Impact Evaluation of Takaful and Karama

I. Quantitative Component
II. Qualitative Component
III. Synthesis Report
World Bank SSNP Mission
MOSS May 21, 2018

1. Qualitative Component
2. Synthesis Report
3. Final Updates on Quantitative Component (Targeting and Heterogeneity Analysis)
4. Way Forward
Impact Evaluation of Egypt’s Takaful and Karama Program

Qualitative Component

21 May 2018

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Evaluation Goals

• To describe dimensions along which Takaful impacted beneficiaries that were not fully captured in the quantitative evaluation.

• To compare perceived impacts of Takaful transfers between ultra-poor and threshold level households.

• To explore the impact of Takaful transfers on intrahousehold and women’s decision-making.
Design
Qualitative Methodology Conceptual Framework

Community

Household & individuals

- Local-level institutions
  - Social inclusion

- Assets & capacities
  - Consumption (dietary and nonfood)
  - Education
  - Finance & livelihoods
  - Coping strategies
  - Intra-household relations and decision making

Outcomes for beneficiaries
- *Improved well-being & livelihoods*
- *Reduced vulnerability*
- *Improved food security & nutrition*
- *Women's empowerment*

Takaful

Cash to women
<table>
<thead>
<tr>
<th>Region</th>
<th>Urban</th>
<th>Rural</th>
</tr>
</thead>
</table>
| **Lower Egypt & Cairo** | Cairo   | Static: Kafr ElSheikh  
                        | Dynamic: Menoufia  |
| **Upper Egypt**         | Fayoum  | Static: Assiut      
                        | Dynamic: Suhag     |
## 4 Household Types

<table>
<thead>
<tr>
<th></th>
<th>Beneficiary</th>
<th>Non-Beneficiary</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ultra-poor</strong></td>
<td>ultrapoorben1</td>
<td>ultrapoornonben1</td>
</tr>
<tr>
<td>Per capita expenditure in lowest quartile</td>
<td>ultrapoorben2</td>
<td>ultrapoornonben2</td>
</tr>
<tr>
<td><strong>Threshold</strong></td>
<td>Thresholdben</td>
<td>Thresholdnonben</td>
</tr>
<tr>
<td>Per capita expenditure near poverty line</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Female and Male in each household.
Data Collection (x 6 communities)

12 Semi-structured interviews in 6 households
• Various household types.
• Male and Female in each.

2 Focus groups (mainly beneficiaries)
• Male and Female.

Community profile
• At least 1 Key informant.
Fieldwork
## Total Respondents Reached

<table>
<thead>
<tr>
<th></th>
<th>Men</th>
<th>Women</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Interviews</strong></td>
<td>27</td>
<td>34</td>
<td>61</td>
</tr>
<tr>
<td><strong>Focus groups</strong></td>
<td>33</td>
<td>43</td>
<td>76</td>
</tr>
<tr>
<td><strong>Community Profile</strong></td>
<td>5</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>65</td>
<td>88</td>
<td>145</td>
</tr>
</tbody>
</table>
In the Field

Rotating 4-person team

Reaching households with Ra’edas:

• Establishing contact with – at least – the first household,
• Guiding team around community,
• Confirming a dissociation from MoSS to encourage respondents to answer freely,
• Introduction to the community leader
• Where ra’edas unavailable, households were reached via contacting a community leader, directly calling respondents or knocking on their door
In the Field

Unreached respondents for interviews were due to:

- Men’s labor migration
- Men’s refusal of interview
- Household relocation
Findings:

*Use of Transfers*
Use of Takaful transfer

• Pre-commitment of most of transfers to specific items or purposes.

“We don’t store the money because it’s spent within an hour or even minutes. We pay the installment for the oven and pay back the money we owe to the grocery store and the pharmacy, and if there’s anything left we’ll buy food but that normally doesn’t happen.”

~ Male, Threshold beneficiary, Menoufia

• Note: Increases in consumption have been restrained by inflation.
Use of Takaful transfer per household

- Number of ultra-poor HHs (out of a total 13 HHs)
- Number of threshold HHs (out of a total 7 HHs)

Categories: Food, School fees/supplies, Private tutoring, Medical services, Clothing, Debts, Gam'eya, Installments, Livelihood activities, Bills

Legend:
- Ultra-poor (left-hand side)
- Threshold (right-hand side)
Use of Takaful transfer for food

The diagram illustrates the use of Takaful transfer for food across different categories, including food, chicken, meat, dairy and eggs, fruits, vegetables, and grains and legumes. It shows the number of ultra-poor households (left-hand side) and the number of threshold households (right-hand side) out of a total of 13 households for each category.
Use of Takaful transfer for education and health

- School supplies and private tutoring.
  - Particularly amongst ultra-poor households

- Medical treatment.
  - More likely amongst ultra-poor households
  - Borrowing
Households’ Coping Mechanisms

- Pay back borrowed money or avoid borrowing
- Pay off loans
- Participate in a gam’eya (Threshold households)
- Increase beneficiaries’ credit worthiness and ability to buy on installments or credit
- Men’s willingness and availability to work is not affected by the transfer
Findings: Women’s Decision-Making
Women’s Decision-making

- Women’s own perception of their decision-making roles is that it is limited – (Ultra-poor and Threshold households).
  - Daily wellbeing of family
  - Raising and educating children

- Transfers may have increased women’s ability to make decisions in some households
  - More control over transfers than general households spending
  - Not on its own (Originally makes decisions, jointly, or other decision-maker)
Views on giving Takaful to women

Men

Women

Favorable
Mixed
Unfavorable
No effect (doesn't matter)
• “It’s a good thing. She knows about the household needs, especially the children’s needs.”
  ~ Male, Focus group discussion, Kafr El Sheikh

• “The guy will take them anyway. He will take them at the end even if I’m the one who receives the cash.”
  ~ Female, Ultra-poor beneficiary, Suhag

• It doesn’t make a difference. As long as their agreement between the couple, there is no problem. What is she going to do with it other than spend it on the household?”
  ~ Male, Ultra-poor beneficiary, Suhag
Views on giving Takaful to women

- Women receiving transfers relieves pressure on men and decreases stress in households

- “When the woman tells the man that she needs money for the household, he asks her where he should get the money from…. [And so] “[the transfers] have calmed down many households.”

~ Female, Focus group discussion, Fayoum
Who makes household spending decisions for everyday necessities?

(30 semi-structured interviews with women)
Who makes decisions about spending transfers and general household spending?

- Woman decides on transfers and usual household spending
- Woman only decides on transfers but not on usual household spending
- Woman decides on both transfers and usual household spending jointly with husband/in-law
- Woman decides on transfers jointly with husband/in-law but does not decide usual household spending
- Mother-in-law decides on both transfers and usual household spending

(17 semi-structured interviews with beneficiary women)
“[Who makes decisions about household spending for everyday necessities?] My mother-in-law. [My husband] gives her a sum of money and she is the one who spends it. [Different section of interview: Who manages the transfers?] Since we started he told me it is not his own business how I use it. You live in the house and can see what your kids need and what the house needs. My husband doesn’t interfere with how I spend it.”

~ Female, Threshold beneficiary, Suhag
Findings:
Perceptions of Targeting and Satisfaction
Perceptions of Takaful targeting

- Most rated the program targeting as either fair, or in-between. Ultra-poor beneficiaries are the most likely to perceive the targeting process as fair.
Perceptions of Takaful targeting

• Program coverage seen as still partial, with many poor families still excluded, while unqualified households are included.

“There are many people in need who don’t receive it which is regrettable. In our district we all know each other”

~ Male, Beneficiary, Fayoum

“Some people do not need it and they get it, people whose husbands work abroad.”

~ Female, Beneficiary, Fayoum
Perceptions of Takaful

• General acceptance and satisfaction with screenings and filtering.

“Because they do the background checks. They go to the associations and check if you have land or own property...it’s right of them to see our situations and others’ situation to pick the right families.”

~ Female, Ultra-poor beneficiary, Menoufia
Perceptions of Takaful

- Required paperwork and application documents are clear, but acceptance conditions for the program unclear.

- A few of the rejection criteria were contested.

  “Anyone who as a fishing permit (in the Nile) has to have insurance by default, so he cannot receive the transfers, when fishing does not provide him with any income.”
  ~ Focus Group Discussion, Menoufia

  “Do we have to be under the dust to qualify for Takaful and Karama?!?”
  ~ Focus Group Discussion, Menoufia
Perceptions of Takaful

• Lack of communication and transparency throughout the application process causes grievances.

“Our takaful transfer stopped suddenly. I filed a complaint but haven’t heard back from them.”

~ Male, Beneficiary, Kafr El-Sheikh

“I wish there was more justice so that whoever applies at least gets a response. It needs to be more systematic.”

~ Male, Non-beneficiary, Cairo
Participants’ recommendations

• Increase transfer amount in light of the high prices for food and other needs.

• More careful targeting and inspections to better identify deserving cases.

• Higher-level monitoring and supervision over local MoSS employees and the administrative process.
Findings: Conditionality & Utilization of Public Services
Utilization of public services

• Education highly valued by men and women among both beneficiaries and non-beneficiaries.

• Educational and healthcare services perceived as low in quality by ultra-poor and threshold households.

“You rarely get medical care if you take them to the health unit.”

~ Threshold non-beneficiary, Fayoum
Utilization of public services

- High spending on tutoring and private medical treatment resulting in substantial debts, gradually repaid using the Takaful transfers.
Synthesis and Policy Recommendations

May 21, 2018
Structure of the Report

• Background of the program
• Quantitative and qualitative methodologies
• Synthesis of findings on Takaful impacts from quantitative and qualitative by topic:
  • Total Household Expenditure
  • Dietary Quality
  • Education
  • Health
  • Women’s Control Over Decision-Making
• Findings on Karama (quantitative only)
• Takaful Targeting (synthesis of quantitative and qualitative)
• Satisfaction and program operation (quantitative only)
• Policy recommendations
Since March 2015, the Government of Egypt has been providing cash to poor households through the Takaful and Karama program.

The program was evaluated by IFPRI in terms of how it affects household welfare using both:

- Quantitative statistical methods (simple questions asked to many households during a survey)
- Qualitative methods (more in-depth questions asked to fewer households in longer interviews)
The quantitative study surveyed a random sample of 6,541 households in 22 governorates from among all households that registered for Takaful and Karama with PMT scores near the threshold.
Qualitative Methodology

• Describes additional ways that Takaful affected households beyond questions in quantitative survey
• Includes ultra-poor households which were not in the quantitative impact analysis
• Visited 6 diverse communities:
  • 61 household interviews
  • 12 focus groups

<table>
<thead>
<tr>
<th></th>
<th>Beneficiary</th>
<th>Non-Beneficiary</th>
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<tbody>
<tr>
<td>Ultra-poor</td>
<td>Two households</td>
<td>Two households</td>
</tr>
<tr>
<td></td>
<td>(Male and female in each)</td>
<td>(Male and female in each)</td>
</tr>
<tr>
<td>Threshold</td>
<td>One household</td>
<td>One household</td>
</tr>
<tr>
<td></td>
<td>(Male and female)</td>
<td>(Male and female)</td>
</tr>
</tbody>
</table>
• Takaful program increased the value of household consumption for beneficiaries by 7.3%-8.4% compared to households who did not receive the program (quantitative finding)

• Compares well with similar CCT programs in other countries
Purchasing on credit and through installments are likely to have been impacted by the Takaful transfers (qualitative evaluation).

This complements the quantitative finding in that it suggests the true impact on total expenditure is higher than measured in the quantitative.

### Total Household Expenditure

![Bar chart showing number of ultra-poor and threshold households by category.](chart.png)
Takaful played an important role in helping poor households to maintain consumption in the face of rising prices, but mixed evidence on the degree to which Takaful allowed households to climb out of poverty

- Quantitative only directly measured impact on poverty near threshold, but suggests overall impacts are low
- Qualitative confirms that beneficiaries do not report transfers helping them to make investments necessary for moving out of poverty
- Qualitative also emphasizes that increase in prices was perceived to work against the benefit of the transfer
Households who received the Takaful program increased their food consumption and improved the quality of their diets (especially fruit and poultry)

- Quantitative measures impact at threshold precisely (8.3% increase on all food spending)
- Qualitative confirms and shows similar pattern among ultra-poor households
Households significantly increased their spending in the category of school supplies and transportation to school (quantitative).
Households spent transfers on tutoring (qualitative)

- Quantitative did not find an increase on tutoring, while qualitative showed that this was likely due to not including group tutoring as a form of “private tutoring”
- Qualitative gives further context by showing evidence that households feel education is important and that the cost and necessity of tutoring is a major barrier to their children’s education
• Measured considerably lower rates of stunting and wasting than past estimates (quantitative)

• Takaful increased weight-for-height (WHZ) z-scores, which measures short term nutritional status, for children under age 2 years (quantitative)
Health

• Poor households spend large amounts of money on private medical care (qualitative)
  • Quantitative did not find an impact on medical spending, which may be because it is quickly converted into debt
  • Qualitative further explains context that public healthcare services are mostly seen as inadequate
Women’s Decision-Making

• Takaful had mixed effects on women’s decision-making power
  • Negative average impact on index of women’s average ability to influence decisions (quantitative)
  • No impact on who primarily makes decisions (quantitative)
  • Positive impact for some women who are able to make decisions about spending the transfer where they are not usually playing a role in deciding on spending (qualitative)
Women’s Decision-Making

• Why are effects so varied?
  • Giving the transfer to women is not necessarily sufficient to increase women’s decision-making role in the household, as pre-existing household dynamics (especially presence of in-laws) often determine who is the decision-maker (qualitative)
  • Women’s decision-making ability is not only associated with intra-household bargaining power, but also with the household’s financial status (qualitative)
  • Some women were more likely to initially give the normatively prescribed answer that men make decisions when giving short answers, while their narratives indicated otherwise (qualitative)
Women’s Decision-Making

- Giving transfers to women has broad support (qualitative)
  - Rare for either men and women to express unfavorable views
  - Men are likely to say it doesn’t make difference
  - Both men and women say that transfers decrease stress in household

![Graph showing the percentage of favorable, mixed, unfavorable, and no effect views for men and women.]

- Favorable
- Mixed
- Unfavorable
- No effect (doesn't matter)
Takaful may empower women beyond the narrow definition of ability to influence decisions (qualitative)

- Evidence from interviews and focus groups that strengthening women’s role as mothers and managers of their households also empowers them
- This type of impact would not easily emerge in quantitative work

“It’s great. It’s given her dignity.” ~ Female focus group participant from Cairo
The RD approach to quantitatively estimating program impacts faced greater challenges in the Karama sample:

- Change in threshold and unexpectedly rapid change in actual status of households in our sample
- Small sample size and very scattered geographically due to scale of program

The quantitative evaluation was unable to measure impacts of the Karama transfers on the outcome variables examined.
Takaful Targeting

- 67% percent of beneficiary households have consumption levels (net of program transfers) that place them in the lowest 2 quintiles of the population of households with children (quantitative)
- Self-selection and geographic targeting via the rollout were important to targeting efficiency (quantitative)
- A large share of poor households with children remain uncovered by Takaful, particularly government workers and urban households (quantitative)
From the individual’s point of view, the PMT score based selection is a process that has a high degree of randomness (quantitative)

- Qualitative shows on the ground how that lack of understanding of eligibility and who can receive the program creates social tensions in the community
- Qualitative also brought up complaints linked to this lack of clarity that the social unit did not study individual cases or did not act honestly in processing the registration forms
The large majority of Takaful and Karama beneficiaries are satisfied with the program, and did not report any significant challenges in receiving their transfers.
1. Continue to fund the program and expand coverage

• Transfers are being received well and have helped households increase spending in categories that contribute to health, education, and overall wellbeing.

• Expanding coverage to reach these ultra-poor households should be the focus.
Policy Recommendations

2. Improve targeting by focusing on excluded poor households (avoid raising the threshold) by:

- Outreach for registration in poor areas, particularly urban areas, possibly with social workers, health units, or NGOs;
- Updating and improving the use of the PMT formula; and
- Reconsideration of the exclusion criteria since they often affect the poorest applicants.
3. Improve communication regarding program design:
   • Conditionality
   • Program length and Recertification
   • This will improve trust in the government and among communities
   • If inflation continues, an increase in transfers should be considered along with a clear message that the transfers will be adjusted in line with prices
4. Work towards a comprehensive social protection strategy

- Coordinate with the Ministry of Education to improve school capacity and quality and reduce “tutoring costs”
- Coordinate with the Ministry of Health and Population on improving public health facilities and consider de-emphasizing the conditionality on child health monitoring until there is clarity on the prevalence of child malnutrition
- Explore synergies with the Ministry of Supply and Internal Trade on database management and share positive lessons related to targeting.
5. At the level of the local MOSS office:
   - Explore mechanisms for community based feedback on targeting decisions
   - Increase transparency and communication regarding the status of applications
6. Consider a public campaign emphasizing woman’s rights, as part of a broader approach towards women empowerment in Egypt. Such a campaign would complement the choice to give Takaful transfers to women – which is positively received and sometimes empowering - but on its own not sufficient to broadly increase women’s decision-making in the household.
7. Conduct a new round of survey and evaluation study after conditionalities have been implemented in 2019, planning for both quantitative and qualitative components

• To assess how conditionalities impact schooling and health outcomes
• To better capture long-term impacts
Quantitative Evaluation Updates: Targeting and Heterogeneity Analysis

May 21, 2018

Clemens Breisinger, Daniel Gilligan, Sikandra Kurdi, Naureen Karachiwala, Amir Jilani, Hoda El Enbaby and Giang Thai
• Is there any way to infer something about impacts among the ultra-poor using the quantitative evaluation?

• More details on targeting:
  • What was the exact distribution of benefits of the program by population expenditure quintile?
  • What factors were important to targeting performance?
  • How does targeting relate to the impact on poverty?
Heterogeneity Analysis
Overview

- RD analysis drawback is that it only estimates the impact of the program at the threshold.
- To see if anything further can be said about how the program impacted either different groups or specifically households far from the threshold, we took the following approaches:
  1. Split the sample by household characteristics.
  2. Testing variation in impact by the probability of being in the program.
• We tested for impacts after splitting the sample to look at different groups of registrants:
  • Urban vs. Rural
  • Education Level of Male Household Head
  • Education Level of Female Spouse of Household Head

• We did not find any cases where the difference in impact estimates between the two groups was statistically significant
  • (by post-estimation Chow test of difference in coefficients)
Following the suggestion to look at Local Instrumental Variables approach of Heckman and Vytlacil (2007) to measure impacts away from the threshold, we tested whether this approach could be applied.

- Approach is based on identifying a non-linear relationship between the outcome and probability of participation.
- But our tests show that in our sample this relationship was consistently linear.
- So we remain limited to reporting impacts at the threshold.
### Technical Details

#### Test of heterogeneity of impact of Takaful program by probability of being a Takaful beneficiary, IV model

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Monthly expenditure per AEU - log values</td>
<td>Monthly expenditure per AEU - log values</td>
<td>Monthly food expenditure per AEU - log values</td>
<td>Monthly food expenditure per AEU - log values</td>
<td>Household education spending</td>
<td>Household education spending</td>
</tr>
<tr>
<td>Predicted probability of being a Takaful beneficiary</td>
<td>0.073** (0.032)</td>
<td>0.207** (0.084)</td>
<td>0.083** (0.033)</td>
<td>0.147 (0.090)</td>
<td>77.190 (46.31)</td>
<td>38.11 (106.09)</td>
</tr>
<tr>
<td>Predicted probability of being a Takaful beneficiary, squared</td>
<td>-0.206* (0.117)</td>
<td>-0.100 (0.127)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Observations</td>
<td>6003</td>
<td>6003</td>
<td>6003</td>
<td>6003</td>
<td>6003</td>
<td>6003</td>
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<tr>
<td>$R^2$</td>
<td>0.1024</td>
<td>0.084</td>
<td>0.123</td>
<td>0.123</td>
<td>0.020</td>
<td>0.020</td>
</tr>
<tr>
<td>Ramsey F-statistic $^a$</td>
<td>0.35</td>
<td>0.70</td>
<td>1.10</td>
<td>0.74</td>
<td>2.12</td>
<td>2.27</td>
</tr>
</tbody>
</table>

Standard errors in parentheses

Estimates from Instrumental Variables Model.

$^*$ $p < 0.10$, $^{**} p < 0.05$, $^{***} p < 0.01$

$^a$ The Ramsey F statistic is from the Ramsey test of model specification. A lower Ramsey F statistic indicates a better fit of the model to the data.

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The independent variable is the predicted probability of participation as calculated for the IV first stage. Ramsey test of model specification consistently preferred the linear to quadratic model, even in the single case where the quadratic term is statistically significant.
Visually, we also see that across different outcome variables, the relationship between probability of participation and outcome looks linear.
• We conclude that impacts are constant within the narrow range of the PMT score in the evaluation sample.

• The data do not provide evidence on impacts for very poor households with PMT scores below 3900
Targeting
• Takaful includes only 1.9 million households, so by design and as a result of the limited budget, most poor households are not included.

• Poverty rate has increased since original conception of Takaful:
  • Poverty rate based on 2012/2013 HIECS: 26.3%
  • Poverty rate based on 2015 HIECS: 27.8%
  • Threshold level used for PMT and poverty line used for this targeting analysis: 40%
Keep in mind: PMT is Imprecise

• PMT based targeting is a common approach with many success stories
• But PMT based targeting is not a magic box
  • Measurement error
  • Mis-reporting
  • Changes over time
  • Incomplete information

• Beyond being aware of how this contributes to overall targeting error, it is important to keep in mind when thinking about other program elements, such as:
  • Importance of a good appeals mechanism
  • Need for clear communication and building trust to prevent resentment due to perceived unfairness
  • Slight changes to the threshold not having large increases on targeting efficiency
  • Etc.

PMT does not correctly assign every household.
Keep in mind: PMT is Imprecise
Targeting analysis uses the nationally representative portion of the sample

<table>
<thead>
<tr>
<th>Sample Selection</th>
<th>Takaful Sample</th>
<th>Karama Sample</th>
<th>Nationally Representative Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purpose</td>
<td>Impact analysis</td>
<td>Impact analysis</td>
<td>Targeting analysis</td>
</tr>
<tr>
<td>Sample Selection</td>
<td>Households in the registrant database with PMT scores from 3900-5100</td>
<td>Households in the registrant database with PMT scores from 7000-7400 and at least one elderly or disabled member</td>
<td>Random selection of households with at least one child under 18 from communities in DHS sampling frame</td>
</tr>
</tbody>
</table>

<p>| N                      | 5,326                                                                         | 1,215                                                                         | 1,692                            |</p>
<table>
<thead>
<tr>
<th>Poverty Line</th>
<th>Per capita expenditure per month in EGP</th>
<th>% of Takaful and Karama HHs under poverty line</th>
<th>% of all HHs under poverty line</th>
</tr>
</thead>
<tbody>
<tr>
<td>Egypt 2017 (updated from 2015 using inflation rates by region)</td>
<td>732-793 by region</td>
<td>92.2% (2.1)</td>
<td>74.3% (2.0)</td>
</tr>
<tr>
<td>Egypt 2015</td>
<td>469-514 by region, 482 on average</td>
<td>67.4% (3.8)</td>
<td>40.6% (2.1)</td>
</tr>
</tbody>
</table>

By using the 2015 poverty line, we assume that consumption is under-reported by about 1/3 (otherwise the poverty level would be unrealistically high)
Pre-Takaful Expenditure

• Quintiles and graphs are constructed based on household expenditure per adult equivalent before Takaful transfers
  - Subtracting 7.3% or
  - Subtracting 2/3 of transfer amount (to account for under-reporting of consumption)
• 30 households differ in their quintile ranking (mostly switching between first and second quintile) depending on which method is used
• For this presentation, we show only subtraction of transfer amount (slightly more generous approach)
Expenditure Distribution

- Vertical line is the poverty line

- The curves show the share of households with each level of expenditure as though the groups were equally sized

- Recall that the non-beneficiary group is actually twice as large as the beneficiary group
Expenditure Distribution

- Same as previous graph, but here the counterfactual of pre-Takaful is constructed based on subtracting the full amount of the transfer.

- Using a lower poverty line would increase the measured impact on poverty as many beneficiaries are far below the poverty line.
Transfers are large relative to expenditure for the poorest beneficiaries, but not as large for those near the poverty line.

<table>
<thead>
<tr>
<th>Share of Takaful transfer in expenditure for beneficiaries</th>
<th>Poorest 20%</th>
<th>20-40%</th>
<th>40-60%</th>
<th>60-80%</th>
<th>Richest 20%</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Share of Takaful transfer in expenditure for beneficiaries</td>
<td>0.25</td>
<td>0.13</td>
<td>0.11</td>
<td>0.15</td>
<td>0.09</td>
<td>0.26</td>
</tr>
<tr>
<td>Observations</td>
<td>76</td>
<td>39</td>
<td>26</td>
<td>17</td>
<td>8</td>
<td>137</td>
</tr>
</tbody>
</table>
### Awareness and Application

Awareness is high throughout the income distribution and there is substantial self-selection at the step of registration.

<table>
<thead>
<tr>
<th></th>
<th>Poorest 20%</th>
<th>20-40%</th>
<th>40-60%</th>
<th>60-80%</th>
<th>Richest 20%</th>
<th>All</th>
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<tbody>
<tr>
<td><strong>Expenditure Per AEU (pre-Takaful)</strong></td>
<td>421.9</td>
<td>669.1</td>
<td>846.0</td>
<td>1101.9</td>
<td>1984.1</td>
<td>995.3</td>
</tr>
<tr>
<td></td>
<td>(7.1)</td>
<td>(3.0)</td>
<td>(3.4)</td>
<td>(6.1)</td>
<td>(74.5)</td>
<td>(29.4)</td>
</tr>
<tr>
<td><strong>Heard of Takaful</strong></td>
<td>0.85</td>
<td>0.82</td>
<td>0.84</td>
<td>0.82</td>
<td>0.79</td>
<td>0.82</td>
</tr>
<tr>
<td></td>
<td>(0.026)</td>
<td>(0.027)</td>
<td>(0.026)</td>
<td>(0.024)</td>
<td>(0.038)</td>
<td>(0.019)</td>
</tr>
<tr>
<td><strong>Applied to Takaful</strong></td>
<td>0.50</td>
<td>0.42</td>
<td>0.33</td>
<td>0.30</td>
<td>0.17</td>
<td>0.35</td>
</tr>
<tr>
<td></td>
<td>(0.033)</td>
<td>(0.037)</td>
<td>(0.034)</td>
<td>(0.031)</td>
<td>(0.027)</td>
<td>(0.023)</td>
</tr>
<tr>
<td><strong>Observations</strong></td>
<td>339</td>
<td>338</td>
<td>339</td>
<td>338</td>
<td>338</td>
<td>1692</td>
</tr>
</tbody>
</table>
## Acceptance of Applicants

Acceptance is a combination of the PMT criteria plus other exclusion criteria or implementation errors. We were not able to match enough households from our dataset with administrative data to differentiate between these.

<table>
<thead>
<tr>
<th>Acceptance of Applicants</th>
<th>Poorest 20%</th>
<th>20-40%</th>
<th>40-60%</th>
<th>60-80%</th>
<th>Richest 20%</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acceptance Rate of Applicants</td>
<td>0.41</td>
<td>0.23</td>
<td>0.22</td>
<td>0.18</td>
<td>0.13</td>
<td>0.27</td>
</tr>
<tr>
<td></td>
<td>(0.036)</td>
<td>(0.044)</td>
<td>(0.042)</td>
<td>(0.046)</td>
<td>(0.050)</td>
<td>(0.035)</td>
</tr>
<tr>
<td>Observations</td>
<td>165</td>
<td>137</td>
<td>107</td>
<td>99</td>
<td>52</td>
<td>560</td>
</tr>
</tbody>
</table>

**Counterfactual: Share of Takaful Beneficiaries in this Quintile if All Households Applied**

<table>
<thead>
<tr>
<th>Acceptance Rate of Applicants</th>
<th>35%</th>
<th>20%</th>
<th>19%</th>
<th>16%</th>
<th>11%</th>
<th>100%</th>
</tr>
</thead>
</table>
Targeting Effectiveness

- Overall targeting effectiveness is a combination of rates at which households apply to the program and rates at which they are accepted.
- If all households had applied, the criteria used for choosing beneficiaries would mean that 55% of beneficiaries are from lowest 40% (previous slide).
- Actually 67% of beneficiary households are in lowest 40% (next slide), indicating the important role played by self-targeting and the geographical targeting during roll-out.
- Recently excluded households (self-report as beneficiaries but not transfers in past 3 months) come from the lowest quintiles (next slide).
### Targeting Effectiveness

<table>
<thead>
<tr>
<th></th>
<th>Poorest 20%</th>
<th>20-40%</th>
<th>40-60%</th>
<th>60-80%</th>
<th>Richest 20%</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Share of Households Self-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reporting in Takaful</td>
<td>0.24</td>
<td>0.13</td>
<td>0.08</td>
<td>0.06</td>
<td>0.02</td>
<td>0.11</td>
</tr>
<tr>
<td></td>
<td>(0.027)</td>
<td>(0.027)</td>
<td>(0.019)</td>
<td>(0.020)</td>
<td>(0.009)</td>
<td>(0.015)</td>
</tr>
<tr>
<td>Share of Households</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Receiving Benefits from</td>
<td>0.20</td>
<td>0.10</td>
<td>0.07</td>
<td>0.06</td>
<td>0.02</td>
<td>0.09</td>
</tr>
<tr>
<td>Takaful Currently</td>
<td>(0.023)</td>
<td>(0.022)</td>
<td>(0.016)</td>
<td>(0.016)</td>
<td>(0.009)</td>
<td>(0.013)</td>
</tr>
<tr>
<td>Share of Takaful</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beneficiaries in this Quintile</td>
<td>45%</td>
<td>22%</td>
<td>16%</td>
<td>12%</td>
<td>5%</td>
<td>100%</td>
</tr>
<tr>
<td>(Currently Receiving Benefits)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Share of Takaful</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beneficiaries in this Quintile</td>
<td>45%</td>
<td>25%</td>
<td>15%</td>
<td>11%</td>
<td>4%</td>
<td>100%</td>
</tr>
<tr>
<td>(Self-Report)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Share of Takaful Benefits</td>
<td>46%</td>
<td>18%</td>
<td>17%</td>
<td>13%</td>
<td>5%</td>
<td>100%</td>
</tr>
<tr>
<td>Received by this Quintile</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Observations</td>
<td>339</td>
<td>338</td>
<td>339</td>
<td>338</td>
<td>338</td>
<td>1692</td>
</tr>
</tbody>
</table>
Influence of Exclusion Criteria

- We include all households, even those that did not apply, as households which knew they met an exclusion criteria may not have applied.
- The criteria we include (available in the Household Survey) are:
  - Own >1 feddan of land
  - Benefit from other government pension
  - Government employee
  - Ownership of car
  - Received transfers from abroad
- The most common exclusion factor was having a government job

<table>
<thead>
<tr>
<th>Share of HHs Meet at least one exclusion criteria</th>
<th>Poorest 20%</th>
<th>20-40%</th>
<th>40-60%</th>
<th>60-80%</th>
<th>Richest 20%</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.17 (0.021)</td>
<td>0.29 (0.027)</td>
<td>0.25 (0.030)</td>
<td>0.35 (0.028)</td>
<td>0.51 (0.040)</td>
<td>0.31 (0.018)</td>
</tr>
</tbody>
</table>
Household expenditure has been adjusted based on regional price levels, however, rural households in the lowest 40% are much more likely to be beneficiaries than urban households in the same quintiles.

<table>
<thead>
<tr>
<th></th>
<th>Urban Households in Poorest 40%</th>
<th>Rural Households in Poorest 40%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heard of Takaful</td>
<td>0.78 (0.04)</td>
<td>0.86 (0.03)</td>
</tr>
<tr>
<td>Applied to Takaful</td>
<td>0.37 (0.04)</td>
<td>0.50 (0.04)</td>
</tr>
<tr>
<td>Takaful Beneficiary (currently receiving benefits)</td>
<td>0.09 (0.03)</td>
<td>0.18 (0.03)</td>
</tr>
<tr>
<td>Observations (All)</td>
<td>229</td>
<td>448</td>
</tr>
<tr>
<td>Share of Applicants Accepted</td>
<td>0.18 (0.05)</td>
<td>0.31 (0.03)</td>
</tr>
<tr>
<td>Observations (Applicants)</td>
<td>181</td>
<td>379</td>
</tr>
</tbody>
</table>
Influence of Roll-Out

Because only current beneficiaries are counted here, this analysis does not fully capture how targeting changed over time, since some early beneficiaries were later excluded.

<table>
<thead>
<tr>
<th>Registration Period</th>
<th>All</th>
<th>Poorest 20%</th>
<th>Richest 20%</th>
<th>Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>March-November 2015</td>
<td>0.51</td>
<td>0.73</td>
<td>0.33</td>
<td>68</td>
</tr>
<tr>
<td>(Threshold =5003)</td>
<td>(0.08)</td>
<td>(0.11)</td>
<td>(0.13)</td>
<td></td>
</tr>
<tr>
<td>December 2015 – September 2016</td>
<td>0.33</td>
<td>0.47</td>
<td>0.17</td>
<td>234</td>
</tr>
<tr>
<td>(Threshold=4296)</td>
<td>(0.04)</td>
<td>(0.05)</td>
<td>(0.09)</td>
<td></td>
</tr>
<tr>
<td>September 2016 – July 2017</td>
<td>0.16</td>
<td>0.25</td>
<td>0</td>
<td>220</td>
</tr>
<tr>
<td>(Threshold= 4500)</td>
<td>(0.03)</td>
<td>(0.06)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td>522</td>
</tr>
</tbody>
</table>
### Impact on Poverty

Depending on which counter-factual is used, we see poverty reduction among households with children of either 0.3% or 1%. If the transfer is doubled, the predicted impact on poverty is 1.6% rather than 1%. The small size of the impact is due to both the scale of the program and the distribution of beneficiaries mostly far below the 40% poverty line.

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poverty rate without Takaful (using impact)</td>
<td>0.409</td>
<td>(0.021)</td>
</tr>
<tr>
<td>Poverty rate without Takaful (subtracting transfer)</td>
<td>0.416</td>
<td>(0.022)</td>
</tr>
<tr>
<td>Current poverty rate</td>
<td>0.406</td>
<td>(0.021)</td>
</tr>
<tr>
<td>Poverty rate with Takaful transfer size doubled</td>
<td>0.400</td>
<td>(0.021)</td>
</tr>
</tbody>
</table>
Way Forward
Way Forward (1)

- Reports
  - IFPRI to finalize Quant Report, Qual Report and Synthesis Report
  - MOSS in collaboration with IFPRI to produce a policy brief
  - Branding/Logos?

- Events
  - IFPRI Egypt Research Seminar with MOSS and WB (end of June?) to be hosted by Minister of Social Solidarity?
  - Present at conferences
  - Takaful and Karama Anniversary (August?)
  - Event in DC?
Way Forward (2)

• Publications
  • Quant and Qual reports published?
  • Synthesis report as IFPRI working paper
  • Academic journals

• Are there plans for a follow-up survey and study?