Can Entrepreneurship Programs Transform the Economic Lives of the Poor?

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The Issues

- the poorest households are typically engaged in low productivity occupations/underemployed

- economic development requires productivity increases:
  - for a given occupational structure/set of activities [info, credit]
  - through changes in the choice of economic activity

- yet there is limited evidence on whether and how policies can affect occupational choice
The Questions

- lack of skills and assets make the poorest potentially less responsive to some existing programs [e.g. microfinance, technology transfers]

- we evaluate an innovative program that tackles constraints related to both skills and assets
  - can entrepreneurship be taught to the very poorest?
  - can it transform the economic lives of the poor?

- beyond the impacts on beneficiaries, we measure spillover effects on other households in the same community, operating through labor markets
BRAC’s Ultra Poor Program

- STUP (Specially Targeted Ultra Poor), key components:
  - asset transfer (livestock), average value 9,000TK ($130)
  - enterprise training
  - subsistence allowance (Tk 15 per day) for the first 40 weeks
  - tailor made health support and community mobilization
  - lessons in micro-finance and invitation to join after 18-24 months

- scale-up: to reach 500,000 households in 40 districts by 2011 at a cost of TK20,700 ($300) per household
Identifying the Ultra-Poor (UP)

- communities engage in participatory wealth ranking
- all households in lowest wealth rank are included in a "primary selection survey"
- beneficiaries chosen after further examination to verify exclusion/inclusion criteria
- note: ongoing forms of village level participation into the programme (village committees)
The Lives of the Ultra-Poor at Baseline

- low human capital: 7% literate, 18.3 average BMI
- low PCE: 2/3 of average PCE in middle class, 1/3 of top class
- stark wealth inequality: 3% of mean middle class wealth, 0.5% of top class
  - 45% of UPs own no assets
  - average value of asset transfer = 2X initial wealth
- [Table 1A]
<table>
<thead>
<tr>
<th></th>
<th>STUPs</th>
<th>Other poor</th>
<th>Middle class</th>
<th>Upper class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of households</td>
<td>6,819</td>
<td>8,628</td>
<td>5,390</td>
<td>4,231</td>
</tr>
<tr>
<td>HH Head Male</td>
<td>.58</td>
<td>.78</td>
<td>.94</td>
<td>.95</td>
</tr>
<tr>
<td>Female respondent is literate</td>
<td>.07</td>
<td>.16</td>
<td>.27</td>
<td>.52</td>
</tr>
<tr>
<td>Female respondent BMI</td>
<td>18.3</td>
<td>18.9</td>
<td>19.3</td>
<td>20.3</td>
</tr>
<tr>
<td>Total Pce (Tk)</td>
<td>3961.1</td>
<td>4247.1</td>
<td>5563.3</td>
<td>11973.2</td>
</tr>
<tr>
<td>Wealth (Tk)</td>
<td>5619.8</td>
<td>14009</td>
<td>153318.7</td>
<td>853426.6</td>
</tr>
<tr>
<td>Livestock value</td>
<td>869.9</td>
<td>2553.1</td>
<td>12876.8</td>
<td>31304.6</td>
</tr>
<tr>
<td>Durables value</td>
<td>375.8</td>
<td>566.8</td>
<td>1620.3</td>
<td>5967.5</td>
</tr>
<tr>
<td>Savings (Tk)</td>
<td>142.3</td>
<td>389.9</td>
<td>1617.6</td>
<td>9297.1</td>
</tr>
</tbody>
</table>
The Occupational Choices of the Ultra-Poor at Baseline

- Stark differences in occupational structure for both men and women:
  - incidence of wage work (maid, agricultural) decreases with wealth
  - incidence of self employment (livestock, land) increases with wealth

- poor women work more hours, no difference for men across wealth classes

- [Table 1B]
Table 1: Baseline Summary Statistics

Averages

<table>
<thead>
<tr>
<th></th>
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<th>Other poor</th>
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<th>Upper class</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Female respondent, hours spent in:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-employment</td>
<td>413.4</td>
<td>502.8</td>
<td>700.4</td>
<td>769.5</td>
</tr>
<tr>
<td>Wage employment</td>
<td>723.5</td>
<td>435.3</td>
<td>110.9</td>
<td>42.6</td>
</tr>
<tr>
<td>All income generating</td>
<td>1136.8</td>
<td>938.3</td>
<td>811.3</td>
<td>812.1</td>
</tr>
<tr>
<td><strong>Male head, hours spent in:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-employment</td>
<td>572.8</td>
<td>750.8</td>
<td>1252.9</td>
<td>1556.1</td>
</tr>
<tr>
<td>Wage employment</td>
<td>1074.6</td>
<td>1060.4</td>
<td>638.1</td>
<td>254.6</td>
</tr>
<tr>
<td>All income generating</td>
<td>1651.9</td>
<td>1813.1</td>
<td>1894.5</td>
<td>1816.6</td>
</tr>
</tbody>
</table>
Mechanisms: Beneficiary Households

• the program loosens two constraints:
  – lack of productive assets
  – lack of skills and information on how to use assets

• both channels increase the returns to self-employment vis-à-vis wage labor

• overall effect on labor supply and occupational choice depends on:
  – whether individuals were previously at full-employment
  – the balance of the income and substitution effects
Mechanisms: Spillover Effects on Other Households

• the program potentially affects the occupational choice of 10-15% of the population in each community (the UP)
  → reduces the supply of casual labor and can increase the casual wage

• the program also injects wealth in the community in the form of livestock
  → increases the demand for livestock labor

• both affect the potential earnings and hence the occupational choice of other hhs in the community
  – households that are close substitutes in the labor market to the UP
  – those socially connected to the UP
  – wealthier households that were previously contracting with the UP
Randomized Evaluation

- randomization at the branch (sub-district) level: half the branches randomly assigned to be treated in 2007
- remaining branches will be treated in 2011
- UP are identified in both treatment and control communities
- survey all UP plus a representative 10% sample from other wealth classes
- 40 branches, 1409 communities, 25,068 households
Evaluation: Description

- full compliance: all selected UP participated in the program
  - intensive personalized support ends after 24 months
  - UPs can sell the assets after that

- average 800 days between baseline and follow-up
  - 96% of UP at follow-up have at least a cow/goat (46% at baseline)
  - 91% of UP at follow-up have at least one cow (6% at baseline)

- survey design: detailed information on income generating activities: measure the transformation of occupational choices
Treatment on the Treated: Occupational Structure

- UP women more than double time devoted to self-employment (husbandry and land cultivation) – close the gap with top classes

- reduce time devoted to wage employment (agr labor and maid services)

- the increase in self-employment (550 hours) is much larger than the drop in wage employment (100 hours)

  → overall labor supply increase (leisure consumption decrease)

  → labor income increases by 1,918 (recall baseline PCE of UP was 3961)
Treatment on the Treated: Other Occupation Related Changes

- other hh members also increase hours devoted to self-employment activities
  - effect strongest for male head (if present): a 50% increase from baseline

- increase in asset holding mirrors occupational changes:
  - value of livestock owned increases 14 times
  - **complementary** assets increase as well: animal sheds and shops

- increase in size of land cultivated, both through ownership and rental
Treatment on the Treated: Savings

- amount of savings increase four-fold: reduced vulnerability to income shocks
- conditional on borrowing (lending), average loan size increases by 37% (150%)
- perhaps microfinance effects will be different now that occupational transformation has occurred?
Welfare

- change in occupation → increase income → increase expenditures

- food, non-food and total PCE increase by 7%, 21% and 10%, respectively

- food security increases by 1/3

- price per calorie (proxy for food quality) increases by 5%
Cost-Benefit Analysis

- program costs TK 20,700 per household

- yearly income of female respondent increases by TK 1,918 ≈ 10% of initial cost – probably an underestimate of the long-run effects

- an equivalent cash transfer at going interest rates (6%) would have yielded TK1080 per year

- hence program generates a rate of return almost double that of cash transfers alone
Spillover Effects: Labor Markets

- given its large effect on the poorest 10-15% of the population, the program is likely to have spillover effects on other households
- focus on labor market spillovers: maid services and casual agricultural labor, separately by gender
- in both maid and agricultural markets, the labor supply of non-UP women increases, but not enough to compensate for the supply drop of UP
- in both markets, female wages increase, both for UP and non-UP hhs
  - maid wages increase by 35% and 25%, respectively
  - agr wages increase by 11% and 7% respectively
- in contrast, the average labor supply of UP men decreases, but the wage remains constant
Spillovers: Cost-Benefit Analysis

- to incorporate these spillover effects into the CBA, consider that the average community has 10-15% of hh UP, and similar proportions of ”other poor”

- income effect on UP: TK9590

- income effect on ”other poor”: TK3630

- ignoring spillovers vastly underestimates net benefits of the program
Conclusions: Effects on the Treated

• we find that even the poorest households with low skills, can successfully operate small businesses

• program success relies on the choice of ”appropriate” projects – in this case livestock rearing, which is a common activity undertaken by richer people in the same communities

• further research will explore:
  – effect on human capital accumulation, especially of children (could be positive or negative–more work less schooling?)
  – long run effect– is this a permanent shift?

• longer term impacts on Bangladesh economy as programme reaches 500,000 rural households
Future Variants of the Programme

- emphasis here on raising income through occupational choice: specialization in livestock rearing

- other mechanisms: raising milk yields from animals:
  - veterinary services, AI, best practice on livestock rearing

- raising prices obtained by livestock rearers (community level interventions):
  - market linkages (chillers; milk collection)