

Working paper



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# Preventing excess female school drop out in Mozambique

Conditional transfers  
and the respective  
role of parent and  
child in schooling  
decisions



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## Feasibility Report

### Preventing Excess Female School Drop Out in Mozambique: Conditional Transfers and the Respective Role of Parent and Child in Schooling Decisions

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#### I. Introduction

Despite large increases in enrolment rates in lower primary school grades, most Mozambican children are still not completing primary education. For upper primary schooling (EP2), the official completion rate is abysmal, especially in rural areas where even at age 19 it is only about 14% for males and 8% for females (Fox et al., 2012). The sources of inefficiencies in the public service provision system leading to such statistics are likely to be varied. Given these extremely low completion rates and the fact that the problem is even more pronounced for girls, demand-side factors are likely to be relevant. Improving our understanding of- and providing practical approaches to relax these demand-side barriers would therefore contribute to improving the performance of the public sector in the area of education in terms of the quantity of primary school graduates it produces. Improving education, and especially that of girls, would also likely contribute to improved economic growth (see, e.g., reviews by Topel 1999, Temple 2001, Krueger and Lindahl 2001, Sianesi and Van Reenen 2003, Sala-i-Martin et al. 2004). Abu-Ghaida and Klasen (2004), for instance, estimate that closing the education gap between males and females would increase the growth rate of GDP per capita by 0.3 percentage points in Mozambique.

Arguably, the most popular policy tool used in recent years to encourage schooling demand are conditional cash transfer (CCT) programs. A growing number of countries, in particular in Latin America, but also in Asia have implemented such programs (Fiszbein and Schady 2009). In Africa, CCT programs have been implemented in several countries including South Africa, Kenya, Malawi, Burkina Faso and Morocco and some of them are currently evaluated. While the program design details vary, all programs transfer resources to poor households conditional on the household taking active measures to increase the health and human capital of their children (e.g. enrolling their children in school and maintaining their attendance, taking them for regular health care visits). In making transfers conditional, this type of intervention seeks to encourage human capital accumulation and break a cycle in which poverty is transmitted across generations.

There are, however, a number of unanswered questions in relation to the optimal design of conditional transfers programs in education. In particular, Bursztyn and Coffman (2012) have shown that, in theory, the information embedded in the conditionality (i.e., receiving the conditional payment tells the parent that the child attended school regularly) can, by itself, increase school enrolment and attendance in the presence of asymmetric information. And the same authors have shown that, in practice, parents value this information component of the

conditionality. This suggests that simply providing information to parents about attendance may increase school enrolment and attendance even in the absence of any transfer, but this implication has never been tested. A second unanswered question about the optimal design of conditional transfers programs is whether it is more cost-effective to incentivise parents or children. Our projected full-scale RCT will answer both questions, thus opening the possibility of identifying low-cost alternatives to traditional CCTs.

In the following, we briefly review the relevant literature, discuss the relevance of the conceptual framework motivating the RCT, report on a small-scale test of our research protocol in the field, and summarize the lessons learnt before concluding on the feasibility of a full-scale implementation of our protocol.

## **II. Literature review**

### *Effectiveness of CCTs*

Evidence of positive impacts of CCTs on education outcomes has been demonstrated in Mexico (Schultz 2004 ; Behrman, Sengupta and Todd 2005; de Janvry et al. 2006; and Attanasio, Meghir and Santiago, 2011), in Colombia (Attanasio et al. 2010); in Nicaragua (Maluccio and Flores 2005 and Macours, Schady and Vakis 2008), in Honduras (Glewwe and Olinto 2004); in Brazil (Glewwe and Kassouf 2012 and in Cambodia (Filmer and Schady 2011).

In their systematic review, Baird et al. (2014) aim to complement the existing evidence on the effectiveness of these programs in improving schooling outcomes and help inform the debate surrounding the design of cash transfer programs. Using data from 75 reports that cover 35 different studies, the authors find that both conditional cash transfers (CCTs) and unconditional cash transfers (UCTs) improve the odds of being enrolled in and attending school compared to no cash transfer program. The effect sizes for enrolment and attendance are always larger for CCTs compared to UCTs, although the difference is not statistically significant. When programs are categorized as having no schooling conditions, having some conditions with minimal monitoring and enforcement, and having explicit conditions that are monitored and enforced, a much clearer pattern emerges whereby programs that are explicitly conditional, monitor compliance and penalize non-compliance have substantively larger effects than unconditional transfers (60% improvement in odds of enrolment). A recent paper by Akresh, de Walque and Kazianga (2015) evaluating a social transfers program in Burkina Faso further indicates that CCTs are more effective than UCTs in improving the enrollment of “marginal” children, those who are initially not enrolled in school or are less likely to go to school, including girls, younger children, and lower ability children.

### *The role of children in schooling decision*

Parents and children’s views on when it is optimal for a child to invest in human capital may not align. In addition, the actions of children are unlikely to be perfectly observed by their parents – this potentially leads to a moral hazard problem which may prevent investments in schooling even when schooling would be optimal from the point of view of the parent-child pair under perfect information (Bursztyrn and Coffman, 2012). A recent literature has emerged with the aim of understanding the respective role of men and women and asymmetric information

between spouses in household decisions such as household expenditure and family planning (Ashraf 2009, Ashraf et al. forthcoming). But despite recent work in family economics showing that children take part in household decisions (Cherchye et al. 2009, Dauphin et al. 2011), there is close to no evidence on the respective role of parents and children in making schooling decisions - one of the key areas of decision affecting children's lives.

The moral hazard problem highlighted above interacts with the current debate over the role of conditionality in social transfer programs, since the receipt of a conditional transfer implies regular attendance and thus conditionality reduces moral hazard. In the context of a conditional cash transfer program (CCT), conditional cash transfers to parents improve investments in human capital in two ways. First, they improve parental returns to education. Therefore, holding the ability of parents to observe their children's actions (or "monitoring technology") constant, parents are more likely to be able to incentivize their children to exert effort. In addition, the conditionality itself implies an improvement in the observability of the child's effort (since receiving the transfers implies a certain level of attendance), and therefore increases the ability of parents to incentivize their children for a given level of returns to education.

On the other hand, conditional transfers to *children* increase the child's returns to their own education and therefore increase investments in human capital through two different channels. First, it will be more often privately optimal for the child to attend school. Second, even when human capital investment is not privately optimal for the child but optimal from the point of view of the parent-child pair, it will be less costly for parents to incentivize children to attend school.

Bursztyn and Coffman (2012) show that parents attach a value to the monitoring of attendance provided by conditional cash transfers in the Brazilian context, and Baird et al. (2011) obtain inconclusive results when comparing the effectiveness of one extra dollar given to children and that of an extra dollar given to parents in the context of joint transfers to parents and children in Malawi. However, neither of these studies specifically tests for the relative effectiveness of transfers to parents and transfers to children at the extensive margin.

In addition, the findings of Bursztyn and Coffman (2012) imply that simply providing information to parents on the child's school attendance should increase the ability of parents to incentivize their children to attend school, and thus increase school attendance, but they do not test the effect of providing information only on attendance. This could be a low-cost alternative to conditional cash transfers to budget-constrained governments such as those found in Sub-Saharan Africa.

Reporting on an experiment carried out in India in 2007, a recent paper by Berry (forthcoming) compares the effectiveness of transfers to children and to parents on test scores. The author finds that transfers to children (toys) are more effective in raising scores for low-scoring children and that transfers to parents (money) are more effective in raising scores for high-scoring children. This is suggestive of the relevance of the recipient of conditional transfers, but a number of issues limit what we learn from this study, and most notably: (i) children are in grades 1 to 3 and hence likely to be too young to have much autonomy, (ii) the intervention did not incentivize a decision which can easily be interpreted as an investment in children's human capital by either parents or children (it incentivized score improvements at a literacy test within a very short (2 months) period), (iii) the different treatment arms were randomized at the individual level within schools, thus likely creating important spillover effects across treatments

and (iv) it is difficult to conclude since the bounds of the 95% confidence interval for the effect of the child treatment relative to the parent treatment are as large as 19% of the mean outcome.

### **III. Relevance of Demand-Side Barriers and Child Agency in Schooling Decisions in the Mozambican Context**

#### *Low Educational Attainment, Especially for Girls*

Despite the increase in enrolment rates at both primary and secondary schooling level seen in the past decade, educational attainment in Mozambique remains low in most of the country, and the situation is especially bad for girls. Below we present figures summarising data from the most recent demographic and health survey carried out in the country in 2011.

Figure 1 first shows the average number of grades completed by age and gender. The blue diamonds indicate grade attainment for boys, and the red triangles, grade attainment for girls. For instance, boys age 18 in 2011 had obtained an average of 6.3 years of education, compared to 5.5 years for girls. This shows that the average 18 year old in 2011 Mozambique had not completed primary schooling (more precisely, about 50% of 18 year-old boys and 41% of 18 year-old girls had completed EP2). Unsurprisingly, the rate of completion of primary schooling is much lower, and much more unequal between genders, in rural and central and northern areas of the country. Figure 2, for instance, shows that only 34% for 18 year-old boys and 23% of 18 year-old girls had completed EP2 in rural areas, while figure 3a and 3b show that the rates are also lower (and unequal between genders) in the North and Central regions.

In each of these graphs, we also plot the percentage of individuals who are married, by age and gender. A striking pattern can be seen in Figure 4: enrolment rates of boys and girls in rural areas are very similar at any given age before age 15, but from age 15 onwards, girls become less and less likely to be enrolled in school relative to boys. Although we do not intend to infer any causal link here between marriage and drop out (since both decisions are likely to be made simultaneously), it is interesting to note that the difference in enrolment rates exists alongside a difference in rates of marriage.

Figure 1

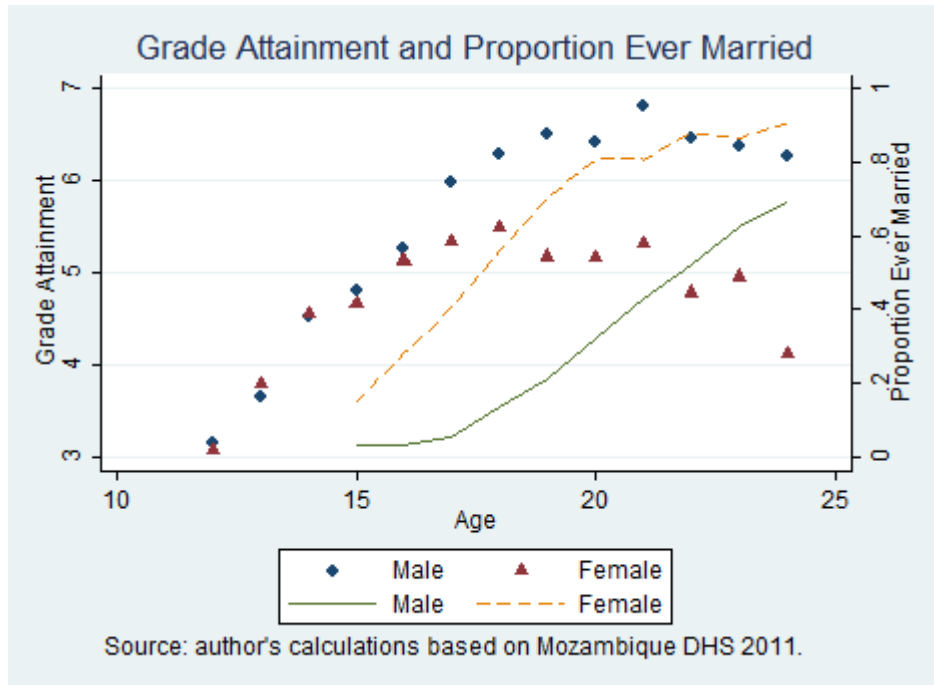


Figure 2

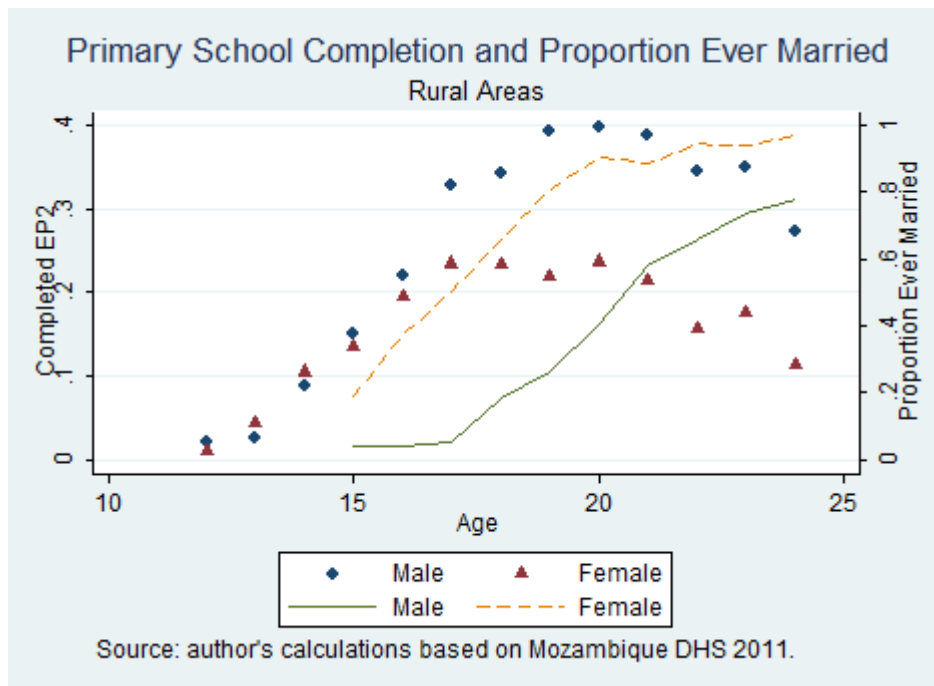


Figure 3a

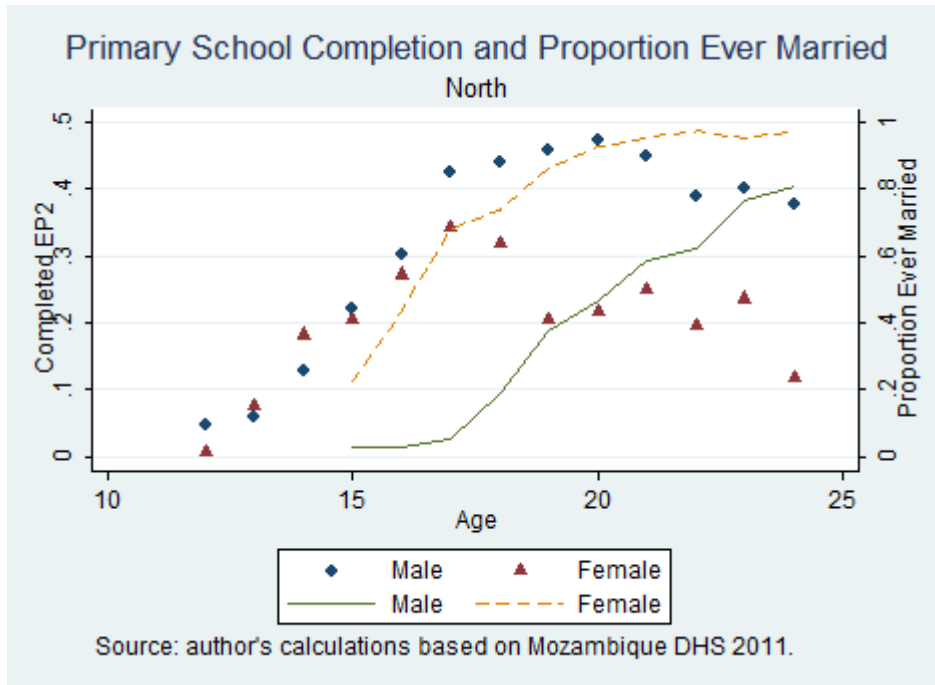


Figure 3b

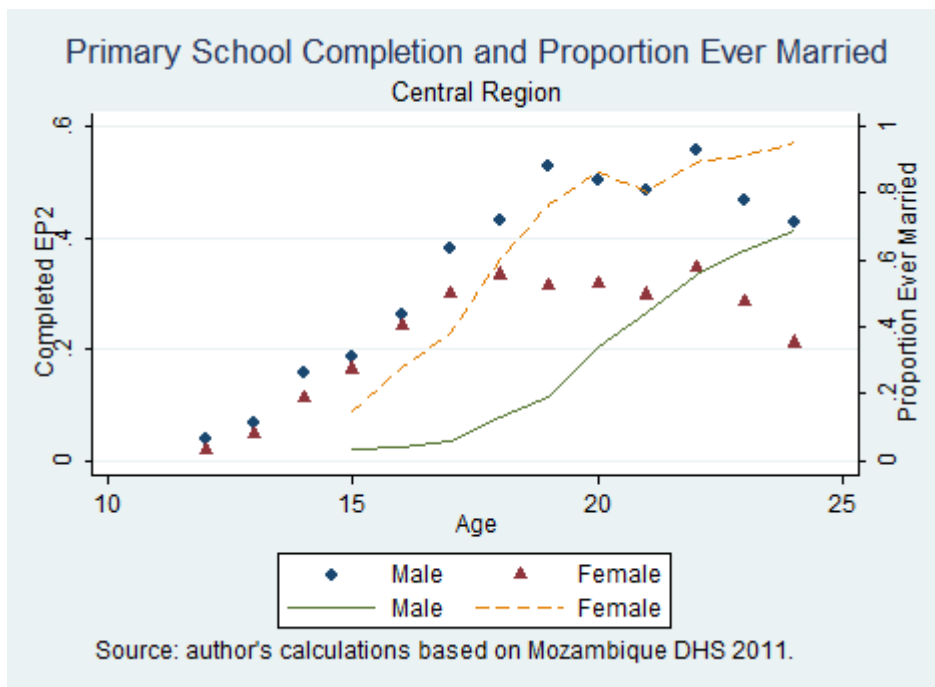
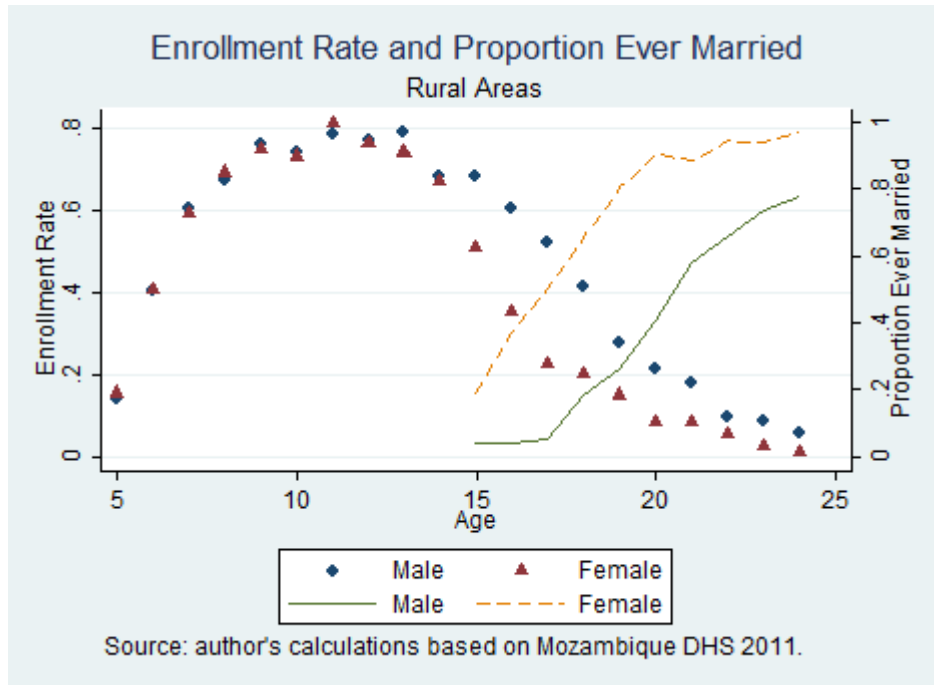


Figure 4



One may think that, given the “legal” age of primary education (6-12 years old), supply-side constraints related to low provision of secondary schools may play an important role in explaining the gender gap that appears in the mid-teens (for instance, even if schools are co-educational, parents may be more reluctant to let a young girl than a young boy live away from home to attend secondary schooling). However, even by age 15, most rural children have not completed Grade 7 (this is true for 85% of boys and 86% of girls in the DHS 2011). Therefore, the question applicable to most rural girls age 15 is not whether or not to enrol in secondary school, but whether or not to enrol in primary school.

### *Child Agency in Schooling Decisions*

The previous subsection has shown that enrolment at later stages of primary schooling remains a stumbling block in human capital accumulation in Mozambique, especially for girls in rural areas. Given the international evidence on the effectiveness of conditional cash transfers in increasing enrolment, especially for girls and children otherwise less likely to be enrolled, the potential benefits for Mozambique are clear. The value added of our proposed research project does not, however, stop at the usefulness of trialling a traditional conditional cash transfer in Mozambique. Two key novel contributions are indeed that we propose to (i) compare the effectiveness of incentivising girls (in kind) and their parents (in cash) and (ii) evaluate the impact of only providing parents with information on their daughters’ attendance at school (without any transfers). If children had no “agency”, i.e., if they were not making decisions themselves about



schooling but simply executing the decisions of their parents, then providing parents with information on their child's school attendance, or incentivising children directly rather than their parents would be unlikely to make a difference to school attendance. Recent evidence using data from Brazil strongly suggests that children do have agency regarding schooling decisions (Bursztyn and Coffman 2012). In order to assess whether this is also likely to be the case in Mozambique, as well as to assess the acceptability of the proposed conditional transfers scheme, we carried out focus group interviews in Manica (Central Region) in May 2014. The focus groups consisted of five groups of girls age 12-15 (mostly 6<sup>th</sup>-7<sup>th</sup> graders for those currently enrolled in school) and their parents or guardians. The girls and their parents/guardians were interviewed separately to avoid girls' answers being influenced by the presence of their parents or guardians, yielding 10 focus groups in total.

The main conclusions of this qualitative data collection exercise are that:

1. ***both parents and children had influence on the decision to go to school.*** It was interesting, for instance, to note that several parents contrasted different daughters of theirs, with one sibling going to school regularly without any problem, and another dragging her feet, arriving late at school, making excuses not to go, or simply skipping schools (e.g., seemingly going to school but then turning around and going back home while their parents are out for work). For instance, this is what a mother of two girls, one age 14 and one age 12 told us: *"Yes, sometimes this [younger] one she misses school. She says she's ill, she has no soap to wash her clothes, etc... They are very different. When food is late, Luisa [the older sister], she goes to school all the same, whereas Maria, she waits and sometimes misses school because of that. Luisa only misses school if she's actually ill."*
2. All groups of girls and parents/guardians expressed the opinion that transfers (to girls or parents) conditional on regular attendance would be a "good thing", and would have a positive effect on schooling. E.g.: from the father of a girl who misses school a lot: *"They may even finish 12<sup>th</sup> grade. Everybody likes to be motivated, this would always make a difference. Who knows maybe even the ones who want to drop out may change their behaviour."* and, from another parent asked directly about whether these conditional transfers would make a difference to their attendance: *"yes, it would make a lot of difference, even the ones who don't make it the first time will try their best to get it the next time"*. Interestingly, the concept of conditionality was seemingly easily understood by all. Girls too expressed the general opinion that conditional transfers would make a difference, both when asked generally about whether this would affect attendance, and when asked personally about themselves. For instance, the 12-year old who admitted that she missed a lot but insisted that it was mostly because of ill health, when asked whether she'd go to school under these circumstances answered emphatically *"yes, I would go to school!"*, and the same reaction was noted among girls who had dropped out.
3. The most surprising finding from the qualitative data collection is that, when asked whether it would be better to give the reward for good attendance to the parents or to the girls themselves, both children and parents said (and seemingly felt strongly) that it should be given to the girls "because they were the ones who needed the

encouragement" and were "the ones who had earned it". The following extract gives a good idea of the general tone of the conversations:

*Moderator: all these things we've talked about, should we give to the kid directly or to the guardian?*

*Celina: Who goes to school? The girl. Who needs it? The child. So it's better to give it to them, also so others see, it's good.*

*Maria: who works is the one who receives. You don't want to work 30 days and see another one be paid. They're the ones who've done the effort, it should be for them, to give them courage.*

4. When asked what should be given as a reward for regular school attendance, both parents and children said (generally in this order): pens, notebooks and other small items such as erasers, soap, school bag, clothes, shoes/flipflops/trainers, mèches (hair extensions), food. School uniforms seem especially popular even though they are not normally in use because they are seen as giving pride to those who wore them, and giving them the respect conferred to their status as students. There was broad agreement (both in parents' groups and in their daughters' groups) that if the gift in kind was not easily shared or transferable (e.g., shoes, clothes, school bag rather than lady's bag), then nobody would take it away from the girls.

#### **IV- Report on the Field Test**

As planned in the feasibility grant application, our initial RCT protocol was tested during the second school trimester of 2015 in four ("complete", i.e., offering both EP1 and EP2) schools of Manica. The four schools were identified by our NGO partner, whom we asked to use their knowledge of the province to select four schools that would give us a good idea of the type of challenges we may face if we implemented the project at the scale of the province. This resulted in the inclusion of schools in the districts of Gondola, Mossurize and Guro, with one school assigned to each of the following experimental arms:

Treatment arm A - in which we gave money-equivalent vouchers to girls ages 12-15 who could then use the tokens to buy a selected number of items, namely: school uniform, shoes, or school bag, which were made available in a "pop-up" shop at the school during a ceremony at the end of the trimester. The choice of items listed here was based on the focus groups interviews with girls age 12-15 and their parents (interviewed separately) carried out in Manica in April/May 2014 by one of the principal investigators. The qualitative evidence collected indeed suggests that these items meet two important criteria: (i) they were consistently cited when children (parents) were asked what gifts could incentivise them (their daughters) to attend school regularly and (ii) both parents and children seemed confident that a girl who was given these items would be able to keep them for herself, and would not be expected to share with anyone else, thus ensuring that this treatment incentivises the girls themselves rather than their families (other than through the utility they may derive from this extra consumption by their daughters). In addition, to provide information to the parents about their child's attendance, girls who met the condition of 85% attendance over the course of the trimester received a certificate of

exemplary attendance (which used a visual component so as to be understood by parents who cannot read – see below).

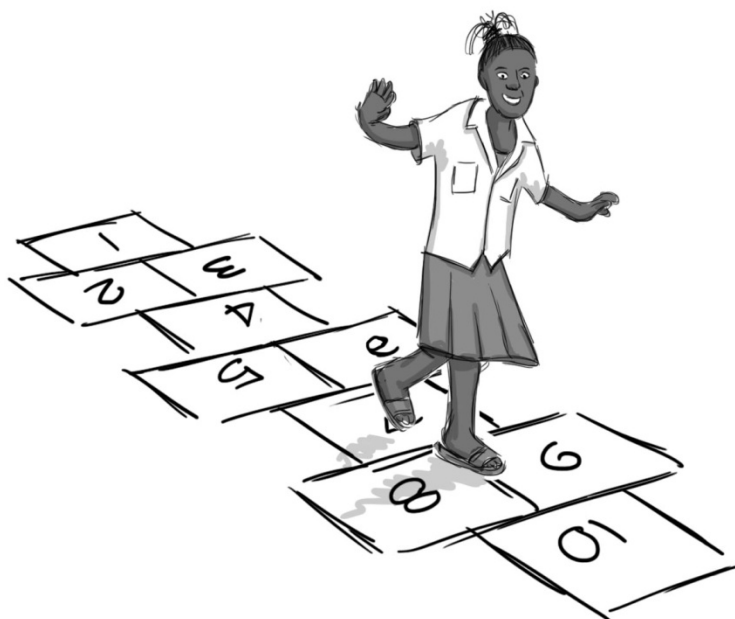
Treatment arm B - in which we gave 400 Meticais (about US\$8) to the parents during an end-of-trimester ceremony, and made the same items as in Treatment arm A available for purchase at the school. The effective price of the items which could be purchased with the vouchers in Treatment arm A varied between 300 and 600 Meticais, but this was not communicated to the subjects of the experiment. Given that the pre-pilot test interventions only lasted one trimester, it was not possible to adjust fully the value of the goods in kind to that of the cash transfer in arm B. Two options for the full-scale intervention over three trimesters would be: (a) to label the vouchers in units –e.g., 400 - and give “change” in vouchers to the girls who purchase items with a lower “price tag”, to be redeemed at the end of the next trimester or (b) to smooth the value of the in-kind transfers over the three trimesters so that it averages 400 at the end of the year. The first option would be preferable, as it would maximise the comparability between treatment arms A and B, and during the full-scale intervention, we will aim to implement this option. Girls who met the condition of 85% attendance over the course of the trimester also received a certificate of exemplary attendance.

Treatment arm C- an "information" treatment, in which girls simply received a certificate of exemplary attendance.

A fourth experimental group constituted the control group. This group simply had an event in which people came together to celebrate the end of the trimester (but with no informational content or discourse about the benefits of schooling or anything which could influence attendance).

## Certificado de Frequência Escolar Exemplar

O presente documento atesta que a \_\_\_\_\_ frequentou a escola em 85% dos dias de escola durante o segundo trimestre do ano letivo de 2015.



### *Eligibility Criteria*

We determined eligibility for the treatments based on gender (girls only), age (12-15) and a simple household poverty criterion based on data from the latest Demographic and Health Survey for Mozambique (2011). More specifically, in this dataset, classifying households in Manica by rural/urban, whether they have a thatched roof, whether they have any form of toilet, whether they own a radio and whether they own a bicycle correctly predicts 85% or the time whether they belong to the bottom 40% in terms of wealth according to a much broader set of indicators. We therefore used these 5 criteria, measured during a baseline census, to define eligibility.

### *Measurement*

The *de facto* catchment area of each school was defined based on information provided by the head teacher. During December 2014 and January 2015, a baseline census of all households in the *de facto* catchment area of each of the four schools took place, followed by interviews of up to 20 eligible households using a much more detailed questionnaire collecting not only basic household demographic and socio-economic information but also carrying out cognitive tests (in order to estimate the effect of conditional transfers on test scores) and including a detailed expenditure module and questions on school attendance and perceptions regarding school attendance monitoring. The census and survey were carried out by a well-established branch of a Portuguese market analysis and data collection company based in Maputo. The interventions were then announced by our local NGO partner in each of the three treatment arms before the start of the second trimester, during which we ran the interventions. The endline survey will take place in February 2016. It was due to take place in December/January of 2015, but given limitations in the deployment capacity of our partner survey firm, and the necessity to carry out the data collection for the full implementation in a timely manner, it was decided that the endline survey for the pre-pilot test was best postponed to after the baseline survey for the full-scale project.

Low-cost monitoring of regular attendance (defined as 85% attendance) was similar to that in Akresh et al. (2013), i.e. attendance booklet filled in by teachers. In addition, the accuracy of the attendance booklets was verified during random spot checks implemented by our local NGO partner. Attendance data collected independently during spot checks are intended to produce the main measure of attendance for the full-scale analysis. In all four experimental arms, teachers who had completed fully the booklets up to the data of each spot check and who had entered the attendance data accurately on the day of each spot checks were given a 100 Meticais air time card at the end of the trimester.

## V- Lessons from the Feasibility Exploration and Adjustments Made for the Full Implementation

### *Acceptability*

Both the preliminary qualitative work and the small-scale test showed that the proposed introduction of social transfers conditioned on school attendance is acceptable to the communities involved. In particular, the qualitative work confirmed the expectation that making a transfer in kind rather than in cash to teenage girls is both likely to be much better accepted by parents and more likely to allow the transfer to “stick” to their intended beneficiaries.

Another important aspect of the acceptability (and thus practical feasibility) of the project has got to do with the acceptability by teachers. One lesson learned from the field test is that teachers, although they may have felt that they deserved to receive the same gifts as the girls themselves (several teachers asked if they could have a back pack, one of the girls’ treatment in kind transfers), cooperated with the research team and filled in the attendance booklets seriously. As explained below, for the full-scale we have introduced a higher frequency monitoring tool which requires more input from the teachers. In order to ensure the teachers’ continued support over the course of a year in this context, and based on the feedback from the implementing NGO, we have decided to increase slightly the teacher incentive (from 100 Meticaïs to 250 Meticaïs per trimester in air time), but restrict it to treatment arms A, B, and C, in which the intervention increases the teachers’ workload. These 250 Meticaïs are equivalent to about 10 minutes of additional work per day per term evaluated at the average teacher salary, which seems like a reasonable compensation for the required work.

### *Eligibility*

One important lesson learnt from the census is that the poverty criteria we initially proposed were too restrictive in practice, as very few households qualified on the basis of a strict application of these criteria. In addition, feedback from the Ministry of Education obtained during an IGC Workshop in Maputo indicated that the selection of eligible households, albeit on poverty criteria, was perceived as non-inclusive. In response to these practical and political economy challenges, we have amended the intervention protocol so as to define eligibility only based on gender and school grade. More specifically, girls will be eligible for transfers conditional on attendance if they are enrolled in Grade 6 or 7 and meet a 90% attendance condition (Grade 6 or 7 are the last two grades of primary school in Mozambique, which together constitute “EP2”).

### *Measurement*

A number of useful lessons have been learnt during the field test:

1. The survey firm had underestimated the time required to carry out the initial census of households in the *de facto* catchment area of each school, not least because of the low population densities prevalent in central Mozambique. In order to address this issue, which would have had implications in terms of cost as well as in terms of time, we have moved away from the planned census to an alternative approach to defining the universe of eligible

girls. In the full-scale implementation, the universe of girls will be defined based on school records, as in Benhassine et al. (2013). More specifically, we will define two lists of eligible girls according to school records for 2013, 2014, and 2015: one list of girls enrolled in 2015, and one list of girls enrolled in 2013 and/or 2014 but not in 2015, whom, if they were to enrol in 2016, would do so in Grade 6 or 7. The survey will then interview the households of a random sample of these girls (with sampling probability in each list proportional to the size of the list).

2. In order to both address the revised costs of data collection (due to point 1.) and take into account feedback from enumerators that the detailed Maths and Portuguese tests included in the pilot baseline survey were long to administer and generated shyness and resistance from the surveyed individuals, we have removed the tests from the baseline survey and replaced them with a simple mathematics test instrument in the endline survey (ASER test, as in Benhassine et al. 2013).
3. The legal school starting age is 6 years old. Among children age 6-17 in the pilot survey, 77% were enrolled in 2014. The following statistics confirm that, among enrolled children, the monitoring technology is not perfect, and that children have a degree of agency in terms of school attendance:

Parent agrees with statement:	Share	N
Child always wants to go to school	0.85	183
Some days parents want child to go to school but child does not	0.28	172
Some days child wants to go to school but parents do not	0.24	169
At the end of each day parent knows if child was at school	0.81	167

There are, however, some contradictions, with some parents agreeing that the child always wants to go to school but that, some days, the child does not. The baseline questionnaire for the full-scale implementation includes an expanded set of questions, allowing for a wider range of answers. For instance, instead of simply allowing respondents to answer “I agree” or “I disagree” in reaction to the statement: “At the end of each day, I know if [NAME] was at school.”, we now allow them to choose between “Fully agree/agree somewhat/neither agree nor disagree/disagree” and follow with the more directed question “Has it ever happened that one day you thought that [NAME] was at school but that you later found out she was not?” (and if yes, we ask how many times and why?).

4. Another lesson learnt during the initial research phase funded by the feasibility grant is that, given that parents are supposed to receive quarterly attendance summary reports from schools, MINEDH representatives questioned the idea that monitoring could be improved by providing quarterly attendance certificates. In response to this comment, in the full implementation phase, we will replace the quarterly attendance certificates with high-frequency communication of information on the attendance of girls using a simple instrument, namely a report card in which the teacher records daily presence/absence and which is given to the child to show their parents at the end of each week. As the parents are

informed at the onset of the intervention of the introduction of this report card, it should lead to a substantial improvement of the parental monitoring technology.

### *Partners*

One important aspect of the feasibility of the full-scale project has to do with the reliability and capacity of the survey and implementation partners. The scoping grant allowed the principal investigators to meet in person with potential partners, and then be physically present during the training of enumerators, part of the survey, attendance spot checks, and end of trimester ceremonies (during which transfers were handed out). This, in turn, permitted the verification of the ability and willingness of the relevant parties to successfully implement the research protocol at scale, as well as the identification of possible issues during the full-scale implementation. This experience has confirmed that the survey firm and implementation NGO were good partners. The data collection was done to the expected standards, and the NGO demonstrated that it had the capacity and willingness to follow the protocol faithfully, which is paramount for the success of the full-scale RCT.

Important lessons were however learnt by all parties involved. In particular, the importance of the timeliness of the implementing NGO work became clearer to them as a consequence of the practice of the field test, and it became clear to the principal investigators that it would be important to ensure that the terms of the contract for the full-scale implementation had to be such that it minimised reliance on the NGO's own financial resources given its limited cash flow. The PIs had initially asked the NGO to announce the intervention in the treatment areas to coincide with the start of the 2015 school year (second week of February) to apply the treatment to the first trimester. But a lack of funds at the level of the NGO created a delay, of which the PIs were informed too late to be able to act upon. In the end, the announcements could only take place well after the start of the first trimester, so that the intervention had to be postponed to the second trimester. On the strength of this experience, the NGO now fully understands the importance of sticking to the timeline, the contract passed with them ensures regular payments upon deliverables in order to avoid cash flow issues, and we have decided to reduce their work load in order to ensure that they have the necessary capacity to carry out the required tasks on time. More specifically, our NGO partner is now implementing the announcements of the interventions and the handing out of the transfers, but both the surveys and the attendance spot checks will be carried out by the survey firm in the full scale implementation. In addition, we have hired a field coordinator for the full-scale implementation, who will be in charge of the day-to-day project management of the research protocol, ensuring that each party does what is expected of them in a timely manner, and identifying any arising issue early on. Hiring this field coordinator will come at a cost that we had initially not planned for, but the exploratory phase has shown that it was important to have someone fill this role.

Finally, IGC support (both financial and through the work of its dedicated country team) has allowed us to meet with stakeholders in the Mozambican Ministry of Education and from donor agencies including DFID, the World Bank, UNICEF and Irish Aid. In particular, both PIs have met with Director Ivaldo Quincardete, first as Director for Secondary Education and then as



Director for Cross-Cutting Issues (including gender), and who has proved to be a great support in facilitating the implementation of the intervention.

#### *Other important lessons*

Another lesson from the pilot was that having a certificate of exemplary attendance could generate motivation beyond the information content of the certificate. Indeed, in the school in which we piloted treatment arm C, in which the treatment consisted only of the award of this certificate if the girls achieved an 85% attendance rate, the head teacher took upon himself to harangue the girls and their parents to achieve the target. This has a cautionary dimension: we have removed the certificate of exemplary attendance, and replaced the end-of-term “ceremonies” with a more basic gathering simply aimed at distributing the transfers in arms A and B. But it also opens an interesting area for further research (beyond the scope of this project), since it suggests that interventions aimed at increasing the intrinsic rather than extrinsic motivation of teachers, parents, and children, may be effective in this context.

#### **IV. Conclusion**

The availability of extensive reliable evidence of the effectiveness of conditional transfers in education has contributed to making this type of social transfers one of the most popular policies for governments intent on raising enrolment throughout the developing world. Evidence on the effect of raising education, and, in particular, on the effect of raising female education, on economic growth, suggests that increasing the educational level of the (female) population would in turn lead to stronger economic growth.

There are, however, a number of unanswered questions in relation to the optimal design of conditional transfer programs. In particular, it has been shown that, in theory, the information embedded in the conditionality (i.e., receiving the conditional payment tells the parent that the child attended school regularly) can, by itself, increase school enrolment and attendance in the presence of asymmetric information. And it has also been shown that, in practice, parents value this information component of the conditionality. This suggests that simply providing information to parents about attendance may increase school enrolment and attendance even in the absence of any transfer, but this implication has never been tested. A second unanswered question about the optimal design of conditional transfers programs is whether it is more cost-effective to incentivise parents or children. Our projected full-scale RCT will answer both questions, thus opening the possibility of identifying low-cost alternatives to traditional CCTs.

Analysis of secondary data and primary qualitative and (small-scale) quantitative data collected through this feasibility project confirms that there is asymmetry of information between parents and children regarding child school attendance in the context of a rural, central, province of Mozambique. The conceptual framework that motivates our RCT has therefore been shown to be relevant in the proposed study area.

In addition, a small-scale test of our research protocol has shown that this protocol is a viable one, and we have perfected the original protocol on the basis of the lessons learnt during this small-scale test.

We therefore conclude that the work carried out under this feasibility grant has shown that full-scale implementation is feasible. As a consequence, we have started work on the full-scale implementation phase, with fieldwork underway for the baseline survey, and interventions in the treatment arms due to start in February 2016 to coincide with the start of the Mozambican school year.

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