The Reach and Impact of Child Support Grants: Evidence from KwaZulu-Natal

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December 27, 2004

1. Introduction

Poverty is again at the center of debates about development. Dominant international institutions have committed themselves to addressing poverty, notably the World Bank, through its Poverty Reduction Strategies, and the United Nations, through the Millennium Development Goals. Discussion has also focused on alternative roles for the state, with particular interest in the part the state may play in social protection, and in addressing chronic poverty.

Government intervention can take many forms, one of which is the direct provision of cash. While cash transfers have long been a standard part of the welfare systems of advanced industrial countries, they have been less commonly found in lower and middle income countries. Cash pensions provided to the elderly in South Africa and Namibia have been found to have marked redistributive and developmental effects (Ardington and Lund 1995, Case and Deaton 1998, Devereux 2001). Perhaps better known are the conditional cash transfer programs to families with children in Latin America, Oportunidades (formerly PROGRESA) in Mexico and Bolsa Escola in Brazil. Both of these programs allocate monthly transfers to poor families that contain children, conditional on household health-related behaviors. The Mexican program has shown promising results, measured against the yardsticks of child anthropometrics and childhood morbidity (Gertler and Boyce 2001). For policy purposes, understanding whether the success is due to nutritional supplements, prenatal or antenatal clinics visits, children's wellness visits to clinics, or the cash itself, is an important next step.

In this paper, we examine the success of a non-conditional means-tested cash transfer targeted at poor children under the age of 7 in South Africa.[1] By early 2002, if a child's parents'

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[1]A detailed description of the program is presented in Lund 2002a.

or primary care giver's total income did not exceed R1100 per month ($470 per month in purchasing power parity dollars), the primary care giver could receive a monthly amount of R110 per eligible child. The grant's performance has high salience, within South Africa and internationally. When selected as South Africa's policy for addressing child poverty in the mid-1990s, the child support grant was unusual in introducing a cash, rather than an in-kind, benefit that was non-conditional. In addition, the program was unique in providing access to the grant through a primary care giver, in contrast to a biological parent, in order to reflect the varied and fluid patterns of caregiving observed in South Africa.

We assess the reach and early impact of the child support grant in the Umkhanyakude District of KwaZulu-Natal. The District is poor and mostly rural. In 2001, 8% of households had piped water inside their dwellings (Case and Ardington 2004) – in contrast to 30% for KZN, and 32% for the country as a whole (Statistics South Africa, Census 2001). Thirty nine percent of households had no toilet facilities on site. Only 50% of households were connected to an electricity grid. The District is bearing a heavy disease and death burden, associated with the HIV/AIDS crisis (Hosegood et al. 2004). Umkhanyakude is thus precisely the kind of area that the Child Support Grant is intended to reach.

We examine the reach and impact of this non-conditional cash transfer using data collected through the Africa Centre for Health and Population Studies, which runs a longitudinal demographic surveillance system (DSS) in the District. (See Hosegood and Timæus 2001 for details.) In 2002, the Africa Centre added a module to its core set of questions, in which it asked a battery of questions about grants for each child in the approximately 11,000 African households in the demographic surveillance area (DSA). These data enable us to evaluate the reach of this

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grant. We find that the grant is being taken up for fully a third of all age-eligible resident children in the DSA and that, based on parents' characteristics and household assets, the grant appears to be reaching those children living in the DSA's poorer households.

Importantly, because our data are part of a comprehensive longitudinal data collection effort for this DSA, we are also able to relate grant receipt to children's outcomes. In particular, we use data on children's school enrollment in years after the grant was received, to assess whether the grant appears to affect children's schooling. We find that children who received the grant are significantly more likely to be enrolled in school in the years following grant receipt than are equally poor children of the same age. To evaluate whether the grant plays a causal role in helping children get to school, we compare the outcomes of children receiving the grant with those of their older brothers and sisters, who were too old to benefit from the grant. We find that older brothers and sisters of grant recipients, when they were observed at younger ages, were less likely than other children to be enrolled in school — perhaps reflecting the greater poverty in grant receiving households. Thus the grant appears to help overcome the impact of poverty on school enrollment.

2. Child Support Grants in the DSA

Data collected by the Africa Centre in 2002 contained the question: "Since 1998, has any adult member of this household received, is in the process of applying for, or been refused a grant for a child?" Households were also asked "Since 1998, is there any child member of this household for whom an adult who is not a member of this household has applied for, received, or been refused a grant?" For households that answered either question affirmatively, details were collected on

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the adult grant holder, the child's identity, the relationship of the child to the adult, and the type of grant. In addition, information was collected on the status of the grant at the time of the interview: Had the adult made a first visit, submitted an application, been awarded a grant, received a grant, or had an application denied? In all that follows, we will use the phrase "grant reported" to mean the household informant reported that the child's care giver was at any stage in the process (first visit, submitted an application, awarded, received or denied). We will reserve the phrase "grant received" to refer to an award being received.

11,178 households answered the grant questionnaire. Of these, 3,615 households reported 6,039 grants, with the overwhelming majority (94%) reporting Child Support Grants.[2] In this section, we will focus exclusively on the 12,865 children under the age of 7 who were resident in the DSA on January 1, 2002, of whom 4,684 had a Child Support Grant reported on their behalf. Of these children, 3,754 were actively receiving a Child Support Grant. The appendix provides details on the sample used here.

Information on the children under age 7 in the DSA is reported in reported in Table 1, where sample means are presented separately for children for whom a Child Support Grant is not reported (column 1), and those for whom a grant is reported (column 2). For each variable, an asterisk (*) indicates when the difference in sample means is statistically significant. Children for whom a grant is reported are slightly, but significantly, older on average. Their mothers and fathers are on average 1 year older than are those of children for whom a grant is not reported. Indeed, only 3.7% of children in the Child Support Grant system have teenaged mothers, true of

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[2]The remainder were 3% reporting Foster Care Grants (targeted at orphans and abandoned children), 1% reporting Care Dependency Grants (targeted at children with disabilities), and a residual without information on type.

8.7% of children not in the system. This 5 percentage point differential is mirrored in the difference in the fraction of children who were born to teenaged mothers (12 percent of children in the grant system, in contrast to 17 percent of children not in the system). Children for whom a grant is reported are also significantly more likely to be co-resident with their mothers. This difference is quite large: 82% of children for whom a grant is reported are co-resident with their mothers, true of only 67% of children without a grant.

Children with a grant reported are almost twice as likely to be paternal orphans (7% versus 4%). For the majority of children, father's status is unknown at the time of the survey. These are fathers who are neither resident nor non-resident members of households in which their children are members, and who are not known to be dead.

Largely as a consequence of parents being missing, parents' ages are missing for a large fraction of children. In results presented below, when we control for mother's or father's age, we will do so by including a complete set of indicator variables for parents' ages. Included will be an indicator variable that the parent's age is missing.

Girls appear to be at no disadvantage for a Child Support Grant. In this and the analysis that follows, an indicator that the child is a girl is never a significant predictor of a grant report. This is consistent with the lack of bias against girls found in other areas, such school enrollment (South African Government, *Education in South Africa: Selected Findings from Census '96*).

Twenty percent of children under age 1 have had at least an inquiry made on their behalf. This rises to 40% for children between the ages of 1 and 5, and falls to 30% for children aged 6. Care givers of the youngest children may not yet have learned how to apply for a grant; those of

the oldest children may have decided that there were not sufficient months of support left before the child turned 7 (and became ineligible) to justify the effort associated with obtaining a grant.

More than 80% of all of the children above the age of 1 for whom an inquiry has been made are currently receiving a Child Support Grant. This can be seen in Figure 1, which presents progress through the system, by age. For children less than age 1 for whom contact has been made with the Child Support Grant system, 50% have either made a first visit, or submitted an application. The first two panels of Figure 1 shows that children aged 6 months to 1 year are more likely to be receiving an award (50.4%) than those aged 0 to 6 months (18.8%). A full 86% of 4, 5, and 6 year olds for whom contact has been made are actively receiving a grant. Applications were refused for only 16 children (0.3%) for whom an inquiry was made.

The most dramatic rise in Child Support Grant receipt occurred between 1999 and 2001. This can be seen in Figure 2, which present the fraction of children at ages 4, 5 and 6 for whom grant receipt is reported for each year from 1998 to 2002, based on the households' reports of the date the child grant was first received on behalf of each child. (Results for children aged 0 to 3 are quite similar.) The fraction of children at each age in the child grant system appears to plateau at about 40% after 2001. If this continues, it will be cause for concern: in an area as poor as Umkhanyakude, we would expect that the majority of children would be eligible for a Child Support Grant.

The above patterns show that children for whom inquiries were made have come to receive a Child Support Grant. In addition, we find no evidence of potential care givers being thwarted by the system, once an inquiry has been made. Of the 2,971 cases for which households could recall dates of first visit and grant receipt, half reported a waiting time of one quarter of a

year or less.[3] For this reason, we will focus on what predicts which care givers will make an inquiry into a Child Support Grant award, rather than on the receipt of the award.

The Child Support Grant system identifies a child's primary care giver as the person who has primary responsibility for the child on a daily basis. This person need not be the child's mother. Indeed, the care giver need not be a woman. However, in the Africa Centre DSA, 87% of primary care givers are mothers; 10% are grandmothers; and 1% are an aunt of the child. Fathers are designated as primary care givers only 0.2% of the time. With time, we would expect the patterns of grant holding will come to reflect the diversity in care giving observed in South Africa, which preceded the AIDS epidemic but which no doubt is being reinforced by it.

Our data show that children who do not co-reside with their mothers are at risk for not having a child grant. Figure 3 presents the probability of reporting a Child Support Grant, based on the status of children's parents. The first four bars report grants for children whose mothers are resident in the same *bounded structure* (compound, house) with the child. Fathers are either resident (bar 1), non-resident (bar 2), dead (bar 3), or have survival status unknown (bar 4), which (as defined above) are fathers who are neither resident nor non-resident members of the household, nor known to be dead. Forty one percent of children with resident mothers are reported in the grant system. This is in contrast to 29% of children with non-resident mothers; 23% with mothers who are dead; and 19% with mothers with status unknown. Holding constant

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[3]For the 3,754 children under age 7 receiving a Child Support Grant, the household informant on the grants questionnaire was the grant holder in 50 percent of all cases. In those cases in which the informant was not the grant holder, it is significantly more likely that details on dates of first visit and first receipt are unknown.

father's status, children with resident mothers were significantly more likely to be in the Child Support Grant system in 11 of 12 comparisons with children whose mothers were not resident.[4]

This finding is important for several reasons. First, it is inconsistent with the popular belief that mothers apply for the grant and then leave their children in someone else's care. In addition, it is consistent with other evidence that children living apart from their mothers face special risks. Household expenditure in South Africa on child-related goods—in particular, on healthy foods—is lower when a child's birth mother is absent (Case et al 2000). Both in South Africa as a whole and in the DSA, a mother's death is predictive of children not being enrolled in school, and of falling behind grade-for-age (Case and Ardington 2004).

Primary care givers may not believe themselves to be eligible for a grant if they are not the biological mother of an age eligible child. While we cannot examine this directly in the data collected by the Africa Centre, we can take an indirect look by analyzing whether there are differences in maternal and non-maternal grant holders in their reports of how they first heard about the grant. If non-maternal grant holders are more likely to report having heard about the program from a source that emphasized their eligibility (government radio spots, welfare offices, for example), we might assume that they had better information than the population as a whole. However, we find no difference in maternal and non-maternal grant holder reports on how they

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[4]These are statistical tests for the differences in grant reports for children whose mothers are resident, for a given father status, versus mothers non-resident (or dead or with status unknown), given the same father status. The exception occurs for the case where mother and father are both resident, relative to that in which mother is non-resident, and father is resident. In that case, children with mother resident were more likely to be reported with a Child Support Grant, (44 percent versus 38 percent), but the difference is not significant at the 1 percent level.

heard about the grant, with 54% having heard from family and friends, and 36% having heard from a government sponsored public information announcement on the radio.

In summary, we find that children in this area of rural KwaZulu-Natal are reported to be participating in the Child Support Grant system in large numbers. Half of all respondents who made contact with the grant system recall receiving a grant within three months of having made a first visit to the grant office. This is consistent with our finding that over 80% of children above age 1 who had had an inquiry made on their behalf into a Child Support Grant are receiving a grant.

3. Targeting

The means tested grant was designed to go to children in poorer households. Two questions about targeting arise. Are poorer people prevented from applying because of costs associated with doing so? Alternatively, given that nearly all who apply for the grant do come to receive it, might officials be disbursing the grant without screening for means? Our data shed some light on these questions. At the time of the survey, information was not available on parents' incomes, which limits our ability to examine how closely the means test was followed. However, we can use information available on asset ownership, parents' educations and their employment status to evaluate whether child support grants are reaching poorer households.

In 2001, the Africa Centre collected information on household ownership of both necessities (e.g., a primus cooker, household furnishings, farm tools), and luxury items (e.g., televisions, VCRs, cars). Table 1 presents averages of the simple sum of assets owned, for

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children with and without a Child Support Grant. On average, children with a grant live in households that own significantly fewer assets.

Table 2 presents the results from a probit regression in which reports on Child Support Grants are regressed on a set of indicator variables for luxuries owned. These include a refrigerator, a hot water heater (geyser), a washing machine, a television, a VCR, a computer, and a car. Controlling for a child's age, sex, household size and composition, and parents' status, we find that several luxuries are negatively and significantly associated with reporting a Child Support Grant. The presence of a geyser reduces the probability of reporting a grant by 20 percentage points, while a VCR or computer each reduce the probability by 15 percentage points. These effects are large, considering that 36 percent of children less than age 7 are reported with an award: all else held equal, the presence of a VCR or computer reduces the probability of a Child Support Grant by almost 50 percent. Owning a car is also negatively and significantly associated with reporting a child grant. Indicators for this set of luxury durable goods are highly jointly significant (chi-square test = 80.6, p-value = 0.0000).

In Table 3, we look more closely at whether parents' characteristics predict the report of a Child Support Grant. The first column of Table 3 presents results on mothers' characteristics, and the sample is restricted to children for whom it is known that mother was alive on 1st January 2002, the reference date for the analytical data sets used in this study. Our results suggest that mother's education and employment status play a significant role in child grant reports. Relative to children whose mothers have completed at least standard 10/grade 12 (the reference category), children whose mothers have less education are 6 to 10 percentage points more likely to report a grant. Children whose mothers are not employed are 14 percentage points (almost 40 percent)

more likely to report a grant than are those whose mothers are reported to be working full-time (the reference category). Many mothers working full-time may earn too much to be eligible for the Child Support Grant.

Our results in Section 2 showed that mothers are overwhelmingly the child's primary care giver with respect to the Child Support Grant. The results in Table 3 suggest that it is the poorer, less well educated mothers who are more likely to be reporting a grant on behalf of a child. Children with unmarried mothers are 5 percentage points less likely to report a grant than are children of married women. Understanding this result requires further investigation. It is unlikely it is driven by mother's age, education, employment status or the status of the child's father, as all of these are being controlled for in Table 3.

We turn in column 2 to the relationship between father's characteristics and Child Support Grants. Our sample for column 2 is restricted to children whose fathers were known to be alive on 1st January 2002. Here we again control for a complete set of child age indicators, child's sex, household size and composition, and the number of assets owned. In addition, we include a complete set of indicator variables for father's age, including an indicator variable that father's age is not known. As was true of mothers, children with less well educated fathers are significantly more likely to be reported in the Child Support Grant system. Relative to children whose fathers have at least a standard 10/grade 12 education (the reference category), children whose fathers have less than a standard 7 education have roughly a 15 percentage point higher probability of a grant, all else held equal. Children with fathers who are not employed are also significantly more likely to be reported in the child grant system. This provides more evidence that the Child Support Grant is reaching poorer children in the community.

While mothers' and fathers' socioeconomic characteristics have similar effects on Child Support Grants, there are important differences in the effects of parents' status. When a child's mother is not resident in the household (the reference category in column 2 of Table 3), children are significantly less likely to be reported with a grant.

Results presented in Tables 2 and 3 provides evidence that the grant is targeting children in poorer households. However, not all of the poorest children are being reached by the grant. We find that only half of the poorest two percent of children — defined as those living in households with 2 or fewer assets, whose mothers have 6 or fewer years of schooling, and whose mothers are not employed — are receiving a child support grant. It will be important to find what can be done to increase take up for these children.

Quantifying the reach of the child support grant is an important first step in evaluating the program. In the next section, we turn to the equally important step of quantifying the impact of the program for poor children in the Umkhanyakude district.

4. Evaluating the Program's Impact

The South African Child Support Grant was introduced without randomized control trials or baseline surveys on children's outcomes of interest — anthropometrics or school-readiness, for example. This makes it challenging to evaluate the program. That said, there is considerable interest in whether the grant affects children's outcomes, including the quality of care provided to children, their nutritional status, and their school attendance and performance.

We can measure the association between Child Support Grant receipt in 2002 and school enrollment in 2003 and 2004, for children young enough to have received the grant in 2002 and

old enough to potentially be enrolled in school when surveyed in 2003 and 2004, using data collected by the Africa Centre. We present results on the association between enrollment and grant receipt in Table 4. Primary school enrollment rates in South Africa are high in general, and this is reflected in the DSA, where fully 97 percent of children ages 8 and 9 are enrolled. However, only 85 percent of 6 year olds and 95 percent of 7 year olds are enrolled, suggesting that there is scope for improvement in school enrollment at young ages.

To analyze the relationship between grant receipt and school enrollment, we ran probit regressions of enrollment in 2003-2004 on an indicator that the child was reported in 2002 to be receiving a grant. The left panel of Table 4 presents the estimated increase in the probability of school enrollment for children receiving the Child Support Grant, estimated from regressions run separately by age for children ages 6 to 9. Socioeconomic status variables are included in each regression. These were measured at the time school enrollment information was collected in the 2003-2004 survey. These are indicator variables that the child's household has piped water; access to toilet facilities; connection to the electricity grid; and a variable measuring the number of assets the household owned at the time of the 2003-2004 survey. In addition, indicator variables are included for mother's and father's status at the time of the 2003-2004 survey. These are indicators signifying that mother is resident in the same bounded structure as the child; mother is dead; mother's status is unknown; father is resident; father is dead; and father's status is unknown. It is particularly important to control for parents' residency status here, given that grant receipt is correlated with mother's presence, and mother's presence independently affects school enrollment.

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We find that Child Support Grant receipt in 2002 is associated with a 8.1 percentage point increase in school enrollment among 6 year olds, and a 1.8 percentage point increase among 7 year olds. For both 6 and 7 year olds, the association between grant receipt and school enrollment is significant. As documented above, households in which grants are received are poorer on average, measured using household assets, parents' educational attainment and employment. That makes the higher enrollment rates among grant recipients all the more remarkable.

There are many possible explanations for higher enrollment among children with grants. The Child Support Grant may improve children's health and nutrition, contributing to their school-readiness. Receipt of a Child Support Grant may free up resources to pay school fees and buy uniforms. However, without additional information, we cannot rule out alternative explanations in which the grant plays no direct role in school enrollment. Primary care givers who have the energy to apply for a Child Support Grant may be more likely to send their children to school at earlier ages, for example. In such cases, grant receipt may be significantly associated with school enrollment because it is a marker that the child's mother is efficient. We would not want to attribute school enrollment to grant receipt for such children.

We can test this "efficient mother" hypothesis indirectly using enrollment data on the older siblings of children studied here. If grant receipt were merely signaling that a mother was competent, we would expect that the indicator of *future* grant receipt by a sibling would be positively and significantly correlated with older siblings' school enrollment in 2000. In 2001, households in the DSA were asked whether each child of school-going age in the household attended school at any point from January 2000 to January 2001. Of all children reported

receiving a child support grant (reported in 2002), 37% had at least one maternal sibling who would have been 6 to 9 years old in 2000, and it is to the school enrollment of these children that we now turn our attention.[5] For the school enrollment probits in the right-hand panel, socioeconomic and parental status variables measured in 2001 are included. These are exact analogues to those included in the left-hand panel (discussed above), but were measured in the first half of 2001, at the time information on children's 2000 enrollment information was collected. These include mother's education and age in 2001, parents' status (resident, missing, dead) in 2001, and indicators that the child's bounded structure was on the electricity grid, had access to piped water, and had toilet facilities, and the number of assets the household owned in 2001. We find no significant association for 6 year olds between school enrollment in year 2000 and an indicator that a maternal sibling would later receive a child support grant. Indeed, for 7 and 8 year olds, the indicator of future grant receipt by a sibling is *negatively* and significantly related to school enrollment. Children whose siblings will receive the grant in the future hail from the poorer households in the DSA, and the negative correlation may be a reflection of that fact. These results lend no support to the hypothesis that grant receipt is simply acting as a signal that the child's mother is a high achiever.

The association between school enrollment and Child Support Grant receipt will benefit from further study, as will the relationship between grant receipt and children's health and well-being.

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[5]Just over one percent of all children reported having received Child Support Grants were themselves 6 to 9 years old in 2000 (58 children), with the majority of these (49) being children aged 6 in 2000. Table 4 currently removes sibships within which a 6 to 9 year old in year 2000 was reported to have received a grant (this removes 84 children from our analysis). The results we present in Table 4 are unchanged when we include these cases.

5. Conclusions

The reach and impact of other aspects of South African state social assistance — in particular, the success of the state old age pension — have been well documented (Case and Deaton 1998, Lund 2002b). With the ACDIS child grant data, we are able to document its reach in rural KwaZulu-Natal, and to offer suggestive findings on its impact. We find that 36 percent of all children under the age of 7 have had some contact with the Child Support Grant system, with no difference in contact for girls and boys. Between 80 and 90 percent of children ages 1 through 6 who have had contact with the system were receiving a grant in 2002. That, in the fifth year of the grant, it was reaching fully a third of age-eligible children in this remote rural area, half of whom received a grant within 3 months, shows a real commitment to implementation.

Is the grant well-targeted for poverty? In the absence of income data, we have relied on other measures — parents' education and employment and household asset ownership — to assess the program's success. Children for whom the grant is being obtained have parents who are less well educated, and parents who are less likely to be employed. They live in households that own fewer assets generally, and fewer luxury items in particular. It is likely that the modest size of the cash transfer is leading to a form of self-selection, where better off primary care givers are not bothering to go through the application process. Children whose fathers have died are significantly more likely to be receiving a grant. Households with greater numbers of children age-eligible to receive the grant report receiving a larger number of grants, on average. However, among the District's poorest children, only 50 percent are receiving the grant. More work is necessary to identify barriers to grant receipt among the poorest households.

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Signs of effective targeting are also tempered by the fact that the probability that a child receives a grant depends in large part on the presence of a child's mother. Although a child who has lost a father is significantly more likely to receive a grant, this is not true for children who have lost a mother. In fact, children whose mothers are non-resident, or dead, or whose survival status is unknown, are significantly less likely to receive a grant, holding constant the child's father's status. Lack of widespread knowledge of the fact that primary care givers need not be mothers provides a possible explanation for our finding. Furthermore, when a mother is absent, the child's primary care giver may be less able to access the relevant documents necessary for registering the child's birth. The Child Support Grant is currently being extended to children aged 7 to 14, who are even less likely than younger children to be residing with their mothers. In addition, with the AIDS crisis in South Africa, a growing number of children are at risk of mother dying. This makes a better understanding of this phenomenon essential.

Does the grant affect children's well-being? Without benefit of randomized control trials to measure the impact of the Child Support Grant, we turn to longitudinal data from the Africa Centre, in which we can compare school enrollment among maternal siblings. We find a positive and significant association between grant receipt and school enrollment among 6 and 7 year olds young enough to have been eligible for the grant. This is noteworthy, given that on average grant-receiving children have less well educated parents and are residing in poorer households.

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Appendix.

<u>Sample selection</u>

The number of households we report as answering the grant questionnaire (11,178) excludes one observation for a household that no longer existed at the time of the survey.

In 6,075 cases, informants answered affirmatively one or both of the following questions: "Since 1998, has any adult member of this household received, is in the process of applying for, or been refused a grant for a child?" and "Since 1998, is there any child member of this household for whom an adult who is not a member of this household has applied for, received, or been refused a grant?" For households that answered either question affirmatively, details were to be collected on the adult grant holder, the child, and the type of grant. Information was reported for 6,039 of these 6,075 cases, in response to the questions "Is the adult [primary care giver] registered in the DSA?" "Is the child registered in the DSA?" and "What type of grant was received?" Of these 6039 grants, child identifiers were recorded for 5940 cases. (Without child identifiers, we cannot match the grant to a child and, for this reason, those children without child identifiers are not analyzed here.) Of the 5940 children with identifiers, the child identifier reported in the grants module did not match that of any individual registered in the DSA data base on January 1st 2002 for 117 grants, reported for 115 individuals. These are also removed from our analysis. Of the 5823 cases remaining, 396 grants were reported for 387 individuals who were not resident in the DSA on January 1st 2002. (We provide information on these children below.) Of the 5427 cases remaining, multiple households reported grants for 157 children (150 children appear twice, 7 children appear 3 times). For this analysis, we assigned children appearing multiple times to exactly one household, using the following assignment rule. If the child had multiple memberships at the time of the survey, we assigned the child to the bounded structure in which he or she was resident. For those children for whom this did not provide a unique observation, we assigned children to households based on a match between the household assigned to this child in the household memberships file with that recorded in the grant questionnaire. (Details are available from the authors on this procedure.) Of the 5,263 children resident in the DSA at the time of the survey for whom a grant is reported, we focus on the 4,684 children less than age 7 for whom a Child Support Grant is reported.

<u>Non-resident children</u>

Children non-resident in the DSA are not analyzed here, because we have no information on the households in which they are living at the time of the survey. These children look similar to resident children for whom grants are reported, along some dimensions, including the distribution of their ages, their mother's and father's educations, mother's employment status, and the probability that their fathers were dead. For these children, mothers are significantly less likely to be the grant holder (5.1 percentage points less likely than is true of resident children for whom a grant is reported), and grandmothers and aunts are significantly more likely to be reported as the grant holder (3.4 and 1.7 percentage points respectively). Non-resident children are 8.2 percentage points less likely to have siblings under age 10 who are household members.

<u>Grant holder characteristics</u>

Grant holders are not identified for 184 of the 4684 children under age 7 reported with a Child Support Grant. A total of 3320 individuals are identified as holding the 4500 grants for which a grant holder is named. Grant holders may be members of one or multiple households. We find 3187 grant holders reported as members of one household; 99 as members of two; and 2 as members of three households. 32 grant holders are not reported as members of any household in the DSA in January 2002, and thus information on their relationship to the household head is not recorded. In constructing Table 2, we assigned grant holders "head of household" status if they were recorded as the head of at least one household in which they were a member. Similarly, we conferred "spouse of head," "child of head," and "parent of head" status on a grant holder if they held this status in any household in which they were reported to be a member.

Table 1. Mean characteristics of children less than age 7 in the DSA[a]

	Children for whom a Child Support Grant is not reported	Children for whom a Child Support Grant is reported
Age	3.08	3.18*
Proportion female	0.50	0.50
Mother's age	29.3 [n=6856]	31.0* [n=4356]
Mother is less than 20 years old	0.087	.037*
Mother was less than age 20 at the child's birth	0.17	0.12*
Father's age	38.3 [n=3058]	41.4* [n=1942]
Mother and child are both resident members of the same bounded structure[b]	0.67	0.82*
Mother is a non-resident member of child's bounded structure	0.14	0.10*
Mother is dead	0.04	0.02*
Mother is neither a resident nor non-resident member, nor is mother known to be dead	0.16	0.06*
Father and child are both resident members of the same bounded structure	0.20	0.24*
Father is a non-resident member of child's bounded structure	0.16	0.16
Father is dead	0.04	0.07*
Father is neither a resident nor a non-resident member, nor is father known to be dead	0.60	0.52*
Mother, father and child are all resident members of the same bounded structure	0.16	0.22*
Number of assets owned by household	7.85 [n=7400]	7.59* [n=4352]
Number of observations[c]	8181	4684

Notes to Table 1.

a. Sample is restricted to those children resident in the DSA on January 1, 2002 for whom a household identifier is known. See appendix for details. Asterisks (*) denote that the difference in means between the two samples is significant at the 1% level.

b. A *bounded structure* is a physical area (compound, house) that has a single owner.

c. Numbers of observations are given at the bottom of each column, with the exception of mother's and father's ages, and number of assets owned by the child's household — variables for which there are missing values. Numbers of observations in these cases are given in square brackets.

Table 2. Household assets and the probability of reporting a Child Support Grant[a]

Dependent variable: = 1 if informant reports contact with the Child Support Grant system on behalf of this child

Explanatory variables: [sample means in brackets]	
Indicator: household owns a refrigerator [.455]	.007 (.014)
Indicator: household owns a hot water heater (geyser) [.014]	–.202** (.042)
Indicator: household owns a washing machine [.004]	–.091 (.089)
Indicator: household owns a television [.362]	–.005 (.014)
Indicator: household owns a VCR [.063]	–.150** (.022)
Indicator: household owns a computer [.005]	–.141 (.078)
Indicator: household owns a car [.125]	–.039** (.019)
Chi-square test for the joint significance of these assets (p-value)	80.59 (.0000)
Number of observations	11734

Notes to Table 2.

a. Probit estimates. The numbers reported are changes in the probability of reporting a grant, given a change from 0 to 1 in the right side variable presented. Robust standard errors for these changes are reported in parentheses, where correlation is allowed between unobservables for children in the same household. The statistical significance of underlying probit coefficients are marked: ** significant at a 5% level; * significant at a 10% level. Included in the probit are age and sex indicators, household size and number of non-resident members, and a complete set of indicator variables for parent's status. Sample is restricted to children resident in the DSA on January 1, 2002.

Table 3. Parental characteristics and the probability of a Child Support Grant[a]

Dependent variable: = 1 if informant reports contact with the Child Support Grant system on behalf of this child

Explanatory variables:	MOTHERS	FATHERS
Indicator: parent is separated, divorced or widowed	.049 (.040)	–.225** (.060)
Indicator: parent is not married	–.049** (.019)	–.057** (.023)
Indicator: parent's completed schooling is less than standard 6	.057** (.018)	.136** (.028)
Indicator: parent's completed schooling is between standard 7 and 9	.098** (.018)	.124** (.032)
Indicator: parent is employed part-time	.056 (.036)	.061 (.047)
Indicator: parent is not employed	.135** (.014)	.125** (.021)
Indicator: other parent is a non-resident household member	–.041** (.020)	–.125** (.039)
Indicator: other parent is dead	.128** (.034)	–.158** (.066)
Indicator: other parent is neither a resident nor non-resident household member, nor is he known to be dead	–.007 (.018)	–.176** (.027)
Number of observations	10403	4583

Notes to Table 3.
Probit estimates. Reported are changes in the probability of reporting a grant, given a change from 0 to 1 in the right side variable presented. Robust standard errors for these changes are reported in parentheses, where correlation is allowed between unobservables for children in the same household. The statistical significance of the underlying probit coefficients are marked: ** significant at a 5% level; * significant at a 10% level. The reference category for parent's education is completion of standard 10 or higher. The reference category for parent's employment is employed full-time. The reference category in columns 2 and 3 for other parent's status is "resident in household." Sample in column 1 is restricted to children resident in the DSA on January 1, 2002 whose mothers are known to be alive on 1st January 2002, and in column 2 to children resident in the DSA on January 1, 2002 whose fathers are known to be alive on 1st January 2002. Included in the probit are age and sex indicators, household size and number of non-resident members, a complete set of indicator variables for parent's age and a complete set of indicator variables for parent's status. Included in father's regression is an indicator that he is polygamous (coefficient insignificant). Where mother's marital status, or education or employment status is unknown, it is assigned as the mean marital status, education, or employment status for all mothers, and variables are included indicating that mothers marital status, education, or employment status has been assigned.

Table 4. Child Support Grant Receipt and School Enrollment[a]

SCHOOL ENROLLMENT 2003-2004			SCHOOL ENROLLMENT 2000		
Impact of Child Support Grant receipt on the probability of enrollment, estimated from a probit regression run separately for children of each age			Impact of *future* Child Support Grant receipt by a sibling on the enrollment of children in year 2000, estimated from a probit regression run separately for children of each age		
Age [mean enrollment]	Coefficient	Number Obs	Age [mean enrollment]	Coefficient	Number Obs
Age 6 [0.845]	.081** (.023)	987	Age 6 [.951]	−.003 (.014)	1060
Age 7 [0.954]	.018** (.009)	1442	Age 7 [.953]	−.027** (.015)	1233
Age 8 [0.976]	.006 (.007)	1434	Age 8 [.954]	−.021* (.014)	1191
Age 9 [0.979]	−.015 (.019)	1396	Age 9 [.956]	−.015 (.013)	1293

Notes to Table 4

a. Probit estimates. Reported are changes in the probability of school enrollment, given child support grant receipt (left panel) or given *future* grant reciept to a sibling (right panel). Robust standard errors for these changes are reported in parentheses, where correlation is allowed between the unobservables for children who are members of the same household. The statistical significance of the underlying probit coefficients are marked: ** significant at a 5% level; * significant at a 10% level. Included in all regressions are an indicator of the child's sex, mother's completed education, and mother's age on January 1, 2002. When mother's education or age is missing, the relevant variable is assigned a value of zero, and indicator variables are included that her education or age is missing. For the school enrollment probits in the left-hand panel, socioeconomic status variables for 2003-2004 (measured at the time school enrollment information was collected) are included. These are: indicator variables that the child's household has piped water, access to toilet facilities, connection to the electricity grid, and a variable measuring the number of assets the household owned at the time of the 2003-2004 survey. In addition, indicators for mother's and father's status at the time of the 2003-2004 survey are included. These are indicators signifying that mother is resident in the same bounded structure as the child; mother is dead; mother's status is unknown; father is resident; father is dead; and father's status is unknown. For the school enrollment probits in the right-hand panel, analogous socioeconomic and parental status variables for 2001 are included. These were measured in the first half of 2001 at the time information on children's 2000 enrollment information was collected.

Figure 1. Child support grant status, by age,
Resident children aged 0 to 5
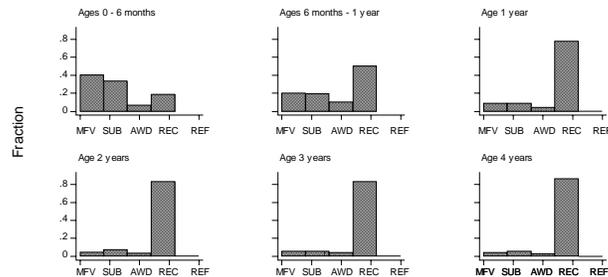
For those children reported to have had contact with the child support grant system, the graphs above
present the stage to which the application process had advanced by 2002. Shown separately by age are:

        MFV : the fraction for whom only a first visit has been made (6.8% over all children < age 7);

        SUB: an application has been submitted (7.8%);

        AWD: an award has been made, but not yet received (3.6%);

        REC: the grant has been received (80.2%);

        REF: the application was refused (0.3%).

Results for 5 and 6 year olds (not shown) look very similar to those for four year olds.

Not shown are a small number of children for whom it is reported that the grant has been stopped.

Apart from the youngest children (less than 1 year olds), for whom first visits and submissions
comprise 50 percent of experience with the system, the vast majority of children are receiving a child support grant.

Figure 2. Receipt of a child support grant for resident children who were aged 4, 5 or 6 years old in 2002
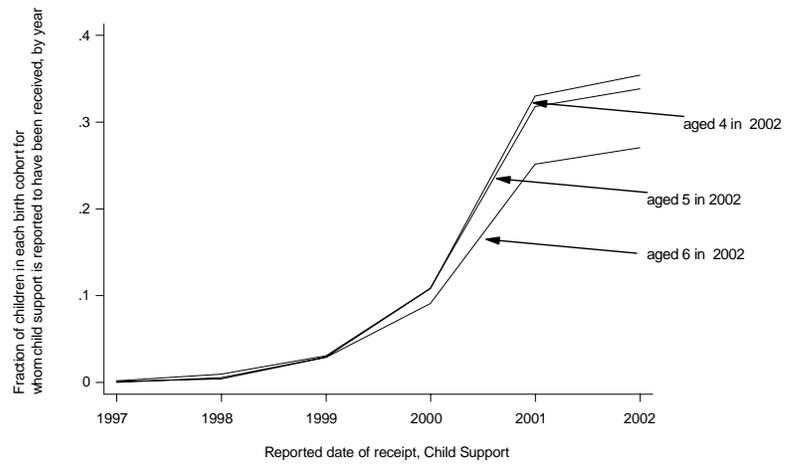

Y-axis: Fraction of children in each birth cohort for whom child support is reported to have been received, by year

X-axis: Reported date of receipt, Child Support

aged 4 in 2002
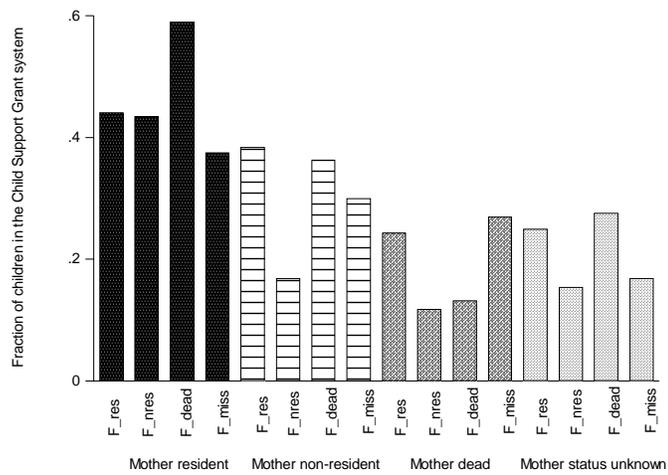
aged 5 in 2002

aged 6 in 2002

Figure 3. The probability of reporting a Child Support Grant, presented by status of a child's mother and father

Reported are the probabilities of reporting a Child Support Grant, based on the vital status of a child's parents.
The first four bars report grants for children whose mothers are resident in the same bounded structure with the child.
Fathers are either resident (bar 1), non-resident (bar 2), dead (bar 3), or status unknown (bar 4).