Food security impacts of value chain frontiers in Ethiopia: The case of Northern Ethiopia

Kebede Manjur, Crelis Rammelt, Maggi Leung and Annelies Zoomers
Contents

1. Introduction
2. Research questions
3. Methodology
4. Findings
5. Conclusion
6. Way forwards
1. Background

• Contemporary literatures have raised concerns on current land rush.

• In contrast, others claim it can play important developmental roles in the areas of:
  - food security, creating employment and foreign currencies

• In developing countries like Ethiopia land for investors for economic transformation took for guarantee

• However, the developmental impacts of land for investors is less clear.

• This conference paper considers these issues in Northern Ethiopia
2. Research questions

This paper draws on qualitative and quantitative data generated during fieldwork conducted between Februarys to May 2016.

• aimed at answering:-

1. How and to what extent agricultural investment affects local livelihoods trajectories?

2. What are the implications of agricultural value chains on local food security under environmental stress like drought?
3. Methodology

• Two districts where agricultural investment is dominant were purposefully selected (Humera and Raya Azebo) from Tigray Regional Sates of Ethiopia.
• But for this conference findings from Raya Azebo site will be presented.
Data collection Tools

Data were collected using Participatory Rural Appraisal tools (PRA) such as:

- a transect walk,
- group discussion,
- focused group discussion
- Case studies at different level
- Data sources
  - Farmers, daily labourer, traders, investors and experts
4. Research Findings
4.1 The land acquisition procedures

- Local people need to apply at their village

- However, Investors can apply at different levels

- Depending on the scale of the investment and where the investor come from

- There are differences in the procedure of land acquisition across regions and even within the same region at different localities
4.2. Impacts of Agricultural investment

- **Negative**
  - Natural Resources degradation
  - disruptions of Water canals
  - Shrinking grazing lands
  - Displacement/ dislocation

- **Positive**
  - Employment
  - Food Security
  - Knowledge transfer
  - Business development
1. Impacts on Natural Resources base

- Most of the areas owned by the investors were either communally used land for grazing, sources of fuel, fruit or wage incomes.

- Resources use conflict between investor and local people resulted in resource degradation.
Fear induced deforestation

Implying the negative consequences of flooding investors over the year’s threat security of local people on the natural resource as livelihood sources.
2. Disruption of traditional water canals

• Agricultural investments are located in low land areas

• Dry spells and drought prone areas

• Traditionally local people have different water harvesting structures
  – That requires trans-boundary water harvesting structures
  – However, areas surrounded by investors got disrupted
  – Resulting in decreasing moisture availability and crop yields

• This problem is severe during drought induced natural shocks where in host community suffer from food and feed shortages
3. Impact on livestock pasture

• The history of livestock farming in Ethiopia is the history of free grazing
• However, villages locked by investors were reported to have limited livestock free grazing and resulting in frequent disputes with investors.
• As a result, now it is common to see daily conflict
• During drought events livestock used to be fed with shrubs and cactus
• Cactus pear cladodes to satisfy their animals feed and water demands
• But, the commercial insect called cochineal invades the cactus and made out of use though it was introduced as economic insect
• Second cactus have cleaned in the area given to investors
## Displacement/ dislocating farmers

<table>
<thead>
<tr>
<th>Name of investor/ institution</th>
<th>Year</th>
<th>Who</th>
<th>ha</th>
<th>Functional</th>
<th>Displaced</th>
<th>Status of the displaced farmers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Savana PLC</td>
<td>2009</td>
<td>Diaspora</td>
<td>500</td>
<td>333(667%)</td>
<td>65</td>
<td>Have got land in exchange</td>
</tr>
<tr>
<td>Alamudi farm</td>
<td>2013</td>
<td>Mixed</td>
<td>500</td>
<td>0</td>
<td>60</td>
<td>Have got land in exchange</td>
</tr>
<tr>
<td>Valiverid PLC</td>
<td>2014</td>
<td>Spain</td>
<td>1150</td>
<td>Clearing stage</td>
<td>100</td>
<td>Not yet</td>
</tr>
<tr>
<td>Semure PLC</td>
<td>2006</td>
<td>Local</td>
<td>40</td>
<td>100</td>
<td>10</td>
<td>Have got land in exchange</td>
</tr>
<tr>
<td>Public institution</td>
<td>2014</td>
<td>Local</td>
<td>100</td>
<td>0/Clearing stage</td>
<td>17</td>
<td>compensated for one production year</td>
</tr>
<tr>
<td>Unifruit</td>
<td>2012</td>
<td>Isreal</td>
<td>1000</td>
<td>29(2.9)</td>
<td>5</td>
<td>Not compensated</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>259</td>
<td></td>
</tr>
</tbody>
</table>
4.3. Developmental impacts of Agricultural Investment (AI)
1. Employment impacts

- AI in rural area created ample casual employment opportunity
- Attitudinal change towards wage employment
  - Decrease conflicts between youths
  - Working culture improved
  - Permanent/full time employment
- Increase labor availability for local people
- Reduce youth out migration
- Employment chain
### Table 1. Value chain commodities and labor demand profiles of AI in Raya

<table>
<thead>
<tr>
<th>Commodities planted (ha)</th>
<th>Investors</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unifruit</td>
</tr>
<tr>
<td>Vegetable covered land</td>
<td>83.1</td>
</tr>
<tr>
<td>Other crops</td>
<td>16.9</td>
</tr>
<tr>
<td>Female : Male</td>
<td>3:2 (60%)</td>
</tr>
<tr>
<td>Local: others</td>
<td>3:2 (60%)</td>
</tr>
<tr>
<td>Total investment area</td>
<td></td>
</tr>
<tr>
<td>Average labour demand/ha</td>
<td></td>
</tr>
<tr>
<td>Daily labour demand</td>
<td></td>
</tr>
<tr>
<td>Wage rate/day at investors farm</td>
<td></td>
</tr>
<tr>
<td>Minimum wage rate</td>
<td></td>
</tr>
</tbody>
</table>
Who are the beneficiaries of this employment and wage issues?

- All social groups mainly the poor, landless youth and women

- Smallholders also engage for consumption smoothing

- Wage employment also enable youths to engage in share cropping and land renting

- “Most of the daily laborers are women ... actually this type of task is relatively simple labor”

- There is wage difference between male and female wage laborers (40-80)
Women engagement in wage labor
2. Food security impacts: Access

- Agricultural investment is the sources of casual labor employment
- In Raya as investment farming is irrigation based, triple harvesting per year is common practice.
- In terms of cropping pattern vegetable covers usually more than 60% of the total crop cultivation annually
- Daily about 11,288 (17%) causal labours are estimated to engage in the valley the
- But in Humera investors only have one harvest
- In Humera agro chemical use is forbidden (organic sesame production oriented)
- In both cases farming practices are labor intensive
Food security...

• This has resulted in increase number of consumers triggers in flourishing:-
  – Non-farm local business
  – Leading in formal and informal settlements
  – Increasing demand for rural house rents
  – Increased flow of urban goods
  – And increased flow of transport facilities which also helped smallholder farmers ease of their product marketing
# Income and expenditure analysis of casual laborers

<table>
<thead>
<tr>
<th>Expenditures (%)</th>
<th>M (%)</th>
<th>F (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Refreshments</td>
<td>15</td>
<td>5</td>
</tr>
<tr>
<td>Food expenses</td>
<td>30</td>
<td>25</td>
</tr>
<tr>
<td>Cloth expenses</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>Health expenses</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Educating family(child)</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td>Saving</td>
<td>10</td>
<td>15</td>
</tr>
<tr>
<td>Helping family</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>House rent</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>
Enhanced food security dimensions: Availability & utilization

- Vegetable production was uncommon practices was used to import

- Availability of fruits & vegetables increased and relatively stable over time

- Number of traders who engaged in vegetable increased

- But known “fresh” vegetable is among the dominant commodity

- Increased food diversity at HH level

- Now common to see vegetable in everyday meal of the community in both rural and urban settings
Affordability of vegetable increased: Stability

– Vegetable price in urban area shows decreasing trends from 24.375 (in 2003) to 8 ETB/kg (from 1 to 0.3 euro/kg).

– Stable supply in urban areas despite drought.

– But price fluctuation is common due to lack of proper cropping calendar and processing facilities.

– But availability of cereal staple cereal crop is unpredictable as this crops are grown in rain fed agriculture.

– Hence food availability at local area is getting less thought currently less noticed and will be also threat for urban areas in future.
Crop price trend 2010-2015

Teff, Maize, Sorghum, Wheat, Onion, Tomato

Increased local food availability of non-traditional crops
• Resulted in increased consumers/ purchasers as there is shift from cereal based farming to vegetables which are usual consumed in small amounts

• Price of cereal is also getting higher & higher from time to time though that of vegetables is getting cheaper and cheaper
### 3. Changing livelihood trajectory

<table>
<thead>
<tr>
<th>Livelihoods</th>
<th>Male N=110</th>
<th>Female N=80</th>
<th>Youth N=100</th>
<th>Old age N=19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rain fed cereal crop farming</td>
<td>100%</td>
<td>81.25</td>
<td>70</td>
<td>42.10</td>
</tr>
<tr>
<td>Irrigation (vegetable)</td>
<td>17.27</td>
<td></td>
<td>12</td>
<td>42.10</td>
</tr>
<tr>
<td>Shoat VC</td>
<td>27.28</td>
<td>37.5</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Vegetable trading (seedlings)</td>
<td></td>
<td>6.25</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Beef fattening</td>
<td>13.64</td>
<td></td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Wage</td>
<td>7.27</td>
<td>37.5</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>7.27</td>
<td>18.75</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Cash crop</td>
<td></td>
<td>+Petty trade</td>
<td>Wage</td>
<td></td>
</tr>
<tr>
<td>Fattening</td>
<td></td>
<td></td>
<td>fatte ning</td>
<td></td>
</tr>
</tbody>
</table>
4. Knowledge transfer enhanced

- Up take of improved farming improved by seeing by doing (investors vs smallholder farmers)
- There is also knowledge and practices change coming from investors
- Availability of agro inputs also increased
- Result in improved production at smallholder level
- Saving culture a bite enhanced
5. Local business development

- This agricultural investment driven influx of casual laborers, also enhances the within district urban-rural and elsewhere immigration that mainly located around road side villages to fetch the spill over effects of the casual labor demands.

- This in turn enhances the purchasing powers of the local people and the adjacent areas either through engaging in non-farm local business or as casual laborers indicating the existence of development chains within and between different space in a given development corridorS.
Enhance non-agricultural works in investment villages

Establishment of market center in the investment areas
5. Conclusion

- Agricultural investment has profound impact on host community land entitlement
- Beyond its negative impacts AI also plays pivotal role in the areas of food security and livelihoods in different ways.
- At village level this is seen in terms of wage employment
- At regional and provincial level this is expressed in terms of agricultural product out flow
- And the flow of urban functions
- Changing patterns and frequency of people mobility
- Expansion of AI improved food security
- Under climate shock intensive AI enables to maintain food security of local people and their livestock assets
6. Way forwards

• Our finding shows the present of ample opportunity created by the existing AI in vegetable value chain

• But the only channel on the commodity value chain is fresh vegetable orientation

• Hence, a more efficient value chain that supplies minimally processed foods that link urban centers and consumers need to be strengthened
Way forwards

• Given the connectedness of space, we observe that all types of development have a cross boarder effects (translocal component) rather than being locally confined.

• i.e what is being happening in investment sites, was found to have direct and indirect implications on development outcome for what is happening in near by villages and urban center

• Hence, an understanding of the impact of development interventions will require to incorporate what happens at various locations simultaneously, rather than taking a space-bounded view where interventions take place.
• Thank you