Using Evidence to Improve the Targeting of Social Protection Programs in Indonesia

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Motivation

• Indonesia gradually moving away from non-targeted subsidies (fuel, electricity, food) to targeted transfers
  – Subsidized rice, scholarships, health insurance, conditional and unconditional cash transfers

• How do we most effectively target these programs—how does the government determine who should be recipients?
  – Move towards a unified database – but who does it include? How do we effectively update beneficiary lists over time?
Three main targeting approaches

• **Proxy means tests (PMT):** government predicts a household’s income by collecting information about the assets they own in a survey. Households that fall below the local poverty threshold are enrolled.

• **Community-based methods:** allow local community members to select beneficiaries, as they may have better information about who is poor.

• **Self-selection:** people apply for the program directly and are accepted if their income falls below the local poverty threshold. Hypothesis: only the poor will take the time to complete the application.
Two randomized evaluations in Indonesia on targeting methods

- We partnered with TNP2K, Bappenas, BPS, Depsos, and World Bank to conduct a series of randomized evaluations to answer these questions:
  - Evaluation 1: PMT vs. community method vs. hybrid method
  - Evaluation 2: Automatic enrollment based on PMT vs. self-selection verified by PMT
Evaluation 1: Involving communities in identifying the poor

- ~640 sub-villages

- This study examined a special, one-time real transfer program operated by the government
  - Beneficiaries received a one-time, US$3 transfer

- **Research question**: which method, proxy means test (PMT) or community targeting, performed best at identifying the poor?
Using an RCT to answer our questions

GROUPS ARE STATISTICALLY IDENTICAL BEFORE PROGRAM

PMT Method

Community Method

Group A
PMT method

Group B
Community Method

ANY DIFFERENCES AT ENDLINE CAN BE ATTRIBUTED TO PROGRAM
The PMT Method

- Government chose 49 indicators, encompassing the household’s home (wall type, roof type, etc), assets (own a TV, motorbike, etc), household composition, and household head’s education and occupation.
- Use pre-existing survey data to estimated district-specific formulas that map indicators to PCE.
- Government enumerators collected asset data door-to-door.
- PMT scores calculated, and those below village-specific (ex-ante) cutoff received transfer.
The Community Method

- Goal: have community members rank all households in sub-village from poorest (“paling miskin”) to most well-off (“paling mampu”)

- Method:
  - Community meeting held, all households invited
  - Stack of index cards, one for each household (randomly ordered)
  - Facilitator began with open-ended discussion on poverty (about 15 minutes)
  - Start by comparing the first two cards, then keep ranking cards one by one

- Also varied who was invited (elites or everyone)
- Hybrid combined community with PMT verification of very poor
Timeline

Baseline Survey
• Nov to Dec 2008

Targeting
• Dec 2008 to Jan 2009

Fund Distribution, complaint forms & interviews with the sub-village heads
• Feb 2009

Endline Survey
• late Feb and early Mar 2009
The PMT had the lowest overall targeting error, but community selected more living on $1 day or less.

**Figure 1: Targeting Error Under Each Method**

<table>
<thead>
<tr>
<th>Method</th>
<th>Error Rate</th>
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<tbody>
<tr>
<td>PMT method</td>
<td>30%</td>
</tr>
<tr>
<td>Community method</td>
<td>33%</td>
</tr>
<tr>
<td>Hybrid method</td>
<td>33%</td>
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</tbody>
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*Statistically significantly different from the PMT method*
Distribution of per capita consumption under the three targeting methods was similar

- PMT centered to the left of community methods—better performing on average
- However, community methods select slightly of the very poor (those below PPP$1 per day)
- On net, beneficiaries have similar average consumption
Community targeting led to greater satisfaction

**Figure 2: Impact of Three Methods on Community Satisfaction**

- **Number of households that should be added to beneficiary list**
  - PMT method
  - Community method
  - Hybrid method

- **Number of households that should be removed from beneficiary list**
  - PMT method
  - Community method
  - Hybrid method

- **Number of complaints in suggestion box**
  - PMT method
  - Community method
  - Hybrid method

*Statistically significantly different from the PMT method*
Evaluation 2: The impact of self-targeting methods

• ~400 villages
• Does requiring an application for a cash transfer program select more eligible beneficiaries than automatically enrolling those who pass PMT?
• Evaluation took place in the context of Indonesia’s conditional cash transfer program, PKH
  – Targets the poorest 5% of the population
  – High stakes: household annual benefits around 11% consumption
Villages were randomly assigned to either automatic or self-targeting PMT.
Villages were randomly assigned to either automatic or self-targeting PMT

<table>
<thead>
<tr>
<th>Automatic PMT (Comparison group):</th>
<th>Self-Targeting PMT (Treatment group):</th>
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<td>Households were automatically enrolled in the program if their PMT scores were below their district cut-off point.</td>
<td>Households were required to apply for the program. Surveyors conducted the PMT test for applications and automatically enrolled eligible households in the PKH program.</td>
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Timeline

Baseline Survey (Dec. 2010-Mar. 2011)
- Consumption
- Travel costs to locations
- Variables for PMT formula

Targeting and Intervention (Jan.-Apr. 2011)
- Government conducts targeting
- PKH funds begin to be distributed

- Satisfaction
- Process questions: e.g. wait time during self-targeting
Poor households were more likely to apply than rich households under self-targeting.
Self-targeting led more poor households and fewer non-poor households to receive benefits compared to automatic screening.
Costs of alternative approaches

• Self-targeting places a greater total cost on households: $70,000 compared to $9300 in automatic enrollment and $32,403 for universal automatic enrollment

• Administrative costs for self-targeting were about $171,000 in our sample. Automatic enrollment administrative costs were about 4.5 times more expensive. Universal automatic enrollment would be 13 times more expensive.

• Assuming we treat costs by households and administrative costs the same, self-targeting leads to a better distribution of beneficiaries at total lower costs
Does increasing the cost of applying further screen out the rich?

- Self-targeting villages were randomly assigned to have an application site that was closer (.25 km on average) or farther away (1.5-2 km)
- Increasing distance did not improve self-selection—it just massively reduced application rates, even for the poorest
Conclusions

• In these two evaluations, we found that:
  – Community targeting did about the same as PMT in terms of identifying people based on per-capita consumption but much better in terms of how local communities define poverty
  – Self-targeting did a much better job at differentiating between poor and rich than automatic PMT, although it does impose costs on applicant households

• However, all approaches miss a large proportion of the poor
Policy implications

- Self-targeting through on-demand applications can be an effective targeting tool that has not yet been used in Indonesia
  - Especially effective in less poverty-dense areas
- Further increasing community involvement in targeting can improve program effectiveness and community satisfaction
- Need to identify screening mechanisms that encourage greater take-up among the poor
- Current implementation and scale-up in Indonesia
  - Community elements being incorporated into national targeting; ongoing discussion of on-demand application