THE EFFECTIVENESS OF THE GRADUATION APPROACH: WHAT DOES THE EVIDENCE TELL US?

BY STEPHEN KIDD AND DILOA ATHIAS
No one should be against giving families living in poverty a few goats, chickens or cattle. Indeed, development projects have been doing these things for decades, with variable results. However, in recent years, major claims have been made about the impacts of livestock schemes known as graduation programmes. According to the World Bank’s Consultative Group to Assist the Poor (CGAP 2017), the graduation approach “holds significant purpose if implemented at scale to move people out of extreme poverty and into sustainable livelihoods”. Banerjee et al. (2015) argue that it “causes lasting progress for the very poor”, while in an article for The Guardian newspaper, Emma Graham-Harrison (2016) claims that it “has transformed the lives of more than a million of the world’s poorest families”. Indeed, the name graduation was chosen because it was believed that the approach will, in fact, ‘graduate’ people out of poverty.

A diagram produced by CGAP to explain the programme (see Figure 1) shows how beneficiary families are expected to be on an ever-upward trajectory out of poverty. So, are graduation schemes the ‘silver bullet’ that the world’s poorest families have been waiting for?

As Figure 1 indicates, the graduation approach combines the provision of assets to families—usually livestock such as cattle, goats, chickens or, in the case of Peru, guinea pigs—in addition to a regular cash or food transfer for a few months combined with intensive coaching. In some cases, beneficiaries are encouraged to save regularly and are given access to health

**FIGURE 1: THE GRADUATION MODEL AS DEPICTED BY CGAP**

services. The value of the assets provided is not particularly large: across five countries Banerjee et al. (2015) found it to be the equivalent of between 3.8 and 8 goats (and 17.1 goats in Ethiopia). In Bangladesh, most beneficiaries appear to receive two cows. Yet the programme is believed by many to be life-transforming.

What is the actual evidence on the impacts of the graduation approach? Has it really achieved its stated objective of ‘graduating’ the ‘ultra poor’ out of poverty? This article hopes to answer these questions by examining whether: the beneficiaries of the programme are, in fact, the poorest people; the impacts of the programmes are as significant as claimed; the impacts are sustainable; and the approach is cost-effective.

PROGRAMME BENEFICIARIES: ARE THEY THE POOREST PEOPLE?
The graduation approach attempts to target the poorest members of society, in the belief that they are excluded from more mainstream development programmes and financial services. However, attempts to reach the poorest people do not appear to be particularly successful.

As Figure 2 indicates, when measured against a poverty line of USD1.25 (Purchasing Power Parity—PPP)—which was used by the Millennium Development Goals to benchmark extreme poverty—a high proportion of recipients had higher levels of consumption when selected for the graduation programme.¹

In Peru and Pakistan, for example, over 80 per cent of recipients were above the USD1.25 poverty line. Even in Bangladesh, around 45

¹ We use the USD1.25 PPP poverty line rather than the current USD1.90 PPP poverty line of the Sustainable Development Goals, as this is the line that was used by the evaluators themselves. Nonetheless, given that the Graduation programme is aimed at the ‘ultra poor’ rather than ‘poor’ people, it seems appropriate to use the USD1.25 PPP poverty line.
The effectiveness of the graduation approach: what does the evidence tell us?

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per cent of beneficiaries were above this line, indicating that the vast majority would not have been considered ‘ultra poor’ when they entered the programme (since the ‘ultra poor’ are expected to be in the poorest 6 per cent of their communities). Furthermore, the Bangladesh graduation programme is known for selecting female-headed households, yet, in fact, 58 per cent of households were male-headed, and only 41 per cent of women were the sole earner in the family (Bandiera et al. 2012; 2016).

Therefore, the claim that graduation programmes are helping only the very poorest is not supported by the evidence. While some recipients are indeed living in extreme poverty, many are not. As we will see in the next section, this has a major influence on the effectiveness of the graduation approach.

Programme impacts: are they significant?

Advocates of the graduation approach claim significant impacts for the programmes. For example, in Bangladesh it is claimed that recipients’ earnings increased by 37 per cent, the value of cows increased by 208 per cent, and business assets rose by 283 per cent. While these figures are correct, the actual impacts are, in reality, much less impressive when expressed as absolute values. As Table 1 shows, earnings only increased by USD0.06 per day, the value of cows rose by a mere USD20.27, and business assets increased by just USD17.36. The claim by Banerjee et al. (2015) that the Bangladesh programme is “very effective” does not seem to be substantiated by the evidence.

The principal aim of the graduation approach, however, is to improve household consumption (ibid.). Yet, even with this indicator, impacts are relatively modest or even non-existent. Table 2 shows the per capita impacts on the expenditure of beneficiary households. Household consumption only increased— across six countries— by between USD0.04 and USD0.12.

### TABLE 1: CLAIMS ABOUT THE IMPACTS OF THE BANGLADESH GRADUATION PROGRAMME AND THE EVIDENCE IN ABSOLUTE VALUES (IN 2007 NOMINAL USD)

<table>
<thead>
<tr>
<th>Claims</th>
<th>Absolute Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earnings increase by 37%</td>
<td>USD0.06 per day</td>
</tr>
<tr>
<td>Value of household durables increases by 110%</td>
<td>USD9.90</td>
</tr>
<tr>
<td>Value of cows increases by 208%</td>
<td>USD20.27</td>
</tr>
<tr>
<td>Household savings increased by 863%</td>
<td>USD13.00</td>
</tr>
<tr>
<td>Value of land owned increases by 220%</td>
<td>USD87.64</td>
</tr>
<tr>
<td>Business assets rise by 283%</td>
<td>USD17.36</td>
</tr>
</tbody>
</table>

Source: Authors’ elaboration based on Balboni et al. (2015) and Bandiera et al. (2016).

### TABLE 2: IMPACTS OF GRADUATION PROGRAMMES ON CONSUMPTION, PER CAPITA PER DAY

<table>
<thead>
<tr>
<th>Country</th>
<th>USD 2014 (PPP) per day</th>
<th>USD 2014 (nominal) per day</th>
<th>% of consumption of 30th percentile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangladesh</td>
<td>0.17</td>
<td>0.07</td>
<td>7.7</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>0.24</td>
<td>0.09</td>
<td>13.4</td>
</tr>
<tr>
<td>Ghana</td>
<td>0.11</td>
<td>0.04</td>
<td>5</td>
</tr>
<tr>
<td>Honduras</td>
<td>-0.15</td>
<td>-0.08</td>
<td>-5</td>
</tr>
<tr>
<td>India (West Bengal)</td>
<td>0.20</td>
<td>0.06</td>
<td>10</td>
</tr>
<tr>
<td>India (Andhra Pradesh)</td>
<td>-0.10</td>
<td>-0.03</td>
<td>-5</td>
</tr>
<tr>
<td>Pakistan</td>
<td>0.20</td>
<td>0.06</td>
<td>6.9</td>
</tr>
<tr>
<td>Peru</td>
<td>0.20</td>
<td>0.12</td>
<td>3.1</td>
</tr>
</tbody>
</table>

Source: For Bangladesh, see Bandiera et al. (2013); for India (Andhra Pradesh), see Bauchet et al. (2015); for all remaining impact evaluations, see Banerjee et al. (2015).
per capita per day. In Honduras, beneficiaries ended up poorer than when they had started, due to their assets (chickens) dying as a result of disease, while similar negative impacts were also found in Andhra Pradesh, India. A further aspect of the scheme in Bangladesh has been an increase in child labour among beneficiary households of around 60 hours per year, although the exact nature of this work is unclear (Bandiera et al. 2013).

This level of impact on consumption can in no way 'graduate' families out of poverty. As Figure 3 indicates, for rural India, the average impact from the West Bengal experiment would only move a family at the 10th percentile to the 16th percentile in the consumption distribution, so they would still be living in extreme poverty. In fact, buried within Banerjee et al.’s (2015) paper is the observation that: "the average effects are not very large and do not correspond to our intuitive sense of what it would mean to be liberated from the trap of poverty". This contrasts markedly with the same study’s headline finding that "the graduation programme’s primary goal, to substantially increase consumption of the very poor, is achieved by the conclusion of the programme" (ibid.). Therefore, this finding does not appear to be substantiated by the evidence either.

Furthermore, the evidence indicates that the largest impacts are among those who were least poor when entering the programme. Banerjee et al. (2015) found that the increase in consumption was greater among households in the top quantiles. As Figure 4 shows, across six countries, the impact on consumption at around one year following the end of the programme was approximately four times higher at the 90th percentile of consumption.

\[ \text{FIGURE 3: THE MOVEMENT OF A HOUSEHOLD IN RURAL INDIA UP THE CONSUMPTION DISTRIBUTION, IF IT RECEIVES THE AVERAGE IMPACT FROM THE GRADUATION PROGRAMME IN INDIA} \]

Source: Authors’ elaboration based on data from PovcalNet for Rural India in 2012

\[ ^2 \text{Misha et al. (2014) came to the same conclusion among beneficiaries of the Bangladeshi Graduation programme.} \]
the consumption distribution than at the 10th percentile. Unsurprisingly, those who were in a stronger position financially at the beginning of the programme—in particular those who were not poor—were better able to take advantage of it. Indeed, Misha et al. (2014) found that the most sustainable impacts of the BRAC graduation scheme were among the people who were entrepreneurs prior to entering the programme; the impacts on those who were not entrepreneurs were negligible in the long term. One explanation could be that, psychologically, people who were not poor were better prepared to profit from the programme, since those living in extreme poverty—or the ‘ultra poor’—would probably have been less confident and less able to take advantage of the opportunity presented to them. This raises the question of whether the programme is, in fact, appropriate for its target group—the ‘ultra poor’—since they do not appear to have gained much from it.

**PROGRAMME BENEFITS: ARE THEY SUSTAINABLE?**

Is the claim by Banerjee et al. (2015) that graduation programmes bring about lasting progress for very poor people correct? First of all, as we have seen already, those benefiting most from the programme are unlikely to be ‘very poor’. Nonetheless, are the impacts sustainable? The authors make this claim despite measuring programme impacts only one year after the programme ended, which seems rather premature. There are strong indications that household productive assets begin to diminish among many beneficiaries either during or just after the programme finishes. Banerjee et al. (2015) note that beneficiaries sold off some of their productive assets soon after receiving them, so that, one year after the programme had been finalised, the value of the assets held by families was less than those they had received. In fact, in Honduras, Pakistan and Peru, it was less than 20 per cent of the value initially received in assets. Across the

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1 BRAC is a non-governmental organisation (NGO) based in Bangladesh. See: http://www.brac.net

4 Unfortunately, it is not possible to use the evaluation results from the study by Bandiera et al. (2016) of the effects the Bangladesh Graduation programme seven years after programme commencement, since there was no longer a control group, and impacts could not be measured.
six countries in their study, the reduction in asset values was greatest among the poorest households. Similarly, in Bangladesh, between the end of the programme and two years afterwards, the average number of cows owned by beneficiaries had reduced slightly from 1.22 to 1.21, the number of poultry from 4.15 to 3.1, and the number of goats from 0.83 to 0.57 (Bandiera et al. 2013). Also, in Bangladesh, Misha et al. (2014) found that the beneficiaries, nine years after joining the scheme in 2002, owned an average of only 0.72 cows/bulls and 1.95 poultry, which does not suggest a ‘sustainable livelihood’.

The reduction in assets is not surprising. Households continually face risks, any of which may oblige them to sell off assets as a coping strategy. Since the regular cash transfer component of the schemes only lasts from a few months to a maximum of one year, households do not have a guaranteed minimum level of income security that they can draw on when hit by a crisis. Therefore, most participants are left exposed to risk, without any form of social protection to support them, unless they are lucky enough to have entered into a government social security scheme.

In fact, in Bangladesh, there is evidence that the change in the lives of beneficiaries was not particularly large nine years after entering the graduation programme: in fact, it was deteriorating year over year. For example, around 50 per cent of beneficiaries continued to depend on day-labouring as their main source of income (Misha et al. 2014). Many other initial benefits from the programme also diminished over this period: for example, the number of animals owned by beneficiaries decreased consistently between 2005 and 2011, indicating that the initial gains from the programme were not sustainable. Similarly, while the probability of engaging in entrepreneurship had increased by 9 percentage points by 2005, it had fallen to 7 percentage points by 2008 and only 4 percentage points by 2011, which, as stated by Misha et al. (2014) “renders the long-term effect to be rather limited”. Indeed, they conclude that: “While the programme caused an initial shift to more entrepreneurial employment activities, by 2011 many treated households reverted back to their baseline occupations.” Of particular concern is the finding that the women who had initially been maids or beggars when joining the programme in 2002 had reverted to these same occupations by 2011, indicating no real change among the most vulnerable people. A similar pattern occurred among those who had been day-labourers in 2002: by 2011 they had reverted to being day-

Households do not have a guaranteed minimum income security... when hit by a crisis
labourers, and, indeed, some had become maids or even beggars.

Similarly, Banerjee et al. (2015) report that a range of positive impacts found at the end of the programmes they studied had disappeared after only one year. These included gains in financial inclusion, time spent working, income and revenue, mental and physical health, and women’s empowerment. There is no way of knowing whether the situation has deteriorated further in later years, but it would not be surprising, since families face more and more crises over time.

The assertion that households are on a continuously upward path out of poverty, as indicated by the advocates of the graduation approach (see Figure 1), is unrealistic. Figure 5 shows the degree of consumption volatility found in Uganda over a period of two years and the extent to which household rankings changed significantly. In fact, 45 per cent of households living in poverty in 2013 had not been living in poverty in 2011, and a similar volatility is found across many—if not all—developing countries. Households are frequently hit by shocks and crises or, alternatively, are able to take opportunities to improve their livelihoods. Without access to regular and predictable social security transfers, beneficiaries of graduation programmes are just as exposed to risk as other households, and, over time, it is likely that the assets of most will be significantly eroded.

COST-EFFECTIVENESS OF THE GRADUATION APPROACH

Graduation programmes are not cheap. Costs range from USD379 per household in India to USD2,865 in Peru, not counting the cost of health services. Banerjee et al. (2015) used a simplistic technique to argue that the benefit–cost ratio of the programme is positive: they assumed that the estimated consumption gains only one year after the programme would continue indefinitely into the future, although a discount rate was included. Thus, they were able to report benefit–cost ratios of between 133 per cent and 433 per cent (although it is minus 198 per cent in Honduras). Similarly, Bandiera et al. (2016) used the highly optimistic assumption that the gains

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7 For example, while beneficiaries of the BRAC Graduation programme had seen an increase in the number of cows/bulls owned of 1.5 by 2005, by 2011 that number had fallen significantly to a net gain of only 0.4 cows/bulls.
from the programme would last “year-on-year”—presumably until the death of the participants—to derive an average benefit–cost ratio of 5.4 for BRAC’s graduation scheme.

They also appear to use a cost of USD280 per recipient for the entire two-year programme, whereas in an earlier paper they put the cost of the programme at USD300 per year, which would result in an overall cost of USD600 (Bandiera et al. 2011). Since the USD600 cost is more in line with other estimates, it suggests that Bandiera et al. (2016) have significantly underestimated the true cost of the programme and, consequently, significantly overestimated the benefit–cost ratio.

Nevertheless, as indicated above, the average level of productive assets in graduation programmes declines over time, which would most likely result in progressively lower incomes. Indeed, across the six countries studied by Banerjee et al. (2015), consumption among the poorest beneficiaries was already falling after one year. Therefore, the assumptions of Banerjee et al. (2015) and Bandiera et al. (2016) appear to be flawed, and the finding that these programmes are cost-effective is highly questionable. It is certainly not based on robust evidence.

A more interesting question would be whether offering families a regular and predictable transfer—and nothing else—over a longer period but at the same cost would result in greater impacts. Table 3 indicates the value of monthly transfers that could be provided over five and 10 years for the same cost as graduation programmes across seven countries. Compared to many social security cash transfers in developing countries, the values of the benefit are relatively high. Given that there is a great deal of evidence that providing families with regular and predictable transfers enables them to build productive assets and engage in the labour market, it is likely that the benefits of a long-term regular transfer would be significant.

The benefit-to-cost ratio was significantly overestimated.

### Table 3: Value of Monthly Cash Transfers That Could Be Provided to Beneficiary Households

<table>
<thead>
<tr>
<th>County</th>
<th>USD 2014 (PPP) per day</th>
<th>USD 2014 (nominal) per day</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PPP Value</td>
<td>Nominal Value</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>19</td>
<td>8</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>52</td>
<td>20</td>
</tr>
<tr>
<td>Ghana</td>
<td>59</td>
<td>20</td>
</tr>
<tr>
<td>Honduras</td>
<td>39</td>
<td>22</td>
</tr>
<tr>
<td>India (W. Bengal)</td>
<td>18</td>
<td>6</td>
</tr>
<tr>
<td>India (Andhra Pradesh)</td>
<td>40</td>
<td>12</td>
</tr>
<tr>
<td>Pakistan</td>
<td>78</td>
<td>24</td>
</tr>
<tr>
<td>Peru</td>
<td>74</td>
<td>43</td>
</tr>
</tbody>
</table>

Source: Authors’ elaboration
(see DFID 2011; Kidd 2014; Bastagli et al. 2016; Davis et al. 2016; and Handa et al. 2016). Even among old-age pensioners in Uganda, the proportion purchasing livestock within a period of one year increased to 46 per cent, compared to 26 per cent prior to the introduction of the pension, alongside a 42 per cent increase in the value of their purchases (Kidd 2016). Yet many graduation programmes do not allow older people to participate, mistakenly regarding them as unproductive.

Regular and predictable transfers offer families security, which enables them to plan for and invest in the future. Furthermore, if they are hit by shocks, they have this transfer to fall back on, as an alternative to selling their productive assets. However, this essential safety net offered by social security transfers is not available to graduation beneficiaries, unless they manage to access a national social security scheme. Indeed, the absence of a regular and predictable social security transfer is likely to undermine the investment in graduation programmes, since the assets given to families could be lost as a result of exposure to even relatively small shocks.

Until a proper evaluation is undertaken to compare graduation programmes with regular and predictable transfers that endure for longer periods of five or even 10 years, we will not know the actual cost-effectiveness of the graduation approach compared to other viable options. Those donors financing graduation schemes may find that using their funds to provide a regular and predictable transfer for up to 10 years may have greater and more sustainable results. There is, of course, value in offering active labour market programmes to recipients of social security schemes, but graduation programmes should never be seen as a replacement for comprehensive national social security systems. At best, they are a complement, albeit an expensive one.

**CONCLUSION**

There is clear evidence that the graduation approach does not achieve its purpose of ‘graduating people out of poverty’. It may improve the consumption of beneficiaries, but this is hardly surprising, given that they have recently received a range of productive assets as gifts. Moreover, those who are most able to take advantage of the graduation approach are not the so-called ‘ultra poor’ but, instead, those who are better-off (a reflection of the programme’s inclusion errors).

The claims made about the success of graduation programmes are both misleading and exaggerated, since they give the impression that impacts are much greater than they actually are. It would be much more realistic if programme implementers were to set a target of, for example, about 20 per cent of beneficiaries having long-term success due to the intervention. Indeed, that would be a rather successful outcome, given the low rate of success associated with employment programmes and start-up companies in developed countries.

The graduation approach is based on the traditional belief in the international development community of heroic individuals dragging themselves out of poverty by their bootstraps. Indeed, Bandiera et al.’s (2013) claim that graduation programmes turn beneficiaries into ‘entrepreneurs’ is, perhaps, a slight exaggeration, given that they only possess a few goats, chickens or guinea pigs.

The graduation approach alone does not engage with the more fundamental challenge of addressing social injustice and ensuring that people living in poverty can access State-funded social services, including social security (such as tax-financed old-age pensions and child and disability benefits), although BRAC, at least, implements other programmes that support people to access their rights. All NGOs delivering graduation programmes should ensure that they also focus on advocating for comprehensive...
national social security systems, as this is the best means of bringing about fundamental and long-lasting change. And, in the absence of such systems, NGOs may find that the provision of a regular transfer for up to 10 years may serve beneficiaries much better than offering a few animals alongside some training.

Graduation programmes considered in isolation are certainly not social protection, since they neither protect beneficiaries against risk—except in the short term when people are able to sell off their assets—nor do they provide regular and predictable transfers (apart from for a few initial months).

They most definitely should not be regarded as innovative programmes, as heralded by their advocates. Instead, they are—as indicated earlier—just rather expensive versions of good old-fashioned livestock schemes, following a long tradition of such programmes, which have had mixed success. They are not the ‘silver bullet’ for widespread poverty reduction, and, in contrast to the claims of their advocates, do not even achieve the aim of moving most of their beneficiaries into ‘sustainable livelihoods’ or even out of poverty.

As stated at the beginning of this article, there is no harm in giving people a few animals, and it is even better to offer them complementary training. Nonetheless, a more strategic activity for those engaged in graduation programmes would be to advocate for the introduction of comprehensive social security systems accompanied by active labour market support to the beneficiaries. Only through the redistribution of national wealth across all citizens through tax-financed social security schemes—ensuring the realisation of the basic right of everyone to social security—can there be fundamental social transformation. Unfortunately, this cannot be achieved solely by graduation programmes.

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REFERENCES


Our Senior Social Policy Specialist Stephen Kidd and Economist Diloá Athias delve deeply into the details of many impact evaluations of graduation interventions. They come to the conclusion that the average effects of graduation schemes would not be large enough to free programme participants from poverty.