Can basic entrepreneurship transform the economic lives of the poor?

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Background

• The world’s poor lack both capital and skills
• They tend to be (under) employed in low-return, often insecure, occupations
• Economic theory studies whether and how giving capital and skills can alter the poor's occupational choices and make them exit poverty
• Most antipoverty programs attempt to do this:
  • capital: microfinance, banking, asset transfers
  • skills: vocational training, adult education
Questions

Low capital and skills

Labor supply and occupational choice

Poverty
Questions

• Can transfers of capital and skills transform the poor's occupational choices?
  • moving away from insecure wage labor..
  • ..towards running small businesses
  • increasing stability
  • reducing uncertainty and seasonality

• Can this set them on a sustainable path out of poverty?
Reasons to be skeptical:

- Beliefs, social norms, or behavioral biases
- Lack of capital and skills are a symptom rather than the cause of poverty

Diagram:

- Low capital accumulation
- Occupational choice

Arrows connect the concepts, indicating a cyclical relationship.
Reasons to be skeptical:

- Large asset transfer
- Wealth increase
- Sell asset, work less
- Use asset to start a new business, work more
This paper

• Evaluate BRAC's TUP program, which aims to shift ultrapoor women from insecure wage labor to self-employment (as practiced by richer women in the same communities)
  • 370k ultra poor households currently treated Bangladesh, and pilots running in ten other countries

• Provide evidence on transferring both capital and skills transforms the occupational choices of the poor
  • bringing them closer to the occupational choices of the middle classes in their communities
  • providing a sustainable route out of poverty
Roadmap

1. Program description
2. Economic lives at baseline: ultra-poor and others
3. Evaluation strategy
4. Evaluation findings
   • Occupational structure
   • Assets
   • Earnings and consumption
5. Closing the gap
6. Costs and benefits
7. Beyond economic outcomes
Program description

• Beneficiaries: poorest women in rural Bangladesh
• Main components:
  • asset transfer (from a menu)
    • most choose a livestock combination, 90% at least one cow
    • average value TK9500=USD140
  • asset specific training
    • classroom training at BRAC’s
    • asset specialist every 1-2 months for 1 year
    • BRAC officer every week for 2 years
  • microfinance training and enrollment after 18-24 months
Program Description: Selection

• PRA exercise: community ranks all households into 5 wealth groups
  • yields precise wealth rank for all households

• BRAC officers visit households in the lowest wealth groups and choose those that satisfy the program’s criteria to become Specially Targeted Ultra Poor (STUP)
Criteria

• 3 binding exclusions:
  • borrowing from MFI
  • receiving government anti-poverty
  • no adult women

• 3 out of 5 inclusions:
  • land owned $\leq 10$ decimals
  • no adult male earner
  • adult women work outside the homestead
  • school-age children working
  • household has no productive assets
Baseline: gender and skills

[Bar chart showing percentage share of Male Headed Households and Literacy by Targeted Poor, Other Poor, and Middle Class.]
Baseline consumption

![Graph showing Total Per Capita Expenditure and Food Security Percentage Share. The graph displays the relationship between Taka (TK) and the percentage share of food security.](image-url)
Baseline productive assets

Share of Households with Livestock

- Targeted Poor
- Other Poor
- Middle Class

Share of Households with Land
Baseline occupational choices

- Hours Devoted to Self-Employment
  - Targeted Poor
  - Other Poor
  - Middle Class

- Hours Devoted to Wage Labour
  - Targeted Poor
  - Other Poor
  - Middle Class
What do the ultrapoor do?

• **Self employment:**
  - cows rearing (24%), poultry rearing (46%)
    • median no of days 350
• **Wage labor:**
  - maid (33%)
    • median no of days working as maid in main occupation 160
  - agricultural day laborer (28%)
    • median no of days working as day laborer in main occupation 140
Snapshot at baseline

• targeted poor have fewer productive assets and are employed in low return, insecure wage labor
• correlation between assets, occupational choice and poverty holds across households
  • can asset transfers transform the occupational choices of the poorest women?
Evaluation strategy

- Randomize the program roll-out across 40 BRAC branch offices (1409 communities) in the poorest areas of the country
  - 20 treated in 2007, 20 in 2011
- Stratify by sub-district (upazila) - 97sq miles- lowest regional division
  - randomly choose 2 branches within each upazila, one treatment, one control
- Randomize at the branch rather than community level to minimize contamination
  - average distance between treatment and control branch: 12km
Evaluation strategy

• Beneficiaries selected in both treatment and control communities, informed of their status only when treated
• Beneficiaries + all other poor + a sample of other wealth classes surveyed in 2007, 2009, 2011
  • Attrition over the four years is 15%, both in treatment and control communities
Methodology

• We compare potential beneficiaries in treatment and control communities before and after the program
• Participation rate is 86%
• Measure effect of the program on:
  • occupational choice
  • productive assets
  • earnings and consumption
• Benchmark size of effects on gaps vs. other wealth classes
Most UP maintain or increase asset stock

<table>
<thead>
<tr>
<th>share of UP who receive:</th>
<th>2 cows</th>
<th>1 cow + 2 goats or 10 chicks</th>
<th>2 goats + 10 chicks</th>
<th>5 goats OR 40 chicks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>36%</td>
<td>52%</td>
<td>8%</td>
<td>4%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>share of UP who: (net of transfer)</th>
<th>decrease cow stock</th>
<th>maintain cow stock</th>
<th>increase cow stock</th>
</tr>
</thead>
<tbody>
<tr>
<td>after two years</td>
<td>17%</td>
<td>62%</td>
<td>21%</td>
</tr>
<tr>
<td>after four years</td>
<td>35%</td>
<td>34%</td>
<td>31%</td>
</tr>
<tr>
<td>after four years - control</td>
<td>3%</td>
<td>89%</td>
<td>8%</td>
</tr>
</tbody>
</table>

less than 2% of cows are rented out
Program transforms occupational choices

<table>
<thead>
<tr>
<th>Metric</th>
<th>After Two Years</th>
<th>After Four Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hours Devoted to Self-Employment</td>
<td>125</td>
<td>150</td>
</tr>
<tr>
<td>Hours Devoted to Wage Labour</td>
<td>-15</td>
<td>-20</td>
</tr>
<tr>
<td>Days of Work/Year</td>
<td>105</td>
<td>115</td>
</tr>
<tr>
<td>Hours of Work/Day</td>
<td>85</td>
<td>90</td>
</tr>
<tr>
<td>Income/Hour of Work</td>
<td>65</td>
<td>70</td>
</tr>
</tbody>
</table>

- 92% increase in hours devoted to self-employment after four years
- 26% decrease in hours devoted to wage labour after four years
- 15% increase in days of work per year after four years
- 26% decrease in hours of work per day after four years
- 15% increase in income per hour of work after four years
Program increases earnings

33% increase after two years
38% increase after four years
Program increases consumption

- 8% increase after two years
- 15% increase after four years
Program increases savings

818% increase after two years
875% increase after four years
Program increases investment in land

38% increase after four years
Program increases life satisfaction

7% increase after two years
15% increase after four years
Nobody loses but income gains are uneven.
and so are consumption gains
Closing the Gap with the Other Poor Occupational Choices

<table>
<thead>
<tr>
<th>Hours Devoted to Self-Employment</th>
<th>Hours Devoted to Wage Labour</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gap at Baseline</td>
<td>Gap After Four Years</td>
</tr>
</tbody>
</table>

-400 | -350 | -300 | -250 | -200 | -150 | -100 | -50 | 0 | 50 | 100 |

Hours/Year
Closing the Gap with the Middle Class Occupational Choices

- Hours Devoted to Self-Employment
- Hours Devoted to Wage Labour

Gap at Baseline
Gap After Four Years
Closing the Gap with the Other Poor Occupational Traits

- Days of Work/Year
  - Gap at Baseline: -10
  - Gap After Four Years: -20

- Hours of Work/Day
  - Gap at Baseline: 0
  - Gap After Four Years: -1.2

- Income/Hour of Work
  - Gap at Baseline: -1
  - Gap After Four Years: -0.5
Closing the Gap with the Middle Class
Occupational Traits

Days of Work/Year

Hours of Work/Day

Income/Hour of Work

Gap at Baseline    Gap After Four Years
Closing the Gap with the Other Poor Productive Assets

- Share of Households with Livestock
  - Percentage Share

- Share of Households with Land
  - Percentage Share

Legend:
- Gap at Baseline
- Gap After Four Years
Closing the Gap with the Middle Class
Productive Assets

Share of Households with Livestock

Share of Households with Land

- Gap at Baseline
- Gap After Four Years
Closing the Gap with the Other Poor Poverty Indicators

- Total Per Capita Expenditure
- Food Security

- Gap at the Baseline
- Gap After Four Years
Closing the Gap with the Middle Class Poverty Indicators

Graph 1: Total Per Capita Expenditure
- X-axis: Total Per Capita Expenditure
- Y-axis: Taka (TK)
- Bars represent 'Gap at Baseline' and 'Gap After Four Years'

Graph 2: Food Security
- X-axis: Food Security
- Y-axis: Percentage Share
- Bar represents 'Gap at Baseline'
Cost-benefit analysis- earnings

- Program costs 20,700TK per HH, yields 1754TK per year
- Useful to compare to cash transfer
- Requires assumption on counterfactual return to cash
  - possibly zero if cash is easier to consume or more difficult to protect from relatives
  - possibly higher if invested in individual specific “best activity” (if not present on the program’s long menu)
- Bank accounts are very rare in these communities (only 3.6% of sample HH, including the rich, have them)
- MFI accounts more common (17%)- return 4/5%
- 20,700 at 4.5% in real terms yields 700<1754
Cost-benefit analysis - utility

• Difference in utility might be higher or lower
• For given earnings, the program brings utility gains:
  • reduction in seasonality
  • more even allocation of hours across days
  • psychological boost of closing gaps with higher classes
• For given earnings, the program brings utility losses:
  • leisure hours fall by 219
• Utility gains and losses are difficult to quantify
• Making further (conservative) assumptions we can show that the program yields more utility than the cash transfer for at least 40% of the beneficiaries
Cost-benefit analysis - utility

- Worst case scenario: gains=0
- What's the value of 219 hours of leisure?
  - given seasonality of labor demand and binding asset constraints, observed wages/return to SE cannot be used to value leisure
  - One possibility is to use QTE estimates to bound it
  - assume that those with lowest earnings are indifferent between the program and the status quo
  - assume that all beneficiaries have the same (additive) preferences over consumption and leisure
  - 219 hours are worth at most 370TK
  - assuming linear utility this implies that the program dominates a cash transfer for all beneficiaries whose earnings increase by more than 700+370=1070TK
- Under these assumption, the program dominates a cash transfer for the average beneficiaries and all beneficiaries above the 6th decile
Lessons

• The program succeeds in transforming the occupational choices of the targeted poor
• Structural change: from wage labor to small businesses
  • compared to other (less successful) programs: massive asset transfer and intensive training
• Implication: capital and skills constraints drive the occupational choices of poor women in rural Bangladesh
• Change in occupational choice accompanied by increase in income, expenditure and food security
• Also of interest: education, health
Impacts on health and education

• Health:
  • Small increase in BMI
  • Reduction in the share of undernourished
  • Better self reported health
  • Large reduction infant mortality

• Nutrition:
  • Consume meat and fish more regularly
  • Spend less on cereals, more on proteins (meat, fish, dairy)

• Education:
  • enrollment stable (about 78%)
  • expenditure on education doubles