CHAPTER 8

Livelihood, Cash Transfer, and Graduation Approaches: How Do They Compare in Terms of Cost, Impact, and Targeting?

Munshi Sulaiman

Between 1990 and 2013, the share of the world's population living on less than US$1.90 a day dropped from around 35 percent to 11 percent (World Bank 2016). According to these estimates, 767 million people still live in extreme poverty, and achieving further improvements poses new challenges. Much of the progress in poverty reduction has been driven by the stable economic growth in East Asian, and to a lesser degree in South Asian, countries. Progress in Latin America and the Caribbean has slowed, and the reductions in extreme poverty have consistently been very low in Africa south of the Sahara, where currently more than half of the world's extreme poor live. It would be practically impossible to reach the Sustainable Development Goal of eliminating poverty through growth alone, as this would require accelerating growth rates to unprecedented levels for most of the countries while keeping inequality unchanged (Yoshida, Uematsu, and Sobrado 2014). Continued reductions in extreme poverty will, therefore, require targeted interventions to help the poorest households increase their standard of living.

Identifying effective social protection programs that can reach the extreme poor and make sustainable changes in their livelihoods is critical to this effort. Social protection programs address various constraints faced by the extreme poor, including poverty, skill gaps, and vulnerability to shocks. In the literature, the set of activities (or interventions) that are included in social protection programs varies, along with definitions of the term. Basic social assistance, also known as a safety net, constitutes "protective social protection." Devereux and Sabates-Wheeler (2004) provide a framework that highlights conceptual and practical differences among *protective, preventive, promotive*, and *transformative* social protection. This chapter broadly follows the *promotive* social protection definition, which includes the creation of economic opportunities and safety nets to reduce poverty or prevent it. Although most social protection initiatives have the common goal of reducing extreme poverty, the specific interventions and the pathways intended to help people out of extreme poverty differ. For example, cash and in-kind transfers can be intended as a safety net to protect against consumption shocks or to encourage investment; training and technical support are often designed to improve productivity; community mobilization programs that encourage collective action may mitigate coordination failure or facilitate the achievement of economies of scale; or value chain initiatives may be designed to create new economic opportunities. In recent years, a number of innovative approaches have been adopted and scaled to improve these programs by combining livelihood protection and promotion (Grosh et al. 2008). Such comprehensive approaches recognize the linkages between the constraints faced by the very poor: little economic and social capital, and limited technical skills or low aspirations.

In this chapter, we look into three types of approaches that are common in development programming due to their potential to help increase the incomes of the extreme poor. *Graduation programs* take a holistic and integrated approach to extreme poverty reduction by simultaneously tackling the interrelated challenges faced by the very poor. *Livelihood development* programs consist of a wide range of interventions to help the poor acquire productive assets, build skills, or create new market opportunities. In practical terms, graduation programs can be viewed as a subset of livelihood programs with a specific focus on targeting the extreme poor, providing a comprehensive support package in a sequential manner to help recipients build profitable microenterprises, and ensuring a time-bound graduation pathway out of extreme poverty (de Montesquiou et al. 2014). Cash transfers are often associated with small regular payments to the poor for consumption support, but larger *lump-sum cash transfers* (for example, as implemented by the nongovernmental organization GiveDirectly) have shown potential to help the poor invest in income-generating assets with substantial returns. Lump-sum cash transfers have a relatively stronger focus on enhancing economic opportunities by relaxing capital constraints, unlike conditional transfers (for example, Progresa), which incentivize a particular behavioral change (such as school enrolment or using health

services), or unconditional cash transfers in distressed or humanitarian situations, which act as a social safety net.

The amount and quality of evidence on the effectiveness of these social protection programs varies significantly. Although there are fewer examples of graduation programs and lump-sum cash transfers compared to the long history of livelihood initiatives, the impact of these programs has been assessed more rigorously than that of livelihood programs. The CGAP (Consultative Group to Assist the Poor)–Ford Foundation Graduation Program coordinated 10 implementations of the program, 8 of which included randomized control trials (RCTs) to evaluate impact. Lump-sum cash transfers are unusual in that they have been delivered primarily in the context of research-led experiments to learn about returns to capital in small enterprises (for example, de Mel, McKenzie, and Woodruff 2009; Karlan et al. 2014; Fafchamps et al. 2013; Beaman et al. 2014). In particular, GiveDirectly, which specializes in unconditional cash transfers, was founded by economists who incorporated rigorous research from the outset. However, despite having the longest history of implementation (typically since the 1970s) and diversity of interventions, livelihood development programs were, until recently, rarely rigorously evaluated.[1]

With all three models offering the potential to have an impact on economic opportunities, the key questions for policy makers are: which approach achieves the greatest impact given its costs, how long do these impacts last, and do they benefit the extreme poor? The clearest way to answer these questions is through cost-effectiveness analysis. However, the answer will depend on the objectives of the policy maker: the cost-effectiveness of a program can vary greatly depending on the population served and the types of outcomes measured. Cost-effectiveness analysis compares the impact achieved on a particular domain per dollar of delivery cost. This chapter conducts such a comparative analysis of poverty alleviation programs, with a focus on graduation, livelihood, and cash transfer programs. We take income and consumption as the primary metric of impact, with a primary interest in long-term outcomes. This review, conducted during 2014–2016, identified 48 livelihood, graduation, and cash transfer initiatives with both impact evaluations and project-specific cost data. These cases are used to develop a distribution of cost-effectiveness to identify the best options for increasing the incomes of the extreme poor.

We find that targeting the extreme poor is not a common feature of the livelihood and lump-sum cash transfer programs, while the graduation approach deliberately targets the extreme poor. Though livelihood programs vary significantly in per beneficiary cost, the median cost is the highest for graduation programs and the lowest for cash transfers. In terms of impact, *consistency* of impact is assessed based on how often the impact estimates of an approach are in the same direction and statistically significant, whereas *sustainability* refers to impact measured at least a year after the interventions are completed. We find that graduation programs are the most consistent in having significant positive impact across sites, and livelihood programs show limited sustainability of impact. In the meta-analysis, the annual household consumption gain as a proportion of total program cost is the highest for cash transfers (0.27), followed by livelihood programs (0.20) and the graduation approach (0.11). However, livelihood programs that have randomized evaluations have a lower impact-cost ratio (0.09) compared to graduation programs. Moreover, livelihood programs for which impact is measured at least a year after the end of the interventions have an even lower impact-cost ratio (0.07). Cash transfers have the least amount of evidence of long-term impact, while graduation programs have the most robust evidence of sustainable impact. There is also a suggestion of possible publication bias in the studies of livelihood programs, but not for the studies of graduation and cash transfer programs.

1 By rigor, we mean the attention to counterfactual and attribution in measuring impact. While RCTs have become popular in measuring impact and are often used as the benchmark for rigor, other approaches for achieving reliable impact estimates are also receiving increased attention by practitioners.

One of the main limitations of this meta-analysis is that we compare the impacts and costs of different approaches under different settings with often very diverse target populations. The influence of these contextual and sample differences on the conclusions cannot be fully accounted for in the cost-effectiveness comparison. Therefore, studies that compare these approaches in the same setting are more reliable. More recently, a few RCT studies have endeavored to perform such direct comparisons. Sedlmayr, Shah, and Sulaiman (2017) compare the graduation approach with a similar-sized unconditional cash transfer in Uganda. This study finds that the graduation approach has a larger effect on consumption compared to cash transfers two years after the end of the interventions. A similar comparison by Chowdhury et al. (2017) in South Sudan shows that both cash transfer and graduation programs increase household consumption but that the graduation approach has a longer-term effect on assets. Shapiro (2017) also conducted a direct comparison in Kenya, where he finds no significant difference in the impact of cash and livestock transfers on assets and consumption. Cash transfers do have a greater impact on the recipients' sense of autonomy and self-respect. However, unlike the other two studies that measure effects two years after the transfers, this study measured these effects six months after. Sedlmayr, Shah, and Sulaiman's (2017) study also included a third variation that includes "soft training" with the cash transfer and finds positive changes on a number of outcomes from this add-on component. Hassan, Mutiso, and Sulaiman (2018) find that lumping two months' unconditional cash transfers together and labeling them as an income-generation activity grant can increase the likelihood of the recipient owning a microenterprise (and generating income) compared to a conventional monthly unconditional cash transfer six months after the transfers.

Based on the findings from the meta-analysis and the direct comparison results, we conclude that the graduation approach has the most robust evidence of having a sustainable impact on the extreme poor and that cash transfers are most impactful in the short run. While cash transfers are attractive because of their simplicity, ease of scale-up, and agency-enhancing element, there is potential to make greater use of these transfers by building microenterprise development into this approach. Livelihood approaches have diverse entry points but generally bypass the extreme poor. Policy makers need to find ways to make these programs more inclusive and effective for the extreme poor.

Data and Methodology

Inclusion Criteria

For the meta-analysis of cost-effectiveness, the study used annual household consumption gain as a proportion of total program cost as the main indicator. For impact, we used indicators that measure poverty reduction across different contexts but do not require imputing values. Therefore, we used the programs' effect on consumption (and income where consumption measures were not available). Although this is a restrictive definition of impact for many of the programs (which may have an impact on other indicators such as assets or food security as well), it has the advantage of comparability over more comprehensive cost-benefit analyses, which require a wide range of assumptions in measuring benefits. Given the diversities in the types of livelihood interventions and the lower quality of evidence on impacts for livelihood programs compared to unconditional lump-sum grants and graduation programs, we adopted different strategies for screening these three types of programs. For livelihood programs, we used existing systematic reviews to identify papers that had been prescreened for quality; we performed a primary screening for evaluations of lump-sum cash grants; and we took the seven graduation cases from two papers, Banerjee et al. 2015 and Bandiera et al. 2013.

The filtering and data compilation process used for the livelihood programs is as follows:

Step 1: Identify initial case sources

We used five systematic reviews that are focused on the promotion of food security and agricultural sector development through technical and business training for farmers. The references are Bodnár and Piters (2011), Nankhuni and Paniagua (2013), Masset et al. (2011), IEG (2011), and Phillips, Waddington, and White (2014). The Bodnár and Piters study, for the Dutch Policy and Operations Evaluation Department (IOB), shortlists 38 studies of interventions in agricultural production, value chains, market regulations, and land security. The Nankhuni and Paniagua review, for the International Finance Corporation, examines papers evaluating farmers' training interventions published between 2009 and 2012. Although this review also focused on financial access initiatives, those were not considered in our review. Masset et al. (2011) review agricultural interventions targeting nutritional outcomes. The review by the Independent Evaluation Group (IEG) at the World Bank contains the longest list, of 85 studies with links to agriculture. Finally, Phillips, Waddington, and White (2014) provide a meta-analysis of the role of targeting in reducing poverty through farmer field schools. Screening from these reviews gave us 198 studies evaluating 182 programs (we refer to all the case studies covered in our comparative analysis as "cases").

Step 2: Screen program evaluations

We excluded 63 evaluations because the interventions did not involve working directly with households (focusing instead on macroeconomic policy reforms, trade reforms, etc.). We excluded 22 evaluations of microcredit interventions. Credit is often a component of livelihood programs, but we excluded purely microcredit evaluations because of our focus on comparing the cost-effectiveness of programs that can reach the extreme poor. There is ample evidence of microcredit not reaching the extreme poor, and the impacts are much more limited (see, for example, Banerjee, Karlan, and Zinman 2015). We assessed whether a program was reaching the extreme poor by using the descriptive statistics of the profile of the beneficiaries relative to the general population of the country (or community, if available).[2]

Step 3: Screen for impact and cost information

To meet our objective of conducting a simple impact-cost analysis, we looked for information that would allow us to estimate annual consumption or income gain and the intervention's cost per household. If such information was not available in the cited report, we extended our search for other evaluations or reports of the same program. For 18 cases, we collected cost information from various web resources containing program budgets and outreach information. We dropped 56 programs for which impact estimates of either consumption or income were not available (9 cases), cost data could not be obtained (12 cases), or both (35 cases). In addition, 7 cases were dropped for other reasons, such as impact estimates using aggregate data or only trend analysis without any comparison group.[3]

We conducted a primary search to identify cash transfer programs that involve unconditional lump-sum grants. Although there are several good reviews of conditional cash transfers (typically involving small regular payments with the condition or expectation that households will meet certain goals such as school attendance and immunizations), these were

2 See Annex 2 of Sulaiman (2016) for a case-by-case assessment of programs' targeting.

3 Annex 3 in Sulaiman (2016) details the excluded cases and a brief explanation of each.

not included in this review given our focus on investment and livelihood development.[4] We used the projects listed on the Abdul Latif Jameel Poverty Action Lab (J-PAL), Innovations for Poverty Action (IPA), and International Initiative for Impact Evaluation (3ie) sites to identify these cases. During this search, we screened 23 studies that met the criteria specified in step 2 above, of which 15 met the screening criteria of step 3. However, only 11 of these studies are considered unconditional lump-sum cash grants, while 4 are included as livelihood cases, as they are more similar to livelihood programs than unconditional cash grants. A case was included beyond this search because of its importance as a predecessor of graduation model (case 20).

Through this screening process, we identified 39 livelihood and 11 cash transfer cases. However, 9 of the livelihood cases could not be included in the meta-analysis due to these studies' not reporting the statistical significance of the impacts. After dropping these cases, we finally included 30 livelihood, 7 graduation, and 11 cash transfer cases in our comparative analysis. Table 8.A.1 in the appendix lists the livelihood and cash transfer cases by case location and source for selection.

Conversion of Impact and Costs to Comparable Metrics

Even within the limited scope of measured impact on consumption and income, there are important differences in the variable construction in the selected studies—for instance, using log value instead of monetary units, or per capita versus household-level measures. We converted all these different measures into annual household-level impact in US dollars, using the commercial exchange rate for the respective years. It is to be noted that the use of commercial or purchasing power parity does not affect the comparison of impact-cost ratios because both use the same denominator. Comparing only the costs or impacts across the cases obviously is influenced by the choice of exchange rate. We used the exchange rate because it is the amount needed as investment in the interventions. If a program evaluation included both income and consumption, we preferred the consumption measure, as consumption tends to be more accurate and comprehensive (including transfers and home production, for example). For livelihood cases, we used impact on household consumption (13 cases), total household income (8 cases), and income from the specific activity supported by the respective interventions (9 cases). For lump-sum cash transfer cases, the distribution was four, one, and six, respectively. We used consumption for all the graduation cases. Because the studies also differ in the ways consumption or income variables are constructed, depending on the survey tools, the values are not strictly comparable. Since this chapter uses the estimates reported in studies, though, it was not possible to create a comparable variable without accessing the primary data for each study. While this limitation introduces measurement error, the comparisons are valid if the studies are not systematically different with regard to the aggregate consumption and income calculations across the three types.

For costs, we use the same exchange rates used in converting impacts. Per beneficiary cost was measured by dividing the total implementation budget by the number of direct beneficiaries (14 cases) where per household cost estimates were not reported in the evaluations.[5] We used these two variables to measure the ratio of impact to every dollar spent as our benchmark indicator of cost-effectiveness. For the standard errors (or *t*-statistic/*p*-value) of the impacts, we used the same factors as those used to rescale the standard errors of the respective impact estimates.

4 There are also new evaluations that assess the impact of conditional cash transfers on livelihood outcomes (for example, Mochiah, Osei, and Osei-Akot 2014). We did not include such cases in our review because livelihood development is a secondary objective for these programs and the continuity of cash transfers in conditional cash transfer programs makes cost comparison difficult.

5 There is a key difference between the cash and livelihood programs in terms of cost estimation. For all the cash transfer cases, cost is measured as the amount of grant funding that is provided to the beneficiary, without including any operational cost. In our comparative analysis, we impute a 10 percent operational cost, which is discussed in the subsequent section.

Description of the Interventions

Graduation Approach

Small cash transfers, capital transfers, skill development, and financial services are carefully sequenced in the graduation approach to make sustainable improvements in the livelihoods of the extreme poor. The first graduation program was initiated by BRAC in Bangladesh in 2002 and reached more than a million households by 2018. Motivated by the initial success of the model, CGAP and the Ford Foundation launched a major initiative to pilot the model at 10 sites between 2006 and 2014 to learn how well it could be adapted outside Bangladesh. The CGAP–Ford Foundation Graduation Pilots were mostly delivered over 18–24 months per household, following a local market assessment to identify potential livelihood activities that extremely poor households could engage in. Beneficiaries were selected through a rigorous targeting process to identify the poorest: generally, a participatory wealth ranking in which the community identified the poorest households, along with a proxy means test to reduce inclusion error. The intervention started with cash stipends to support subsistence while beneficiaries developed new livelihoods. Through a consultative process with the household members, appropriate enterprises were determined for each household. Following initial training on the selected enterprise, the assets required to start the livelihood activity were transferred. The assets or enterprises were primarily livestock and small nonfarm businesses. This asset transfer was followed by regular coaching to provide technical assistance on enterprise management as well as to assist beneficiary households in coping with shocks and various social pressures. Depending on the site, beneficiaries were provided with bank accounts as a secure place to save their income, or neighboring beneficiaries were mobilized as a savings group. In some cases, a component of mobilizing community elites was added to create a more supporting environment for the extreme poor.[6]

RCT results for the graduation approach conducted in six countries demonstrate significant positive impacts on employment, income, and welfare.[7] While there are some variations in the magnitudes of the impacts across the sites, the pooled estimates demonstrate substantially large impacts on a range of livelihood outcomes (Banerjee et al. 2015). Among the economic indicators, the program increased per capita consumption by 0.12 standard deviations (or 5.8 percent) compared to the control group, household income by 0.38 standard deviations, assets by 0.26 standard deviations, time spent in earning activities by 0.10 standard deviations, food security by 0.11 standard deviations, and financial inclusion by 0.21 standard deviations. Most of these impacts were sustained (or even increased) a year after the households completed the program. There were also positive impacts, although relatively less strong, on health status, political involvement, and women's empowerment. A different RCT, conducted by Bandiera et al. (2013), of the program implemented at a much larger scale by BRAC in Bangladesh also finds similar positive impacts on employment, income, assets, and consumption. Two studies looked at the sustainability of the effects at seven years (four years after the end of interventions) in Bangladesh (Bandiera et al. 2017) and in West Bengal (Banerjee et al. 2016). Both studies find that these longer-term impacts are greater than the short-term effects.

6 For more details on the program and its adaptations, see de Montesquiou et al. (2014), Hashemi and de Montesquiou (2011), and other resources at http://www.microfinancegateway.org/topics/graduation-sustainable-livelihoods.

7 There are two randomized evaluations of graduation programs not included here: one, in India, of Swayam Krishi Sangam's (SKS's) program, does not have sufficiently comparable data, and the results from a pilot in Yemen are not available yet.

Lump-Sum Cash Transfers

More recently, there has been growing interest in the adoption of unconditional cash transfers as a social protection tool. The relative simplicity of lump-sum cash grants and the potential for mobile money to facilitate scaled delivery at a low operational cost are the key attractive features of these unconditional lump-sum cash transfers. An RCT of GiveDirectly in Kenya showed positive impacts from cash transfers averaging $513 on consumption, assets, and food security. Haushofer and Shapiro (2013 and 2016) followed up after 4.3 months of transfers, on average, to measure the short-term effects. A three-year follow-up study of this experiment by Haushofer and Shapiro (2018) finds that the sustainability of the effects depends on the measurement approach, and the conservative estimates do not show long-term effects on consumption.

In Sri Lanka, de Mel, McKenzie, and Woodruff (2008 and 2009) found that cash transfers of $100 and $200 increased business revenue by around 60 percent, with profits persisting over three years. However, there was substantial heterogeneity in the returns, especially for women. Twenty percent of men and 60 percent of women earned returns lower than the cost of capital (at commercial borrowing rates), and half of women earned negative returns. In Ghana, Fafchamps et al. (2011) compared cash and in-kind transfers, and transfers made to men and women. Again, they found very high—averaging 15 percent per *month* after one year—but heterogeneous returns to capital. Men showed high returns whether provided with cash or in-kind grants, while women benefited only when provided with in-kind grants. A possible explanation is that in-kind transfers prevented women from spending cash on immediate family needs rather than investing it. However, poorer women (those with below-median baseline profits) saw no benefit from either form of grant.

Because most of the cash transfer cases were research initiatives, several of them compare the impacts of different intervention models. The variations are cash versus in-kind transfer (cases C4, C5, and C11 in Table 8.A.1), credit versus grant (cases C1 and C7), and grants that are conditional on training or a business proposal (cases C7 and C9). For all these cases with multiple intervention arms, we focus on the particular treatment group receiving a cash grant with relatively thin or no other supports, with the objective of assessing the impact of unconditional lump-sum cash grants.

Livelihood Development Programs

Livelihood development programs, which have a much longer history in poverty reduction strategies, cover a wide variety of specific interventions. Common interventions for these programs in rural contexts include training and technical assistance promoting new farming technologies, organizing farmer groups to encourage collective action, and creating linkages in agricultural supply chains. These interventions are sometimes combined with cash grants or in-kind (usually seed and fertilizer) support and access to financial services. Community infrastructure creation, such as small irrigation schemes, and land security in terms of land titles also fall within the scope of livelihood development programs. These programs typically use combinations of these interventions.

We identified 11 groups of interventions carried out by the livelihood programs included in the meta-analysis (Figure 8.1). Training is the most common element of these livelihood programs. More than 60 percent of the livelihood programs offered some sort of training related to income-generating activities. It is also important to note that there is significant diversity in the content and modalities of the training interventions. Examples of training include teaching a new technology at farmer field schools, visits to demonstration plots, natural resource management in participatory action research, classroom training on microenterprise development, and management of group enterprises. Some of the training

sessions on technology focused on general productivity-enhancing techniques and a few were specific to a new crop variety.

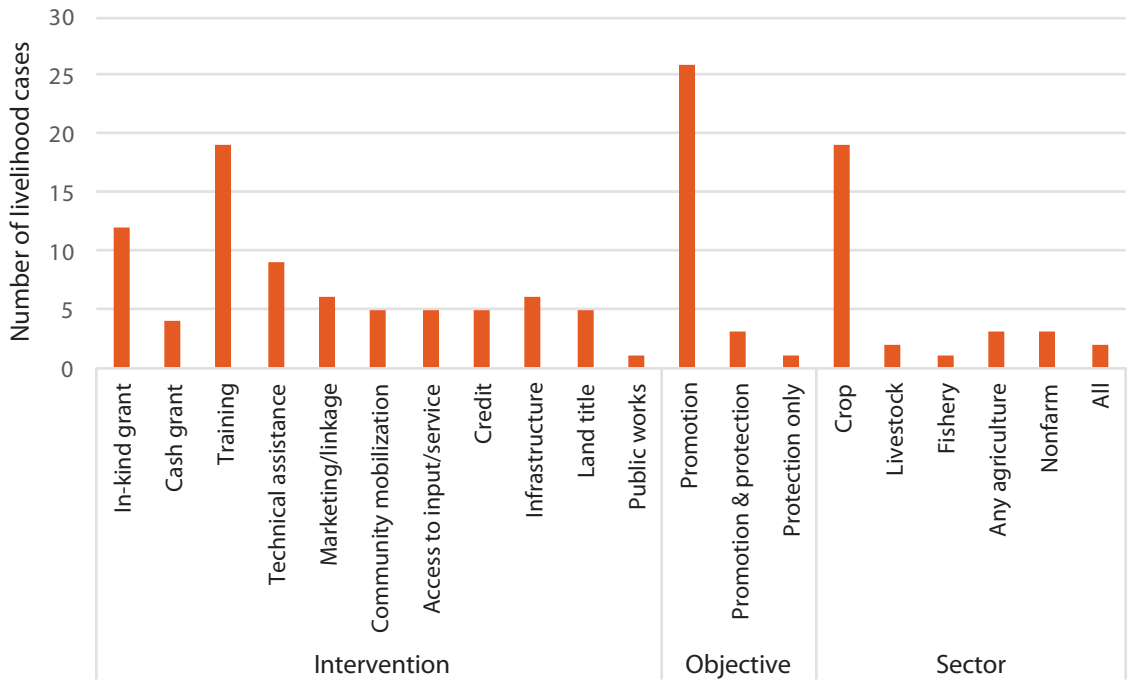
The second most frequent intervention is in-kind transfers, with 40 percent of the livelihood cases involving these transfers. About half of the transfers were "crop packs" composed of seed and fertilizer. The value of these crop packs varied substantially across the cases: the Zimbabwean Agricultural Recovery Program transferred crop packs valued at $20 to $40 in different years (case L8 in Table 8.A.1), an input subsidy program in Mozambique charged farmers $32 for a pack worth $117 (case L24), and the Millennium Development Authority's (MiDA) program for farmers in Ghana transferred a "starter pack" worth $230 (case L1). These crops packs are typically combined with training to promote a new technology—for example, MiDA provided 29 hours of training on new technology to farmer groups through nine weekly modules followed by a starter pack of seed and fertilizer (case L1). Other in-kind transfers related to agriculture include tools and livestock, and on rare occasions land. Only one case in our review, the Micro-Entrepreneurship Support Program (case L28) in Chile, provided in-kind transfers for nonfarm businesses. The assets transferred in this program were equipment and inventory.

Cash transfers are usually executed in livelihood cases that focus on nonfarm enterprise development. Four of our selected livelihood programs included cash grants. Among the other common interventions, creating market linkages or value chain development was included in six livelihood programs. This intervention was primarily used as part of a package, and none of the programs actually enhanced market linkages on its own without any other intervention. Examples of value chain initiatives are promoting export of organic coffee in Uganda by Kawacom Uganda Limited (Sipi Coffee Promotion, case L5), support to potato growers in Ecuador (Plataformas, case L16), and support for export crops in Kenya (DrumNet, case L22). Kawacom connected small-scale coffee growers with the organic coffee market in Europe by providing support for attaining certification, regular price information, and advice on improving productivity. The Plataformas program created an alliance between farmers and agricultural service suppliers, nongovernmental organizations, and research institutes. With an objective of creating a direct linkage between potato farmers and high-value markets, avoiding traditional intermediaries, this program provided training on integrated pest management at farmer field schools and established a collective distribution chain. DrumNet provided a four-week orientation course on specific export crops (beans, baby corn, or passion fruit), in-kind loans for inputs, and marketing services (collection, export, etc.) meeting EurepGAP requirements. This particular program, however, was discontinued a year after the evaluation ended because the farmers failed to maintain quality requirements. Among the six programs with infrastructure development as an intervention, three cases featured irrigation projects. These irrigation interventions included building new irrigation canals, rehabilitating old canals, and constructing small-scale dams. These cases also included formation of water management committees at the community level. Five programs addressed issues of access to land and land titling. While all five programs were part of the national land reform agenda, two of them also transferred land to smallholder farmers and landless households.

The key aspect that emerges from this discussion of interventions is the diversity in these programs' composition, even within this limited scope of agribusiness and food security. A few of these programs are actually not very different from the graduation approach in their intervention composition. The key feature that makes the graduation approach distinct within this spectrum of livelihood programs is the comprehensiveness of the package, with sequencing of the interventions to build new livelihood opportunities for the extreme poor.

Although the livelihood programs (30 cases) vary substantially in their specific interventions, there is less diversity in their objectives or sectoral focus (Figure 8.1). All the selected livelihood cases have direct or indirect

FIGURE 8.1—DISTRIBUTION OF COMPARISON LIVELIHOOD PROGRAMS



Source: Sulaiman (2016).

links with the objective of increasing the income of beneficiary households. Considering the distinction between protection and promotion in safety nets, more than 80 percent of the cases (26 out of 30) are primarily driven by livelihood promotional objectives. The prominence of livelihood promotion in these cases is similar to that in both the graduation approach and cash transfers. Although the consumption and health supports have protective notions, the overwhelming objective of the graduation approach is livelihood promotion. Of the remaining livelihood cases, three programs deliberately combined elements of both protection and promotion, while only one case can be identified as having an exclusive focus on protection.

As noted earlier, the graduation approach has adopted a specific model within the spectrum of livelihood programming. Consequently, a few livelihood cases seem very similar to the graduation model. The Productive Safety Net Program (PSNP, case L4) in Ethiopia is one of the most comprehensive social protection programs in Africa south of the Sahara. This program includes a number of intervention components, including public works and direct support (cash and food transfers) as protection, and credit, training on new agricultural technology, and irrigation development to enhance the productivity of rural agriculture. In fact, the graduation experiment in Ethiopia was layered on a group of PSNP beneficiaries.[8] The International Food Policy Research Institute has performed several evaluations on various components of PSNP, and we consider the evaluation measuring the impact of direct transfers layered on public works (Gilligan, Hoddinott, and Taffesse 2009). Among the other examples of combining protection and promotion, the Income Generation for Vulnerable Group Development (IGVGD, case L20) in Bangladesh is in several ways a predecessor of the graduation approach. Although less comprehensive than PSNP, the IGVGD program also combined food transfers with skill development and access

8 The Ethiopian sample of the six-country study by Banerjee et al. (2015) compares the graduation model to the control group, which was regular PSNP beneficiaries, essentially showing the additional effect of layering graduation on PSNP.

to financial services in order to create a pathway out of extreme poverty. Development of the graduation approach has drawn from the lessons learned from the implementation shortfalls and limitations of the IGVGD program (Matin and Hulme 2003).

Targeting

Rigorous targeting through a comprehensive multistage process is one of the key features of the graduation approach. This focus on targeting is driven by the objective of reaching the extreme poor and the high cost of erroneous inclusion. Studies of unconditional lump-sum cash transfers are focused mostly on owners of micro- and small enterprises and do not primarily target the extreme poor. Similarly, the livelihood programs reviewed had less of a focus on targeting compared to graduation programs. Prioritization of targeting the extreme poor varied according to the objectives in these livelihood programs.

The Rural Business Program of the Millennium Challenge Corporation in Nicaragua is an example of a "typical" rural livelihood program (case L2). Organizing both farmers and nonfarmers into groups, this program offered technical advice on project development and matching investment grants. Targeting was not prioritized in this program, as it focused on individuals with relatively higher potential for success, and consequently the majority of the beneficiaries in this program were from the upper 50 percent of the rural income distribution (Carter, Tjernstrom, and Toledo 2011). The study also found that the impacts were more strongly visible among the less poor at midline and that the overall impacts become weaker one year after the midline. The need for targeting is also highlighted in many livelihood programs in the rhetoric of avoiding "elite capture" or programs ostensibly meant for the poor benefiting better-off households. There are also examples of livelihood programs generating more equitable impacts. In the evaluation of the Women's Income Generating Support (WINGS) program for the extreme poor in Uganda (case L21), Blattman et al. (2013) found an overall 33 percent increase in consumption, a more than 60 percent increase in labor hours, and a more than fourfold increase in savings. Although the program impacts were lower for the households at the lower end of the initial consumption distribution when measured in terms of absolute increase in consumption, the impacts were comparable in terms of percentage gains.

Since there is no common indicator available for these programs to measure targeting effectiveness, our assessment of the programs' focus on targeting is based on a qualitative review of their emphasis on reaching the poorest and/or descriptive statistics from the evaluation reports. Based on this assessment, three (27 percent) of the cash transfer and 10 (33 percent) of the livelihood programs were reaching the extreme poor.[9] The cash transfer evaluations targeting the extreme poor are Macours, Premand, and Vakis (2012) in Nicaragua (case C3), GiveDirectly by Haushofer and Shapiro (2013) in Kenya (GiveDirectly, case C6), and de Mel, McKenzie, and Woodruff (2014) in Sri Lanka (SIYB, case C10). The Nicaraguan cash transfer was an experiment layered on a conditional cash transfer program that used proxy means testing to determine eligibility. GiveDirectly used simple housing characteristics (whether the house had a thatch roof) to identify eligible households. The study by de Mel (2014) had two distinct samples: business owners earning less than $2 a day and women without a business who were interested in starting one.

Among the 10 livelihood cases targeting the extreme poor, very few had as substantial a focus on targeting as the graduation approach. The Ruti irrigation program (case L12) in Zimbabwe adopted a combination of geographical and household targeting, with the majority of the beneficiaries living on less than £1 per capita per day. This case also had a strong focus on targeting women farmers. A second example of reaching a specific

9 Although we define the extreme poor as those living on less than $1.25 a day at purchasing power parity, we could not apply this definition in categorizing the targeting of programs. Annex 2 in Sulaiman (2016) provides the details used for each program in our classification of targeting.

TABLE 8.1—TARGETING IN INCLUDED CASES

	Target extreme poor		All
	Yes	No	
Number of livelihood programs	**10**	**20**	**30**
Interventions focusing on crop(s)	4 (40%)	15 (75%)	19 (63%)
Intervention package includes in-kind grant	7 (70%)	5 (25%)	12 (40%)
Short-duration interventions [< 2 years]	8 (80%)	7 (35%)	15 (50%)
Program started before 2001	3 (30%)	8 (40%)	11 (37%)
Program started during 2001 to 2005	2 (20%)	8 (40%)	10 (33%)
Program started since 2006	5 (50%)	4 (20%)	9 (30%)
Per beneficiary cost of US$300 or more	8 (80%)	9 (45%)	17 (57%)
Number of cash transfer programs	**3**	**8**	**11**
Number of graduation programs	**7**	**0**	**7**

Source: Sulaiman (2016).

vulnerable group is a program in Liberia (case L29) that targeted young (under 30 years old) ex-combatants with very little education who were engaged in casual labor. The baseline survey for this program shows that the average monthly income of the beneficiaries was less than $50 per month. The importance of greater focus on targeting is also noted in the meta-analysis of the farmers' school model (Phillips, Waddington, and White 2014).

Table 8.1 provides a basic comparison of the livelihood programs by their emphasis on targeting the extreme poor. Programs targeting the extreme poor are less likely to focus on productivity improvement and increasing income through crop production. Since most crop-sector interventions require the household to own or have access to enough land to adopt the promoted new technology and the financial capacity to make the required investments, extremely poor households are less suited for such interventions. However, programs that offer in-kind grants are more likely to focus on targeting.

Programs targeting the extreme poor are more likely to be short-duration interventions (less than two years) compared to nontargeted ones. Interestingly, we observe targeting being more prominent in more recent programs. While 38 percent of the cases targeting the extreme poor launched their programs after 2006, only 20 percent of the other livelihood cases were started during this period. Although it is plausible that the recent evaluations focused more on targeted programs, creating this distribution, this pattern is encouraging in the context of the agenda of reducing extreme poverty. Finally, we find that livelihood programs targeting the extreme poor are likely to be more expensive (with a cost per beneficiary of more than $300) than nontargeted interventions. This difference in cost clearly shows the importance of considering the differences in target populations when interpreting results from our cost-effectiveness measures.

Comparing Costs

The costs reported here are in US dollars using the exchange rates prevailing at the time of program implementation. For half of the livelihood programs, the cost per beneficiary was calculated using the total program expenses and the number of direct beneficiary households. The other livelihood program evaluations reported costs per beneficiary. In cases where both figures are available, we used the per beneficiary costs reported in the evaluations.

The cost of cash transfer programs, in contrast, is the size of the cash grants made to the beneficiaries. Since most of the cash transfer interventions were executed as part of a research project, the operational costs are rarely discussed. Even if the actual transaction costs for making these grants could be obtained, they would not be comparable to regular development intervention costs. One of the key features of the GiveDirectly program is the very high cost-efficiency in selecting poor households (selection took place remotely using satellite imagery of roofing materials) and

transferring the grants via mobile money. GiveDirectly was able to do this with an average cost per households of 10 percent of the grant size. To make the "research" cash transfers better reflect the real-world costs of running programs, we increased the cost of other cash transfer projects by 10 percent of their average grant size. Although this provides a practical guideline, we recognize that the transaction costs in other contexts may not be the same as GiveDirectly's experience in Kenya. Nonetheless, it is a convenient estimate of the lower bound.[10]

With this key distinction regarding the inclusion of operational costs, the average cost of the cash transfer programs is much lower (at $232) than that of the livelihood programs ($779). As expected, the range in cost per beneficiary is much wider for livelihood programs—extending from a low of $2.36 a high of more than $3,700—compared to the cash transfer cases. The size of cash grants ranged between $84 and $480. The three least expensive livelihood programs were land certification (case L11) as part of economic reform in Vietnam, at $2.36; support for export crops in Kenya (case L22), at $12; and the Participatory Livestock Development Project (case L18) in Bangladesh, at $81. At the higher end, two livelihood programs spent more than $3,500 per beneficiary. These most expensive programs were Productive Business Services (case L13) in El Salvador and the Farmer Training and Development Project (case L15) in Honduras, at $3,721 and $3,655, respectively. Unsurprisingly, considering the comprehensive package of interventions, the average cost of the seven graduation initiatives is the highest ($1,147) among the three program types (Table 8.2).

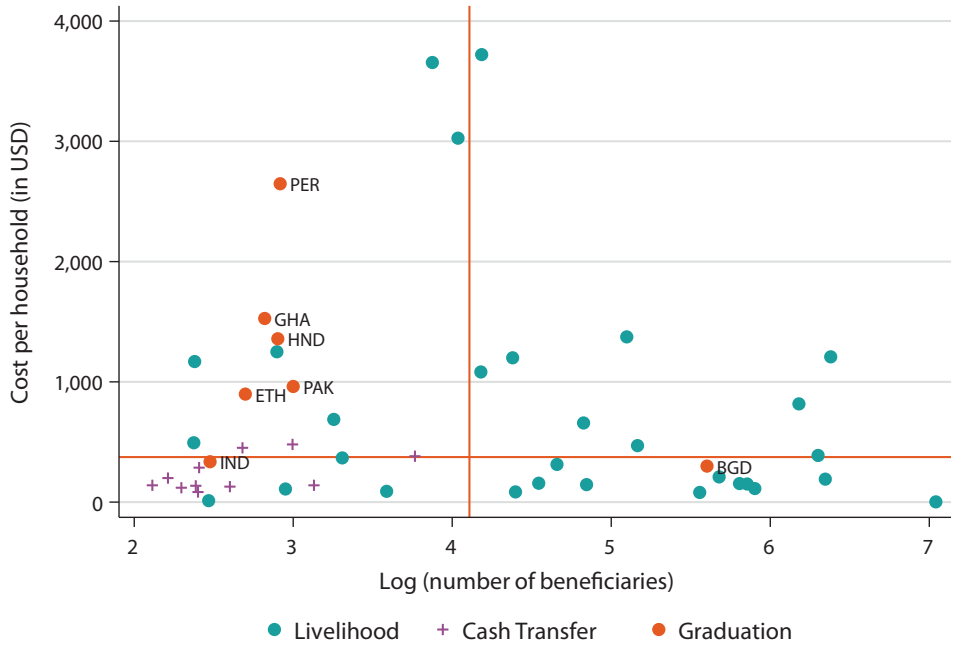
Figure 8.2 plots the cost and scale of all the cases. On the horizontal axis of the graph, the number of beneficiaries is presented in log scale. Therefore, a change from four to six represents a 100-fold increase in the number of beneficiaries. The red lines show median values for all the observations plotted. Given the larger number of livelihood programs in this pool

TABLE 8.2—AVERAGE COSTS OF PROGRAMS

Type of program	Average cost
Lump-sum cash transfers	$232
Livelihood programs	$779
Graduation programs	$1,147

Source: Sulaiman (2016).

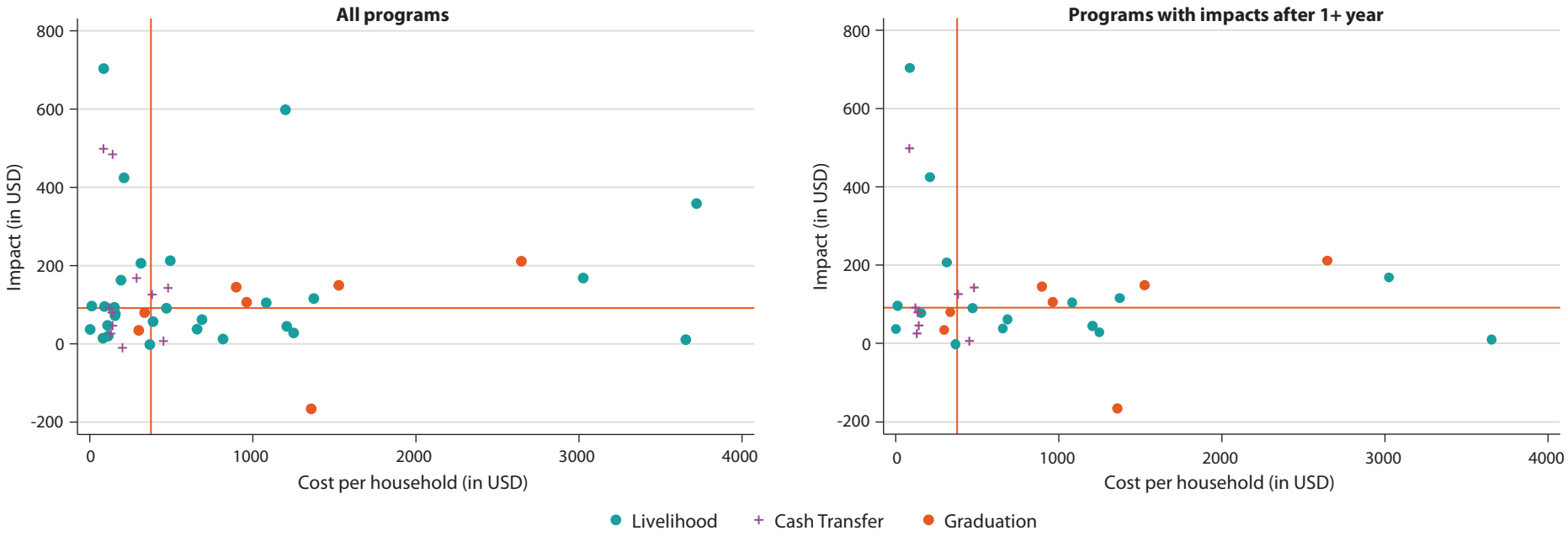
FIGURE 8.2—SCALE AND COST BY TYPE OF PROGRAM



Source: Sulaiman (2016).

10 Changing the overhead cost to 30 percent (which is a reasonable upper bound) does not change the order of cash transfers in the ranking by either cost or impact-cost ratio.

FIGURE 8.3—COST AND IMPACT BY PROGRAM TYPE



Source: Sulaiman (2016).

of cases, the median values divide these cases roughly into equal size. We see that most of the graduation cases had higher than median costs. Cash transfer cases, reflecting the nature of research projects, were implemented at relatively small scales. Many of the costlier livelihood programs were also implemented at quite large scales. Obviously, these cases had very large total program budgets.

Impact Evidence

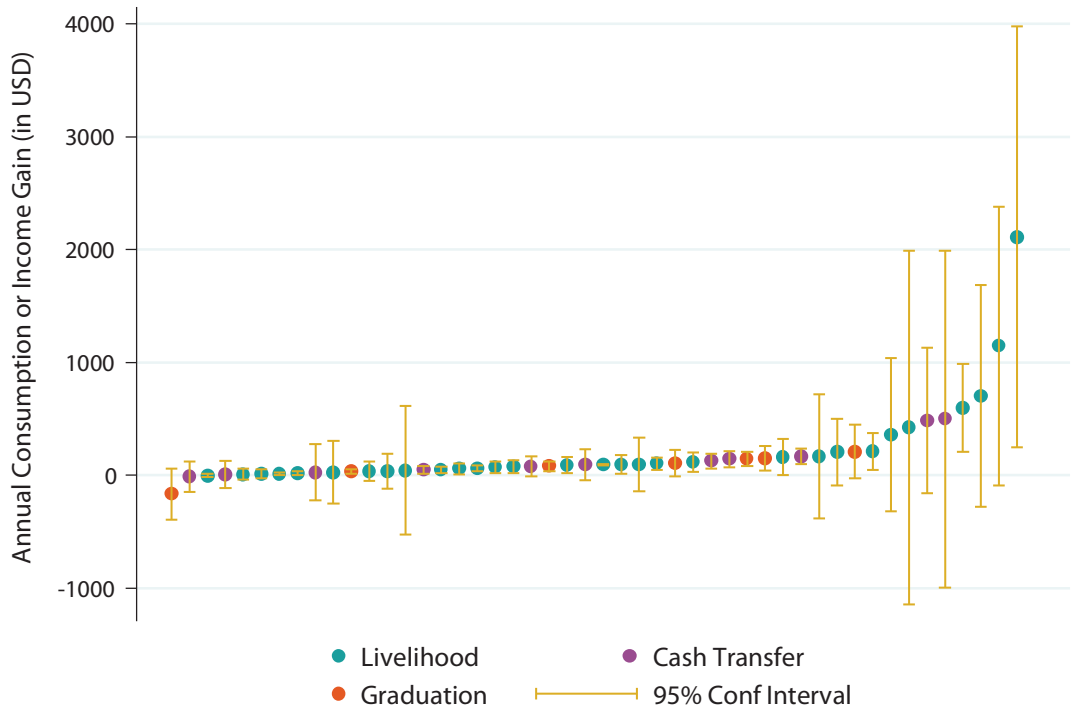
As discussed in the methods section, we converted all the point estimates from the impact evaluations into annual gains in consumption or income. For programs with impact estimates available for both income and consumption, we used the consumption estimates, as these tend to be more reliable for poor households with irregular sources of income. Figure 8.3 plots these impact estimates and per beneficiary costs. There are two programs (both livelihood cases) with extremely large impact values, which we eliminated from the graphs to keep the scales within a meaningful range.[11]

Somewhat surprisingly, there is no clear relationship between per beneficiary cost and impact. One would expect a higher investment per household to generally yield larger impact (Figure 8.3). Most of the cash transfer cases are located around the median impact value, except for a couple of studies showing very large impacts (over $400). Of the seven

11 The two cases are Kenya Dairy Development Project (case L17), with estimated impact of $2,112, and Ruti Irrigation Scheme (case L12) in Zimbabwe, with an impact estimate of $1,147. As we discuss below, both these estimates are also very imprecise, with a large standard error.

graduation initiatives, four had impact estimates above the median. Overall, this simple comparison of cost and impact does not reveal the superiority of any of our three groups of cases over the others. In the second plot, only those cases with impacts measured at least one year after the end of the intervention are shown. In this graph, graduation cases become predominant in the high cost–high impact quadrant.

FIGURE 8.4—IMPACT ESTIMATES WITH CONFIDENCE INTERVAL



Source: Sulaiman (2016).

Figure 8.4 shows the 95 percent confidence intervals for all the impact estimates in ascending order. As we can see, the cases with the eight largest impact estimates (six of which are livelihood programs, and two are cash transfers) had very large confidence intervals. In other words, we have very little confidence that these estimates are statistically different from no impact. The fact that all eight of the highest impact estimates also have starkly larger confidence intervals points to an underlying reporting bias problem driven partly by the tendency of small studies to generate large (but false) treatment effects. An assessment of "small study bias" in the included cases shows that there are signs of possible publication bias for the livelihood programs but not for the cash transfers or graduation.[12]

Meta-analysis of Cost-Effectiveness

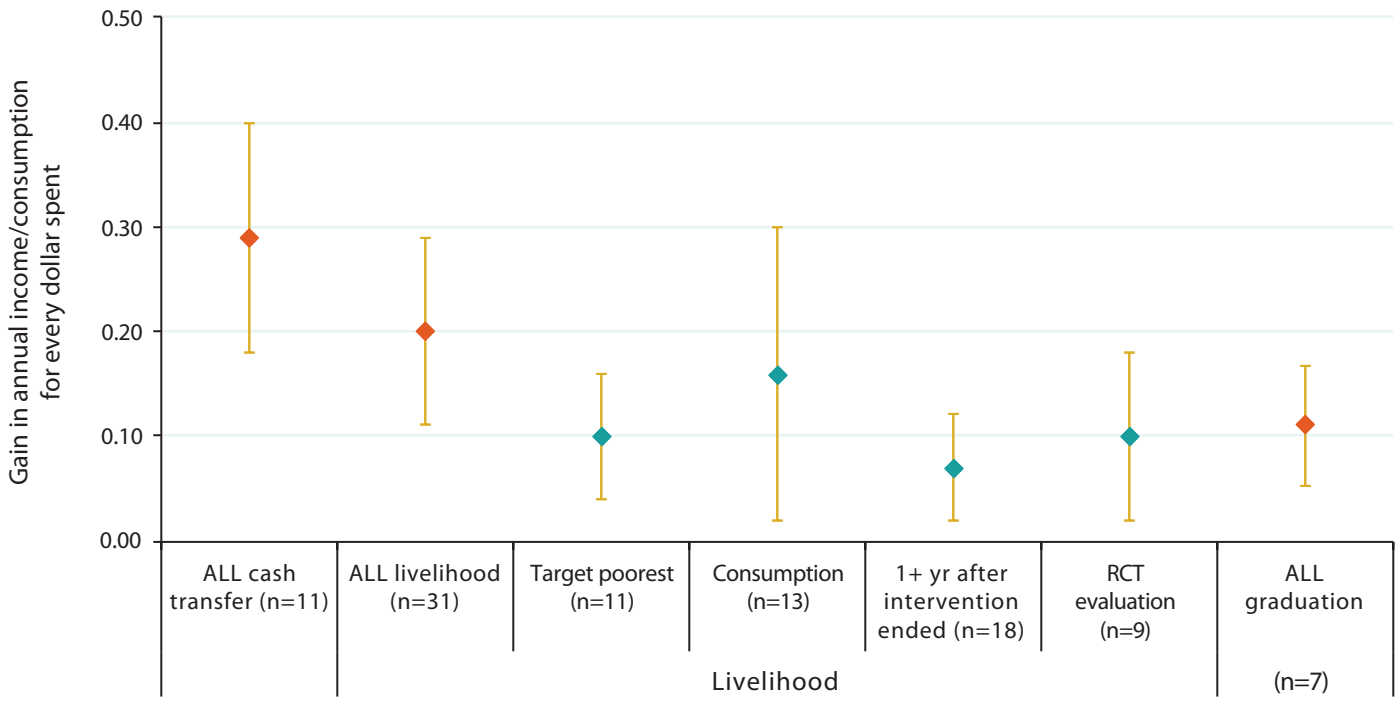
Figure 8.5 presents the overall meta-average of impact-cost ratios of the three groups of cases and the subgroups of livelihood cases. These ratios do not make any assumption of continuation of the impacts in the future to estimate net present values. Overall impact-cost ratios are 0.29 for cash transfer cases, 0.20 for livelihood cases, and 0.11 for graduation cases. However, when we restrict the comparison to livelihood cases that target the extreme poor or measure "long-term" effects, the graduation approach has similar impact-cost ratios. The 18 livelihood cases that measured impacts at least one year after the end of the intervention yield an average impact-cost ratio

12 See Annex 1 in Sulaiman (2016) for the specifics of this analysis of bias.

of 0.07, and the 11 programs that targeted the poorest have an average impact-cost ratio of 0.1. Both are not significantly different from the meta-average of graduation programs.

Looking at the five livelihood cases that targeted the extreme poor and measured long-term impacts, we obtain a meta-average impact-cost ratio of 0.09 (result not shown in Figure 8.5). However, this average is essentially reflective of two cases: WINGS (case L21) in Uganda and the Community Based Rural Land Development Project (case L26) in Malawi. In the meta-average, the WINGS case receives a 67 percent weight and the Malawi case a 31 percent weight. WINGS has strong similarities to the graduation approach, and this creates the challenge of having to compare individual cases in which the comparison, essentially, is of a graduation approach with an "almost graduation" approach.

FIGURE 8.5—COST-EFFECTIVENESS COMPARISON



Source: Sulaiman (2016).
Note: Standard errors are estimated separately for each set of studies in meta-regression. RCT refers to randomized control trial.

Similar challenges exist in performing a subset analysis of cash transfer cases. There are only two cash transfer cases that targeted the extreme poor and had long-term results. The transfer in Nicaragua (case C3) has an impact-cost ratio of 0.27 (significant at less than the 1 percent level) and the cash grant for business start-up by female entrepreneurs in Sri Lanka (case C10) has a ratio of 0.18 (not significant). The Nicaragua study by Macours, Premand, and Vakis (2012) shows that the impact on annual household income is about $40 ($30 from nonfarm businesses and $10 from livestock rearing), compared to the estimated annual household consumption gain of $142. Moreover, with a relatively small effect on productive assets (about $15), the long-term change in consumption expenditure appears unrealistically high.

An alternative way to reflect on sustainability is assessing how the impact estimates change for individual evaluations over time. While a few

of the livelihood and cash transfer cases in our review conducted impact assessments at different points in time, the graduation initiatives have strong evidence of the sustainability of the impacts. All six CGAP–Ford Foundation pilot initiatives have impacts measured both at the end of interventions and a year after. The graduation case in Bangladesh was evaluated at the end of the intervention and two years after.[13] Two graduation evaluations also measured the impact five years after the end of the intervention. These evaluations demonstrate that impact on economic indicators (including consumption) persists in the follow-up surveys. In Bangladesh, the results are more encouraging because the estimated impact on total consumption significantly increases between the end of the intervention and the long-term follow-ups. However, the livelihood and cash transfer cases show a reverse trend. There are four cases (two livelihood programs and two cash transfers) with impact estimates at multiple points in time. These show a declining trend between their respective midlines and endlines. The livelihood cases—the Rural Business Program in Nicaragua (case L2) and the Input Subsidy Program in Mozambique (case L24)—show a substantial decline in effect sizes. The cash grant experiment by de Mel, McKenzie, and Woodruff (2009) in Sri Lanka (case C4) found that the impacts were much higher in the four quarters immediately after transfers than a year later. Another experiment in Sri Lanka by de Mel, McKenzie, and Woodruff (2014) also showed that the initial improvements in business practices dissipated after two years (case C10). Based on this analysis, the graduation approach clearly has an advantage in terms of sustainability of impacts.

Similar within-case variations can be used for assessing the equitability of the impacts. Some of the evaluations measure heterogeneity of impact by the initial poverty status of the beneficiaries. The results are somewhat mixed for livelihood and cash transfer cases. For example, for the agroforestry program in Kenya (case L9), adoption of the promoted technology was similar between the poor and the nonpoor. However, Munro (2003) reports that asset-rich households were more likely to have benefited from the crop pack interventions under the Agricultural Recovery Program (case L8) in Zimbabwe. The cash transfer experiment by Fafchamps et al. (2011) showed no effect of capital transfers on extremely poor women (case C11). Quantile treatment effects of the graduation approach find large variations in the magnitude of the impacts, but all the groups in the sample showed an increase in consumption one to two years after the end of the interventions. These individual cases, in addition to the more recent studies discussed that compare different approaches in a single study setting, indicate the superiority of the graduation approach as a tool for sustainable economic development for the extreme poor over both livelihood programs and cash transfers. However, given the superiority of cash transfers in the short run, it is necessary to measure the sustainability of the impact to reach a firmer conclusion.

Our case screening was based on the availability of impact estimates for consumption or income. Although we have impact estimates for additional indicators from the graduation evaluations, most of the livelihood and cash transfer cases do not report these outcomes. Consequently, we cannot conduct a similar analysis of impacts on other livelihood outcomes based on these cases.

13 More recent evidence by Bandiera et al. (2017) shows that the impacts on consumption and assets could be even higher after seven years from baseline. However, this estimate uses the trends for the control group from baseline to the two follow-ups (two and four years after) to construct a seven-year counterfactual since the control group received treatment after the fourth year from baseline. Banerjee et al. (2016), however, provide a stronger case of longer-term impact in West Bengal in India.

Conclusion

With the objective of providing a comparative assessment of alternative approaches to making sustainable reductions in extreme poverty, this review compiled data from three types of social protection tools. We find that targeting the extreme poor is not a common feature of the livelihood and lump-sum cash transfer programs. Average delivery cost is the highest for graduation programs and the lowest for cash transfers, while livelihood programs have a large diversity in per beneficiary cost. In terms of impact, graduation programs are the most consistent in making significant positive impacts across sites and in the longer term, while livelihood programs and cash transfers generally lack evidence of sustainability of impact among the extreme poor.

In our meta-analysis, annual household consumption gain as a proportion of total program cost is the highest for cash transfers, followed by livelihood and graduation programs. However, the estimates for livelihood programs are lower if we limit the analysis to programs that target the extreme poor or that measure impacts at least one year after the end of the interventions. This evidence is in line with individual studies that find differentially lower effects on poorer households or declining effects after interventions are phased out.

For our outcome of interest, long-term impact on the extreme poor, both graduation and livelihood cases show a positive impact with similar impact-cost ratios. The livelihood programs meeting these criteria vary widely and include agricultural reforms, irrigation, a women's income-generation program, land redistribution, and ex-combatant reintegration. The breadth of these programs supports no clear policy recommendation for scaling programs. However, growing evidence from the direct comparison of graduation and lump-sum cash transfers indicates the greater cost-effectiveness of the graduation approach. Based on current evidence, lump-sum cash transfers have perhaps the most potential to reduce poverty, while the graduation approach has the largest and most consistent body of evidence to support its actual impact on extreme poverty.

Appendix

TABLE 8.A.1—LIVELIHOOD AND CASH TRANSFER PROGRAMS INCLUDED IN THE STUDY

Sl	Case title	Country	Case source
Livelihood cases			
L1	MiDA Farmer Based Organization (FBO) Training	Ghana	Nankhuni and Paniagua (2013)
L2	Rural Business Program	Nicaragua	Nankhuni and Paniagua (2013)
L3	National Agriculture Advisory Services (NAADS)	Uganda	Nankhuni and Paniagua (2013)
L4	Productive Safety Net Program (PSNP)	Ethiopia	Masset et al. (2011)
L5	Sipi organic coffee contract farming scheme	Uganda	Bodnár and Piters (2011)
L6	Farm Input Subsidy Program (FISP)	Malawi	Bodnár and Piters (2011)
L7	Comprehensive Agrarian Reform Program (CARP)	Philippines	Bodnár and Piters (2011)
L8	Agricultural Recovery Program (ARP)	Zimbabwe	Bodnár and Piters (2011)
L9	Agroforestry in Western Kenya	Kenya	Bodnár and Piters (2011)
L10	National Titling and Registration Program in Peru (PETT)	Peru	Bodnár and Piters (2011)
L11	Land-use certificate	Vietnam	IEG (2011)
L12	Ruti Irrigation Scheme	Zimbabwe	Nankhuni and Paniagua (2013)
L13	Productive Business Services (PBS)	El Salvador	Nankhuni and Paniagua (2013)
L14	Water to Market (WtM)	Armenia	Nankhuni and Paniagua (2013)
L15	Farmer Training and Development Project (FTDP)	Honduras	Nankhuni and Paniagua (2013)
L16	Plataformas	Ecuador	Nankhuni and Paniagua (2013)
L17	Kenya Dairy Development Project (KDDP)	Kenya	Masset et al. (2011)
L18	Participatory Livestock Development Project (PLDP)	Bangladesh	Masset et al. (2011)
L19	Farmer Field Schools in Cajamarca	Peru	Phillips, Waddington, and White (2014)
L20	Income Generation for Vulnerable Group Development (IGVGD)	Bangladesh	Author
L21	Women's Income Generating Support (WINGS)	Uganda	IPA
L22	DrumNet	Kenya	J-PAL (Theme: Agri)
L23	Development of Sustainable Aquaculture Project (DSAP)	Bangladesh	Masset et al. (2011)
L24	Input Subsidy Program	Mozambique	J-PAL (Theme: Agri)
L25	Land title reform by SOMALAC	Madagascar	IEG (2011)
L26	Community Based Rural Land Development Project	Malawi	IEG (2011)
L27	Peruvian Irrigation Subsector Project	Peru	IEG (2011)
L28	Micro-Entrepreneurship Support Program	Chile	J-PAL (Theme: Fin)
L29	Ex-combatant reintegration program	Liberia	IPA
L30	Agriculture Development (Fadama)	Nigeria	IEG (2011)
Cash transfer (unconditional lump-sum) cases			
C1	Self-selection into credit markets in Mali	Mali	J-PAL (Theme: Agri)
C2	Agricultural decisions after relaxing constraints	Ghana	J-PAL (Theme: Agri)
C3	Transfers, diversification, and household risk strategies	Nicaragua	J-PAL (Theme: Fin)
C4	Returns to capital in microenterprises	Sri Lanka	3ie
C5	Experimental Evidence on Returns to Capital and Access to Finance	Mexico	3ie
C6	Unconditional cash transfer	Kenya	IPA
C7	Stimulating Microenterprise Growth	Uganda	Author
C8	Youth opportunities program in northern Uganda	Uganda	J-PAL (Theme: Fin)
C9	Human and financial capital for microenterprise development	Tanzania	3ie
C10	Business training and female enterprise start-up	Sri Lanka	3ie
C11	Returns to capital in microenterprises	Ghana	IPA
Graduation cases			
G1	Graduation pilots in six countries	India, Pakistan, Ethiopia, Ghana, Peru, Honduras	Banerjee et al. (2015)
G2	Targeting Ultra-poor Program (TUP)	Bangladesh	Bandiera et al. (2013)

Source: Author.
Note: 3ie = International Initiative for Impact Evaluation; IPA = Innovation for Poverty Action; J-PAL = Abdul Latif Jameel Poverty Action Lab.