LAND ACCESS IN KENYA: ARE THE CURRENT LAND POLICIES FOSTERING INCLUSIVE AGRICULTURAL GROWTH?

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Poverty and hunger

- Reducing poverty and hunger have been a critical policy concern in most of the sub-Saharan African countries for the past half-century.
- Yet, despite series of governments and development agencies interventions, poverty still remains pervasive.
- In 2005, more than 40 percent of Sub-Saharan Africa’s population was estimated to be below the poverty line (World Bank, 2006).
- Majority of the hungry and poor are the rural households who are smallholder farmers.
Population below poverty line

World

Source: CIA World Factbook (2012)
Population below poverty line

--Africa--

Source: CIA World Factbook (2012)
FIGURE 2.4 2013 GLOBAL HUNGER INDEX BY SEVERITY

Note: For the 2013 GHI, data on the proportion of undernourished are for 2010–2012, data on child stunting are for the latest year in the period 2008–2012 for which data are available, and data on child mortality are for 2012. GHI scores were not calculated for countries for which data were not available or for certain countries with very small populations. The 2013 GHI score could only be calculated for urban Sudan, because separate undernourishment estimates for 2010–2012 were not available for Sudan and South Sudan, which became independent in 2011.

Hunger and poverty reduction strategy

• Based on the region’s land resource endowment, an agricultural-led growth strategy has been touted as the best way for rapid and sustained reductions in food insecurity and poverty (Wood, 2003)

• Fischer and Shah (2010) report that sub-Saharan Africa has about 202/446 million hectares of uncultivated arable land in the world

• The region is also reported to possess an enormous yield gap in staple grains (Fischer et al., 2009; Deininger and Byerlee, 2011)

• Renewed interest in the “unutilized” land – “land grabs” – following food and fuel prices volatility and adverse climatic conditions
Household landholding vs. income

<table>
<thead>
<tr>
<th>Country</th>
<th>Per Capita Land Access (Ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETHIOPIA</td>
<td></td>
</tr>
<tr>
<td>KENYA</td>
<td></td>
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<tr>
<td>RWANDA</td>
<td></td>
</tr>
<tr>
<td>MOZAMBIQUE</td>
<td></td>
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<tr>
<td>ZAMBIA</td>
<td></td>
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</table>

Source: Jayne et al., 2003
Is Africa a land abundant continent?
Land abundance hypothesis
-- what do we know?--

• But, newspaper headlines and household level survey data show declining trends in farm sizes and rising land conflicts:
  • Population densities in many areas of rural Africa are much higher than they were two decades ago:
    • Rural populations still growing at 1 to 2.5 per year
    • Declining trends in farm size and fallow rates-- more than half of smallholder farms are less than 1.5 hectares
    • Low urbanization rates and persistently concentrated rural settlements
      • 1% of SSA’s rural areas contain 16% of its rural people
      • 20% of SSA’s rural areas contain 76% of its rural people
  • Even in countries with low population densities like in Northern Mozambique, there are inequalities in land access:
    • All arable land is either fully allocated or already under cultivation
Selected newspaper headlines -- Kenya

**Daily Nation**
- Why Qatar-Tana River land deal requires further discussion
- Kibaki finally gazettes land commission:
  - Land grab or development opportunity?
- Jubilee promises to tackle land question
- Poll: Voters believe leaders won’t solve land issue
- National land ownership register: Kibaki should take lead
- Catechist kills woman over land dispute:
- ATM theft: 11 YEAR-OLD boy nabbed
- 14 arrested in police line-up
- Man hacks four family members to death over land
- Kenyans Must End This Obsession With Land
- Land issue takes centre stage in campaigns
- Land issues can’t be wished away: Muite
- Kenya: MPs lead squatters back to farms
- Eleven killed in violence over land in Kenya

**Al Jazeera**

**The New York Times**

**Africa Review**

**Kenya Elections**

**Daily Nation**

**The Kenyan Daily Post**

**Otago Daily Times**

**Los Angeles Times**

Qatar looks to grow food in Kenya
2008 Post Election Violence in Kenya

- Causes of the wave of violence that engulfed Kenya after the presidential election in December 2007
  - local analysts point to historical land inequalities the main cause
  - “…it is time the hyenas would give back the land so that landless people can own land…”
  - 2\textsuperscript{nd} witness in the case facing Mr William Ruto, International Criminal Court, The Hague, The Netherlands, October 7\textsuperscript{th} 2013 (Daily Nation, 2013)
## Hectares of arable land per person in agriculture (10 year average)

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Ethiopia</td>
<td>0.501</td>
<td>0.444</td>
<td>0.333</td>
<td>0.224</td>
<td>0.218</td>
<td>43.5%</td>
</tr>
<tr>
<td>Zambia</td>
<td>0.643</td>
<td>0.607</td>
<td>0.398</td>
<td>0.342</td>
<td>0.297</td>
<td>46.2%</td>
</tr>
<tr>
<td>Kenya</td>
<td>0.462</td>
<td>0.364</td>
<td>0.305</td>
<td>0.264</td>
<td>0.219</td>
<td>47.4%</td>
</tr>
<tr>
<td>Uganda</td>
<td>0.655</td>
<td>0.569</td>
<td>0.509</td>
<td>0.416</td>
<td>0.349</td>
<td>53.3%</td>
</tr>
<tr>
<td>Malawi</td>
<td>0.480</td>
<td>0.466</td>
<td>0.357</td>
<td>0.304</td>
<td>0.307</td>
<td>64.0%</td>
</tr>
<tr>
<td>Zimbabwe</td>
<td>0.613</td>
<td>0.550</td>
<td>0.452</td>
<td>0.420</td>
<td>0.469</td>
<td>76.5%</td>
</tr>
<tr>
<td>Rwanda</td>
<td>0.212</td>
<td>0.213</td>
<td>0.195</td>
<td>0.186</td>
<td>0.174</td>
<td>82.1%</td>
</tr>
<tr>
<td>Mozambique</td>
<td>0.356</td>
<td>0.337</td>
<td>0.320</td>
<td>0.314</td>
<td>0.294</td>
<td>82.6%</td>
</tr>
<tr>
<td>Ghana</td>
<td>0.646</td>
<td>0.559</td>
<td>0.508</td>
<td>0.492</td>
<td>0.565</td>
<td>87.5%</td>
</tr>
<tr>
<td>Nigeria</td>
<td>0.982</td>
<td>0.860</td>
<td>0.756</td>
<td>0.769</td>
<td>0.898</td>
<td>91.4%</td>
</tr>
</tbody>
</table>

Source: FAO STAT (2010)
Rural Population Growth

Rural population growth
1960-2010

Source: World Development Indicators, World Bank
Arable Land per Capita

Arable land per capita
1960-2010

Source: World Development Indicators, World Bank
Figure 3: Population density in Kenya
Agro-climatic zones in Kenya
Figure 5: Population density in Zambia
Case Study

Land access in Kenya:

What can we learn from the medium-scale farmers’ growth?
Rising medium scale farmers in Africa

• Many African countries have witnessed explosion in the number of indigenous medium-scale farmers, also known as “emergent” farmers.
• Emergent farmers refer to farmers cultivating between 5 to 20 hectares of land.
• Emergent farmers have little in common with large-scale commercial farmers in terms of farm size, access to finance, input application rates, and farm management practices.
  • For example, in Zambia the number medium scale farmers has grown by 103 percent between 2001 and 2011 (Sitko et al., 2013).
  • The medium scale farmers’ overall production is also increasing.
• Yet, the processes behind this group’s growth and its productivity compared to smallholder farmers is unclear in many countries.
Examining the factors driving the growth of medium scale farmers

• Is this growth driven by farmers who began their farming careers as small-scale farmers, cultivating less than 5 hectares of land and now transitioning to a larger scale of production through capital and assets accumulation?

• If this is the case, is this a precursor to the inclusive agricultural-led structural transformation that Johnston and Kilby (1975) and Mellor (1976) hypothesized?

• Is the growth driven by land institutions, policies and public spending patterns that encourage investment in land acquisitions by individuals from non-agricultural employment sector?
Data and methods

• Data sources
  • Survey with 200 medium scale farmers—cultivating 5-50 hectares of land
  • Household survey data of 296 smallholders
  • Focus group discussions

• Methods
  • Bivariate descriptive analyses
    • Medium scale farmers sample is divided into two mutually exclusive analytical groups based on the primary source of capital
      • Farm-led strategy
      • Non-farm led (lateral entry) strategy
  • Econometric models
    • Pathways into medium scale farming and production differences
    • Comparing smallholders and medium scale farmers
Key results [I]

1. Majority (60%) of medium-scale farmers used non-farm entry strategy
   • Most of them are current/former public sector employees
   • Acquired land from savings from non-farm, largely urban jobs
   • Had high education attainment

2. Only a minority were primarily engaged in agriculture
   • But had sufficient initial endowment of land– average of 2 hectares

3. Owned over two times more land than they were using for crops:
   • High degree of land owned for speculative purposes
   • Inability of these farmers to make productive use of their land
Key results [II]

4. Acquired most of their land through purchases
   • Had more land outside the location in which they were born

5. Farm-led strategy group acquired most of their land before 1990s
   • Non-farm led strategy group acquired most of their land in 1990-2000

6. Switch from smallholder to medium scale production reduces crop production per hectare owned by 70%
   • Data on livestock production not collected

7. No significant difference in terms of crop production per hectare cultivated
Is African agriculture intensifying in response to rising population density?
So, what do diminishing landholding sizes mean for a feasible poverty reduction strategy in sub-Saharan Africa?

- In the middle of increased smallholder inaccessibility to land?
- Limited off-farm opportunities and migration?

The *Asian green revolution* was a small farm phenomenon (Johnston and Kilby, 1975; Mellor, 1976)

- Over 80 percent of farms in India, Bangladesh, Indonesia, China, Japan and Viet Nam are less than two hectares
- This revolution was broad-based contributing greatly to rural poverty reduction in Asia

Is there a potential for similar forms of inclusive smallholder-led agricultural growth in SSA?
Boserup (1965): Land use intensity responds to population density

Potential forms of intensification:

- Value output/ha
- Modern inputs
  - Fertilizers
  - High yielding seeds and quick maturing crops
- Soil quality improvements
  - Terracing, mulching, etc.
- Irrigation
- Improved crop choices--shift to higher value crops
- Reduced fallow/continuous cultivation
Induced innovation intensification

- **Induced innovation model** (Binswanger and Ruttan, 1978; Hayami and Ruttan, 1985; Binswanger and McIntire, 1987; Pingali et al., 1987)
  - Rising population density induces changes in the relative prices of factors of production—price of the scarce factor (land) increases relative to the price of the more abundant factor (labor)
  - Land is used more intensively with the help of land-saving inputs courtesy of science and technology
Smallholder intensification

- Literature has not considered what lies beyond the smallholder intensification
  - Soil fertility is declining in densely populated areas due to nutrient mining with continued cultivation and reduced fallows (Dreschel et al., 2001)
  - Evidence show low crop response to inorganic fertilizer application due increased soil acidity as a result of inorganic fertilizer overuse (Marenya & Barrett, 2009)
  - Intensification not possible beyond some population density thresholds (Jayne & Muyanga, 2012; Muyanga & Jayne, 2013)
Case Study: Smallholder intensification in Kenya
Objectives

- Effects of population density on smallholder agricultural production in rural Kenya
  - **Strategy**: estimates the impact of rising population densities on factor inputs, output supply, and household incomes
Effects of population density on smallholder-intensification—conceptual framework
Data sources

- **Household Survey Panel Data:**
  - Nationwide Egerton University (Tegemeo Institute) rural household survey panel dataset

- **National Population Census Data:**

- **Gridded Population Data:**
  - High-resolution gridded estimates of rural population distributions -GRUMP (Global Rural-Urban Mapping Project)
  - Population density: persons/km² of arable land
  - Land quality – agricultural potential
Results: Farm intensification thresholds

Figure 1: Fertilizer quantities applied per hectare cultivated

Figure 2: Total value of cash expenditures per ha cultivated

Figure 3: Area cultivated per household

Figure 4: Net crop income per hectare cultivated
Farm intensification thresholds

Figure 5: Net crop income per family labor (resident adults)

Figure 6: Non-farm income per household
Concluding remarks
Policy suggestions

• Sustainable intensification in densely populated areas
  • Public investment in agricultural research focusing on new land-saving farm technologies and practices appropriate for small farms

• Rural-rural migration
  • Incentives for people owning more land than they need to release what they don’t need to land-poor groups
  • Physical infrastructure investment in less populated areas e.g. roads and irrigation

• Rural-urban migration
  • Off-farm employment opportunities in urban center
  • Invest in education to equip students necessary skills
Conclusion

• While foreign “land grabs” have captured international attention, perhaps a more serious threat to land access for the millions of smallholder farmers in the region is the transfer of land to a relatively wealthy class of “medium-scale” farmers through land markets and the political process.

• Current land policies undermine the long-term potential of the inclusive smallholder agriculture-led growth.
  • Medium scale farmers buy into farming using economic, social and political capital conferred through non-farm employment.

• Rural poverty and food insecurity is likely to persist unless government institutes pro-smallholders’ land access policies.

• Spatial inequality in landholding (social injustices) lead to social and political tensions that can undermine social and political stability.
Acknowledgements

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