the Education Commission

Background Paper

The Learning Generation

Targeted, Multidimensional Approaches to Overcome Inequalities in Secondary Education

Case Study of Camfed in Tanzania

Ben Alcott, Pauline Rose and Ricardo Sabates
Research for Equitable Access and Learning (REAL) Centre,
University of Cambridge

Targeted, multidimensional approaches to overcome inequalities in secondary education: Case study of Camfed in Tanzania

REAL Centre, Faculty of Education, University of Cambridge

Ben Alcott, Pauline Rose and Ricardo Sabates

Paper Commissioned by the International Commission on Financing Global Education Opportunity

October 2016

Acknowledgements: The research team would like to thank the Education Commission research team for their support to this work, including providing feedback on earlier drafts. We are also grateful for comments received from colleagues in the REAL Centre, as well as Lucy Lake, Stuart Johnson and Jose Liht at Camfed. Any inaccuracies are the responsibility of the authors.

Contents

Figures

Executive summary

Multiple barriers to educational opportunities compound one another for the world's most disadvantaged children. Redressing inequalities is thus likely to require targeted, multi-faceted support. In conjunction with the UK Department for International Development's Girls' Education Challenge programme, the Campaign for Female Education (Camfed) works with adolescent girls who make it to secondary school in countries in sub-Saharan Africa. Camfed's support targets a range of barriers to girls' secondary education at an age when girls are at great risk of dropping out due to factors such as poverty, early marriage and teenage pregnancy. In particular, Camfed seeks to:

- Remove financial barriers by covering direct and indirect costs of schooling for girls who are identified as needing support
- Provide support to community-led initiatives to improve schooling
- Train teacher mentors and staff and parents to improve educational quality
- Develop and distribute low cost educational resources
- Enable young women school graduates to take on a leadership role as 'Learner Guides' in their local schools to provide mentoring and deliver a life skills curriculum.

To better understand the impact of Camfed's work, we analyse data collected over a two-year period for approximately 2,500 girls in rural Tanzania. Our findings indicate that, starting from a very low learning base, Camfed support improved both retention and learning rates of marginalised. We show that the bursary targeted at the most marginalised girls is important for reducing dropout in particular, and the importance of combining this with pedagogical reforms to support learning.

Overall, the analysis offers three key principles to help support disadvantaged girls in secondary school in other related contexts:

1. Targeted interventions should support both access and learning for those most in need

2. The benefits of targeted interventions can be shared equally for more disadvantaged children, as well as for children with disabilities

3. In terms of pedagogical reform, it is important to promote attitudes and behaviour that boost learning

Introduction

Interventions aimed at tackling multiple dimensions of disadvantage are important to improve both access and learning for the most marginalised children. These interventions aim to lift or ameliorate a range of barriers for educational access, while also boosting learning outcomes, thus reducing the chances that children leave schooling early or without basic literacy and numeracy skills.

Over the period of the Millennium Development Goals, strategies have been adopted to address both demand- and supply-side barriers in particular to children's access to school. Notably, the abolition of official primary school fees has contributed to a significant increase in enrolment in countries that were furthest from achieving universal access to primary schooling. This is leading to pressure on secondary school systems. Even so, it remains the case that the most disadvantaged girls are not completing primary school, let alone making it to secondary school. This raises a question about the most appropriate support for those who do make it to secondary school.

The targeted support offered by the Campaign for Female Education (Camfed) provides an innovative example of interventions tackling the multiple dimensions of disadvantage for adolescent girls who make it to secondary school in Tanzania, as well as other countries in sub-Saharan Africa. Camfed's support targets a range of barriers to girls' secondary education at an age when girls are at great risk of dropping out due to factors such as poverty, early marriage and teenage pregnancy. In particular, Camfed's programme (Camfed International, 2015):

- Removes financial barriers by covering direct and indirect costs of schooling for girls who are identified as needing support
- Provides support to community-led initiatives to improve schooling
- Trains teacher mentors and staff and parents to improve educational quality
- Develops and distributes low cost educational resources
- Enables young women school graduates to take on a leadership role as 'Learner Guides' in their local schools to provide mentoring and deliver a life skills curriculum

As part of DFID's Girls' Education Challenge programme, to date Camfed has provided support to 40,219 marginalised girls (in addition to 24,650 less marginalised girls, 48,584 marginalised boys and 29,778 less marginalised boys) across 201 secondary schools in Tanzania. In the following analyses, we focus on a subsample for which Camfed collected detailed data for evaluation purposes. For this subsample, we analyse enrolment and learning outcomes for 1,640 girls from six districts who received Camfed support in relation to 849 girls in comparison to schools who did not receive support (Camfed International, 2016). More specifically, we compare changes in these outcomes between the evaluation's baseline (when girls were in Grade 2) and midline (when girls were in Grade 4) points. We use logistic regression models to assess the impact of Camfed support on access, and difference-in-difference models to assess its impact on learning outcomes. The learning outcome on which we focus is a maths assessment designed by the National Examination Council of Tanzania to be age and curriculum appropriate. The assessment took the form of one-hour exam scored between 0 and 100, and was taken by girls at both baseline and midline (with different questions of an equivalent level at each time point). Even though based on curricular standards, scores were very low at the baseline level, at around 12 points out of 100 for girls and 18 points for boys. While surveyed children were also assessed in English, we focus on learning outcomes in maths as they are less likely to be influenced by distortions in home factors.

Three principles

Based on this analysis, we identify three principles that provide lessons for supporting disadvantaged girls in secondary school in other related contexts.

1. Targeted interventions should support access and learning for those most in need

It is both important for interventions to support access amongst the most marginalised, as well as to make sure that this is accompanied by gains in their learning. Accounting for household wealth, marginalised girls in Camfed-supported schools were 18% less likely to dropout compared with marginalised girls from comparison districts. This improvement is primarily driven by Camfed's bursary scheme: marginalised girls receiving a bursary are 31% less likely to dropout than are marginalised girls from comparison districts. This improvement was similar across different degrees of household disadvantage and levels of disability.

It is important to recognise that the chances of a girl dropping out depends on initial learning levels. Amongst weaker learners who receive a bursary, dropout reduces from 20% to 16%. However, their chances of dropping out are still far higher than amongst stronger learners with a bursary: amongst this group, dropout falls from 8% to 3%. It is evident that girls who are initially weaker learners will require additional forms of support to further increase their opportunities to remain in school. These could include whether the amount of the bursary needs to be further increased, targeted at weaker learners, or whether complementary support is needed beyond the bursary itself.

The improvement in access was also reflected in considerable gains in learning outcomes among Camfed-supported girls: on average, marginalised girls who received Camfed support almost tripled their scores on the learning assessment, from 11 to 28 points. This is in stark contrast to equivalent marginalised girls who did not receive support, who made no significant improvement in their assessment scores.[1] This is all the more striking given that comparison schools were selected in part on the basis that they had similar prior Grade 4 assessment scores to those schools receiving Camfed support (Camfed International, 2015). In addition, while Camfed support also boosted learning among marginalised boys (from 17 to 31 points), benefits were greatest amongst marginalised girls, thus helping to close the gender inequality in learning.

These improvements contrast with programmes that use singular conditional-cash transfer interventions, rather than the multidimensional forms of support that Camfed provides. Whereas cash transfers have often been shown to improve access to education, there is limited evidence on their impact on learning.[2] In contrast, it appears that Camfed's multidimensional approach leads to modest improvements in access that are accompanied by sizeable gains in learning. This implies that combining financial incentives with pedagogical and other forms of in-school support is important

[1] This pattern is mirrored among non-marginalised girls: those in Camfed supported schools made sizeable improvements in learning (from 13 to 30 points), while those in non-supported schools made no progress (remaining at 18 points).

[2] For example, consistent and strong impacts on secondary education were found across evaluations of cash transfer programmes in seven countries in sub-Saharan Africa (Handa & de Milliano 2015). Fewer studies have looked at the effect on learning. For those that have done so, the evidence is more mixed. A common conclusion is that cash transfers need to be accompanied by school-related interventions for achieve positive outcomes for both access and learning (McEwan, 2015).

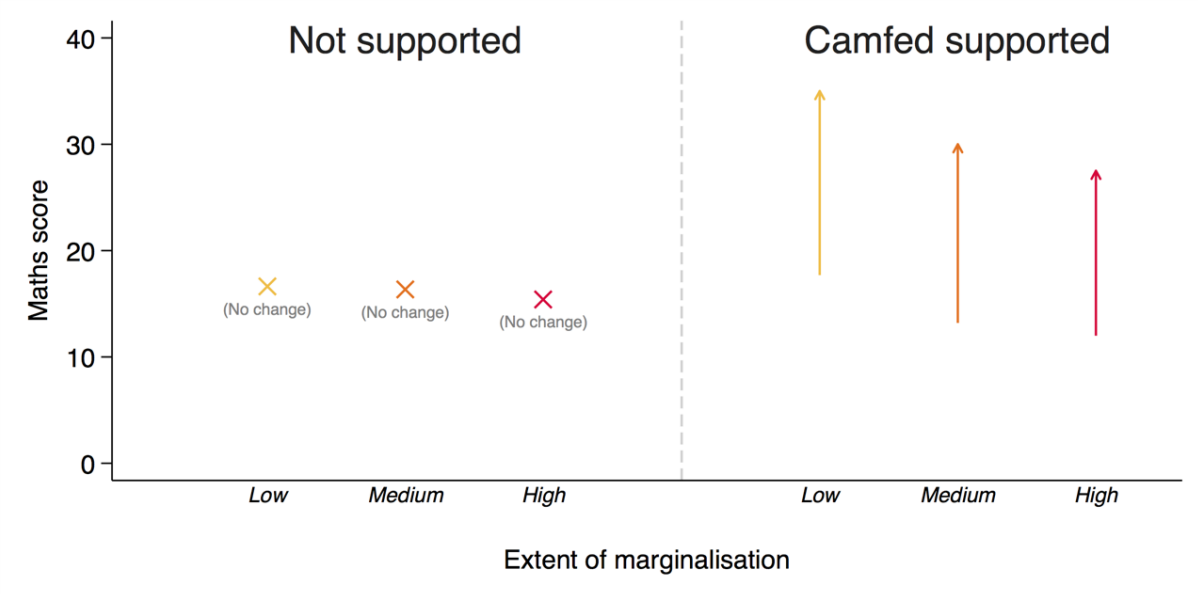
for learning gains to be achieved. Given though that the assessment was scored out of 100 and based on curricular expectations, it is also important to note that there is still a way to go before all these children are learning at the appropriate level for their grade.

2. The most marginalised girls (including girls with disabilities) can benefit equally from targeted interventions

Using Camfed's marginality tools in the survey, we are able to identify those girls facing the greatest degree of marginalisation, even compared with the other marginalised girls also supported by the programme. For example, while some girls may be targeted due to one condition of need (such as low income) others may have multiple sources of disadvantage (low income and having a long term illness or disability). Figure 1 shows girls' absolute improvement in mathematics between Grade 2 and Grade 4 by levels of disadvantage, as measured by household characteristics and asset ownership.

First, it is important to note that all children had low levels of learning: no group averaged more than 20% on the baseline assessment. But, while girls who did not receive Camfed support did not make any progress between Grades 2 and 4, those who did receive support made substantial learning gains regardless of degree of disadvantage. For example, while the most advantaged girls receiving support improved their maths scores by 15 points (from 12 to 27), the most disadvantaged girls improved their maths scores by 17 points (from 18 to 35).

Figure 1. Absolute gains in Mathematics test scores for girls according to extent of marginalisation (low to high marginalisation)



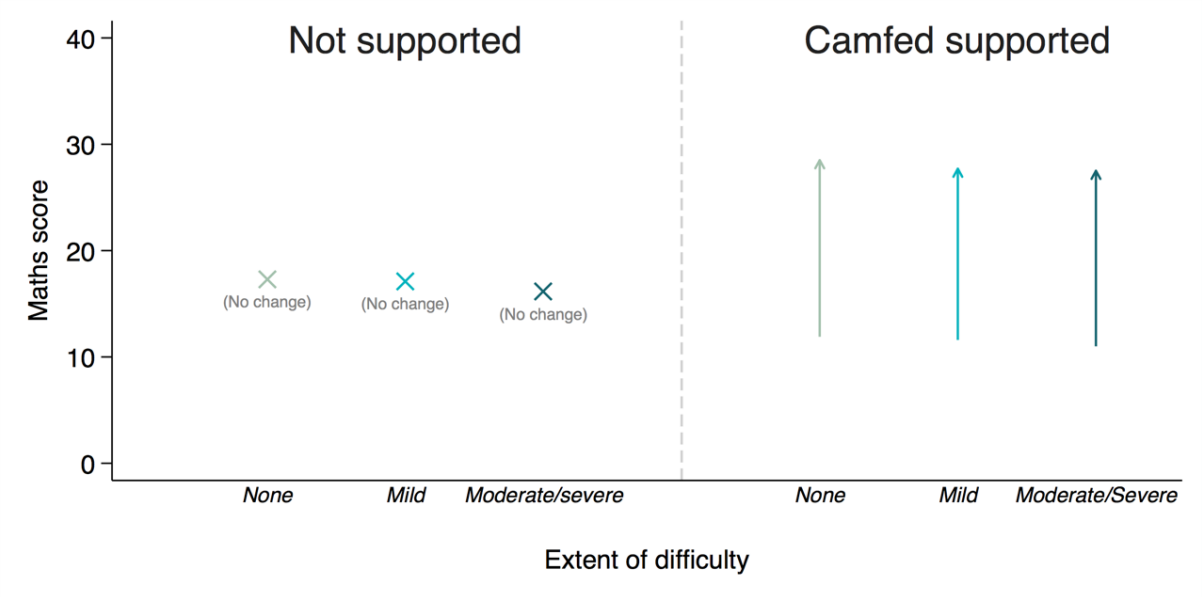
Source: Authors' analysis based on Camfed Tanzania data

Camfed's targeted support has also enabled learning benefits for marginalised girls with disabilities, even though this is not a central aim of the programme. The Camfed programme for Tanzania shows that all girls, regardless of whether they reported difficulties in seeing, hearing, concentration or walking, even when these difficulties were moderate to severe, improved their attainment in English and mathematics compared with girls who were not supported by the programme.

Marginalised girls who were identified as having mild, moderate or severe difficulties in seeing, hearing, walking, caring, understanding or remembering performed at similar learning levels in mathematics to marginalised girls without difficulties (Figure 2). Mathematics attainment before the programme started was 12 points for marginalised girls without difficulties or disabilities, whereas it was 11.5 points for girls with mild difficulties and 11 points for those with moderate to severe difficulties. One likely reason for this is that Camfed's work with the Girls' Education Challenge focuses on supporting marginalised girls who are still in the second year of secondary education.[3] This means that marginalised girls affected by any of the above difficulties have managed to receive up to 8 years of education, and so are likely to be atypical of children with disabilities. Even though this might be a selected group of girls affected by difficulties, the results demonstrate that removing barriers to access and facilitating perseverance in education enables learning.

The targeted support benefitted girls' learning across the spectrum of mild, moderate or severe difficulties. Once supported by the programme, we find that marginalised girls significantly increased their English and mathematics test scores over the period of two years, regardless of physical or mental learning difficulties. For example, on average girls with moderate/severe difficulties improved their maths scores from 11 to 28 points out of 100. By comparison, equivalent marginalised girls not supported by the programme did not improve. In addition, it is worth noting that marginalised girls with physical or mental difficulties supported by Camfed improved their learning at the same rate as marginalised girls who did not report any difficulties.

Figure 2. Absolute gains in Mathematics test scores for girls according to extent of disability



Source: Authors' analysis based on Camfed Tanzania data

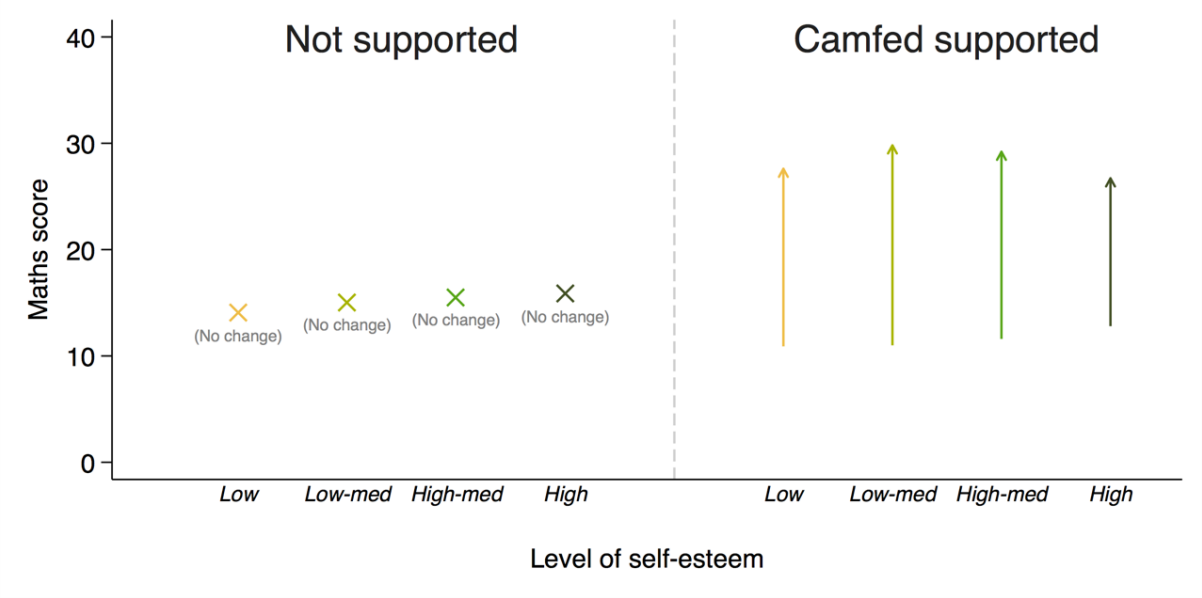
[3] Camfed's wider programme targets support to girls throughout the education cycle, with a particular focus on the transition from primary to secondary.

3. Pedagogical reforms need to support girls' self-esteem as a means to boost learning

Children's positive self-perceptions are essential to their learning, but this topic remains relatively unexplored in the context of marginalised children in low-income countries. Camfed's focus on promoting more inclusive education environments together with its support of Learner Guide (who are female secondary school graduates from marginalised backgrounds, many of whom had previously been supported by Camfed (Camfed International, 2016)) could be expected to support girls with low self-esteem or aspirations. In particular, the programme's Learner Guides aim to expand the presence of female role models, and lead students through a broad life skills curriculum, organise academic study groups, and provide counselling and follow up on students in danger of dropping out.

During Camfed's baseline survey, girls reported on their confidence in a range of skills, including working in groups, working with other people, helping others, managing or solving problems, doing homework, and future planning.[4] From this scale we divided girls into quartiles, from low to high self-esteem.

Figure 3. Absolute gains in Mathematics test scores for girls according to self-esteem



Source: Authors' analysis based on Camfed Tanzania data

Figure 3 shows that, for those girls identified with low self-esteem, Camfed support is helping them to improve their learning at a similar rate to those girls receiving support who are identified as having higher levels of self-esteem. At baseline, girls' learning differed according to level of self-esteem: girls with low self-esteem achieved, on average, 11 points in mathematics test scores, whereas girls with high self-esteem achieved, on average, 13 points. Yet, learning benefits resulting from Camfed support were seen across the whole self-esteem scale, with increasing in mathematics of around 15 to 16 points on average regardless of whether girls had shown high or low levels of

[4] Responses from these questions were combined into a standardised scale with an alpha reliability coefficient of 0.87.

self-esteem. As before, this suggests that the benefits of programme support also reached those girls likely to be most at risk of failing to complete secondary school.

Conclusion

There is still much more to do to raise learning outcomes for all. This is clear given how far children's assessment scores are from national curricular expectations, even amongst those who were able to improve. Nonetheless, Camfed support shows that, under appropriate conditions and with good targeting, it is possible to level the playing field.

Experience from Camfed's programme offers principles to help support disadvantaged girls in secondary school in other related contexts:

1. Targeted interventions should support access and learning for those most in need

2. The benefits of targeted interventions can be shared equally for more disadvantaged children, as well as for children with disabilities

3. In terms of pedagogical reform, it is important to promote attitudes and behaviour that boost learning.

References

Camfed International (2015). *A New Equilibrium for Girls – Tanzania and Zimbabwe Baseline*. Project Reference Number 5101. Girls' Education Challenge, UK AID.

Camfed International (2016). *A New "Equilibrium" for Girls – Tanzania and Zimbabwe Midline Evaluation Report*. Project Reference: 5101. Girls' Education Challenge, UK AID.

Handa, S. and M. de Milliano (2015). The Impact of Social Cash Transfers on Schooling in Africa: An Update from the Transfer Project. *The Transfer Project Research Brief 2015-01*.

McEwan, P. (2015). Improving Learning in Primary Schools of Developing Countries: A Meta-Analysis of Randomized Experiments. *Review of Educational Research* September 2015, Vol. 85, No. 3, pp. 353–394.

REAL Centre (forthcoming). *Overcoming learning inequalities*. Report commissioned by the International Commission on Financing Global Education Opportunity.

UNESCO (2016). *World Inequality Database on Education*. Accessible at http://www.education-inequalities.org/

the
Education
Commission

The International
Commission
on Financing Global
Education Opportunity

educationcommission.org