Which Large Scale Agricultural Commercialisation Models offer best Opportunities for Improved Rural Livelihoods in Zambia?

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Preamble

- Growing investor interest in farmland within the past decade has prompted the **revival of large-scale commercial agriculture** across many regions of Africa (Deininger and Byerlee, 2011; Baglioni and Gibbon 2013).

- Associated with the growth of farmland deals and commercial farming in Africa is a policy and investor narrative concerning the ‘**win-win’ possibilities** arising from the convergence of investor capital with available land and abundant labour (FAO 2009).
Three models of agricultural commercialisation

1) Plantations

- Large, self-contained agribusiness farms
- Vertically-integrated processing chain,
- Associated with one major crop
- Permanent or seasonal hired labour.
- Not much interaction with local economy
- Used Zambeef Chiawa Estate (Kafue District) as a case study
  - 10,000 ha (cultivated=2,500 ha) soybeans, maize and wheat under capital intensive precision farming
  - No in-situ processing
Zambeef Chiawa Estate
Three models of agricultural commercialisation

2) Commercial Farm Area

- Medium-to-large farms relative to surrounds
- More or less contiguous, and dominate an area
- Associated with mixed farming operations
- Owned by individuals or companies
- Used Mkushi Farm Block (Mkushi District)
- 176,000 ha of farmland (many different farms)
- Some on-site soybean oil crushing
- Maize, wheat, soybeans: Capital intensive but labour absorbing
Farms in Mkushi Farm Block
Three models of agricultural commercialisation

3) Outgrower Scheme

- Linked to a processing firm, sometimes with a nucleus estate
- Outgrowers are contracted to supply their produce to the nucleus estate
- Outgrowers farm own land with own labour
- May also work on the nucleus estate
- Used Magobbo Scheme under Zambia Sugar (Mazabuka District)
- 432 ha block (made of 4-6 ha household blocks)
- Sugar processing
Magobbo outgrower block farm
Location of the case studies
Methods

1. **Qualitative**: in-depth interviews with farmers, manager and workers; primary and secondary document analysis.

2. **Quantitative**: random household survey in each site including those involved in our case studies (as workers, outgrowers, independent farmers) as well as those not.

3. **Qualitative**: in-depth life histories; mapping of local economic linkages
Key question

- What are the outcomes of these different models of agricultural commercialisation for:
  - Land
  - Labour
  - Livelihoods
  - Local economic linkages
Access to land generally high

- Over 80% reported having access to land around Zambeef Chiawa Estate or Mkushi Farm Block

- In Magobbo all (100%) outgrowing hhs had access to land

- Only 33% of households employed in this model had access to land; it was 66% for those not involved in the scheme.
### Access to land generally high

<table>
<thead>
<tr>
<th>Model</th>
<th>Category</th>
<th>% with access to land</th>
<th>% cultivating land</th>
<th>Average land size (ha)</th>
<th>Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plantation</td>
<td>Employed in plantation</td>
<td>89.3</td>
<td>89.3</td>
<td>2.5</td>
<td>28</td>
</tr>
<tr>
<td></td>
<td>Not involved</td>
<td>94.3</td>
<td>94.3</td>
<td>1.5</td>
<td>70</td>
</tr>
<tr>
<td>Out-grower</td>
<td>Employed in scheme</td>
<td>36.8</td>
<td>36.8</td>
<td>0.5</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>Contracted</td>
<td>100.0</td>
<td>100.0</td>
<td>4.7</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>Both employed &amp; contracted</td>
<td>100.0</td>
<td>100.0</td>
<td>5.9</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>Not involved</td>
<td>66.1</td>
<td>66.1</td>
<td>2.8</td>
<td>59</td>
</tr>
<tr>
<td>Commercial</td>
<td>Employed on commercial block</td>
<td>82.3</td>
<td>71.0</td>
<td>5.3</td>
<td>62</td>
</tr>
<tr>
<td></td>
<td>Not involved</td>
<td>83.3</td>
<td>79.6</td>
<td>5.9</td>
<td>54</td>
</tr>
</tbody>
</table>
Increasing land concentration & conflict

- Active land markets evident across all the three models due to commodification of land.

- Declining access & land conflicts across all three models

- Highest conflicts reported around the outgrower model where access is worse
Local communities displaced from land

- Zambeef Chiawa estate expansion displacing local communities

- Magbbo outgrower scheme displaced 64 families to give way to a contiguous block for the sugar scheme

- Satellite farming around Mkushi block gradually displacing local people
Gender & Generational inequalities in land

- Women resisted the Magobbo outgrower scheme during its initiation but ignored. Concerned with land reallocation.
- Women not consulted with Zambeef Chiawa estate expansion at its bulk water intake near Zambezi River.
- Failure of intergenerational transfer of land to young households around the outgrower model, rendering youth a near landless group.
Mkushi commercial block provides most employment across the models

- but more casualised, insecure and poorly paid

- The plantation and outgrower model provides least employment, although more permanent than casual
### Mkushi farm block provides most employment

<table>
<thead>
<tr>
<th>Model area</th>
<th>Location of employment</th>
<th>Percent household members employed</th>
<th>% household members unemployed</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Permanent</td>
<td>Casual</td>
<td>Total</td>
</tr>
<tr>
<td>Plantation</td>
<td>Inside plantation</td>
<td>5.7</td>
<td>1.5</td>
<td>7.2</td>
</tr>
<tr>
<td></td>
<td>Outside plantation</td>
<td>6.7</td>
<td>3.6</td>
<td>10.3</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>12.4</strong></td>
<td><strong>5.1</strong></td>
<td><strong>17.5</strong></td>
</tr>
<tr>
<td>Out-grower</td>
<td>Inside scheme</td>
<td>4.5</td>
<td>3.0</td>
<td>7.5</td>
</tr>
<tr>
<td></td>
<td>Outside scheme</td>
<td>7.9</td>
<td>3.0</td>
<td>10.9</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>12.4</strong></td>
<td><strong>6.0</strong></td>
<td><strong>18.4</strong></td>
</tr>
<tr>
<td>Commercial</td>
<td>Inside commercial block</td>
<td>5.9</td>
<td>16.0</td>
<td>21.9</td>
</tr>
<tr>
<td></td>
<td>Outside commercial block</td>
<td>1.6</td>
<td>3.2</td>
<td>4.8</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>7.5</strong></td>
<td><strong>19.2</strong></td>
<td><strong>26.7</strong></td>
</tr>
</tbody>
</table>
More men in both permanent and casual employment than women

- Only Zambeef Chiawa Estate had a relatively higher proportion of females employed permanently, (47% versus 28%).
- Magobbo Out-grower Scheme and Mkushi Farm Block, had a higher proportion of males in permanent employment (15% versus 13% and 24% versus 15% respectively);
- The opposite was true for temporary or casual employment (14% versus 25% and 51% versus 85% respectively).
- Across all the models, women were paid less than men for permanent jobs.
Generational differences in employment opportunities

- Young people confront inequalities in terms of employment across the agricultural models except in the outgrower model:
  - In plantation model, more older men (over 35 years) are employed both on a permanent and casual basis than young people
  - In commercial model, more older people take permanent employment than young people, while the opposite is true for casual jobs
  - By contrast, outgrower model employs more younger men than older people as older people focus on own farming
Key drivers for improved livelihoods and food security

- The combination of wage employment and own-farming important across 3 models;

- Wage employment in Zambeef Chiawa Estate and Magobbo Out-grower Scheme is crucial for improving hh food security;

- Own-farming hhs around Mkushi Farm Block more food secure than those employed in the model;

- Outgrowing hhs in Magobbo greatly improved their incomes & food security
Commercial model has most local economic linkages

- Mkushi Farm Block stimulates local input and output markets (local trade in farming inputs and equipment);
- Zambeef Chiawa Estate is a textbook case of a relative ‘enclave economy’ poorly integrated in the local economy and has weak localised economy linkages;
- Magobbo Out-grower Scheme does not boost local markets as the block farming model mimics a plantation.
Conclusions – Commercial Model

- Commercial farm model provided the best opportunities for broad based rural livelihood improvement
  - Co-exists with smallholders of different sizes
  - Provide employment for those who need to supplement farming incomes
  - Local economic linkages for input/output markets with spill overs into non-farm goods and services
  - Own-farming remains key driver of improved livelihoods
Conclusions – Plantation Model

- The best plantation model offers is direct employment
- Few/limited opportunities the key draw back
- Workers may sometimes be immigrants
- Employment for those able to access it has led to positive impacts on farming activities and food security through wages
Conclusions – Outgrower Model

- Main benefit for outgrower schemes was contract to supply crop of interest by the nucleus estate
- Contracted outgrowers increase incomes and improve livelihoods
- Like plantation, key limitation is the few numbers involved in the scheme
- Limited numbers directly employed by the scheme