September 2005

Can Capital Investment Relieve Children from Labor?: Consequences of Poverty Alleviation Program in Indonesia

Chikako Yamauchi

Department of Economics
University of California, Los Angeles
Los Angeles, CA 951477
cyamauch@ucla.edu

Abstract:
    With two hundred and eleven million children working worldwide, child labor is a serious global problem. In an attempt to address this problem, governments often provide grants and loans for productive investment in order to enhance the income-generating capacity of adults, thus lessening their reliance on child labor. Using Indonesia's anti-poverty program, this paper investigates how such investments in household enterprises affect the time allocation of children. A unique variation in the amount of program funds per household across targeted villages enables the identification of the programs impact. Results indicate that urban children shift into household work as adults shift out of it. No effect is found for rural children despite an improvement in the employment status of adults, suggesting that an increase in the earning potential of adults does not guarantee an immediate reduction in child labor. Results also suggest that effects may vary by the level of program management in the villages.

1   Introduction

Child labor is widely recognized as a serious problem afflicting low-income areas. The International Labor Organization (ILO) estimates that two hundred and eleven million children ages 5-14, or 18% of them, work for earnings. Though some of these working children may conduct light tasks acquiring skills that they need for the future, a substantial proportion of them risk their health in dangerous work environments or suffer from long hours of work (ILO (2002)). In addition, with relatively low levels of educational attainment, these children are likely to face a depressed stream of future income. Furthermore, the low level of human capital acquired by these children will ultimately limit the economy's growth potential.

Recently, a growing global consensus on the need to eliminate child labor has been established. For example, the Conventions on the Minimum Age for Economic Activities (no. 138) and on the Worst Forms of Child Labor (no. 182) were ratified at an unprecedented rate in the latter half of the 1990s. The ILO launched a global project, the International Program for the Elimination of Child Labor (IPEC) in 1992 to systematically tackle the problem in multiple countries (ILO (2002) p.68-69 and p.8.). Many programs aiming to reduce child labor and promote schooling take approaches such as providing alternative income-generating methods, which are ways to raise income for households without relying on child labor, food-for-education programs,[1] building legal framework, and raising public awareness. The first approach, providing alternative income-generating methods, includes delivery of grants or credit for poor households' family enterprises and increasing employment opportunities for poor adults.

Previous studies theoretically support these alternative income-generating methods, particularly to poor households. For instance, Basu and Van (1998) show that child labor and low adult wage rates reinforce each other. That is, children's participation in the labor force keeps adult wage rates low, which in turn prevents households from raising enough income to withdraw children from work. In addition, Swinnerson and Roger (1999) point out that unequal distribution of wealth could lead children from poor families to work even if countries attain moderate aggregate income levels. These theories suggest the improvement of adults' employment status or their income-generating capacity through, for example, grants or credit for household-level productive activities, or household enterprises.

---

[1] A well-known example of this program is Mexico's PROGRESA, in which poor households receive subsidies conditional on school enrollment of the children. Schultz(2004) reports that this program does increases enrolment and Parker and Skoufias(2000) cite that the increased enrollment is associated with a significant reduction in children's participation in work for earnings and household work. A similar program in Bangladesh is also reported to have a significantly positive effect on enrollment (Ravallion and Wodon (2000)).

However, on the other hand, available empirical evidence suggests that the effect of funds for household enterprises differ by how they are spent. Receiving credit that is not necessarily tied to investment has a positive effect on children's school enrolment in Bangladesh (Pitt and Khandakar (1998)). However, investment in household enterprises could exacerbate the problem. For instance, if it increases capital stock such as livestock and agricultural tools, which in turn raises marginal productivity of labor, children may be forced into working to meet the increased demand for labor. Moreover, children may bear larger responsibilities in household work if adult household members are more involved in work outside of the household. Rosenzweig and Evenson (1977) show that children in districts with above average land holdings are more likely to be at work in India. With the assumption that land and child labor are complementary in production, they conclude that larger economic contribution of children increases the incidence of child labor and decreases the share of children enrolled in school. In Guatemala, Wydick (1999) finds that households with larger access to credit tend to send their children to school. However, this positive relationship is mitigated when the household invests in capital stock.[2] Also, Hazarika and Sarangi (2005) find a positive association between the probability of children participating in domestic chores and self-reported credit limit in rural Malawi.

These pieces of evidence suggest that funds for investment in household enterprise may pull children into work as a result of changes in other production inputs used in household enterprise (capital stock) or in household chores (adult labor). However, in contrast to these substitution effects, the effect of increased household income may change such relationships over time especially once households begin to reap the returns from their investment. Also, impacts of such publicly provided funds may vary depending on village characteristics such as program management capability.

This study investigates whether and how children's time allocation across schooling, work for earnings, and work for household chores changes over time once the availability of loans for household enterprise is altered due to a large-scale subsidy to poor villages using Indonesia's anti-poverty program called IDT. I also examine whether effects differ according to the village's level of program management ability, measured by the repayment rate. I exploit IDT's program design which provides targeted villages with the same amount of lump-sum grants regardless of the population size. That is, IDT effectively assigns a village with fewer households a larger amount of funds per household. Utilizing this variation, together with rich datasets that encompass periods before and after program implementation, I test whether changes in children's time

---

[2]Jacoby and Skoufias (1997) also argues that changes in labor demand at the household enterprise, which is not due to changes in capital stock but due to seasonality in the production process, affect children's school attendance.

allocation behaviors are greater in smaller villages that receive larger grants per household. Particularly, I measure children's time allocation behaviors by the share of children in a village who work for earnings at least one hour per week (at work),[3] who regularly attend school (at school), and whose major activity is work in a home (at household work). In the rest of the paper, I use the following terms, the shares of children at work, at school, and at household work, to refer to these three types of measures of children's time allocation behaviors.

Results indicate that such funds induce older children ages 16-18 into greater participation in household work, as fewer adults become involved in household work in urban areas. In contrast, in rural areas, neither children's household responsibility or adults' engagement in household work changes. This discrepancy suggests that reduced participation in household work by adults increases children's involvement in household errands. The other major finding is that children's time allocation behaviors are not affected throughout the period of analysis even though more rural adults begin working. This lack of effect on the share of children at work or at school implies that investment in household enterprise does not either replace child labor with adult labor, raise children's marginal labor productivity and push even more of them into work, or lead to a significant increase in household income enabling the elimination of child labor or promotion of schooling. Furthermore, the results of heterogeneous program effects are suggestive that local community's program management capability matters in determining the effectiveness of IDT. In villages where the repayment rate is low, participants spend program resources directly on the education of older children. The last finding motivates further investigation into heterogeneity of the effects by village characteristics such as access to credit and the administrative capability of local community institution.

2 Indonesia's Grants for Poor Villages: IDT

2.1 Background

Inpres Desa Tertinggal (IDT) is a subsidy program for selected poor villages in Indonesia. It was launched in 1994 in order to accelerate the reduction in the number of impoverished individuals by targeting public resources to poor, remote villages. The government encourages targeted villages to use the subsidy as a fund for rotating loans and households receiving the loans to invest in productive activities.[4] Approximately

---

[3]Work for earnings includes both paid work and unpaid work for family members engaged in household enterprise.
[4]National Development Planning Agency, Indonesian Ministry of Home Affairs (NDPA, 1994).

one third of the 65,000 villages is selected for funding if the value of the village's welfare indicator, which summarizes residents' standard of living and the availability of socio-economic infrastructure, is lower than two provincial thresholds.[5] The program is conducted over the course of three years, from the fiscal years of 1994/95 through 1997/98, and most of the villages that are initially designated as poor receive subsidies in all the three years.[6] Within these villages in the rural and urban areas, 18% and 7% of households participate in the program, and the average loan size is worth nine times and five times as much as their average monthly expenditure per capita, respectively (Table 1).[7]

Within funded villages, the rules used to select participating households are unknown to researchers. In addition, the rules are likely to differ across villages because village governments are given discretion over the distribution of program resources and encouraged to utilize local knowledge in targeting poor households. In general, households in which heads are less-educated and houses are made of inferior materials tend to be direct beneficiaries.

Participating households are allowed to invest in productive activities, but they are not expected to spend funds to finance children's education for the following reasons. First, the government suggests that households invest in productive activities that yield returns in the short-run (NDPA(1994)). In some villages the repayment cycle is a month or two weeks (Kimura(1994)). Thus, participants are unlikely to meet repayment deadlines if they spend the money on the children's schooling unless funds are used primarily to smooth income flow of a month or two. Second, once households are chosen to be eligible, they need to submit business proposals describing the kind of production activities that they plan to undertake and the amount of funds that they plan to spend. No participating household answer that they use IDT funds to finance their children's education. Approximately a half of them use the funds for the purchase of livestock; another 30% for crop cultivation, fishery, and other agricultural activities.[8]

However, the following evidence suggests limited compliance with such expected usage of funds. Despite the role of the grant as a fund for revolving loans, many households do not repay loans. The fraction of

---

[5]If the value is lower than only one of the two thresholds, then the village is funded when a field officer considers that the village is poor.

[6]Though some villages are added and subtracted from the group of treated villages, these groups of villages do not provide large enough samples for regression analysis. Thus, I focus on villages that are fully funded. These villages occupy 88% of villages that are funded at least in one year.

[7]This data is described in detail in a later section.

[8]In urban areas, 36% of participating households answer that they spend funds on trade, 21% on livestock, 18% on other agricultural activities, and 15% on small-scale industry. The rest of categories include service, miscellaneous activities, and "not having used yet". The last two categories occupy less than 5% and 7% in the rural and urban areas. These figures are based on 1998 SUSENAS, which is described in a later section.

households repaying loans that are extended some time in 1996 by January 1998 are 20% and 33% in rural and urban villages, respectively (Table2).[9] In such villages where loans are not well-managed, it is unlikely that the government's guidance for usage is well-communicated. Furthermore, anecdotal evidence suggests that there is a case where a recipient obtain a loan by submitting a proposal saying that he will purchase livestock, but actually spends it on his child's education. Though my early work shows that such usage of IDT funds is unlikely to be a common phenomenon for all the targeted villages,[10] it does not preclude the possibility that a subgroup of villages with poor program management capability let participants spend funds on short-run consumption or financing children's education. Therefore, the effects of IDT are likely to depend on how loans are managed within targeted villages as well as by recipients.

2.2   Previous Studies on IDT and Children's Time Allocation

Given explicit rules to select villages, several researchers have studied the effects of IDT, but the results demonstrating the impacts on children's time allocation have been mixed. Due to the government's purposeful selection of relatively poor villages, non-treated villages are inherently wealthier and thus unlikely to be indicative of what would have happened to treated villages without grants (Rosenzweig and Wolpin (1986)). The following studies attempt to control for this issue by using the government's rules to select poor villages.[11] Molyneaux and Gertler use propensity score for matching, but do not take into account the fact that the thresholds used for the selection vary across provinces. As a result, they find no systematic change in the share of children enrolled in school. Alatas (2000) uses two kinds of analyses: one compares a treated village in one province with non-treated villages in other provinces that have similar welfare indicator values with the treated village. The other analysis uses the program's sharp regression discontinuity design[12] and compares villages whose welfare indicators take values that are just below and above the provincial threshold. Based on this regression discontinuity analysis, her results do not show any systematic effects that are common across provinces. On the other hand, her matching results show that the share of children ages 10-18 is higher in

---

[9]These rates are based on villages where at least one of sampled households participate in IDT in 1996.

[10]Household expenditure per capita does not exhibit a significant positive effect until the third year of the program period. Even when it significantly increased, the major items driving the increase are clothing and housing maintenance costs. In addition, if participants spend the funds on education or any kind of consumption, the share of adults at work would not be affected or can be reduced as they do not need to work to raise tuition. However, the share of young men at work does increase, which is followed by the increase in household expenditure (Yamauchi (2005)).

[11]Also, Akita and Szeto (2000) and Daimon (2001) examine IDT's effects on inequality and poverty.

[12]In the second year of the program, some villages are additionally included in the treatment group if their welfare indicators in the second year have values lower or equal to the provincial threshold. This rule thus possesses the feature of sharp discontinuity (Hahn, Todd, Van der Klaauw (1998)).

rural treated villages. However, as Alatas (1999) notes, this cross-sectional difference may be due to underlying difference across provinces.[13] Therefore, these two previous studies based on different methods have produced contradictory results that may not fully control for the endogenous selection of treated villages. This indicates the need for further evidence on the effects on children's time allocation based on an identification strategy that controls for differences in threshold values and unobserved factors across provinces.

The present study provides such evidence controlling for unobserved factors not only at the provincial but also at the village level. In particular, I exploit the fact that the amount of funds provided to targeted villages is fixed to be 20 million rupiah (approximately US$8,932[14]) even though population size varies across these villages. The amount of funds per household varies from 27,434 rupiah to 101,423 rupiah at the 25th and 75th percentiles, as their numbers of households range from 708 to 185 in rural areas (Table 2). The respective figures are 12,744 rupiah and 31,833 rupiah with 1452 and 600 households in urban areas. In addition, both the fraction of households participating in the program and the average loan size are significantly positively correlated with the amount of funds per household (Table 3), indicating that, the larger the amount of funds per household is, the higher the participation rate and the greater the benefits per participant. Utilizing this variation, I identify the effect of a marginal increase in program funds on children's time allocation behaviors conditional on program receipt of the village. Since within-village distribution of funds is unknown, the present study examines the overall village-level effects, taking the within-village distribution as given. Thus, these overall effects may include spillover effects that participants potentially have on non-participants.

3   Conceptual Framework

The implementation process of IDT described in the previous section suggests that there are multiple pathways that IDT funds can affect children's time allocation. In this section, I illustrate that the effect of IDT is not predictable a priori due to (1) dissimilar effects of various utilizations of funds and (2) possible heterogeneity in the role that IDT plays across villages with different levels of program management capability.

Suppose that funds are invested in productive activities as expected. Then, there are at least three possible

---

[13]The provincial thresholds are computed as AVE-SD and AVE-0.6I, where AVE, SD, and I stand for the province-level average, standard deviation, and interval of the welfare indicator. Therefore, treated and non-treated villages are extracted from provinces where non-extracted villages are relatively wealthy and poor, respectively. The result may reflect higher employment rate for older children in villages from wealthier provinces.

[14]In terms of 1995 U.S. dollars. This conversion is based on the 1995 average exchange rate of Rp.2239 per 1995 dollar (Indonesian Financial Statistics, Bank Indonesia).

scenarios depending on use of funds as follows: (1) purchase of capital stock such as livestock, tools, and machinery, (2) increased current expenditures on non-labor inputs such as retail items to be sold at a street store or raw materials for handcraft work, and (3) an increased current expenditure on hired labor.

First, in the case of capital augmentation, marginal productivity of labor is likely to increase in the household enterprise sector.[15] If adult and child labor are substitutes, then children may be pushed into the production process. If such an impact is large, then the overall share of children at work may increase and that of those at school may decrease. Second, if participants spend funds on non-labor production inputs, to the extent that labor and these inputs are complements, demand for labor will increase, part of which may be met by children. Third, if labor is hired in order to replace children who help their family members, then the incidence of child labor will likely decrease, though the output level may not change.

These three scenarios may be associated with a possible income effect resulting from either augmented capital stock, increased scale of production, or greater contribution by hired labor that exceeds the forgone contribution of children who withdraw from work. Given that children's non-work, non-household-work time is a normal good, an increase in income level is likely to mitigate the pulling effect of capital augmentation and the scaling-up of non-labor intermediate inputs, while strengthening the effect of the substitution with hired labor.

In addition to these effects stemming from changes in the production process and household income, changes in adults' time allocation is likely to affect children's time allocation. That is, if capital augmentation or scaling-up of production increases adults' hours spent working in the household enterprises or the market, it may lead to greater responsibility of children in household work. Particularly if female adults, who are usually in charge of household work, become more involved in working for earnings, their duties at home may be filled by children.

So far, these possible pathways work under the assumption that funds are actually invested in productive enterprise. However, if the repayment obligation is not well-disseminated or monitoring and collection enforcement are poor within targeted villages, then IDT funds may be used to directly finance education. For example, if villages with limited program management capabilities fail to induce participants to repay loans due to these reasons, then program effects are likely to differ by the village repayment rate. That is, there may be an increase in the share of children at school or a decrease in the share of children at work only in

---

[15]It is possible that capital stock is labor-saving. Then it should show a decrease in labor supplied to self-employment sector. However, I show that it in fact increases. Thus, the assumption that capital and labor are complements is likely to be plausible.

villages with low repayment rates. Though repayment is a behavioral variable and the results would inform us of correlational, not causal, relationships, they are likely to provide preliminary information for further investigation into heterogeneity in the program effects by pre-determined village characteristics related to program management capability. Thus, in order to shed light on pathways in which IDT affects children, I examine how changes in the shares of children at work, household work, and at school are correlated with the amount of funds per household, together with their heterogeneity by the repayment rate.

4   Data

In order to empirically estimate the effect of marginal increase in funds per household, I combine the following three datasets: *Survei Sosial Ekonomi Nasional* (SUSENAS, The National Socio Economic Survey), a nationally representative, repeated cross-sectional dataset; *Potency Desa* (PODES, Village Potential Statistics), a census dataset on village characteristics; and the census administrative data on IDT.[16] The SUSENAS provides information on the activity for which a child who is 10 years old or older spends most of the time in the week previous to enumeration. For the activity, the child chooses either work for earnings, household work, attending school, or others. If the child's major activity is not work for earnings, the SUSENAS asks whether he works for at least one hour; if he does not work for even one hour, it further asks whether he has a regular job and was temporarily on vacation. Using these pieces of information, I define children at work as those who answer that (1) the major activity is work for earnings, (2) the major activity is not work for earnings but work at least one hour per week, or (3) the major activity is not work for earnings and work hours are fewer than one hour but has a regular job.[17] In order to measure the extent to which children are engaged in activities other than work for earnings, I define children at household work as those who answer that their major activity is household work. Children who are at school are defined as those who answer that they regularly attend school. Using these three dummy variables, I compute the share of children in a village who are at work, at school, and at household work. Since these three dummy variables are not mutually exclusive, the shares do not necessarily sum up to one. In addition to these outcome variables, I investigate the effects of IDT on the shares of adults who live with children ages 10-19 and who are at work and at household work in order to examine how changes in child's and adults' employment status are associated with each other.

---

[16]I am thankful to John Molyneaux for kindly providing this dataset.

[17]This definition is consistent with the one used by the ILO, which is children who work at least one hour or those who are temporarily on vacation during the interview period (ILO(2002)).

Adults' outcome variables are defined similarly to those of children. I will also use another measure for their work status, the share of those whose major activity is work for earnings so as to capture the effect on the intensive margin.[18] The policy variable, the amount of funds per household, is computed based on the number of households in a village as of 1993, which is available in the PODES. This figure is also adjusted for price changes across provinces and time. These variables are extracted for treated villages that are identified in the IDT dataset.

Table 4 provides summary statistics of the shares of children who are at school, at work, and at household work in 1994 - before IDT is implemented - for rural and urban areas. The figures show that, in rural areas, 90%, 58%, and 22% of boys ages 10-12, 13-15, and 16-18 are at school.[19] The figures for girls attain similar levels of school attendance. The former two groups are required to complete elementary and junior high school education according to the country's nine-year compulsory education program launched in 1994.[20] However, these statistics suggest that even in elementary school compliance is not complete, let alone lower secondary education, by children in rural areas. Urban areas in general achieve higher levels of school attendance. For example, 97%, 77%, and 53% of boys in the three age groups are at school. The level of attendance is still not perfect at the junior high school level.

Consistent with the tendency that urban children are more likely to regularly attend school, the share of children at work are higher in rural areas. Within each area, boys are more likely to be engaged in work for earnings while girls are more likely to be mainly involved in household work. This gender gap becomes more pronounced as children become older. The average working child helps family members in the agricultural sector. For instance, 78% of working boys ages 10-15 participate in households' productive activities without receiving any wages. In contrast, larger proportions of boys ages 16-18 work as wage workers (14%) and self-employed workers (20%). Regardless of age group, children are predominantly engaged in the agricultural sector, while a minor fraction participate in small-scale manufacturing, trading, and services. These employment patterns across occupation and industry are similar for girls. Urban areas show a different picture: 50% (30%) of young (older) children participate in household enterprise and market work, respectively. A sub-

---

[18]I study the effects on hours of work among those at work, but they tend to be estimated inaccurately due to the small sample. Thus, they are not reported in this paper.

[19]Though children ages 5-14 are often considered as those to be protected from any kind of work for earnings, work status for those ages 5-9 is not available in the data.

[20]Previous to this reform, mandatory education was set at six years, which covers elementary education. This mandatory education system is not consistent with the minimum age set by the government. During the period of this analysis (1993-98), the minimum age was 14 years old, and children ages less than 14 were allowed to work in certain types of work with parental consent and for a limited number of hours depending on a family's financial need. The minimum age was raised in April 1999 to 15 years old and children under 15 became not allowed to work more than four hours a day (U.S. Department of Labor (2002)).

stantial fraction of these urban working children are in the manufacturing, trading, services, and construction sectors.

5   Identification Strategy

Using these data, I estimate the effect of a marginal increase in the amount of funds per household in a village. In particular, I exploit the fact that smaller villages with fewer households are assigned to larger funds per household among treated villages. That is, I limit my analytical sample to targeted villages, and then, estimate the effect of the amount of funds available per household on outcomes such as the shares of children in a village who are working for earnings, doing household work, and regularly attending school. Since these outcome variables may be correlated with village size, or the number of households, I incorporate village fixed effects in the econometric model as follows:

$$Y_{jt} = \alpha_0 + \sum \alpha_t T_t + \sum \delta_t [ln(F_{jt}) * T_t] + \mu_j + \epsilon_{jt} (t = 1994, ..., 1998) \qquad (1)$$

where the outcome variable, Y_{jt}, is a function of year dummies, T_t, interaction terms between the year dummies and natural log of funds per household, $ln(F_{jt}) * T_t$, the village-level fixed effects, μ_j, and the error term, ϵ_{jt}.[21] The subscripts j and t denote village and year, respectively. The village-level fixed effects allow an unobserved village-level factor to be correlated with the amount of funds per household as long as they are additive and constant over years. For instance, before IDT is implemented, smaller villages in urban areas tend to have fewer older girls at household work (Graph 1(A)). Additionally, smaller villages in rural areas tend to have more young boys at work and fewer in school (Graph1(B)). The estimate will reflect the correlation between the outcome and funds per household net of such underlying correlations. Therefore, parameters of interest, δ, indicate how changes in the outcomes from the base year of 1993 to years 1994, 1995, ..., 1998 are correlated with funds per household. Firstly, the estimate for 1994 provides a test for spurious correlation as it shows whether unobserved trends in outcomes differ across villages with varying village size during the period in which the program had not been implemented. I show in the next section that there is no such underlying correlation. Secondly, the estimates for 1995 through 1997 exhibit differences across villages that are correlated with the amount of funds per household. Lastly, the results for 1998 allow us to examine whether the program

---

[21]The error term is allowed to be correlated within a village. Thus, possible serial correlation across years is taken into consideration in the computation of the standard errors (Bertrand, Duflo and Mullainathan (2004)).

effects, if any, have impacts continued even after villages stop receiving funds.

Note that the present identification strategy does not provide the estimate for the effect of receiving IDT grants. Rather, it estimates the effect of receiving a marginally larger amount of funds per household conditional on grant receipt. Therefore, compared to the estimate that would be obtained from the comparison of treated and non-treated observations, the size of the estimate based on the present strategy is likely to be smaller. However, given that grant assignment is endogenous and that it is difficult to identify the effect of the program by comparing treated villages and non-treated villages, the results based on the comparison of treated villages with small and large amounts of funds per household provide crucial information on the causal effect of IDT. Another point to keep in mind is that not all the households in treated villages participate in the program, which dilutes the effect that are identified in the village-level analysis. With no information on intra-village allocation of funds, which varies across villages, it is very difficult to disentangle the effects of IDT at the household-level; it is unknown how unobserved characteristics such as entrepreneurship and program participation are correlated in each village. In contrast, the village-level analysis provides consistent estimates for the effect of a marginal increase in program funds given program receipt. Moreover, the village-level estimates include possible spillover effects on non-participants, measuring the overall impact on targeted villages.

The sample that is used for the analysis consists primarily of villages that were funded in all the three years. Note that a minor fraction of rural villages that are designated as poor in the first year drop out of the treatment group in the 2nd or 3rd year if their village size is particularly small.[22] When I allow estimates δ_t and α_t to differ for these groups of dropped villages, their deviations do not significantly differ from zero. Thus, I chiefly report the results for villages that are funded in all the three years. The urban sample also has villages that are dropped in the 2nd and 3rd years; unfortunately, too few of these villages are sampled in the SUSENAS to allow separate estimation of their program effects. Therefore, I limit my urban analytical sample to those villages funded in all three years. Nevertheless, the basic findings are robust to the inclusion of the villages that are dropped in the middle of the program period.

Finally, in addition to estimating the overall effects for the whole sample, I will examine whether effects vary by the ability of village government to manage programs measured by the village-level repayment rate. In order to conduct this analysis of heterogeneity, I define the repayment rate as the fraction of households that

---

[22]In order to reduce the inequality in the amount of funds per capita, the government does not renew funding status of these particularly small villages.

repay loans by January of 1998 among those receiving loans in 1996. Since the SUSENAS have some treated villages with no participant, this analysis is based on about a quarter of the original sample for which the repayment rate is available.[23] Since repayment is likely to be simultaneously determined with outcomes such as time allocation and usage of funds, differences in the program effects by the repayment rate may simply reflect associations between the outcomes and repayment. Nevertheless, these results provide rich preliminary information for further investigation.

6   Results

6.1   Effects for Urban Areas

Results for urban areas indicate that IDT increases the share of older children aged 16-18 doing household work as it reduces the share of adults engaged in household tasks; however, it does not affect the shares of children at work or at school. Graph 2 shows the estimated coefficients, δ_t, for the shares of children at work, at school, and doing household work by age group and gender. Each graph exhibits how the coefficient evolves from the pre-program period (1994), program period (1995-97), to post-program period (1998), with marks for the years in which the effects are significantly different from zero.[24]

The graph for older boys shows that the change in the share of those who are involved in household work is significantly larger in smaller villages in 1995, 1997 and 1998. On the other hand, there is no such difference across villages with varying size in the pre-program period, 1994, indicating no spurious trend in the outcome correlated with village size. The coefficient in 1995, 0.026, signifies that, if a village with the median level of funds per household - 20,360 rupiah - obtains an additional 20,000 rupiah,[25] then the change in the share of older boys at household work from 1993 to 1995 increases by 2.6%.[26] This is net of the effect of IDT that is common to all the treated villages, and thus, is not the estimate for the overall change in the share that can be attributed to IDT. Even so, the qualitative results indicate that IDT has a positive effect on the share of

---

[23]The sample of villages where the repayment rate is available tends to be poorer and thus the results may not represent the whole sample.

[24]See Appendix 1 and 2 for detailed estimation results.

[25]This is equivalent to the difference in the amount of funds between the median and the 84th percentile. Thus, this thought experiment corresponds to providing additional funds to a village with the median level of funds per household so that the total grants become worth what the 84th percentile village initially receives.

[26]For example, the approximated overall change evaluated at the median and 84th percentile point of the amount funds per household is -0.001 and 0.017 as from the regression equation, the overall change is $E[Y|T_t = 1, T_s = 0] - E[Y|T_t = 0, T_s = 0] = \alpha_{1995} + \delta_{1995}ln(F) = -0.079 + 0.026ln(F)$. Thus, the overall change increases by 0.018 when F is altered from 20 to 40. This value of linearly approximated overall change exceeds 0.026 because the functional form of the overall change is concave with respect to F. Note that this approximation assumes that within-village distribution is identical.

older boys doing household work. The results for older girls also suggest that they become more involved in household work in 1995. A weaker, yet similar increase is found in 1996 and 1998 as well.

Such an increase in household responsibilities is not associated with any significant change in school attendance or work for earnings. Although older boys exhibit a positive effect on school attendance and a negative effect on work participation in 1997, these effects are not significant. Moreover, they do not extend to 1998. Older girls demonstrate a similar trend in IDT's effects on their shares of those at work and at school. These results may indicate an increase in household income that is accumulated after villages receive the grants three times. Even so, this effect is limited to be temporary and of marginal significance.

The absence of any significant and sustained impacts on the shares of boys and girls at work or school, coupled with a measurable increase in the share of children involved in household work, suggests that a pre-existing pool of idle children become engaged in household work. In fact, initially, 19% and 15% of older boys and girls were not involved in work, school, or household chores. [27]

In contrast to older children, young children ages 10-15 experience few significant effects of IDT. The only exception is a negative effect on the share of young boys at work in 1996. However, the size of this effect is almost the same as that found in 1994, when IDT is not yet implemented. Thus, it is unclear whether the negative effect is due to IDT or an underlying trend that is found disproportionately in smaller villages.

These results for urban children imply that the major effect of IDT is an increase in the share of older children chiefly engaged in household work. The results for adults suggest that this increase in older children's household responsibility is explained by declining participation of adult household members in household errands. Graph 3 indicates that the coefficient for the share of young men who mainly do household work is negative from 1995 on, and it is significantly different from zero in 1997. Also, the the effect on the share of older women doing household work is negative in 1995, 1996, and 1998, corresponding to an increasing share of older girls participating in household work. Thus these results suggest that older boys and girls replace young men and older women in household work, respectively. Nevertheless, it is older, rather than younger, children who take this responsibility. In addition, increased work in the household does not interrupt older children's school attendance. Therefore, the results imply that IDT's positive effect on the share of older children involved in household work is unlikely to be detrimental to long-run human capital formation.[28]

---

[27]It is also possible that, even if a child who is working for earnings becomes mainly involved in household activities, the child keeps working for earnings one hour per week. However, this is unlikely the case as the other measure of work, the share of those whose major activity is work for earnings does not show any effect either.

[28]It is possible that older children's hours spent on school-related work are decreased and their school performance degraded.

Besides these effects on adults' participation in household work, the results indicate that IDT has a positive, yet insignificant, impact on work participation by older women as well as young and older men (Graph 3), suggesting that IDT's employment-enhancement effect is too weak to be measured. This absence of significant impact on adults' employment status provides an explanation for the lack of change in the share of children at work or school.

6.2   Effects for Rural Areas

I have shown in the previous section that additional funds for investment increase the share of older children doing household work as fewer adults become involved in work. In this section, I demonstrate that the overall shares of children in rural areas who are at work, at school, or at household work do not change significantly even though more young men work.

Graph 4 indicates that, though the shares of older boys and girls at work show negative effects during the program period of 1995 through 1997, they are of marginal significance.[29] Even if these effects indicate a slight reduction in the share of those at work, they do not lead to any increase in the share of those at school. Also, unlike the case for older children in urban areas, IDT leaves the share of those at household work unchanged. These results apply for young children ages 10-15. Young boys show a negative, but insignificant, effect of IDT on the share of those at work during the program period. Girls reveal an even slighter change in the share of those at work. For both boys and girls, the effects have no systematic patterns on the effects on the shares of those at school or at household work.

These results, coupled with the results for urban children, imply that IDT increases the supply of older children's labor to the household sector in urban areas, but not in rural areas. Investigating the effects on adults' time allocation addresses this discrepancy; older children in rural areas do not need to increase involvement in household work because adults do not create excess labor demand at home. The left panel in Graph 5 shows an insignificant, yet increasingly positive effect on the share of young women at household work during the program period; the effect for older women is also non-negative. throughout the period of interest, the share of men doing household work in rural areas is relatively constant. Therefore, unlike urban adults,

---

Existing evidence suggests, however, that hours spent on household work and school performance are not significantly correlated with each other (Binder and Scrogin (1999)).

[29]All the regressions include separate coefficients for the two groups of villages that are dropped from the treatment group in the 2nd and 3rd years, which show few significant deviations from the estimates that are presented. For example, for these three outcomes, only older girls in villages that stopped receiving grants in 1997 show a significantly negative deviation from the estimate shown for the effect of funds per household on the share of girls attending school. No group shows such a deviation for villages that are dropped in 1996. Therefore, only the main estimates are presented.

rural adults' participation in household chores does not influence demand for children in household work.

Another difference in the results between urban and rural areas is the effect on adults' employment status; while urban areas show few changes, rural areas exhibit a significant increase in the share of young men at work in 1996, which is driven by an increase in self-employment (Table 5, Column 3). However, as depicted in Graph 4, this improvement of young men's employment status is not associated with any significant effect on children's time allocation. These results indicate that, on one hand, children are not drawn into work; but on the other hand, even if adults gain new employment opportunities, children do not receive any direct benefits. Disaggregation of the effects on the share of workers by employment status sheds light on how IDT funds are utilized. Particularly, the effect on the share of wage workers is remains unchanged (Column 4, Table 5), suggesting that funds are used for non-labor inputs, rather than for replacing children with hired adult labor.[30] Given that young men invest in non-labor inputs, it is possible that this investment increases labor demand to the extent that labor and non-labor inputs are complementary. This increased labor demand could draw children into work force. On the other hand, if household income significantly increases due to the investment, it may relieve children from work. The results suggest that, overall, young men's investment does not have either a positive or negative effect on the share of working children. Similarly, IDT's impacts on the share of children at school indicate no significant change as a result of enhanced self-employment activities by young men.

This lack of either an increase in the share of children attending school or a decrease in the share of those at work is common in both urban and rural areas. However, while a small proportion of treated households and loan size in urban areas reduce the measurable impacts on children, the results for rural areas indicate that improving adults' employment status does not guarantee an immediate and effective change in children's time allocation behaviors. This is consistent with the fact that the effects of IDT on the consumption of all the households in treated villages is limited. Only per capita expenditure on non-food items increased in 1997, and the change in total per capita expenditure is not significantly different across villages with varying amounts of funds per household (Yamauchi (2005)).

---

[30]The fact that the share of wage workers does not change could indicate that some of wage workers become self-employed by utilizing investment opportunities provided by IDT, but this decrease in wage workers is also offset by an increase in labor hired by these self-employed workers.

6.3 Heterogeneity in Program Effects

If there is no overall effect on children's work or school attendance, is there any subgroup of villages where additional funds for productive investment lead to improvement in children's school attendance or alleviation of their work? In this section, I argue that rural villages where participants tend to not repay their loans are more likely to use funds to finance older boys' education, and that employment-enhancement effects are concentrated in villages with positive repayment rates.

Column 1-4 of Table 6 show that the effects of IDT for older boys in rural areas are heterogeneous. Overall, changes in the shares of older boys at work and at school do not show any significant difference across villages with different amounts of funds per household (Columns 2 and 4). However, when villages are separated into those with positive and zero repayment rates, the latter indicates a significantly negative effect on the share of those at work and positive effect on the share of those at school in 1997 (Columns 1 and 3). The coefficients for 1995, 1996, and 1998 exhibit a weaker yet similar shift from work to school. On the other hand, the coefficients for villages with positive repayment rate tend to offset these effects. A clear heterogeneous program effect is found only for older boys in rural areas. Young and older (Column 5-8 of Table 7 and 6) girls show negative and positive deviations in the effect on the share of those at school in villages with positive repayment rate, respectively; however, these heterogeneous effects are only found in 1995. Young boys exhibit no heterogeneity in the program effects. Interestingly, in villages where participating households appear to invest in older boys's schooling, older women shift from work to household work while villages with positive repayment rates do not show a similar movement (Columns 1-4 of Table 8). These results suggest that households in villages with relatively ineffective loan management are more likely to spend funds to reduce older women's work and to finance older boys' education. In other words, IDT benefits children when funds are spent in a manner similar to food-for-education programs, rather than in ways that strengthen alternative income-generating capacity.

Urban areas show the employment-enhancement effect for adults that are concentrated in villages with positive repayment rates, but evidence for the correlation between the repayment rate and the impact on children is mixed. First, results for the overall effects indicate no employment-enhancement effect (Columns 6, 8, 10, and 12). However, the results in Columns 7, 9, 11, and 13 indicate that a significant share of older women shifts from mainly doing household work to working for earnings in 1996, and a similar albeit insignificant shift is also found in 1997 and 1998. Young men also show the same pattern of employment-enhancement effect in 1995 and 1997. The results for children may be suggestive of benefits of strengthened income-generating

16

capacity, but are unclear relative to those for rural children. Older girls exhibit a positive deviation in the effect on the share of those at school in villages with positive, repayment villages in 1996. The effects on their share of those at work suggest that there is an underlying positive trend specific to smaller villages from 1993 to 1994, and that the trend becomes smaller after 1994. Under the assumption that this trend existed from 1994 on if IDT had not been implemented, then the reduction in the size of the positive trend implies that IDT mitigates the positive trend in the incidence of child labor. Though these results suggest that older girls move from work to school, it should be noted that the assumption does not need to hold. Young girls in villages with positive repayment rates also show a positive deviation in the coefficient for the share of those at school, though it is only present in 1998. Boys do not show any heterogeneity in their program effects (Columns 1-4 if Table 9 and 10).

These results imply two different scenarios in urban and rural areas. The associations found in rural villages suggest that participants planning not to repay loans are unlikely to comply with other rules of the program such as investing in productive activities that yield returns in the short-run. Without such restrictions on investment, participants use IDT funds to finance older children's education and reduce older women's work participation .[31] On the other hand, though urban villages show that villages with positive repayment rates are more likely to have participants invest in productive activities, results in these positive repayment villages also indicate a possible shift in the share of girls from work to school. In other words, the expected positive effect of a program that strengthen income-generating capacity is realized. However, as discussed, these findings most likely reflect correlation, not causal relationship, between village repayment rate and the outcomes. Therefore, these two distinct preliminary findings motivate further examination of heterogeneity in program effects by pre-determined village characteristics that are correlated with a higher repayment rate.

7   Conclusion

In this study, I have investigated whether grants for productive investment provided to poor villages have any impact on children's time allocation behavior using Indonesia's anti-poverty transfer program called IDT. This program is designed to increase employment opportunities of poor households by encouraging them to

---

[31]However, it is noteworthy that beneficiaries are those ages 16-18, who are not targeted by the new mandatory education program. This suggests the possibility that villages with zero repayment rate not only fail to manage loans properly, but also fail to allocate funds to the most needy households. I am currently investigating village-level factors that are correlated with successful targeting of poor households within a village (Yamauchi (2005) b).

use transferred grants as a source of revolving loans.

One of the major findings in urban areas is that IDT induces older women and young men to participate less in household work, thereby leading more of older children to take over household responsibilities. Contrastingly, in rural areas where the employment status of female adults is unchanged, children's household responsibility is not significantly affected. This difference implies that policies reducing household work for adults can increase children's burden at home. Nevertheless, the results also indicate that it is older, not young, children, who are likely to bear the burden. In addition, even among older children, increased household work does not affect the shares of those at school or work for earnings. Thus, it is unlikely that the increased household work for older children impedes the accumulation of human capital.

The other findings imply that the provision of funds for investment has limited effects in promoting education and eliminating child labor. In rural areas, children's time allocation pattern does not change significantly even though the employment status of young men improves. The results suggest that these young men mainly invest in non-labor inputs, rather than replacing working children with hired labor. Though their investment is likely to create substitution and income effects on labor supplied by children, the results indicate no significant overall change in children's time allocation behaviors.

The results of heterogeneous program effects by the village repayment rate also suggest that, while urban villages with positive repayment successfully improve earnings opportunities for older women and young men, it is unclear whether children benefit. In addition, results in rural villages indicate that older boys are able to shift from work to school in villages where participants are unlikely to invest in productive activities. These results demonstrate that successfully increasing adults' employment opportunities through investment does not guarantee sufficiently large returns to improve children's school attendance or to reduce child labor. Though it is beyond the scope of this research to determine which program characteristics are necessary for successful augmentation of income-generation capacity, the anecdotal evidence of business failures such as loss of invested capital stock and inadequate knowledge of the activities that participants start suggest that, if similar programs are implemented, training for adults combined with funds for investment may be needed components.

Lastly, the results of heterogeneous program effects reflect a positive associations between a village's program management capabilities and the effects on children's time allocation behaviors as well as the impacts on adults' employment status. That is, villages with little organizational capacity may fail to disseminate

repayment obligation and result in participants spending funds on activities that may not strengthen earnings capacity, such as children's schooling. This preliminary evidence suggests that investigating heterogeneity in program effects by village characteristics that are likely to predict the village's capacity to manage loans, such as the degree of development of village government, the availability of financial institutions within the village, and the quality of transportation facilities allowing travel outside the village as a measure of access to external credit. In addition, examining whether the impact on children's time allocation varies by the composition of household members is likely to shed more light on who bear disproportionate responsibilities in household work.

References

[1] Akita, Takahiro and Jesse Szeto (2000) "Inpres Desa Tertinggal (IDT) Program and Indonesian Regional Inequality." *Asian Economic Journal*, 14(2): 167-86.

[2] Alatas, Vivi (2000) "Evaluating the Left Behind Villages Program in Indonesia: Exploiting Rules to Identify Effects on Employment and Expenditures," Princeton University, mimeo.

[3] Basu and Van (1998) "The Economics of Child Labor," *American Economic Review*, 88(3): 412-27.

[4] Bertrand, Marianne, Esther Duflo, and Sendhil Mullainathan (2004) "How Much Should We Trust Differences-in-Differences Estimates?," *Quarterly Journal of Economics*, 119(1): 249-75.

[5] Binder, Melissa and Scrogin (1999) "Labor Force Participation and Household Work of Urban Schoolchildren in Mexico: Characteristics and Consequences," *Economic Development and Cultural Change*, 48(1): 123-154.

[6] Daimon, Takeshi (2001) "The Spatial Dimension of Welfare and Poverty: Lessons from a Regional Targeting Programme in Indonesia," *Asian Economic Journal*, 15(4): 345-67.

[7] Hahn, Jinyong, Petra Todd, and Wilbert Van der Klaauw (2001) "Identification and Estimation of Treatment Effects with a Regression-Discontinuity Design," *Econometrica*, 69(1): 201-209.

[8] Hazarika, Gautam and Sudipta Sarangi (1997) "Household Access to Microcredit and Child Work in Rural Malawi," Institute for the Study of Labor (IZA) Discussion Papers, 1567.

[9] International Labor Organization (2002) *A Future without Child Labor: the 3rd Global Report*.

[10] Jacoby, Hanan and Emmanuel Skoufias (1997) "Risk, Financial Markets, and Human Capital in a Developing Country," *Review of Economic Studies*, 64: 311-335.

[11] Kimura, Hirotsune (1999) "Uekarano-Micro-credit: Indonesia Hinkonson Bokumetukeikaku no Kyokun, (Microcredit from Above: Lessons from IDT (Presidencial Instruction for Isolated Villages) in Indonesia)", *Forum for International Development Studies*, No.12 :153-170, in Japanese.

[12] Molyneaux, Jack and Paul Gertler (1999) "Evaluating Program Impact: A Case Study of Poverty Alleviation in Indonesia," mimeo.

[13] National Development Planning Agency, Ministry of Home Affairs (1994) *IDT Program Implementation Guidance.*

[14] Parker, Susan and Emmanuel Skoufias (2000) "Final Report: The Impact of PROGRESA on Work, Leisure, and Time Allocation," International Food Policy Research Institute, Washington, D.C.

[15] Pitt, Mark and Shahidur Khandker (1998) "The Impact of Group-Based Credit Programs on Poor House-holds in Bangladesh: Does the Gender of Participants Matter?," *Journal of Political Economy*, 106(5): 958-96.

[16] Ravallion, Martin and Quentin Wodon (2000) "Does Child Labor Displace Schooling? Evidence on Behavioral Responses to an Enrollment Subsidy," *The Economic Journal*, 110(March): C158-C175.

[17] Rosenzweig, Mark and Robert Evenson (1977) "Fertility, Schooling, and the Economic Contribution of Children in Rural India: An Econometric Analysis," *Econometrica*, 45(5): 1065-1079.

[18] Rosenzweig, Mark R. and Kenneth I. Wolpin (1986) "Evaluating the Effects of Optimally Distributed Public Programs: Child Health and Family Planning Interventions" *The American Economic Review*, 76(3): 470-482.

[19] Schultz, Paul (2004) "School Subsidies for the Poor: Evaluating the Mexican Progresa Poverty Program," *Journal of Development Economics* 74(1): 199-250.

[20] Swinnerton and Rogers (1999) "The Economics of Child Labor: Comment," *American Economic Review*, 89(5): 1382-85.

[21] U.S. Department of Labor, Bureau of International Labor Affairs (2002) *Advancing the Campaign Against Child Labor: Efforts at the Country Level*, Washington, D.C.

[22] Wydick, Bruce (1999) "The Effect of Microenterprise Lending on Child Schooling in Guatemale", *Economic Development and Cultural Change*, 47(4): 853-869.

[23] Yamauchi, Chikako (2005) a "Effects of Grants for Productive Investment on Employment and Poverty: Lessons from Indonesia's Left-Behind Villages Program", mimeo.

[24] Yamauchi, Chikako (2005) b "Governance, Inequality, and Delivery of Social Programs", mimeo.

Table1 Participation Rate and Loan Size

	Rural villages			Urban villages		
	Obs.	Mean	SD	Obs.	Mean	SD
The fraction of participating households (%)						
1994	2999	25.5	30.3	395	7.8	13.6
1995	2999	19.5	26.5	395	8.9	13.3
1996	2275	16.4	22.2	363	6.4	8.9
1997	1546	10.6	22.4	271	4.4	11.9
Loan size (1,000 rupiah)						
1994	2052	355	720	178	278	422
1995	1827	332	694	210	305	633
1996	1409	336	648	190	308	515
1997	555	250	347	74	271	575
Monthly expenditure per capita (1994) (1,000 rupiah)	1793	35	13	260	50	18

Notes: The fraction of participating households is the number of households receiving IDT loans divided by the total number of households in a village. Loan size is the average amount of money lent to these participating households. The figures for 1994 and 1995 are based on retrospective questionnaires asked in the 1996 and 1997 SUSENAS. The figures for 1996 and 1997 are based on those in the 1997 and 1998 SUSENAS as well as the 1998 SUSENAS, respectively. Loan size and monthly expenditure per capita are in terms of 1995 Jakarta price.

Table2 Funds per Household and Repayment Rate

	Rural villages			Urban villages		
	Obs.	Mean	SD	Obs.	Mean	SD
Number of households (1993)	10433	504	438	1537	1260	1443
Funds per household (1,000 rupiah)	10433	95	149	1537	26	23
The share of repaying households (%)	832	20.4	36.2	95	32.9	42.9

Notes: The means of the number of households and the amount of IDT funds per household are weighted by the number of years in which villages appear in the analytical dataset, which spans from 1993 through 1998. Thus the unit of observations is village*year. The share of repaying households is the fraction of households that repay loans extended some time in 1996 by January of 1998. This information is available only for villages surveyed in 1998 where at least one sample household participates in IDT in 1996. Out of 1553 rural and 271 urban villages, 832 and 95 villages provide this information.

Table3 Correlations between Funds per Household and Participation Rate as well as Loan Size

	Rural villages			Urban villages		
	Obs.	Coefficient	SE	Obs.	Coefficient	SE
The fraction of participating households (%)						
1994	2999	16.34	[0.502]***	395	6.616	[0.895]***
1995	2999	6.695	[0.496]***	395	5.267	[0.893]***
1996	2275	4.325	[0.509]***	363	2.965	[0.630]***
1997	1546	6.122	[0.601]***	271	3.353	[0.968]***
Loan size (1,000 rupiah)						
1994	2052	109.395	[16.724]***	178	103.74	[42.529]**
1995	1827	141.762	[18.808]***	210	210.423	[70.141]***
1996	1409	140.324	[20.704]***	190	178.86	[57.093]***
1997	555	66.591	[16.862]***	74	27.265	[83.865]

Notes: The coefficients are taken from the regression of either the fraction of participating households or the average loan size on log of funds per household and an intercept. The results with the level of funds per household show the same tendency. Standard errors in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table4 Outcome Variables (1994)

	Rural villages			Urban villages		
	Obs.	Mean	SD	Obs.	Mean	SD
The share of children at school:						
boys ages 10-12	1662	0.90	0.22	245	0.97	0.12
ages 13-15	1599	0.58	0.39	243	0.77	0.31
ages 16-18	1491	0.22	0.34	241	0.53	0.37
girls ages 10-12	1662	0.90	0.23	252	0.96	0.13
ages 13-15	1510	0.56	0.40	242	0.77	0.29
ages 16-18	1451	0.19	0.33	239	0.51	0.39
The share of children at work:						
boys ages 10-12	1662	0.14	0.27	245	0.04	0.14
ages 13-15	1599	0.40	0.40	243	0.15	0.26
ages 16-18	1491	0.71	0.38	241	0.35	0.36
girls ages 10-12	1662	0.11	0.25	252	0.02	0.11
ages 13-15	1510	0.31	0.39	242	0.09	0.19
ages 16-18	1451	0.50	0.43	239	0.24	0.33
The share of children at household work:						
boys ages 10-12	1662	0.01	0.06	245	0.00	0.00
ages 13-15	1599	0.01	0.08	243	0.01	0.05
ages 16-18	1491	0.01	0.09	241	0.01	0.05
girls ages 10-12	1662	0.03	0.12	252	0.01	0.08
ages 13-15	1510	0.11	0.25	242	0.07	0.18
ages 16-18	1451	0.31	0.39	239	0.19	0.30

Notes: The shares of children at work, at school, at household work are defined as the shares of children in a village who work at least one hour in the week prior to the enumeration or have permanent jobs, children who answer that they regularly attend school, and children whose major activity is household work. Children ages 10-12, 13-15, and 16-18 correspond to those who are supposed to attend primary, lower secondary and upper secondary schools though there is a variation in the age at which children start attending school. Since 1994, mandatory education is extended to children ages 7 through 15. On the other hand, the minimum age for employment is set to be 14 during the period of this analysis. Children ages less than 14 are allowed to work in certain types of work with parental consent and for a limited number of hours depending on a family's financial need. The minimum age was raised to 15 in 1999 and children under 15 became not allowed to work more than four hours a day

Table 5: Effects of IDT Funds per Household on Village Share of Young Men by Employment Status
Rural villages

Young men (ages 19-41)

	(1)	(2)	(3)	(4)
	1{Work at least} One Hour}	1{Unpaid family workers}	1{Self-employed}	1{Wage workers}
ln{funds per HH} * 1994	0.014	-0.011	0.026	0.001
	[0.009]	[0.018]	[0.021]	[0.018]
ln{funds per HH} * 1995	0.014	0.014	0.016	-0.012
	[0.010]	[0.020]	[0.024]	[0.018]
ln{funds per HH} * 1996	0.021	-0.007	0.033	-0.001
	[0.010]**	[0.019]	[0.024]	[0.019]
ln{funds per HH} * 1997	0.012	0.004	0.025	-0.016
	[0.011]	[0.020]	[0.021]	[0.018]
ln{funds per HH} * 1998	0.018	0.009	0.025	-0.013
	[0.011]	[0.020]	[0.022]	[0.019]
Observations	10284	10284	10284	10284

Notes: Each regression includes village fixed effects and an intercept. The error term is allowed to have serial correlation within villages. The amount of funds per household is in terms of 1995 Jakarta prices.
Workers are divided into unpaid family workers, who help family members' enterprise without receiving salary, self-employed workers, which inlude those who work on their own as well as who use family or non-permanent workers, and wage workers, who are employed by a private/government institutions and receive a salary or wages in cash or in goods. Other employment status are employers, however, this category occupies less than 1% of any group defined by gender and age. Standard errors inbrackets. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table 6 : Effects of IDT Funds per Household on Shares of Older Children by Village Repayment Rate
Rural villages

	Older boys (ages 16-18)				Older girls (ages 16-18)			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	1{Working at least one hour}		1{Regularly attending school}		1{Working at least one hour}		1{Regularly attending school}	
ln{funds per HH} * 1994	0.026	0.045	-0.016	-0.044	0.142	0.099	-0.012	-0.032
	[0.063]	[0.053]	[0.055]	[0.050]	[0.068]**	[0.057]*	[0.067]	[0.053]
ln{funds per HH} * 1995	-0.076	-0.029	0.042	-0.033	-0.02	-0.047	0.053	-0.016
	[0.059]	[0.052]	[0.062]	[0.055]	[0.068]	[0.057]	[0.054]	[0.049]
ln{funds per HH} * 1996	-0.055	-0.015	0.077	0.056	0.01	0.015	0.025	0.015
	[0.058]	[0.049]	[0.054]	[0.049]	[0.067]	[0.051]	[0.052]	[0.041]
ln{funds per HH} * 1997	-0.121	-0.059	0.089	0.027	0.002	-0.001	-0.016	-0.034
	[0.058]**	[0.046]	[0.051]*	[0.044]	[0.070]	[0.055]	[0.055]	[0.043]
ln{funds per HH} * 1998	-0.028	0.007	0.058	0.008	0.064	0.042	0.015	0.001
	[0.059]	[0.047]	[0.050]	[0.047]	[0.068]	[0.052]	[0.054]	[0.041]
1{Village has a positive repayment rate}*								
ln{funds per HH} * 1994	0.047		-0.072		-0.126		-0.052	
	[0.109]		[0.106]		[0.119]		[0.105]	
ln{funds per HH} * 1995	0.131		-0.216		-0.112		-0.232	
	[0.113]		[0.112]*		[0.131]		[0.092]**	
ln{funds per HH} * 1996	0.106		-0.041		0.026		-0.019	
	[0.104]		[0.101]		[0.102]		[0.082]	
ln{funds per HH} * 1997	0.18		-0.166		-0.01		-0.055	
	[0.091]**		[0.089]*		[0.112]		[0.087]	
ln{funds per HH} * 1998	0.092		-0.134		-0.064		-0.029	
	[0.094]		[0.098]		[0.106]		[0.077]	
Observations	2177	2177	2177	2177	2098	2098	2098	2098

Notes: The results are based on villages sampled in the 1998 SUSENAS and at least one sampled household participates in IDT in 1996, as only for these villages I can calculate the fraction of households repaying loans that are extended some time in 1996 by the enumeration of the 1998 SUSENAS.

Table 7: Effects of IDT Funds per Household on Shares of Young Children by Village Repayment Rate
Rural villages

	Young boys (ages 10-15)				Young girls (ages 10-15)			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	1{Working at least one hour}		1{Regularly attending school}		1{Working at least one hour}		1{Regularly attending school}	
ln{funds per HH} * 1994	-0.002	-0.028	0.009	0.026	0.057	0.02	-0.021	-0.007
	[0.052]	[0.040]	[0.042]	[0.034]	[0.045]	[0.037]	[0.036]	[0.029]
ln{funds per HH} * 1995	-0.04	-0.044	0.005	0.014	-0.024	-0.025	-0.087	-0.049
	[0.048]	[0.039]	[0.035]	[0.032]	[0.045]	[0.035]	[0.044]**	[0.034]
ln{funds per HH} * 1996	-0.057	-0.055	0.018	0.018	-0.033	-0.033	-0.038	-0.02
	[0.037]	[0.030]*	[0.034]	[0.029]	[0.042]	[0.032]	[0.034]	[0.025]
ln{funds per HH} * 1997	-0.046	-0.053	0	0.002	-0.007	-0.015	-0.038	-0.026
	[0.041]	[0.033]	[0.032]	[0.028]	[0.044]	[0.034]	[0.034]	[0.028]
ln{funds per HH} * 1998	-0.021	-0.033	0.017	0.022	-0.002	-0.018	-0.042	-0.029
	[0.037]	[0.030]	[0.032]	[0.027]	[0.041]	[0.031]	[0.034]	[0.026]
1{Village has a positive repayment rate}*								
ln{funds per HH} * 1994	-0.072		0.047		-0.108		0.039	
	[0.076]		[0.071]		[0.071]		[0.058]	
ln{funds per HH} * 1995	-0.015		0.03		-0.007		0.13	
	[0.076]		[0.076]		[0.070]		[0.067]*	
ln{funds per HH} * 1996	0.006		0.002		-0.003		0.052	
	[0.061]		[0.062]		[0.061]		[0.047]	
ln{funds per HH} * 1997	-0.011		-0.001		-0.021		0.031	
	[0.067]		[0.063]		[0.066]		[0.056]	
ln{funds per HH} * 1998	-0.036		0.015		-0.05		0.037	
	[0.059]		[0.059]		[0.060]		[0.051]	
Observations	2556	2556	2556	2556	2527	2527	2527	2527

Notes: The results are based on villages sampled in the 1998 SUSENAS and at least one sampled household participates in IDT in 1996, as only for these villages I can calculate the fraction of households repaying loans that are extended some time in 1996 by the enumeration of the 1998 SUSENAS.

Table 8: Effects of IDT Funds per Household on Shares of Adults by Village Repayment Rate

	Older women (ages 41-60) in rural areas				Older women (ages 41-60) in urban areas				Young men (ages 19-40) in urban areas			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	12	(8)
	1{Major Activity is work for earnings}		1{Major Activity is household work}		1{Major Activity is work for earnings}		1{Major Activity is household work}		1{Major Activity is work for earnings}		1{Major Activity is household work}	
ln{funds per HH} * 1994	-0.085	-0.054	0.093	0.049	-0.113	-0.012	0.083	-0.002	0.011	0.011	0.002	0.003
	[0.060]	[0.058]	[0.062]	[0.058]	[0.075]	[0.092]	[0.068]	[0.088]	[0.079]	[0.066]	[0.005]	[0.004]
ln{funds per HH} * 1995	-0.076	-0.041	0.083	0.023	0.095	0.04	-0.089	-0.048	-0.108	0.073	0.006	0.008
	[0.064]	[0.062]	[0.063]	[0.059]	[0.207]	[0.182]	[0.188]	[0.197]	[0.098]	[0.076]	[0.012]	[0.006]
ln{funds per HH} * 1996	-0.141	-0.083	0.155	0.082	-0.061	0.069	0.138	-0.031	0.079	0.062	0.012	-0.021
	[0.063]**	[0.056]	[0.062]**	[0.056]	[0.121]	[0.073]	[0.141]	[0.092]	[0.070]	[0.059]	[0.011]	[0.023]
ln{funds per HH} * 1997	-0.126	-0.08	0.125	0.074	-0.042	0.053	0.13	0.001	-0.097	-0.011	0.004	0
	[0.065]*	[0.059]	[0.066]*	[0.058]	[0.115]	[0.115]	[0.115]	[0.124]	[0.079]	[0.071]	[0.007]	[0.004]
ln{funds per HH} * 1998	-0.088	-0.039	0.113	0.055	0.018	0.113	0.012	-0.09	-0.013	0.042	0	-0.002
	[0.056]	[0.053]	[0.055]**	[0.051]	[0.070]	[0.085]	[0.080]	[0.094]	[0.068]	[0.053]	[0.010]	[0.007]
1{Village has a positive repayment rate}*												
ln{funds per HH} * 1994	0.097		-0.141		0.188		-0.149		0		0.002	
	[0.126]		[0.122]		[0.146]		[0.158]		[0.117]		[0.007]	
ln{funds per HH} * 1995	0.092		-0.173		-0.058		0.021		0.329		-0.006	
	[0.142]		[0.132]		[0.308]		[0.306]		[0.120]***		[0.014]	
ln{funds per HH} * 1996	0.179		-0.226		0.262		-0.367		-0.055		-0.08	
	[0.108]*		[0.107]**		[0.139]*		[0.168]**		[0.100]		[0.046]*	
ln{funds per HH} * 1997	0.14		-0.162		0.168		-0.266		0.262		-0.006	
	[0.115]		[0.110]		[0.239]		[0.251]		[0.110]**		[0.012]	
ln{funds per HH} * 1998	0.153		-0.185		0.208		-0.222		0.134		-0.002	
	[0.109]		[0.104]*		[0.127]		[0.141]		[0.104]		[0.012]	
Observations	2428	2428	2428	2428	341	341	341	341	349	349	349	349

Notes: The results are based on villages sampled in the 1998 SUSENAS and at least one sampled household participates in IDT in 1996, as only for these villages I can calculate the fraction of households repaying loans that are extended some time in 1996 by the enumeration of the 1998 SUSENAS.

Table 9: Effects of IDT Funds per Household on Shares of Older Children by Village Repayment Rate
Urban villages

|	Older boys (ages 16-18)				Older girls (ages 16-18)			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	1{Working at least one hour}		1{Regularly attending school}		1{Working at least one hour}		1{Regularly attending school}	
ln{funds per HH} * 1994	0.209	0.053	-0.217	-0.101	-0.126	0.042	-0.098	-0.011
	[0.169]	[0.134]	[0.146]	[0.110]	[0.116]	[0.114]	[0.070]	[0.103]
ln{funds per HH} * 1995	0.235	0.083	-0.168	-0.113	-0.135	0.117	-0.061	-0.053
	[0.166]	[0.193]	[0.181]	[0.188]	[0.174]	[0.141]	[0.153]	[0.105]
ln{funds per HH} * 1996	0.286	0.155	-0.069	0.052	-0.092	-0.098	-0.123	0.016
	[0.163]*	[0.158]	[0.167]	[0.156]	[0.114]	[0.084]	[0.088]	[0.115]
ln{funds per HH} * 1997	0.224	0.178	0.014	0.03	-0.265	-0.112	0.07	0.114
	[0.143]	[0.138]	[0.142]	[0.144]	[0.154]*	[0.117]	[0.090]	[0.099]
ln{funds per HH} * 1998	0.214	0.147	-0.164	-0.115	-0.101	-0.002	-0.041	0.02
	[0.131]	[0.129]	[0.130]	[0.137]	[0.103]	[0.089]	[0.062]	[0.094]
1{Village has a positive repayment rate}*								
ln{funds per HH} * 1994	-0.322		0.207		0.417		0.199	
	[0.264]		[0.208]		[0.148]***		[0.223]	
ln{funds per HH} * 1995	-0.29		0.099		0.462		0.098	
	[0.365]		[0.372]		[0.239]*		[0.258]	
ln{funds per HH} * 1996	-0.265		0.256		-0.024		0.319	
	[0.337]		[0.322]		[0.165]		[0.189]*	
ln{funds per HH} * 1997	-0.056		-0.066		0.369		0.102	
	[0.283]		[0.293]		[0.199]*		[0.199]	
ln{funds per HH} * 1998	-0.098		0.088		0.204		0.161	
	[0.264]		[0.268]		[0.158]		[0.212]	
Observations	327	327	327	327	317	317	317	317

Notes: The results are based on villages sampled in the 1998 SUSENAS and at least one sampled household participates in IDT in 1996, as only for these villages I can calculate the fraction of households repaying loans that are extended some time in 1996 by the enumeration of the 1998 SUSENAS.

Table 10: Effects of IDT Funds per Household on Shares of Young Children by Village Repayment Rate
**Urban villages**

	Young boys (ages 10-15)				Young girls (ages 10-15)			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	1{Working at least one hour}		1{Regularly attending school}		1{Working at least one hour}		1{Regularly attending school}	
ln{funds per HH} * 1994	-0.187	-0.135	0.021	0.016	-0.021	-0.024	-0.038	-0.031
	[0.061]***	[0.054]**	[0.046]	[0.042]	[0.061]	[0.049]	[0.059]	[0.048]
ln{funds per HH} * 1995	-0.136	-0.1	0.063	0.092	0.075	-0.015	-0.033	0.031
	[0.081]*	[0.047]**	[0.091]	[0.053]*	[0.073]	[0.058]	[0.069]	[0.046]
ln{funds per HH} * 1996	-0.13	-0.11	0.033	0.049	0.027	0.019	-0.034	-0.025
	[0.058]**	[0.053]**	[0.055]	[0.058]	[0.032]	[0.025]	[0.041]	[0.047]
ln{funds per HH} * 1997	-0.113	-0.1	0.051	0.05	0.008	0.011	-0.019	0.006
	[0.069]	[0.054]*	[0.061]	[0.070]	[0.053]	[0.046]	[0.053]	[0.047]
ln{funds per HH} * 1998	-0.136	-0.111	0.042	0.047	-0.016	-0.009	-0.057	0.007
	[0.027]***	[0.030]***	[0.059]	[0.057]	[0.039]	[0.043]	[0.052]	[0.045]
1{Village has a positive repayment rate}*								
ln{funds per HH} * 1994	0.138		-0.035		0.024		0.006	
	[0.091]		[0.084]		[0.087]		[0.093]	
ln{funds per HH} * 1995	0.067		0.044		-0.141		0.14	
	[0.096]		[0.114]		[0.113]		[0.096]	
ln{funds per HH} * 1996	0.043		0.036		-0.022		0.042	
	[0.099]		[0.119]		[0.061]		[0.119]	
ln{funds per HH} * 1997	0.015		-0.021		-0.016		0.031	
	[0.085]		[0.165]		[0.090]		[0.105]	
ln{funds per HH} * 1998	0.056		0.022		0.023		0.193	
	[0.053]		[0.123]		[0.105]		[0.093]**	
Observations	349	349	349	349	349	349	349	349

Notes: The results are based on villages sampled in the 1998 SUSENAS and at least one sampled household participates in IDT in 1996, as only for these villages I can calculate the fraction of households repaying loans that are extended some time in 1996 by the enumeration of the 1998 SUSENAS.

Graph 1: Correlations between outcomes and the amount of funds per household in a village
(A) Urban areas
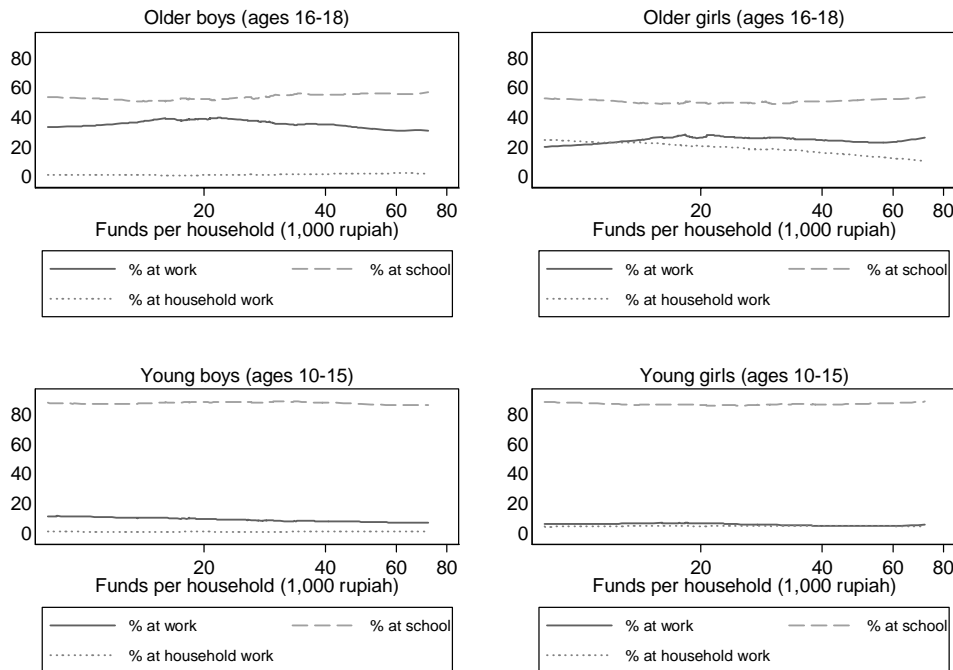
(B) Rural areas
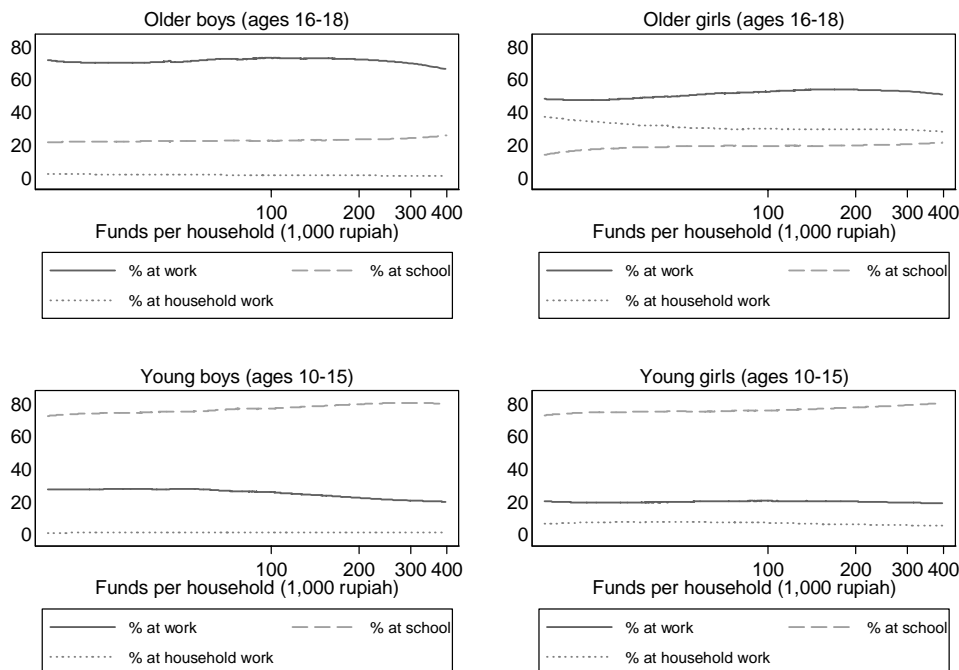
Notes: Each graph shows non-parametric estimates of three outcome variables conditional on log of the amount of funds per household. The estimates are computed using Cleveland (19**)'s LOWESS estimator which is provided in stata command with the bandwidth of 0.3. The shares of children at work, school, and those doing household work are defined as those who work at least one hour or those who have permanent jobs yet temporarily on vacation, those who answer that they regularly attend school, and those whose major activity is doing household errands. The amount of funds per household is defined as the amount of lump-sum subsidy, 20 million rupiah, divided by the number of households in a village as of 1993; The amount is shown in 1,000 rupiah and in terms of 1995 Jakarta price.

Graph 2: IDT's Effects on Shares of Children at School, at Work, and Doing Household Work: Urban Areas
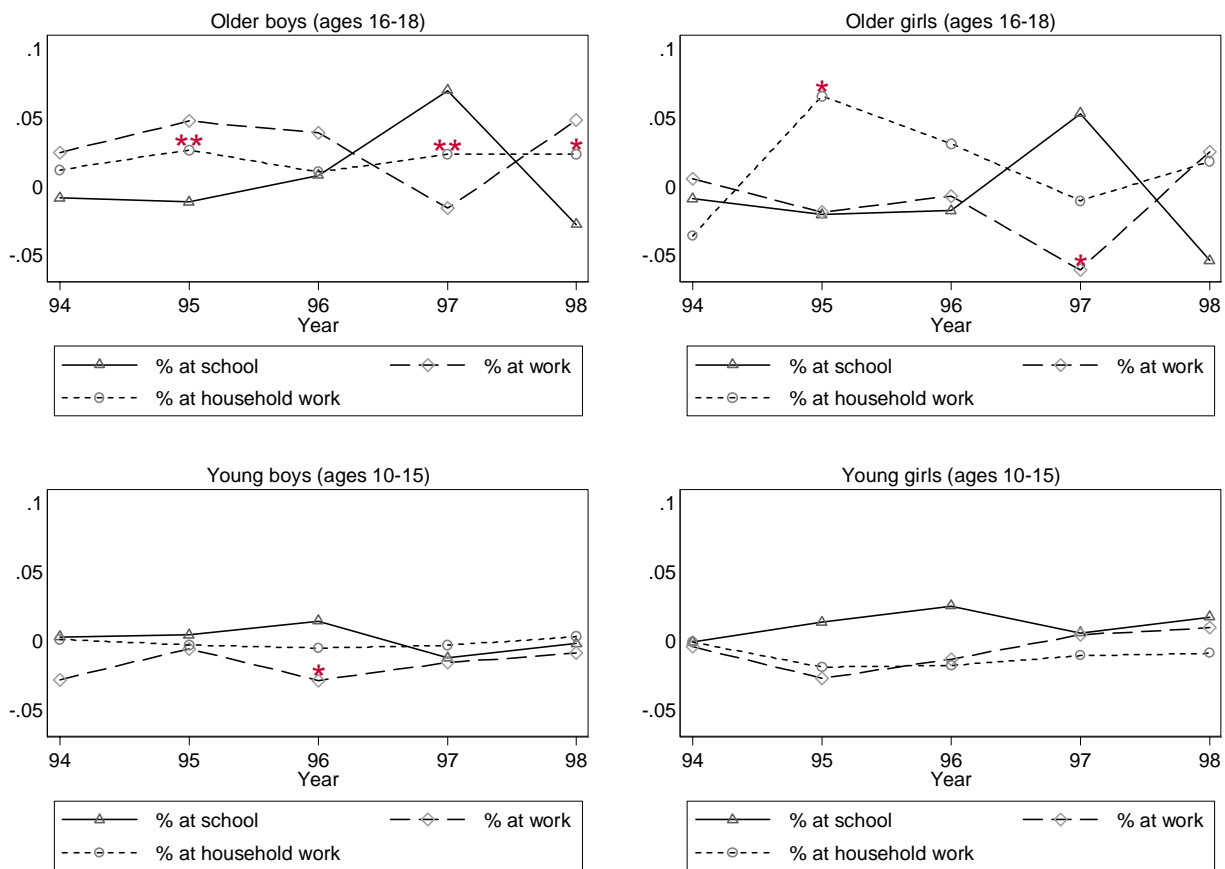
Notes: The coefficients for the interaction terms between the year dummies and log of funds per household are presented for years 1994 through 1998, which are taken from the regression on year dummies, the interaction terms, and village fixed effects,. The regression also allows arbitrary correlation in the error term within a village. One star and two stars, which are plotted next to some of the coefficient points, signify that the coefficients are significantly different from zero with 10% and 5% significance levels, respectively. As IDT provided funds to targeted villages from 1995 through 1997, the coefficients for 1994 show whether there are any spurious correlations between trends in the outcome variables and the amount of funds per household, which is simply the reciprocal of the number of households before the implementation of the program. The coefficients for 1995 through 1997 and those for 1998 depict the effects of IDT during and after program implementation.

Graph 3: IDT's Effects on Shares of Adults at Work and Household Work: Urban Areas
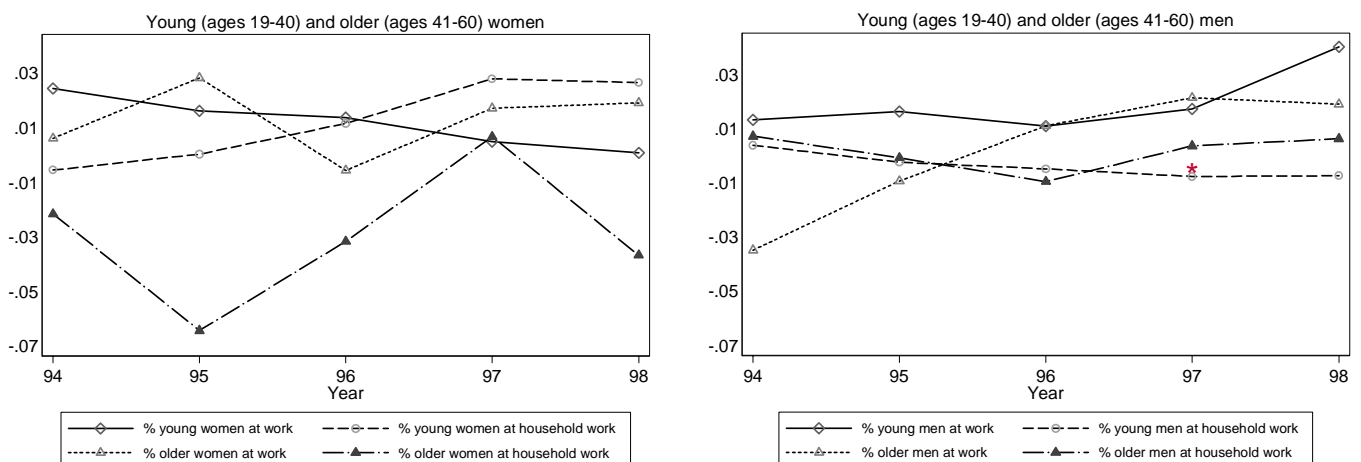
Note: See the notes for Graph 2.

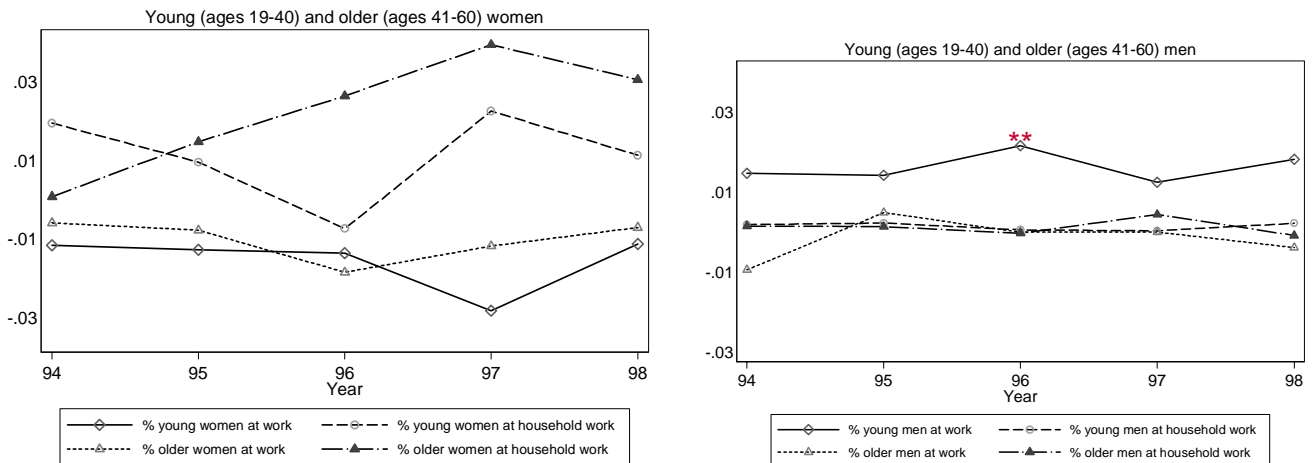**Graph 4: IDT's Effects on Shares of Children at School, Work, and Household Work: Rural Villages**
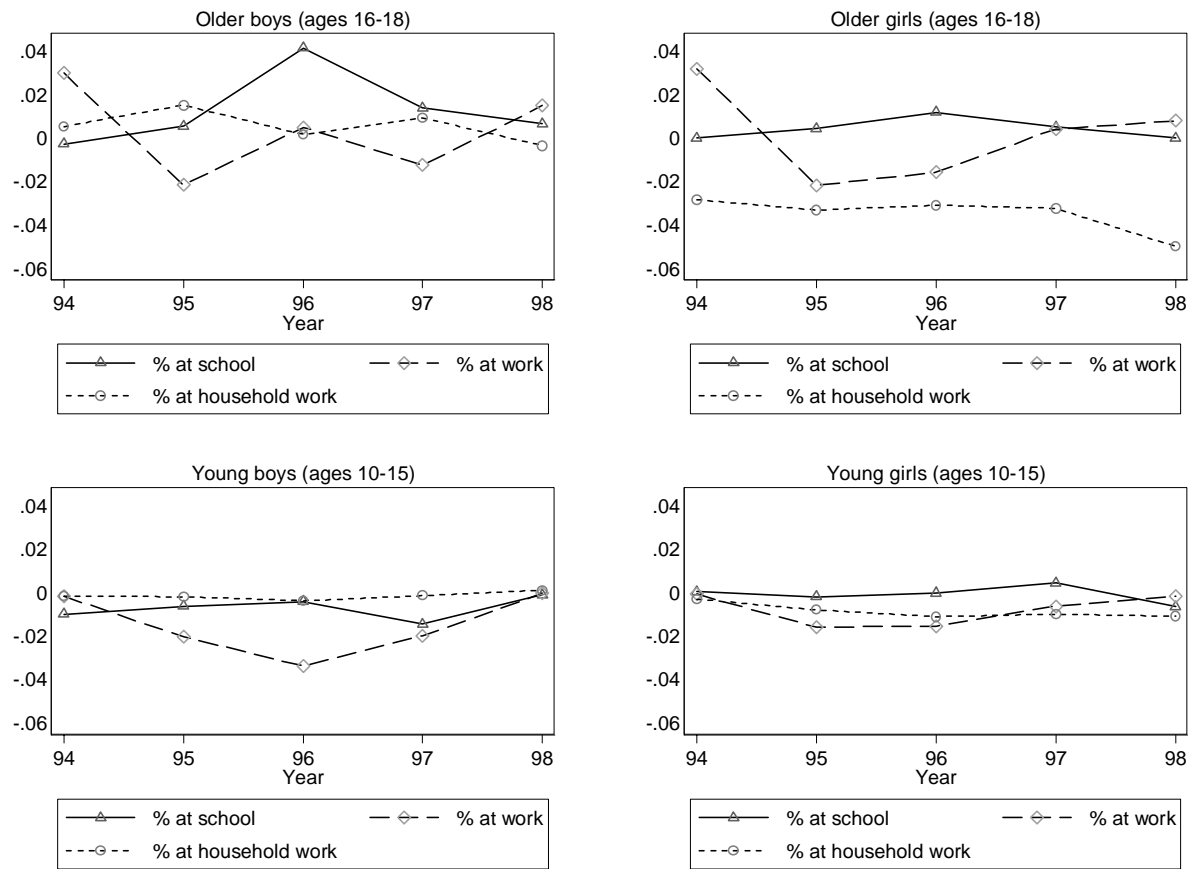
Note: See the notes for Graph 2.

Graph 5: IDT's Effects on Shares of Adults at Work and Household Work: Rural Villages

Note: See the notes for Graph 2.

Appendix 1-A: Effects of IDT Funds per Household on Village Share of Children at Work, Household Work, and School by Gender and Age
Urban villages

A. Older boys (ages 16-18)

	(1)	(2)	(3)
	1{Work at least} One Hour}	1{Major Activity is HH Work}	1{Regularly Attend School}
ln{funds per HH} * 1994	0.025	0.012	-0.008
	[0.061]	[0.010]	[0.056]
ln{funds per HH} * 1995	0.047	0.026	-0.011
	[0.056]	[0.011]**	[0.055]
ln{funds per HH} * 1996	0.039	0.01	0.008
	[0.056]	[0.010]	[0.044]
ln{funds per HH} * 1997	-0.016	0.023	0.069
	[0.048]	[0.011]**	[0.042]
ln{funds per HH} * 1998	0.048	0.023	-0.028
	[0.049]	[0.012]*	[0.044]
Observations	1399		

B. Older girls (ages 16-18)

	(1)	(2)	(3)
	1{Work at least} One Hour}	1{Major Activity is HH Work}	1{Regularly Attend School}
ln{funds per HH} * 1994	0.006	-0.036	-0.009
	[0.040]	[0.030]	[0.047]
ln{funds per HH} * 1995	-0.019	0.065	-0.021
	[0.058]	[0.039]*	[0.055]
ln{funds per HH} * 1996	-0.007	0.031	-0.018
	[0.038]	[0.034]	[0.049]
ln{funds per HH} * 1997	-0.06	-0.01	0.053
	[0.035]*	[0.044]	[0.044]
ln{funds per HH} * 1998	0.025	0.018	-0.054
	[0.045]	[0.031]	[0.063]
Observations	1362		

C. Young boys (ages 10-15)

	(1)	(2)	(3)
	1{Work at least} One Hour}	1{Major Activity is HH Work}	1{Regularly Attend School}
ln{funds per HH} * 1994	-0.028	0.001	0.003
	[0.018]	[0.002]	[0.017]
ln{funds per HH} * 1995	-0.006	-0.003	0.004
	[0.017]	[0.003]	[0.020]
ln{funds per HH} * 1996	-0.029	-0.005	0.014
	[0.017]*	[0.005]	[0.018]
ln{funds per HH} * 1997	-0.016	-0.003	-0.013
	[0.019]	[0.004]	[0.023]
ln{funds per HH} * 1998	-0.009	0.003	-0.002
	[0.021]	[0.002]	[0.022]
Observations	1526		

D. Young girls (ages 10-15)

	(1)	(2)	(3)
	1{Work at least} One Hour}	1{Major Activity is HH Work}	1{Regularly Attend School}
ln{funds per HH} * 1994	-0.005	-0.001	-0.001
	[0.014]	[0.009]	[0.020]
ln{funds per HH} * 1995	-0.027	-0.019	0.013
	[0.025]	[0.013]	[0.026]
ln{funds per HH} * 1996	-0.013	-0.018	0.025
	[0.012]	[0.011]	[0.024]
ln{funds per HH} * 1997	0.004	-0.011	0.006
	[0.015]	[0.012]	[0.020]
ln{funds per HH} * 1998	0.009	-0.009	0.017
	[0.015]	[0.011]	[0.019]
Observations	1517		

Notes: Each regression includes village fixed effects and an intercept. The error term is allowed to have serial correlation within villages. The amount of funds per household is in terms of 1995 Jakarta prices. Standard errors in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%.

Appendix 1-B: Effects of IDT Funds per Household on Village Share of Female Adults at Work and Household Work by Age
Urban villages

A. Older Men (ages 41-60)

	(1)	(5)
	1{Work at least} One Hour}	1{Major Activity is HH Work}
ln{funds per HH} * 1994	-0.035	0.007
	[0.022]	[0.006]
ln{funds per HH} * 1995	-0.009	-0.001
	[0.026]	[0.008]
ln{funds per HH} * 1996	0.011	-0.01
	[0.022]	[0.011]
ln{funds per HH} * 1997	0.021	0.004
	[0.021]	[0.006]
ln{funds per HH} * 1998	0.019	0.006
	[0.020]	[0.006]
Observations	1515	1515

B. Older women (ages 41-60)

	(1)	(5)
	1{Work at least} One Hour}	1{Major Activity is HH Work}
ln{funds per HH} * 1994	0.006	-0.022
	[0.037]	[0.044]
ln{funds per HH} * 1995	0.028	-0.065
	[0.057]	[0.054]
ln{funds per HH} * 1996	-0.006	-0.032
	[0.044]	[0.035]
ln{funds per HH} * 1997	0.017	0.006
	[0.041]	[0.037]
ln{funds per HH} * 1998	0.019	-0.037
	[0.046]	[0.046]
Observations	1481	1481

C. Young Men (ages 19-40)

	(1)	(5)
	1{Work at least} One Hour}	1{Major Activity is HH Work}
ln{funds per HH} * 1994	0.013	0.004
	[0.024]	[0.003]
ln{funds per HH} * 1995	0.016	-0.003
	[0.029]	[0.004]
ln{funds per HH} * 1996	0.011	-0.005
	[0.029]	[0.004]
ln{funds per HH} * 1997	0.017	-0.008
	[0.023]	[0.004]*
ln{funds per HH} * 1998	0.04	-0.008
	[0.027]	[0.006]
Observations	1530	1530

D. Young women (ages 19-40)

	(1)	(5)
	1{Work at least} One Hour}	1{Major Activity is HH Work}
ln{funds per HH} * 1994	0.024	-0.006
	[0.026]	[0.036]
ln{funds per HH} * 1995	0.016	0
	[0.046]	[0.034]
ln{funds per HH} * 1996	0.014	0.011
	[0.030]	[0.031]
ln{funds per HH} * 1997	0.005	0.028
	[0.030]	[0.033]
ln{funds per HH} * 1998	0.001	0.026
	[0.031]	[0.039]
Observations	1535	1535

Notes: See the notes for Appendix 3-A.

Appendix 2-A: Effects of IDT Funds per Household on Village Share of Children at Work, Household Work, and School by Gender and Age
Rural villages

A. Older boys (ages 16-18)

	(1)	(2)	(3)
	1{Work at least} One Hour}	1{Major Activity is HH Work}	1{Regularly Attend School}
ln{funds per HH} * 1994	0.03	0.005	-0.003
	[0.032]	[0.008]	[0.028]
ln{funds per HH} * 1995	-0.022	0.015	0.005
	[0.034]	[0.010]	[0.031]
ln{funds per HH} * 1996	0.005	0.001	0.041
	[0.035]	[0.009]	[0.030]
ln{funds per HH} * 1997	-0.013	0.009	0.014
	[0.035]	[0.009]	[0.030]
ln{funds per HH} * 1998	0.015	-0.004	0.006
	[0.038]	[0.010]	[0.032]
Observations	8629		

B. Older girls (ages 16-18)

	(1)	(2)	(3)
	1{Work at least} One Hour}	1{Major Activity is HH Work}	1{Regularly Attend School}
ln{funds per HH} * 1994	0.032	-0.029	0
	[0.036]	[0.033]	[0.026]
ln{funds per HH} * 1995	-0.022	-0.033	0.004
	[0.041]	[0.038]	[0.029]
ln{funds per HH} * 1996	-0.016	-0.031	0.012
	[0.038]	[0.035]	[0.028]
ln{funds per HH} * 1997	0.004	-0.033	0.005
	[0.038]	[0.034]	[0.027]
ln{funds per HH} * 1998	0.008	-0.05	0
	[0.038]	[0.035]	[0.027]
Observations	8342		

C. Young boys (ages 10-15)

	(1)	(2)	(3)
	1{Work at least} One Hour}	1{Major Activity is HH Work}	1{Regularly Attend School}
ln{funds per HH} * 1994	-0.002	-0.002	-0.01
	[0.022]	[0.004]	[0.021]
ln{funds per HH} * 1995	-0.021	-0.002	-0.007
	[0.022]	[0.005]	[0.019]
ln{funds per HH} * 1996	-0.034	-0.004	-0.004
	[0.022]	[0.004]	[0.019]
ln{funds per HH} * 1997	-0.02	-0.002	-0.015
	[0.023]	[0.004]	[0.020]
ln{funds per HH} * 1998	-0.001	0.001	-0.001
	[0.022]	[0.004]	[0.020]
Observations	10289		

D. Young girls (ages 10-15)

	(1)	(2)	(3)
	1{Work at least} One Hour}	1{Major Activity is HH Work}	1{Regularly Attend School}
ln{funds per HH} * 1994	-0.001	-0.003	0
	[0.020]	[0.011]	[0.019]
ln{funds per HH} * 1995	-0.016	-0.008	-0.002
	[0.021]	[0.012]	[0.021]
ln{funds per HH} * 1996	-0.016	-0.011	0
	[0.022]	[0.013]	[0.020]
ln{funds per HH} * 1997	-0.007	-0.01	0.004
	[0.022]	[0.012]	[0.020]
ln{funds per HH} * 1998	-0.002	-0.011	-0.007
	[0.021]	[0.014]	[0.020]
Observations	10240		

Notes: See the notes for Appendix 3-A.

Appendix 2-B: Effects of IDT Funds per Household on Village Share of Female Adults at Work and Household Work by Age
Rural villages

A. Older Men (ages 41-60)

	(1)	(5)
	1{Work at least} One Hour}	1{Major Activity is HH Work}
ln{funds per HH} * 1994	-0.01	0.001
	[0.007]	[0.003]
ln{funds per HH} * 1995	0.005	0.001
	[0.008]	[0.004]
ln{funds per HH} * 1996	0	0
	[0.009]	[0.004]
ln{funds per HH} * 1997	0	0.004
	[0.008]	[0.004]
ln{funds per HH} * 1998	-0.004	-0.001
	[0.008]	[0.004]
Observations	10191	10191

B. Older women (ages 41-60)

	(1)	(5)
	1{Work at least} One Hour}	1{Major Activity is HH Work}
ln{funds per HH} * 1994	-0.006	0.001
	[0.024]	[0.029]
ln{funds per HH} * 1995	-0.008	0.015
	[0.028]	[0.031]
ln{funds per HH} * 1996	-0.019	0.026
	[0.028]	[0.033]
ln{funds per HH} * 1997	-0.012	0.039
	[0.028]	[0.033]
ln{funds per HH} * 1998	-0.007	0.03
	[0.030]	[0.033]
Observations	9853	9853

C. Young Men (ages 19-40)

	(1)	(5)
	1{Work at least} One Hour}	1{Major Activity is HH Work}
ln{funds per HH} * 1994	0.014	0.002
	[0.009]	[0.003]
ln{funds per HH} * 1995	0.014	0.002
	[0.010]	[0.004]
ln{funds per HH} * 1996	0.021	0
	[0.010]**	[0.004]
ln{funds per HH} * 1997	0.012	0
	[0.011]	[0.004]
ln{funds per HH} * 1998	0.018	0.002
	[0.011]	[0.004]
Observations	10284	10284

D. Young women (ages 19-40)

	(1)	(5)
	1{Work at least} One Hour}	1{Major Activity is HH Work}
ln{funds per HH} * 1994	-0.012	0.019
	[0.019]	[0.022]
ln{funds per HH} * 1995	-0.013	0.009
	[0.022]	[0.025]
ln{funds per HH} * 1996	-0.014	-0.008
	[0.023]	[0.025]
ln{funds per HH} * 1997	-0.028	0.022
	[0.023]	[0.024]
ln{funds per HH} * 1998	-0.011	0.011
	[0.025]	[0.025]
Observations	10389	10389

Notes: See the notes for Appendix 3-A.