SP DISCUSSION PAPER NO. 0604

36637

Uninsured Risk and Asset Protection: Can Conditional Cash Transfer Programs Serve as Safety Nets?

Alain de Janvry, Elisabeth Sadoulet, Pantelis Solomon and Renos Vakis

June 2006

Social Protection
THE WORLD BANK

Uninsured risk and asset protection: Can conditional cash transfer programs serve as safety nets?

Alain de Janvry, Elisabeth Sadoulet, Pantelis Solomon, and Renos Vakis

The World Bank

June 2006

Abstract

Conditional cash transfer (CCT) programs have proved to be effective in inducing chronic poor households to invest in the human capital of their children while helping reduce poverty. They have also protected child human capital from the shocks that affect these households. In this paper, we argue that many non-poor households exposed to uninsured shocks have to use children as risk coping instruments, creating long term irreversibilities in child human capital development. We explore how CCT programs can be designed to serve as safety nets for the vulnerable non-poor when hit by a shock This would help them not use children as risk coping instruments, thus avoiding long term irreversibilities in child human capital development and creation of a source of new poor.[1]

[1] We are indebted to Frederico Finan, Céline Ferré, and Jill Luoto for assistance with the paper. We also received useful suggestions from Karen Macours and Sebastian Martinez.

1. Slipping into poverty due to uninsured exposure to risk

In the last two decades, there have been major successes in moving millions of people out of chronic poverty. Chen and Ravallion (2004) estimated that the number of extreme poor, with daily income less than one dollar, fell by some 400 million between 1981 and 2001, implying a halving of the world extreme poverty rate from 40% to 21%. This success was, however, confined to East and South Asia, and mainly to China. In the rest of the world, the number of extreme poor remained about constant. And it rose in Sub-Saharan Africa, Latin America and the Caribbean, and Eastern Europe and Central Asia. Using a $2 a day poverty line, the number of poor rose for the world over the period.

These figures show that the fight against poverty is far from won. This is in a sense surprising. While major inroads have been made in taking large numbers of people out of chronic poverty, we see reproduction in the number of people in extreme poverty in many parts of the world, and a rise in $2 a day poverty worldwide. This implies that there exists a source of new poor that partially or completely erases the gains made in taking people out of poverty.

Following a pathways from poverty framework (de Janvry and Sadoulet, 2004), reduction in chronic poverty has been achieved through the use of three types of instruments:

i) Asset creation for the poor. This has been the consequence of improvements in human capital such as health and education, redistributive programs for natural capital such as land reform, improved access to financial capital for the poor, programs of capital transfer to poor entrepreneurs, and the build up of social capital among the poor.

ii) Improved opportunities for the poor to use their assets more productively. This has been due to expanding employment opportunities for unskilled and low-skilled labor as a consequence of rapid labor-intensive growth, technological change in smallholder production, access to new markets and reduction of transactions costs in accessing markets, public goods investments such as infrastructure, and institutional innovations supportive of the competitiveness of small farmers and small entrepreneurs such as improved financial services, insurance for production and prices, legal provisions for contracting, and producers organizations.

iii) More effective and more inclusive social protection programs targeted at the chronic poor. This includes large cash transfer and conditional cash transfer programs effectively reaching the poor. In both Brazil (Helfand and Levine, 2005) and Mexico (World Bank, 2004), uplifting large numbers of extreme chronic poor from poverty during the last decade has been largely credited to the transfers achieved through these programs.

While a lot has been learned about how to reduce poverty through these three instruments that offered pathways out of poverty to the chronic poor, uninsured exposure

to risk remains an important source of new poor, and little is known about how to protect the vulnerable non-poor from slipping into poverty due to shocks (Dercon, 2006).[2] As a consequence of this lack of attention to the vulnerable non-poor, some programs targeted at the chronic poor that have been effective in uplifting large numbers of people out of poverty have eventually not reduced aggregate poverty as an equal number of people moved into poverty (UNDP, 2004). A study in Andra Pradesh showed that while an array of government programs helped 14% of poor households move out of poverty, 12% of the non-poor households fell into poverty due to a variety of shocks during the same period, leaving poverty rates largely unaffected (Krishna et al., 2004a). A similar study in Kenya showed that while 19% of households in Western villages moved out of poverty, a similar percentage fell into poverty for reasons associated to idiosyncratic shocks (Krishna et al., 2004b). In Mexico, it is widely recognized that in spite of reasonable economic growth and extensive anti-poverty programs, the reason why the incidence of poverty has remained relatively stable over the long run is because vulnerability to shocks acted as a "fabrica de pobres" (World Bank, 2004).

In a long term perspective of poverty reduction, what these observations tell us is that it may be equally important to prevent downward mobility of the vulnerable non-poor into poverty as it is to assist the chronic poor move out of poverty. Yet, little attention has been given to the first, and there is scant experience in program design as to how to achieve protection of the vulnerable, in particular to prevent them from "excessive" asset decapitalization when hit by an uninsured shock that will create long term poverty traps or strong difficulties in re-accumulating assets to move out of poverty.

This is in particular the case for child human capital, a fundamental asset for poverty reduction in the next generation. Many programs have been effective in inducing poor parents to invest in the human capital of their children. This includes the massive interventions through conditional cash transfers (CCT) on the demand side, and large investment programs in educational and health improvement on the supply side. Yet, the children of vulnerable non-poor households remain exposed to shocks as they are disqualified from inclusion in social protection programs for not being among the chronic poor (World Bank, 2004). The ability of these households to keep their children at school and in good health may be as low as that of the poor when hit by large shocks.

Successful improvement in the education and health of the children of chronic poor households through CCT programs may thus be partially cancelled by a loss of human capital among the vulnerable non-poor. This requires revisiting the design of CCT programs so they could achieve both goals: provide education and health services to the children of the chronic poor, as they currently do, and additionally help keep the children of the vulnerable non-poor at school and in good health when hit by a shock. This is what we explore in this paper. The justification is that extending CCT programs to serve both functions could make a major contribution to long term poverty reduction.

[2] In this paper the word vulnerability and uninsured exposure to risk are used interchangeably. As such, vulnerability refers to vulnerability to uninsured risk and not to "vulnerable groups" like orphans, widows, or people with disabilities.

In order to explore this function of CCT programs, we first review in section 2 the mechanisms through which uninsured exposure to risk is adverse to household welfare: ex-ante risk management that reduces households expected incomes at the cost of risk avoidance; and ex-post response to shocks when harmful risk-coping instruments such as taking children out of school are used, leading to loss of human capital and long term irreversibilities in their income generation potential.

In section 3 we examine how risk focused social protection programs can be used to protect the assets of the poor when hit by a shock. This is done either directly by sheltering the assets of vulnerable households (health, nutrition, schooling, livestock, physical assets), or indirectly by placing conditions on transfers that restrict asset decapitalization.

We then proceed to make the case for a CCT approach by showing in section 4 that it is vastly more cost effective than cash transfers in inducing investment in child human capital. By focusing on education outcomes such as school enrollment, we show that CCT programs in Mexico, Nicaragua, and Honduras have been quite effective in protecting the children of poor beneficiaries from being used as risk coping instruments when hit by shocks. In addition, we also find that there exists a large class of vulnerable non-poor households who are currently excluded from CCT programs that target the chronic poor but who also respond to shocks by using children for risk-coping. It is this class of households that risk-focused CCT programs would protect, thus avoiding that they become a source of new poor when exposed to uninsured shocks.

In section 5, we explore elements of design of a CCT with safety net functions. We do this by reviewing program features in existing risk-oriented programs that allow better targeting of risk-coping instruments, greater program effectiveness for ex-ante risk management, and higher program efficiency by providing incentives to reduce moral hazard, induce self-restraint, and encourage graduation. Finally, section 6 concludes with recommendations about piloting CCT with a safety net function.

2. The mechanisms through which uninsured exposure to risk reproduces poverty

There are two mechanisms through which uninsured risks contribute to poverty, one in the short run and the other in the long run. In both cases, child human capital may be lost due to these risks.

2.1. Uninsured risk and ex-ante risk management

In the short run, households who anticipate the adverse consequences of shocks against which they are not insured may devise strategies that will reduce the exposure to and adverse consequences of the shock. When there is a risk-return trade-off in activity choice, this will result in a less productive use of the assets, contributing to poverty. This is because such ex-ante risk management strategies have a cost on expected return: income diversification strategies reduce risk but they also sacrifice the expected income gains from specialization, safer traditional technologies have lower expected yields than

modern high yielding varieties, and secure civil service employment offers lower salaries than labor returns in more risky private sector activities.

As a consequence of their need to manage risk ex-ante, the asset portfolio of vulnerable households has been shown to have a high component of precautionary savings which immobilizes assets in unproductive or low productivity activities (Fafchamps, 2003). This can be under the form of cash, jewelry, grain stocks, and animals held for precaution. Buffer stock saving is done at an opportunity cost on scarce capital assets that could be used more productively if there were fewer uninsured risks, and there is relatively more buffer stocking among the poor due to higher levels of risk aversion and greater exposure to insurance and capital market failures than among the non-poor (Rogg's (2005) study of livestock holdings in Ethiopia). The composition of portfolios of productive assets is also biased toward larger holdings of liquid assets, with a lower return than fixed assets that cannot be used for risk coping if there is a shock. This is the famous study of distorted portfolio holdings toward bullocks and away from water pumps in India (Rosenzweig and Wolpin, 1993).

Other aspects of ex-ante risk management include keeping children close to home and in the local solidarity network, sacrificing the net social gains that could be derived from letting them migrate, in order to avoid the risk of seeing them exit from the social safety net. This "collective conservatism" (Kuran, 1988) in managing risk at the level of kinship networks prevents children from capturing opportunities on their own, including seeking higher education that may help them migrate (Hoff and Sen, 2005). As such, ex-ante risk management has a general income effect that lowers the demand for schooling and it may raise the discount rate that is applied to future gains, thus reducing investment in higher education with delayed benefits.

If risk-focused social protection programs offer insurance against the consequences of shocks, then households can reduce costly ex-ante risk management. It is in that sense that there are efficiency gains to social protection programs when they offer credible insurance or income guarantee schemes allowing greater risk taking. Risk taking does not have to only be in microenterprises that may concern a small fraction of the poor, but also in choosing employment options that promise greater rewards at the cost of higher risk. Social protection programs such as workfare can fulfill this insurance function, helping reduce the cost of ex-ante risk management. Similarly, CCT programs that would provide secure income when shocks occur would allow greater risk-taking while protecting child schooling. It is this potential function of CCT programs that we explore in this paper.

2.2. Uninsured risk and ex-post risk management

The long run effect of a shock on poverty will be felt if the ex-post, risk-coping instruments available to a household are ineffective or incomplete, inducing "excessive" asset decapitalization to cope with the shock and protect consumption. There are four possible consequences of such "excessive" asset decapitalization that imply a long run contribution to poverty.

The first is when assets fall to such low levels that they create sharp convexities in the subsequent asset accumulation trajectories.[3] Hence, once fallen to low levels of assets, it may take a very long time to recuperate a level of assets sufficient to move out of poverty. This path will be all the more convex that poor households manage assets less productively due to the need for risk management. Empirical evidence provided by McKenzie (2005) for Mexico shows that such convexities affect the poor more than the middle class, and the middle class more than the rich, creating divergence in asset accumulation over time.

The second consequence is when irreversibilities are created by asset decapitalization to cope with a shock. Examples abound. Children may be taken out of school because child labor or saving on school expenses are needed to cope with a household income shock, compromising their long term educational achievements due to strong state dependence in returning to school after having dropped out, even for a short period of time (Jacoby and Skoufias, 1997; de Janvry, Finan, Sadoulet, and Vakis, 2005). Infant nutrition may be reduced due to an income shortfall, leading to a long-term negative impact on children's physical development (Alderman, Hoddinott, and Kinsey, 2003; Hoddinott and Kinsey, 2001). Health facilities may not be used because of an income shock, leading to a long run loss in labor productivity. Seeds may be eaten as food, preventing planting when the rains return.

The third is when there are high re-entry costs into the labor force or an independent business, following exits due to short run shocks. Inability to pay rent for a few months may throw a tenant into homelessness, creating insurmountable difficulties to re-enter the housing rental market and the labor force. Move to a refugee camp may doom the possibility of recuperating land in the community of origin or of starting over an independent business.

The fourth is true poverty traps created by stable low level equilibria into which a household falls back unless there is a sufficiently large jump in asset holdings to reach another stable equilibrium. Santos and Barrett (2005) show that, in Ethiopia, there is a minimum herd size that needs to be maintained to undertake migratory herding and avoid local pasture degradation. Difficulty to recapitalize is reinforced by social exclusionary mechanisms where low asset productivity due to excessively small herd size leads to exclusion from safety nets achieved through animal transfers to assist herd recovery. As a consequence, "excessive" decapitalization can drive the household into an asset poverty trap (Carter and Zimmerman; Carter and Barrett, 2005). While empirical evidence is largely lacking, this is a classical argument in the development literature in favor of protecting the poor from "excessive" decapitalization.

If risk-focused social protection programs offer access to risk-coping instruments, they can help protect households from "excessive" decapitalization. In particular, they may prevent households from using child labor and from saving on nutrition and school

[3] Convexity means that the relation between assets and accumulation is very flat at low levels of asset ownership.

costs as risk coping instruments with long term consequences on child human capital. CCT programs can offer such instruments, as we explore in this paper.

3. Risk-focused social protection programs

There exists a broad range of social protection programs. Most have the purpose of reducing chronic poverty. As conceptualized in the pathways from poverty framework, they focus on building the assets of the poor, insuring opportunities for the poor to use their assets more productively, and transferring cash or quasi-cash to the poor (social assistance programs). The latter include such programs as food transfers (food stamps, food rations, food price subsidies), cash transfers (grants, non-contributory pensions, family allowance programs), service subsidies (social housing programs, utility subsidies, and childcare centers), and conditional cash transfers (conditional on child and maternal health care practices, school attendance, and nutritional standards, or on use of welfare programs as in Chile Solidario). These programs are typically targeted at the chronic poor. Hence, the question of the vulnerable non-poor remains unaddressed. For the chronic poor, these programs indirectly reduce vulnerability by raising income levels, thus lowering the risk of falling back into poverty as a consequence of an uninsured shock.

We are concerned here with risk-focused social protection programs. Following the logic of the role of risk as a determinant of poverty, these programs can be used by households either for risk prevention or mitigation purposes, thus reducing their ex-ante chance of falling into poverty, or for risk-coping purposes, thus reducing the risk of excessive decapitalization of assets resulting in convexities in post-shock capital accumulation, irreversibilities in asset holdings, high re-entry costs, and poverty traps. Such programs include transfer programs, credit programs, insurance programs, workfare programs, and social fund programs introduced as emergency response to shocks.

While these are programs used by vulnerable people when hit by a shock, they affect ex-ante risk management if households can rely on them. For this, the programs must be in place before a shock hits, the conditions for access to the programs must be well known to households before they are affected by a shock, there must be no risk of rationing in use among eligible households and quick certification when hit by a shock, and there must exist a credible commitment device that these conditions will not vanish with occurrence of a shock. Under these conditions, programs with ex-post risk-coping functions can also serve an insurance function, allowing households to reduce the cost of ex-ante risk management which they incur when they adjust their own income earning strategies.

Most programs with risk coping functions are designed to protect a household's income and consumption when hit by a shock. Protection of income and consumption indirectly protects the household's assets since it does not need to decapitalize as much as it would otherwise have had to in order to compensate for a shock. However, from a social perspective, the risk coping intervention may want to directly protect the

household's assets since "excessive" decapitalization will have long run costs, both socially and privately.

This can be done in two ways. The first is through risk coping programs that are directly targeted at sheltering the assets of vulnerable households. This includes health maintenance programs [fee waivers during a crisis (Indonesia 1998, Thailand 1999, Chile 1973-89), school feeding programs during a crisis (Thailand 1999)], school assistance programs [tuition waivers for the children of the unemployed in Korea (1998), "stay at school" program of emergency scholarships during a crisis in Indonesia (1998-2003)], fodder subsidies for livestock during a drought (Namibia 1992-93), and physical reconstruction programs following natural disasters, conflicts, and economic crises (as in many of the social funds programs, particularly in Africa and Central America).

The second approach is through cash transfers for the maintenance of income and consumption, with conditions attached restricting asset decapitalization. This is what CCT programs with conditions on child education and health would achieve: the cash transfer provides income and consumption protection for the recipient household, and the condition implies that accepting the transfer will protect child human capital from being used as a risk coping instrument. The role of the condition, acting as a price effect on the conditioned asset, is to complement the income effect that the cash transfer would induce. If the price effect is much larger than the income effect, then constraining behavior toward asset decapitalization can be an enormously efficient way of providing risk coping while protecting children's assets.

This potential function of CCT programs has never been implemented. That is, by expanding the scope of CCT interventions in a non-traditional way via targeting non-poor but risk-exposed households, such programs can directly integrate an innovative way to target risk, while complementing existing program aimed at reducing negative impacts of shocks. The next section discusses this further.

4. Why use a CCT approach for risk-focused social protection? Some lessons from education outcomes

In order to strengthen the argument of the appropriateness of a risk-focused CCT approach, we focus on education and schooling decisions to show how CCT can serve as a cost effective instrument in inducing investments in schooling, protecting children from being used as risk coping instruments and allow vulnerable non-poor households who are currently excluded from CCT programs that target the chronic poor but who also respond to shocks by using children for risk-coping.

4.1. Effectiveness of CCT vs. CT in inducing school attendance

CCT programs that impose a condition on school attendance and health practices have proven to be extraordinarily effective in enhancing the human capital of the children of poor people compared to what could be achieved through an income effect. Some of these programs have become quite large, such as Oportunidades in Mexico that covered 4

million families at the annual cost of $2.2 billion in 2005, and Bolsa Escola that covered 4.9 million families at the cost of $700 million in 2004 (Rawlings and Rubio, 2005). Besides the direct poverty reduction effect achieved by the cash transfers, these programs have been shown to be effective in enhancing educational achievements (Schultz, 2004; Behrman, Sengupta, and Todd, 2006), bettering child health (Gertler, 2004), improving nutrition (Hoddinott and Skoufias, 2004), and reducing child labor (Parker and Skoufias, 2004). There are also important secondary effects of the programs such as local expenditure linkages (Coady and Harris, 2001), household income multipliers through investment in productive activities (Gertler, Martinez, and Rubio, 2005), and educational spillover effects on the non-poor in the same rural community (Bobonis and Finan, 2005).

The key issue, if the objective of an intervention is to induce a higher demand for education among the poor, is to decide whether to obtain it through an income effect (cash transfer, CT), or through a price effect (conditional cash transfer, CCT). There are two pieces of evidence that support the proposition that, dollar for dollar, inducing demand for education via a price effect is much larger than through an income effect. The first is through micro simulating the response to a transfer received by children who go to school (and thus meet the school attendance conditionality) when they have the options of working full time, combining work and school, and going to school full time (Bourguignon, Ferreira, and Leite, 2003). The transfer would induce some of the children who did not go to school to start attending school while working, or to attend school and not work. Using a transfer similar to that offered by Bolsa Escola in Brazil, the authors find that, among poor households, there would be a decline of 58% among children not attending school, an increase of 7% for children attending school and working, and of 5% for children attending school and not working. The effect is large among poor households, as 58% of the 10-15 years old not in school would enroll in response to the CCT. By contrast, when the school enrollment condition is not imposed to receive a transfer, the pure cash transfer has a zero effect on school enrollment. Hence, a CCT induces a large increase in child human capital when a CT does not. For Africa, Kakwani, Veras, and Son (2005) show that cash transfers would buy very little in increased school attendance, recommending against their use based on cost considerations. They consequently suggest using CCT instead, but do not provide results of expected impacts due to insufficient information to use a micro-simulation approach.

The second piece of evidence is using the ex-post Progresa effect to measure the impact of an unconditional versus a conditional cash transfer effect on schooling decisions (de Janvry and Sadoulet, 2005). Here, the schooling decision is entry into secondary school for children who are graduating from primary school in poor rural communities. The CCT is exogenous in a randomized experiment organized by Progresa in 500 communities with treatment and control. The CT (household total expenditure) is not a controlled experiment. While this estimate thus suffers from endogeneity, stability of the estimated coefficients to introduction of a very large number of child, household, community, and state control variables gives confidence that any endogeneity bias would be very small. Results in Table 1 show that, using the regression with all controls and a

quadratic function in expenditures, a dollar of CCT is about 8 times more effective in inducing school enrollment than a dollar of CT at the mean income of the poor.[4]

We can thus conclude that, once the decision has been made that imposing a condition on behavior is acceptable and feasible, a CCT is considerably more effective than an unconditional CT transfer in altering behavior toward schooling. Hence, if the objective of a risk-coping intervention includes preventing decapitalization of child human capital as an element of risk coping, imposing a condition on school attendance to receive a cash transfer could be quite effective.

4.2. Effectiveness of CCT as a risk-coping instrument in protecting child education

A number of recent studies have explored the ex-post coping role of CCT. While none of the CCT reviewed were originally designed as a safety net program in the sense of reacting or adjusting to crises or shocks, they have performed like one for beneficiary households. These results are thus important in demonstrating the value of a CCT approach in preventing decapitalization of child human capital in response to shocks.

4.2.1 Mexico: Progresa

The Progresa randomized experiment can be used to show that a CCT received in the context of an income shock can be effective in preventing children from being taken out of school. In a separate paper (de Janvry, Finan, Sadoulet, and Vakis, 2005), we show that there is a high incidence of shocks in Mexican marginal rural communities, both idiosyncratic and covariate. Most frequent are unemployment and illness of the household head and exposure to natural disasters at the level of the community. In addition, we show that children are taken out of school when parents are exposed to these shocks, most often to save on school costs and also to send them to work.

The study finds that there is strong state dependence in child education: a child who dropped out of school for a semester has a much higher chance of not returning to school the following semester. For instance, a child in secondary school who misses a semester has a 23% lower chance of being enrolled the following semester. Girls are more likely not to return than boys. In this sense, shocks create irreversibilities: a short run response in taking children out of school as a risk coping instrument has long run consequences on their levels of educational achievements. Uninsured risk exposure thus contributes to deplete the assets of the poor and to replenish the stock of future poor.

Finally, we also find that Progresa transfers fully compensate the impact of shocks on school attendance. Hence, the CCTs have been effective not only in raising the educational achievement of the chronic poor, but also in helping their children stay at school when hit by a shock. In fact, for the chronic poor benefited by Progresa, we calculated that a quarter of the educational gains from the CCTs were due to their insurance value.

[4] The range is from 7 to 9 from the first to the third quartiles of poor households. On the other hand, we find no differential effect of the CCT across income levels, as estimated with an interaction effect.

4.2.2 Nicaragua: Red de Protección Social

In Nicaragua, the Red de Protección Social (RPS) is a CCT that targets chronic poor households and provides transfers conditional on children staying at school and making regular visits to health centers. Two recent randomized evaluation studies have shown that, in addition to the overall positive impact of the RPS on schooling and health outcomes, the program has also protected households from various shocks. For example Maluccio (2005) finds that households affected by the coffee sector crisis (mainly small scale farmers) who were participating in the RPS were not only protected against declines in per capita expenditures but also sheltered child human capital in terms of school enrollment rates and child labor outcomes. Specifically, the RPS enabled beneficiary households residing in the coffee region to maintain pre-program expenditure levels compared to a decline of 22 percent in 2001 for non-beneficiary households in the same region. Similarly, while overall enrollment rates in the coffee region increased (presumably as a response to declining employment opportunities for children), they increased more for households in the program (by an additional 25 and 10 percent for boys and girls, respectively). Child labor, especially for girls, decreased among program participants residing in the coffee region by 10 percent relative to their counterparts without the program. In a separate study, Gitter (2005) showed that the RPS helped households affected by droughts to fully protect child schooling: while school enrollment rates declined by nine percent among households affected by drought, the RPS fully protected children against the shock.

4.2.3 Honduras: Programa de Asignación Familia

A recent evaluation analysis of the Programa de Asignación Familia (PRAF) in Honduras suggests that it also protected poor households' welfare in the face of the coffee crisis. The analysis indicates that the cash transfers given out by PRAF conditional on school enrollment have significantly affected the labor allocation decision of credit-constrained coffee farmers while protecting children (Coady, Olinto, and Caldés, 2004). In particular, the study finds that the additional liquidity provided by the transfers has allowed families to maintain children in school, while increasing the time dedicated by adults to coffee farming. As such, the CCTs via the combination of transfers and conditionality have ensured that labor responses to shocks have not occurred at the expense of investments in children's human capital.

In the three cases reviewed—Mexico, Honduras, and Nicaragua—, the CCTs allowed the chronic poor beneficiaries not to use their children as risk-coping instruments, avoiding long term costs on child human capital. This is because the transfers were large enough relative to the shocks observed. This may not always be the case. When transfers are just sufficient to keep children at school in normal times, they may need to be raised when the chronic poor are hit by a shock if child human capital is to be protected. The safety net function of CCTs may thus require to both (1) increase transfers to the chronic poor when hit by a shock to keep children at school, and (2) extend benefits to vulnerable non-poor households with children at risk of being taken out of school in response to a shock.

4.3. Ex-ante protection of children of vulnerable non-poor households

The majority of CCT programs are targeted at the chronic poor. The results obtained above show that the CCTs have been effective in sheltering the human capital assets of the poor from shocks that would otherwise force them to take their children out of school. The next question that we address is whether there are also vulnerable households, excluded from the CCT because they are not chronic poor, that would take their children out of school if hit by a shock. Given strong state dependence in going to school, this would create irreversibilities in response to shocks. If this is the case, extension of CCT coverage to these households when hit by a shock would help protect the human capital of their children.

4.3.1 Mexico: Response to shocks of vulnerable non-poor households

The Progresa randomized experiment that we used above to analyze the response to shocks of chronic poor households can also be used to characterize the responses of non-poor households to the same shocks. The data consist in four rounds of Progresa panel surveys as follows: May and November 1999, and May and November 2000. All of these rounds took place after the start of the program. Although household surveys were collected for two rounds before the start of the program and once more in November 2000, they did not include information on shocks, and hence cannot be used for this analysis.

We focus on the decision to enter secondary school, as enrollment rates are very high in primary school even without any program, leaving little opportunity for any CCT to have any effect on them. By contrast, entry in secondary school is a critical step in rural Mexico on which Progresa has had the most impact, raising the continuation rate from 63 to 76% among the eligible children.

To measure the impact of shocks on school enrollment across households at different levels of welfare, both below and above the poverty line, we estimate the following fixed-effects regression:

$$Y_{ivt} = \alpha_i + \sum_t \beta_t T_t + \lambda_1 S_{ivt} + \lambda_2 (S_{ivt} \times W_{iv}) + \kappa_1 (P_{iv} \times S_{ivt}) + \kappa_2 (P_{iv} \times S_{ivt} \times W_{iv}) + \varepsilon_{ivt} \text{ , (1)}$$

where Y_{ivt} represents whether child *i* in village *v* at time *t* was enrolled in secondary school. T_t is an indicator variable for the enrollment year, P_{iv} is an indicator for whether the child is eligible for Progresa (i.e, from a household below poverty level, living in a program village), W_{iv} denotes the household's welfare level, and S_{ivt} is the proportion of households in the community that experienced a natural disaster. The stochastic variable ε_{ivt} represents the unobserved determinants of school enrollment, and α_i represents an individual child fixed-effect. The specification in equation (1) assumes marginal effects of shocks that are linear in the welfare index[5]. Although the Progresa effect is estimated from the observations of children that are below the poverty line, we extend the

[5] A quadratic function in the welfare index was also tested but did not improve on the linear function.

prediction slightly above the poverty level on the assumption that there should be no discontinuity in behavior at this arbitrary threshold. This allows to predict the effect of shocks on the probability of going to school for children who receive ("Progresa shock") and do not receive ("Control shock") Progresa, by household welfare level below and above the poverty line .

The predicted enrollment of children that did not experience a natural disaster is embedded in the child fixed-effect. To recover the impact of Progresa on enrollment by welfare level when there are no shocks, we estimate the following equation:

$$\hat{\alpha}_i = \xi + \delta_1 W_i + \delta_2 C_i + \delta_3 D_i + \delta_4 (C_i \times D_i) + \delta_5 (C_i \times D_i \times W_i) + \delta_6 X_i + \nu_i , \qquad (2)$$

where $\hat{\alpha}_i$ is the estimated child fixed-effect in equation (1), C_i denotes whether the child lives in a Progresa village, D_i indicates whether the child comes from a poor household, X_i is the age of the child in the base year, and ν_i is a random error term. The coefficients δ_4 (the direct effect of Progresa) and δ_5 (the effect of Progresa by welfare level), along with the constant term in the fixed-effect regression above, give us the predicted enrollment for children who receive Progresa but are fortunate to not experience any shocks.

Results for the probability of enrollment without a shock (equation 2, lower part of Table 2) show that the welfare level influences positively school enrollment. The welfare index calculated by Progresa, based on demographic characteristics, employment status, and indicators of dwelling quality and ownership of common durables, varies from 500 (at the first decile) to 850 (at the ninth decile) with a poverty line set at around 650[6], A child from a poor household with a welfare index of 500 has a predicted probability of enrolling of 80% compared to a child from a non-poor household with a welfare index of 700 who has a probability of enrolling of 83% (Table 3). When Progresa is offered to the poor, their probability of enrollment increases from 80 to 85%, a gain in enrollment of 6.3%.

Results for equation 1 (upper part of Table 2) show that shocks reduce the probability of secondary school enrollment across all welfare levels. For a poor household, with a welfare index of (say) 500, the probability is reduced by 7%. For a vulnerable household just above the poverty line with a welfare index of 700, this probability would be –3%, still about half that of the poor. There are thus many children in non-poor households whose education is vulnerable to shocks. Comparison of the coefficients λ_2 and κ_2 shows that the negative impact of shocks is largely compensated by Progresa across all welfare levels among the poor. Extrapolating this result just above the poverty line thus suggests that access to CCT transfers for the vulnerable non-poor would be of considerable importance to keep their children at school when hit by a shock.

[6] This is an approximate value used for illustration purposes as the calculation of the welfare index and the definition of the poverty line are state specific.

We illustrate these results in Figure 1. The fixed effects line is used as the anchor on which the three categories represented in Figure 1 are drawn. The "Control no shock" line shows how the probability of entering secondary school rises with income (proxied by the Progresa welfare index). When these households are affected by a shock (measured here as the proportion of households in the community that experienced a natural disaster), school participation drops precipitously to the "Control shock" line. For households below the poverty line, Progresa transfers allow to restore school participation to a level that is not significantly different from the no-shock situation, as represented by the "Progresa shock" line. The CCTs are thus effective in sheltering child schooling from these shocks. This risk-coping role of Progresa, if applied to households above the poverty line, would also help them keep their children at school when hit by a shock.

4.3.2 Nicaragua: ex-ante targeting based on both poverty and risk exposure

Building from the RPS results discussed above, an ongoing CCT pilot in Nicaragua (Sistemas de Atención a Crisis) uses both the concepts of chronic poverty and of exposure to uninsured risks in its targeting design. In addition to children's schooling and health objectives, the pilot aims at enhancing the ex-ante risk management capacity of households related to weather variation via additional components that support income diversification. While the objectives of the pilot are somewhat different from the ones discussed in this paper, it is the only CCT pilot we know that incorporates ex-ante risk considerations in its design and applies targeting based on uninsured risk exposure.

Targeting was done based on both poverty and risk exposure. In a first stage, municipal level data on poverty were combined with rainfall data to create a typology of municipalities based on the two dimensions of poverty and risk. Based on this, six municipalities with high poverty rates and high drought incidences were selected. In a second stage, household eligibility within treatment communities was defined based on proxy means calculations of consumption per capita. Instead of using a national poverty line as a threshold for defining eligibility, a higher threshold was used, the justification being that households above (but close) to the poverty line are also exposed to uninsured weather risk (such as droughts).[7] As such, two categories of eligible households were identified, those based on poverty and those based on uninsured risk exposure.

As we argue in this paper, in the presence of uninsured risks, households might become poor if hit by a shock. While the baseline data cannot be used to confirm this, some of the households in the pilot presumably fell below the poverty line as a result of experiencing one or more of the shocks reported. Indeed, as Table 4 confirms, there is a high incidence of a variety of shocks among poor households in the pilot. For example, 96 percent of all eligible households reported having been affected by droughts during the last year, making many of them fall into poverty. As such, these "new poor" households

[7] Other justifications for the higher threshold beyond the issue of uninsured risk included concerns of potential underestimates of poverty rates using the proxy means methodology and national poverty line from 2001 (as opposed to a region-specific proxy means methodology that also accounts for price changes and local contexts - the pilot was implemented in late 2005).

became eligible to receive the program based on poverty considerations. While these households are in this case indistinguishable from the chronic poor, they would be exactly the households that a CCT with an ex-ante insurance element would want to extend eligibility to after verifying their exposure to a particular shock.

Targeting non-poor households who are exposed to uninsured risks is crucial for a number of reasons. First, as Table 4 suggests, there is no systematic difference in drought incidences reported between eligible households based on poverty and those eligible based on risk exposure. Similar patterns emerge for all the other shocks except one. Second, while the vulnerable non-poor are more likely to use ex-ante risk management instruments like savings than poor households, they nonetheless cannot fully protect themselves against risk. For example, two thirds of non-poor eligible households have reduced consumption to cope with drought, the same incidence as poor households (Table 5). While they show less exposure to drought than poor households, they had to engage in all cases in significant adjustments to cope with shocks. In particular, despite differences in available risk management instruments, non-poor eligible households do use children to cope with shocks. This is true for a variety of shocks that induce coping strategies that include increasing child labor (Table 6) and taking children out of school (Table 7). We thus see that seven percent of non-poor eligible households use child labor in response to droughts. This goes up to 24 for households exposed to floods. We also see that vulnerable households respond to shocks by taking children out of school, ranging from 4% in the case of droughts, to 9% in case of floods, and 16% when there is a death in the family. Hence, there is much room for using a CCT approach to protect the human capital of children from shocks in rural villages, both among chronic poor and vulnerable non-poor households.

5. How to design a CCT program for risk management? Lessons from Social Protection experiences around the world

Based on the discussion above, how would a CCT program be designed or modified to serve as an instrument to address risk among the vulnerable non-poor which are normally not included among program beneficiaries? In order to answer this question, we review a number of existing social protection and poverty related programs (both CCT and non-CCT) around the world that deal explicitly with risk to draw some insights. The key areas we explore relate to: (i) how to determine eligibility in providing access to risk-coping instruments; (ii) how to insure program effectiveness for risk management; and (iii) how to provide incentives to reduce moral hazard and encourage graduation. Perhaps the initial and not surprising insight in reviewing these programs is the observation that there exists a diverse set of innovative programs with unique features and positive experiences that could be easily integrated in many existing CCT programs to introduce and strengthen their insurance function.

5.1 Eligibility in accessing risk-coping instruments

If a CCT is to serve as a conditional risk-coping instrument to prevent excessive decapitalization in the event of a shock, it is important that the targeting of vulnerable

households be accurately done. There are two options to identify eligible households for a risk-focused CCT, one ex-ante relative to shocks and the other ex-post.

5.1.1 Using risk vulnerability measures to define ex-ante eligibility

Risk vulnerability indicators can be used to define eligibility in an ex-ante manner. In order to implement such an approach in practice, we would need to identify non-poor households who are exposed to specific uninsured risk. For example, in the case of the risk of children dropping out of school discussed above, a risk index can be calculated using a probability equation of the form:

Pr (Drop out of school = 1) = f(child, household, and community characteristics; type and magnitude of shocks; interactions between characteristics and shocks).

Household characteristics would include not only income/welfare indicators as in the Progresa example, but also many other determinants of vulnerability to shocks such as education, age, demographic structure, and gender of the household head. If eligibility is to be shock-specific, these characteristics should be interacted with shocks in calculating the vulnerability score. Such a score would be used to define eligibility. When a shock occurs, all households deemed vulnerable to the particular shock would then be automatically included in the program. There is no need to verify how the shock has actually affected a particular household, only that it has occurred.

While none of the programs we review in this paper use risk vulnerability indicators explicitly, risk considerations have been considered in the definition of eligibility in various cases. For example, the Korea Public Works Program uses the duration of unemployment for working members in the household in its score system that defines eligibility. In addition, weather insurance schemes in India and Malawi target groundnut farmers on the premise that this is a high risk crop. Similarly, the Livestock Insurance Scheme in Mongolia targets herders due to their high vulnerability to climate shocks.

5.1.2 Defining eligibility ex-post by verifying households' exposure to shocks

Ex-post eligibility consists of verifying that a formerly non-eligible household has been affected by a shock and that the magnitude of the impact has been large enough to induce eligibility. As such, there are no ex-ante eligibility criteria other than being non-poor in normal times (chronic poor households should have already been incorporated in the program, irrespective of risk exposure). Ex-post incorporation would require re-calculation of the score used to determine eligibility. This calculation could be done on demand, with guarantee of a quick response. As such, the qualification formula should include not only structural indicators to detect chronic poverty, but also indicators that respond quickly to the occurrence of a shock. This includes variables such as adult unemployment, family deaths, disabilities, testing positive to HIV/AIDS, and exceptional medical bills. These indicators used to calculate the eligibility score must all be difficult to manipulate by the household and verifiable by program officers or community

committees. In the example of children dropping out of school, a formerly non-eligible child affected by a shock would be offered incorporation if the new qualification score (capturing the probability of dropping out of school) reaches above the program threshold.

A number of existing programs use this approach. For example, the Jaring Pengaman Sosial, a school scholarship program instituted in the aftermath of the Indonesian financial crisis, uses among its components for eligibility the subjective likelihood that a student may drop out of school due to exposure to the crisis (Pritchett, 2002). The Social Relief of Distress Award in South Africa provides cash transfers in the event of shocks. To be eligible, the applicant needs to suffer a shock that renders her unable to support her family's basic needs. The program defines specific shocks that qualify for relief such as death of the breadwinner, incarceration, hospitalization, idiosyncratic disasters (like fire), and natural disasters (such as floods and tornadoes). Similarly, the Disability Grants Program in South Africa offers cash transfers to people who cannot work due to a permanent or temporary disability, while the Chile Solidario CCT Program allows for non-poor households to request reexamination of eligibility if they have been affected by a shock such as unemployment.

5.2 Program effectiveness for risk management

For a program to serve not only as an ex-post risk-coping instrument, but also as an instrument to reduce costly ex-ante risk-management, the program's rules of incorporation must be well known to all vulnerable households (well before shocks occur), the rules must be credible and anchored on a commitment device, and the program should have no rationing for those who satisfy the conditions for incorporation. Quick response must be guaranteed, with a timing announced before shocks occur. In order to avoid decapitalization in the event of a shock, the program needs to act fast in terms of certification, verification of shocks, and disbursement of benefits.

5.2.1 Ensure widespread publicity and clarity of program rules and rights

Widespread knowledge of the program and its rules among vulnerable households is important to allow them to seek what is more productive as opposed to what is less risky. Different mechanisms can be used for this. The Thailand Low Income Card Scheme uses village leaders to announce the program one month prior to the registration deadline and then conducts house visits to ask people to submit their applications. Similarly, officials from the BASIX weather insurance program in India discuss with local leaders and farmers the insurance products they offer using household and village level visits. A similar approach is implemented by the GRET Microinsurance program in Cambodia.

5.2.2 Quick verification of eligibility and guaranteed incorporation

Rapid incorporation is particularly important when a risk-management program is demand based. If eligibility is determined ex-ante, then all that is needed is verification of

the shock. For example, weather insurance schemes in India and Malawi can do just-in-time verification of the extent of weather shocks at various stages of the harvest cycle which trigger immediately whether households are eligible for a payment to be made within a month.

If eligibility is determined ex-post, then the procedure may be longer and as such, having a system in place to guarantee a speedy verification and incorporation process is important. For example, the Health Fee Waiver Programs in Kenya and Chile determine ex-post eligibility on the spot. In Kenya, hospital staff determines eligibility and the waivers are granted the same day. Furthermore, emergency assistance can be given temporarily until the verification process is complete. The South Africa Social Relief Distress Award provides applicants with the first month's payment even if verification has not been completed. Payment is discontinued if the applicant does not present the necessary documents to verify eligibility by the second month. Finally, the San Francisco County Adult Assistance Program grants an initial one-week period of Presumptive Eligibility in the form of in-kind vouchers for food, housing, and transportation. Normal cash transfers begin when determination of eligibility is made.

In addition, the program must credibly guarantee incorporation upon demand for eligible individuals. For example, in the India National Rural Employment Guarantee Scheme each potential worker submits an application for employment to the Gram Panchayat committee. The committee must then offer employment in one of its projects within 15 days. If no employment is available, employment under another implementing agency is offered. If still no employment is available, an unemployment allowance is paid to the applicant.

5.2.3 Timely disbursement of benefits

The disbursement of benefits needs to be quick once verification of shocks and incorporation have taken place. In the case of the Self Employed Women's Association Micro-insurance scheme in India (SEWA), the old disbursement policy consisted of patients paying the hospital upfront and submitting receipts and doctors' certificates to the insurance company for reimbursement. In many cases, this induced asset decapitalization to meet the short run costs. As a response, SEWA developed a different mechanism to ensure that members receive services without the need to pay themselves. An insurance agent visits the patient in the hospital, verifies the expected costs with the doctors, and makes part of the payment (80 percent) on the spot. The rest of the charges are paid at the time of discharge and submission of the relevant documents (Chatterjee, 2005). A similar payment scheme is implemented for the GRET Microinsurance scheme in Cambodia.

Another interesting example is the Mongolia Livestock Insurance program where payments are based on the losses in the first six months of the year. Nearly 90 percent of losses occur during this period. As such, if annual losses were used instead, payments would be made almost a year after the shock. The shorter six month cycle for payment ensures on time and fast disbursement of the insurance.

5.2.4 The program must have mechanisms for accountability and conflict resolution

The majority of programs reviewed have internal mechanisms to resolve conflicts and complaints. For example, in the India National Rural Employment Guarantee Scheme, various levels of monitoring and complaint processes have been introduced, ranging from the village council that provides a forum for public hearings, the program officer who handles general complaints at the block level, the state level where a state ombudsman and help line may be installed, as well as a citizens' charter that outlines all program entitlements and responsibilities. Similarly, the Urban Food for Work program in Ethiopia uses a committee to act as a liaison between the workers and the local authorities. Finally, in various South African cash transfer programs (Foster Care Grants, Social Relief of Distress Award, and Disability Grants Program), applicants who were denied a grant receive a letter outlining why the application has been refused and how the applicant can appeal. Existence of such mechanisms is important in enhancing the ex-ante credibility of a program, and hence its risk-management value.

5.3 Providing incentives to reduce moral hazards and encourage graduation

The structure of benefits needs to be designed in such a way as to ensure the program's financial sustainability. For this, the program should include safeguards to prevent moral hazards and program abuse via exploring appropriate levels and length of benefits. Similarly, the program needs to provide incentives for program graduation to prevent dependency by integrating benefits that strengthen the risk management capacity of beneficiaries as well as by introducing clear rules for decertification and graduation.

5.3.1 Prevent moral hazard behavior

In providing insurance, controlling moral hazard is crucial. Verification of shocks must be accurate, monitoring and enforcement mechanisms must be in place to prevent abuse, and program rules must encourage self-restraint to prevent excessive risk-taking and abuse. A number of useful insights can be taken from weather insurance programs in India and Malawi: (i) the payouts are conditional on rainfall indicators, which are exogenously collected and monitored separately making verification of shocks easier; and (ii) since the level of the payouts is based on rainfall intensity, the schemes discourage risk-taking behavior by farmers. Similarly, for the Livestock Insurance Program in Mongolia, the insurance is activated whenever the livestock mortality rate in the region exceeds a trigger level and, as such, does not depend on the individual herder's livestock losses.

Limitations on the level of benefits can also encourage self-restraint and limit program abuse. The Ontario Rent Bank Program offers emergency rent and energy bill payment to low income people with arrears that put them at risk of homelessness due to short-term shocks. The rule to qualify for emergency assistance consists in an offer to cover rent and utility services for two months in a two years period. This induces individuals to exercise restraint in order to maintain the option of calling for assistance in case of future larger shocks. Similarly, a beneficiary of the Korea Public Works Program

cannot work in more than three consecutive projects, which last three months each. Finally, in Trabajar in Argentina, each beneficiary participates in a project that typically lasts 3-6 months. Inclusion into a new project is not automatic. Ravallion et al. (2001) thus find that a large number of workers leave the program after 6 months (45 percent of Trabajar workers participate in only one project).

Having a well functioning data management system can help minimize duplication of benefits, leakages, and exclusion errors but also enhance accountability mechanisms and avoid general corruption and abuse. In addition, since risk defined eligibility will need to be renewed often, a well designed data management system can facilitate the process. One example is the Jefes de Hogar Program in Argentina which has an elaborate system of cross checks to verify eligibility. The data management system also verifies whether an applicant is in another program of the Ministry of Labor, receiving unemployment insurance, has a formal sector job, or is receiving cash transfers from another program.

5.3.2 Provide incentives for participants to graduate from the program and prevent dependency

Providing skills and risk management instruments through the program design can be an effective way to strengthen the households' capacity to manage risk but also increase the probability of self-exiting the program. As an example, the Nicaragua Atención a Crisis CCT pilot incorporates activities to promote risk prevention (income diversification in non-agricultural activities) and prevent decapitalization (child schooling and health). In this sense, the benefits are used to protect consumption but to also directly provide new income opportunities. Ravallion et al (2001) find that a high proportion of participants in the Trabajar program in Argentina reports that the program improved their chances of getting a job and gave them a marketable skill. A quarter of the participants responded that the program had expanded their contacts, while half of those who graduated from the program found a job within 6 months.

Finally, time limits on benefits receipt can be used to guarantee program exit and minimize program abuse. For example, the South Africa Social Relief of Distress Award is only available for three months and only under exceptional circumstances can an applicant receive another 3-month grant. Similarly, in India's National Rural Employment Guarantee Scheme, the program only guarantees 100 days per household. While there is no upper limit to the number of days worked, there is no guarantee for more work beyond these 100 days.

6. Conclusions

Despite advances in policy design to reduce chronic poverty through asset creation, improved opportunities to use assets more productively, and more inclusive social protection programs targeted at the poor, exposure to uninsured risks remains an important source of new poor as well as an impediment to sustainable upward mobility. While greater understanding has been gained about the dynamic links between risk and

poverty (Fafchamps, 2003; Dercon, 2006), little attention has been given to ways of protecting those who are exposed to uninsured risks from slipping into poverty. As a consequence of this, while many programs targeted at the chronic poor have been effective in lifting large numbers of people out of poverty, they have often not managed to reduce aggregate poverty since an equal number of people moved into poverty due to exposure to uninsured risks.

This paper explores the potential role of conditional cash transfers programs in serving as safety nets to protect child human capital from being used as a risk coping instrument when households are hit by a shock. We start by observing that uninsured shocks have a double cost on household welfare: an ex-ante cost of risk avoidance, and an ex-post cost of decapitalization and irreversibilities. Both affect child human capital and are a source of future new poor. Risk-focused programs can be used to protect the assets of the poor from uninsured shocks. This is done directly by sheltering assets, or indirectly through transfers (income effects) or conditional cash transfers (price effects). We show that CCTs are vastly more efficient than CTs in inducing investment in human capital by the chronic poor. In addition, CCT programs observed in Mexico, Nicaragua, and Honduras have been effective in protecting child human capital from shocks. There exists, however, a large number of vulnerable non-poor not covered by these programs who also take their children out of school when hit by an uninsured shock. As such, they are a potential source of new poor. CCT programs designed to act as safety nets for these households when hit by a shock could thus be a powerful component of poverty reduction strategies.

In order to explore this further, we finally explore how the design of CCT programs can be modified in order to provide them with the flexibility to achieve this safety net function. We do this by reviewing the risk related features of a variety of programs targeted at the poor in developing and developed country settings. A number of lessons related to household eligibility for risk coping instruments, program effectiveness for risk management, and incentives to reduce moral hazard and encourage graduation and self-restraint are derived. The key insight is the observation that there exist a diverse set of innovative program rules, unique features and positive experiences that could be easily integrated in many existing interventions, including CCT programs to introduce and strengthen their insurance function.

Despite these insights, little is known in practice about how CCT programs can be used to address risk in a systematic way among vulnerable non-poor households who may be the source of new poor if they decapitalize excessively in coping with shocks. To develop this potential of a CCT approach, experimentation in pilot programs is needed. Putting into place these pilot programs should be a priority for international development agencies.

References

Alderman, H., J. Hoddinott, and B. Kinsey. 2003. "Long-term consequences of early childhood malnutrition." IFPRI FCND working paper #168, December.

America: The role of social safety nets in Honduras". Background paper in *Shocks and Social Protection: Lessons from the Central American Coffee Crisis,* World Bank, Report No. 31857-CA.

Antman, Francisca, and David Mckenzie. 2005. "Poverty Traps and Nonlinear Income Dynamics with Measurement Error and Individual Heterogeneity". Economics Department, Stanford University.

Behrman, Jere, Piyali Sengupta, and Petra Todd. 2005. "Progressing Through Progresa: An Impact Assessment of a School Subsidy Experiment." University of Pennsylvania. *Economic Development and Cultural Change* 54(1): 237-75.

Bobonis, Gustavo, and Frederico Finan. 2005. "Endogenous Social Interaction Effects in School Participation in Rural Mexico." University of California at Berkeley.

Bourguignon, François, Francisco Ferreira, and Philippe Leite. 2003. "Conditional Cash Transfers, Schooling, and Child Labor: Micro-Simulating Brazil's Bolsa Escola Program." *World Bank Economic Review* 17(2): 229-54.

Carter, Michael and Frederick Zimmerman. 2003. "Asset smoothing, consumption smoothing, and the reproduction of inequality under risk and subsistence constraints". *Journal of Development Economics* 71: 233-260.

Carter, Michael, and Christopher Barrett. 2005. "The Economics of Poverty Traps and Persistent Poverty: An Assets-Based Approach". University of Wisconsin and Cornell University.

Chatterjee, Mirai. 2005. "Microinsurance – a note on the State of the Art." Note on workshops organized by SEWA in September 2003 and September 2004.

Chen, Shaohua, and Martin Ravallion. 2004. "How Have the World's Poorest Fared since the Early 1980s?" *The World Bank Research Observer* 19(2): 141-169.

Coady, David, Pedro Olinto, and Nicolas Caldés. 2004. "Coping with the coffee crisis in Central America: The role of social safety nets in Honduras." Washington D.C.: International Food Policy Research Institute.

Coady, David, and Rebecca Lee Harris. 2001. "Evaluating Transfer Programs Within a General Equilibrium Framework." FCND Discussion Paper #110. Washington D.C.: International Food Policy Research Institute.

de Janvry, Alain, and Elisabeth Sadoulet. 2004. "Achieving Success in Rural Development: Toward Implementation of an Integral Approach". In D. Coleman and N. Vink, eds., *Reshaping Agriculture's Contributions to Society,* Oxford: Blackwell Publishing.

de Janvry, Alain, and Elisabeth Sadoulet. 2006. "Making Conditional Cash Transfer Programs More Efficient: Designing for Maximum Effect of the Conditionality." *World Bank Economic Review*, 20: 1-29.

de Janvry, Alain, Frederico Finan, Elisabeth Sadoulet, and Renos Vakis. 2006. "Can Conditional Cash Transfers Serve as Safety Nets to Keep Children at School and Out of the Labor Market?". *Journal of Development Economics* 79: 349-73.

Dercon, Stefan. 2006. "Risk, Growth, and Poverty: What do we know, what do we need to know?" Department of Economics, Oxford University.

Fafchamps, Marcel. 2003. *Rural Poverty, Risk, and Development*. Edward Elgar Publishing Ltd.

Gertler, Paul, Sebastian Martinez, and Marta Rubio. 2005. "Investing Cash Transfers to Raise Long Term Living Standards." University of California at Berkeley.

Gertler, Paul. 2004. "Do Conditional Cash Transfers Improve Child Health? Evidence from Progresa's Control Randomized Experiment." *American Economic Review* 94(2): 336-341.

Gitter, Seth, R. 2005. "Conditional Cash Transfers, Credit, Remittances, Shocks, and Education: An Impact Evaluation of Nicaragua's RPS". Department of Agricultural and Applied Economics, University of Wisconsin-Madison

Helfand, Steven, and Edward Levine. 2005. "The Impact of Policy Reforms on Rural Poverty in Brazil: Evidence from Three States in the 1990s". Department of Economics, University of California at Riverside.

Hoddinott J., and B. Kinsey. 2001. 'Child Growth in the Time of Drought.' *Oxford Bulletin of Economics and Statistics* 63(4): 409-436.

Hoddinott, John, and Emmanuel Skoufias. 2004. "The Impact of Progresa on Food Consumption." *Economic Development and Cultural Change* 53(1): 37-62.

Hoff, K., and A. Sen. 2006. "The Kin System as a Poverty Trap?" In S. Bowles, S. Durlauf, and K. Hoff, eds., *Poverty Traps*. Princeton University Press.

Jacoby, Hanan, and Emmanuel Skoufias. 1997. 'Risk, Financial Markets, and Human Capital in a Developing Country.' *Review of Economic Studies* 64(3): 311-335.

Kakwani, Nanak, Fabio Veras, and Hyun Son. 2005. *Conditional Cash Transfers in African Countries.* Working Paper No. 9, International Poverty Center, UNDP.

Krishna, Anirudh et al. 2004a. "Falling into Poverty in Villages of Andhra Pradesh: Why Poverty Avoidance Policies Are Needed". *Economic and Political Weekly* July 17, pp. 3249-3256.

Krishna, Anirudh, Patti Krist Janson, Maren Radeny, and Wilson Nindo. 2004b. "Escaping Poverty and Becoming Poor in 20 Kenyan Villages." *Journal of Human Development* 5(2): 211-226.

Kuran, T. 1988. "The Tenacious Past: Theories of Personal and Collective Conservatism." *Journal of Economic Behavior and Organization* 10(2): 143-171.

Maluccio, John. (2005) "Coping with the Coffee Crisis in Central America: The Role of the Nicaraguan Red de Protección Social." *FCND Discussion Paper* No. 188, IFPRI, Washington D.C.

Parker, Susan, and Emmanuel Skoufias. 2006. “Labor Market Shocks and Their Impacts on Work and Schooling: Evidence from Urban Mexico”. Forthcoming in *Journal of Population Economics* 19(1): 163-81.

Pritchett, Lant, Sudarno Sumarto and Asep Suryahadi. 2002. “Targeted Programs in an Economic Crisis: Empirical Findings from Indonesia’s Experience.” Center for International Development at Harvard University, Working Paper No. 95

Ravallion, Martin, Emanuela Galasso, Teodoro Lazo and Ernesto Philipp. 2001. What Can Ex-participants Reveal about a Program’s Impact?” *Journal of Human Resources* 40:208-230.

Rawlings, Laura, and Gloria Rubio. 2005. “Evaluating the Impact of Conditional Cash Transfer Programs.” *World Bank Research Observer* 20(1): 29-55.

Rogg, Christian. 2005. *Risk-coping Strategies at the Household Level: Evidence from Rural Ethiopia.* Doctoral Dissertation, Department of Economics, Oxford University.

Rosenzweig, M. and K. I. Wolpin. 1993. “Credit market constraints, consumption smoothing, and the accumulation of durable production assets in low-income countries: investment in bullocks in India.” *Journal of Political Economy* 101(2): 223-244.

Santos, Paulo, and Christopher Barrett. 2005. “Safety nets or social insurance in the presence of poverty traps? Evidence from southern Ethiopia”. Cornell University.

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

UNDP. 2004. “Slipping Into Poverty: A Neglected Issue in Anti-Poverty Strategies”. *One Pager*, Brasilia: International Poverty Center.

World Bank. 2004. *Poverty in Mexico: An Assessment of Conditions, Trends, and Government Strategy*. Mexico City: The World Bank.

Table 1. Relative effectiveness of a CCT vs. a CT in inducing a change in behavior toward child schooling. Progresa data.

Linear probability model of enrollment in secondary	Mean	(1)	(2)	(3)	(4)
CCT: Treatment community (dummy, 1=US$200/year)	0.718	0.130**	0.127**	0.130**	.128**
		(0.019)	(0.020)	(0.018)	(0.018)
CT: Household total expenditure (US$100/year)	8.055		0.003*	0.004*	.011**
					(0.004)
Quadratic term in household total expenditure					-0.00024*'
					(0.00011)
Control variables					
Child, household, and community characteristics (31 variables)				Yes	Yes
State of residence (6 variables)				Yes	Yes
CCT/CT effect on enrollment			21	16	8

* significant at 5%; ** significant at 1%

Table 2. Linear predictions of enrollment in secondary school (Progresa Data)

Equation (1): Secondary school enrollment decision

	Coefficient	t-stat
Natural disaster (S)	-0.180	-4.54
Natural disaster*Welfare (S*W)	0.00021	4.02
Progresa*Shock (P*S)	0.151	2.10
Progresa*Shock*Welfare (P*S*W)	-0.00018	-1.68
Wave3 (T3)	0.090	42.90
Wave4 (T4)	0.065	30.94
Wave5 (T5)	0.034	17.02
Constant	0.615	438.09
R2	0.0246	
Number of observations	107409	
Number of groups	35718	

Linear probability equation with child fixed effects

Equation (2): Determinants of child fixed-effect in equation (1)

	Coefficient	t-stat
Progresa Village (C)	0.020	3.00
Welfare Index (W)	0.0002	6.54
Poor (D)	0.019	2.25
Progresa Effect (C*D)	0.084	3.14
Progresa Effect*Welfare (C*D*W)	-0.0001	-2.70
Age (X)	-0.076	-152.66
Constant	0.676	31.45
R2	0.4804	
Number of observations	26000	

Table 3. Impacts of shocks and Progresa by welfare level

Equation 2: Probability of enrollment w/o shock and w/o Progresa

		Coefficients	Poor	Non-poor
Progresa village	C	0.0195	1	1
Welfare index	W	0.0002	500	700
Poor	D	0.0187	0	0
Progresa effect	C*D	0.0837	0	0
Progresa effect*Welfare	C*D*W	-0.0001	0	0
Age - (Grade+6)	X	-0.0757	-0.353	-0.353
Constant	Constant	0.6763	1	1
Predicted probability of enrollment			0.80	0.83

Equation 2: Probability of enrollment w/o shock and with Progresa program for poor

		Coefficients	Poor	Non-poor
Progresa village	C	0.0195	1	1
Welfare index	W	0.0002	500	700
Poor	D	0.0187	1	0
Progresa effect	C*D	0.0837	1	0
Progresa effect*Welfare	C*D*W	-0.0001	500	0
Age - (Grade+6)	X	-0.0757	-0.353	-0.353
Constant	Constant	0.6763	1	1
Predicted probability of enrollment			0.85	0.83

Equation 1: Probability of enrollment with shocks

					Change in predicted probability of enrollment	
		Coefficients	Poor	Non-poor	Poor	Non-poor
Shock	S	-0.1800	1	1	Shock w/o Progresa	
Shock*Welfare	S*W	0.0002	500	700	-0.07	-0.03
Progresa*Shock	P*S	0.1511	1	1	Shock with Progresa for all	
Progresa*Shock*Welfare	P*S*W	-0.0002	500	700	-0.01	-0.01
Wave3	T3	0.0901				
Wave4	T4	0.0652				
Wave5	T5	0.0342				
Constant	Constant	0.6146	1	1		

Progresa's poverty line is set at a welfare index of 650.

Table 4. Shock incidences (%), by eligibility method (Nicaragua Pilot)

	Households eligibility decided on the basis of:	
	Poverty	Risk exposure
Drought	96 [93, 96]	95 [93, 96]
Increases in consumer prices	80 [78, 81]	80 [78, 82]
Theft	6 [5, 7]	7 [5, 8]
Mudslides	7 [6, 8]	7[5, 8]
Health shock of working member	4 [3, 5]	7 [5, 8]*
Floods	3 [2, 3]	3 [2, 3]
Unemployment	2 [2, 3]	3 [2, 3]
Death	1 [0.2, 1.0]	1 [0.5, 1.5]

* significant difference at 10%
95 % confidence intervals in brackets

Table 5. Coping strategies for those affected by drought (%), by eligibility method (Nicaragua Pilot)

	Households eligibility decided on the basis of:	
	Poverty	Risk exposure
Worked more	77 [75, 78]	71 [69, 73] *
Decreased consumption	67 [66, 69]	66 [64, 68]
Used savings	35 [33, 37]	43 [41, 46] *
Sold animals	23 [21, 25]	27 [25, 29]*
Household members had to work	21 [19, 22]	18 [16, 20]*
Increased child labor	10 [9, 11]	7 [6, 9] *
Applied for a loan from a bank	10 [9, 11]	16 [14, 17]*
Received a loan from family	9 [8, 10]	11 [10, 13] *
Took children out of school	7 [6, 9]	4 [3, 5]*

* significant difference at 10%
95 % confidence intervals in brackets

Table 6. Percentage of households increasing child labor to cope with shocks, by eligibility method and shock (Nicaragua Pilot)

	Households eligibility decided on the basis of:	
Shock	Poverty	Risk exposure
Drought	10 [9, 11]	7 [6, 9]*
Increase in consumer prices	11 [9, 12]	8 [6, 9]*
Theft	12 [6, 18]	13 [7, 19]
Mudslide	20 [13, 26]	21 [14, 28]
Health shock of working member	19 [11, 27]	12 [6, 19]*
Flood	18 [9, 26]	24 [12, 35]
Unemployment	16 [5, 26]	16 [5, 27]
Death	21 [1, 41]	26 [5, 48]

* significant difference at 10%
95 % confidence intervals in brackets

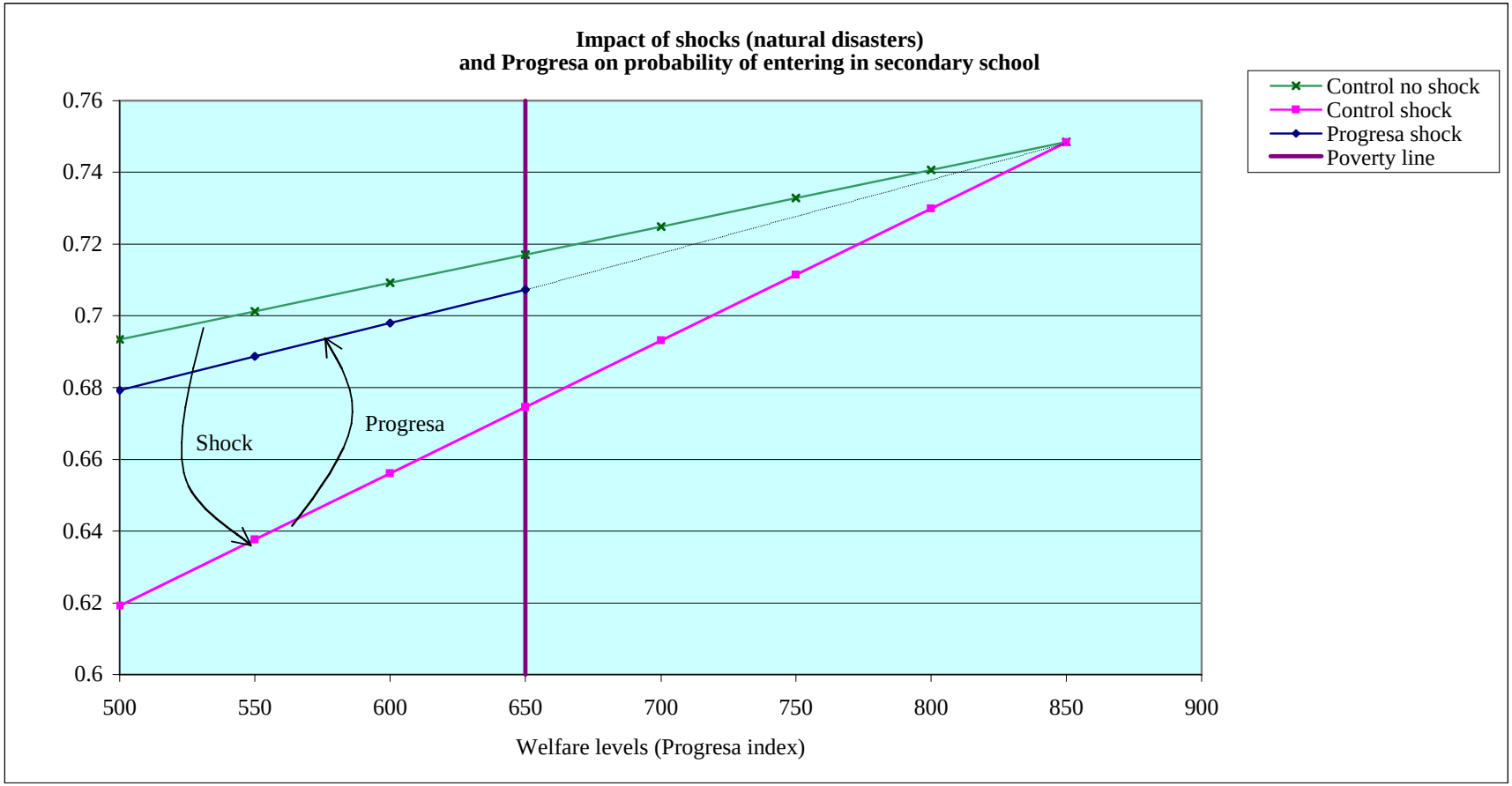
Table 7. Percentage of households taking children out of school to cope with shocks, by eligibility method and shock (Nicaragua Pilot)

	Households eligibility decided on the basis of:	
Shock	Poverty	Risk exposure
Drought	7 [6, 9]	4 [3, 5]*
Increase in consumer prices	8 [7, 9]	4 [3, 5]*
Theft	13 [7, 18]	7 [2, 11]*
Mudslide	12 [7, 17]	7 [2, 12]*
Health shock of working member	14 [7, 21]	6 [2, 11]*
Flood	16 [8, 25]	9 [1, 17]
Unemployment	16 [5, 26]	9 [1, 18]
Death	11 [-5, 26]	16 [-2, 34]

* significant difference at 10%

95 % confidence intervals in brackets

Figure 1. Impact of Progresa transfers as a safety net for the poor and the vulnerable



Social Protection Discussion Paper Series Titles

No.	Title
0604	Uninsured Risk and Asset Protection: Can Conditional Cash Transfer Programs Serve as Safety Nets? by Alain de Janvry, Elisabeth Sadoulet, Pantelis Solomon and Renos Vakis, June 2006
0603	Examining Conditional Cash Transfer Programs: A Role for Increased Social Inclusion? by Bénédicte de la Brière and Laura B. Rawlings, June 2006 (online only)
0602	Civil-service Pension Schemes Around the World by Robert Palacios and Edward Whitehouse, May 2006 (online only)
0601	Social Pensions Part I: Their Role in the Overall Pension System by Robert Palacios and Oleksiy Sluchynsky, May 2006 (online only)
0543	Complementing Natural Disasters Management: The Role of Social Protection by Renos Vakis, February 2006
0542	Brazil's Bolsa Escola Program: The Role of Local Governance in Decentralized Implementation by Alain de Janvry, Frederico Finan, Elisabeth Sadoulet, Donald Nelson, Kathy Lindert, Bénédicte de la Brière and Peter Lanjouw, December 2005 (online only)
0541	Japan's Pension Reform by Junichi Sakamoto, December 2005 (online only)
0540	Demographic Alternatives for Aging Industrial Countries: Increased Total Fertility Rate, Labor Force Participation, or Immigration by Robert Holzmann, December 2005 (online only)
0539	Disability, Poverty and Schooling in Developing Countries: Results from 11 Household Surveys by Deon Filmer, November 2005 (online only)
0538	Food Aid and Food Security in the Short- and Long Run: Country Experience from Asia and sub-Saharan Africa by Carlo del Ninno, Paul A. Dorosh and Kalanidhi Subbarao, November 2005 (online only)

0537 The New Pensions in Kazakhstan: Challenges in Making the Transition
by Richard P. Hinz, Asta Zviniene, and Anna-Marie Vilamovska, September 2005 (online only)

0536 Household's Vulnerability to Shocks in Zambia
by Carlo del Ninno and Alessandra Marini, September 2005 (online only)

0535 Linking Community Empowerment, Decentralized Governance, and Public Service Provision through a Local Development Framework
By Louis Helling, Rodrigo Serrano, David Warren, September 2005

0534 Youth Employment in the MENA Region: A Situational Assessment
by Nader Kabbani and Ekta Kothari, September 2005

0533 Measuring Risk Perceptions: Why and How
by Joachim De Weerdt, July 2005

0532 Implementing Means-Tested Welfare Systems in the United States
by Kathy Lindert, June 2005 (online only)

0531 La Focalización En El Programa De Desarrollo Humano Oportunidades De Mexico
by Mónica Orozco y Cecilia Hubert, June 2005 (online only)

0530 Sistema de Identificación de la Población Objetivo: SIPO en Costa Rica
by Roxana M. Víquez, June 2005 (online only)

0529 Targeting Social Spending To The Poor With Proxy–Means Testing: Colombia's SISBEN System
by Tarsicio Castañeda, June 2005 (online only)

0528 Focalización De Programas En Chile: El Sistema CAS
by Osvaldo Larrañaga, June 2005 (online only)

0527 Reforming Brazil's Cadastro Único to Improve the Targeting of the Bolsa Família Program
by Bénédicte de la Brière and Kathy Lindert , June 2005 (online only)

0526 Designing and Implementing Household Targeting Systems: Lessons from Latin American and The United States
by Tarsicio Castañeda and Kathy Lindert, with Bénédicte de la Brière, Luisa Fernandez, Celia Hubert, Osvaldo Larrañaga, Mónica Orozco, and Roxana Viquez, June 2005 (online only)
Also available in Portuguese.

0525 Unequal Prospects: Disparities in the Quantity and Quality of Labour Supply in sub-Saharan Africa
by John Sender, Christopher Cramer and Carlos Oya, June 2005

0524 Pension Supervision: Understanding International Practice and Country Context
by Richard P. Hinz and Anca Mataoanu, May 2005

0523 Social Security Coverage in Latin America
by Rafael Rofman, May 2005

0522 A Technology White Paper on Improving the Efficiency of Social Safety Net Program Delivery in Low Income Countries: An Introduction to Available and Emerging Mobile Technologies
by Mike Gallaher, May 2005 (online only)

0521 Aging and Poverty in Africa and the Role of Social Pensions
by Nanak Kakwani and Kalanidhi Subbarao, May 2005 (online only)

0520 Delivery Mechanisms of Cash Transfer Programs to the Poor in Bangladesh
by Shaikh S. Ahmed, May 2005 (online only)

0519 Portability Regimes of Pension and Health Care Benefits for International Migrants: An Analysis of Issues and Good Practices
by Robert Holzmann, Johannes Koettl, and Taras Chernetsky, May 2005 (online only)

0518 Who Has the Yam, and Who Has the Knife? Social Action Funds and Decentralization in Malawi, Tanzania, and Uganda
by N. Mungai Lenneiye, May 2005

0517 Household Vulnerability and Children's Activities: Information Needed from Household Surveys to Measure their Relationship
by Diane Steele, May 2005 (online only)

0516 The Effect of Child Labor on Mathematics and Language Achievement in Latin America
by Mario A. Sanchez, Peter F. Orazem, and Victoria Gunnarsso, May 2005

0515 The Inter-Generational Persistence of Child Labor
by Patrick M. Emerson and André Portela Souza, May 2005

0514 How Does Working as a Child affect Wage, Income and Poverty as an Adult?
by Nadeem Ilahi, Peter F. Orazem, and Guilherme Sedlacek, May 2005

0513 Dynamics of Child Labor: Labor Force Entry and Exit in Urban Brazil
by Suzanne Duryea, Jasper Hoek, David Lam, and Deborah Levison, May 2005

0512 The Responses of Child Labor, School Enrollment, and Grade Repetition to the Loss of Parental Earnings in Brazil, 1982-1999
by Marcelo Côrtes Neri, Emily Gustafsson-Wright, Guilherme Sedlacek, and Peter F. Orazem, May 2005

0511 Child Labor, Schooling, and Poverty in Latin America
by Guilherme Sedlacek, Suzanne Duryea, Nadeem Ilahi, and Masaru Sasaki, May 2005

0510 Changing Patterns of Child Labor around the World since 1950: The Roles of Income Growth, Parental Literacy and Agriculture
by Victoria Gunnarsson, Peter F. Orazem, and Guilherme Sedlacek, May 2005

0509 Disability and Social Safety Nets in Developing Countries
by Sophie Mitra, May 2005

0508 Social Funds: A Review of Public Sector Management and Institutional Issues
by Mukhmeet Bhatia, May 2005

0507 Pension Reform in El Salvador
by Rodrigo Acuña, April 2005

0506 How Changes in Benefits Entitlement Affect Job- Finding: Lessons from the Slovenian "Experiment"
by Jan van Ours and Milan Vodopivec, April 2005

0505 A Guide to Multisector Labor Market Models
by Gary S. Fields, April 2005

0504 Multinational Enterprises and Training Revisited: Do International Standards Matter?
by Niels-Hugo Blunch and Paula Castro, March 2005

0503 Community-Based Health Insurance & Social Protection Policy
by Steven Tabor, March 2005 (online only)

0502 Towards a Better Understanding of the Nature, Causes and Consequences of Youth Labor Market Disadvantage: Evidence for South-East Europe
by Alexandre Kolev and Catherine Saget, March 2005 (online only)

0501 A Lecture on the Political Economy of Targeted Safety Nets
by Lant Pritchett, January 2005

0420 Can Conditional Cash Transfer Programs Improve Social Risk Management? Lessons for Education and Child Labor Outcomes
by Elisabeth Sadoulet, Frederico Finan, Alain de Janvry, and Renos Vakis, December 2004

0419 Measuring Welfare for Small but Vulnerable Groups. Poverty and Disability in Uganda
by Johannes G. Hoogeveen, September 2004

0418 Institutional Analysis Toolkit for Safety Net Interventions
by Inke Mathauer, August 2004

0417 Trade Union Participation in the PRSP Process
by Lawrence Egulu, August 2004

0416 A New Approach to Social Assistance: Latin America's Experience with Conditional Cash Transfer Programs
by Laura B. Rawlings, August 2004

0415 Shocks and Coffee: Lessons from Nicaragua
by Renos Vakis, Diana Kruger and Andrew D. Mason, July 2004

0414 Costs of Projects for Orphans and other Vulnerable Children: Case studies in Eritrea and Benin
by Menahem Prywes, Diane Coury, Gebremeskel Fesseha, Gilberte Hounsounou, and Anne Kielland, July 2004

0413 Disability Employment Policy
by Daniel Mont, July 2004

0412 Child Labor, Education, and Children's Rights
by Gordon Betcherman, Jean Fares, Amy Luinstra, and Robert Prouty, July 2004

0411 Challenges and Opportunities of International Migration for the EU, Its Member States, Neighboring Countries and Regions: A Policy Note
by Robert Holzmann and Rainer Münz, June 2004

0410 Evaluating Different Approaches to Estimating Vulnerability
by Ethan Ligon and Laura Schechter, June 2004

0409 Transferring Cash Benefits Through the Banking Sector in Colombia
by Maria Teresa Lafaurie V. And Claudia A. Velasquez Leiva, May 2004

0408 Mitigating Social Risks in Kyrgyz Republic
by Emil Tesliuc, April 2004

0407 Toward a Reformed and Coordinated Pension System in Europe: Rationale and Potential Structure
by Robert Holzmann, April, 2004

0406 Boosting Productivity Via Innovation and Adoption of New Technologies: Any Role for Labor Market Institutions?
by Stefano Scarpetta and Thierry Tressel, March 2004

0405 Mitigating the Social Impact of Privatization and Enterprise Restructuring
by David H. Fretwell, March 2004

0404 Risk and Vulnerability in Guatemala: A Quantitative and Qualitative Assessment
by Emil D. Tesliuc and Kathy Lindert, March 2004

0403 Implicit Pension Debt: Issues, Measurement and Scope in International Perspective
by Robert Holzmann, Robert Palacios and Asta Zviniene, March 2004

0402 Impacts of Active Labor Market Programs: New Evidence from Evaluations with Particular Attention to Developing and Transition Countries
by Gordon Betcherman, Karina Olivas and Amit Dar, January 2004

0401 Consumption Insurance and Vulnerability to Poverty: A Synthesis of the Evidence from Bangladesh, Ethiopia, Mali, Mexico and Russia
by Emmanuel Skoufias and Agnes R. Quisumbing, January 2004

0327 Community-Based Social Services: Practical Advice Based upon Lessons from Outside the World Bank
by Dinah McLeod, December 2003 (online only)

0326 Pension Reform in the Dominican Republic
by Robert J. Palacios, December 2003

0325 Disability Pensions and Social Security Reform: Analysis of the Latin American Experience
by Carlos O. Grushka and Gustavo Demarco, December 2003

0324 Methods for Microeconometric Risk and Vulnerability Assessments
by John Hoddinott and Agnes Quisumbing, December 2003

0323 Data Sources for Microeconometric Risk and Vulnerability Assessments
by John Hoddinott and Agnes Quisumbing, December 2003

0322 Household Vulnerability and Child Labor: The Effect of Shocks, Credit Rationing and Insurance
by Lorenzo Guarcello, Fabrizia Mealli and Furio Camillo Rosati, November 2003

0321 Trends in the Youth Labour Market in Developing and Transition Countries
by Niall O'Higgins, October 2003

0320 Youth Employment Policy in Developing and Transition Countries - Prevention as well as Cure
by Martin Godfrey, October 2003

0319 Testing Vietnam's Public Safety Net
by Dominique van de Walle, October 2003

0318 The Other Side of Self-Employment: Household Enterprises in India
by Maitreyi Bordia Das, September 2003

0317 Child Labor: What Have We Learnt?
by Sonia Bhalotra and Zafiris Tzannatos, September 2003

0316 Social Safety Net Assessments from Central America: Cross-Country Review of Principal Findings
by José Silvério Marques, August 2003

0315 Benchmarking Government Provision of Social Safety Nets
by Timothy Besley, Robin Burgess and Imran Rasul, August 2003

0314 Targeted Transfers in Poor Countries: Revisiting the Trade-Offs and Policy Options
by Martin Ravallion, May 2003

0313 Why are Educated Women Less Likely to be Employed in India? Testing Competing Hypotheses
by Maitreyi Bordia Das and Sonalde Desai, May 2003

0312 Politicas Y Programas De Juventud En América Latina Y El Caribe: Contexto Y Principales Caracteristicas
by Francisco Pilotti y María Claudia Camacho, April 2003

0311 Redirecting Resources to Community Based Services: A Concept Paper
by Louise Fox and Ragnar Götestam, April 2003

0310 Unemployment Benefit Systems in Central and Eastern Europe: A Review of the 1990s
by Milan Vodopivec, Andreas Wörgötter and Dhushyanth Raju, March 2003

0309 Gender and Social Funds: Challenges and Opportunities
by Kathleen Kuehnast, March 2003

0308 Waivers and Exemptions for Health Services in Developing Countries
by Ricardo Bitrán and Ursula Giedion, March 2003

0307 Ageing and Pensions in the Euro Area: Survey and Projection Results
by P. C. Rother, M. Catenaro and G. Schwab, March 2003

0306 Safety Nets in Transition Economies: A Primer
by Louise Fox, March 2003

0305 Child Work: An Expository Framework of Altruistic and Non-Altruistic Models
by Furio Camillo Rosati and Zafiris Tzannatos, March 2003

0304 Pension Reform in Croatia
by Zoran Anusic, Philip O'Keefe, and Sanja Madzarevic-Sujster, February 2003

0303 Joblessness and Precarious Work in Bulgaria: Addressing the Multiple Aspects of Vulnerability in the Labour Market
by Alexandre Kolev, February 2003

0302 Systemic Shocks and Social Protection: Role and Effectiveness of Public Works Programs
by Kalanidhi Subbarao, January 2003

0301 What Role for Safety Net Transfers in Very Low Income Countries?
by W. James Smith and Kalanidhi Subbarao, January 2003

0233 Public Attitudes Matter: A Conceptual Frame for Accounting for Political Economy in Safety Nets and Social Assistance Policies
by Carol Graham, December 2002

0232 Ensuring Access to Essential Services: Demand-Side Housing Subsidies
by Harold M. Katsura and Clare T. Romanik, December 2002

0231 Gender and Risk in the Design of Social Protection Interventions
by Kene Ezemenari, Nazmul Chaudhury, and Janet Owens, December 2002

0230 Vulnerability and Poverty Measurement Issues for Public Policy
by Jean-Yves Duclos, December 2002

0229 Emerging from Ethnic Conflict: Challenges for Social Protection Design in Transition Countries
by Christian Bodewig, December 2002

0228 Child Work in Zambia: A Comparative Study of Survey Instruments
by Niels-Hugo Blunch, Amit Dar, Lorenzo Guarcello, Scott Lyon, Amy Ritualo and Furio Rosati, December 2002

0227 Strengthening Public Safety Nets from the Bottom Up
by Jonathan Morduch and Manohar Sharma, September 2002

0226 Incentives and the Role of Institutions in Provision of Social Safety Nets
by Chris de Neubourg, September 2002

0225 Food-Based Safety Nets and Related Programs
by Beatrice Lorge Rogers, Ph.D. and Jennifer Coates, M.S., September 2002

0224 Subsidies as a Social Safety Net: Effectiveness and Challenges
by Harold Alderman, September 2002

0223 Assisting the Poor with Cash: Design and Implementation of Social Transfer Programs
by Steven R. Tabor, September 2002

0222 Effectiveness of Lending for Vocational Education and Training: Lessons from World Bank Experience
by S. Canagarajah, A. Dar, R. Nording and D. Raju, September 2002

0221 Participation of Children in Schooling and Labor Activities: A Review of Empirical Studies
by Amit Dar, Niels-Hugo Blunch, Bona Kim and Masaru Sasaki, August 2002

0220 The World Bank and Children: A Review of Activities
by Iqbal Kaur and Zafiris Tzannatos, July 2002

0219 Managing Public Pension Reserves Part II: Lessons from Five Recent OECD Initiatives
by Robert Palacios, July 2002

0218 Guidelines for Assessing the Sources of Risk and Vulnerability
by Karin Heitzmann, R. Sudharshan Canagarajah and Paul B. Siegel, June 2002

0217 Czech Pension System: Challenges and Reform Options
by Esperanza Lasagabaster, Roberto Rocha and Patrick Wiese, June 2002

0216 Extending Social Protection to Informal Workers in the Horticulture Global Value Chain
by Armando Barrientos and Stephanie Ware Barrientos, June 2002

0215 Social Fund Support of Microfinance: A Review of Implementation Experience
by Alexandra Gross and Samantha de Silva, June 2002

0214 Income Support Systems for the Unemployed: Issues and Options
by Milan Vodopivec and Dhushyanth Raju, May 2002

0213 Social Protection @ Your Fingertips. Using Information & Communications Technologies in Social Protection
by Knut Leipold, May 2002

0212 Short-and Long-term Impacts of Economic Policies on Child Labor and Schooling in Ghana
by Niels-Hugo Blunch, Sudharshan Canagarajah and Sangeeta Goyal, May 2002

0211 Supporting and Expanding Community-Based HIV/AIDS Prevention and Care Responses: A Report on Save the Children (US) Malawi COPE Project
by Susan S. Hunter, May 2002

0210 World Vision's Experience Working with HIV/AIDS Orphans in Uganda - 1990-1995
by Joe Muwonge, May 2002

0209 The Reformed Pension Systems in Latin America
by José E. Devesa-Carpio and Carlos Vidal-Meliá, May 2002

0208 Mandatory Annuity Design in Developing Economies
by Suzanne Doyle and John Piggott, May 2002

0207 Long-Term Welfare and Investment Impact of AIDS-Related Changes in Family Composition: Evidence from Uganda
by Klaus Deininger, Anja Crommelynck and Gloria Kempaka, May 2002

0206 Child Labor Handbook
by Alessandro Cigno, Furio C. Rosati and Zafiris Tzannatos, May 2002

0205 An Overview of Labor Markets World-Wide: Key Trends and Major Policy Issues
by Gordon Betcherman, April 2002

0204 Options of Public Income Support for the Unemployed in the Philippines and Social Protection
by Jude H. Esguerra, Makoto Ogawa, and Milan Vodopivec, April 2002

0203 Unemployment Insurance and Unemployment Assistance: A Comparison
by Wayne Vroman, April 2002

0202 Does Eurosclerosis Matter? Institutional Reform and Labor Market Performance in Central and Eastern European Countries in the 1990s.
by Michelle Riboud, Carolina Sánchez-Páramo and Carlos Silva-Jáuregui, March 2002

0201 Pension Reform and Capital Markets: Are There Any (Hard) Links?
by Eduardo Walker and Fernando Lefort, February 2002

* The papers below (No. 9801-0131) are no longer being printed, but are available for download from our website at www.worldbank.org/sp

0131 Child Labor, Nutrition and Education in Rural India: An Economic Analysis of Parental Choice and Policy Options
by Alessandro Cigno, Furio Camillo Rosati and Zafiris Tzannatos, December 2001

0130 Social Protection and the Informal Sector in Developing Countries: Challenges and Opportunities
by Sudharshan Canagarajah and S.V. Sethuraman, December 2001

0129 Chile´s Pension Reform After 20 Years
by Rodrigo Acuña R. and Augusto Iglesias P., December 2001

0128 Labor Market Regulation: International Experience in Promoting Employment and Social Protection
by Gordon Betcherman, Amy Luinstra, and Makoto Ogawa, November 2001

0127 Generational Accounting and Hungarian Pension Reform
by Róbert I. Gál, András Simonovits and Géza Tarcali, October 2001

0126 Orphans and Other Vulnerable Children: What role for social protection?
edited by Anthony Levine, October 2001

0125 Child Farm Labour: The Wealth Paradox
by Sonia Bhalotra and Christopher Heady, September 2001

0124 What Can Be Done about Child Labor? An Overview of Recent Research and Its Implications for Designing Programs to Reduce Child Labor
by Bjørne Grimsrud, October 2001

0123 Measuring and Analyzing Child Labor: Methodological Issues
by Bjørne Grimsrud, October 2001

0122 Family-Controlled Child Labor in Sub-Saharan Africa-A Survey of Research
by Jens Christopher Andvig, October 2001

0121 Is Child Work Necessary?
by Sonia Bhalotra, October 2001

0120 The Cost and Benefits of Collective Bargaining: A Survey
by Toke Aidt and Zafiris Tzannatos, September 2001

0119 The Informal Sector Revisited: A Synthesis Across Space and Time
by Niels-Hugo Blunch, Sudharshan Canagarajah and Dhushyanth Raju, July 2001

0118 Social Services Delivery through Community-Based Projects
by Dinah McLeod and Maurizia Tovo (available in Spanish), July 2001

0117 Earnings Inequality in Transition Economies of Central Europe Trends and Patterns During the 1990s
by Jan J. Rutkowski, July 2001

0116 Viewing Microinsurance as a Social Risk Management Instrument
by Paul B. Siegel, Jeffrey Alwang and Sudharshan Canagarajah, June 2001

0115 Vulnerability: A View from Different Disciplines
by Jeffrey Alwang, Paul B. Siegel and Steen L. Jorgensen, June 2001

0114 Individual Accounts as Social Insurance: A World Bank Perspective
by Robert Holzmann and Robert Palacios, June 2001

0113 Regulating Private Pension Funds' Structure, Performance and Investments: Cross-country Evidence
by P.S. Srinivas, Edward Whitehouse and Juan Yermo, July 2001

0112 The World Bank and the Provision of Assistance to Redundant Workers: Experience with Enterprise Restructuring and Future Directions
by Yi Chen, April 2001

0111 Labor Markets in Transition Economies: Recent Developments and Future Challenges
by Mansoora Rashid and Jan Rutkowski, April 2001

0110 Operating Instruction Included: A Review of Social Investment Fund Operations Manuals
by Juliana Weissman, April 2001

0109 Risk and Vulnerability: The Forward Looking Role of Social Protection in a Globalizing World
by Robert Holzmann, March 2001

0108 Australia's Mandatory Retirement Saving Policy: A View from the New Millennium
by Hazel Bateman and John Piggott, March 2001

0107 Annuity Markets and Benefit Design in Multipillar Pension Schemes: Experience and Lessons from Four Latin American Countries
by Robert Palacios and Rafael Rofman, March 2001

0106 Guide for Task Teams on Procurement Procedures Used in Social Funds
by Jorge A. Cavero Uriona, February 2001

0105 Programmes Actifs Pour Le Marche Du Travail: Un Aperçu General Des Evidences Resultant Des Evaluations
by Zafiris Tzannatos and Amit Dar, January 2001

0104 Kazakhstan: An Ambitious Pension Reform
by Emily S. Andrews, January 2001

0103 Long-term Consequences of an Innovative Redundancy-retraining Project: The Austrian Steel Foundation
by Rudolf Winter-Ebmer, January 2001

0102 Community Based Targeting Mechanisms for Social Safety Nets
by Jonathan Conning and Michael Kevane (available in Spanish), January 2001

0101 Disability and Work in Poland
by Tom Hoopengardner, January 2001

0024 Do Market Wages Influence Child Labor and Child Schooling?
by Jackline Wahba, December 2000

0023 Including the Most Vulnerable: Social Funds and People with Disabilities
by Pamela Dudzik and Dinah McLeod, September 2000

0022 Promoting Good Local Governance through Social Funds and Decentralization
by Andrew Parker and Rodrigo Serrano, September 2000

0021 Creating Partnerships with Working Children and Youth
by Per Miljeteig, August 2000

0020 Contractual Savings or Stock Market Development. Which Leads?
by Mario Catalan, Gregorio Impavido and Alberto R. Musalem, August 2000

0019 Pension Reform and Public Information in Poland
by Agnieszka Chlon, August 2000

0018 Worker Reallocation During Estonia's Transition to Market: How Efficient and How Equitable?
by Milan Vodopivec, July 2000

0017 How Poor are the Old? A Survey of Evidence from 44 Countries
by Edward Whitehouse, June 2000

0016 Administrative Charges for Funded Pensions: An International Comparison and Assessment
by Edward Whitehouse, June 2000

0015 The Pension System in Argentina: Six years after the Reform
by Rafael Rofman, June 2000

0014 Pension Systems in East Asia and the Pacific: Challenges and Opportunities
by Robert Holzmann, Ian W. Mac Arthur and Yvonne Sin, June 2000

0013 Survey of Disability Projects. The Experience of SHIA, Swedish International Aid for Solidarity and Humanity
by Kaj Nordquist, June 2000

0012 The Swedish Pension Reform Model: Framework and Issues
by Edward Palmer, June 2000

0011 Ratcheting Labor Standards: Regulation for continuous Improvement in the Global Workplace
by Charles Sabel, Dara O'Rourke and Archon Fung, May 2000

0010 Can Investments in Emerging Markets Help to Solve the Aging problem?
by Robert Holzmann, May 2000

0009 International Patterns of Pension Provision
by Robert Palacios and Montserrat Pallarès-Miralles, April 2000

0008 Regulation of Withdrawals in Individual Account Systems
by Jan Walliser, January 2000

0007 Disability Issues, Trends and Recommendations for the World Bank
by Robert L. Metts, February 2000

0006 Social Risk Management: A New Conceptual Framework for Social Protection and Beyond
by Robert Holzmann and Steen Jørgensen, February 2000

0005 Active Labor Market Programs: Policy Issues for East Asia
by Gordon Betcherman, Amit Dar, Amy Luinstra, and Makoto Ogawa, January 2000

0004 Pension Reform, Financial Literacy and Public Information: A Case Study of the United Kingdom
by Edward Whitehouse, January 2000

0003 Managing Public Pension Reserves Part I: Evidence from the International Experience
by Augusto Iglesias and Robert J. Palacios, January 2000

0002 Extending Coverage in Multi-Pillar Pension Systems: Constraints and Hypotheses, Preliminary Evidence and Future Research Agenda
by Robert Holzmann, Truman Packard and Jose Cuesta, January 2000

0001 Contribution pour une Stratégie de Protection Sociale au Bénin
by Maurizia Tovo and Regina Bendokat, January 2000

9934 Helping the Poor Manage Risk Better: The Role of Social Funds
by Steen Jørgensen and Julie Van Domelen, December 1999

9933 Coordinating Poverty Alleviation Programs with Regional and Local Governments: The Experience of the Chilean Social Fund - FOSIS
by Jorge C. Barrientos, December 1999

9932 Poverty and Disability: A Survey of the Literature
by Ann Elwan, December 1999

9931 Uncertainty About Children's Survival and Fertility: A Test Using Indian Microdata
by Vincenzo Atella and Furio Camillo Rosati, December 1999

9930 Beneficiary Assessment Manual for Social Funds
by Lawrence F. Salmen, December 1999

9929 Improving the Regulation and Supervision of Pension Funds: Are There Lessons from the Banking Sector?
by Roberto Rocha, Richard Hinz, and Joaquin Gutierrez, December 1999

9928 Notional Accounts as a Pension Reform Strategy: An Evaluation
By Richard Disney, December 1999

9927 Reform Options for Pay-As-You-Go Public Pension Systems
by Sheetal K. Chand and Albert Jaeger, December 1999

9926 An Asset-Based Approach to Social Risk Management: A Conceptual Framework
by Paul Siegel and Jeffrey Alwang, October 1999

9925 Migration from the Russian North During the Transition Period
by Timothy Heleniak, September 1999

9924 Pension Plans and Retirement Incentives
by Richard Disney and Edward Whitehouse, September 1999

9923 Shaping Pension Reform in Poland: Security Through Diversity
by Agnieszka Chlon, Marek Góra and Michal Rutkowski, August 1999

9922 Latvian Pension Reform
by Louise Fox and Edward Palmer, September 1999

9921 OECD Public Pension Programmes in Crisis: An Evaluation of the Reform Options
by Richard Disney, August 1999

9920 A Social Protection Strategy for Togo
by Regina Bendokat and Maurizia Tovo, July 1999

9919 The Pension System in Singapore
by Mukul G. Asher, August 1999

9918 Labor Markets and Poverty in Bulgaria
by Jan J. Rutkowski, August 1999

9917 Taking Stock of Pension Reforms Around the World
by Anita M. Schwarz and Asli Demirguc-Kunt, May 1999

9916 Child Labor and Schooling in Africa: A Comparative Study
by Sudharshan Canagarajah and Helena Skyt Nielsen, July 1999

9915 Evaluating the Impact of Active Labor Programs: Results of Cross Country Studies in Europe and Central Asia
by David H. Fretwell, Jacob Benus, and Christopher J. O'Leary, June 1999

9914 Safety Nets in Transition Economies: Toward a Reform Strategy
by Emily S. Andrews and Dena Ringold, June 1999

9913 Public Service Employment: A Review of Programs in Selected OECD Countries and Transition Economies
by Sandra Wilson and David Fretwell, June 1999

9912 The Role of NPOs in Policies to Combat Social Exclusion
by Christoph Badelt, June 1999

9911 Unemployment and Unemployment Protection in Three Groups of Countries
by Wayne Vroman, May 1999

9910 The Tax Treatment of Funded Pensions
by Edward Whitehouse, April 1999

9909 Russia's Social Protection Malaise: Key Reform Priorities as a Response to the Present Crisis
edited by Michal Rutkowski, March 1999

9908 Causalities Between Social Capital and Social Funds
by Jesper Kammersgaard, March 1999

9907 Collecting and Transferring Pension Contributions
by Rafael Rofman and Gustavo Demarco, February 1999

9906 Optimal Unemployment Insurance: A Guide to the Literature
by Edi Karni, January 1999

9905 The Effects of Legislative Change on Female Labour Supply: Marriage and Divorce, Child and Spousal Support, Property Division and Pension Splitting
by Antony Dnes, January 1999

9904 Social Protection as Social Risk Management: Conceptual Underpinnings for the Social Protection Sector Strategy Paper
by Robert Holzmann and Steen Jorgensen (available in Russian), January 1999

9903 A Bundle of Joy or an Expensive Luxury: A Comparative Analysis of the Economic Environment for Family Formation in Western Europe
by Pierella Paci, January 1999

9902 World Bank Lending for Labor Markets: 1991 to 1998
by Amit Dar and Zafiris Tzannatos, January 1999

9901 Active Labor Market Programs: A Review of the Evidence from Evaluations
by Amit Dar and Zafiris Tzannatos, January 1999

9818 Child Labor and School Enrollment in Thailand in the 1990s
By Zafiris Tzannatos, December 1998

9817 Supervising Mandatory Funded Pension Systems: Issues and Challenges
by Gustavo Demarco and Rafael Rofman, December 1998

9816 Getting an Earful: A Review of Beneficiary Assessments of Social Funds
by Daniel Owen and Julie Van Domelen, December 1998

~~9815~~ This paper has been revised, see Discussion Paper No. 9923

9814 Family Allowances
by Suzanne Roddis and Zafiris Tzannatos, March 1999

9813 Unemployment Benefits
by Zafiris Tzannatos and Suzanne Roddis, October 1998

9812 The Role of Choice in the Transition to a Funded Pension System
by Robert Palacios and Edward Whitehouse, September 1998

9811 An Alternative Technical Education System: A Case Study of Mexico
by Kye Woo Lee, July 1998

9810 Pension Reform in Britain
by Edward Whitehouse, June 1998

9809 Financing the Transition to Multipillar
by Robert Holzmann, December 19998

9808 Women and Labor Market Changes in the Global Economy: Growth Helps, Inequalities Hurt and Public Policy Matters
by Zafiris Tzannatos, April 1998

9807 The World Bank Approach to Pension Reform
by Robert Holzmann, December 1999

9806 Government Guarantees on Pension Fund Returns
by George Pennacchi, April 1998

9805 The Hungarian Pension System in Transition
by Robert Palacios and Roberto Rocha, April 1998

9804 Risks in Pensions and Annuities: Efficient Designs
by Salvador Valdes-Prieto, February 1998

9803 Building an Environment for Pension Reform in Developing Countries
by Olivia S. Mitchell, January 1998

9802 Export Processing Zones: A Review in Need of Update
by Takayoshi Kusago and Zafiris Tzannatos, January 1998

9801 World Bank Lending for Labor Markets: 1991 to 1996
by Amit Dar and Zafiris Tzannatos, January 1998

Summary Findings

Conditional cash transfer (CCT) programs have proved to be effective in inducing chronic poor households to invest in the human capital of their children while helping reduce poverty. They have also protected child human capital from the shocks that affect these households. In this paper, we argue that many non-poor households exposed to uninsured shocks have to use children as risk coping instruments, creating long term irreversibilities in child human capital development. We explore how CCT programs can be designed to serve as safety nets for the vulnerable non-poor when hit by a shock. This would help them not use children as risk coping instruments, thus avoiding long term irreversibilities in child human capital development and creation of a source of new poor.

HUMAN DEVELOPMENT NETWORK