A Research Agenda for the Next Wave of Graduation Programs

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Rarely has an antipoverty strategy been evaluated so thoroughly as the Graduation Approach, the holistic livelihood development program popularized by BRAC. The Graduation Approach includes five or more components designed to ensure that beneficiaries—typically the extreme poor—are able to manage or avoid new shocks while finding a pathway out of poverty. Targeted households are provided with consumption support (cash or food assistance) to meet basic daily needs, an income-generating asset (or a combination of assets, most often livestock) along with training in managing the asset, a savings account (or savings groups where banking is unavailable), and coaching or mentoring over a two-year period to reinforce lessons, monitor households' progress, provide moral support, and help to overcome any challenges along the way.

In 2006 CGAP and the Ford Foundation teamed up to determine whether BRAC's Ultra-Poor Graduation Approach could be adapted successfully outside Bangladesh. They identified ten partners in eight countries around the world and, with much foresight, invested in an evaluation strategy that would provide an impressive body of evidence once these programs had completed nearly a decade later. Eight of the sites were evaluated with randomized evaluations which were complemented with rigorous qualitative research. Innovations for Poverty Action (IPA) conducted seven of the randomized evaluations, with one of the research sites in India managed by our partners at J-PAL. We pooled the data from six[1] of the randomized evaluations and published the results in *Science* (Banerjee et al. 2015).

What we know now

The results showed positive impacts on every outcome we looked at, including income and revenues, total per-capita consumption, assets, food security, women's empowerment, physical health, financial inclusion, mental health, total time spent working and political involvement. Most of the outcomes were remarkably stable from year two, when the program completed, through year three, a full year after households received any services from the programs. Two results, physical health and women's empowerment, were no longer statistically significant by year three, though the direction of the impact remained positive. There was very little or no decline in the impact of the program after 36 months on the key outcomes including consumption, household assets, and food security.

The magnitudes of the individual impacts are modest (per-capita consumption increases about 5% compared to the control group), but they add up. We conducted a thorough cost-benefit analysis which showed a benefit/cost ratio of 166 percent across all the sites, with the highest over 400 percent. The benefits were based primarily on a projection of the 3-year impact of the program on per-capita consumption. This calculation rested on an assumption that the impacts would continue into the future, based on the stability of results from year two to year three. This assumption was bolstered by results from a separate randomized evaluation of BRAC's original program showing strong impacts after four years (Bandiera et al. 2016) and later greatly strengthened by a long-term

[1] The Yemen evaluation was delayed due to conflict but the data was eventually collected and data analysis is being completed.

follow up in one of the sites (Bandhan, India) showing impacts actually increasing after seven years (Banerjee et al. 2016).

The Ford Foundation and CGAP's investment in research paid off. The publication of the results drew wide attention, including coverage in the *New York Times*, *The Economist*, and NPR. Today CGAP counts 60 Graduation sites implemented by governments and NGOs, and extending to new populations including the urban poor and refugees. (UNHCR, with technical assistance from Trickle Up, is piloting graduation for refugees in five countries with plans to expand to 22.) CGAP and BRAC have released implementation guides to help new implementers plan new Graduation programs. And yet we still know relatively little about how best to design and deliver Graduation. The CGAP-Ford Foundation evaluations primarily tested the full Graduation package compared to control households who received nothing, so we know less about the impacts of individual components. The evidence for the impact of that package remains strong, but the median cost to deliver the package was around US$1,100 – beyond the reach of many governments.[2] Is the full package necessary, or might a reduced form enable more households to benefit from the program?

As Graduation gets further embedded into safety net programs, governments will need to find ways to identify those who deserve the program and can benefit from Graduation. An analysis of targeting in Honduras and Peru showed the three-step Graduation targeting method (geographic targeting, participatory appraisal, and verification check) failed to perform much better than random sampling within a poor community (Karlan and Thuysbaert 2016). But community targeting can still have benefits which may make such approaches worthwhile. Alatas et al (2012) find while community targeting does not outperform proxy means tests on objective measures of poverty it results in greater community satisfaction.

Not all Graduation programs explicitly target women and it remains unclear whether within-family targeting can improve women's empowerment or other outcomes. Is the standard Graduation approach sufficient, or could something like gender-specific trainings improve outcomes for women? Future research may address how Graduation can increase female empowerment, as measured by asset and landownership, social networks, and decision-making power.

Going forward: Unpacking the pieces

Two lessons from the CGAP-Ford Foundation sites shed light on the holistic nature of the Graduation approach, which has livelihood creation at its core. In one of the sites (Honduras) the income-generating activity didn't pay off for beneficiaries. Most participants chose poultry as their income-generating activity, but the chickens died off in large numbers from disease and household consumption was no higher among participants. In Ghana we were able to test just the income-generating assets (goats), with no other supporting services: no training, no coaching, no savings accounts. In this case the households provided only goats had more goats three years later, but despite the windfall in assets (approximately $250 in goats) they had no more net worth in livestock and consumed no more per capita than control households. From these examples we learn that Graduation without income generation does not achieve the goals of the program, and income generation by itself is also insufficient. But these are extremes.

[2] Where potential beneficiaries already receive cash transfers under pre-existing safety net programs the cost of implementing Graduation will be reduced as there is no need to include consumption support.

IPA has a research agenda designed to optimize the Graduation Approach by learning more about poverty traps and what it takes to move households out of extreme poverty. Some of this, such as finding ways to improve psycho-social outcomes for beneficiaries, is frontier research, and some will require only simple tests to determine how much of each component is necessary to create impact. In some cases, simply trying the program with and without individual components can shed light on the nature of poverty traps. For example, household visits are often the most expensive component of the program to deliver, representing 30-40 percent of the total program budget. Naturally program implementers will be interested to know whether the coaching component is essential to the success of the program. Testing the program with and without coaching will help reveal the constraints faced by the extreme poor: do they primarily lack capital and technical skills; or are behavioral constraints (such as confidence) more binding?

Optimizing component levels

Interesting as such a test with and without coaching might be, perhaps the right answer is somewhere in between. The classic version of the program calls for weekly coaching visits over a two-year period. Are weekly visits necessary? In the Peru site the beneficiaries, in the mountains surrounding Cusco, were simply too remote to visit every week. Households were visited every six weeks and fared pretty well, though not as well as in the top-performing sites. Whether this is because of the limited coaching, or another explanation such as limited access to markets, is impossible to say. Blattman *et al* (2016), evaluating a package of cash, business skills training, and supervision among the extreme poor in Uganda, varied the number of follow-up visits provided to participants. Some got two visits to ensure beneficiaries invested the cash, while others got five visits for both commitment to invest and business advice. Those who received visits were more likely to have a surviving business but had no more income or consumption.

But were two or five the right numbers? Five is much closer to zero than the 104 visits a beneficiary would expect in the Graduation approach. Maybe five is too few and 104 more than necessary. A robust research agenda would require testing many permutations of the Graduation components to determine the optimal intensity of each component, measured by cost-effectiveness analysis: the greatest impact per dollar spent by the program.

Such a research agenda would not only consider the classic Graduation model as-is but would allow for variations to determine which improve the cost effectiveness of the program. For example, *Fundación Capital* has been working with tablets to replace face-to-face coaching in Colombia. E-coaching is likely to reduce costs, but the cost-effectiveness of the program will improve only if the tablets perform sufficiently well to do better than the cost-effectiveness of face-to-face coaching. This includes designing software that can be used by illiterate beneficiaries, and solving the last-mile problems of making sure the tablets remain charged and in working order. If the e-coaching is designed well enough it may even work better than traditional coaching by ensuring consistency in messaging and allowing the households to work through materials at their own pace.

Group approaches may also increase the cost-effectiveness of the graduation model. In Kenya, the BOMA Project provides cash grants of approximately $300 to a group of three women – the amount other Graduation programs typically spend on assets for a single beneficiary.[3] Group accountability and support may allow BOMA to create impact at lower cost. But is the investment in productive assets per beneficiary sufficient to put them on the path out of extreme poverty? The effect of group

[3] Village Enterprise also provides grants to groups of women, though in slightly larger amounts ($500).

versus individual delivery of Graduation has yet to be rigorously evaluated, and must be weighed against the additional burden of forming and following small groups.

Adjusting the model for those who don't succeed

Analysis of the distribution of impacts of the CGAP-Ford Foundation sites showed that while everyone benefits from the program on average, some benefit much more than others. Even those at the 10th percentile on many outcomes, such as consumption, assets, and income, show some gains, but the difference was quite small compared to those at the upper end of the distribution. The question remains why some people were able to seize the opportunity to sharply change their trajectory out of extreme poverty, while others just improved a bit.

Those who do least well or backslide in the traditional program may need more support, or a different program altogether. We are working with Trickle Up to test a version of the program in which field staff would identify which households need the most support and allocate their time to make sure those with the greatest need get additional coaching. Or perhaps livelihood choice is the critical factor. There is suggestive evidence that some livelihood choices were more profitable than others, but does that reflect the inherent profitability of the livelihoods, or the types of participants who selected them? Households could potentially be nudged into selecting livelihoods with greater income potential.

Perhaps some beneficiaries struggle to engage with new livelihoods due to underlying psychosocial capabilities. In Ghana we are testing the addition of group-based cognitive behavioral therapy (CBT) to reduce depression and improve the forward-looking aspirations among the poor, before they receive the Graduation program. CBT has been shown to reduce depression and improve productivity among patients in India and Uganda and may help the ultra poor to engage more productively with their new livelihoods (Thomas and Haushofer 2015).

Challenges of scaling-up

An ideal program would be customized to the individual needs and potential of each and every household, with those requiring fewest resources given only what they need, with others getting more intensive services. Designing an evaluation to learn how to do that would be unrealistically expensive, but we can learn a lot from evaluations of individual scale-up solutions. For maximum scalability households could simply be given cash grants rather than any of the support services in the Graduation Approach. An evaluation of cash grants[4] provided by GiveDirectly in Kenya showed positive impacts on consumption, assets, and psychological wellbeing (Haushofer and Shapiro 2016), but the follow-up period is much shorter (four months) and the targeting was performed differently than by Graduation programs. New studies directly comparing Graduation to cash grants will help to determine whether the holistic nature of Graduation outperforms cash in cost effectiveness for the poorest and most vulnerable households.

A hybrid approach providing much of the support structure of Graduation, while easing procurement challenges, is to give cash rather than in-kind assets, along with other Graduation

[4] Cash grants differ from other social cash transfer programs in that they are explicitly unconditional, large, and concentrated in time. In the case of Kenya the experiment relied on two payment modalities: monthly installments over nine months vs a one-time lump sum transfer; and two transfer magnitudes: USD 404 PPP vs USD 1,525 PPP (Haushofer and Shapiro, 2016).

services. But will households invest the cash well? Programs could provide cash at the marketplace, with assistance in selecting profitable assets and healthy livestock.

Technology solutions, like e-coaching discussed above, can potentially boost the impact of lighter-touch programs at low cost. Some potential examples include providing information on market prices, or accountability mechanisms to help beneficiaries stick to their plans. Technology can also reduce costs with digitally assisted delivery of consumption support or savings. These (and other interventions discussed above) can be readily tested with randomized evaluations, though other methodologies including qualitative research and human-centered design will be important in designing appropriate products and learning in depth about their impact on beneficiaries.

The Graduation approach is now being brought to scale in several countries, including Ethiopia, Pakistan, and Colombia, with interest and activity in many more. As the program increases in reach and density several scale-up questions about the impact of the approach will increase in importance, starting with the general equilibrium effects of the program. What happens to goat prices when so many new entrants are given livestock? Neither Banerjee et al (2015) nor Bandiera et al (2016) find evidence of crowding out among non-beneficiaries, though the ultra poor targeted by BRAC represent only the bottom six percent of the population. There is strong interest in adapting the Graduation approach to serve the urban poor and livelihood options will have to be adjusted for urban contexts, including more choices beyond livestock.

So far most Graduation programs are working within the constraints of existing value chains. The standard Graduation model identifies a menu of livelihood activities for beneficiaries and works with households to match them to appropriate activities. Programs could potentially improve revenues by facilitating group input purchases and market price information. It may be possible to push out the curve of potential livelihoods by linking the poor to markets or supporting the creation and expansion of local and national value chains. The BRAC enterprise model promotes quality products, fair producer pricing, and market literacy across entire value chains in Bangladesh. For example, their poultry operations include a feed mill, chick distribution, processing plants, and package printing. In Paraguay, Graduation households can participate in a public-private partnership in which government officials, businesspeople, agricultural cooperatives, and peasant groups jointly identify projects feasible for the extreme poor. Graduation beneficiaries can access start-up capital from a social investment fund and profits are split between the beneficiaries and the investors. Might these approaches be successful in other contexts? The CGAP-Ford Foundation program was set up to answer just such a question. This and the research questions above could be answered with a similarly ambitious investment in the delivery and evaluation of next-generation Graduation programs.

Annex: Research Questions

Big-Picture Questions

- Graduation vs. other interventions, especially cash: which is more cost effective at moving households out of poverty in the long run, especially the extreme poor and other vulnerable populations

Theoretical Questions

- What is the nature of poverty traps among the extreme poor? Can they be identified at the household level, with customized targeting?
  - Capital constraints -> in-kind or cash grants
  - Information constraints -> training, market information
  - Behavioral/Psycho-social -> 1) Coaching: are household visits necessary? Can they be customized? 2) can Cognitive Behavioral Therapy improve economic outcomes?
  - Intergenerational: How does Graduation affect human capital acquisition for beneficiaries and their children?
- Spillover effects: what happens when many households get Graduation in the same community and region? Could be positive (sharing with non-beneficiaries, wage improvements as beneficiaries exit the casual labor market) and negative (jealousy, reductions in asset prices as supply increases in livestock or other markets)
- Heterogeneity:
  - Who benefits the most, why and what can be done to improve impact for others?
  - Can households be nudged to undertake more profitable activities?

Operational Questions

- Costs: How much of each component (asset transfer, training, coaching, consumption support, health, savings) is necessary?
- Group-based livelihoods: Do group-based assets increase cost effectiveness, through economies of scale and group accountability and support?
- Who implements: is there a quality difference between NGO and government?
- Targeting:
  - Does it matter who within the household is targeted for the program?
  - Participatory targeting is costly and doesn't appear to change who is brought in. Does it change the community engagement in the program?
  - How do we identify the persistently poor?
- Cash:
  - In lieu of assets or the full program?
  - What happens to unconditional cash grants: How much is consumed vs invested?
  - Can cash recipients be nudged into good investment choices?
- Technology: can digital delivery of coaching and financial services reduce costs and/or improve quality?
- Add-ons: What add-ons can be done effectively and equitably, taking advantage of the channel: immunizations, gender training, etc.

- New target populations:
    - Urban
    - Refugees
    - Graduation-influenced programming for cash transfer recipients
- Value chains:
    - How do we identify profitable livelihood choices for the extreme poor?
    - Is it better for beneficiaries to diversify or specialize in livelihoods (and to what extent does this depend on the availability of financial services)?
    - How can Graduation recipients be integrated into regional and national value chains?

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