A Study of Rural Household Wealth Dynamics in Kenya

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Background

• Poverty, disease and ignorance identified as major development challenges in 1963

• Policy responses:
  – National Development Plans and Sessional Papers
  – Medium Term Expenditure Framework (MTEF) budget that started in 2000/01

• Vision 2030
Background

- Kenya’s economic performance has been mixed

Figure 1: GDP Growth Rates (%)
### Table 1: National poverty rates

<table>
<thead>
<tr>
<th>Poverty Measure</th>
<th>WMS III (1997)</th>
<th>KIHBS (2005/06)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Adult Equivalent</td>
<td>Adult Equivalent</td>
</tr>
<tr>
<td>Rural</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Absolute</td>
<td>52.9</td>
<td>49.1</td>
</tr>
<tr>
<td>Hardcore</td>
<td>34.8</td>
<td>21.9</td>
</tr>
<tr>
<td>Urban</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Absolute</td>
<td>49.2</td>
<td>33.7</td>
</tr>
<tr>
<td>Hardcore</td>
<td>7.6</td>
<td>8.3</td>
</tr>
<tr>
<td>National</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Absolute</td>
<td>52.3</td>
<td>45.9</td>
</tr>
<tr>
<td>Hardcore</td>
<td>29.6</td>
<td>19.1</td>
</tr>
</tbody>
</table>
Motivation

• Existence of high poverty incidences

• Call for continued research to inform poverty reduction policies
Poverty dynamics

• Poverty is a dynamic phenomenon:
  – not all poor are poor all the time

• Some households that were once poor successfully climb out of poverty

• Conversely, some households that were well above the poverty line descend into poverty

• If factors causing these dynamics or predisposing households to these situations were known, it would be possible to inform poverty reduction strategies
Objective

• Use panel survey and retrospective survey evidence from Kenya to identify factors associated with households that have:
  – Successfully risen out of poverty
  – Descended into poverty
Data sources

- **Panel data:**
  - panel survey data on 1,254 households collected in 1997, 2000, 2004 and 2007
  - information captured: demographics, farm and off-farm incomes, location, access to infrastructural facilities, etc.
Data sources

• **Retrospective survey data**
  
  – identify four types of smallholder farm households:
    1. those experiencing a major improvement in wealth - *ascenders*
    2. those experiencing a major decline in wealth – *descenders*
    3. consistently well-off households - *non-poor*
  
  – In-depth retrospective and life history surveys conducted in 2008 on 30 households in each of these 3 groups
Conceptual framework

• Household’s welfare dynamics is a function of:
  – household demographic factors
  – household’s socio-economic environment, including spatial factors such as agro-ecological conditions and access to markets
  – household shocks, e.g. chronic illness, deaths
  – intergenerational factors, inheritances
Data Analysis

• Descriptive: bivariate relationships

• Econometric model

\[ y_{it} = \alpha_i + X_{it} \beta + \mu_{it} \]

- With panel data, there are 2 popular methods for estimating this model, fixed and random effects
- However, both approaches have shortcomings
- Mundlak (1978) and Chamberlain (1984) propose a framework known as the correlated random effects estimator (CRE) or the Mundlak-Chamberlain device
- The unobserved, time-constant heterogeneity is modeled

\[ \alpha_i = \delta + \bar{X}_i + \zeta_i \quad \zeta_i \mid X_i \sim N(0, \sigma_\zeta^2) \]
Measure of household welfare

• Household income
  – sum of farm and non-farm income including transfers and remittances

• Household asset wealth is the measure of household welfare
  – asset wealth is contended to more accurately reflect welfare than income or consumption
  – less susceptible to random shocks, and is likely to be a more stable indicator of household welfare
Ascenders [1]

1. **Idiosyncratic shocks:**
   - more likely to have remained healthy and suffer no unexpected deaths during the decade prior to the start of the initial survey in 1997
   - were not adversely affected by mortality that did occur during the panel period

2. **Gender:** were consistently headed by males

3. **Inheritance:** received relatively more land from their parents at the time the household was formed
4. **Education**: had parents who were relatively well-off and educated

5. **Infrastructure**: reduced distances to infrastructural facilities increase households’ assets

6. **Social capital**: length of time the household has stayed in the current location matters
Descenders [1]

1. **Idiosyncratic shocks:**
   - Roughly half experienced unexpected shocks, such as premature death and chronic illness.
   - These households reported spending 22% of their annual incomes and 47% of their assets on medicines and care giving.

2. **Gender:** more likely to have turned from male to female headship

3. **Polygamy:** more likely to have two or more wives in the household
Descenders [2]

4. **Education:**
   - more likely to have poorly educated heads
   - fathers of household heads who were also poorly educated

5. **Inheritance:** relatively small land and other assets inherited from parents

6. **Infrastructure:** increased distances to healthcare services is associated with a decline in asset wealth for the descending group
Consistently non-poor

1. **Education**: more likely to have members with secondary and/or post-secondary educations

2. **Monogamous**: heads had one wife

3. **Inheritance**: received significantly more land and other assets at the time the household was formed

4. **Idiosyncratic shocks**: less affected by mortality in the family
Key points and policy implications [1]

1. **Poverty dynamics**: not all households are poor/wealthy all the time
   - there are a lot of movements – inter and intra

2. **Health**: importance of staying healthy in households’ ability to produce agricultural surpluses, accumulate assets, and exit from poverty
   - policy: improved healthcare services
Key points and policy recommendations [2]

3. Poverty begets poverty:
   - poor households transfer little to the next generation, which then makes it difficult for them to climb out of poverty

4. Land: ascension out of poverty associated with increased acquisition of land
   - 15% of the rural population are about to become landless

5. Infrastructure: overall improvement in access to infrastructure and agricultural services
   - role of CDF, LATF, etc.
Wars against nations are fought to change maps; wars against poverty and inequality are fought to map change

.....Muhammad Ali