In this paper...

- we study the impact of a business and financial literacy program and its spillover effects on about 2,000 micro-entrepreneurs in rural Uganda using a two-stage randomized saturation experiment.
- we first randomize the program at the trading center level, and then randomize the share of treated micro-entrepreneurs in each cluster.
- we evaluate (i) the impact of an active learning financial education training on the financial behavior of micro-entrepreneurs, and (ii) the spillover effects more than one year after the intervention.
- we find that (i) the relatively short intervention generates several intended significant changes; (ii) the treatment works to also impact the use of mobile money; and (iii) spillovers are largely insignificant with many negative coefficient signs.

Background

Low adoption of mobile money

- Mobile money was found to improve risk sharing, household welfare, and financial inclusion.
- From our regionally representative survey at the baseline, we found that almost 90% of the micro-entrepreneurs own a mobile account, but only half of them use it.
- Two potential reasons for the low adoption: (i) complicated cost structure; (ii) low trust in this financial service.
- Mobile money is the most safe and cheapest way of making money transfer among all possible options in the local rural setting.

Timeline of the study

Baseline 19/02-04
Randomized intervention 19/08-09
Endline 20/10-12 + 21/04

N=2,177; 108 villages
N=254; 54 villages
N=2,199 (1,975+224)

Note: the 254 additional people who were not baseline were not included in the analysis.

Randomized intervention

- a five-hour financial literacy training using active learning method,
- five main parts: (1) budgeting and record keeping, (2) saving, (3) debt management, (4) business investment and (5) money transfer.

Endline Survey

- combines phone (1,777) and face-to-face (422) interviews,
- reaches 90.72% (1,975) of the baseline sample,
- randomization is still successful.

Results

Table: Effects on Savings, Loans, Investment and Business Formality

<table>
<thead>
<tr>
<th></th>
<th>Saving (β)</th>
<th>In Formal Saving (β)</th>
<th>In Formal Loans (β)</th>
<th>In Loans (β)</th>
<th>In Formal Investments (β)</th>
<th>In Investments (β)</th>
<th>In Record (β)</th>
<th>Separate (β)</th>
<th>Control Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(0.006)</td>
<td>(0.209)</td>
<td>(0.020)</td>
<td>(0.002)</td>
<td>(0.006)</td>
<td>(0.020)</td>
<td>(0.005)</td>
<td>(0.002)</td>
<td>0.849</td>
</tr>
<tr>
<td></td>
<td>(0.018)</td>
<td>(0.020)</td>
<td>(0.020)</td>
<td>(0.020)</td>
<td>(0.020)</td>
<td>(0.020)</td>
<td>(0.020)</td>
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<td>0.849</td>
</tr>
</tbody>
</table>

ITT and Spillover Effects

Assigned to Training: 0.015 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016
Spillover Group: 0.015 0.015 0.015 0.015 0.015 0.015 0.015 0.015 0.015

Spillover Group:

<table>
<thead>
<tr>
<th></th>
<th>T = Spillover (p-value)</th>
<th>Observations</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>0.195</td>
<td>1975</td>
</tr>
<tr>
<td></td>
<td>0.075</td>
<td>2015</td>
</tr>
</tbody>
</table>

Methodology

Experimental Design

ITT:

\[ Y_{itw} = \alpha_0 + \beta_1 \text{Target} + \beta_2 \text{Spillover} + \omega Y_{it0} + \gamma_1 + \delta_1 + \epsilon_{itw} \]  

Hypothesis

- \( \beta_1 \) positive;
- \( \beta_2 \) could be positive (social learning, network effect), or negative (crowding-out effect).

Conclusion

- Firstly, we find that the financial education intervention has effects similarly to those found in a related training by Kaiser and Menkhoff (2018): the treatment significantly increases formal savings and investments more than one year after the intervention, but it does not improve record keeping.
- Secondly, regarding mobile money we find that the training succeeds in increasing to use the savings function of mobile money and the use of several payment functions.
- Finally, regarding spillovers we do not find a significant effect. We are somewhat surprised, however, by the often negative coefficients among the spillover group, a result that deserves further attention.

Table: Effects on Mobile Money Use

<table>
<thead>
<tr>
<th></th>
<th>MM Active (β)</th>
<th># MM Active (0-4)</th>
<th>MM Saving (β)</th>
<th># MM Saving (0-4)</th>
<th>MM Transfer (β)</th>
<th># MM Transfer (0-4)</th>
<th>MM Payment (β)</th>
<th># MM Payment (0-4)</th>
<th>MM Supplier (β)</th>
<th># MM Supplier (0-4)</th>
<th>MM Customer Share</th>
<th># MM Customer Share</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
<td>(7)</td>
<td>(8)</td>
<td>(9)</td>
<td>(10)</td>
<td>(11)</td>
<td>(12)</td>
</tr>
<tr>
<td>Control Mean</td>
<td>0.912</td>
<td>1.189</td>
<td>0.184</td>
<td>2.030</td>
<td>0.777</td>
<td>9.348</td>
<td>0.789</td>
<td>0.379</td>
<td>0.037</td>
<td>0.037</td>
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</tr>
</tbody>
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ITT and Spillover Effects

Assigned to Training: 0.016 0.058 0.034** 0.034** 0.019 0.177 0.042* 0.052* 0.012*
Spillover Group: 0.016 0.058 0.034** 0.034** 0.019 0.177 0.042* 0.052* 0.012*

Spillover Group:

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<tr>
<td></td>
<td>0.127</td>
<td>1975</td>
</tr>
<tr>
<td></td>
<td>0.010</td>
<td>2015</td>
</tr>
</tbody>
</table>

Study area

Baseline sample: 108 TCs, 2,177 SBOs
Control clusters: 54 TCs, 1,207 SBOs
Spillover group: 54 TCs, 970 SBOs
861 SBOs invited: 577 participated 284 did not
346 SBOs not invited: 108 participated 238 did not