Drought Micro-insurance in Ethiopia: An Innovative Model to Increase the Resilience of the Poorest Households

Index Insurance Innovation Initiative

January, 2010
Rome, Italy

Dir biyabir anbessa yassir.

“When spiders’ webs unite, they can tie up a lion.”
Horn of Africa Risk Transfer for Adaptation

HARITA (11/07-12/09): A Case Study in

- Community-driven CC adaptation;
- Holistic drought risk management;
- Weather index insurance, designed for/by farmers;
- Replicable/scalable approach

- Trust, Education, Demand-Side Focus
Selected Partners & Advisors

Adi Ha Multipurpose Farmers Cooperative

Relief Society of Tigray (REST)
Nyala Insurance Co.
DECSI microfinance institution
National Meteorological Agency
Tigray Food Security Office
Mekele University
Institute for Sustainable Dev’t

Oxfam America
Swiss Re
Columbia University/IRI
The Rockefeller Foundation
Index Insurance Innovation Initiative (I4)
1996...

Foundation of Trust in Adi Ha & Today
Playing Experimental Games

21 Farmers Collecting Rain Data

Enrollment Day Testimonial

Design Team Learning to Measure Rainfall
HARITA Conceptual Framework

Holistic Risk Management

1. Disaster Risk Reduction
2. Residual Risk Transfer
3. Prudent Risk Taking

Risk Reduction

CREDIT

INSURANCE
Complement Informal Insurance & Ethiopia’s Productive Safety Net Program (PSNP)

PSNP: “Predictable Transfer for Predictable Needs”
Insurance: “Predictable Transfer for Unpredictable Needs”
Standalone Insurance Package

Package Characteristics
Percentage premium price: 24%
Expected payout just over 1 in 5
No *direct* price subsidy

Results (May 2009)
200 hh purchased (approx. 20% of all households)
Avg. premiums: 138 ETB*, 1.8X minimum option
*adjusted for landholding
The majority (65%) of buyers were PSNP participants. On average, PSNP purchased more cover than non-PSNP.
Female vs. Male Headed Households

- 38% of all enrollees: female head of hh
- Vast majority purchased with labor
### Post-Rollout Survey

<table>
<thead>
<tr>
<th>(Peterson 2009)</th>
<th>Buyer?</th>
<th>N</th>
<th>Mean</th>
<th>Std Dev</th>
<th>Std Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender (% women) (F=14.019, p&lt;0.000)</td>
<td>Non-buyer</td>
<td>68</td>
<td>0.1471</td>
<td>0.3568</td>
<td>0.04327</td>
</tr>
<tr>
<td></td>
<td>Buyer</td>
<td>114</td>
<td>0.4035</td>
<td>0.49277</td>
<td>0.04615</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>182</td>
<td>0.3077</td>
<td>0.46281</td>
<td>0.03431</td>
</tr>
<tr>
<td>Age of household (F=31.726, p&lt;0.000)</td>
<td>Non-buyer</td>
<td>68</td>
<td>48.1029</td>
<td>15.10277</td>
<td>1.83148</td>
</tr>
<tr>
<td></td>
<td>Buyer</td>
<td>114</td>
<td>37.0439</td>
<td>11.23867</td>
<td>1.0526</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>182</td>
<td>41.1758</td>
<td>13.85887</td>
<td>1.02729</td>
</tr>
<tr>
<td>PSNP participation (% who participate) (F=19.967, p&lt;0.000)</td>
<td>Non-buyer</td>
<td>66</td>
<td>0.3182</td>
<td>0.46934</td>
<td>0.05777</td>
</tr>
<tr>
<td></td>
<td>Buyer</td>
<td>111</td>
<td>0.6486</td>
<td>0.47956</td>
<td>0.04552</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>177</td>
<td>0.5254</td>
<td>0.50077</td>
<td>0.03764</td>
</tr>
</tbody>
</table>
## Post-Rollout Survey

<table>
<thead>
<tr>
<th>Table 51: Differences in characteristics of buyers vs. non-buyers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Peterson (2009)</strong></td>
</tr>
<tr>
<td>---------------------</td>
</tr>
<tr>
<td>Timad of rainfed land you own (F=6.61, p&lt;0.011)</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Timad of irrigated land you own (F=5.842, p&lt;0.017)</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Timad of teff grown last season (F=7.389, p&lt;0.007)</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
TOP REASONS FOR PURCHASE

Generally worried about drought: 55.3%

Looking for additional coping mechanism: 20.2%

Trust organizations involved: 7%

Want to try something new: 6.1%
TOP REASONS FOR NON-PURCHASE

Unaware of the opportunity to buy: 40.7%
Did not understand insurance: 12.8%
No reason: 30%

SATISFACTION RATES

Price: 93%
Coverage period: 95.6%
Crop used: 82.5%
Satellite data ok: 89.5%
Complaint process: 92.1%
Future Research

• Does this approach really benefit the **poorest** farmers? IFW vs cash may make a difference.

• How much insurance is optimal?

• How to measure benefits of risk reduction/labor? Affects value proposition and CBA.

• How replicable? How scalable?

• Farmers manage basis risk via savings or *gamgam*??
Thank you!

For more information, please contact:

David Satterthwaite
Sr. Global Microinsurance Officer,
Private Sector Department
Oxfam America
dsatterthwaite@oxfamamerica.org
The Distribution Model
Predictable Transfers for Predictable Needs (PSNP 8 million beneficiaries)

Predictable Transfers for Unpredictable Needs (Drought Insurance Proposal)

Donors, GoE

New Donors (Oxfam Yr. 1) (Later: CC Adaptation Funds, CDM, Carbon Credits?)

Local Insurer (Nyla) & Global Reinsurer (Swiss Re)

Cash-for-Work Program (PSNP in Tigray)

Microfinance Institution (DECSI)

Poorest Households (PSNP Participants)

Poor Households (Non-PSNP Participants)

Drought index triggered

Donations

Premiums

Ins. Voucher

Cash / Grain

Payouts

Credit

Repmts

Payouts

New Donors

Labor