Youth Business Groups in Tigray: Evidence from a census of 742 groups in five districts

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Introduction

• Initial study of youth business groups in Tigray in 2016
  – Funding from NMBU (own funds of project leader) and NORHED capacity building project “CLISNARP”
  – We heard about this new local initiative and got curious
    • Implemented a census in 5 districts
Pre-project Data

• Census of 742 groups in five districts in 2016
  – Average group size: 19 members
  – Early 2016: collected a range of baseline information on each youth group.

• Member survey of 119 youth business groups
  – Survey and lab-in the field experiments with 1142 individual group members in August 2016
  – Sample of maximum 12 members from sampled groups

• Second round survey and experiments of same groups and members in 2017
What is the “Youth Business Group Model” in Tigray?

• Landless or near landless rural residents (mostly youth) that seek a rural livelihood within their home community and apply for land access
• Communities set aside rehabilitated communal land for distribution to groups
• Self-selection of group members most common in a village (got)
• Local administration/experts allocate land and define a suitable production activity on that land
• The group establishes a primary cooperative, based on cooperative law, that is given the land area
Primary cooperatives

• Elect a **board of five members**
  – Leader, vice leader, secretary, accountant, treasury

• Develop their **own bylaw**

• Are required to prepare a **business plan** that has to be accepted by the local authorities

• Are required to **protect the land** area they are given

• After two years of good performance the group is given a letter that give them a **conditional right to the allocated land**

• Are subject to **auditing** (likelihood depends on administrative capacity)
Organization of group activities

• **Frequent group meetings** where important decisions are made
• Open election of board members
• **Equal sharing of group work and income from group production activities**
• **Limited power of leaders**: Organize based on decisions by group
• Division of labor among board members
• **Everybody are required to contribute** and participate in all work activities decided by the group
Youth group size distribution

Probability distribution

Youth group size, number of members

Group size 2016
Initial group size
Gender distribution in youth groups

Probability distribution

Female share in youth group

Current female share
Female share at start
All members are not youth...

Age distribution of youth group members
Sample of 1130 youth in 119 groups

Age distribution by gender
Sample of 1130 youth in 119 youth groups

Age in years

Age of individual group members, years

- Age distribution all members
- Age distribution group leaders

- Females
- Males
Education by gender and position in youth groups

Education of YG members by gender
Sample of 1130 youth in 119 groups

Education of group members by position in group

Probability distribution

Years of education

- Group leader
- Vice group leader
- Secretary
- Accountant
- Treasurer
- Ordinary member
Gender differences in Endowments and Income

Gender differences: Males vs. Females

Endowments and Incomes
- Livestock
- Durable assets, number
- Group activity net income
- Complementary net income

95% confidence intervals based on bootstrapped standard errors
Who becomes group leader?

Group leadership model

Factors enhancing the likelihood of being leader

- Education, years
- Male, dummy
- Age, years
- Mobile phone owner, dummy

Average Marginal Effects
## Income sources of youth

### August 2015 – July 2016

<table>
<thead>
<tr>
<th>Income Source</th>
<th>Rank 1, %</th>
<th>Rank 2, %</th>
<th>Rank 3, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Youth group activity</td>
<td>7.0</td>
<td>27.6</td>
<td>16.8</td>
</tr>
<tr>
<td>Land renting/Sharecropping</td>
<td>16.8</td>
<td>14.0</td>
<td>3.5</td>
</tr>
<tr>
<td>Trade</td>
<td>9.6</td>
<td>7.4</td>
<td>3.4</td>
</tr>
<tr>
<td>Construction work</td>
<td>10.9</td>
<td>8.7</td>
<td>4.5</td>
</tr>
<tr>
<td>Support from family</td>
<td>20.9</td>
<td>10.3</td>
<td>3.5</td>
</tr>
<tr>
<td>Own farm</td>
<td>29.2</td>
<td>5.3</td>
<td>1.9</td>
</tr>
<tr>
<td>Other, specify</td>
<td>5.7</td>
<td>5.7</td>
<td>3.0</td>
</tr>
<tr>
<td>No activity</td>
<td>0</td>
<td>20.9</td>
<td>63.5</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>
Expected main source of income five years into the future

<table>
<thead>
<tr>
<th>Source of income</th>
<th>Freq.</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Youth group activity</td>
<td>691</td>
<td>60.72%</td>
</tr>
<tr>
<td>Land renting/Sharecropping</td>
<td>67</td>
<td>5.89%</td>
</tr>
<tr>
<td>Trade</td>
<td>137</td>
<td>12.04%</td>
</tr>
<tr>
<td>Construction work</td>
<td>20</td>
<td>1.76%</td>
</tr>
<tr>
<td>Support from family</td>
<td>9</td>
<td>0.79%</td>
</tr>
<tr>
<td>Own farm</td>
<td>189</td>
<td>16.61%</td>
</tr>
<tr>
<td>Other, specify</td>
<td>11</td>
<td>0.97%</td>
</tr>
<tr>
<td>Do not know/Very uncertain</td>
<td>6</td>
<td>0.53%</td>
</tr>
<tr>
<td>Missing responses</td>
<td>8</td>
<td>0.7%</td>
</tr>
<tr>
<td>Total</td>
<td>1,138</td>
<td>100%</td>
</tr>
</tbody>
</table>
What are the most important/serious threats to the sustainability of the group

<table>
<thead>
<tr>
<th>Responses from 742 group leaders</th>
<th>Rank 1, %</th>
<th>Rank 2, %</th>
<th>Rank 3, %</th>
<th>Rank 4, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Too low productivity of the land due to water scarcity</td>
<td>17.1</td>
<td>6.7</td>
<td>2.7</td>
<td>2.7</td>
</tr>
<tr>
<td>Poor market access for inputs</td>
<td>4.0</td>
<td>5.0</td>
<td>2.3</td>
<td>1.8</td>
</tr>
<tr>
<td>Poor market access for outputs</td>
<td>26.3</td>
<td>24.1</td>
<td>8.2</td>
<td>1.5</td>
</tr>
<tr>
<td>Lack of skills/training</td>
<td>3.5</td>
<td>4.7</td>
<td>5.8</td>
<td>2.0</td>
</tr>
<tr>
<td>Lack of capital/credit</td>
<td>9.0</td>
<td>11.7</td>
<td>8.6</td>
<td>2.2</td>
</tr>
<tr>
<td>Lack of complementary income for members</td>
<td>8.0</td>
<td>17.5</td>
<td>17.5</td>
<td>7.3</td>
</tr>
<tr>
<td>Lack of motivation among group members</td>
<td>6.6</td>
<td>10.1</td>
<td>17.4</td>
<td>5.1</td>
</tr>
<tr>
<td>Internal cooperation problems in group</td>
<td>20.0</td>
<td>10.5</td>
<td>7.7</td>
<td>2.7</td>
</tr>
<tr>
<td>Other</td>
<td>5.0</td>
<td>3.0</td>
<td>1.9</td>
<td>0.7</td>
</tr>
<tr>
<td>No response</td>
<td>0.5</td>
<td>6.6</td>
<td>27.9</td>
<td>74.1</td>
</tr>
</tbody>
</table>
Investment loans, training needs & satisfaction with production activities by main production type

<table>
<thead>
<tr>
<th>Responses from 742 group leaders in 2016</th>
<th>Animal rearing</th>
<th>Bee keeping</th>
<th>Forestry</th>
<th>Irrigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of groups with investment loan</td>
<td>27.9</td>
<td>51.6</td>
<td>7.1</td>
<td>24.0</td>
</tr>
<tr>
<td>% of groups with additional training need</td>
<td>92.1</td>
<td>92.5</td>
<td>95.2</td>
<td>96.9</td>
</tr>
<tr>
<td>% satisfied with current prod. activities</td>
<td>65.0</td>
<td>69.2</td>
<td>71.4</td>
<td>77.1</td>
</tr>
<tr>
<td>% who want more production activities</td>
<td>18.6</td>
<td>17.0</td>
<td>16.7</td>
<td>15.6</td>
</tr>
</tbody>
</table>
Eucalyptus + beehive group
Eucalyptus enriched forest
Bee hive group
Rehabilitated land, horticulture group
Rehabilitated land (WB/NTF-funded)
Animal fattening group
Shed for livestock during night
Hardin versus Ostrom

• One basic question is whether allocation of rehabilitated forests and grazing lands to youth groups has a high risk of ending as a “Tragedy of the Commons”? (Hardin 1968)

• Or alternatively, whether such groups have a high probability of being able to cooperate and establish sustainable livelihoods and behave more in line with the Design Principles of Elinor Ostrom?

• Can lessons be learnt from the degree of compliance and the early performance of youth groups?
<table>
<thead>
<tr>
<th>DP No</th>
<th>Short name</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Clearly defined borders</td>
<td>Individuals with rights to the common pool resource (CPR) must be clearly defined and the same applies to the borders of the CPR</td>
</tr>
<tr>
<td>2</td>
<td>Matching appropriation and provision rules</td>
<td>There must be a balance between appropriation rules (benefit sharing rules), provision rules (required contributions by group members) and this must match the CPR</td>
</tr>
<tr>
<td>3</td>
<td>Collective choice arrangements</td>
<td>There must be an inclusive decision-making process related to adjustment of rules for CPR utilization and management</td>
</tr>
<tr>
<td>4</td>
<td>Monitoring</td>
<td>There must be an accountable monitoring system in place that monitors the CPR management and ensures its protection</td>
</tr>
<tr>
<td>5</td>
<td>Graduated sanctions</td>
<td>Appropriators who violate the rules for CPR management or extraction face graduated sanctions depending on the seriousness of the violation or repetition of violations</td>
</tr>
<tr>
<td>6</td>
<td>Conflict resolution mechanism</td>
<td>Appropriators have a good and efficient (low-cost) system for conflict resolution among themselves and between appropriators and outsiders</td>
</tr>
<tr>
<td>7</td>
<td>Recognized rights to organize</td>
<td>Government bodies allow groups to self-organize by forming own internal rules of conduct</td>
</tr>
<tr>
<td>8</td>
<td>Nested enterprises</td>
<td>Appropriation, provision, monitoring, enforcement, conflict resolution, and government activities are organized in multiple layers of nested enterprises</td>
</tr>
</tbody>
</table>
Objectives

A) This study investigates the extent to which the newly formed youth groups in northern Ethiopia comply with Ostrom’s Design Principles the way they are organized.

B) Assess how their compliance with the Design Principles is correlated with a number of early performance indicators for the youth groups in terms of their stability, trust and overall performance.
Degree of compliance with Ostrom's DPs

Probability density

Aggregate of Design Principle variables

kernel = epanechnikov, bandwidth = 0.1779
The importance of Ostrom’s Design Principles: Youth group performance in northern Ethiopia

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Conclusions

• Our study revealed a high degree of compliance with Ostrom’s Design Principles across the youth groups:
  – Ostrom’s «Invisible hand» is with us😊
  – And it seems to enhance group performance

• Overall, the youth business group model shows promise

• Still, they face many challenges
  – A lot of room for improvement

• The youth business group model is worth testing elsewhere
Potential, advantages and requirements of the approach

• Facilitates self-organization & mobilization

• Facilitates formalization and orchestration
  – System for planning and training (economies of scale)
  – Service provision

• Can be used in urban as well as rural areas
  – Temporary or permanent groups
  – Many types of activities

• Requires
  – Allocation of rights/resources
  – Planning and organizational capacity/system
  – Training (technical skills, business skills)
  – Marketing, diversification, precessing (value chain integration)
Tentative ideas on Potential

• The Youth Group Model may help facilitate rural transformation
  – Establishment of larger and more professional businesses (from micro farms to small commercial farms)
  – Contract farming may be one option
  – Marketing & processing (value chain) development is essential
  – Clusters of groups may organize joint marketing (e.g. dairy cooperatives)
Information about our research

• Website of Centre for Land Tenure Studies at NMBU:
  – [www.nmbu.no/clts](http://www.nmbu.no/clts)
    • Working papers
    • Journal papers
    • Reports
    • Summaries
    • News

• ResearchGate: Project link:
References

• **Journal paper:**

• **Working papers:**