The Design of Social Protection Programs for the Poor:

In-Kind Asset Transfers versus Unconditional Cash Transfers

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Social Protection Programs

• This study:
  • compare household responses to in-kind asset transfers vs. unconditional cash transfers

• design of SPP is a key policy issue for many countries:
  – evidence base on high returns to asset transfers [Banerjee et al. 2015, Bandiera et al. 2015]
  – emerging evidence on the efficacy of UCT [Blattman et al. 2014]

• Pakistan policy debate: BISP UCT, in-kind asset transfers...

• Economic theory: with perfect markets and standard decision making processes, always possible to perfectly replicate outcomes from in-kind transfers using UCT

• Implication: can never do worse with UCT
Why Might Returns to In-kind and Cash Transfers Differ?

- **market imperfections** faced by the poor:
  1. transactions costs in accessing markets: distance/time
  2. missing/imperfect markets: skills, information [Das et al 2005, de Janvry and Sadoulet 2005]
  3. informal taxation by kin (imperfect market for social insurance) [Fafchamps et al. 2013, Angelucci et al. 2015]

- **decision making** of the poor:
  4. household decision making: marital preferences/bargaining
  5. individual (unitary) decision making:
     - labelling/mental accounting/flypaper effects
     - commitment/self-control
     - demand for control
Policy Issues for Choice Between In-Kind and UCT

• **political support** among non-beneficiaries might hinge on in-kind over cash

• **endorsement effects** of in-kind (or labelled) transfers
  [Benhassine et al. 2013]

• in-kind transfers more **costly to implement** than UCT
  – parallels to literature comparing CCT and UCT

• Our study: understand how such concerns might need to be weighed against the **differential effectiveness** of the two types of SPP
PPAF Intervention Components

• HH listing in each village [poverty scores 0-100]
• Eligible households: poverty score 0-18
  – the poorest 30% of households

• Market assessment in all villages
• T1: choice of in-kind transfer from asset menu
  – household can choose multiple asset-skill bundles up to the value of PKR62K
• T2: same choice but with one more listed option
  – equivalent valued UCT [PKR62K]
Example of a Village Asset List

<table>
<thead>
<tr>
<th>Livestock</th>
<th>Retail</th>
<th>Crop Farming</th>
<th>Non-Livestock Production</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goat Raising (One Goat @ 15k)</td>
<td>Grocery Shop (material up to 50k)</td>
<td>Cultivation of cotton (seeds 20k + fertilizer 15k)</td>
<td>Tailoring (Sewing machine 6k + table 4k)</td>
</tr>
<tr>
<td>Dairy Farming (One Cow @ 48K)</td>
<td>Fruit Stall (Stall @ 5k + Fruit up to 45k)</td>
<td></td>
<td>Pesticides @ 50k</td>
</tr>
<tr>
<td>Calf Rearing (One Calf @ 25k)</td>
<td>General Store @ 50k</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fodder @ 50k</td>
<td>Barber Shop @ 35k</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Veterinary Medical Store @ 50k</td>
<td>Carpenter Shop @ 30k</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Animal Breeding Shop @ 40k</td>
<td>Cycle Repairing Shop @ 35k</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Household can choose **multiple asset bundles** up to the value of **PKR50K**
- **Fine tuning:** prices shown are indicative average values, but lots of variation (e.g. depending on age and breed of cow: 30-70K)
- Associated training always valued at additional **PKR12K**
Surveys and Timeline

Community Surveys
- Village Mapping: Jan – Aug 2012

Household Survey Instruments
- Baseline Survey: Feb – Jun 2013
- Social Mobilization: Oct – Dec 2013
- Asset/Cash Transfers: Jan – Mar 2014
- Tri-annual Trackers: May – Aug 2014

Livestock Supply Side Surveys
- Supply Side Phase 1: July – Sep 2012
- Supply Side Phase 2: Oct 2012 – Mar 2013
The map shows the study area covering four districts in Punjab. There are 45 Control villages and 58 Treatment villages. Treatment villages are divided between 29 villages in Treatment group 1 (receiving the offer of in-kind asset transfers and associated training), and 29 villages in Treatment group 2 (receiving the offer of in-kind asset transfers and associated training, or the equivalent unconditional cash transfer).

- Stratified random sampling: strata are geography and village size
- [Table 1: Random Assignment – villages and households look identical before the intervention]
## Asset Choices

<table>
<thead>
<tr>
<th>Asset Category</th>
<th>Treatment 1</th>
<th>Treatment 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number of HHs</td>
<td>Percentage</td>
</tr>
<tr>
<td>Livestock: Productive Animals</td>
<td>518</td>
<td>58.5</td>
</tr>
<tr>
<td>Livestock: Draft Animals</td>
<td>222</td>
<td>25.1</td>
</tr>
<tr>
<td>Livestock: Combination</td>
<td>29</td>
<td>3.3</td>
</tr>
<tr>
<td>Retail</td>
<td>84</td>
<td>9.5</td>
</tr>
<tr>
<td>Crop farming</td>
<td>8</td>
<td>0.9</td>
</tr>
<tr>
<td>Other Asset Choices</td>
<td>24</td>
<td>2.7</td>
</tr>
<tr>
<td><strong>Cash</strong></td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>885</td>
<td>100</td>
</tr>
</tbody>
</table>
T2: Intended Use of UCT

- Livestock Related Business Activity: 78%
- Non-Livestock Related Business Activity: 14%
- Employment: 5%
- Asset for Household Use: 14%
- Education: 5%
- Rituals: 5%
- Other/Multiple Categories:

Not much intention to use UCT for assets we did not offer (e.g. education, migration)
## T2: Actual use of UCT

### Livestock Choices/Purchases

<table>
<thead>
<tr>
<th>Animal Type</th>
<th>Proportion of HHs that Chose Animal</th>
<th>Average Price per Animal (Rs)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1) Treatment 1 [In-Kind]</td>
<td>(2) Treatment 2 [UCT]</td>
</tr>
<tr>
<td>Cows</td>
<td>.228 (.420)</td>
<td>.201 (.401)</td>
</tr>
<tr>
<td>Calves</td>
<td>.447 (.498)</td>
<td>.158 (.365)</td>
</tr>
<tr>
<td>Buffaloes</td>
<td>.060 (.237)</td>
<td>.030 (.171)</td>
</tr>
<tr>
<td>Goats</td>
<td>.186 (.390)</td>
<td>.145 (.353)</td>
</tr>
</tbody>
</table>

| % HHs with livestock transfer/purchase | 86.9% | 46.1% |

Means, standard deviation in parentheses

More variation in prices paid for livestock with UCT
Very Short Run Impacts [one year]

- Labor market activity by spouse:
  - extensive margin
  - intensive margin
- Expenditures:
  - consumption, savings, investment
Labor Market Activity: **Extensive Margin**

**Men**

- Economically Inactive: 11%
- Casual Wage Labor: 36%
- Other Wage Labor: 18%
- Livestock Rearing: 31%
- Other Self-employment: 13%

**Women**

- Economically Inactive: 53%
- Casual Wage Labor: 32%
- Other Wage Labor: 6%
- Livestock Rearing: 11%
- Other Self-employment: 2%

**Treatment 1 [In-Kind]**

- Men: -10%
- Women: -5%

**Treatment 2 [UCT]**

- Men: 0%
- Women: 5%
Labor Market Activity: Intensive Margin

Total Hours per Month Spent Working in any Activity

- **Men [181]**
  - Treatment 1 [In-Kind]
  - Treatment 2 [UCT]

- **Women [86]**
  - Treatment 1 [In-Kind]
  - Treatment 2 [UCT]

- **Household [251]**
  - Treatment 1 [In-Kind]
  - Treatment 2 [UCT]
Expenditures

Household Level Outcomes: % Change

- Monthly Food Consumption (per AE, Rupees)
- Monthly Non-Food Consumption (per AE, Rupees)
- Monthly Savings (Rupees)
- Monthly Investment in Business Assets (Rupees)
- Monthly Investment in Non-Business Assets (Rupees)
- Total Expenditure

[Graph showing the percentage change in expenditures for different categories under two treatments: Treatment 1 [In-Kind] and Treatment 2 [UCT].]
In Pakistan, even after very short run of one year, we see some important wedges opening up in differential responses to in-kind asset transfers and UCT:

- economic activity of women
- engagement in livestock rearing activities
- total hours of labor supplied across work activities
Next Step 2: Heterogeneous Impacts

Change in Household Employment Hours per Month

- Close
- Remote
- No Extended Family
- Extended Family Present

Treatment 1 [In Kind] vs Treatment 2 [UCT]

% Impact on Household Savings

- Close
- Remote
- No Extended Family
- Extended Family Present

Treatment 1 [In Kind] vs Treatment 2 [UCT]
Next Step 3: GE Effects

**Evaluation Design: Household Sampling**

<table>
<thead>
<tr>
<th></th>
<th>Treated Ultra Poor</th>
<th>Non-treated Ultra Poor</th>
<th>Non-Poor</th>
<th>Total Households</th>
</tr>
</thead>
<tbody>
<tr>
<td>Household Census</td>
<td>1832</td>
<td>7605</td>
<td>32061</td>
<td>41498</td>
</tr>
<tr>
<td>Baseline Survey</td>
<td>1688</td>
<td>1662</td>
<td>11063</td>
<td>14413</td>
</tr>
<tr>
<td>Livelihood Investment Plan</td>
<td>1832</td>
<td>0</td>
<td>0</td>
<td>1832</td>
</tr>
<tr>
<td>Tracker 1</td>
<td>1809</td>
<td>1554</td>
<td>0</td>
<td>3363</td>
</tr>
<tr>
<td>Tracker 2</td>
<td>1806</td>
<td>1518</td>
<td>0</td>
<td>3324</td>
</tr>
<tr>
<td>Midline Survey</td>
<td>1772</td>
<td>5917</td>
<td>10234</td>
<td>17923</td>
</tr>
</tbody>
</table>

- Evaluation of impacts of in-kind transfers versus UCT on Ultra Poor households
- Spillover effects on other Ultra Poor households in the same village
- Spillover and distributional effects non-poor households in the same village

- Village wide spillover effects can differ between in-kind and UCT transfers targeted to the UP:
  - cash creates pure income effect on demand for goods
  - have differential price effects [Cunha 2013, Cunha, De Giorgi and Jayachandran 2014]