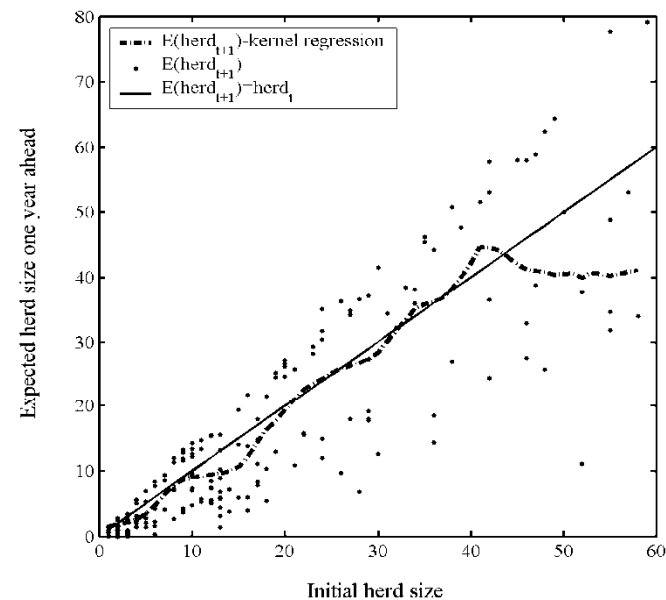
Concern that increased climate variability and loss of spatial refugia are trapping more pastoralists in chronic poverty.

Importance of vulnerability and risk management: shocks may be central not only to shifts between long-run equilibria, but to the very existence of multiple equilibria.

### Good/normal rainfall



### Bad rainfall



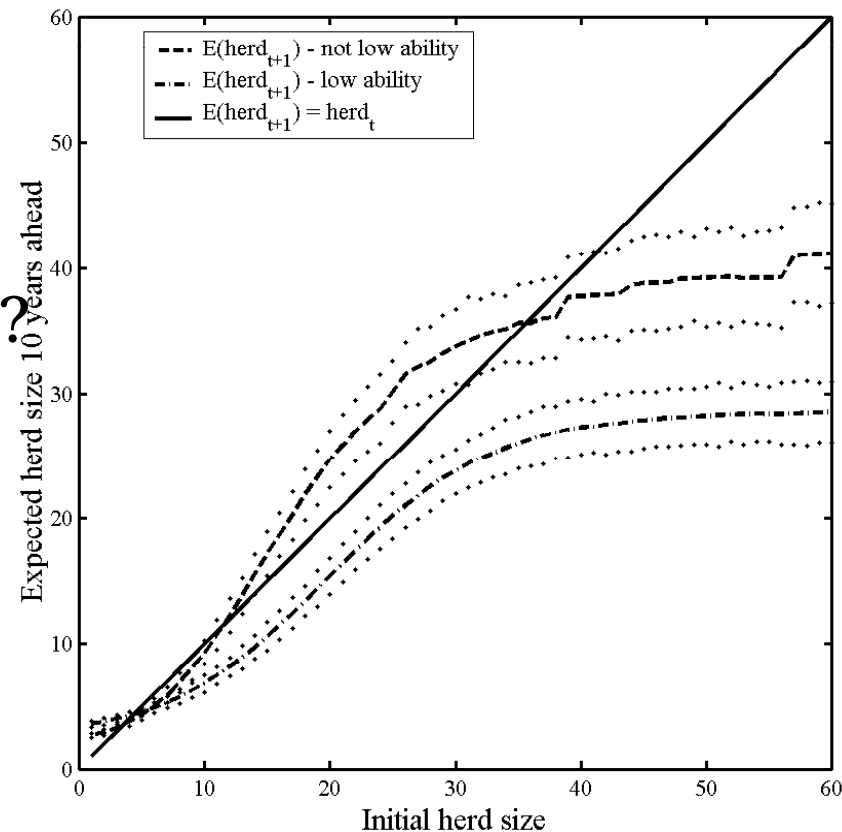


# Multiple causes of poverty traps

## Ability is another issue:

Not everyone can manage tough times well. Needs escape routes for the nonviable as well as safety nets for the viable but unlucky.

But what gives rise to adult ability? Early childhood Health/nutrition/education? Social relations?





# Ecosystem resilience and risk

**Ecology and economics have the same root: *oikos* (“household”). Connection is more than just etymological.**

- **Most of the world’s poor live in rural areas and depend heavily on the natural resource base.**
- **Coupled human-natural systems dynamics: Resource state affects productivity/wealth while human behavior affects resource conditions: nonlinear system w/feedback.**
- **Ecology has analogous concepts to poverty traps: resilience and multiple stable states.**
- **Matters to design of conservation strategies (e.g., Serengeti) as much as it does to poverty reduction strategies.**





# Key implications of that project

## ***Tailor policies to different pastoralist subpopulations:***

- for traditional herders, maintain migration options and herd sizes (“smart” restocking, water/disease/forage mgmt)
- for “post-pastoralists”, provide nonpastoral investment opportunities so they can create wealth and jobs
- for displaced pastoralists, build nonpastoral employment options (education, health, commerce)

## ***Need for safety nets and better risk management tools***

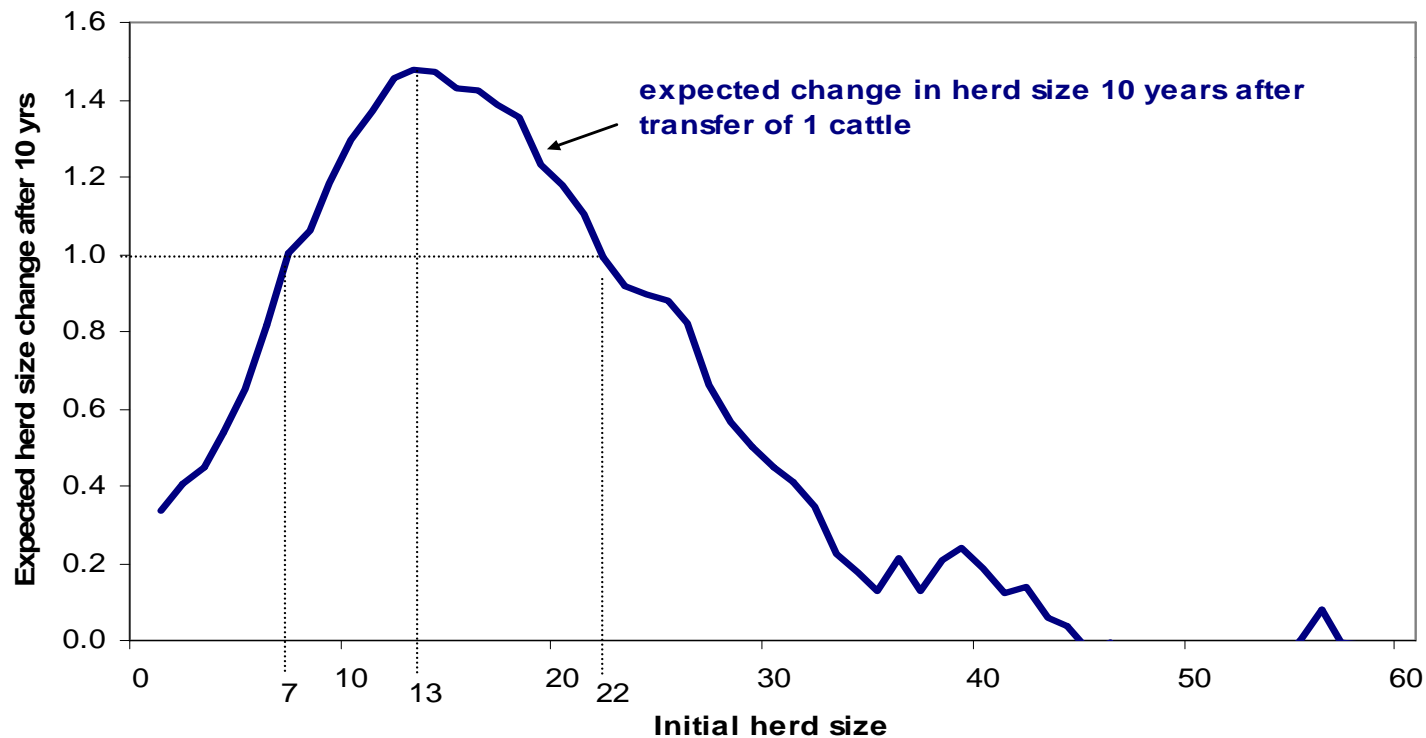
## ***Weaknesses of value chains a key constraint***

- *infrastructure, institutions (quarantines, auctions), security*



# Key implications of that project

**Example, “smart” restocking given herd dynamics:  
need to get people to 7-22 TLU for transfers to stick**





# **Broader poverty traps implications**

## **1. Take an asset-based approach when focus turns to dynamics of well-being and systems**

- Building stock of productive assets under poor's control (both quantity and quality)
- Protecting the assets of all, including currently non-poor lest they're knocked into poverty trap

## **2. Emphasize productivity growth: shift the asset dynamics in the system**

- Increased output key to both producers and consumers
- Improved market access equally important and complementary to technological improvements



# Broader poverty traps implications

## 3. Systems thinking is essential

- Farmers manage highly integrated landscapes, actively engage non-farm economy ... balancing risk and return
- Feedback links across species, sectors, and scales. Indirect effects (via environmental spillovers and/or induced price effects) can be huge.

## 4. Risk and shocks are critical: management is key

- Both ex ante effects (risk - especially to those facing multiple equilibria), and ex post effects (shocks)
- Need both risk reduction tools (for disease, water, feed, market institutions) and risk transfer instruments (safety nets, index-based risk finance)



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A wide-angle photograph of a camel caravan in a vast, rocky desert landscape. The ground is covered in dark, jagged volcanic rocks. In the distance, a line of camels is visible, with a person walking alongside them. The sky is a clear, pale blue with a few wispy clouds.

**Thank you for your time,  
attention and comments.**



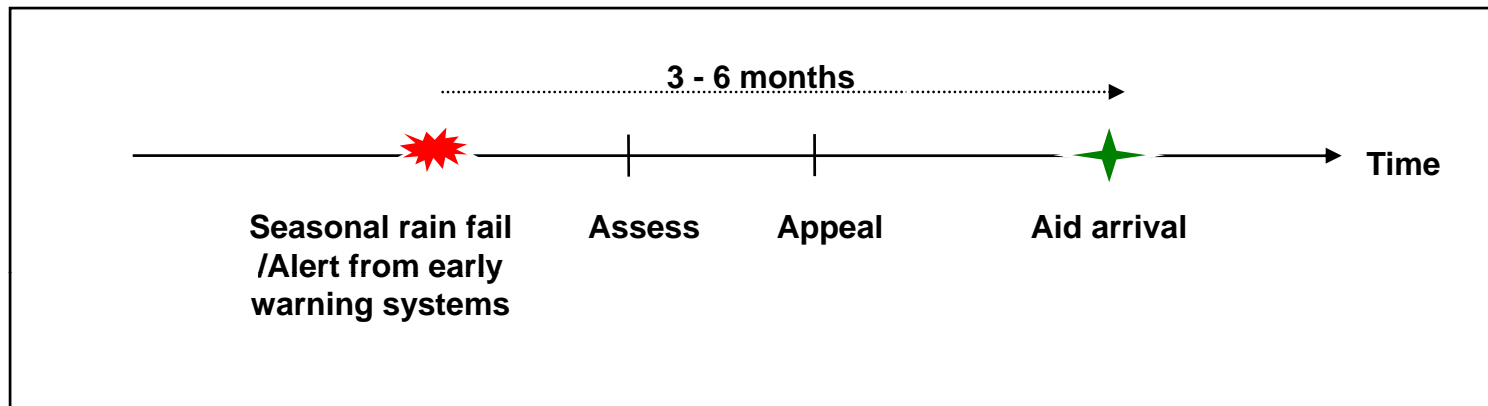
## Example: Index-Based Risk Finance

Multiple product types: weather insurance, area-based yield/livestock mortality insurance, famine bonds, etc. Different clientele and distinct purpose for different IBRF instruments.

- Pre-financing of disaster response
  - Famine bonds, drought insurance for governments, NGOs, WFP, etc. Objective: Improve emergency response by more timely and reliable funding, when response costs are lower.
- Credit-linked insurance
  - Use insurance to solve credit market failures associated with lenders' covariate risk exposure and borrowers' collateral risk.
- Asset protection insurance
  - Defend critical asset thresholds ... positive moral hazard.

# Rationale for Using Weather Index Insurance to Improve Emergency Response to Droughts

Current stage of emergency response



**Goal:** Using weather index insurance to secure timely and reliable funds to finance effective response to severe droughts

