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LINKING THEORY AND PRACTICE TO ELIMINATE THE WORST FORMS OF CHILD LABOR

Linking Theory and Practice to Eliminate the Worst Forms of CHILD LABOR

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BUREAU OF INTERNATIONAL LABOR AFFAIRS RESEARCH SYMPOSIUM PAPERS

LINKING THEORY AND PRACTICE TO ELIMINATE THE WORST FORMS OF CHILD LABOR

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Introduction

United States Department of Labor

Bureau of International Labor Affairs

Office of Child Labor, Forced Labor, and Human Trafficking

The Bureau of International Labor Affairs (ILAB) carries out the international responsibilities of the Department of Labor under the direction of the Deputy Undersecretary for International Labor Affairs. ILAB conducts research on and formulates international economic, trade, immigration, and labor policies in collaboration with other U.S. Government agencies and provides international technical assistance in support of U.S. foreign labor policy objectives. ILAB is working together with other U.S. Government agencies to create a more stable, secure, and prosperous international economic system in which all workers can achieve greater economic security, share in the benefits of increased international trade, and have safer and healthier workplaces where the basic rights of workers and children are respected and protected. ILAB's Office of Child Labor, Forced Labor and Human Trafficking (OCFT), formerly the International Child Labor Program (ICLP), was created at the request of Congress in 1993 to investigate and report on child labor around the world. More recently Congress, through the Trafficking Victims Protection Reauthorization Act of 2005, directed the Office to include, among its responsibilities, monitoring and combating forced labor and human trafficking

Today, OCFT develops policy, researches, investigates, and reports on international child labor, trafficking in persons, and forced labor, and supports efforts to eradicate exploitive child labor worldwide.

Research and Policy

Since 1994, ILAB has published annual reports on international child labor, which have been widely distributed in the United States and abroad. Since 2001, these reports have focused on child labor in trade beneficiary countries and countries with which the United States has negotiated free trade agreements.

OCFT also convenes public hearings and symposia to raise public awareness and understanding of international child labor issues. From 1994 through 1998, OCFT held public hearings to gather information on international child labor practices. In 1995, the Office conducted a Washington D.C. symposium of international experts discussing the problem of child prostitution. In May 2000, in conjunction with the International Labor Organization's International Program on the Elimination of Child Labor (ILO-IPEC), DOL sponsored a conference, *Advancing the Global Campaign Against Child Labor: Progress Made and Future Actions*, which highlighted innovative approaches to eliminating child labor around the world. In May 2003, U.S. Secretary of Labor Elaine L. Chao hosted representatives of the world community in a discussion of *Children in the Crossfire: Prevention and Rehabilitation of Child Soldiers*, to heighten the global awareness and response to the exploitation of child soldiers.

In addition to the research efforts carried out by OCFT, the Division of Economic and Labor Research (ELR) in the Office of Trade and Labor Affairs conducts economic and labor research that evaluates the effects of U.S. international economic policies and foreign economic developments. As part of its broad interest in internationally recognized worker rights, ELR has carried out technical economic research on child labor. It has also supplied technical support and peer reviews to the authors of the papers in this volume.

OCFT Technical Assistance

OCFT administers DOL grants to remove children from exploitive work, improve access to basic education for child laborers, and raise awareness about and increase knowledge on child labor worldwide. Since 1995, OCFT programs have withdrawn or prevented approximately 860,000 children from exploitive child labor and provided them with meaningful alternatives. OCFT's technical assistance programs fall into two categories: support for ILO-IPEC, and the Child Labor Education Initiative (EI).

OCFT and the International Program on the Elimination of Child Labor

Since 1995, OCFT has received appropriations of $330 million for technical cooperation projects with ILO-IPEC in the area of international child labor. Individually targeted programs allow countries that have demonstrated a political commitment to addressing their child labor problem to receive technical assistance support from IPEC. With U.S. funding, IPEC is enhancing the ability of these countries to develop, carry out, and enforce national policies and plans of action to combat child labor. National steering committees, with the participation of government, labor and industry groups as well as non-governmental organizations (NGOs), are established to develop and oversee the implementation of the national plans of action. These projects provide assistance to thousands of working children, including educational opportunities, vocational training, and income-generating opportunities for their families.

Child Labor Education Initiative (EI)

In 2001, OCFT launched the Child Labor Education Initiative (EI) to support international efforts to eliminate child labor through programs that improve access to basic education in areas with a high rate of abusive and exploitive child labor. Since then, DOL has invested $205 million in EI program activities to strengthen child labor elimination strategies and complement international and national efforts to reduce child labor by getting child laborers into school and keeping them there.

The Research Papers in this Volume

The studies in this volume were funded by OCFT to further the knowledge base on working children and to inform the design of effective interventions that address the needs of children working in or at risk of entering into the *worst forms of child labor* (WFCL). The WFCL are defined by the International Labor Organization Convention 182 as:

(a) All forms of slavery or practices similar to slavery, such as the sale and trafficking of children, debt bondage and serfdom and forced or compulsory labor, including forced or compulsory recruitment of children for use in armed conflict;

(b) The use, procuring or offering of a child for prostitution, for the production of pornography or for pornographic performances;

(c) The use, procuring or offering of a child for illicit activities, in particular for the production and trafficking of drugs as defined in the relevant international treaties;

(d) Work which, by its nature or the circumstances in which it is carried out, is likely to harm the health, safety, or morals of children.

The research papers probe the physical and mental health implications of the WFCL and investigate alternative income generation strategies as an instrument for reducing families' dependence on child labor. They were presented at a research symposium in Washington, D.C. on April 11-12, 2006.

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Can Investment in Household Enterprise Advance Children's School Attendance? Consequences of Poverty Alleviation Program in Indonesia

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Alternative Income Generation and Entry into Worst Forms of Child Labor: Theory and Evidence from Ragpickers, Porters, and Child Domestics in Nepal

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TEACHING ENTREPRENEURSHIP: IMPACT OF BUSINESS TRAINING ON MICROFINANCE CLIENTS AND INSTITUTIONS *

Dean Karlan and Martín Valdivia

ABSTRACT

Can one teach entrepreneurship, or is it a fixed personal characteristic? Most academic and policy discussion on micro entrepreneurs in developing countries focuses on their access to credit, and assumes their human capital to be fixed. However, a growing number of microfinance organizations are attempting to build the human capital of micro entrepreneurs in order to improve the livelihood of their clients and help further their mission of poverty alleviation. Using a randomized control trial, we measure the marginal impact of adding business training to a Peruvian village banking program for female micro entrepreneurs. Treatment groups received thirty to sixty minute entrepreneurship training sessions during their normal weekly or monthly banking meeting over a period of one to two years. Control groups remained as they were before, meeting at the same frequency but solely for making loan and savings payments. We find that the treatment led to improved business knowledge, practices and revenues. The microfinance institution also had direct benefits through higher repayment and client retention rates. Larger effects found for those that expressed less interest in training in a baseline survey have important implications for implementing similar market-based interventions with a goal of recovering costs.

Keywords: entrepreneurship, microfinance, business training, business skills, adult education
JEL Codes: C93, D12, D13, D21, 121, J24, 012

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I. INTRODUCTION

Can one teach entrepreneurship? Both macro growth models as well as micro market models often include human capital as a critical component. However, many of our models of entrepreneurial activity in developing countries treat human capital as fixed, and focus instead on financial constraints and information asymmetries in credit and equity markets (Banerjee and Newman 1993; Paulson and Townsend 2004). Similarly, much of the microfinance industry focuses on the infusion of financial capital into micro enterprises, not human capital, as if the entrepreneurs already have the necessary human capital. Some development practitioners, however, actively pursue strategies to teach adults (typically women) entrepreneurial skills. These programs are strikingly heterogeneous, and little is known about their impact on economic outcomes for the poor.

In this paper, we evaluate the marginal impact of adding entrepreneurship training to a microfinance program in Peru. Much tension exists in the development finance community regarding whether lenders should specialize in financial services only, or should integrate non-financial services into their programs (MkNelly, Watetip, Lassen and Dunford 1996).[1] The idea that specialization is good is certainly not new, but in this setting it is unknown whether the economies of scope outweigh the risks of having credit officers simultaneously become "teachers." The issue is starker in other "education" components such as health and nutrition training. Such other modules are often part of the "credit with education" approach, but this study focuses strictly on the business training modules. Aside from losing focus on the lending and savings activities, providing detailed business advice may lead to higher default if the borrower then perceives the lender as partially responsible for any business changes that do not succeed.

Similar entrepreneurship training has been used around the world by Freedom from Hunger (FFH), a US-based non-profit organization, as well as other organizations. FFH is considered the leader in the "credit with education" integrated model of microfinance and is directly responsible for work in 18 countries and over 30 financial institutions. Its influence in credit-linked training programs is evident from the adoption of its approach by other organizations without direct intervention from FFH and its prominent role at industry events such as the Microcredit Summit (Dunford 2002). However, little is known about the marginal impact of these non-financial services.[2] This study addresses this gap by implementing a randomized control trial to assess the marginal impact of incorporating such training into a microcredit program. The study was conducted with the Foundation for International Community Assistance (FINCA) in Peru, a "village banking" organization for poor, female micro entrepreneurs in Lima and Ayacucho. We randomly assigned pre-existing lending groups to either treatment or control. Treatment groups received the training as part of their mandatory

[1] In a third alternative, the "parallel" approach, non-financial services are provided to the same individuals by another organization (or other employees of the same organization) in coordination with the financial service provider.

[2] One notable exception is an analysis of the non-credit services offered by the microfinance institutions in Bangladesh. This study used a structural approach to estimate the impact of credit services and assumed the residual impact to be due to the non-credit aspect of the program (McKernan 2002). Prior evaluations of Freedom from Hunger have measured the impact of the entire package of credit with education versus no services, not the marginal value of the education to the credit program. A comparison has been done on Project HOPE's credit program with health education versus the credit program alone (Smith 2002). This study did not focus on specifically entrepreneurial training and was not a randomized control trial.

weekly meetings. Control groups remained as they were before, a credit and savings only group. We conducted a baseline survey before the intervention and a follow-up survey between one and two years later.

We find strong benefits for both the client and the microfinance institution. The client shows improved business processes and knowledge, and increased sales. The microfinance institution benefits from increased retention and repayment. Section II presents the nature of the intervention and basic hypothesis. Section III explains the experimental design, and Section IV details the data collected and empirical strategy. Section V presents the results, and Section VI concludes.

2. THE INTERVENTION AND ITS EXPECTED EFFECTS

The goal of the business training intervention is two-fold: to improve business outcomes and overall welfare for clients, and to improve institutional outcomes for the microfinance institution. Stronger business may demand more services, and clients may be less likely to default if they are satisfied (either due to higher cash flow or a stronger feeling of reciprocity). But the two goals do not need to reinforce each other. If business increases enough that clients "graduate" to larger formal sector banks, providing the business training could lead to lower client retention for the microfinance institution.

2.1 THE INTERVENTION

FINCA is a small, non-profit, but financially sustainable, microfinance institution (MFI) that has been operating in Peru since 1993, and is associated with FINCA International, a large US-based, non-profit organization responsible for creating and replicating the village banking methodology around the world. FINCA-Peru's mission is to improve the socio-economic situation of the poor and empower women through the promotion of the village-banking methodology. By providing them with working capital to increase inventory and invest in their businesses, FINCA expects to increase the earned income of its clients, primarily poor women with no collateral. In addition to providing credit, FINCA teaches its clients to save by requiring weekly or monthly savings deposits that correspond to the size of the loan the client has taken out and by encouraging additional voluntary savings for which they receive market interest rates. FINCA further aims to empower clients by giving them the opportunity to run their banks through their rotating participation on the village-bank board.

FINCA has operations in three particularly poor districts of Lima, and in two Andean provinces, Ayacucho and Huancavelica. As of June 2003, FINCA sponsored 273 village banks with a total of 6,429 clients, 96 percent of which were women. FINCA members, particularly those in Ayacucho, are relatively young and have little formal education. FINCA clients each hold, on average, $233 in savings whereas the average loan is $203, with a recovery rate of 99 percent. FINCA charges sufficient interest to be self-sustainable. Its sustainability indicator (Total income / Total expenses) was 99 percent in 1998; 105.5 percent in 1999; and 132.2 percent in August, 2000.

The business training materials were developed through a collaborative effort between FINCA, Atinchik,[3] and Freedom from Hunger (FFH), and had been used in the past in other projects.[4]

[3] Atinchik, a nine-year old firm, specializes in the generation of training materials in business management for micro-entrepreneurs. Atinchik had used similar training previously in a project for the World Bank.

The program included general business skills and strategy training, not client-specific problem-solving. Although the pedagogy did include discussion with the clients (not just lecture) and various short exercises, there was no part of the program that worked directly with an individual client on their individual business problems. Although the content of the training was similar in both locations, they were organized and presented differently to cater to the differences in educational levels and learning processes.[5] In Lima, clients received handouts and did homework, whereas in Ayacucho, teaching relied more heavily on visual aids and was sometimes in Quechua. The training materials in Lima were organized in two modules. The first module introduced attendees to what a business is, how a business works, and the marketplace. Clients were taught to identify their customers, competitors, and the position of the business in the marketplace and then learned about product, promotional strategies and commercial planning. The second module explained how to separate business and home finances by establishing the differences between income, costs, and profit, teaching how to calculate production costs, and product pricing. See Appendix A for more details on the content of the business training.

Training began in October, 2002 in Lima and in March, 2003 in Ayacucho and was planned to last 22 weekly sessions in total. Each bank timed the beginning of the training with the beginning of new loan cycles, so not all banks began training at the same time. Ayacucho's meetings are weekly, whereas in Lima some groups meet weekly and others meet bi-weekly.

2.2 THE INTENDED EFFECTS

The goal of the program is to teach entrepreneurial skills. However, if the entrepreneurial "spirit" is a fixed characteristic, teaching an individual to engage in activities similar to a successful entrepreneur may not actually lead to improved business outcomes. The training aims to improve basic business practices such as how to treat clients, how to use profits, where to sell, the use of special discounts, credit sales, and the goods and services produced. These improvements should lead to more sales, more workers, and could eventually provide incentives to join the formal sector.

We also examine the impact on two sets of household outcomes: household decision-making and child labor. The link to household decision-making is straightforward and one of the oft-cited motivations of such training: improved business success could empower female micro entrepreneurs with respect to their husbands/partners in business and family decisions by giving them more control of their finances. Measuring child labor effects is also important, since children in these households are often actively involved in the family enterprise. Any change to the household enterprise may have important effects on child labor and education, although the expected impact is ambiguous. The training may increase or decrease the marginal product of labor, hence could increase or decrease child labor through a substitution effect. If the training increases business income, then this would lead to an expected decrease in child labor and increase in schooling as wealth increases.[6] Furthermore, an indirect effect may

[4] Since 1995, FFH has provided technical assistance to eighteen MFIs in Asia, Africa and Latin America, with its program Credit with Education, a combination of microcredit and educational services. Working with independent local partners, FFH provides training in microfinance products, MFI capacity building, and adult education in health and business development. Its business education curriculum was developed through market assessments using individual surveys, focus groups with key informants, pilot testing, and the feedback of clients and staff.
[5] Among FINCA's Lima clients, the literacy rate is 98 percent, the majority has a secondary education and 40 percent have some post-secondary schooling as well. On the other hand, in the Ayacucho region, almost 70 percent of the FINCA clients did not finish secondary school and approximately 15 percent are illiterate.
[6] The connection between increased income and the reduction of child labor and the increments in schooling can be reviewed in Basu and Van (1998), Baland and Robinson (2000), and Edmonds (2005; 2006), among others.

occur in which the education (if valued by the mother) motivates the mother to invest more in schooling of her children.

In addition to impact on the client's business and her household, the training could impact important outcomes for the institution. If clients' businesses improve, they are more able to repay their loans. The training also may engender goodwill and sentiments of reciprocity, also leading to higher repayment rates. Loan sizes and savings volumes are more ambiguous: if clients learn how to manage their cash flows better, they perhaps will need less debt. On the other hand, the business training may lead them to expand their business, and thus also demand more financial capital.

Although much of the academic literature focuses on repayment rates for microfinance, many institutions (who typically have near perfect repayment) are more concerned with client retention (Copestake 2002). The expected effects here are ambiguous. If clients like the training, they may be more likely to remain in the program in order to receive the training, whereas obviously if they do not like the training (perhaps due to the additional 30-60 minutes per week required for the village bank meetings), they may be more likely to leave. The net effect is critical for the microfinance institution, since maintaining a stable client base is important for the sustainability of the organization.

3. THE EXPERIMENTAL DESIGN AND THE MONITORING OF THE INTERVENTION

We evaluate the effectiveness of integrating business training with microfinance services using a randomized-control trial in which pre-existing lending groups were assigned randomly to control and treatment groups. In Ayacucho, of the 140 village banks (3,265 clients), 55 were assigned to a mandatory treatment group (clients had to stay through the training at their weekly bank meeting[7]), 34 were assigned to a voluntary treatment group (clients were allowed to leave after their loan payment was made, before the training began), and 51 were assigned to a control group which received no additional services beyond the credit and savings program. In Lima, of 99 FINCA-sponsored banks (1,326 clients), 49 were assigned to mandatory treatment and 50 were assigned to control (there was no voluntary treatment group in Lima). The randomization was stratified by credit officer; hence, each credit officer has the same proportion of treatment and control groups.

We monitored the attendance at the weekly meetings and the training sessions. On average, training sessions in mandatory training banks had an 88 percent attendance rate while attendance in voluntary banks was 76 percent.[8] The training did not occur at each meeting (nor does it typically under most implementations of "credit with education"). First, some treatment banks put the trainings on hold if they were having problems such as high default and dropout rates. In these cases, they would often enter a restructuring phase that involved reinforcement of the traditional FINCA training about good repayment practices and discipline. The training session was also skipped at the first and last meeting of each cycle, and when the meeting included a group activity such as the celebration of a birthday or regional and religious holidays. In these cases, the session would be postponed until the following meeting. There were other cases in which the clients and credit officers decided that they needed more time to

[7] Fines were applied for absence or tardiness, and could result in expulsion from the bank.
[8] Attendance in voluntary banks gradually slowed from an average of 80% at the beginning to 70% in the last two cycles observed.

grasp fully the information offered in one session. In some cases, it became a normal practice for banks to agree to spend an extra meeting reviewing the material of the previous training session.[9]

These practices not only delayed the completion of the training materials, but also caused heterogeneity in treatment intensity across groups. In Lima, for example, the average bank advanced 3.5 sessions per loan cycle over the 12-meeting cycles. However, it was common for banks to complete five training sessions in the first loan cycle, and slow to an average of 2.6 training sessions per cycle over time. As a result, after at least 24 months since the launch of the training, only half the banks had reached the 17th session out of a total of 22 programmed sessions. The empirical analysis will compare the village banks assigned to treatment to those assigned to control, irrespective of how well they adhered to the training program, and irrespective of how well clients attended the training. This is important not only to avoid a selection bias, but also because the delays experienced here are normal for credit with education interventions.[10] Had the training been adhered to more strictly, we would be estimating the impact of a treatment that is stronger than is normally implemented.

4. DATA AND ESTIMATION METHODS

This evaluation uses three key data sources: FINCA financial-transaction data, a baseline survey before the randomization results were announced, and a follow-up survey up to two years later.

Financial-transaction data are from FINCA's database, which contains the reports of all the transactions made by each bank client at every scheduled meeting since 1999. It includes information on the loan cycles, broken down by loan payment, interest, mandatory and voluntary savings, fines for tardiness, and contributions to cover default of other members. The database also includes some socio-economic characteristics of the clients, such as age, education, and business main economic activity, registered when the client first joined a FINCA-sponsored village bank.

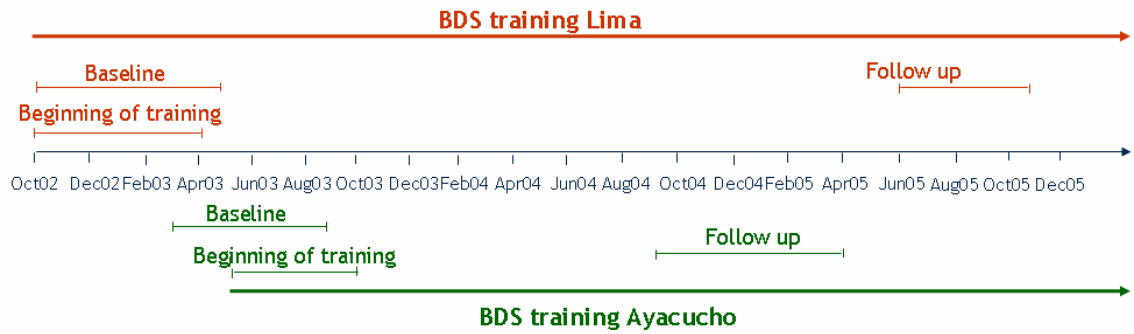
The baseline and follow-up surveys included a variety of questions on the socio-demographic characteristics and other general information about the client's household and business. Outcomes can be divided into four categories: (1) institutional outcomes, (2) business processes, knowledge and savings practices (i.e., testing whether the specific practices taught in the training were adopted), (3) business outcomes, (4) household outcomes, including empowerment in decision-making and child labor (the Lima follow-up survey included questions related to the time children between six and fifteen years old dedicate to domestic work and school activities). The full list of outcome variables and their definitions are included in Appendix Table 1.

In treatment banks, the baseline survey was given within a few weeks prior to the bank beginning the training. Figure 1 below shows the timeline of these components of the study for Ayacucho and Lima. Most baseline surveys were completed at the FINCA office at the time of their weekly meeting; although due to time constraints some of them had to be completed at

[9] In the case of Lima, such revisions often implied using the sessions to work in groups, with the support from the credit officer, on the assigned homework.
[10] This stylized fact reported to us by Freedom from Hunger staff.

their home or place of business. In Ayacucho, we completed 3,265 baseline surveys, while in Lima, we completed 1,326 baseline surveys.

FIGURE 1: TIMELINE OF THE INTERVENTION AND DATA COLLECTION



Seventy-six percent of the clients in the baseline survey were reached and surveyed for the follow-up survey. For the 62 percent of the clients interviewed in the baseline who were no longer members of a FINCA-sponsored village bank when the follow-up surveys began, we located them using addresses collected in the baseline survey or, in some cases, asking neighbors or FINCA members. However, some clients had moved far away, were impossible to locate, or refused to be interviewed. In total, we interviewed 83 percent of the clients who were still borrowing from FINCA, and about 72 percent of those who had dropped from the program. As Appendix Table 2 shows, there was not a survey response bias in Ayacucho, but in Lima, control group individuals were slightly more likely to complete the survey. This may be due to the training itself taking a long time, so individuals were less willing to spend the extra time to complete the survey. Also, among those who dropped out, the response rate is higher for the control group than the treatment group.

Appendix Table 2 shows some key demographic characteristics and financial-transaction history of the members of control and treatment groups before BDS training began. These results verify that the random assignment produced observably similar treatment and control groups. At the time of the randomization, data were available on prior repayment rates, the average loan size and the average savings size. The remaining variables were unobserved at the time of the randomization, but also are similar across treatment and control groups, as expected.

To estimate the impact of the business training program, we use the first-difference (FD) or the double-difference (DD) estimators, depending on whether we observe the outcome of interest only in the follow-up, or in both the baseline and follow-up survey. The FD estimator is obtained by comparing the levels of the outcomes variables between the treatment and control groups. In turn, the DD estimator is obtained from comparing changes over time in a particular outcome variable between treatment and control groups. As long as the control and treatment groups were similar ex-ante, which was assured through the randomization, we can argue that both estimators can provide an unbiased estimate of the impact of the intention to treat with business training program on a particular outcome variable.

Econometrically, the FD estimator is obtained by estimating the following linear regression:

$$Y_{ij} = \alpha + \beta D_j^T + \varepsilon_{ij} \quad (1)$$

where Y_{ij} denotes an outcome variable for client *i* in bank *j* after the treatment, D_j^T is a dummy variable that takes the value one if the client belonged to a treatment bank, and ε_{ij} denotes the error term which is assumed to be independent across banks but not necessarily within them. Thus, β measures the difference between the treatment and control groups in the outcome Y after the treatment, and is an unbiased estimate of the average impact of being assigned to a treatment group on the outcome variable Y. In the tables of results section, we also report estimates of β that result from a regression that adds to eq. (1) a set of covariates such as the clients' age and education, the number of loans received from FINCA, business type and size, and branch location.[11]

We also test whether the training generates heterogeneous treatment effects along characteristics such as prior interest in training, schooling, marital status, and business size as measured by total revenues. The following model is used:

$$Y_{ij} = \alpha + \delta X_{i0} + \beta_1 D_j^T + \beta_2 D_j^T X_{i0} + \varepsilon_{ij} \quad (2)$$

where X_0 is a binary variable that denotes the characteristic of interest prior to the intervention. In this case, β_1 is the FD estimator for those individuals that have characteristic $X = 0$ and ($\beta_1 + \beta_2$) measures the impact for those individuals that have characteristic $X = 1$.

If the outcome variable is a dummy variable, then we estimate a probit model and report the marginal effect of D_i^C for the impact of business training on outcome Y. In the model with interactions, the marginal effect for those with $X = 0$ is obtained by estimating [Pr($Y = 1/ D = 1, X = 0$) – Pr($Y = 1/ D = 0, X = 0$)]. For those clients for whom $X = 1$, the marginal effect of treatment on those clients with $X = 1$ is obtained with the following expression: [Pr($Y = 1/ D = 1, X = 1$) – Pr($Y = 1/ D = 0, X = 1$)].

The double difference estimator comes from the following expression:

$$Y_{ijt} = \alpha + \beta_1 Post_t + \beta_2 D_j^T + \beta_3 Post_t D_j^T + \varepsilon_{ijt} \quad (3)$$

where $Post_t$ is a binary variable equal to one if the observation corresponds to the post treatment time period. Then, β_3 is the double difference estimator of the program's impact on outcome Y. As before, to measure whether treatment is heterogeneous across various characteristics, the following model is estimated:

$$Y_{ijt} = \alpha + \delta X_{i0} + \beta_1 Post_t + \gamma_1 Post_t X_{i0} + \beta_2 D_j^T + \gamma_2 D_j^T X_{i0} + \beta_3 Post_t D_j^T + \beta_4 Post_t D_j^T X_{i0} + \varepsilon_{ijt} \quad (4)$$

where X_0 is a binary variable that denotes the characteristic of interest at the time of the baseline. In this case, β_3 is the double difference estimator for those individuals that do not have characteristic X and ($\beta_3 + \beta_4$) measures the impact for those individuals that do have it.

[11] Since treatment was assigned randomly, we would expect the insertion of these covariates to unbiasedly reduce the variance of the estimated effect.

5. RESULTS

We divide the analysis into four categories of outcome variables: (1) institutional outcomes, (2) business processes and knowledge, (3) business outcomes, and (4) household outcomes including empowerment in decision-making and child labor.

5.1 INSTITUTIONAL RESULTS

We found important effects of training on institutional outcomes such as repayment and client retention. Repayment among treatment groups is three percentage points higher than among control groups (Table 1). That is, clients among treatment groups were more likely to maintain a clean repayment record in the cycles between the baseline and follow-up surveys.[12] We also found that treatment group clients were four to five percentage points less likely to drop out. However, when not counting returnees as dropouts, this effect is slightly smaller and no longer statistically significant. We infer from this that clients place high value on the training they receive, causing them to avoid at a minimum temporary exits, and perhaps permanent ones as well. Still, treatment clients are more likely to cite the length of weekly meetings as a factor in dropping out of the program (Appendix Table 4). So while in net the business training is good for client retention, the program can expect to lose some clients due to lengthier meetings. Making the training voluntary would reduce in principle this tension, but we find the improvement in dropout rates is slightly higher for the mandatory treatment than the voluntary treatment groups (Table 1b).

Another explanation for the increase in client retention for treatment groups is the improvement of clients' business outcomes, leading to higher repayment capability. The increase in client retention could be driven by the reduction in default rather than client satisfaction, if the training causes some clients who might have defaulted to increase their ability to make loan payments, thus avoiding the need to drop out of the program for default. This would require an increase in business income to provide the funds to make extra payments, and as we shall see below, such impacts were indeed detected. We examine whether the treatment led to more dropout with default as well as dropout without default, and although the treatment effect is larger in reducing dropout without default, when disaggregated neither is significant statistically.

We also find that the improvement in repayment rates and client retention are strongest for clients with larger businesses (as measured by sales) and for those who expressed the least interest in business training in the baseline survey.[13] The latter has strong implications for the appropriate method for introducing business training to a program or market, since the impact is highest on those who indicate the lowest demand for the service (i.e., charging a fee for the business training initially may yield the exact wrong set of clients in order to maximize impact).

We find no change in loan size or cumulative savings. The improved default and client retention rates have strong implications for the profitability of the institution, as discussed in more detail in the conclusion.

[12] A client is said to have had a clean repayment record if their payments over the cycle plus their savings were always enough to cover the amount borrowed plus interest.
[13] Moreover, when looking at those less interested in training, we also find a significant effect of business training on permanent dropouts.

5.2 BUSINESS SKILLS AND PRACTICES

In the follow-up survey we asked clients questions about key elements of the training, such as business knowledge, marketing strategies, use of profits, and record-keeping (see Appendix Table 1 for the full list of survey questions and variable definitions). Table 2 shows the results on these outcome measures. Training participants demonstrated greater business knowledge, answering more questions correctly (10 percentage points, which is 0.07 standard deviations). The greater knowledge translated into better business practices, though only in limited areas. The training increased the likelihood that individuals reinvested profits in their business by four percentage points (0.08 standard deviations), maintained sales records for their business by three percentage points (0.07 standard deviations), and maintained withdrawal records from their business by seven percentage points (0.17 standard deviations). Lastly, individuals were asked to name changes or innovations they have made to their businesses over the prior year, and those in the treatment group were five percentage points more likely to report having done so.[14]

Table 2b shows that impacts on business formality and on the execution of changes for the business were observed mostly on the clients who expressed low interest in training in the baseline survey. This result is consistent with those in Table 1b, reinforcing the notion that the benefits of the program concentrated in those who did not foresee them at the start.[15] However, several other results (reinvesting profits in their business, improvements in business knowledge, and maintaining sales records) show stronger impacts on those with higher expressions of interest. Hence we consider the results mixed at best with regard to heterogeneous treatment effects for those with differing levels of prior interest in training.

5.3 BUSINESS RESULTS

Table 3 presents the results on business outcomes such as sales and employment. Sales in the month prior to the surveys were 16 percent higher. When looking at the variation in sales, we find the largest effect for sales in a bad month, which is 28 percent higher among treatment groups compared to control groups. We infer from this latter result that the training has helped clients identify strategies to reduce the fluctuations in their sales. For instance, they could have diversified the goods and services they offer or have identified clients with a different seasonality in their purchases.

For retail business, no change in profit margin was observed on the most common product sold. Due to the limited time available for the survey we only asked about profit margin for the main product. However, unless the profit margin shrunk on other products despite not decreasing on the main product, the increased overall revenue implies an increase in profits. For service businesses, since no change in labor was observed, the increased revenue should translate more or less directly to increased profits.

5.4 HOUSEHOLD OUTCOMES

Table 4 reports the results on household outcomes. We divide the household outcomes into two categories, empowerment in decision-making and child labor. We detect no impact on household decision-making such as how to use the FINCA loan and savings, whether to take money or products from the business, or family size decisions. Participants are also no more

[14] Micro entrepreneurs in the Ayacucho treatment groups reported higher execution rates in overall treatment of the client, the use of special discounts and seasonal adjustments in the products offered to their clientele.
[15] For the execution of changes in business practices, effects are stronger in Ayacucho, where FINCA clients are poorer, have less formal education and expressed less interest in the training in the baseline survey.

likely to keep track of household bills or separate their money from that of their husband or partner. One explanation for the lack of empowerment effects may be that we are working with women that already run a business, keep savings, and manage loans so that they are already sufficiently empowered for the business training to have an additional effect on the indicators analyzed here. Also, as indicated in section II, FINCA clients routinely receive empowering messages during their bank meetings.

On child labor, although the overall effect is not significant for both male and female children, we do find a positive treatment effect on the number of hours female children dedicate on average to school and schoolwork. We do not see a corresponding shift downward in hours spent working in the enterprise or housework, which indicates that the female children spent less time in leisure. This also implies that the training had its effect not through changing the marginal product of labor in the enterprise, nor through an income effect, but instead perhaps through increasing the mother's preference for education for their daughters. We also find, in Table 4c, that for more educated mothers, the training reduces the number of hours the children spend working in the enterprise. However, while the corresponding increase in education is positive, it is not statistically significant.

6. CONCLUSION

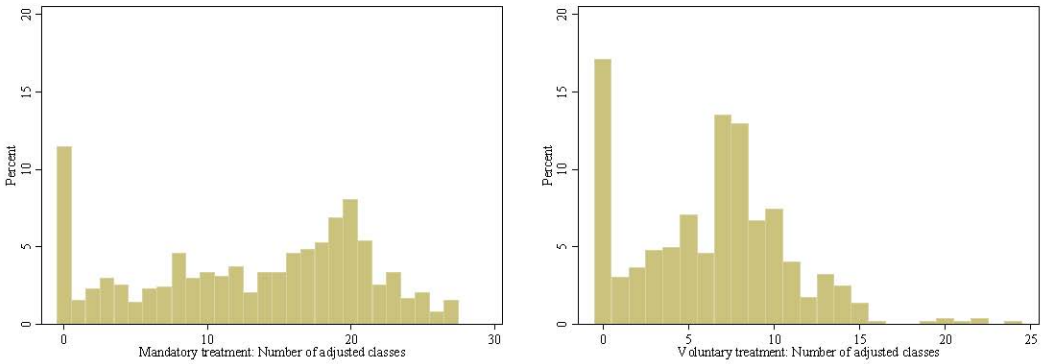
We raised a fundamental question, can successful entrepreneurship be taught? In our setting, the answer is yes, we can teach individuals to engage in certain good business practices, which lead to increased sales. Clients report engaging in some of the exact activities being taught in the program: separate money between business and household, reinvest profits in the business, maintain records of sales and expenses, and think proactively about new markets and opportunities for profits. The implementation of these strategies seemed to have helped clients increase business income, mainly by smoothing fluctuations between good and bad periods. We also find positive impacts on repayment rates and client retention for FINCA, the lender.

From the institutional perspective, the intervention also succeeded. Freedom from Hunger has found that the marginal cost to organizations is 6 to 9 percent of total costs (vor der Bruegge, Dickey and Dunford 1999). The marginal revenue will come from the increased client retention and repayment rates (no change in loan sizes was observed). The fixed cost of managing a village bank is high, but the variable cost of each individual client is quite low. The improved client retention rate (sixteen percent improvement in client retention) generates more increased revenue than the marginal cost of providing the training. The improved client repayment is more difficult to estimate, since the true benefit to FINCA comes through lower enforcement costs (the eventual default is virtually nonexistent). Thus, this is a profitable undertaking for FINCA.

Another important result is that we find the stronger effects for those clients who expressed less interest in the training in the baseline survey. Not only are they the ones more likely to improve retention and repayment but also they were more likely to report having implemented changes to improve their businesses. This result implies that demand-driven "market" solutions may in fact not be as easy as charging for the services. It is possible that after a free trial, clients with low-prior demand would appreciate the value and demand the services. The experimental setup and outcomes measured here do not allow us to examine this. One conclusion is clear: merely charging for the service would not lead to the strongest impact.

Although this paper has broader implications for models of growth that incorporate the ability to increase human capital and for models of financial and small enterprise markets for the poor, this is at one level an exercise in program evaluation. We suggest, however, that it is a necessary exercise. Given the plethora of these projects, and given the importance of human capital to our thinking about growth and development, it is imperative that we know whether these efforts are having a positive effect on the poor. Having found an encouraging positive answer in our setting, further experimentation is now needed to verify the replicability in different contexts. It also would be important to evaluate the ongoing sustainability of the improvements for the client and the lending institution. Lastly, an open debate exists regarding alternative delivery processes, such as whether credit officers rather than training specialists should be delivering the education.

Graph 1. Distribution of the individual attendance in Ayacucho, by kind of treatment [a/]



[a/] Individual attendance is calculated as the number of classes that the client was exposed to during her tenure in the treatment bank, adjusted by percentage of classes attended.

Graph 2. Distribution of the individual attendance in Lima [a/]

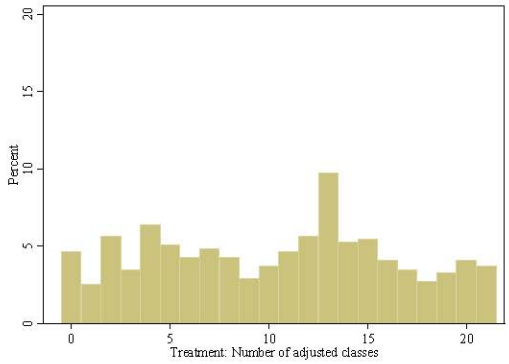


TABLE 1. IMPACT OF TRAINING ON INSTITUTIONAL OUTCOMES
OLS, PROBIT

Dependent variable [a/]	Mean & S.D. of dependent variable	N° of clients	Treatment impact without covariates	Treatment impact with covariates el
Loan size [b/]	212.19	3170	2.35	8.75
	(207.73)		(13.692)	(12.911)
Cumulative savings [b/]	304.45	3170	-11.53	-4.37
	(411.31)		(15.839)	(16.027)
Repayment [c/]	0.80	3170	0.03	0.03*
	(0.40)		(0.022)	(0.020)
Fines [c/ d/]	0.03	2785	0.10	0.12
	(3.20)		(0.130)	(0.133)
Solidarity discounts [c/ d/]	0.44	2785	-0.22	-0.19
	(5.71)		(0.435)	(0.403)
Dropout [c/]				
Permanent or Temporary Dropout	0.61	3170	-0.04	-0.05*
	(0.49)		(0.026)	(0.026)
Permanent Dropout	0.45	3170	-0.02	-0.03
	(0.50)		(0.025)	(0.026)

Each coefficient reported in the table is from a separate regression. * significant at 10%; ** significant at 5%; *** significant at 1%. Standard errors clustered by village bank in parentheses. Marginal effects reported for probit specifications (repayment, client retention, and all dropout variables).

[a/] Dependent variables are defined as follows:
Loan size: Amount borrowed from FINCA's external account at beginning of loan cycle (US$).
Cumulative savings: Balance at end of loan cycle (US $).
Repayment: Binary variable equal to one if, since the beginning of training, the client made all her payments on time or had sufficient savings to cover missed payments.
Fines: Amount discounted from the savings account for not attending or being late to any of the meeting, and/or not making the weekly installment (US$).
Solidarity discounts: Discounts from savings account that occur when there is an individual default in the external account not covered by defaulter's individual savings (US$).
Permanent or Temporary Dropout: Binary variable equal to one if client had left a FINCA village bank ever after the beginning of the training.
Permanent Dropout: Binary variable equal to one if client had left a FINCA village bank by December 2005.
[b/] Double difference estimate reported.
[c/] First difference estimate reported.
[d/] Only available in FINCA database since June 2004.
[e/] The covariates include location (Ayacucho or Lima), business activity, business size, age, schooling and number of FINCA loans received by the client.

TABLE 1B. IMPACT OF TRAINING ON INSTITUTIONAL OUTCOMES, BY SUB-GROUP
OLS, PROBIT

	Mean & S.D. of dependent variable	Location		Type of Treatment (Ayacucho only)		Ex-ante Attitude Towards Training		Education		Civil Status		Business Size	
		Ayacucho	Lima	Mandatory	Voluntary	Low interest	High interest	Below high school	Above high school	Single	Married	Below median	Above median
Dependent variable [a/]	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Loan size [b/]	212.19	2.68	40.04	13.67	-12.23	17.20	-13.02	8.48	-24.71	-19.25	9.61	-7.96	13.21
	(207.73)	(11.886)	(30.918)	(14.215)	(13.603)	(14.324)	(19.001)	(13.990)	(28.568)	(22.767)	(14.724)	(14.119)	(18.605)
Cumulative savings [b/]	304.45	-15.09	3.60	4.30	-36.12	-11.14	-12.17	-9.65	-22.24	38.38	-27.70*	-25.03	0.82
	(411.31)	(22.490)	(16.096)	(25.566)	(27.218)	(21.362)	(25.347)	(16.038)	(47.374)	(37.173)	(16.876)	(18.666)	(24.382)
Repayment [c/]	0.80	0.04	0.01	0.05*	0.08***	0.06**	0.00	0.04*	0.01	0.01	0.04	0.02	0.04*
	(0.40)	(0.025)	(0.043)	(0.027)	(0.025)	(0.027)	(0.026)	(0.023)	(0.039)	(0.031)	(0.024)	(0.027)	(0.026)
Fines [c/]	0.03	0.03	0.26	0.02	0.24*	0.16	0.03	0.11	0.13	0.24	0.06	-0.07	0.25
	(3.20)	(0.128)	(0.315)	(0.149)	(0.136)	(0.140)	(0.229)	(0.131)	(0.394)	(0.248)	(0.148)	(0.153)	(0.193)
Solidarity discounts [c/]	0.44	0.01	-0.76	0.01	0.01	-0.44	0.03	-0.29	0.13	-0.49	-0.14	0.26	-0.62
	(5.71)	(0.007)	(1.442)	(0.012)	(0.009)	(0.637)	(0.272)	(0.524)	(0.276)	(0.584)	(0.395)	(0.206)	(0.844)
Dropout [c/]													
Permanent or Temporary	0.61	-0.05*	-0.01	-0.12***	-0.07*	-0.08***	0.01	-0.03	-0.07	-0.07	-0.03	-0.01	-0.06**
	(0.49)	(0.031)	(0.047)	(0.037)	(0.039)	(0.031)	(0.035)	(0.029)	(0.048)	(0.044)	(0.027)	(0.032)	(0.033)
Permanent	0.45	-0.05*	0.03	-0.06*	-0.03	-0.06**	0.01	-0.02	-0.06	-0.04	-0.02	-0.01	-0.04
	(0.50)	(0.030)	(0.047)	(0.035)	(0.032)	(0.029)	(0.034)	(0.027)	(0.048)	(0.042)	(0.027)	(0.032)	(0.032)

Each coefficient reported in the table is from a separate regression. * significant at 10%; ** significant at 5%; *** significant at 1%.
Standard errors clustered by village bank in parentheses.
Marginal effects reported for probit specifications (repayment, client retention, and all dropout variables).

[b/] Double difference estimate reported.
[c/] First difference estimate reported.
[d/] Only available in FINCA database since June 2004.
[e/] The covariates include location (Ayacucho or Lima), business activity, business size, age, schooling and number of FINCA loans received by the client.

TABLE 2. IMPACT OF TRAINING ON BUSINESS PRACTICES
OLS, PROBIT

Dependent variable [a/]	Mean & S.D. of dependent variable	N° of clients	Treatment impact without covariates	Treatment impact with covariates [h/]
Tax formality [b/]	0.14	3398	0.01	0.01
	(0.35)		(0.012)	(0.011)
Profit used for business growth [c/]	0.67	3427	0.04**	0.04**
	(0.47)		(0.020)	(0.019)
Thinking of keeping business safe when taking money from it [c/]	0.26	3427	-0.002	-0.0002
	(0.44)		(0.016)	(0.015)
Fixed salary [b/]	0.04	3424	-0.02	-0.02
	(0.20)		(0.017)	(0.017)
Keeping records of:				
Sales [b/]	0.29	3388	0.03*	0.04*
	(0.45)		(0.020)	(0.021)
Withdrawals [b/ d/]	0.11	969	0.07*	0.07*
	(0.31)		(0.042)	(0.043)
Payments to workers [c/]	0.23	2992	0.005	0.004
	(0.57)		(0.015)	(0.013)
Business knowledge index [c/]	3.32	3427	0.10*	0.08
	(1.40)		(0.060)	(0.055)
Started new business [c/]	0.14	3427	-0.02	-0.02
	(0.35)		(0.012)	(0.012)
Number of sales locations [b/]	1.07	3424	0.01	0.01
	(0.32)		(0.026)	(0.026)
Level of diversification				
Number of income sources [b/ e/]	2.33	2394	-0.02	-0.02
	(0.53)		(0.038)	(0.038)
Importance of main product [c/ f/]	2.31	2221	0.01	0.01
	(0.70)		(0.034)	(0.035)
Allows sales on credit [b/]	0.59	3424	-0.002	-0.002
	(0.49)		(0.015)	(0.015)
Proportion of clients who faced problems with business [c/ g/]	0.65	1033	0.02	0.02
	(0.48)		(0.034)	(0.034)
Proportion of clients who: [c/]				
Planned innovations in their businesses	0.65	3427	0.02	0.03
	(0.48)		(0.019)	(0.018)
Executed innovations in their businesses	0.39	3427	0.05**	0.05**
	(0.49)		(0.020)	(0.019)

Each coefficient reported in the table is from a separate regression. * significant at 10%; ** significant at 5%; *** significant at 1 %. Standard errors clustered by village bank in parentheses. Marginal effects reported for probit specifications (tax formality, profit used for business growth, thinking of keeping business safe when taking money from it fixed salary, keeping records, started new business, allowing sales on credit and proportion of clients who faced problems/planned innovations/executed innovations).

[a]/ Dependent variables are defined as follows:
Tax Formality: Binary variable equal to one if client has a tax ID number.
Profit used for business growth: Binary variable equal to one if client reported re-investing profits for the growth or continuity of the business.
Thinking of keeping business safe when taking money from it: Binary variable equal to one if client considers the needs of the business when taking money from the business for family use. Fixed salary: Binary variable equal to one if client pays herself a fixed salary.
Keeping records: Binary variable equal to one if client records sales/withdrawals/payments to workers in a registry or notebook.
Business knowledge index: Number of right answers given by the client when asked about what should be done to increase business sales and to plan for a new business.
Started new business: Binary variable equal to one if client reports that she began a new business in the last year (Ayacucho) or the last two years (Lima).
Number of sales locations: Number of locations where the client sells her main business's products.
Number of income sources: Number of income sources the client reports (personal/family businesses, other jobs or working activities, etc).
Importance of the main product: Discrete variable indicating if the sales of the most profitable product represent 1) all; 2) more than half; or 3) less than half of business sales.
Allows sales on credit: Binary variable equal to one if client makes sales on credit.
Proportion of clients who faced problems with business: Binary variable equal to one if client reports that her business faced a specific problem in the last year (Ayacucho) or the last two years (Lima).
Proportion of clients who planned/ executed innovations in their businesses: Binary variable equal to one if client had an idea for /implemented a change or innovation to improve the business (Ayacucho) or to solve the problems faced (Lima).
[b]/ Double difference estimate reported.
[c]/ First difference estimate reported.
[d]/ Only for Lima
[e]/ Only for Ayacucho.
[f]/ Scale from 1 to 3. The higher, the more diversified.
[g]/ Only in Lima. This outcome can be divided between business and family/health related problems.
[h]/ The covariates include location (Ayacucho or Lima), business activity, business size, age, schooling and number of FINCA loans received by the client.

TABLE 2B. IMPACT OF TRAINING ON BUSINESS PRACTICES, BY SUB-GROUP
OLS, PROBIT

	Mean & S.D. of dependent variable	Location		Type of Treatment (Ayacucho only)		Ex-ante Attitude Towards Training		Education		Civil Status		Business Size	
Dependent variable [a/]	(1)	Ayacucho (2)	Lima (3)	Mandatory (4)	Voluntary (5)	Low interest (6)	High interest (7)	Below high school (8)	Above high school (9)	Single (10)	Married (11)	Below median (12)	Above median (13)
Tax formality [b/]	0.14	0.02	-0.02	0.01	0.03*	0.03**	-0.01	0.01	0.02	0.01	0.01	0.01	0.01
	(0.35)	(0.014)	(0.021)	(0.015)	(0.019)	(0.018)	(0.017)	(0.012)	(0.032)	(0.026)	(0.013)	(0.013)	(0.021)
Profit used for business growth [c/]	0.67	0.04	0.03	0.03	0.06*	0.02	0.06***	0.04*	0.02	0.06	0.03*	0.03	0.06**
	(0.47)	(0.026)	(0.026)	(0.028)	(0.030)	(0.027)	(0.024)	(0.022)	(0.035)	(0.040)	(0.021)	(0.027)	(0.025)
Thinking of keeping business safe when taking money from it [c/]	0.26	-0.01	0.01	-0.02	-0.0004	-0.02	0.02	0.001	-0.003	-0.01	0.002	-0.003	-0.0002
	(0.44)	(0.017)	(0.031)	(0.019)	(0.021)	(0.023)	(0.022)	(0.017)	(0.032)	(0.032)	(0.017)	(0.020)	(0.022)
Fixed salary [b/]	0.04	0.01	0.002	0.01	0.002	-0.02	-0.02	-0.02	-0.03 *	-0.01	-0.02	-0.01	-0.03
	(0.20)	(0.022)	(0.021)	(0.018)	(0.019)	(0.018)	(0.024)	(0.022)	(0.015)	(0.034)	(0.018)	(0.022)	(0.019)
Keeping records of:													
Sales [b/]	0.29	0.04	0.04	0.03	0.05	0.01	0.06**	0.04*	0.05	0.08	0.02	0.04	0.03
	(0.45)	(0.024)	(0.039)	(0.026)	(0.034)	(0.024)	(0.031)	(0.022)	(0.050)	(0.048)	(0.021)	(0.027)	(0.033)
Withdrawals [b/]	0.11					0.04	0.09	0.06	0.13	0.16	0.05	0.15**	0.01
	(0.31)					(0.066)	(0.056)	(0.048)	(0.120)	(0.125)	(0.046)	(0.072)	(0.045)
Payments to workers [c/]	0.23	0.004	0.005	0.01	-0.02	0.02	-0.01	0.01	-0.02	-0.01	0.01	-0.001	0.01
	(0.57)	(0.018)	(0.030)	(0.020)	(0.021)	(0.019)	(0.022)	(0.014)	(0.039)	(0.029)	(0.018)	(0.016)	(0.024)
Business knowledge index [c/]	3.32	0.08	0.16	0.10	0.11	0.02	0.20***	0.11*	-0.002	0.09	0.11*	0.02	0.20***
	(1.40)	(0.076)	(0.094)	(0.065)	(0.091)	(0.071)	(0.074)	(0.061)	(0.110)	(0.117)	(0.063)	(0.074)	(0.076)
Started new business [c/]	0.14	-0.01	-0.02	-0.02	-0.01	-0.02	-0.02	-0.02*	0.01	-0.02	-0.01	-0.03*	0.001
	(0.35)	(0.012)	(0.030)	(0.013)	(0.014)	(0.016)	(0.018)	(0.013)	(0.028)	(0.026)	(0.014)	(0.016)	(0.018)
Number of sales locations [b/]	1.07	0.03	0.05	0.04	0.01	-0.01	0.03	0.004	0.02	-0.03	0.02	-0.01	0.03
	(0.32)	(0.023)	(0.053)	(0.027)	(0.027)	(0.027)	(0.039)	(0.027)	(0.054)	(0.042)	(0.029)	(0.037)	(0.028)

Table continued on following page…

TABLE 2B (CONTINUED). IMPACT OF TRAINING ON BUSINESS PRACTICES, BY SUB-GROUP
OLS, PROBIT

	Mean & S.D. of dependent variable	Location		Type of Treatment (Ayacucho only)		Ex-ante Attitude Towards Training		Education		Civil Status		Business Size	
		Ayacucho	Lima	Mandatory	Voluntary	Low interest	High interest	Below high school	Above high school	Single	Married	Below median	Above median
Dependent variable [a/]	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Level of diversification													
Number of income sources [b/]	2.33			-0.02	-0.03	-0.02	-0.01	-0.03	0.002	0.05	-0.0001	0.01	-0.06
	(0.53)			(0.044)	(0.045)	(0.044)	(0.066)	(0.041)	(0.090)	(0.075)	(0.070)	(0.050)	(0.057)
Importance of main product [c/]	2.31	-0.01	0.03	0.02	-0.05	0.03	-0.02	0.01	0.005	0.04	-0.001	0.01	0.0002
	(0.70)	(0.045)	(0.052)	(0.035)	(0.054)	(0.047)	(0.047)	(0.037)	(0.062)	(0.069)	(0.037)	(0.045)	(0.045)
Allows sales on credit [b/]	0.59	0.002	0.004	0.005	-0.001	0.02	-0.02	0.002	-0.02	-0.02	0.004	-0.01	0.01
	(0.49)	(0.019)	(0.023)	(0.020)	(0.021)	(0.017)	(0.021)	(0.016)	(0.027)	(0.025)	(0.017)	(0.019)	(0.020)
Proportion of clients who faced problems with business [c/]	0.65					0.07	-0.01	0.06	-0.14**	0.12*	-0.01	0.04	-0.01
	(0.48)					(0.051)	(0.043)	(0.038)	(0.061)	(0.075)	(0.035)	(0.045)	(0.049)
Proportion of clients who:													
Planned business innovations [c/]	0.65	0.02	0.03	0.02	0.02	0.03	0.02	0.02	0.02	-0.02	0.03*	-0.0005	0.05**
	(0.48)	(0.021)	(0.036)	(0.023)	(0.024)	(0.025)	(0.026)	(0.023)	(0.036)	(0.040)	(0.021)	(0.027)	(0.022)
Executed business innovations	0.39	0.07***	0.01	0.06**	0.07**	0.06***	0.03	0.06**	0.02	0.05	0.05**	0.03	0.07**
	(0.49)	(0.024)	(0.034)	(0.026)	(0.032)	(0.023)	(0.028)	(0.023)	(0.036)	(0.037)	(0.022)	(0.025)	(0.027)

Each coefficient reported in the table is from a separate regression. * significant at 10%; ** significant at 5%; *** significant at 1 %. Standard errors clustered by village bank in parentheses. Marginal effects reported for probit specifications (tax formality, profit used for business growth, thinking of keeping business safe when taking money from it fixed salary, keeping records, started new business, allowing sales on credit and proportion of clients who faced problems/planned innovations/executed innovations). For linear specifications, we report $\beta_1 + \beta_2 X$ from eq. (2) for FD estimates, and $\beta_3 + \beta_4 X$ from eq. (4) for DD estimates.

[a/] All dependent variables are defined identically to those in the previous table. See notes under Table 2 for variable definitions.
[b/] Double difference estimate reported
[c/] First difference estimate reported

TABLE 3. IMPACT OF TRAINING ON BUSINESS RESULTS
OLS

Dependent variable [a/]	Mean & S.D. of dependent variable	N° of clients	Treatment impact without covariates	Treatment impact with covariates [d/]
Sales [b/]				
Last month (log)	6.56	3421	0.16 *	0.16 *
	(1.63)		(0.082)	(0.082)
Good month	7.91	3389	-0.01	0.00
	(1.26)		(0.051)	(0.051)
Normal month	7.15	3388	0.10 **	0.11 **
	(1.20)		(0.052)	(0.052)
Bad month	5.91	3381	0.28 ***	0.28 ***
	(2.24)		(0.100)	(0.100)
Difference good-bad month	2.00	3380	-0.28 ***	-0.28 ***
	(2.02)		(0.103)	(0.103)
Weekly surplus from most profitable product [c/]	11.87	1759	1.84	1.71)
	(46.34)		(2.275)	(2.139
Number of workers [b/]				
Total	1.96	3398	-0.01	-0.01
	(1.46)		(0.063)	(0.063)
Paid workers, not family members	0.25	3396	-0.05	-0.06
	(1.05)		(0.044)	(0.043)

Each coefficient reported in the table is from a separate regression. * significant at 10%; ** significant at 5%; *** significant at 1 %. Standard errors clustered by village bank in parentheses.

[a/] Dependent variables are defined as follows:
Last week sales: Logarithm of main business's sales in the month preceding each survey.
Good/Normal/Bad sales: Logarithm of main business's sales in a good/normal/bad month.
Difference good-bad week: Difference in monthly sales between good and bad month.
Weekly surplus from most profitable product: Difference between the weekly revenue and cost of the most profitable product in the main business (soles).
Number of total workers: Number of workers in the main business.
Number of paid workers: Number of workers in the main business that are not household members.
[b/] Double difference estimate reported.
[c/] First difference estimate reported.
[d/] The covariates include location (Ayacucho or Lima), business activity, business size, age, schooling and number of FINCA loans received by the client.

TABLE 3B. IMPACT OF TRAINING ON BUSINESS RESULTS, BY SUB-GROUP
OLS

	Mean & S.D. of dependent variable	Location		Type of Treatment (Ayacucho only)		Ex-ante Attitude Towards Training		Education		Civil Status		Business Size	
		Ayacucho	Lima	Mandatory	Voluntary	Low interest	High interest	Below high school	Above high school	Single	Married	Below median	Above median
Dependent variable [a/]	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Sales [b/]													
Last month (log)	6.56	0.07	0.11	0.06	0.09	0.16	0.15	0.13	0.28*	0.24	0.13	0.22**	0.10
	(1.63)	(0.083)	(0.116)	(0.090)	(0.105)	(0.099)	(0.110)	(0.088)	(0.151)	(0.147)	(0.089)	(0.111)	(0.078)
Good month	7.91	0.03	-0.02	0.04	0.01	-0.01	0.00	-0.03	0.07	0.04	-0.02	-0.02	0.03
	(1.26)	(0.06)	(0.09)	(0.07)	(0.07)	(0.07)	(0.07)	(0.06)	(0.11)	(0.10)	(0.05)	(0.08)	(0.06)
Normal month	7.15	0.08	0.12	0.06	0.11	0.08	0.13*	0.10*	0.13	0.11	0.10*	0.12	0.10
	(1.20)	(0.07)	(0.08)	(0.07)	(0.08)	(0.07)	(0.07)	(0.05)	(0.11)	(0.10)	(0.05)	(0.08)	(0.06)
Bad month	5.91	0.21 *	0.15	0.17	0.28**	0.27**	0.30**	0.26**	0.35**	0.38**	0.26**	0.36**	0.21 *
	(2.24)	(0.11)	(0.09)	(0.14)	(0.13)	(0.13)	(0.13)	(0.11)	(0.18)	(0.18)	(0.11)	(0.14)	(0.12)
Difference good-bad month	2.00	-0.18	-0.15**	-0.13	-0.27**	-0.26**	-0.30**	-0.28**	-0.28	-0.34*	-0.26**	-0.37***	-0.18
	(2.02)	(0.11)	(0.07)	(0.14)	(0.13)	(0.13)	(0.12)	(0.11)	(0.17)	(0.18)	(0.11)	(0.14)	(0.13)
Profit from most profitable product [c/]	11.87	0.72	3.06	1.38	3.20	1.56	2.04	0.63	5.69	-1.64	2.72	0.61	2.89
	(46.34)	(2.20)	(4.10)	(2.46)	(3.68)	(2.06)	(3.90)	(2.38)	(5.88)	(1.79)	(2.78)	(1.81)	(4.03)
Number of workers [b/]													
Total	1.96	-0.02	-0.02	0.04	-0.11	0.02	-0.05	0.01	-0.07	-0.03	0.00	0.08	-0.10
	(1.46)	(0.071)	(0.118)	(0.080)	(0.096)	(0.086)	(0.092)	(0.071)	(0.151)	(0.119)	(0.076)	(0.078)	(0.104)
Paid workers, not family members	0.25	-0.05	-0.04	0.00	-0.12**	-0.05	-0.05	-0.07	0.00	-0.03	-0.06	-0.03	-0.07
	(1.05)	(0.039)	(0.096)	(0.046)	(0.053)	(0.059)	(0.066)	(0.043)	(0.131)	(0.072)	(0.053)	(0.055)	(0.075)

Each coefficient reported in the table is from a separate regression. * significant at 10%; ** significant at 5%; *** significant at 1 %. Standard errors clustered by village bank in parentheses. For linear specifications, we report $\beta_1 + \beta_2 X$ from eq. (2) for FD estimates, and $\beta_3 + \beta_4 X$ from eq. (4) for DD estimates.

[a/] All dependent variables are defined identically to the previous table. See notes under Table 3 for variable definitions.
[b/] Double difference estimate reported.
[c/] First difference estimate reported.

TABLE 4. IMPACT OF TRAINING ON HOUSEHOLD OUTCOMES
OLS, PROBIT

Dependent variable [a/]	Mean & S.D. of dependent variable	N° of clients	Treatment impact without covariates	Treatment impact with covariates [e/]
Client's decision power on [b/]				
Loans/savings from FINCA for hh/business (index)	0.01	3422	-0.07	-0.08
	(1.24)		(0.064)	(0.062)
Number of children	4.04	2782	0.02	0.02
	(0.81)		(0.047)	(0.046)
Taking money/products from business	4.76	3356	0.0004	0.003
	(0.72)		(0.037)	(0.036)
Keeping track of household bills [b/]	3.50	3416	-0.02	-0.03
	(1.60)		(0.076)	(0.075)
No need to separate money [c/]	0.62	3413	-0.01	-0.01
	(0.49)		(0.019)	(0.019)
Child Labor [d/]				
Working children	0.31	1043	-0.02	-0.01
	(0.46)		(0.035)	(0.035)
Daily hours dedicated to				
House work	1.02	1043	0.01	0.004
	(0.85)		(0.059)	(0.059)
Child labor	0.59	1043	-0.05	-0.05
	(1.10)		(0.079)	(0.080)
Schooling	7.35	1040	0.10	0.09
	(1.48)		(0.108))	(0.108
Children with perfect attendance	0.97	1025	0.01	0.01
	(0.18)		(0.013)	(0.012)

Each coefficient reported in the table is from a separate regression. * significant at 10%; ** significant at 5%; *** significant at 1 %. Standard errors clustered by village bank in parentheses. Marginal effects reported for probit specifications (no need to separate money, working children and children with perfect attendance).

[a/] Dependent variables are defined as follows:
Client's decision power: Index aggregating the responses to questions on who makes key decisions on household and business finance, the number of children to have, and the amount of money/products taken from the business; a higher number is associated with greater decision making power for the client.
Keeping track of household bills: A categorical variable indicating who is in charge of paying household bills; a higher number is associated with more responsibility for the client.
No need to separate money: Binary variable equal to one if client thinks that is not necessary to separate her money from that of her husband/partner or other adult in the household to control expenses and savings.
Working children: Binary variable equal to one if the child works.
Daily hours dedicated: Number of hours the child dedicated to each activity in the week before the survey; schooling includes the time the child spent at school, as well as the time he/she dedicates to do homework or study at the household.
Children with perfect attendance: Binary variable equal to one if the child attended school all the days that he/she could have.
[b/] Double difference estimate reported.
[c/] First differences.
[d/] Sample for the analysis on child labor includes school-aged children (between 6 and 15 years of age) of clients in Lima.
[e/] The covariates include location (Ayacucho or Lima), business activity, business size, age, schooling and number of FINCA loans received by the client.

TABLE 4B. IMPACT OF TRAINING ON HOUSEHOLD OUTCOMES, BY SUB-GROUP
OLS, PROBIT

	Mean & S.D. of dependent variable	Location		Type of Treatment (Ayacucho only)		Ex-ante Attitude Towards Training		Education		Civil Status		Business Size	
		Ayacucho	Lima	Mandatory	Voluntary	Low interest	High interest	Below high school	Above high school	Single	Married	Below median	Above median
Dependent variable [a/]	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Client's decision power on [b/]													
Loans/savings from FINCA for hh/business	0.01	-0.04	-0.08	-0.02	-0.08	-0.11	-0.03	-0.08	-0.06	-0.17	-0.05	0.02	-0.18*
	(1.24)	(0.078)	(0.113)	(0.090)	(0.102)	(0.087)	(0.094)	(0.072)	(0.137)	(0.132)	(0.072)	(0.087)	(0.093)
Number of children	4.04	0.03	0.06	0.01	0.06	-0.02	0.07	0.04	-0.04	0.10	0.01	-0.04	0.09
	(0.81)	(0.058)	(0.079)	(0.067)	(0.075)	(0.065)	(0.066)	(0.053)	(0.094)	(0.110)	(0.051)	(0.065)	(0.067)
Taking money/products from business	4.76	-0.03	0.01	-0.06	0.02	-0.002	0.001	0.02	-0.07	-0.04	0.01	-0.001	0.0003
	(0.72)	(0.045)	(0.067)	(0.047)	(0.053)	(0.050)	(0.055)	(0.041)	(0.081)	(0.077)	(0.042)	(0.051)	(0.053)
Keeping track of household bills [b/]	3.50	-0.03	-0.04	-0.04	-0.01	-0.03	-0.02	0.01	-0.17	0.002	-0.03	0.03	-0.08
	(1.60)	(0.093)	(0.135)	(0.104)	(0.117)	(0.104)	(0.112)	(0.086)	(0.163)	(0.159)	(0.087)	(0.105)	(0.111)
No need to separate money [c/]	0.62	-0.02	0.01	-0.02	-0.03	0.02	-0.05*	-0.004	-0.04	0.05	-0.03	0.02	-0.05 *
	(0.49)	(0.023)	(0.035)	(0.025)	(0.027)	(0.026)	(0.027)	(0.022)	(0.037)	(0.033)	(0.022)	(0.025)	(0.029)

Each coefficient reported in the table is from a separate regression. * significant at 10%; ** significant at 5%; *** significant at 1 %. Standard errors clustered by village bank in parentheses. Marginal effects reported for probit specifications (no need to separate money). For linear specifications, we report $\beta_1 + \beta_2 X$ from eq. (2) for FD estimates, and $\beta_3 + \beta_4 X$ from eq. (4) for DD estimates.

[a/] All dependent variables are defined identically to the previous table. See notes under Table 4 for variable definitions.
[b/] Double difference estimate reported.
[c/] First differences.

TABLE 4C. IMPACT OF TRAINING ON CHILD LABOR, BY SUB-GROUP
OLS, PROBIT

		Mother's Ex-ante Attitude							
		Child's gender		Towards Training		Mother's Education		Mother's Civil Status	
	Mean & S.D. of dependent variable	Female	Male	Low interest	High interest	Below high school	Above high school	Single	Married
Dependent variable a/ b/	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Working children	0.31	-0.07	0.03	-0.01	-0.02	0.01	-0.09	-0.13	0.01
	(0.46)	(0.047)	(0.044)	(0.057)	(0.044)	(0.041)	(0.068)	(0.087)	(0.038)
Daily hours dedicated to									
House work	1.02	-0.09	0.08	0.08	-0.03	0.01	-0.02	-0.13	0.03
	(0.85)	(0.091)	(0.071)	(0.096)	(0.075)	(0.069)	(0.119)	(0.152)	(0.065)
Child labor	0.59	-0.15	0.03	0.11	-0.14	0.04	-0.32**	-0.24	-0.02
	(1.10)	(0.111)	(0.101)	(0.131)	(0.099)	(0.093)	(0.156)	(0.224)	(0.085)
Schooling	7.35	0.25*	-0.04	-0.06	0.18	0.08	0.12	0.12	0.10
	(1.48)	(0.146)	(0.135)	(0.171)	(0.138)	(0.125)	(0.214)	(0.236)	(0.120)
Children with perfect attendance	0.97	-0.01	0.03	-0.01	0.02	0.01	0.02	-0.05	0.02
	(0.18)	(0.012)	(0.020)	(0.016)	(0.018)	(0.014)	(0.033)	(0.030)	(0.014)

Each coefficient reported in the table is from a separate regression. * significant at 10%; ** significant at 5%; *** significant at 1 %. Standard errors clustered by village bank in parentheses. Marginal effects reported for probit specifications (working children and children with perfect attendance). For linear specifications, we report $\beta_1 + \beta_2 X$ from eq. (2) for FD estimates, and $\beta_3 + \beta_4 X$ from eq. (4) for DD estimates.

a/ All dependent variables are defined identically to the variables in Table 4. See notes under Table 4 for variable definitions.
b/ Sample for the analysis on child labor includes school-aged children (between 6 and 15 years of age) of clients in Lima.

APPENDIX TABLE I: DESCRIPTIONS OF OUTCOME VARIABLES

Variable	Description	Time of measurement
1. Institutional outcomes		
Loan size	Amount borrowed from FINCA's external account at beginning of loan cycle (US$).	Last cycle before and last available after the training
Cumulative savings	Savings balance (voluntary and mandatory) at end of loan cycle.	Last cycle before and last available after the training
Repayment	Binary variable equal to one if, since the beginning of training, the client made all her payments on time or had sufficient savings to cover missed payments	Every cycle since the beginning of training
Fines	Amount discounted from the savings account for not attending or being late to any of the meeting, and/or not making the weekly installment (US$).	
Solidarity discount	Discounts from savings accounts that occur when there is an individual default in the external account not covered by defaulter's individual savings (US$).	
Dropout, global	Binary variable equal to one if client had left a FINCA village bank ever after the beginning of the training.	
Dropout, permanent	Binary variable equal to one if client had left a FINCA village bank by December 2005.	
Dropout with default	Binary variable equal to one if client defaulted by the time she left the village bank.	
Dropout without default	Binary variable equal to one if client did not defaulted by the time she left the village bank.	
2. Business results		
Last month's sales (log)	Logarithm of sales from the client's main business in the month preceding each survey.	Baseline (BL) and Follow-up (FU)
Good sales	Sales from the client's main business in a good month (S/.).	BL and FU
Normal sales	Sales from the client's main business in a normal month (S/.).	BL and FU
Bad sales	Sales from the client's main business in a bad month (S/.).	BL and FU
Difference good-bad monthly sales	Difference between sales from the client's main business in a good month and in a bad month IIS/.)	BL and FU
Weekly surplus from most profitable product	Difference between the weekly revenue and cost of the most profitable product in the main business (S/.)	FU
Number of total workers	Number of workers in the main business.	BL and FU
Paid workers, not family	Number of workers in the main business that are not household members.	BL and FU

3. Business practices		
Tax formality	Binary variable equal to one if the client has a tax ID number.	BL and FU
Profits used for business growth	Binary variable equal to one if the client reported re-investing profits for the growth or continuity of the business.	FU
Thinking of keeping business safe when taking money from it	Binary variable equal to one if client considers the needs of the business when taking money from the business for family use.	FU
Fixed salary for herself	Binary variable equal to one if the client pays herself a fixed salary.	BL and FU
Records sales	Binary variable equal to one if the client records her sales in a registry or notebook.	BL and FU
Records withdrawals	Binary variable equal to one if the client records her cash and in-kind withdrawals in a registry or notebook.	BL and FU
Records wages	Binary variable equal to one if the client records in a registry or notebook the wage payments she makes to workers that are not household members.	FU
Business knowledge	Number of right answers given by the client when asked about what should be done to increase business sales and to plan for a new business.	FU
Starting a new business	Binary variable equal to one if the client reports having begun a new business in the last year (A Ayacucho) or the last two years (Lima).	FU
Number of sales locations	Number of locations where the client sells the products of her main business.	BL and FU
Number of income sources	Number of income sources the client reports. Includes all her personal/family businesses as well as other jobs or working activities (only available for Ayacucho).	BL and FU
Importance of main product	Discrete variable that indicates if the sales of the most profitable product represent I) all business sales; 2) more than half of business sales; or 3) less than half of business sales. The higher the number, the more diversified the business is.	FU
Allows credit sales	Binary variable equal to one if the client makes sales on credit.	FU, but recalling situation 12 months before survey
Faced problems with business	Binary variable equal to one if the client reported that her business faced a specific problem in the last year (Ayacucho) or the last two years (Lima).	FU
Planned change/innovation	Binary variable equal to one if the client had an idea for a change/innovation to improve the business (Ayacucho) or to solve the problems faced (Lima).	FU
Implemented change/innovation	Binary variable equal to one if the client implemented a change/innovation to improve the business (Ayacucho) or to solve the problems faced (Lima).	FU

4. Empowerment outcomes		
Financial decisions	Index aggregating the answers to questions on who makes decisions on savings and credit for the household and the business. For each specific question, a categorical variable is generated and a higher number means more decision making power on the part of the client. Index was constructed using principal component analysis for discrete/categorical data.	BL and FU
Family size decisions	Variable indicating power in making decisions regarding family size. Uses same categories as above.	BL and FU
Keeping track of household bills	Variable that indicates who is in charge of ensuring that the household bills have been paid. Uses same categories as above.	BL and FU
Taking money/product from business	Variable that indicates who decides to take products/money from the business. Uses same categories as above.	BL and FU
Need to separate money	Binary variable equal to one if the client needs to separate her money from that of her husband/partner or other adult in the household to control expenses and savings.	FU
5. Child labor outcomes		
Working children	Binary variable equal to one if the child works.	
Hours dedicated to house work/child labor/schooling	Number of hours the child dedicated to each activity in the week before the survey; schooling includes the time the child spent at school, as well as the time he/she dedicates to do homework or study at the household.	
Children with perfect attendance	Binary variable equal to one if the child attended school all the days that he/she could have.	

APPENDIX TABLE 2: DESCRIPTIVE STATISTICS OF OUTCOME VARIABLES

Variable	Obs	Mean	Std. Dev.	Min	Max
Institutional results					
Loan size	6340	253.22	264.59	50.00	4,500.00
Cumulative savings	6340	299.56	405.41	-1,742.62	5,492.73
Repayment	6340	0.80	0.40	0.00	1.00
Fines	2721	0.02	3.23	-62.00	32.00
Solidarity discounts	2721	0.34	4.07	0.00	142.43
Dropout global	6340	0.61	0.49	0.00	1.00
Dropout permanent	6340	0.45	0.50	0.00	1.00
Global dropout with default	6340	0.16	0.37	0.00	1.00
Global dropout without default	6340	0.42	0.49	0.00	1.00
Permanent dropout with default	6340	0.14	0.35	0.00	1.00
Permanent dropout without default	6340	0.30	0.46	0.00	1.00
Business practices					
Tax formality	6471	0.15	0.35	0.00	1.00
Profit used for business growth	3473	0.67	0.47	0.00	1.00
Thinking of keeping business safe when taking money from it	3473	0.26	0.44	0.00	1.00
Fixed salary	6331	0.09	0.28	0.00	1.00
Keeping records of sales	6381	0.34	0.47	0.00	1.00
Keeping records of withdrawals	5393	0.20	0.54	0.00	3.00
Keeping records of payments to workers	1704	0.21	0.40	0.00	1.00
Business knowledge index	6946	3.32	1.40	0.00	13.00
Started new business	6946	0.07	0.26	0.00	1.00
Number of sales locations	6946	1.05	0.46	0.00	4.00
Number of income sources	4820	1.89	0.79	0.00	5.00
Importance of main product	2255	2.31	0.70	1.00	3.00
Allows sales on credit	6946	0.58	0.49	0.00	1.00
Proportion of clients who faced problems with business	2126	0.32	0.47	0.00	1.00
Proportion of clients who planned innovations in their businesses	6946	0.32	0.47	0.00	1.00
Proportion of clients who executed innovations in their businesses	6946	0.20	0.40	0.00	1.00

APPENDIX TABLE 2: DESCRIPTIVE STATISTICS OF OUTCOME VARIABLES (CONTINUED)

Business results					
Last month sales (log)	6451	6.77	1.66	0.00	14.47
Good month sales	6353	7.95	1.29	3.04	14.69
Normal month sales	6341	7.19	1.21	2.40	14.47
Bad month sales	6303	6.10	2.04	0.00	13.77
Difference good-bad month sales	6297	1.85	1.76	-1.67	12.95
Weekly surplus from most profitable product	1799	-550.45	13,753.86	-336,994.60	1,000.00
Total number of workers	6453	1.18	3.98	0.00	198.00
Number of paid workers, not family members	6456	0.48	4.55	0.00	99.00
Household outcomes					
Client's decision power on:					
Loans/savings from FINCA for hh/business (index)	6731	-0.04	1.27	-4.66	1.33
Number of children	4588	4.06	0.77	1.00	5.00
Taking money/products from business	6186	4.74	0.71	1.00	5.00
Keeping track of household bills	6865	3.45	1.54	1.00	5.00
No need to separate money	3459	0.62	0.49	0.00	1.00
Child labor					
Working children	1043	0.31	0.46	0.00	1.00
Daily hours dedicated to:					
House work	1043	1.02	0.85	0.00	5.00
Child labor	1043	0.59	1.10	0.00	8.00
Schooling	1040	7.35	1.48	0.00	13.00
Children with perfect attendance	1025	0.97	0.18	0.00	1.00

APPENDIX TABLE 3: EX-ANTE DIFFERENCES BETWEEN CLIENTS
BY LOCATION AND PERMANENCE IN FINCA

	Treatment	Control	Difference	T -stat	
Response rate (follow-up survey)	75.2	77.9	-2.7	2.060	**
By Location					
Lima	77.2	83.5	-6.2	2.845	***
Ayacucho	74.5	74.8	-0.3	0.170	
By Permanence in FINCA					
Clients	83.2	83.9	-0.6	0.339	
Ex-clients	69.9	74.2	-4.3	2.436	**
Tenure in FINCA (Cycles)					
Lima	5.2	5.2	0.0	0.030	
Ayacucho	6.0	5.8	-0.2	-1.220	
Years of Education					
Lima	9.9	9.7	0.2	0.946	
Ayacucho	8.1	8.1	0.0	0.009	
Age					
Lima	42.6	42.3	0.3	0.529	
Ayacucho	36.3	36.5	-0.2	-0.510	
Loan Size (external account) [a/ b/]					
Lima	293	308	15	1.09	
Ayacucho	173	167	-6	-0.85	
Accumulated Savings [a/ b/]					
Lima	174.9	185.2	-10.3	-0.703	
Ayacucho	360.4	348.6	11.7	0.577	
Default Rate [b/]					
Lima	0.03	0.03	0.00	0.109	
Ayacucho	0.02	0.01	0.00	0.369	
Dropout Rate [b/]					
Lima	22.5	23.3	-0.8	-0.37	
Ayacucho	22.8	23.4	-0.6	-0.47	
Last week sales (log)					
Lima	7.4	7.4	0.0	-0.071	
Ayacucho	6.3	6.3	0.0	-0.086	
Number of total workers					
Lima	1.2	1.2	0.0	-0.202	
Ayacucho	0.8	0.8	0.0	0.793	
Number of paid workers					
Lima	0.4	0.3	0.1	0.894	
Ayacucho	0.2	0.2	0.0	0.442	
Ex-ante high interest in training					
Lima	0.6	0.6	0.0	0.446	
Ayacucho	0.4	0.4	0.0	0.797	

Source: FINCA-Peru historical database and baseline client survey.
Averages were calculated for the cycle before the BDS training program was started.

[a/] In US $.
[b/] In the last cycle before the beginning of training.

APPENDIX TABLE 4: POST INTERVENTION DIFFERENCES FOR DROPOUT REASONS, AYACUCHO & LIMA

	Total		Treatment		Control		Difference	T -stat
	#obs	%	#obs	%	#obs	%		
Number of clients	3457		2093	60.54	1364	39.46		
5-I. Reasons related with the policies and procedures of the FINCA program								
Dissatisfied with FINCA's loan terms	227	6.57	131	6.26	94	6.89	-0.633	-0.737
Dissatisfied with FINCA's saving terms	51	1.48	28	1.34	23	1.69	-0.348	-0.830
Dissatisfied with the solidarity discounts (only Lima) [a/]	47	4.42	20	3.68	27	5.19	-1.509	-1.196
The meetings were too long or too far (interference with business' schedule and/or personal activities)	404	11.69	256	12.23	145	10.63	1.601	1.437
Unequal/bad treatment to bank members	142	4.11	82	3.92	59	4.33	-0.408	-0.592
Because of the training	0	0.00	0	0.00	0	0.00	0.000	
FINCA discovered loans from other institutions (only Ayacucho) [b/]	13	0.54	7	0.45	6	0.71	-0.259	-0.825
Found an institution with better loan terms	18	0.52	11	0.53	7	0.51	0.012	0.049
5-II. Reasons related with the group loans								
The village bank "graduated" (or was dissolved)	30	0.87	14	0.67	13	0.95	-0.284	-0.928
Personal conflicts in the bank (with other bank members or with the bank's president)	170	4.92	106	5.06	63	4.62	0.446	0.594
5-III. Reasons related to the client's business								
No credit needs because of the good situation of the business (sufficient capital in the business or the business operates seasonally)	29	0.84	18	0.86	11	0.81	0.054	0.169
No credit needs/could not pay the loan because of the bad situation of the business or other reasons	304	8.79	187	8.93	116	8.50	0.430	0.437
Closed the business / new activity or job	69	2.00	38	1.82	30	2.20	-0.384	-0.794
5-IV. Personal Reasons								
Expenses resulting from a family crisis (i.e. illness) or family event (i.e. wedding)	312	9.03	193	9.22	118	8.65	0.570	0.573
Other personal problems	124	3.59	74	3.54	50	3.67	-0.130	-0.201
Left the region/went on a long trip	215	6.22	140	6.69	75	5.50	1.190	1.417
A relative influenced the client	37	1.07	23	1.10	14	1.03	0.073	0.202
5- V. Reasons due to Environmental Factors								
Environmental/macroeconomic factors	57	1.65	31	1.48	26	1.91	-0.425	-0.959
5- VI Other Reasons								
Other / Did not respond	221	6.39	134	6.40	85	6.23	0.171	0.201

APPENDIX A: BUSINESS TRAINING MATERIALS

In Lima, the training was administered as a two-part program.[1] Module 1, "Training for Success," consists of 15 sessions that introduce the topics of business administration and marketing. Classes begin by introducing attendees to what a business is, how a business works, and the marketplace. Women are taught to identify their customers, business competitors, and the position of the business in the marketplace. Later in the module, sessions cover topics on product, price, and promotional strategies and a commercial plan. The module also includes review sessions and a business game that participants play in several sessions.

The second module, "Business and Family: Costs and Finances," consists of 10 sessions that explain how to separate business and home finances. The classes cover the differences between income, costs, and profit, how to calculate production costs, and product pricing. Other sessions cover maintaining records of business' operations, business growth, loan repayment, and taxes.

Every session of these two modules included worksheets on the topics taught for the clients to practice and review at the meetings or at home.

In Ayacucho, the training program was grouped into three modules with topics less advanced than those taught in Lima.[2] Sessions were presented in 30 minute classes and did not used worksheets as in Lima. Module 1, "Manage Your Business Money," begins by defining the differences between money for personal expenses and for the business. Women are taught how to calculate profits and about the use of profits for the household and business. Sessions cover how to handle selling to customers on credit, how to record business expenses, how to prevent losses, and the importance of investing in the business. The module also includes a review session.

Module 2, "Increase Your Sales" begins by providing an overview of five key elements in sales: 1) customers, 2) business product or service, 3) product placement, 4) pricing, and 5) marketing. Many of the following sessions are dedicated to providing women with practical means of applying these concepts. The topics covered include the key elements of good customer relations, how to target sales to different types of customers, and approaches for varying the types and timing of the products that are sold in order to increase sales. Participants are also taught about how to identify locations, price goods, and conduct activities that increase sales and profits.

The third module, "Plan for a Better Business," teaches members how to incorporate planning into their business. Sessions begin by presenting why planning is beneficial and what traits characterize a successful business. Attendees are instructed on how to solve business problems and how to introduce new products or changes. Later sessions teach the tools needed to prepare a sales plan, calculate business and loan costs, search for new resources, and handle unexpected problems and opportunities.

[1] Table Al provides a list of lessons presented in modules I and 2 in Lima.
[2] Table A2 provides a list of lessons presented in modules I -3 in Ayacucho.

APPENDIX A, TABLE I. BUSINESS TRAINING SESSIONS PRESENTED IN LIMA

Module 1: Training for Success		Module 2: The Business and the Family: Costs and Finances	
Session	Title	Session	Title
1	Training for Success	1	The Business and the Family
2	What is a business?	2	Income, Costs, and Profit
3	How does a business work?	3	My Costs of Production and Operating Resources
4	The Market	4	How Do I Calculate the Cost of Production of My Product?
5	Who are my customers?	5	Prices and Price Equilibrium
6	Who are my competitors?	6	How to Make a Good Price Decision
7	Review Session 1	7	The Registers and Controls in My Business
8	Business game: Module 1	8	The Growth of My Business
9	My business' position in the market	9	Will I Be Able to Pay My Loan?
10	Product and Price Commercial Strategy	10	Taxes
11	Marketplace and Promotion Commercial Strategy		
12	My Commercial Plan		
13	Review Session 2		
14	Business Game: Module 2		
15	Business Game: Module 3		

APPENDIX A, TABLE 2: BUSINESS TRAINING SESSIONS PRESENTED IN LIMA

Module 1: Manage Your Business Money		Module 2: Increase Your Sales	
Session	Title	Session	Title
1	Separate Business and Personal Money	1	Know Your Customers
2	Use Business Loans for Your Business	2	Treat Your Customers Well
3	Calculating Profits	3	Sell to Different Kinds of Customers
4	Track, Plan and Invest Your Business Money	4	Improve Your Products and Services
5	Decide How to Use the Profits of the Business to Satisfy the Needs of the Business and Your Personal Needs	5	Sell New and Complementary Products and Services
6	Prevent Business Losses	6	Seize Opportunities to Sell
7	Manage Credit Sales	7	Sell Where Customers Buy the Most
8	Review of the Learning Sessions of "Manage Your Business Money"	8	Set the Right Price
		9	Promote Your Business With Good Selling Practices
		10	Plan for Increased Sales

Module 3: Plan for a Better Business	
Session	Title
1	Use Planning Steps to Grow Your Business
2	Examine How Your Business Is Doing
3	Decide How You Can Improve Your Business
4	Develop and Test New Business Ideas
5	Plan How Much to Make and Sell
6	Plan Business Costs
7	Plan for More Profit
8	Find Resources for Your Business
9	Prepare for Unexpected Events

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CAN INVESTMENT IN HOUSEHOLD ENTERPRISE ADVANCE CHILDREN'S SCHOOL ATTENDANCE? CONSEQUENCES OF POVERTY ALLEVIATION PROGRAM IN INDONESIA

Chikako Yamauchi[1]

1. INTRODUCTION

Child labor is widely recognized as a serious problem afflicting low-income areas. It is estimated that 211 million children ages 5-14, or 18% of children worldwide, work for earnings. Many of these working children risk their health in dangerous work environments or suffer from long hours of work (ILO, 2002). These children face a possible threat of inter-generational transfer of poverty if their work for household income prohibits them from attaining a high enough level of education and depresses their stream of future income.

These concerns have spawned measures that attempt to eliminate child labor. For example, many of today's developed countries banned child labor in the nineteenth century. A number of developing countries have recently ratified at an unprecedented rate the ILO Conventions on the Minimum Age for Economic Activities and on the Worst Forms of Child Labor. However, due to the difficulty of enforcement, the laws they enact are often expected to have limited impact on the incidence of child labor (Grootaert and Kanbur, 1995).

In addition to the establishment of these legal frameworks, many programs have been implemented to reduce child labor and promote schooling. One such program provides grants or credit to poor adults in order to strengthen their income-generating capacity so that they do not have to rely on child labor (alternative income-generating methods). This strategy is supported by theory, which says that improving the income-generating capacity of adults, especially those in the lowest socioeconomic brackets, reduces the labor force participation among children (Basu and Van, 1998; Swinnerton and Rogers, 1999).

However, this strategy assumes that poor adults can utilize publicly provided funds productively by investing in their family enterprises. Nevertheless, knowledge, skills, and network may be required to ensure positive, certain returns from the investment within the time

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period in which children do not grow too old for education. In addition, such returns from the investment need to be large enough to overcome a possible unintended effect of increased capital stock raising marginal productivity of labor and pushing children into the production process (Wydick, 1999; Rosenzweig and Evenson, 1977).

Also, in order to enhance earnings capacity, it is necessary to induce participants to comply and invest in productive activities without diverting program funds for other purposes. However, if households do not perceive a need for compliance, they may appropriate the funds for short-run consumption. This tendency may be stronger for households that have little investment experience or that face severe credit constraints. Although lack of compliance indicates a failure of program implementation, it could be beneficial for children, if the funds are used to relieve them from labor or to finance their education. Recent evidence that conditional cash transfer programs (or food-for-education programs) increase enrollment (Schultz, 2004; Ravallion and Wodon, 2000) seems to partly reflect an underlying need of poor households for funds for children's education.

These concerns raise the question of how effective alternative income-generating methods are in reducing the incidence of child labor and promoting schooling. In order to address this question, I examine, first, which socioeconomic groups are more likely to comply and invest in family enterprises when loans for such enterprise are made available. Particularly, I examine whether adults' employment status is improved as a result of such investment. If the degree of compliance differs across households, I further investigate how the ultimate impact on children's time allocation behaviors compare between investing households and non-investing households. In particular, I measure children's time allocation behaviors by dummy variables indicating whether a child works for earnings at least one hour per week, whether he or she regularly attends school, and whether his or her main activity is household work.

For this investigation, I utilize the change in the availability of loans for household enterprises which was caused by Indonesia's large-scale subsidy program called *Inpres Desa Tertinggal* (IDT). This program provided poor villages with grants that were designated as a fund for business loans from 1994-95 through 1996-97. Although the impact of IDT on children's time allocation has been examined by some studies, different identification strategies have resulted in mixed findings. Additionally, no study has examined the impact of variation in the amount of IDT funds per household across treated villages. IDT funds per household vary because the program provides targeted villages with the same amount of lump-sum grants regardless of the population size, effectively assigning larger amounts of funds per household to villages with fewer households. By exploiting this unique variation in program intensity, this paper enables the inclusion of all the treated villages. This contrasts with previous studies of IDT, which discard the poorest villages from methodological consideration. Thus, my results are more representative and relevant. In addition, I report how the effects differ by socioeconomic status of households measured by the level of educational attainment of the heads.

Findings indicate that urban households headed by persons with no schooling experience use program funds to temporarily shift children from work to school, while rural households invest in household enterprises and improve the employment status of young male adults. These rural households do not demonstrate a positive impact on children's time allocation either in the short- or long-run. These findings suggest that, though investment in household enterprise may increase adults' employment opportunities, it may not necessarily eliminate child labor or promote children's education. On the other hand, findings for urban households suggest the

potential of educational loans/grants to improve the time allocation of socially disadvantaged children in the short-run.

2. BACKGROUND

2.1 CHILDREN AT WORK AND AT SCHOOL IN INDONESIA

With more than 200 million people, Indonesia is the world's fourth largest country and its performance in combating child labor and promoting schooling affects the welfare of a considerable number of children. At the onset of *Inpres Desa Tertinggal* (IDT), Indonesia had been successful in reducing the number of people in poverty. However, the national share of children working at least one hour per week remained relatively high. Twenty-two percent (5%) of rural (urban) children aged 10-15 worked and 20% (7%) of them did not regularly attend school. Though children in this age range are required to complete elementary and junior high school education according to the country's nine-year compulsory education program launched in 1994,[2] the statistics indicate that it was not strongly enforced. The conditions were even less satisfactory in villages that are designated as poor by IDT. Twenty-seven percent (10%) of rural (urban) boys were at work and 25% (12%) of them did not attend school regularly. A more striking difference is found across groups of households headed by persons with different levels of education. Even in urban areas, one out of four boys from households headed by persons with no schooling experience was not regularly attending school, while more than 90% of boys from households headed by those with a secondary degree attended school no matter whether they were in urban or rural areas (Table 1(A). See Table 1(B) for adolescents ages 16-18.).

These initial benchmarks, indicating a particularly low rate of school attendance and high rate of labor force participation among children from disadvantaged households, suggest that the lack of household resources may be one of the factors that prohibit them from shifting children from work to school. IDT may affect transition from work to school by changing household resources particularly among these households with low socioeconomic status. Therefore, even though IDT does not directly target children, but rather aims for the creation of employment opportunities and the improvement of welfare in general, it can have an unintended impact on children's time allocation behaviors.

2.2 INDONESIA'S GRANTS FOR POOR VILLAGES: IDT

Inpres Desa Tertinggal (IDT) is a subsidy program for selected poor villages in Indonesia. It was launched in 1994 in order to accelerate the reduction in the number of impoverished individuals by targeting public resources to poor, remote villages. The government encouraged targeted villages to use the subsidy as a fund for rotating loans, and households receiving the loans to invest in productive activities (National Development Planning Agency, Indonesian Ministry of Home Affairs (NDPA), 1994). Approximately one third of the 65,000 villages were selected for funding if the value of the village's welfare indicator, which summarizes residents' standard of living and the availability of socioeconomic infrastructure, was lower than two provincial thresholds. These criteria were modified each year over the course of three years, from the

[2] Prior to this reform, mandatory education was set at six years, which covers elementary education. The country also had an independent law restricting the minimum age for working. During the first half period of this analysis (1993-98), the minimum age was 14 years old, and children ages less than 14 were allowed to work in certain types of work with parental consent and for a limited number of hours depending on a family's financial need. The minimum age was raised in April 1999 to 15 years old and children under 15 were not allowed to work more than four hours a day (U.S. Department of Labor, 2002).

fiscal years of 1994-95 through 1997-98. However, most of the villages that were initially designated as poor received subsidies in all three years.[3]

Within these villages in the rural and urban areas, 37% and 15% of households respectively, participated in the program by 1997, and the average loan sizes, 304,000 rupiah and 278,000 rupiah, were worth nine times and five times as much as their average monthly expenditure per capita, respectively. The rules used to select these participating households are unknown to researchers; these rules also differ across villages because village governments were given discretion over the distribution of program resources and encouraged to utilize local knowledge in targeting poor households. In general, households in which heads were less-educated and houses were made of inferior materials tended to be direct beneficiaries. Particularly, the level of educational attainment of a household head is a good predictor of the probability of being eligible for IDT loans. For example, households headed by persons who have never attended school, have attended school but have no degree, have primary degrees, and have secondary degrees show the average participation rates of 40%, 42%, 43% and 31% in rural areas and 19%, 23%, 18%, and 8% in urban areas, respectively. I combine this within-village variation in the probability of being eligible with the variation in the amount of program funds per household in assessing the effect of IDT.

Participating households were encouraged to invest in productive activities, but they were not expected to spend funds to finance children's education for the following reasons. First, the government suggested that households invest in productive activities that yield returns in the short-run (NDPA, 1994). Some villages started collecting repayment within a month and completed the collection over ten months (Kimura, 1994). These factors made it difficult for participants both to meet repayment deadlines and to spend the money on children's schooling unless funds were used primarily to smooth income flow of a month or two. Second, once households were chosen to be eligible, they needed to submit business proposals describing the kind of production activities that they planned to undertake and the amount of funds that they planned to spend. No participating household answered that they use IDT funds to finance their children's education. Approximately half of them used the funds for the purchase of livestock; another 35% for crop cultivation, fishery, and other agricultural activities.[4]

However, the following evidence suggests limited compliance with such expected usage of funds. Despite the role of the grant as a fund for revolving loans, many households did not repay loans. The fractions of households repaying loans that were extended some time in 1996 by January 1998 are 20% and 28% in rural and urban villages, respectively.[5] These figures suggest that some households did not perceive the obligation to comply with the program guideline, and chose to allocate the funds for purposes other than investment. If dominant usage of program funds for non-complying households was to relieve children from work or to cover the educational costs for children, such diversion of program funds could bring about positive changes in children's time allocation behaviors in an unintended manner. Particularly,

[3] Though some villages are additionally designated as poor in later years, they are not used in the present study for the following reasons. First, most of the additional villages are selected in the third fiscal year, in which the selection criteria for this year are not well-documented. Second, their selection depends on a newly calculated welfare indicator, which is likely to be affected by the impact of the first- and second-year grants. Since the indicator is calculated for each province, controlling for the third-year selection would require accurate estimation of the province-specific program effects in the first two years. In order to simplify the analysis, this paper focuses on villages that are selected as poor in the initial year.

[4] In urban areas, 36% of participating households answer that they spend funds on trade, 18% on livestock, 20% on other agricultural activities, and 14% on small-scale industry (1998 SUSENAS).

[5] These rates are based on villages where at least one of the sampled households participates in IDT in 1996.

the repayment rate differs largely across households depending on the level of heads' educational attainment and the area where they reside. That is, in urban areas, while households headed by those with some schooling experience, primary degrees, and secondary degrees exhibit the repayment rates of 23%, 19%, and 21%, only 6% of households headed by those with no schooling experience repaid. This socially disadvantaged group of households does not indicate a lower repayment rate in rural areas; rather, it boasts a higher rate of 20% compared to repayment rates of 15%, 15%, and 14% for households with heads who have some schooling experience, primary degrees, and secondary degrees, respectively. This gap in the repayment rate indicates that the behavioral responses of participating households are likely to vary depending on the level of educational attainment of the heads; and, particularly, the most disadvantaged group of households in urban areas may reveal a distinct effect of IDT. I investigate this possible heterogeneity in program effects by the level of educational attainment of household heads.

3. CONCEPTUAL FRAMEWORK

The implementation process of IDT described in the previous section suggests that there are multiple pathways that IDT funds can affect children's time allocation behaviors. Particularly, the effect depends on whether participants perceive program funds as money that can be used only for investment or a pure cash transfer. In this section, I illustrate two simple agricultural household models that are based on different households' perceptions.[6] These two scenarios demonstrate that adult labor supply can increase in the case where households invest in family enterprises while it is likely unchanged or decreases if they perceive IDT funds as cash transfer. These differing implications provide an opportunity to empirically test whether households use IDT loans for investment. Later, I discuss which households are more likely to invest rather than consume program funds and explore any heterogeneous program effects by socioeconomic status of households measured by the level of educational attainment of the heads.

3.1 SCENARIO 1: FUNDS FOR CAPITAL INVESTMENT

Under the first scenario where households use IDT funds for investment, the program *can* increase household labor supply if labor and capital stock used in the household production sector are complements and the effect of increased labor productivity in the sector exceeds the positive income effect of capital augmentation on leisure. Suppose that a household maximizes a static, unitary utility function that depends on total consumption, X, and leisure, l, of the household members subject to time constraints.[7]

$$\text{Max } U = U(X, l)$$

$$\text{s.t. } l + F = T$$

where total time endowment, T, of all household members is allocated to either leisure, l, or work, F. Households also face a budget constraint; total expenditure, PX, is equal to profits accrued in production activities, that is, revenue, f(L, K), subtracted by the rental cost for capital, rK, as well as wage earnings, w(F-L). L and K are the total amounts of labor and capital stock used in the household production process; thus, the difference between F and L stands for the

[6] For detailed discussion on agricultural household models, see Singh, Squire and Strauss (1986).
[7] Though evidence for collective household decision-making is well documented, it is hard to implement an empirical analysis under a model with a bargaining power parameter in this study because the data do not provide any good indicators of bargaining power, or information on who receives and controls the credit within the household.

hours that household members spend at wage work if it is positive, and if it is negative, the hours that hired labor spends at the household production process.

$$PX = f(L, K) - r^*(M, r)K + w(F-L)$$

The effect of IDT in the case where households perceive it as money for investment can be characterized as reducing the costs to use capital stock. That is, the effective rental price for capital stock, r*, is increasing in actual rental price, r, and decreasing in IDT grants. Particularly, this cost-reducing effect is stronger in villages with a larger amount of funds per household, M.

The effect of such price reduction on household labor supply is unclear because it depends on the technological relationship between capital stock and labor as well as the balance between income and substitution effects of capital augmentation. Suppose that capital stock and labor are complements.[8] That is, increased capital stock calls for greater labor inputs in order to keep operating efficiently. Examples include livestock, which requires labor to take care of it, and an increased amount of raw materials to manufacture craft boxes, a common product. In this case, investment increases demand for labor.[9] Since it is more productive to work at the household production sector, some household members may newly start working or other members who were working in the labor market may shift from wage work. If adult and child labor are substitutable, labor demand can be met by labor supplied by children.[10] On the other hand, capital augmentation also raises the level of household income. This income effect induces household members to increase consumption of goods and leisure, and thus, to reduce total labor supply. Thus, the income effect mitigates the effect of capital augmentation pushing household members into the household production sector. Altogether, the overall impact on labor supplied by household members is ambiguous.

These household-level predictions imply that the village-level share of workers can increase if participants invest in family enterprise. Since an increase in aggregated labor demand in the household production sector is met by labor supplied either by household members or hired employees, these changes can be examined in the village share of self-employed and wage workers in addition to the overall share of individuals at work.[11] Note that the impact on the village share of people at work includes possible spillover effects on individuals who do not directly receive IDT loans because they can be hired by participants.

3.2 SCENARIO 2: CASH TRANSFER

The second scenario assumes that participants take IDT as a cash transfer, which they are allowed to use for either investment or consumption. In this case, the program is characterized as an increase in unearned income in the budget constraint, and the interest rate does not depend on the amount of funds per household.

[8] It is possible that capital and adult labor are substitutes. However, in my earlier work, I show that IDT increases labor supply of young adults, which include those who do not have children living in their household (Yamauchi, 2005). Thus, it seems reasonable to assume the same technological pattern for households with children.

[9] For simplicity, I assume that households do not hire labor from market. Incorporating the labor market will allow households to hire labor to complement with increased capital. However, empirical results do not suggest a significant change in the fraction of wage workers even in urban areas.

[10] Even if adult and child labor are not completely substitutable, if capital stock and child labor are complements, capital augmentation also results in an increase in demand for child labor. For instance, an additionally purchased goat may increase the supply of child labor if it is conventional for children, rather than adults, to take care of livestock.

[11] This is based on the assumption that, though effective labor market may contain several villages, participants are likely to hire labor supplied by people in the same village.

$$PX = f(L, K) - rK + w(F-L) + M$$

If this is the case, the income effect created by the program funds increases consumption and leisure, decreasing labor supply. These predictions include the case where children reduce their work hours and instead spend more time at school or for leisure. Similarly, the effect on adults' work hours is non-positive. At the aggregated village-level, given that there is no impact on time allocation behaviors among non-participants, these predictions imply that the share of workers will be either unchanged or decrease and the share of children at school may increase.

The prediction for the share of workers differs from that based on scenario 1, enabling us to distinguish the two scenarios. That is, if a larger number of individuals start working after the implementation of IDT, it suggests that IDT-induced capital augmentation in the household production sector creates employment opportunities and participants are not merely spending program funds for short-run consumption. Particularly, adults may be more likely to be affected by the program given that they are the principal operators of household production. Exploiting this difference in the theoretical prediction, I examine which households show evidence of investment, that is, an increase in adult labor supply. Then, I investigate how the changes in children's time allocation between work and school is associated with the impact of IDT on adult employment. It is important to note that we cannot distinguish the two cases if adult or child labor does not increase. No change in their time allocation behaviors indicates either that there is no investment and thus no job creation or that households invest, which however is not increasing labor demand because, say, capital stock saves rather than requires labor inputs or investment fails. Thus, this method of testing households' investment decision hinges on the assumption that capital stock and labor are complements and investment enhances labor demand more than it induces leisure.

Another implication suggested by these two scenarios is that the models are general and IDT's income effect can be revealed in many aspects of households' consumption and time allocation behaviors. Some of the implied changes can in turn affect children's time allocation. However, the direction of an ultimate impact is unclear, and thus an empirical question.[12] For instance, if female adults, as secondary breadwinners, decrease their labor supply and start to spend more time at household work, they may improve children's nutrition intake and sanitary environment. The ultimate impact of this change on children's time allocation is unclear as such an improvement can increase children's productivity both at work and at school. Alternatively, households may spend program funds to purchase goods rather than leisure, including items that are directly related to education such as school materials and transportation. On the other hand, households may merely increase expenditure on items that are not directly related to education. Even in this case, improved food consumption and housing environment may indirectly benefit children's schooling. However, as in the case where female adults spend more time at household work, the eventual impact on children's time allocation is unclear.

3.3 POSSIBLE HETEROGENEITY IN PROGRAM EFFECTS

The two previous subsections have demonstrated that we can identify investing households by examining adult labor supply behaviors. This establishes the basis to investigate the effectiveness of alternative income-generation methods in eliminating child labor and promoting

[12] The same income effect on consumption is predicted by the scenario of investment. It also provides the same prediction for time allocation behaviors to the extent that the income effect dominates the substitution effect.

their schooling. The decision-making of investment is likely to depend on a number of village- and household-level factors. For example, villages with strict program implementation may force participants to comply with the program guideline requiring investment. In places with a scarce source of credit, participants may be inclined to comply in order to keep IDT loans accessible. Without these two factors, the decision is likely to depend on whether marginal utility from spending program funds for consumption is higher than expected marginal utility from potential returns to investment. For instance, households in severe poverty may prefer increasing today's consumption rather than waiting for returns that may realize later. Particularly, for households with school age children, spending program funds on children's education may be an important option. Then, expected returns from investing in businesses relative to the returns from investing in children becomes the key factor. Both of these expected returns are likely to differ across villages as well as households. For example, in remote villages, educational facilities may not exist within the villages, quality of educational services may be lower, and job opportunities for educated individuals may be scarce. These factors likely increase the cost of sending children to school and lower the expected returns from education in remote villages.

These four factors, perceived restriction on compliance, access to other sources of credit, the degree to which credit-constrained, and expected marginal returns from children's education compared to those from business investment, are likely to vary not only across villages but also across households with varying socioeconomic status. However, it is unclear which group of households is more likely to invest in family enterprises. For example, households with higher socioeconomic status, such as those with more educated household heads, are more likely to have greater power within a community, which enables them to not be bound by village officials who may attempt to monitor or enforce the guideline. They are also less likely to be credit-constrained, which implies that they do not need to follow the guideline just to keep their eligibility; on the other hand, they are less likely to consume program funds out of hunger or lack of current income. In addition, while their expected returns from children's education may be high, they may also expect high returns from business investment because they possess the network, experiences, and skills that are necessary for such business investment.

However, the differences in the repayment rates across households with different socioeconomic status suggest possibly distinct investment behaviors for households headed by persons with no schooling experiences in urban areas. As discussed in the previous section, they show the lowest repayment rate of 6% while the rest of the households demonstrate the average repayment rate of 14%. This low figure among the most disadvantaged group of households likely reflects diversion of program funds or failed business investment. Since a similar participation rate is shared with households headed by persons with some schooling experiences and primary degrees, if there are any heterogeneous impacts between the most disadvantaged group of households and the other two groups of households, they are likely to suggest behavioral discrepancies. In order to shed light on such heterogeneity in investment behaviors and associated time allocation behaviors of children, I investigate the effect of IDT separately for these groups of households.

4. IDENTIFICATION STRATEGY

4.1 PREVIOUS STUDIES ON IDT AND VARIATION IN FUNDS PER HOUSEHOLD

Given rich data sets and explicit rules to select villages, IDT has been studied by several researchers, but no study has considered the impact of variation in the amount of funds per household across treated villages. The previous studies mainly used matching strategies, but the results based on different matching methods have been mixed. As is often the case for targeted social programs, due to the government's purposeful selection of relatively poor villages, villages that do not receive IDT grants are inherently wealthier and thus unlikely to be indicative of what would have happened to treated villages without grants (Rosenzweig and Wolpin, 1986).

In order to control for this endogenous assignment, Molyneaux and Gertler (1999) match treated villages with non-treated villages based on the propensity score. However, they do not take into account the fact that the thresholds used for the selection vary across provinces. As a result, they find no systematic change in the share of children enrolled in school. Alatas (2000) uses two kinds of analyses: one compares a treated village in one province with non-treated villages in other provinces that have welfare indicator values similar to the treated village. The other analysis uses the program's sharp regression discontinuity design[13] and compares villages whose welfare indicator values are just below and just above the provincial threshold. Based on this regression discontinuity analysis, her results do not show any systematic effects that are common across provinces. Also, though Alatas's matching results show that the share of children at work ages 10-18 is higher in treated villages in the rural area, she notes this cross-sectional difference may be due to underlying differences across provinces.[14]

In short, these two previous studies have not produced consistent results, and it is unclear whether they fully control for the endogenous selection of treated villages. More importantly, they do not take into consideration that different amounts of money per household are provided to villages of different sizes. This indicates the need for further evidence on the effects on children's time allocation behaviors based on an identification strategy that utilizes the variation in the amount of funds per household across villages and is not subject to a possible bias due to the endogenous program assignment.

The present study provides such evidence. That is, I limit my sample to villages that are designated as poor. Then, utilizing the fact that the same amount of funds, 20 million rupiah per year (approximately US$8,932[15]), is provided to all targeted villages regardless of population size, I test whether villages with fewer households, with larger amounts of funds per household, exhibit greater changes in children's time allocation behaviors. Since the policy variable is not a dummy for program assignment but the amount of funds per household, my estimates suggest

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

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

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

the impact of a marginal increase in program funds conditional on program receipt.[16] This change in parameter enables us to identify the causal effect of IDT. In addition to providing consistent estimates, the present method enables us to include all the treated villages. This contrasts with the previous studies that discard the poorest villages because they cannot be matched with any villages that do not receive grants. Therefore, the estimates derived by the present method better represent the mean impact on all the selected villages.

The amount of funds per household is defined as the accumulated amount of money provided by the government to a village by a certain year in the period of analysis divided by the number of households as of 1993. For example, if a village receives funding every year, which is the case for most of the sample villages, the cumulative amount of funds is 20, 40, and 60 million rupiah in 1995, 1996, and 1997. If a village does not receive funding for the last year, the cumulative amount is 20, 40, and 40 million rupiah. Other cases are calculated similarly. For 1993 and 1994, when IDT was not yet launched, I use 20 million rupiah as a benchmark value. The coefficients on the amount of funds per household in these two years indicate the correlation between village size and outcomes prior to program implementation. For years 1997 through 1999, when villages were no longer receiving funding, I use the amount of money accumulated over the three program years, which is 60 million rupiah for most of the sample villages. The number of households as of 1993 is used every year because it is a predictor of the actual number of households in 1994 through 1999, but is not subject to a possible change in the number of households due to immigration motivated by the program. For a small fraction of villages that split into two or more villages during the period of analysis, I adjust for the villages' discontinuous change in the number of households. Namely, for these villages, I use the interpolated number of households based on the numbers of households in 1993 and 1996, and the number of households as of 1996 for years after 1996. Finally, the amount of funds is adjusted for inflation. Thus, the amount of funds per household declines after 1996 because the same amount of money is worth less in later years (Table 2).

An important differential resulting from these varying amounts of funds per household is that, in villages with fewer households, the fraction of households participating in the program is higher and the average loan size is larger. Graph 1 clearly indicates that, the larger the amount of funds per household, the higher the participation rate (Graph 1(A)) and the greater the benefits per participant (Graph 1(B)). Therefore, if there is any impact of IDT on children's time allocation behaviors, it is likely to be greater in smaller villages. This is the source of variation that I explore to identify the impact of IDT, and its basic idea can be illustrated by examining the distribution of an outcome variable, say, the share of children at work, across villages with different sizes for years before and after the introduction of IDT. For example, Graph 2 depicts the nonparametric relationships between the share of girls at work and the amount of funds per household in 1993 and 1995. It shows that the relationship has a slightly negative slope in 1993 while the same relationship in 1995 exhibits a positive slope, indicating a particularly rapid increase in the share of children at school in smaller villages from 1993 to 1995. Under the assumption that there is no other factor that raises the share specifically in smaller villages, this change in the slope can be attributed to IDT. I capture such changes in the slope of the relationship between the amount of funds per household and an outcome variable in the following econometric specification.

[16] Note that the present identification strategy does not provide the estimate for the effect of receiving IDT grants. The effect of grant receipt itself may be of great interest; however, given the large variation in the amount of funds per household, the effect of grant receipt is unlikely to be identical across villages of different sizes. Thus, the introduction of the variation in funds per household likely enables us to better capture the effects of IDT. Also, previous studies suggest that the available data do not allow robust estimation of the effect of grant receipt.

4.2 OVERALL IMPACTS

I first estimate the impact for all the types of households; then I separately examine the impact for households with different socioeconomic status (SES) measured by the level of educational attainment of the head. Specifically, I limit my analytical sample to targeted villages, and then, estimate the following regression equation for outcomes such as the shares of children in a village who are working for earnings and regularly attending school:

$$
\begin{aligned}
Y_{jt} = {} & \alpha_0 + \alpha_{1994}\, T_{1994} + \beta_{1994}\, [\ln M_{1994,j} * T_{1994}] \\
& + \alpha_{1995}\, T_{1995} + \beta_{1995}\, [\ln M_{1995,j} * T_{1995}] \\
& + \alpha_{1996}\, T_{1996} + \beta_{1996}\, [\ln M_{1996,j} * T_{1996}] \\
& + \alpha_{1997}\, T_{1997} + \beta_{1997}\, [\ln M_{1997,j} * T_{1997}] \\
& + \alpha_{1998}\, T_{1998} + \beta_{1998}\, [\ln M_{1998,j} * T_{1998}] \\
& + \alpha_{1999}\, T_{1999} + \beta_{1999}\, [\ln M_{1999,j} * T_{1999}] + \mu_j + \varepsilon_{jt} \qquad (1) \\
t = {} & 1993, \ldots, 1999
\end{aligned}
$$

where the outcome variable, Yjt, is a function of year dummies, T's, the interaction terms between the year dummies and natural log of funds per household, [lnMj*T]'s, the village-level fixed effects, μj, and the error term, εjt. The subscripts j and t denote village and year, respectively. Parameters α's and β's are equivalent to the intercepts and slopes of the relationship between an outcome variable and the amount of funds per household for each year.

The estimates for 1995-99 indicate the impact of the program while the estimates for 1994 provide information that enables the examination of identification assumptions. The estimates for 1995 through 1997 demonstrate whether smaller villages show disproportionate changes in the outcomes. The estimates for 1998-1999 show whether the program impacts, if any, have continued after villages stop receiving funds. Lastly, the estimate for 1994 provides a test for any spurious correlation as it shows whether unobserved trends in outcomes differ across villages of varying sizes during the period immediately prior to implementation of the program. When this test indicates a violation of the identification assumption, we cannot simply interpret the estimates for later years as the assumptions indicate. Thus, I assume that the pre-existing trend in the outcome variable that is specific to smaller villages would have continued without IDT in later years, and then examine whether the estimates for later years exhibit a significant deviation in the trend from the initial trend estimated for 1994.

The village-level fixed effects allow an unobserved village-level factor to be correlated with the amount of funds per household as long as they are additive and constant over years. For example, before IDT is implemented, smaller villages in urban areas tend to have fewer older girls at household work. Also, smaller villages in rural areas tend to have more young boys at work and fewer in school. These initial differences are likely due to longstanding characteristics of smaller villages such as relatively scarce educational facilities and poorer quality of education. Such underlying gaps in outcome variables may falsely attribute differences between small and large villages to IDT. However, by including the village-level fixed effects, such pre-existing differences are controlled, and the estimates for β's reflect changes in the relationships between outcome variables and the amount of IDT funds per household. In addition, I allow the error term to be correlated within a village. Thus, possible serial correlation across years is taken into consideration in the computation of the standard errors (Bertrand, Duflo and Mullainathan, 2004).

In evaluating the size of estimates, it is worthwhile to note that my analytical sample includes households in treated villages that do not participate in the program. Thus, the estimates measure the overall impact in targeted villages.[17] They provide an indicator of the returns to public investment in poor villages including the spillover effects. Another factor to note is that small villages may implement IDT in different ways from large villages, possibly underestimating the effect of a marginal increase in program funds per household. First, households in smaller villages are likely to face less competition against IDT loans; as a result, the quality of funded projects may be lower in such villages. Also, smaller villages have a larger number of children per household. Thus, the amount of funds *per household* may overestimate the true amount of funds available *per child* in smaller villages.[18] If either of these factors biases the coefficient in any way, it will only be downward. Thus, though these factors may weaken the ability of this identification strategy to detect the impact of IDT, if significant effects are found, they are likely valid evidence for the causal impact of IDT.

4.3 HETEROGENEOUS EFFECTS

The analysis stated above can be extended to examine heterogeneous effects across groups of households with different socioeconomic status. This individual-level analysis permits us to check the robustness of the effects estimated in the village-level analysis based on the differential probabilities across households to be eligible for IDT loans. It also allows us to test whether finely defined socioeconomic groups show different labor supply behaviors. The regression equation is modified as follows:

$$
\begin{aligned}
Y_{ijt} = {} & [\alpha_0^{NEV} * D_{ij}^{NEV}] + \beta_0^{NEV} [\ln M_{j,1993} * D_{ij}^{NEV}] \\
& + \sum \alpha_s^{NEV} [T_s * D_{ij}^{NEV}] + \sum \beta_s^{NEV} [\ln M_{js} * T_s * D_{ij}^{NEV}] \} \\
& + [\alpha_0^{NO} * D_{ij}^{NO}] + \beta_0^{NO} [\ln M_{j,1993} * D_{ij}^{NO}] \\
& + \sum \alpha_s^{NO} [T_s * D_{ij}^{NO}] + \sum \beta_s^{NO} [\ln M_{js} * T_s * D_{ij}^{NO}] \} \\
& + [\alpha_0^{P} * D_{ij}^{P}] + \beta_0^{P} [\ln M_{j,1993} * D_{ij}^{P}] \\
& + \sum \alpha_s^{P} [T_s * D_{ij}^{P}] + \sum \beta_s^{P} [\ln M_{js} * T_s * D_{ij}^{P}] \} \\
& + [\alpha_0^{S} * D_{ij}^{S}] + \beta_0^{S} [\ln M_{j,1993} * D_{ij}^{S}] \\
& + \sum \alpha_s^{S} [T_s * D_{ij}^{S}] + \sum \beta_s^{S} [\ln M_{js} * T_s * D_{ij}^{S}] \} \\
& + \mu_j + \varepsilon_{ijt} \qquad (2)
\end{aligned}
$$

$(t = 1993, ..., 2003; s = 1994, \ldots, 2003)$

where the dummy variables D_{ij}^{E} indicate individuals in households headed by persons who have never attended school (E=NEV), persons who have attended school but never completed a degree (E=NO), persons who have completed primary education (E=P), and persons who have completed secondary education (E=S). These groups of households are allowed to have different levels of the intercept and the initial correlation between the outcome and village size.

[17] With no information on intra-village allocation of funds, which varies across villages, it is very difficult to disentangle the effects of IDT at the household-level; it is unknown how unobserved characteristics such as entrepreneurship and program participation are correlated in each village. If one is willing to make a strong assumption that all the villages use the identical selection rule within the villages, then it is possible to match observations in the program period and the post-program period with one of or the average of those in the pre-transfer period.

[18] The amount of funds per child may not be sensible in analyzing the effect of labor supply as a household is the unit to receive a loan. The robustness of the results can be checked by repeating the analysis using both of the measures.

In addition, I permit these groups to have varying year effects. Therefore, the parameters of interest, β_s^E, estimate the change in the correlation between the outcome and village size separately for these four groups of households while controlling for the group-specific mean, trend, and initial correlation.

As we discussed in the previous section, households headed by persons with secondary degrees exhibit a significantly lower probability to be eligible. Thus, if there is an overall effect at the village level, it should be found strongly among households with lower socioeconomic status; namely, those headed by persons with no school experience, some experience, and primary degrees. I utilize this discrepancy in eligibility likelihood to further examine the effects found in the village-level analysis. For this purpose, I divide the sample to two groups, rather than four groups, of households: households headed by persons with secondary degrees and the rest of the households.

The other question of interest is heterogeneity in program effects by the level of educational attainment of household heads. Even among groups of households for which the eligibility likelihood is similar, which are households headed by those with some schooling experiences, primary degrees, and secondary degrees, behavioral responses to IDT can differ due to their differential economic constraints and expectations. Particularly a significantly low repayment rate for households with the lowest socioeconomic status suggests that these households may show a distinct behavioral pattern. Since households with the three lowest levels of socioeconomic status have a similar participation rate, a significant gap in the results is likely to suggest heterogeneity in their behavioral responses.

5. DATA

The methods described in the previous section are applied to the following datasets: *Survei Sosial Ekonomi Nasional* (SUSENAS, The National Socio Economic Survey), a nationally representative, repeated cross-sectional dataset; *Potency Desa* (PODES, Village Potential Statistics), a census dataset on village characteristics; and the census administrative data on IDT. The SUSENAS provides information on the activity in which children 10 years or older spend most of the time in the week previous to enumeration. Among the activity options children may choose are work for earnings, household work, attending school, or other activities such as leisure, job search, and voluntary work. If their major activity is not work for earnings, the SUSENAS asks whether they work for at least one hour; if they do not work for even one hour, it further asks whether they have a regular job and are temporarily on vacation. Using these pieces of information, I define children at work as those who answer that (1) their major activity is work for earnings, (2) their major activity is not work for earnings but they work at least one hour per week, or (3) their major activity is not work for earnings and work hours are fewer than one hour, but they have a regular job.

In order to measure the extent to which children are engaged in activities other than work for earnings, I define children who are at school as those who answer that they regularly attend school. I also extract from the SUSENAS adults who live with children ages 10-18 and similarly define dummy variables indicating who is at work and who is doing household work. These pieces of information are combined with the 1993 PODES, which provides the number of households in a village. In addition, using the IDT dataset, I limit my sample to villages that are designated as poor in the first year. In order to estimate the overall effects, I aggregate the

outcome variables to the village level,[19] while the heterogeneous effects are investigated at an individual level. Note that, since the SUSENAS are not longitudinal but repeated cross-section data, individual observations appear only once in the dataset. Nevertheless, some villages are surveyed in multiple years, allowing the inclusion of village-level fixed effects.

As a result of merging, on average, 88 percent of the individual observations in the SUSENAS remain in the sample. Some of the observations are not matched with either the PODES or the IDT data due to the inconsistency of village IDs. During the period of analysis, 1993 through 1999, the matching rate does not vary much[20] and all the years provide more than 1,800 village observations. Since villages that do not have consistent village IDs are more likely to have a small number of households initially, the matching process is selecting out smaller villages. Thus, the results can be generalized to the population of treated villages to the extent that the impact of IDT does not differ between villages that are kept in the sample and villages that are dropped out of the sample.

6. RESULTS

6.1 RURAL ADULTS' LABOR SUPPLY BEHAVIORS: SHIFT TOWARDS SELF-EMPLOYMENT

Estimation results based on equation (1) indicate that, in the rural area, households comply and invest in self-employment activities, increasing the share of working adults, specifically young men. Graph 3 depicts the estimated coefficients, β_{1994}, …, β_{1999} for the shares of adults who are at work and who are mainly self-employed in rural areas by gender and age group.[21] Young adults are defined as individuals ages 19-40 and older adults are individuals ages 41-60. The panel for young men shows that the correlation between the share of young men at work and the amount of funds per household is significantly positive in 1999. Most of this overall employment effect is driven by the increase in self-employed men. The data for older men, on the other hand, indicate a negative effect on the share of self-employed workers in 1994, before IDT is implemented. Since the year dummy indicates an increase in the share of self-employed workers, the negative coefficient for the amount of funds per household implies that the increase in self-employed workers from 1993 to 1994 is mitigated in smaller villages. If we assume that this trend would have continued without IDT, the effect of the amount of funds per household in later years is significantly larger for smaller villages. Such changes are not observed among women. These village-level results may reflect that smaller villages experienced a disproportionate increase in the overall employment for men. In order to further investigate this hypothesis, next, I examine the results of estimating equation (2).

As discussed earlier, if the overall effect represents the causal effect of IDT, the behavioral response is likely to be found more strongly among households that are more likely to directly benefit from the program. Here, I compare households headed by persons with the secondary degree (higher socioeconomic status) and households headed by persons who have never attended school, attended school but attained no degree, and attained primary degrees (lower socioeconomic status). The latter group of households is more likely to be the direct beneficiaries of IDT. Graph 4 depicts the results for these two groups of households for young

[19] Though most of the sample villages have 16 households, the number of individuals used for this aggregation differs across villages. Thus each village is weighted by its accuracy of an aggregated outcome variable. Since these outcome variables are not mutually exclusive, the shares do not necessarily sum up to one.
[20] The matching rate is 88%, 88%, 89%, 88%, 88%, 86%, 85% for 1993 through 1999.
[21] See Appendices for the number of observations.

and older men. The upper two panels demonstrate that the effect of IDT is indeed stronger for young men who are from households with lower SES. The effect on the share of young self-employed men is significantly positive at the 5 percent level in 1996, and the effect is sustained until 1999. The effect on overall employment rate is not significant because the increase in self-employed workers is offset by a decrease in wage workers and individuals who help household members. These results suggest that IDT shifts some young men from wage work or helping family members to self-employment work, keeping overall employment unchanged. The estimated coefficient for the share of self-employed young men in 1996, 0.027, indicates that a change in the share of self-employed workers would be 2.7% larger if a village that has the average level of funds per household additionally receives the same amount of money per household. Based on the median number of households, 969, this increase in grant money is equivalent to 23,256,000 rupiah, or $10,386 in 1995 U.S. dollars, per village.[22] On the other hand, young men from households of higher socioeconomic status show a positive trend already in 1994; assuming that this trend would have continued, the coefficients in later years do not signify any changes. Thus, the differences in the results for the two groups of households indicate that work enhancement effect of IDT is concentrated among households with higher eligibility likelihoods and participation rates.

However, the results for older men from the two types of households do not suggest such a clear concentration of work-enhancement impact of IDT for those of lower socioeconomic status. They only indicate limited evidence for IDT-induced self-employment activities for older men of lower socioeconomic status. For instance, if we assume that the decreasing trend in the share of self-employed older men with lower socioeconomic status in 1994 continued, then the significant differences in the coefficients between 1994 and later years suggest that IDT mitigates the pre-existing negative trend (Graph 4). The effect on the overall employment rate is not significant throughout the period of analysis, similar to the case for young men. In contrast, older men from households of higher socioeconomic status do not indicate even such a limited increase in self-employed workers. Though the overall employment rate shows an increase in 1995 and 1996 compared to 1994, these are not driven by self-employment activities, but by changes in the share of wage workers. Since it is unlikely that these wage workers of higher socioeconomic status are hired by self-employed young men of lower socioeconomic status, it is unclear whether the changes in the overall employment rate for socially advantaged older men are related to IDT.

These sets of results based on village- and individual-level analyses suggest that IDT expands business opportunities in the self-employment sector for rural young men. Though the overall share of young men at work does not change, with more of them engaged in the self-employment sector, an increased number of children may be pushed into the production process. In the next section, I test whether there is a change in children's time allocation behaviors associated with this shift of young men towards the self-employment sector.

6.2 NO CHANGE IN RURAL CHILDREN'S TIME ALLOCATION BEHAVIORS

The results for children's time allocation behaviors reveal that enhanced business opportunities for young men do not force any additional children into the production process. However, despite the expectation that the improvement of adults' employment status eventually reduces the incidence of child labor, even in the long-run, there is no significant change in children's time allocation behaviors.

[22] This change in grant money can also be interpreted as increasing funds for the village currently obtaining the median amount of funds per household to receive the 86 percentile funds per household.

Graph 5 demonstrates the results of estimating the village-level impact on the shares of children at work and at school for four groups of children defined by age and gender. A striking finding is that no group of children exhibits a significant change in the incidence of child labor. The share of children attending school remains mostly unchanged as well. Though young and older boys exhibit negative effects on the share of boys attending school in 1997 and 1995, respectively, these effects do not last long. Also, these changes are not associated with the increase in working children, suggesting that they are not forced out of school in order to help the work of their parents or other adult household members. Older boys in smaller villages also increase their probability of working after 1997. Given the late onset of the effect, this may be due to factors unrelated to IDT which disproportionately affect smaller villages after 1997. Particularly, it is the time when Indonesia experienced a number of pivotal events such as the currency crisis, changes in the political regime, and a number of natural disasters. If the results reflect the impacts of one of these events, then the same tendency should be found for all the groups of households.

In order to further examine whether we can attribute these village-level effects to IDT, I test program effects separately for the two groups of households with lower and higher socioeconomic status. The results do not support that the overall effects are due to IDT. Children who are more likely to be treated indicate few significant changes (Graph 6). First, the negative impact on the share of young boys at school is likely unrelated to IDT because this impact is mainly found for young boys of higher socioeconomic status, rather than of lower socioeconomic status (upper panels).[23] Second, the fact that more of older boys in smaller villages tend to be working in 1999 is likely due to changes in economic opportunities that are specific to smaller villages but not related to IDT. Older boys from the two groups of households demonstrate the same tendency, suggesting that these changes are due to common factors.

However, the results suggest that the negative impact on the share of older boys at school in 1995 is due to IDT. The data for older boys from advantaged background indicate similar negative impact on their share of those at school in 1995; however, given their underlying negative trend in 1994, the effect in 1995 does not represent a significant change. In contrast, the overall effect is likely reflecting behavioral changes among older boys who are more likely to be exposed to IDT. These results are suggestive that older boys who were already working as well as attending school start helping adults' self-employment activities more intensely; as a result, it becomes difficult for these boys to continue attending school regularly. As they were already working for earnings, the change in their hours of work is not captured in the share of older boys at work.

The other significant estimates found for children from households of higher socioeconomic status are a simple continuation of pre-existing trends specifically for smaller villages. For example, young boys show negative effect on the share of those at school throughout the period of analysis. However, given the negative trend in 1994, the subsequent effects do not signify a measurable deviation from the pre-existing trend. The same is true for the negative effect on the share of older boys attending school.

In sum, these results suggest that rural children do not change their time allocation behaviors very much although adults' succeed in expanding their work opportunities in the self-employment sector throughout the period of analysis. This finding suggests that (1) providing resources for new businesses may not force children into the production process; (2)

[23] I focus on the results for boys in this section because girls do not indicate any significant change in the overall effects. The results based on disaggregated sample of girls do not show any significant and systematic effects regardless of household background.

however, even in the long-run it does not reduce their likelihood of working for earnings or increase their probability of regularly attending school.

6.3 NO EVIDENCE FOR ENHANCED WORK OPPORTUNITIES FOR URBAN ADULTS

In contrast to the results for rural adults' labor supply behaviors, adults in urban areas do not show clear evidence of a business effect. Graph 7 indicates the results of the urban village-level analysis, which suggests that only older men may gain IDT-induced overall work opportunities. They show a negative initial trend for smaller villages in the share of those at work. Given this trend, the difference in the effects between the initial year and 1996 through 1999 are significant, indicating that IDT mitigated the underlying negative trend in the overall employment rate for older men. On the other hand, the share of young men at work shows a positive effect only in 1999, without any significant impact on the share of self-employed workers. Women do not show a systematic pattern.

The village-level analysis is particularly difficult to interpret in urban areas because the participation rate and the average loan size are smaller. The village-level measures of labor supply are greatly diluted by behaviors of non-participants who may not be affected by IDT at all. In order to minimize such an influence, I assess the results separately for households that are more and less likely to be participants. However, the results demonstrate little heterogeneity in program effects on adults' labor supply behaviors.

First, older men do not show strong heterogeneity in program effects (lower panels, Graph 8).[24] The results for older men with lower socioeconomic status demonstrate the positive effect on the share of self-employed workers in 1997. However, though the coefficients are not significantly different from zero, older men from households of higher socioeconomic status also indicate positive effects of comparable size in 1996, 1998, and 1999. Thus, it is not clear whether the overall increase in the share of those at work is due to IDT-induced investment. Similarly, young men from both types of households show the positive impact on the overall employment rate in 1999, suggesting that the overall effect reflects the change affecting all young men, not only those who are more likely to benefit directly from IDT. These results suggest that IDT's business impact on adults is very limited or, even if there is some impact, it is not detected in the data.

6.4 UNINTENDED BENEFITS FOR SOCIALLY DISADVANTAGED URBAN CHILDREN

Given that there is no evidence for increased work opportunities for urban adults, there is a question of whether urban households decide to consume IDT loans for short-run consumption or whether the impact is too small to be detected in the current data. I address this question by investigating the effect of IDT on urban children's time allocation behaviors. If IDT funds are used to relieve children from labor, then children's time allocation behaviors should be changed at the onset of the program. However, the results of the village-level analysis reveal few changes in the shares of children at work or at school (Graph 9). For example, young boys exhibit a decline in the share of those at work in 1996, but given the pre-existing trend in 1994, this is not a significant change from the initial condition. Older children, particularly girls, exhibit a shift from work to school in 1997. However, no similar changes are found in other years during the program period.

[24] I again focus on the results for men. Women do not indicate significant heterogeneity in the effects of IDT on their labor supply behaviors.

Graph 10 shows the results for the same two groups of households separately. The results reveal that most of the impacts found in the overall analysis are common to children from both types of households, suggesting that the results are unlikely to represent causal effects of IDT. For example, older children, particularly girls, show a shift from work to school in 1997 in the village-level results. However, separate estimation results show that this effect is not concentrated among the group of children who are more likely to be directly exposed to IDT. Also, the negative effect on the share of young boys at work in 1996, which is found in the village-level analysis, is commonly found for boys of lower and higher socioeconomic status. The only result that exhibits a clear contrast between the two types of households is young girls' time allocated to school and work. They do not show a significant change; however, those from lower SES exhibit a shift from work to school in 1995. This pattern is not found for the group of children who are unlikely to be treated. In order to further pin down the group that shows such a shift, I estimate the effects of IDT by the four groups defined by heads' educational attainment. Namely, I further separate households in which heads have no schooling experience, some schooling experience but no degree, and primary degrees. This breakdown reveals that the shift from work to school is found more clearly among children from households where heads have never attended school. Graph 11 shows the estimated coefficients for this group of children.[25] Particularly strong evidence is found for girls. Younger ones shift to school[26] while older ones tend to shift to household work. Interestingly, the similar analysis for adults does not indicate any business effect for any of the four groups. Therefore, the results for the most disadvantaged households, which suggest children's shift from work to school and no business effect for adults, coupled with the very low repayment of 6%, indicate that these socially disadvantaged households divert funds to children without investing in businesses.[27]

The comparison of the results for urban and rural areas demonstrates an interesting contrast. IDT's employment-enhancement effect is found only in rural areas, though the improvement of adults' employment status does not eventually reduce child labor or promote their schooling. On the other hand, urban households do not show any employment effect, but the children benefit in an unintended way. This urban-rural differential may stem from relatively higher expected marginal returns from investing in children in urban areas. Given more prevalent non-agricultural jobs, completing primary or higher degrees are likely to bring higher returns in urban areas. The proximity of schools and quality of education service may also contribute to lowering the cost of schooling. With the initially lower share of children at school, households with the lowest socioeconomic status are likely to have a larger scope for improvement. These households are also likely to face disadvantage in starting new businesses because they do not have experiences and network that may be necessary in successful investment in non-agricultural industries, which are more common in urban areas.[28]

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[25] Though suppressed, the effects for the other groups of children are simultaneously estimated as well. Boys from other types of households do not indicate a significant change. Girls whose heads have primary or secondary degrees indicate that they are also relieved from work.

[26] Given the high level of school attendance and low level of incidence of child labor, linear probability model may not be appropriate to estimate the effect of IDT for these children from socially advantaged households. The robustness of these results should be examined using other functional specifications.

[27] The analysis of the impact of IDT on household expenditure on education per child does not suggest that the expenditure is increased due to the program. The lack of changes in educational expenditure may be due to the fact that it consists of a very small proportion of total household expenditure. The share of educational expenditure averages 2% and 3% in rural and urban areas, respectively.

[28] The village-level factors are unlikely to be the driving factor of the heterogeneous effects between urban and rural areas. Separately estimating the effect of IDT for villages with and without a number of the village-level characteristics, such as the initial level of governance, the availability of other types of credit institutions, and the availability of schools, does not yield a significant and systematic pattern.

7. CONCLUSION

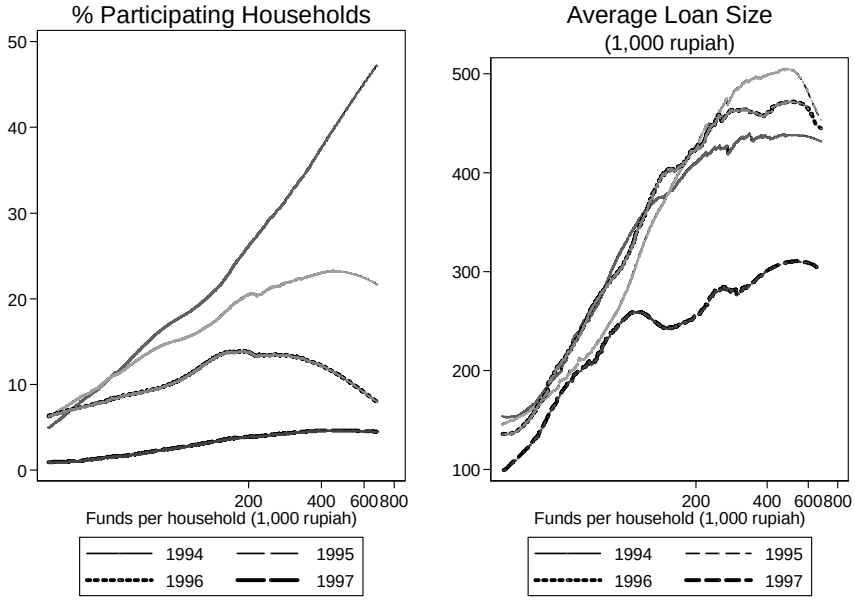
I have investigated how households with children utilize public financial assistance that is designated for productive investment, and whether it has any impact on children's time allocation behaviors. It is often expected that strengthening adults' earning capacity through investment in household enterprises can relieve children from labor and promote schooling. However, in practice, neither households' compliance with investment requirements nor returns from such investment are ensured. Particularly, if households expect that returns from such investment are likely low, they may have an incentive to use the funds to supplement current household income. Especially for households with children, they may utilize a portion of the funds to relieve the children from labor or cover their educational expenses.

Analyzing Indonesia's subsidy program called IDT, I have found evidence that urban households indeed divert program funds to shift their children from work to school. Adults in urban areas do not exhibit any significant improvement in their employment status after the introduction of IDT. Instead, urban children whose household heads have no schooling experience demonstrate a significant increase in the share of those regularly attending school and a decrease in the share of girls working. These findings suggest that disadvantaged households may have unmet demand for credit in order to become financially independent without children's economic contribution and to cover children's education, and suggest the potential for policies that provide access to credit or grants for households with school-aged children. This finding is in line with recent evidence of the positive impact of conditional cash transfer programs. However, an important difference is that my findings suggest that transfers that are not conditional on children's enrollment may be able to shift children from work to school.

My findings also suggest that, even though rural participants comply and invest in family enterprises, this does not necessarily benefit children in terms of reduced incidence of child labor or enhanced school attendance. Since it may take some time for such enterprises to become profitable, we may expect to find the realization of a positive impact of investment only after a number of years. However, I have shown that, while more young men in the rural areas began working after the introduction of IDT, children did not systematically change their time allocation behaviors either in the short- or long-run.

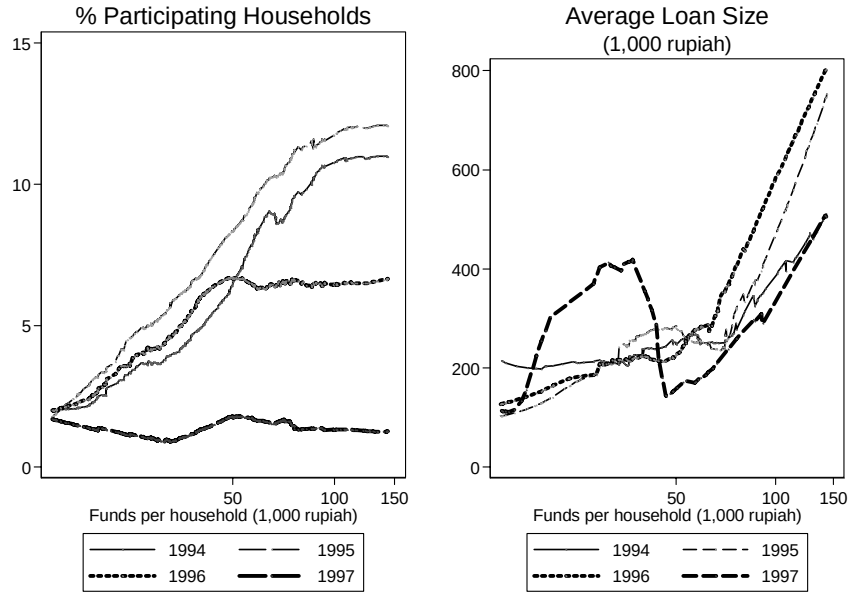
These findings imply that an alternative income-generation method should be accompanied with other types of intervention in order to effectively strengthen adults' earning capacity. In the case of Indonesia's IDT, anecdotal evidence suggests that some participants did not have enough skills and knowledge in their investment activities, indicating that an alternative income generation approach should consist of not only funds for investment but also training services that provide low-income adults with necessary skills. Particularly, training of general management skills may not be enough to enhance households' income (Karlan and Valdivia, 2006). Further research that investigates the impact of various kinds of training that is combined with business grants or loans, such as industry-specific training, is likely to help us form more effective methods to strengthen poor households' earning capacity, eliminate child labor and advance children's schooling.

GRAPH 1(A): PARTICIPATION, LOAN SIZE, AND THE AMOUNT OF FUNDS PER HOUSEHOLD, RURAL AREA



Notes: The fraction of households participating in IDT is the number of surveyed households that received IDT loans over the total number of surveyed households in a village. The village-level average loan size is in terms of 1995 prices. Locally weighted regression estimates of these two variables are shown for each year from 1994 to 1997. The estimates are computed using lowess procedure in Stata with the bandwidth of 0.5. See Table 2 for the definition of the amount of funds per household. The horizontal axis is log-scaled.

GRAPH 1(B): PARTICIPATION, LOAN SIZE, AND THE AMOUNT OF FUNDS PER HOUSEHOLD, URBAN AREA



Notes: See the notes for Graph 1(A). The average loan size for 1997 for observations at the bottom of the distribution is larger than other years most likely because of miscoding of the data. Only this year, the questionnaire is changed to recode loan size in terms of 1,000 rupia, instead of rupiah. As a result, many households report loan size that is far greater than the maximum loan size in the other three years. I attempt to correct for this possible coding error for observations with obviously large values; however, I leave observations with moderate amounts as they are.

TABLE 1(A): YOUNG CHILDREN AGES 10-15 AT WORK AND AT SCHOOL (1993/1994 SUSENAS)

	Rural villages			Urban villages		
	Obs.	Mean	SD	Obs.	Mean	SD
The share of children at work:						
Boys	**20,179**	**0.27**	**0.44**	**3540**	**0.10**	**0.29**
Household head no schooling	5,581	0.37	0.48	349	0.16	0.37
Household head no degree	7,066	0.27	0.44	935	0.14	0.35
Household head primary degree	5,640	0.21	0.41	1220	0.08	0.27
Household head secondary degree	1,892	0.13	0.34	1036	0.05	0.22
Girls	**18,282**	**0.20**	**0.40**	**3445**	**0.07**	**0.25**
Household head no schooling	4,940	0.28	0.45	376	0.11	0.31
Household head no degree	6,481	0.20	0.40	927	0.09	0.29
Household head primary degree	5,224	0.16	0.36	1168	0.06	0.24
Household head secondary degree	1,637	0.11	0.32	974	0.04	0.20
The share of children at school:						
Boys	**20,179**	**0.75**	**0.43**	**3540**	**0.88**	**0.33**
Household head no schooling	5,581	0.64	0.48	349	0.74	0.44
Household head no degree	7,066	0.73	0.44	935	0.80	0.40
Household head primary degree	5,640	0.82	0.39	1220	0.90	0.30
Household head secondary degree	1,892	0.92	0.28	1036	0.97	0.17
Girls	**18,282**	**0.73**	**0.44**	**3445**	**0.86**	**0.34**
Household head no schooling	4,940	0.61	0.49	376	0.73	0.44
Household head no degree	6,481	0.73	0.45	927	0.78	0.42
Household head primary degree	5,224	0.80	0.40	1168	0.89	0.32
Household head secondary degree	1,637	0.90	0.30	974	0.96	0.19

Notes: The unit of observation is an individual. A child is at work if his or her main activity in a week is work for earnings, he or she works at least one hour per week, or has a permanent job but is temporarily on vacation. A child is at school if he or she answers that they regularly attend school.

TABLE 1(B): OLDER CHILDREN AGES 16-18 AT WORK AND AT SCHOOL (1993/1994 SUSENAS)

	Rural villages			Urban villages		
	Obs.	Mean	SD	Obs.	Mean	SD
The share of children at work:						
Boys	**7,504**	**0.70**	**0.46**	**1588**	**0.36**	**0.48**
Household head no schooling	2,351	0.79	0.41	209	0.63	0.48
Household head no degree	2,658	0.74	0.44	449	0.47	0.50
Household head primary degree	1,909	0.64	0.48	495	0.33	0.47
Household head secondary degree	586	0.40	0.49	435	0.15	0.36
Girls	**6,877**	**0.51**	**0.50**	**1435**	**0.28**	**0.45**
Household head no schooling	2,012	0.61	0.49	150	0.50	0.50
Household head no degree	2,433	0.53	0.50	378	0.37	0.48
Household head primary degree	1,799	0.46	0.50	480	0.26	0.44
Household head secondary degree	633	0.29	0.45	427	0.15	0.36
The share of children at school:						
Boys	**7,504**	**0.24**	**0.42**	**1588**	**0.51**	**0.50**
Household head no schooling	2,351	0.17	0.38	209	0.25	0.43
Household head no degree	2,658	0.18	0.38	449	0.37	0.48
Household head primary degree	1,909	0.28	0.45	495	0.49	0.50
Household head secondary degree	586	0.60	0.49	435	0.79	0.41
Girls	**6,877**	**0.19**	**0.39**	**1435**	**0.48**	**0.50**
Household head no schooling	2,012	0.13	0.34	150	0.24	0.43
Household head no degree	2,433	0.14	0.34	378	0.32	0.47
Household head primary degree	1,799	0.23	0.42	480	0.46	0.50
Household head secondary degree	633	0.45	0.50	427	0.71	0.45

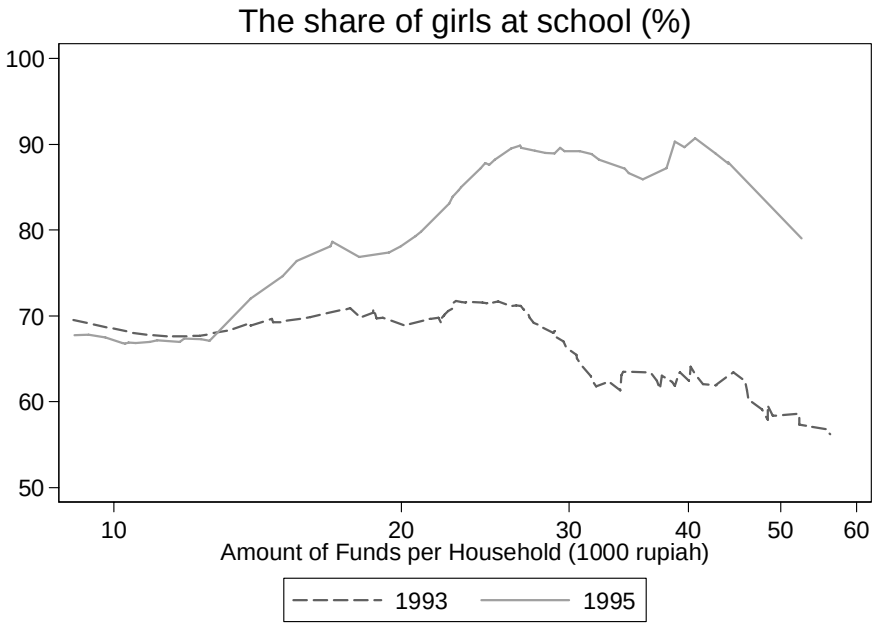
Notes: The unit of observation is an individual. See Table 1(A) for the definition of the variables.

TABLE 2: THE AMOUNT OF IDT FUNDS PER HOUSEHOLD (1000 RUPIAH)

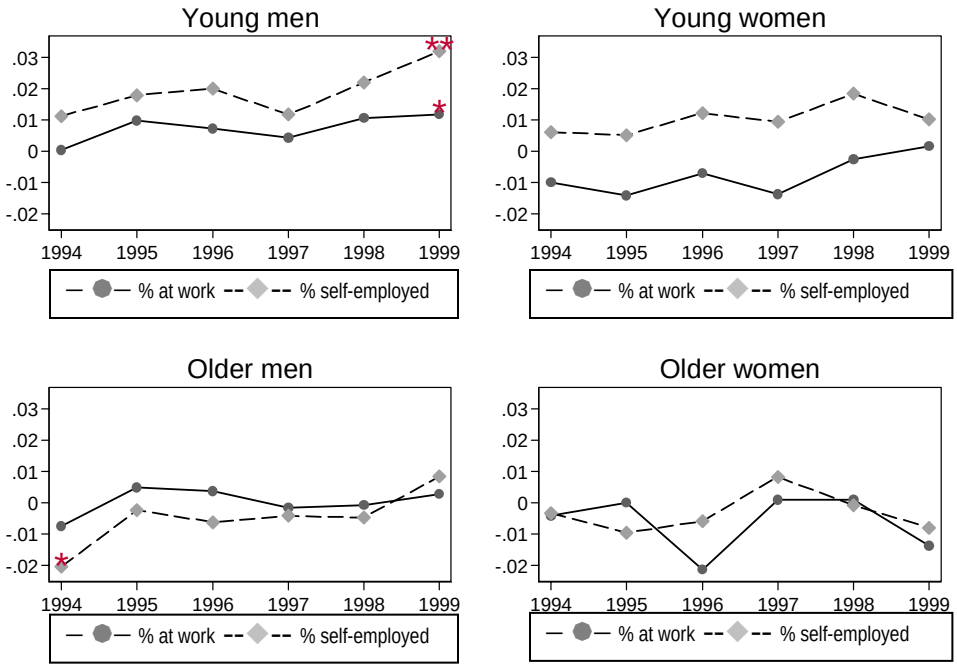
	Rural villages			Urban villages		
	Obs.	Mean	SD	Obs.	Mean	SD
1994	1,787	133.3	205.3	262	34.2	30.3
1995	1,741	124.6	198.1	232	29.5	21.3
1996	1,862	235.9	358.2	241	63.8	75.1
1997	1,706	154.8	151.2	286	61.4	75.6
1998	1,571	158.9	221.8	279	53.3	68.7
1999	1,781	110.7	171.2	237	31.1	37.3
2000	1,351	104.7	190.6	331	26.2	21.7
2001	1,466	86.6	137.9	174	26.5	26.3
2002	1,415	71.3	113.4	198	21.7	18.2
2003	1,462	82.1	129.5	175	19.3	16.0
Total	**16,142**			**2,415**		

Notes: The unit of observation is a village. The amount of funds per household is the accumulated amount of grant money that a village receives from the government in a certain year divided by the number of households as of 1993. For villages that are funded in the all three years during the program period, the amount is 20, 40, and 60 million rupiah in 1995, 1996, and 1997. In the post-program period, the amount is kept at 60 million rupiah. In the re-program period, I use 20 million rupiah as a benchmark value. For villages that experience large changes in the number of households through splitting into multiple villages, I use the interpolated number of households. Values are in terms of 1995 prices. The number of observations differs across years because the data is repeated cross-section.

GRAPH 2: THE SHARE OF URBAN GIRLS AT SCHOOL AND AMOUNT OF FUNDS PER HOUSEHOLD

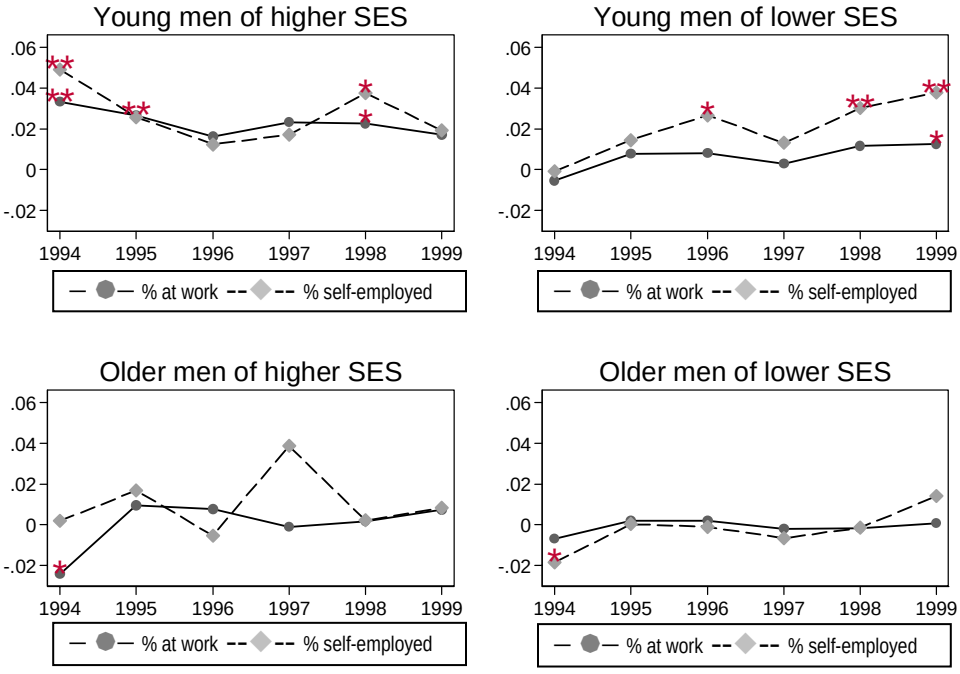


GRAPH 3: IMPACT OF IDT ON LABOR SUPPLY OF RURAL ADULTS, VILLAGE-LEVEL OVERALL EFFECT



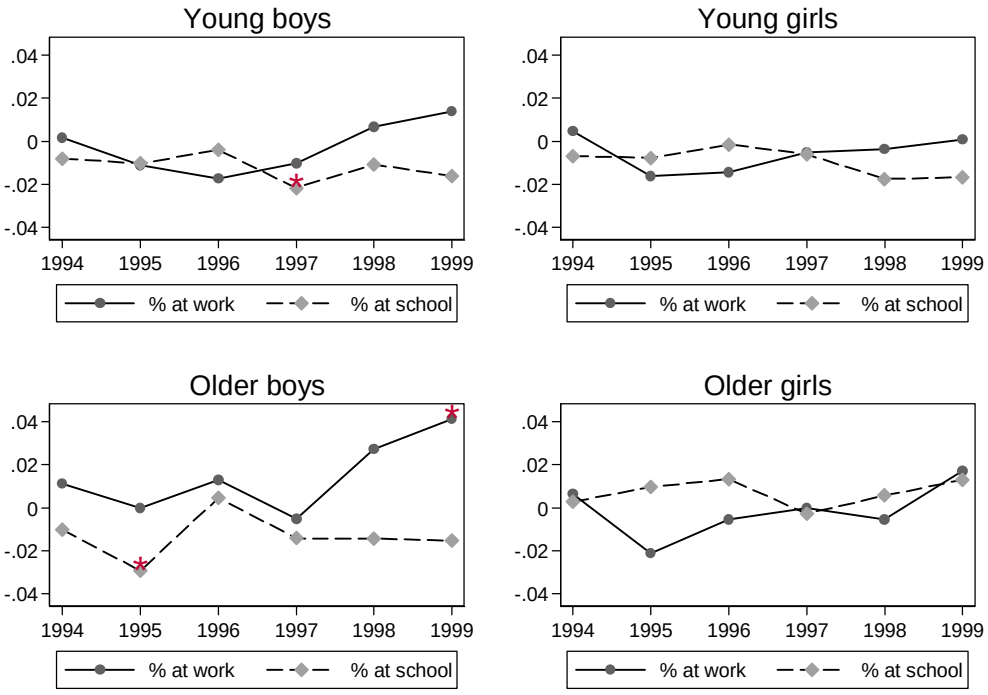
Notes: The vertical axis indicates the size of the coefficients on the cumulated amount of IDT funds per household in the village interacted with year dummies for 1994 through 1999. See Table 2 for more information on the amount of IDT funds per household. Young men and women are defined as those ages 19 to 40 and older men and women are defined as those ages 41 to 60. Adults are at work if they spend most of their time in the week previous to the survey working for earnings, spend at least one hour working for earnings, or are temporarily on vacation though they regularly have a job. * indicates significance at the 5% level; ** indicates significance at the 1% level.

GRAPH 4: IMPACT OF IDT ON LABOR SUPPLY OF RURAL ADULTS, BY LEVEL OF HOUSEHOLD HEAD'S EDUCATIONAL ATTAINMENT



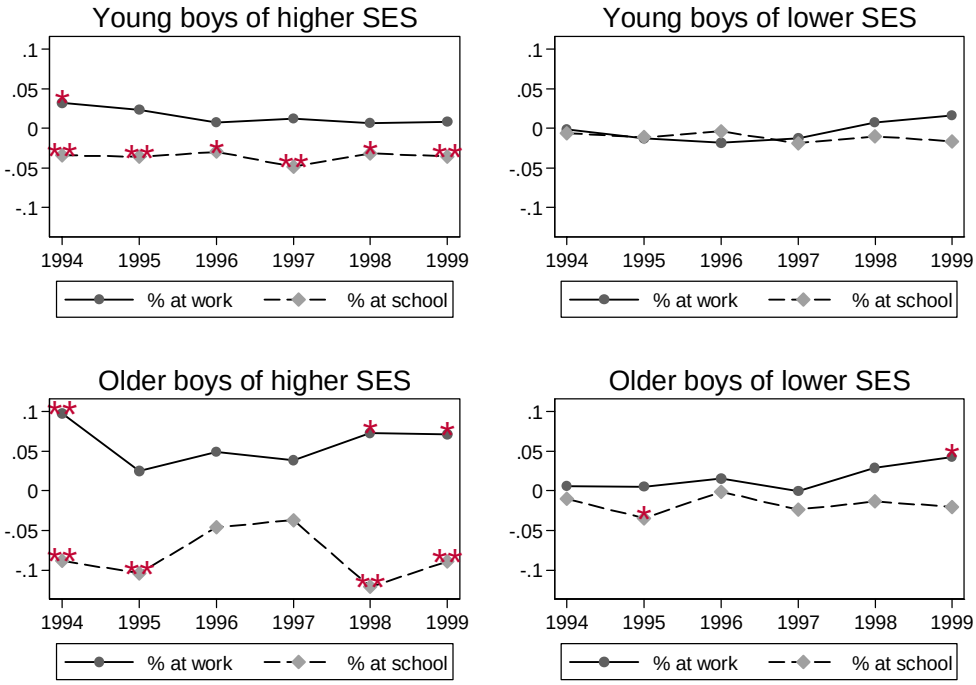
* significant at 5%; ** significant at 1%

GRAPH 5: IMPACT OF IDT ON LABOR SUPPLY OF RURAL CHILDREN, VILLAGE-LEVEL OVERALL EFFECT



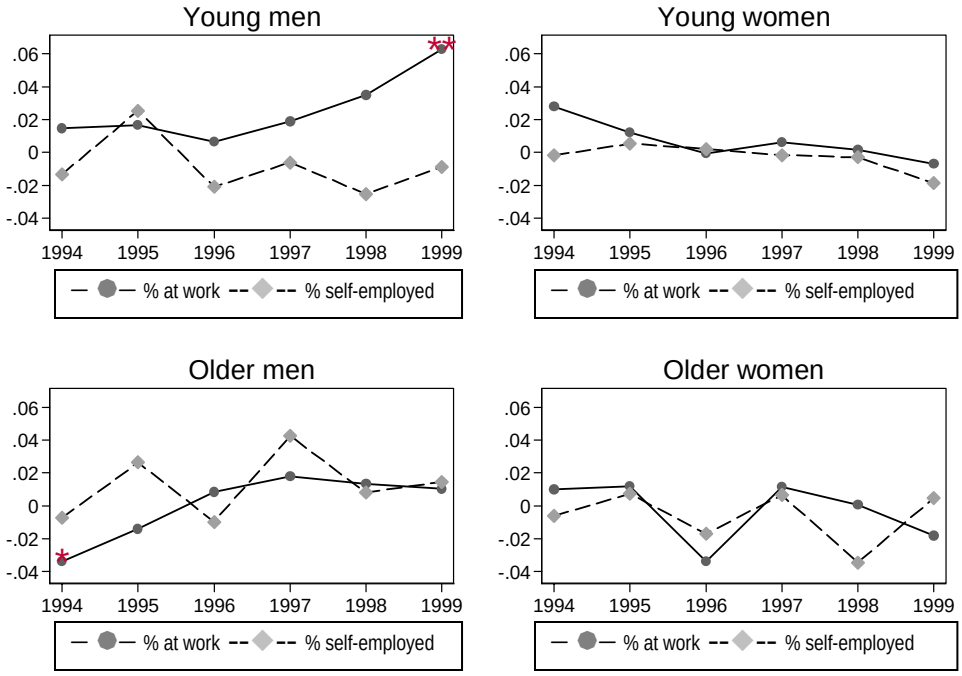
* significant at 5%; ** significant at 1%

GRAPH 6: IMPACT OF IDT ON LABOR SUPPLY OF RURAL CHILDREN, BY LEVEL OF HOUSEHOLD HEAD'S EDUCATIONAL ATTAINMENT



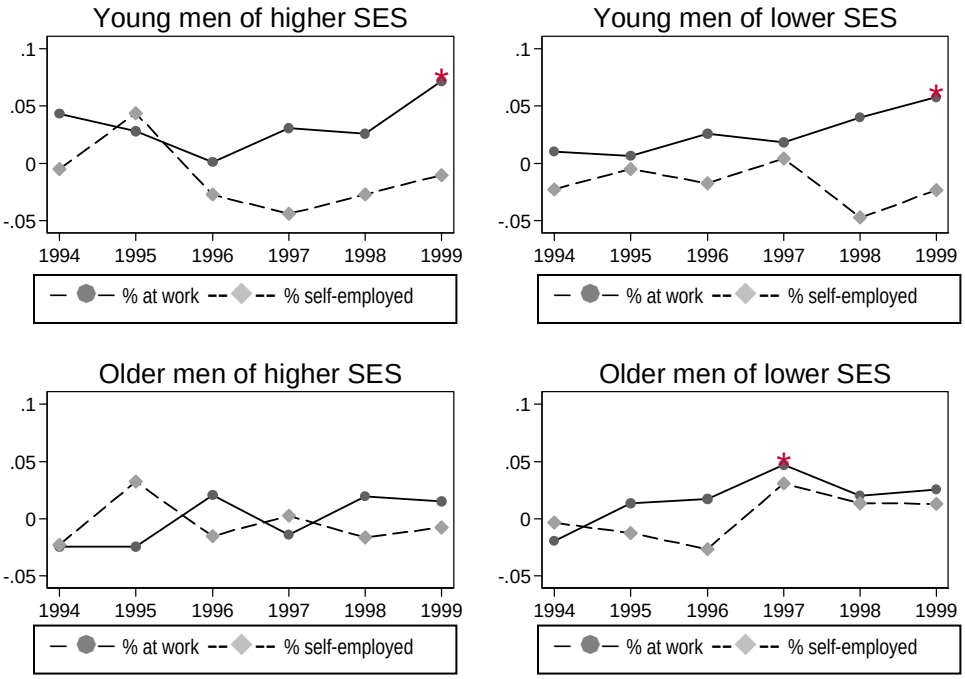
* significant at 5%; ** significant at 1%

GRAPH 7: IMPACT OF IDT ON LABOR SUPPLY OF URBAN ADULTS, VILLAGE-LEVEL OVERALL EFFECT



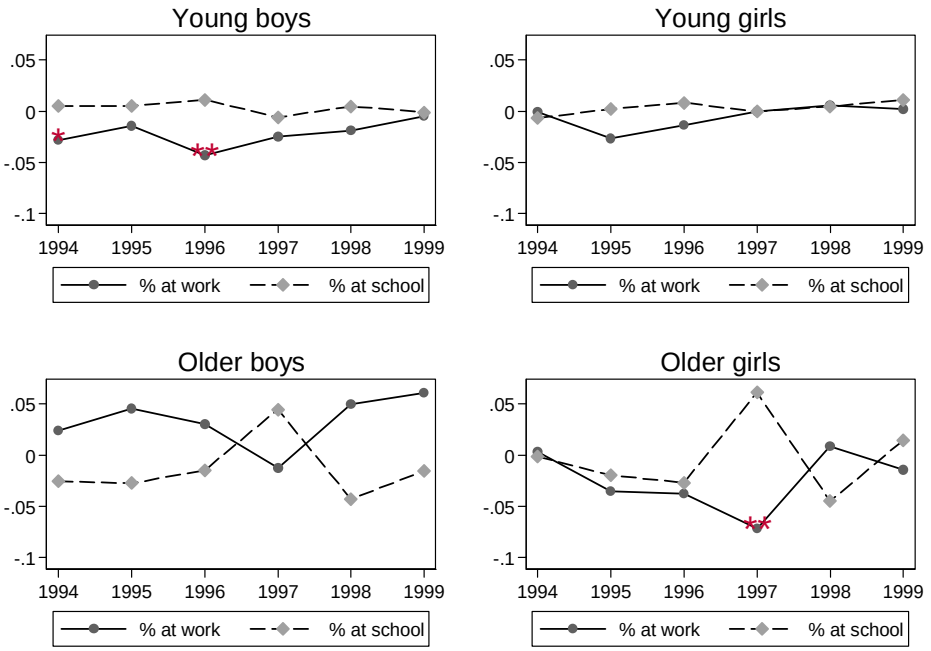
* significant at 5%; ** significant at 1%

GRAPH 8: IMPACT OF IDT ON LABOR SUPPLY OF URBAN ADULTS, BY LEVEL OF HOUSEHOLD HEAD'S EDUCATIONAL ATTAINMENT



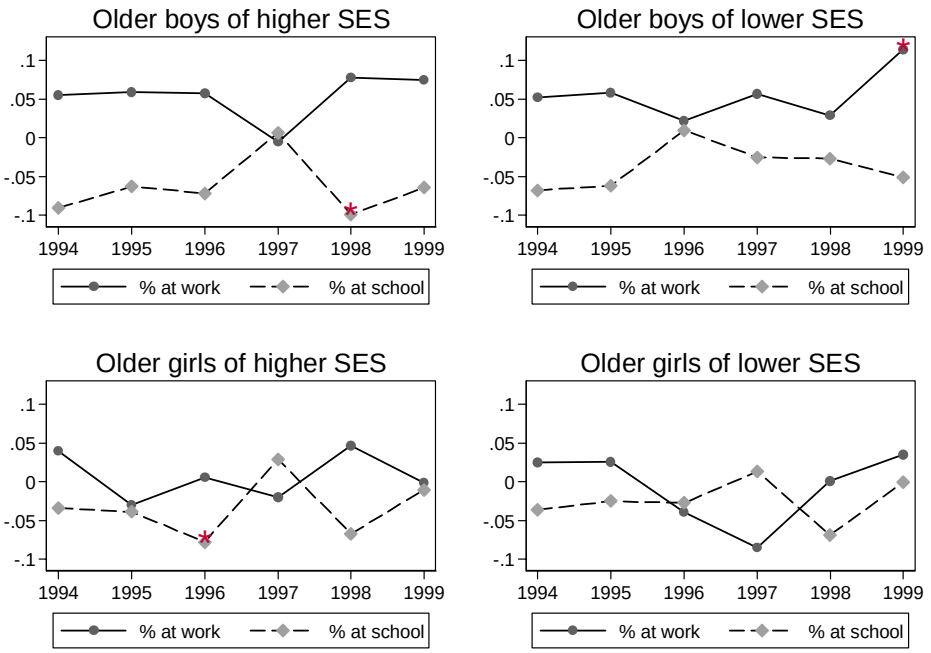
* significant at 5%; ** significant at 1%

GRAPH 9: IMPACT OF IDT ON LABOR SUPPLY OF URBAN CHILDREN, VILLAGE-LEVEL OVERALL EFFECT



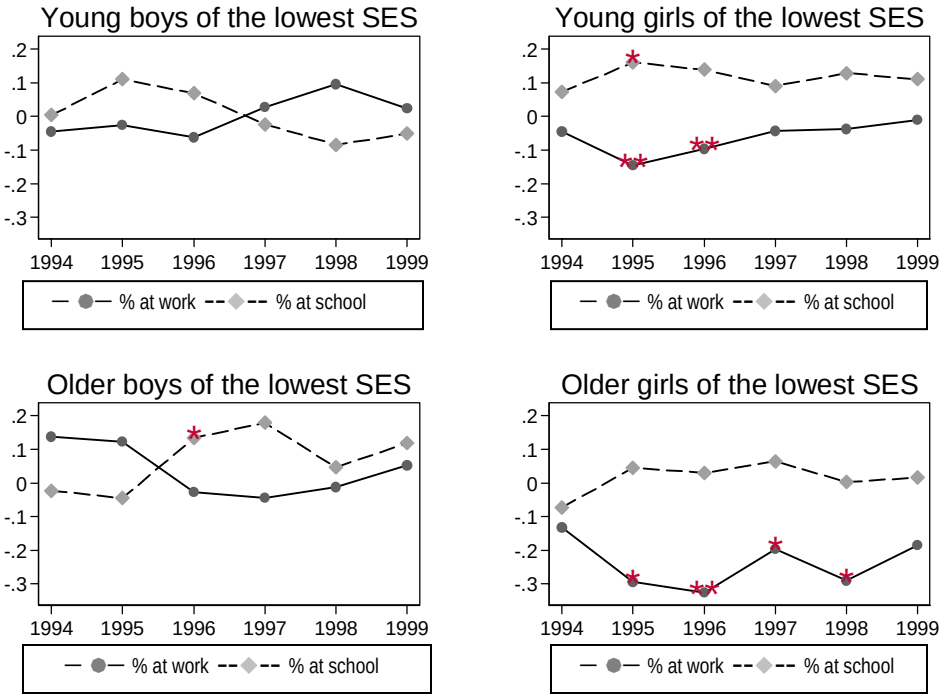
* significant at 5%; ** significant at 1%

GRAPH 10: IMPACT OF IDT ON LABOR SUPPLY OF URBAN CHILDREN, BY LEVEL OF HOUSEHOLD HEAD'S EDUCATIONAL ATTAINMENT



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

GRAPH 11: IMPACT OF IDT ON LABOR SUPPLY OF URBAN CHILDREN, HOUSEHOLDS IN WHICH HEAD HAS NEVER ATTENDED SCHOOL



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

APPENDIX 1: NUMBER OF RURAL VILLAGES
BY YEAR AND HOUSEHOLD HEAD'S EDUCATIONAL ATTAINMENT

Young men

	Never attended	No degree	Primary	Secondary
1993	965	1,278	1,186	547
1994	858	1,232	1,198	559
1995	810	1,214	1,187	575
1996	890	1,243	1,286	577
1997	759	1,095	1,174	559
1998	684	1,056	1,112	593
1999	795	1,119	1,273	642
Total	5,761	8,237	8,416	4,052

Young boys

	Never attended	No degree	Primary	Secondary
1993	978	1,245	1,086	513
1994	959	1,204	1,107	479
1995	919	1,225	1,084	518
1996	984	1,242	1,208	513
1997	803	1,113	1,088	480
1998	737	1,032	1,045	484
1999	849	1,132	1,187	550
Total	6,229	8,193	7,805	3,537

Young women

	Never attended	No degree	Primary	Secondary
1993	1,011	1,355	1,258	601
1994	948	1,303	1,253	619
1995	925	1,301	1,255	650
1996	1,019	1,344	1,356	664
1997	837	1,193	1,222	604
1998	775	1,143	1,193	637
1999	838	1,227	1,365	730
Total	6,353	8,866	8,902	4,505

Young girls

	Never attended	No degree	Primary	Secondary
1993	960	1,244	1,065	449
1994	905	1,168	1,086	454
1995	895	1,188	1,055	485
1996	971	1,196	1,175	508
1997	780	1,057	1,040	455
1998	710	1,029	1,023	495
1999	801	1,086	1,190	531
Total	6,022	7,968	7,634	3,377

Older men

	Never attended	No degree	Primary	Secondary
1993	941	1,181	928	421
1994	905	1,122	978	389
1995	875	1,168	978	453
1996	903	1,162	1,045	456
1997	723	1,048	1,003	413
1998	701	1,005	961	459
1999	775	1,125	1,112	506
Total	5,823	7,811	7,005	3,097

Older boys

	Never attended	No degree	Primary	Secondary
1993	714	812	633	211
1994	635	793	623	210
1995	607	759	602	220
1996	618	787	640	253
1997	552	722	675	219
1998	507	689	655	237
1999	586	759	721	262
Total	4,219	5,321	4,549	1,612

Older women

	Never attended	No degree	Primary	Secondary
1993	1,032	1,077	767	300
1994	952	1,049	765	280
1995	940	1,093	790	291
1996	962	1,057	819	318
1997	818	956	820	309
1998	744	906	778	332
1999	864	1,023	884	347
Total	6,312	7,161	5,623	2,177

Older girls

	Never attended	No degree	Primary	Secondary
1993	613	766	595	243
1994	583	736	634	236
1995	567	714	642	253
1996	589	718	671	230
1997	497	670	642	267
1998	458	617	626	255
1999	532	693	721	268
Total	3,839	4,914	4,531	1,752

Notes: Each cell indicates the number of villages where there is at least one person who belongs to the group defined by gender and age.

APPENDIX 2: NUMBER OF URBAN VILLAGES BY YEAR AND HOUSEHOLD HEAD'S EDUCATIONAL ATTAINMENT

Young men

	Never attended	No degree	Primary	Secondary
1993	98	181	225	178
1994	87	187	219	185
1995	73	170	187	162
1996	68	172	202	169
1997	90	193	222	183
1998	70	184	222	193
Total	486	1,087	1,277	1,070

Young boys

	Never attended	No degree	Primary	Secondary
1993	99	189	213	169
1994	84	176	204	173
1995	82	162	178	152
1996	80	166	189	169
1997	80	181	193	167
1998	77	170	214	180
Total	502	1,044	1,191	1,010

Young women

	Never attended	No degree	Primary	Secondary
1993	103	201	239	191
1994	94	196	227	194
1995	80	187	201	177
1996	81	170	213	182
1997	94	206	230	214
1998	73	200	231	206
Total	525	1,160	1,341	1,164

Young girls

	Never attended	No degree	Primary	Secondary
1993	99	176	215	167
1994	76	173	210	164
1995	68	161	174	151
1996	78	153	180	166
1997	79	183	200	177
1998	59	170	206	173
Total	459	1,016	1,185	998

Older men

	Never attended	No degree	Primary	Secondary
1993	91	170	191	156
1994	66	174	196	165
1995	55	157	176	149
1996	61	146	187	169
1997	74	185	208	184
1998	60	166	212	181
Total	407	998	1,170	1,004

Older boys

	Never attended	No degree	Primary	Secondary
1993	66	140	130	108
1994	62	117	146	124
1995	59	112	123	99
1996	43	115	133	120
1997	46	128	140	125
1998	49	135	157	123
Total	325	747	829	699

Older women

	Never attended	No degree	Primary	Secondary
1993	113	174	167	122
1994	94	168	167	136
1995	79	147	152	113
1996	85	151	162	137
1997	87	179	185	132
1998	84	162	179	155
Total	542	981	1,012	795

Older girls

	Never attended	No degree	Primary	Secondary
1993	61	116	141	107
1994	41	116	142	123
1995	42	105	116	99
1996	44	111	133	119
1997	56	124	153	128
1998	43	130	153	114
Total	287	702	838	690

Notes: Each cell indicates the number of villages where there is at least one person who belongs to the group defined by gender and age.

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ALTERNATIVE INCOME GENERATION AND ENTRY INTO WORST FORMS OF CHILD LABOR
THEORY AND EVIDENCE FROM RAGPICKERS, PORTERS, AND CHILD DOMESTICS IN NEPAL

Eric V. Edmonds[1]

EXECUTIVE SUMMARY

Alternative income generating activities (IGA) for vulnerable families have the ambiguous potential either to increase or decrease child labor. Rising family incomes may make families less dependent on the child's economic contribution or better able to afford schooling expenses. Rising income may help families avoid sending a child away or the circumstances that lead to child migration or child trafficking. However, IGA may also be associated with changing employment opportunities to children. While IGA in which children can participate may generate increases in the number of working children, activities that substitute for children may push children out of employment in the household, perhaps into school, unemployment, or other types of work away from their families. In the end, theory cannot predict the impact of IGA on child work or even participation in activities that are considered worst forms. Consequently, the expected impact of growth in IGA on perceptions of child welfare depends on both the type of IGA and how different types of work are viewed in a country.

Article 3 of ILO Convention 182 allows considerable discretion for countries in how they define worst forms of child labor. A worst form of child labor can include any "work that is likely to endanger the health, safety, or morals of children." The accompanying recommendation (190) draws attention to cases where children are exposed to abuse, work in an unhealthy environment, work long hours (including during the night), or face confinement to the employer's premises. Ragpicking, portering, and child domestic service are among the 16 worst forms of child labor in Nepal as identified by the Government of Nepal's National Master Plan, and they are among the seven worst forms of child labor targeted for elimination under the 2001 Time-Bound Program (TBP) in Nepal.

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The original purpose of this study was to analyze how the structure of economic activity in the child's parents' environment is correlated with participation in domestic service, ragpicking, and portering in Nepal. Ultimately, little is found to suggest a clear connection (consistent with the theoretical ambiguity discussed above). Hence, this study's more substantive contribution is to show how it is possible to analyze the correlates of selection into worst forms of child labor. With nothing more than data on children in a worst form, as might be collected from targeted surveys, it is impossible to infer why children select into a given worst form. This study shows how to estimate the correlates of entry into a worst form when four conditions are met:

1. The type of work that qualifies as a worst form is explicitly identified
2. Reasonable estimates of the incidence of that worst form exist in the population
3. Individual level data are available on background characteristics of children engaged in the worst form
4. Nationally representative data are available on the same set of background characteristics available for the general population.

Inference will only be possible over characteristics that are observed in both the targeted survey and the nationally representative data. The primary source of representative data for this study is the 2001 population and housing census of Nepal. The census and the Time Bound Program (TBP) baseline surveys of children in worst forms of child labor have in common questions about location, whether the family owns agricultural land and a household roster, with sex, age, ethnicity, mother tongue, employment occupation, and education of each family member. This study illustrates how to draw inference about the relative significance of each of these attributes in explaining selection into worst forms of child labor. Moreover, the census identifies whether children are engaged in market work in the family business or farm and wage work. Hence, with the census, it is possible to compare selection into worst forms of child labor with these other, more prevalent forms of child labor.

Nothing in the data considered herein suggests a pivotal role for alternative income generating activities in influencing selection into worst forms. In theory, it is not obvious how IGA to the household will influence child participation in worst forms. In practice, at best, the data only hint at a possible, small role for employment opportunities for children in explaining selection into ragpicking, domestic service, or portering. Parental disability (especially paternal disability) stands out as a strong correlate of participation in a worst form, but the role of IGA in helping families cope with something like paternal disability is unclear. However, the data do suggest some small correlation between parental self employment and entry into worst forms. While parental self employment is associated with more wage work by children in general, it is associated with a *reduced probability* of observing a child as a domestic, porter, or ragpicker. Overall, the diminished risk of selection into these worst forms associated with parental self employment is tiny compared to the elevated risk associated with paternal disability.

Only a more complete integration of scientific evaluation techniques into existing IGA projects can answer whether there is any scope for IGA to influence entry into worst forms. That said, the analytical approach adopted in this study based on combining population estimates of the worst form, targeted data, and nationally representative data should be useful in other country contexts and may help researchers better target IGA interventions for evaluation purposes

1. INTRODUCTION

Few issues in low income countries draw more attention than child labor, and the eradication of the worst forms of child labor has become a goal in development policy. Several different policy instruments are being employed to combat the worst forms of child labor, but alternative income generation strategies are among the most promising because they seek to eliminate the flow of children into these worst forms of child labor. Improving the design of alternative income generation strategies to help marginalized children requires an understanding of why children are marginalized. This study hopes to review and enhance our understanding of why children select into some of the worst forms of child labor prevalent in Nepal.

The question of why children are working in worst forms of child labor has received substantial theoretical attention, but empirical evidence suitable to understanding selection into the worst forms of child labor is scarce. The difficulty of capturing the activities with randomized sampling is largely responsible for the paucity of empirical work. Hence, existing evidence on why children are in worst forms comes largely from research where children engaged in a targeted activity are interviewed, asked about their working conditions, and why they participate in the work. In these surveys, children typically respond that they are working because either they or their family need the money. Insights of this sort have led to the conclusion that alternative income generation schemes may be a partial solution to the problem of labor supply in these activities. However, the fact that children work in worst forms for income does not itself answer the question of why children are working in *these* activities. Children work in plenty of activities for income, many of which would not be considered hazardous or a worst form of child labor. Consequently, this observation is of limited use for the design of policy to ameliorate the supply of labor into these activities, and a better understanding of why children select into worst forms of child labor is of first order importance for policy decisions.

This study has two main objectives. First, this study reviews the existing literature on why there is a link between income and child labor. Though the empirical work in this study focuses on survey data from Nepal, the review component of this study is not limited to Nepal. Rather, it seeks to provide a more comprehensive review of both the theoretical and empirical academic literature on the link between family income and child labor. This literature predicts that income generating activities (IGA) can influence child time allocation through their impacts on family income and on the value of child time inside the household. The latter of these impacts makes the overall impact of IGA in the family ambiguous. Rising family incomes may decrease pressures to have children work or not attend school. Rising incomes may help families better support their existing children, reducing the need to send children away and mitigating incentives for child migration. If rising incomes (or the IGA activities themselves) are accompanied by a perceived increase in the return to educating a child, they may draw children away from work into the classroom. However, additional employment opportunities inside the household may draw some children into working in the IGA. If the IGA crowd out existing household activities and the child's relative performance in the IGA is poor, IGA could spur more children to look for work outside of their household. Depending on how different types of activities are viewed, it is possible that IGA could increase the number of working children or push already working children into situations where they are more vulnerable to worst forms of child labor. Whether there is evidence of this theoretical possibility in reality is ultimately an empirical question.

A common issue that arises in the discussion of existing IGA programs is the general lack of evidence of their impact. This comment may seem inaccurate to practitioners who often have observed and commissioned reports about the impact of IGA programs in the field. An analogy to medical research is appropriate here. For a long time, pharmaceutical products and medical procedures were evaluated by asking subjects whether they felt better after they had received a medication or undergone a treatment. However, concerns about placebo effects, sampling, recording and reporting biases, and the interpersonal dynamics involved in evidence of this nature eventually led to the adoption of more scientific standards for evaluation based on randomization when feasible and quasi-experimental methods when randomization is not possible. Evaluation is costly, but in the case of medicine, it was deemed worthwhile because of the important role medical treatments can have for individual welfare. Scientific evaluation also has the advantage of advancing knowledge by learning whether and why products work. These welfare concerns and desire to learn are equally appropriate for the study of IGA. Assertions of a general lack of evidence on the impact of IGA programs are supported by the absence of this type of experimental or quasi-experimental scientific evidence.

Second, this study combines data on porters, ragpickers, and domestic servants in Nepal and estimates of the incidence of each in the population, with nationally representative data from Nepal's population census, in order to infer the correlates of selection into these worst forms of child labor in Nepal. Often work that qualifies as a worst form is not explicitly identified. However, when it is explicit as in the present case, a combination of population estimates, targeted data on participants, and representative data in low income environments is often available to be used to develop an understanding of the correlates of selection into worst forms. Only child background characteristics that appear in both the targeted and nationally representative data can be analyzed; however, differences in the nature of the data collection process between the worst forms data and the nationally representative data can significantly bias estimation. Nonetheless, it is striking how unusual it is to analyze participation in worst forms in the context of nationally representative data on children who are not engaged in the worst forms. This study demonstrates how it would be simple and costless to improve quantitative survey instruments of children in worst forms to substantially improve our ability to analyze why children select into these activities.

This study found no evidence to suggest a strong connection between type of parental employment or household activity and selection into any of the worst forms of child labor. There are hints in the descriptive work of some role for outside employment opportunities, but the only observable household characteristic that stands out is a strong correlation between parent (especially paternal disability) and selection into a worst form. Relative to wage working children, domestics are seven times, porters are five times, and ragpickers are four times more likely to report that their father is disabled. It seems possible that IGA could compensate for the loss of a disabled father's contribution to the household, but it is not clear whether the association between paternal disability and participation in a worst form reflects a loss of income, a loss of employment opportunities within the household, a loss of care or attention, or something else that happens to be coincident with paternal disability and selection into a worst form. That said, the data support a small role for IGA, as porters, ragpickers, and domestics are slightly less likely to have parents who are self employed.

The next section reviews the relevant theoretical literature. Section 3 describes how to combine targeted surveys and representative data to draw inferences about the correlates of entry into worst forms. Section 4 presents findings from data on domestics, porters, and ragpickers in Nepal. Section 5 summarizes the findings and discusses their implications for future research.

2. ALTERNATIVE INCOME GENERATING ACTIVITIES (IGA) AS A WAY TO INFLUENCE SELECTION INTO WORST FORMS

Unfortunately, empirical evidence of why children select into worst forms of child labor is scarce. In addition, because scientific evaluation of the impact of IGA targeted to disadvantaged families is still in its infancy, there is very little direct evidence on whether or how IGAs might influence entry into worst forms of child labor.

The purpose of this section is to speculate about the possible role for IGAs in influencing selection into child labor. There is a large academic literature exploring the relationship between family income and common forms of child labor. This section begins with a summary of that literature and discusses its relationship to IGAs. The extent to which these findings extend to worst forms depends on whether worst forms are somehow fundamentally different for reasons other than working conditions. The second part of this section reviews current academic understanding of the relationship between worst forms and common forms of child labor, and reflects upon what these theories suggest for how IGAs influence selection into worst forms.

2.1 FAMILY INCOMES AND CHILD LABOR

Qualitative interviews of children in both common and worst forms of child labor emphasize poverty as a key factor influencing why children work. The attribution of children working to the family's need for income really contains two insights into why children work. First, the family's marginal utility (or extra welfare) gained by additional income from the child is high even if the income earned is small. Second, the return to child time spent working (or in a worst form) is greater for the family than other uses of the child's time. This second insight is important, because it implies a role for local schooling institutions, and draws attention to cultural norms about how parents internalize the value of child time in child labor decisions. Moreover, as discussed below, this second aspect of the idea that children are working in order to help their families may be especially important for designing alternative income generation to affect worst forms of child labor.

The academic literature has emphasized several ways in which rising family incomes might influence child labor. First, even when it is necessary, child labor may be viewed negatively among parental preferences. As incomes improve, the family may choose to have children work less, in alignment with their preferences. In fact, in their seminal child labor paper, Basu and Van (1998) posit the "luxury axiom": children only work when the family is unable to meet its basic needs. Beyond subsistence, the luxury axiom posits, families always opt to keep children out of work. This extreme characterization of parental preferences presumes that there are always preferred uses for child time outside of some form of work. Hence, it is difficult to account for evidence of a correlation between working and returns to education, school quality, employment opportunities, and family living arrangements. When Edmonds (2005) applies the Basu and Van model to data from Vietnam, he finds it necessary to assume that the household's perception of its basic needs depends on returns to education, school quality, etc., in order to reconcile the Basu and Van model with the data. However, it seems plausible that the luxury axiom may be applicable to worst forms without additional qualifications. Most narratives of worst forms emphasize that a high share of participants are migrant or trafficked children, and it seems plausible that the luxury axiom might extend to the decision to send a child away, without the need for additional qualification.

Second, with diminishing marginal utility of income, the value of the marginal contribution of the child's income decreases. For example, where direct and indirect schooling costs are experienced as high, an important part of the child's economic contribution to the family might be through not attending school. In fact, Edmonds (2006) documents strong schooling and work responses to anticipated income changes in South Africa that seem to stem in part from schooling related expenses. Edmonds, Pavcnik, and Topalova (2006) observe that the avoidance of school related expenses appears to be a significant factor in why there is a (relative) increase in the share of children who work without attending school in Indian districts where there is a rise in poverty (relative to the national trend) attributable to Indian trade reforms in the early 1990s. Nonetheless, the economic contribution of working children can be substantial. Psacharopoulos (1997) observes that income earned by working Bolivian 13 year olds amounted to 13% of total household income on average. Menon et al (2004) attempt to compute the value of the child's own farm labor to largely subsistence farm households in rural Nepal. They estimate that children contribute roughly 11 percent of the value of total agriculture production in Nepal or about 9 percent of GDP. If moving children out of work entails giving up such a significant contribution to income, it is hard to imagine that preferences do not play a role.

Third, rising incomes may facilitate improved credit access or more effective insurance. The idea that access to credit is important for child labor supply has recently been formalized in theoretical work by Baland and Robinson (2000) and Ranjan (2000) with empirical support at the macro level in Dehejia and Gatti (2005) and in microdata in Edmonds (2006). In addition to leveraging credit to make productive investments, credit may facilitate the intertemporal reallocation of resources so that current investment decisions such as education need not depend solely on contemporaneous considerations. The return for the child's future can be balanced against current considerations. Better informal insurance associated with rising incomes may also reduce the import of contemporaneous economic circumstances for child schooling decisions. Evidence on the importance of insurance failures for child labor appears in Beegle et al (2006).

The empirical evidence on the link between family incomes and child labor typically finds declining child labor associated with improvements in income. Using cross-country estimates of child labor supply, Edmonds and Pavcnik (2005a) note that 73 percent of the cross-country variation in child labor can be attributed to variation in national income. Econometric attempts to address the endogeneity of national income and child labor do not diminish this strong correlation (Edmonds and Pavcnik 2006a). Within countries, studies that track children or families over time also tend to find a similarly strong, robust negative association between child labor supply and family incomes (for example: Beegle et al. 2006, Duryea, Lam, and Levison 2003, and Edmonds 2005).

An important fourth way in which income may be related to child labor is highlighted by the considerable confusion that exists over how to interpret some of the evidence on the family income – child labor correlation. Within country, cross-sectional studies of the relationship between child labor and family income typically find a less robust relationship. An intrinsic problem in studies of the link between economic status and child labor is that poor households differ from rich households in many ways that might be associated with child labor. Disentangling these omitted factors from the underlying causal relationship is difficult, but the association between family incomes, the employment opportunities open to children, and perceived returns to education is perhaps the most important of these omitted factors in the cross-sectional evidence.

Typically, the economic opportunities available to children are positively associated with family income. Everything else being equal, better employment opportunities should mean that more children work. Several recent studies note that child labor is higher in households with more self employment activities (Edmonds and Turk (2004) in Vietnam, Parikh and Sadoulet (2005) in Brazil). Wydick (1999) notes a correlation between work and household involvement in a microcredit program. Using detailed time use data from Botswana, Mueller (1984) documents that the more productive capital the household has, the more productive work its children perform. She estimates that the positive productivity effect of productive capital outweighs its association with family income in its effects on child time allocation. Households must balance rising returns to child labor against a desire to have the child work less or devote more time to schooling, and theory cannot predict which of these values will dominate. Edmonds and Pavcnik (2005b) illustrate that one should assume that the relative importance of rising incomes and rising employment opportunities in child labor should be location specific. Vietnam liberalized its rice markets in the mid-1990s and concurrent with this liberalization were increases in employment opportunities in rice related activities and increased family income. In the Vietnam context where schooling is accessible and of relatively high quality, Edmonds and Pavcnik found a large decline in child labor with rising incomes despite increasing employment opportunities.

Moreover, decisions about child labor depend not on the absolute return to child time in work but on labor's relative return, and it is not obvious theoretically that higher income will be associated with higher relative returns to work. Higher family incomes may facilitate the purchase of substitutes for child labor that lower the return to child labor within the household. For example, a washboard, fertilizer spreader, livestock, or a combine harvester may replace child labor within the home. Edmonds and Pavcnik (2006b) document some suggestive evidence that this replacement of child labor with market inputs was important in the decline in child labor in Vietnam discussed above. Alternatively, the child's productivity in other activities such as schooling might improve because the family might be able to afford better inputs to schooling such as nutrition, textbooks, or uniforms. Higher income might also raise the family's perceived returns to education, especially when raising incomes are associated with other changes in the family's environment that might reward education.

In fact, the empirical evidence suggests that the association between the relative return to work and rising family incomes will be extremely sensitive to local circumstances. For example, Bhalotra and Heady (2003) find that the additional withinhousehold employment opportunities open to girls associated with greater landholdings in Pakistan and Ghana are sufficiently larger than for other households; those households with greater land wealth are more apt to have their child work. Chernichovsky (1985) uses the same Botswana data as Mueller to point out that when substitutes for child labor are available inside the household, children tend to attend school rather than work even in the presence of productive capital. Interestingly, Psacharopoulos and Arriagada (1989) document similar patterns in Brazil. As an important substitute for child labor, they emphasize a piped water supply. Cockburn (2002) goes into further detail using Ethiopian data. He notes that small livestock and land appear to be market work increasing, whereas oxen, bulls, ploughs, land quality, and again, proximity to water are child labor decreasing. These patterns make sense in that the factors Cockburn identifies as child labor decreasing all substitute for children and are difficult for children to manage.

These studies have an interesting implication for the present context. The impact of IGA on child labor will depend on how it affects household income and the employment opportunities available to children within the household. IGA could both increase or decrease child

employment opportunities within the household. This will depend both on the type of activity and the specific country context. For example, Free the Children – India has been active in distributing gem polishers and sewing machines to marginalized women in India as part of its "Adopt a village" campaign. This additional productive capital in the household might displace some of the work children have performed. What might displaced children do? Perhaps they would go to school if there was affordable, accessible schooling of sufficient quality to make it worthwhile. They might turn instead to other work, perhaps even work outside of the household. Alternatively, the additional income may allow families the luxury of not having their children work, or the additional productive capital may induce children to work more inside the household in the IGA activity (from school or from other work outside of or away from the household).

One solution to this ambiguity is to target IGA to give children work. For example, "YES Nigeria" has been active in targeting microcredit loans to youths in order to help them start small businesses and accumulate savings that might be used to finance schooling. Hiefer International and the Maasai Association in Kenya have been active in giving children small livestock such as goats or chickens whose care demands are compatible with schooling. The goal of these organizations is to mitigate the family's incentive to have the child seek other forms of employment that might be less compatible with schooling. However, in turn, they may induce more children to work as might IGA targeted at parents. If the alternative to this involvement in the families IGA is working in a worst form, it may be that the way IGA can deter entry into worst forms in part entails an increase in overall levels of child labor. Hence, it is important to set national policy priorities about what types of work need to be deterred.

2.2 ARE WORST FORMS DIFFERENT THAN MORE COMMON ACTIVITIES?

The minimum age convention, C138, places special emphasis on activities that "jeopardise the health safety, or morals of young persons" (Article 3 - section 1) and defines 18 as the minimum age of employment for activities that can be described as such. In 1999, C182 on the Worst Forms of Child Labor asksed signatory countries to clarify what types of activities fall under this label and to develop specific plans for their eradication. C182 has proven less controversial than the minimum age conventions, and to date there are 151 signatories.

While it is up to the individual country to specify "worst forms," Article 3 of C182 contains several guidelines for what types of activities are to be considered for persons under the age of 18. These include all forms of slavery and "practices similar to slavery." This later clause is noted to include the sale and trafficking of children, debt bondage, serfdom, and forced or compulsory labor including for the purposes of armed conflict. Children in prostitution, pornography, or in the production or processing of drugs are also noted as being in "worst forms" of child labor. However, Article 3 (d) is more ambiguous as it allows worst forms to include "work which, by its nature or the circumstances in which it is carried out, is likely to harm the health, safety, or morals of children." Article 4 of the convention is explicit that it is up to individual countries to define what types of work are considered "worst forms" of child labor under this clause. Activities labeled "worst forms" under Article 3(d) of C182 are often labeled as "Hazardous forms of child labor." The companion recommendation document for C182, R190 Worst Forms of Child Labor Recommendation, suggests that these hazardous forms of child labor include:

> "(a) work which exposes children to physical, psychological, or sexual abuse; (b) work underground, under water, at dangerous heights, or in confined spaces; (c)

> work with dangerous machinery, equipment and tools, or which involves the handling or transport of heavy loads; (d) work in an unhealthy environment which may, for example, expose children to hazardous substances, agents or processes, or to temperature, noise levels, or vibrations damaging to their health; (e) work under particularly difficult conditions such as work for long hours or during the night or work where the child is unreasonably confined to the premises or the employer." (R190, Section II.3.a-e).

Most of the existing evidence on why children work comes from responses to large-scale household surveys. The advantage of these surveys is that they are randomized so that it is possible to use them for inference about the scope of child labor in a country. However, these instruments are often inappropriate for monitoring the worst forms of child labor in a country. For these difficult to monitor forms of child labor, the ILO and interested organizations conduct specialized surveys that interview only those individuals engaged in the activity. From these targeted surveys, it is possible to estimate the extent of worst forms of child labor in a country.

The ILO/SIMPOC estimates that a total of 8.4 million children are involved in child trafficking, in forced or bonded labor, are soldiers, are prostitutes or involved in pornography, or participate in illicit activities (ILO, 2002); 68 percent of these children are in bonded or forced labor. Since hazardous activities are defined at the country level, cross country evidence on their extent is not available. Country level estimates are also typically not available. However, in implementing C182, the ILO has been active in assisting countries in assessing the prevalence of worst and hazardous forms of child labor as well as in developing plans for the eradication of these activities. Nepal was one of the first countries to initiate one of these "Time Bound Programs," and the findings from the baseline work for this program are illustrative of the types of activities that governments label as hazardous and the prevalence of worst forms in a very poor country.

ILO (2001) estimates of the extent and incidence of worst forms of child labor in Nepal are depicted in Table 1. They show that there are approximately 8 million children below the age of 16 in Nepal, and estimate that 1.5 percent of these children work in these worst forms of child labor. Most children engaged in worst forms of child labor in Nepal are in hazardous forms of child labor. Child porters and domestic workers are the two most common types of "worst forms" of child labor. Among child porters, there are two main types: short distance porters who work in urban markets and bus parks, and long distance porters who work in the countryside. The ILO estimates that long distance porters typically stay and work with their families while short distance porters have often migrated to find work. Estimates are that there are about 42,204 long distance porters and 3,825 short distance porters. Eighty-eight percent are boys. Domestic workers are most prevalent in high status urban households, though domestics typically come from rural areas. In Kathmandu, 1 out of 5 households employ children. The ILO estimates that 43 percent of employers of child domestics are government or non-government service holders. Domestics are believed to be evenly split between paid (to parents) and unpaid (more correctly, paid in a lump sum) workers. The other children included in Table 1, because of the nature of their employment, are children in mines, in the carpet sector, and ragpickers, who pick rags and other rubbish out of garbage dumps for resale.

Both bonded laborers and trafficked children also fall under worst forms of child labor. Bonded children in Nepal are in bondage either because parents took out debts against the child's future earnings or because they were used as collateral on loans. The ILO estimates that some 17,152 children are in bondage in Nepal, although this estimate is controversial because it does not

include children whose parents are held in a system of bonded labor that pervades western Nepal (because debts are inherited, many argue that the children are implicitly bonded in the system). Child trafficking is particularly hard to measure and evaluate. According to the ILO (2001), 12,000 girls are trafficked into the commercial sex industry each year in Nepal. By and large, these girls work in brothels in India. Unfortunately, because of the relative rarity of worst forms and the challenges of capturing them in randomized surveys, little research exists on whether these activities are rightly viewed as a type of child work (where human rights is more obviously an issue) or whether they should be viewed as something other than a form of work.

Three views about differences in the selection process into common forms and worst forms of child labor seem to dominate the academic literature. In one view, worst forms are no different than other types of work from the parent or child's perspective, and factors that drive children to select into worst forms are the same factors that drive them to work in the first place. Selection into a worst form occurs because the worst form is the only option available to the child or because all the negative amenities of the worst form are fully compensated (in expectation) through higher wages. In this case, the link between worst forms and income will be the same as that of more common forms of child labor, and the resulting policy prescriptions will be the same. In addition, when insurance markets are incomplete, the stability of IGA income will also be an important factor affecting entry into worst forms. Thus, alternative sources of income that help families cope with insurance and credit market failures will help ameliorate the need for children to work.

A second view sees the partial compensation offered for worst forms of child labor as greater than for other forms (Dessy and Pallage 2005). Thus, the entry process is similar to other types of work except that poorer households are more likely to select into worst forms, because the marginal utility for the additional income exceeds the disutility of the work. Policy to reach the most disadvantaged may need to be considerably more aggressive than in the fully compensated case. Moreover, policies that increase employment opportunities for children within their family or home community may be particularly effective at decreasing worst forms even if they lead to higher levels of more common forms of child labor. For example, employment in worst forms is typically urban and a common anecdote is that these children come from rural areas. Hence, policies that help increase employment opportunities and economic activity in rural areas may be effective at mitigating the flow of children into worst forms even if they increase child labor overall.

In a third view, children in worst forms of child labor enter because of poor information about what the work entails (Rogers and Swinnerton 2002). They select into the work under the assumption that it is similar to other types of work; then, there are barriers to exiting. This explanation is most often voiced to explain selection into prostitution, but it may be equally substantive for other worst forms of child labor. A commonly observed correlate of involvement in worst forms is a child migrant living away from home. It is worth noting that in many activities it is not unusual to see children working by their parent's side. Ragpicking is one example.

The role that alternative income generation can play here is mixed. On the one hand, increased income or perhaps perceived returns to schooling may mitigate the parent's willingness to send children into work, and therefore the effect of increased, stable sources of income may be similar as in the fully compensated case. However, poor information or the willingness to send a child to work in the context of uncertainty may function in the same way as pay differentials that are not fully compensated so that the policy prescriptions discussed in the previous case

may be more relevant. Empirically, the information explanation will be hard to identify in data, and qualitative data may be the most productive avenue to assess information problems. Moreover, to the extent that information appears to be a fundamental issue in some worst forms, education and other services might be an important companion to income generation activities.

Because of inference problems when dealing with rare events, we have little evidence on why children select into worst forms and whether selection is driven by characteristics that differ from those discussed above. Until scientific evaluation of IGAs is conducted with attention to entry into worst forms, we can only speculate whether family income effects associated with IGAs will be important or whether IGAs influence the employment opportunities open to children in ways that discourage activities associated with selection into worst forms.

An important issue is omitted from the above discussion. Who decides whether children work, how they work, and where they work? Reports of child abuse at home are commonplace in qualitative interviews, and interviews of older migrant children often emphasize a desire to have greater autonomy. To the extent that autonomy is important, the impact of IGA on child residency patterns and time allocation may depend on who captures the income from these activities. In particular, it seems plausible that income in the hands of a child, especially an older child, may be a powerful influence on how the child spends his time. Could increasing the employment opportunities available to older children be a way to increase schooling and prevent entry into worst forms? Unfortunately, the answer to this question is not known at present, and this study will not shed any additional light on this important question. However, in policy discussions, it is often impossible to suggest anything that might encourage children to work even though this might be a useful channel to prevent participation in worst forms.

3. METHODOLOGY FOR EXAMINING SELECTION INTO WORST FORMS

Why are children engaged in worst forms of child labor (WFCL)? Empirically, this is a difficult question to answer, because WFCL are relatively rare. The probability that random sampling captures children engaged in any given WFCL is typically low. Hence, data collection can be prohibitively costly and statistic power is always a concern. Researchers have had to turn to other data sources. The most common approach is inherently qualitative: researchers find children engaged in a worst form and interview them to find out about their circumstances. Sometimes these interviews are unstructured, but often researchers follow a survey questionnaire which can permit quantitative analysis.

It is impossible to learn about why children are in worst forms from only interviewing children in worst forms. For example, consider some factor D that influences selection into activity Y. The researcher is interested in knowing how factor D increases the probability that a child with other characteristics X enters into activity Y. When D is discrete, this is:

$$P\left[Y=1\middle|D=1,X\right]-P\left[Y=1\middle|D=0,X\right].$$

Neither probability can be computed in the set of Y=1. Put another way; let's say a child in an interview remarks that they are engaged in activity Y because of factor D ("I am a ragpicker, because my dad lost his job"). There may be lots of children that experience factor D that do not select into Y (lots of children have a parent lose a job without becoming a ragpicker), but

without data on children not in Y there is no way to compute the increased chance of engaging in Y with a change in D.

The problem of drawing inference about rare events is not unique to worst forms of child labor. Most observational inference in medicine is made under precisely these circumstances; this study applies approaches to rare events from epidemiology to the study of selection into worst forms of child labor. These techniques do not appear to have been applied to the analysis of selection into worst forms before. The present discussion draws heavily from papers such as Prentice and Pyke (1979), King and Zeng (1999), and Manski (1999).

Let Y_i be an indicator that child i is involved in the given worst form of interest. D_i is the covariate of interest. In the present discussion, D_i is binary, but the discussion generalizes to when D_i takes more than two values. Our interest is in estimating the impact of D_i on the probability that child i is involved in the given worst form. Later attention will be placed on estimating this probability conditional on other confounding variables that are correlated with both Y_i and D_i.

There are three main outcomes of potential interest.

1. Absolute risk. How likely is an individual with D_i to be involved in the given worst form:

   $$\pi_i = \Pr\left(Y = 1 \middle| D_i\right). \qquad \text{(eq. 1)}$$

2. Relative risk. How much more likely is a child with D=1 to be observed in activity Y than a child with D=0:

   $$R = \frac{\Pr\left(Y = 1 \middle| D = 1\right)}{\Pr\left(Y = 1 \middle| D = 0\right)}. \qquad \text{(eq. 2)}$$

3. Attributable risk. How much does an individual's risk of engaging in Y increase with a change in D from 0 to 1:

   $$A = \Pr\left(Y = 1 \middle| D = 1\right) - \Pr\left(Y = 1 \middle| D = 0\right). \qquad \text{(eq. 3)}$$

Each of these outcomes is potentially of considerable interest to researchers and policymakers. For example, absolute risk is of interest to assess how likely a child with a given characteristic is to be in a WFCL. An index of vulnerability to WFCL would be constructed entirely through combining measures of absolute risk. Researchers interested in how participation in WFCL differs with variation in observable characteristics will be most concerned with relative or attributable risk. Relative risk is the most straightforward to estimate. However, interpretation of relative risk can often be misleading in the context of low probability events. For example, suppose that the probability of observing a child in a WFCL is extremely low when a certain characteristic D is not present (e.g. 0.00001) and suppose the probability is higher when the characteristic is present (e.g. 0.0001) but still so small as not to be substantive. Estimates of relative risk in this case would be very large (10) even though the probabilities are so small as to be not substantive. Hence, at a minimum, relative risk should never be considered without attention to the baseline absolute risk. In contrast, attributable risk gives a direct measure of how much a child's risk of being involved in a WFCL changes with an observed characteristic. Consequently, it is most often the outcome of interest.

Estimating absolute, attributable, or relative risk requires data on both cases (subjects where Y=1) and controls (Y=0). When data on both cases and controls can be collected in a single randomized survey, standard cohort comparison techniques are available. However, typically the incidence of most WFCL is such that a survey would need to be extremely large in scale to recover engaged children using random sampling. Thus, a more common situation is to have separately collected data on children not engaged in the WFCL (the control data) and data on children engaged in the activity (the case data). Though the case data do not need to be obtained through randomized sampling, estimating absolute or attributable risk requires knowledge of the probability a child engages in the WFCL. This is most easily assessed if the case data collection is designed, in part, to estimate this parameter. Moreover, whatever sampling procedure generates the case data, sampling must be independent of the covariates of interest *D* except in as much as that D is correlated with selection into the case data. Put another way, the data generation process can generate bias if it is correlated with covariates of interest for reasons other than that the covariates are correlated with selection into worst forms.

Ideally, the survey instrument used to collect data on the case and control populations will be identical. In practice, it is rare that similar case and control data exist. It will only be possible to compute any of the risk parameters of interest for covariates that appear in both the case and control data. Moreover, a common problem is that even when there are similar questions, the case and control data will be answered by different people. Often case data is collected by interviewing children while most household surveys and censuses (typical sources of control data) interview household heads or their spouses. Biases from differences in respondents can be as substantive as biases from different framing of questions, and these dissimilarities make it very challenging to assess the risk parameters of interest.

The classic case – control approach makes the rare events assumption to estimate relative risk. That is, the case and control data are pooled, and it is assumed that the probability of observing a case individual tends to zero (conditional on observed characteristics) in the limit. This assumption allows the researcher to interpret the odds ratio from a logit of participation in the WFCL on observable characteristics as an estimate of relative risk. The appeal of this approach is that it is possible to estimate relative risk without identifying absolute risk in the population. However, the rare events assumption is problematic since the existence of case data implies that the probability of observing a case is not zero, yet the rare events assumption implies that attributable risk is zero.

Knowledge of the probability of observing a case in the population substantially improves estimation. Let λ denote the incidence of the worst form in the population, and let $\bar{Y}$ be the fraction of the case–control pooled data that is from the case data. In order to estimate parameters such as absolute risk and attributable risk, the constant from the logit needs to be corrected to reflect the difference between λ and $\bar{Y}$. Specifically, the regression's intercept in the logit β_0 needs to be adjusted as:

$$\beta_0 - \ln\left[\left(\frac{1-\lambda}{\lambda}\right)\left(\frac{\bar{Y}}{1-\bar{Y}}\right)\right] \qquad \text{(eq. 4)}$$

This result is attributable to Manski and Lerman (1977) or Prentice and Pyke (1979). The intuition behind this adjustment is that, in general, the ratio of case to control observations in the pooled data will not correspond to the ratio expected in the population. Hence, the intercept term needs to be rescaled so that predicted probabilities match what would be observed if all of the population data existed.

Sometimes researchers will not have an estimate of the incidence rate in the population. Theoretical work in econometrics, such as Manski (1999), considers cases where there is no prior information about the range of plausible values of λ. However, at a minimum, researchers will have some idea of a plausible range of values for incidence in the population. Let λ_L and λ_H indicate the lower and upper values of the plausible range of λ. King and Zeng (1999) suggest computing bounds on possible values of absolute and relative risk by estimating either of these at both λ_L and λ_H. Because absolute and relative risk are positive monotone functions of λ, computing either at the lower and upper values of λ defines bounds on the range of possible absolute and relative risks.

Attributable risk is more difficult to estimate, because it is not a positive monotone function of λ. Define $A(\lambda_k)$ as the estimate of attributable risk associated with an estimated incidence of λ_k. King and Zeng (1999) suggest checking for whether λ_L and λ_H are in a monotone region of attributable risk by evaluating whether attributable risk appears to have the same derivative with respect to λ at both its high and low values. This can be checked by verifying that the signs of $A(\lambda_{L+\varepsilon}) - A(\lambda_L)$ and $A(\lambda_{H+\varepsilon}) - A(\lambda_H)$ are the same. When λ_L and λ_H are in a monotone region of A, then bounds can be calculated as:

$$A \in \left\{ \min\left(A(\lambda_L), A(\lambda_H)\right), \max\left(A(\lambda_L), A(\lambda_H)\right) \right\}. \qquad \text{(eq. 5)}$$

Sometimes, population prevalence rates will be in a non-monotone region of attributable risk. In this case, King and Zeng (1999) show that bounds on attributable risk are given by:

$$A \in \left\{ \min\left(A(\lambda_L), A(\lambda_0), A(\lambda_H)\right), \max\left(A(\lambda_L), A(\lambda_0), A(\lambda_H)\right) \right\}. \qquad \text{(eq. 6)}$$

where $A(\lambda_0) = \dfrac{\sqrt{\omega}-1}{\sqrt{\omega}+1}$ and ω is the odds ratio:

$$\omega = \frac{\Pr(Y=1|D=1)\Pr(Y=0|D=0)}{\Pr(Y=0|D=1)\Pr(Y=1|D=0)}. \qquad \text{(eq. 7).}$$

The econometric work included in the discussion of findings that follows focuses on presenting estimates of attributable risk. Attributable risk is the focus of this study, because the primary aim of the empirical work is to identify indicators associated with increased risk of participating in a worst form. Hence, the size of the increased risk associated with a given factor of interest is important. In the present case, attributable risk is computed using prior correction (eq. 4) to compute absolute risks and in turn compute the difference. All empirical work is implemented using the regression code available freely from King and Zeng (2001).

4. FINDINGS FROM CHILD DOMESTICS, CHILD PORTERS, AND CHILD RAGPICKERS IN NEPAL

4.1 DOMESTICS

Child domestic workers are defined as children working in an employer's house with or without wages. They typically wash, cook, clean, care for children or elders, and help in other domestic related duties. The government of Nepal classifies child domestic work as a "worst form" of child labor. Domestics often live in isolation as it is unusual for households to employ multiple domestics, and domestics are often confined to their employer's premises. Domestics have little recourse to address issues over emotional deprivation and verbal or physical abuse. Because of this confinement, isolation, and potential for abuse, child domestic work is viewed as

a worst form by the government. See Mukharjee et al (2004) for a more detailed presentation of the work environment of domestics.

Interestingly, there is little popular stigma against employing a domestic. This permits precise estimates of the incidence of domestic workers from the population census. The 2001 population and housing census captured 29,556 domestics age 6-18. This corresponds to roughly 0.4 percent of children in Nepal. Forty-nine percent of all domestics are in Kathmandu. Fostered domestic workers are primarily urban phenomena. These 29.6 thousand domestics make up nearly 3 percent of Nepal's urban children.

The Child Domestic Workers survey (CDW) was conducted in 2003 by the ILO and the Central Bureau of Statistics in Nepal (ILO 2004). Urban areas in Nepal were stratified based on population, and blocks of households were randomly selected. Within each selected block, lists of residents were collected for each household in the block. Detailed questionnaires on the domestic's background, work conditions, etc., were administered to sampled domestics. Because of the randomized nature of this survey and the transparency of the survey design, it is possible to use the CDW to construct estimates of the urban child domestic population in 2003. The CDW finds 35,286 child domestics aged 6-18 in Nepal in 2003 (Sharma 2005), or 0.5 percent of children. This number represents 18.7 percent of all children estimated to be involved in a worst form of child labor in Nepal.

The population and housing census of 2001 is used for the control sample. While the census includes information on domestics, no information is available on their background. Hence, it is not possible to conduct an analysis of selection into domestic service from the census. However, because domestics can be explicitly identified in the census, it is easy to exclude them from the control sample and thereby be assured of the validity of the assumption that the control sample is uncontaminated.

One important, substantive issue with the census is that it is only possible to discern familial relationships for children of the household head. This introduces non-random selection bias into the control sample by eliminating children who live in households where a parent is not codified as the head. This could create a problem for inference if whether a parent is coded as a household head in the census is correlated with selection into domestic service and other observable household characteristics. Parental death is a potential concern. A child who has experienced a parental death is less likely to have a parent coded as the household head (mechanically, they have one fewer parent who could be a household head). If parental death is associated with other background characteristics and selection into domestic service, any estimates of attributable risk associated with such background characteristics could be severely biased. Unfortunately, there appears to be no obvious solution to this problem.

Use of the census also requires two additional restrictions. First, information on economic activities is not collected for children below age 10. An estimated 1, 517 children 6-9 work as domestics in Nepal based on the CDW survey, but it is impossible to draw inference about what drives selection into these activities using the census as a source of control data. Second, education data is incomplete on children above age 14 in the census because of an odd skip pattern in the questionnaire. The CDW found an estimated 12,350 domestics age 15 and above, whom it will not be possible to consider in the analysis. Thus, children 10-14 are the focus of the present study. This corresponds to an estimated 21, 659 working child domestics in the CDW survey or 0.72 percent of children 10-14 in Nepal.

Table 2 begins with a comparison of characteristics of child domestics for the CDW and children who are not domestics in the census. Census children are trifurcated into children involved primarily in wage work, primary in home enterprise work, or no form of work. This later category includes children who work in domestic service in their own home, children who are inactive, and children who are primarily students. For each classification of child, means and standard errors are reported. Both are corrected for sample design and weighted to be nationally representative. For each activity category in the census data, the hypothesis that the mean of the row characteristic in the census is different from the mean of the row characteristics in the CDW is tested. A * indicates any difference in means that is statistically significant at 10 percent, and ** indicates a difference that is significant at 5 percent.

The top row of table 2 counts the actual number of children observed in each category (column). There are 486 observed child domestics 10-14 in the CDW data and 6,900 children observed in the census working for wages. The second row weights each observation by its inverse sampling probability to compute population estimates. Note that the CDW is unusual in that it is feasible to compute national estimates from the CDW. It will be more common in other applications to only be able to describe the target group for which data is available. There are an estimated 21,659 domestics 10-14 and 63,143 wage workers.

Ethnicity and caste are intertwined in Nepal, and the census identifies over 100 ethnic groups. The CDW records six different categories, and hence the census has been grouped to match the CDW. The Tharu are a middle status ethnic group indigenous to the Terai (plains) of Nepal. The Newari are also of middle status. They are typically characterized as the earliest inhabitants of the Kathmandu valley, and today they are primarily located there. A number of Hindu occupational castes are grouped under Dalit, and they are among the lowest status populations in Nepal. There would be considerable stigma against a high status individual having a Dalit inside their house. Muslims in Nepal are of relatively low status, although they are more apt to be welcomed into a high status Hindu house than would a Dalit. Most ethnic groups in Nepal have their own language, and it is not unusual to observe uneducated individuals speaking both Nepali and their native language. Table two reports whether an individual's native language is Nepali, Tharu, or something else.

Information on child schooling is reported by indicators for whether the child attends school currently, is able to read and write (self-assessed), has completed some school, standard five, or post primary schooling. Schooling categories are cumulative, so a child who has completed post primary has also completed primary, etc. An important caution in the descriptive statistics is that the CDW data are self-reported by a child to a survey enumerator whereas the census is administered to a household head by a local official, often a school teacher.

A comparison of child domestics with children in wage work is illustrative. Domestics are more likely to be female. This is not surprising. The types of activities performed by domestics are typically assigned to women in households, and women in Nepal have fewer labor market opportunities, making domestic service one of the few occupations open to young girls to bring home additional income from outside their family. Domestics are more likely to be of high caste or Tharu than wage workers who are more apt to be Dalit or "other". As high status households are most apt to employ domestics, it makes sense that the domestics should come from ethnic groups whose presence in high status households is socially acceptable. The difference in incidence rates between domestics and wage workers is such that there are actually more high caste children working as domestics than in wage work (9,017 v. 5,935). The Tharu are an especially interesting group. They are roughly 8 percent of the Nepali population,

but they constitute 29 percent of domestics. This group is interesting, because a system of debt-bondage is pervasive in the indigenous Tharu population (see Edmonds and Sharma 2005 for discussion).

Self-reported schooling is substantially greater among domestics than wage workers. Schooling attendance is greater for domestics than any other working students and literacy rates and schooling completion are similarly elevated relative to both children working for wages or in home enterprises. This may reflect the reporting biases of domestics or that many domestics receive schooling as a part of their compensation package. Indeed, some statistical evidence and ample anecdotal evidence suggests that access to schooling is an important motivation in sending children to work as domestics (see Sharma 2005). That said, one has to be concerned about the likelihood that a domestic responding to an ILO enumerator may give different answers than a parent in the census being asked questions by a local school teacher.

There is some evidence from their background characteristics that children are more likely to be domestics when other employment opportunities are scarce. Table 3 looks at how child background characteristics for children in the census differ from those observed for domestics. Wage work is most prevalent in the Terai whereas domestics are most prevalent in the hill areas. This hints at a degree of non-substitutability between wage work and domestic work that will be revisited later. Domestics are also less likely to come from households that own farmland than are children who are not working or children who work in family enterprises. That is, domestics seem to be coming from backgrounds where wage work and alternatives to wage work are relatively scarce.

The parents of domestics are less likely to have self employment than are parents of wage workers. Table 4 summarizes parental background characteristics (problems in the parental wage employment data in the CDW prevent its use herein). Three percent of domestics have a father who works in a family business while 11 percent of wage workers do. The difference for mothers is similar. Two percent of domestics have a mother with a small business while 10 percent of wage workers do. Domestics have a higher incidence of fathers who are disabled and a lower incidence of mothers who are disabled than any population group in the census. A domestic is seven times more likely to report that a father is disabled than is a child working for wages. However, a child working for wages is more than three times as likely to report a mother who is disabled. This is interesting, because a disabled father is likely to be associated with diminished family income while a disabled mother might raise the household's labor demand for domestic services. The incidence of disability is so low that only the difference in maternal disability between domestics and wage workers is statistically significant, but these disability patterns might be suggestive of circumstances that lead a family to send a child to be a domestic.

Table 5A reports estimates of attributable risk for background characteristics that are likely to be associated with income generating activities in the sending family. Attributable risk is computed as described in the methodology section, following King and Zeng (2001). Specifically, the census and CDW data are pooled. An indicator that a child is a domestic is regressed (using a logit) on age, gender, ethnicity, language, geographic belt (hills, mountain, plains), development region (east, central, mid-west, west, far-west), and other controls that vary across specifications. The logit is estimated using prior correction (eq. 4) with a bias correction for small samples. Attributable risk is then computed by estimating the differences in absolute risk level as computed with (eq. 3). Standard errors are corrected for clustering in sample design.

In the first column of table 5A, attributable risk is computed from a regression on the variable indicated by the row in addition to the other controls listed in the preceding paragraph. That is, column 1 contains estimates of attributable risk from 15 separate regressions. In the column marked "conditional", all fifteen controls are included in one regression simultaneously, and attributable risk is computed for a difference from zero to one in the row variable. Predicted probabilities from a logit regression depend on what values of the other included controls are used. In table 5A, all controls other than the indicated row variable are evaluated at their mean when the row variable moves from zero to one. Confidence intervals are reported for both unconditional (each row variable in a separate regression) and conditional estimates of attributable risk. Attributable risk can only be computed when there is some variation in selection associated with the covariate. That is, conditional on the row variable, children must be observed both in and out of domestic service. While this point is not substantive in Table 5A, it will be important in some applications.

It is critical to remember that causal parameters are not being computed. Attributable risk is the change in probability of observing a domestic associated with a change from 0 to 1 (or mean to mean plus one) in the row variable. That is, it is an observational statistic based on existing data, and it cannot be used to predict out of sample changes in the incidence of child domestic service with changes in row variables. This point is illustrated in a comparison of the interpretation of the findings in the first column of table 5A to the interpretation of results in the column labeled "conditional". In column one, children from households with agricultural land are nearly 3 percentage points less likely to be observed as a domestic than children from families without land. The scale of the change in risk associated with being a domestic is enormous for an activity with an incident rate of 0.72 percent. The "conditional" column hints at part of the reason why this magnitude appears so large. Owning farmland is associated with a number of other background characteristics that also reduce the probability of a child being a domestic. When a small set of the possibly relevant background characteristics are captured in the conditional specification, the risk attributable to owning land declines in magnitude by approximately one third.

Several individual observable characteristics are associated with large variation in the incidence of domestic service (column 1 of table 5A). In addition to owning agricultural land, having a father who owns a small business or who can read or write, or having a mother who owns a small business, all are associated with substantively lower participation rates in domestic work. The largest variation in the risk of domestic service is attributable to variation in father's disability status. Having a disabled father is associated with a nearly ten-fold increase in the chance of observing the child as a domestic.

The specification that pools all (row) common characteristics allows the consideration of how changes in multiple covariates at the same time are associated with changes in the probability that a child is a domestic. This is more informative than the attributable risks reported in the conditional attributable risks in Table 5A, because it is unlikely that a father who is disabled is as likely to work in the formal wage sector as the average worker. In the present context, this is important since estimates of attributable risk depend on the value of all included covariates. More informative attributable risk calculations are in Table 5B.

Table 5B reports estimates of attributable risk with simultaneous changes in multiple risk factors. In the first columns, all probabilities are calculated for households with average probability of holding land; in the second columns, they are computed for households without any landholdings. Several scenarios are considered in Table 5B. The first two rows consider a

change from father (mother in row 2) who is not disabled who has population means for all labor related variables to a father (mother) who is disabled and cannot work. The second set of results considers variation in literacy rates among mothers and fathers who have no formal schooling. The third set of results considers increases in work in family businesses.

The largest predictor of domestic service is paternal disability in landless households. Similarly paternal literacy seems to substantially reduce the probability a child is observed as a domestic (although the magnitude of the decline in attributable risk associated with paternal literacy is about a fifth of the increase associated with paternal disability). Both paternal illiteracy and paternal disability are likely to be associated with diminished living standards, much more so than maternal disability or illiteracy. In contrast, maternal disability lowers the probability that a child is observed as a domestic. This likely reflects that most domestics are girls, and maternal disability raises the return on the girl's time within her own home. Hence, the relative return to sending her as a domestic is lower with maternal disability. Similarly, employment opportunities within the household lower the risk that the child is observed as a domestic. In general, attributable risk estimates are larger in magnitude for landless households.

Table 5C is an interesting contrast to the findings for selection into domestics. In particular, 5C mimics 5B in form but computes attributable risk of selection into wage work. That is 5C is based on a logit regression of an indicator that a child participates in wage work on all the row variables in the conditional column of Table 5A as well as all the controls described in the table notes using prior correction and the small sample bias correction. Interestingly, paternal literacy is associated with reduced wage work (much more so than maternal literacy), similar to what was observed for domestics. In contrast to what was observed in domestics, parent participation in home enterprises is associated with an increased risk of wage labor participation by the child, especially in landless households, and maternal disability is associated with an increased risk of wage work rather than the observed decreased risk of being a domestic. These contrasting results in 5C and 5B suggest the possibility that response of worst forms and more common forms of child labor may differ in response to changes in the family's environment.

4.2 PORTERS

For many areas of Nepal, porters are critical for transporting consumer goods, getting business output for market, and delivering construction materials to remote areas. Porters are typically classified as long route and short route porters, and the two types of porters appear to be somewhat segmented. This study focuses on short route porters. Short route porters are typically contracted at spot markets in local markets and bus parks.

Portering is considered a worst form of child labor, because children often carry heavy loads, across difficult terrain, for long hours. In the data used in this study, short route porters report working, on average, approximately 10 hours per day for 6 days a week. Two thirds of short route porters report averaging roughly 10 routes per day that range in weight from 10 to 50 kilograms (caution is required when interpreting self-reported load weights). Sixty percent report not wearing protective gear such as boots, gloves, or pads on the head.

The short route porter (SRP) survey was conducted in urban areas of Nepal where short route portering is concentrated. Rather than sampling households as in the CDW survey, the SRP survey sampled work sites: markets and bus parks. Out of an estimated 423 market centers and bus stops, a random sample of porters was interviewed in 97 randomly selected market centers

and 15 randomly selected bus parks. When appropriately weighted, the SRP survey suggests a total of 5,087 short route child porters age 6-17 in Nepal in 2003. A total of 30 of these are below the age of 10, and most are age 14 or more. In the present study, we focus on short route porters age 10-14. There are an estimated 1,404 short haul porters age 10-14 in urban Nepal in 2003.

As with the analysis of child domestics, the population census is used to create a control sample. The difficulties associated with identifying parents in the census are still a substantive problem in the analysis of selection into portering. An additional problem is that it is not possible to identify in the census whether a child is a porter. Hence, it is necessary to assume that no porters are sampled in the 11% public use sample of the census used in this analysis. To the extent that some of the control children are (unobserved) porters, our estimates of selection into portering could be severely biased.

Children engaged in short route portering appear similar to children involved in other forms of wage work. Table 6 compares child characteristics of short route porters from the SRP and children in the census who live with a parent (this restriction is important in the subsequent discussion). Census children are trifurcated into children involved primarily in wage work, primary in home enterprise work, or no form of work. For each classification of child, means and standard errors are reported. Both are corrected for sample design and weighted to be nationally representative. For each activity category in the census data, the hypothesis that the mean of the row characteristic in the census is different from the mean of the row characteristics in the SRP is tested. A * indicates the difference in means is statistically significant at 10 percent, and ** indicates the difference is significant at 5 percent.

Short route porters differ from wage workers in that they are more likely to be high status, more likely to speak Nepali, and less likely to be Muslim. These differences likely reflect that short route porters are only interviewed in urban areas, and tend to be from those same areas. That is, most short route porters in the survey are not in-migrants to urban areas. Thus, populations of rural origin (such as Muslims or non-Nepali speaking populations) are less present in the SRP. The reported completed schooling of porters is also higher than other wage workers. It is unclear whether this reflects reporting bias or something about those who select into portering.

Porters are more likely to be from hill areas than wage workers. Table 7 summarizes various child background characteristics. It is not surprising that porters are more prominent in hill areas, less prominent in plains, as the road infrastructure around the Terai's mid sized cities are generally better than in the hill areas. Moreover, porters are more active in the western development region of Nepal than are wage-workers. This likely reflects the fact that short haul porters often work around bus stations and larger markets, which are more prevalent in the central and west regions of Nepal.

Porters appear to come from relatively disadvantaged backgrounds. Parental characteristics of porters are summarized in Table 8. Literacy among both fathers and mothers is lower for porters than wage workers. Porters report higher levels of paternal schooling completion than paternal literacy, so either there is data error in the coding of paternal education or there are lots of illiterate fathers of porters who have completed primary school. The maternal education data is consistent with the observed lower maternal literacy rates for porters than wage workers. Porters are also more likely to report both a father or a mother who is disabled, and to report a mother who is working.

Paternal and maternal disability and maternal wage work stand out as strong predictors of selection into portering. The first column of table 9A contains estimates of attributable risk for each listed row characteristic. Attributable risk is computed as described in the methodology section, following King and Zeng (2001). Specifically, the census and SRP data are pooled. An indicator that a child is a porter is regressed (using a logit) on age, gender, ethnicity, language, belt, development region, and, in column 1, the variable indicated by the row. The logit is estimated using prior correction (eq. 4) with a bias correction for small samples. Attributable risk is then computed by estimating the differences in absolute risk level as computed with equation 3. Standard errors are corrected for clustering owing to sample design.

Paternal disability raises the probability a child is observed portering by more than a tenth of a percent. Maternal disability has a similar positive association with portering. The maternal disability pattern is the opposite of what was observed in domestics. Children are less likely to be a domestic when their mother is disabled, but they are more likely to be porters. Another strong indicator factor associated with an elevated risk of being a domestic is having a mother working for wages. Female wage work is relatively rare in Nepal, so that this observation might reflect something about the geographic location of the control population relative to the portering population. It is also consistent with the idea that women only enter the labor market when the family's marginal utility of income is very high. Hence, the wage work observation might be consistent with a view that poverty is critical in explaining selection into portering.

Attributable risk estimates in table 9A are not causal estimates of how selection into portering will be affected by changes in any of the listed observable characteristics. Rather, they merely describe how the likelihood of observing a child porter varies with changes in maternal or paternal characteristics. The conditional attributable risk estimates are computed by holding all listed observable characteristics constant (at its mean) except for the variable specified by the row. Paternal disability is the largest predictor of selection into portering.

Interestingly, the findings for porters in table 9A differ from those observed for domestics in table 5A. For domestics, maternal disability diminished the risk of observing a child as a domestic. However, porters are more likely to report maternal disability than other children. Porters are also more likely to report maternal wage employment, which is likely a correlate of poverty in Nepal (especially conditional on location and ethnicity). Hence, the porter data suggests that portering it is more coincident with additional income concerns alone than is the domestic evidence (where the different responses of domestic service to paternal and maternal disability hinted at the importance of the household's need for the child's labor).

Table 9B contains estimates of attributable risk for becoming a porter associated with changing several of the covariates from Table 9A (right side) simultaneously. For example, a mother who is disabled and not working raises the probability a child is observed as a porter by nearly 0.2 percentage points for a landless household (nearly double the risk observed in a household with land). In general, landless households are more likely to be observed sending children to porter in the context of a paternal or maternal disability or if both mother and father are observed working. A comparison of attributable risk estimates in table 9B to that observed for wage work in table 5C is illustrative. The patterns observed with disability and literacy are similar for portering and other types of wage work. The main difference with portering is that the presence of self employment in the household lowers the risk of portering (while it raises the risk of observing a child in wage work). This is similar to what was observed for domestics in table 5B. Hence, the portering data contains some suggestion that the availability of employment within the household may be associated with a diminished risk of seeking work in

portering outside the family. It is important to note, however, that the magnitudes of the observed changes in attributable risk with home enterprises are very small.

4.3 RAGPICKERS

Ragpickers collect rags and other used goods to be recycled and reused. As an activity, ragpicking is primarily an urban activity. Adult and child ragpickers collect plastics, polyethylene, bottles, metals, and tins from dumping sites, streets, river banks, etc. These collected materials are sold to junkyards and shops which in turn sell these materials to suppliers for recycling. Ragpicking is nearly universally viewed as a worst form because of the extremely hazardous work environment.

The ragpickers survey (RAG) was conducted in urban areas of Nepal. The original survey design was to sample sites where ragpickers worked. However, researchers found it difficult to interview children in dumping areas, garbage disposal and refuse areas, slums, and river banks, and faced additional difficulties associated with the mobility of ragpickers. Consequently, while the survey was being fielded, enumerators abandoned the original sample frame and interviewed children in junkyard shops or locations where they spend their leisure time.

The nonrandom nature of the survey and this disconnect between sample design and survey implementation creates an unknowable array of problems for inference and makes it impossible to know whether estimates of the incidence of ragpicking from this data are accurate. If one is willing to treat the RAG data as if it were based on random sampling of job sites, it is possible to make inferences about the scope of ragpicking in Nepal. That said, the survey suggests that there are 3, 695 child ragpickers age 6-18 in Nepal in 2002. Nine hundred and seventy-four of these ragpickers are age 10-14.

As with porters and child domestics, the population census is the source of the control sample, and all of the qualifications discussed in the context of porters are relevant in the analysis of selection into ragpicking as well. Specifically, both the sample selection necessary for matching children to parents in the census and the risk of contamination in the control census because of an inability to identify ragpickers in the census data have the potential to create substantive biases in the present analysis.

There are a total of 372 ragpickers age 10-14 interviewed in the RAG survey. If population projections are correct, this implies that more than one third of ragpickers 10-14 are interviewed. Various child characteristics of ragpickers are in table 10. Table 10 also summarizes child characteristics for wage workers, children in home enterprises, and children who do not work in the population census for comparison purposes. For each activity category in the census data, the hypothesis that the mean of the row characteristic in the census is different from the mean of the row characteristics in the RAG is tested. A * indicates the difference in means is statistically significant at 10 the percent level, and ** indicates the difference is significant at the 5 percent level.

Ragpickers tend to be younger than wage workers, suggesting a role of employment opportunities in selection into ragpicking as young children have fewer formal wage earning opportunities. Ragpickers appear to be relatively more educated, although it seems likely that this difference with the census might reflect biases owing to who responds to the questionnaire. Ragpickers are also less likely to be higher caste than the general population, and less likely to be Tharu. The low incidence of Tharu ragpickers is interesting. Two possible explanations

seem obvious. First, ragpicking may be more common in places where the Tharu are less prevalent. Second, desperate Tharu may have better options than ragpicking as they are a population where debt-bondage is especially prevalent.

Ragpickers are much more likely to be from hill areas than are wage workers and are more likely to be from central Nepal. Table 11 describes background characteristics of ragpickers from the RAG survey and other children in the census. The concentration of ragpickers is consistent with the location of the large recycling centers, which are especially prevalent in the Kathmandu Valley (central-hill). However, because of the population density, this is also where trash is especially concentrated. Hence, one should not infer that the presence of the recycling industry is the reason there are ragpickers in the Valley. Of course, without a market for their output, it seems unlikely children would pick through trash except to help meet basic needs.

Ragpickers are also less likely to come from households that own farmland. This observation is consistent with the view that a lack of alternative income generating strategies may play an important role in selection into ragpickers. To some extent this seems obvious as it is hard to imagine that picking through trash and debris is ever someone's first choice for income. However, it is easy to over interpret this correlation between farmland and ragpicking. Children working for wages are less likely to own farmland than children who work in family enterprises (like farms). Moreover, a lack of land may be correlated with fewer at home employment opportunities but it also may be correlated with a lack of income.

Several parental background characteristics suggest that selection into ragpicking is correlated with having a relatively disadvantaged background. Table 12 contains descriptive statistics on parental background for ragpickers, children in wage work, children working in family enterprises, and children who do not work. Maternal literacy is lower than wage workers and both mothers and fathers of ragpickers are less likely to have some post primary education.

Moreover, parental disability is a strong correlate of ragpicking (as has been observed with porters and domestics as well). Four percent of ragpickers have a disabled father, and 1 percent of ragpickers have a disabled mother. In contrast, less than one tenth of one percent of the general population has a disabled father.

Ragpickers are also less likely to have a parent who owns a small business or is employed in agriculture. While 63 percent of children in wage work have a father who works in agriculture, less than 9 percent of ragpickers do. Forty-eight percent of wage earning children have a mother in agriculture; less than 8 percent of ragpickers do. It is impossible to discern whether this reflects the employment opportunities open to the children, the family's disadvantaged background, or something transitory in the child's family's economic environment. However, the differences in the means are not present in other activities.

Table 13A provides estimates of attributable risk by observable background and family characteristic. It is constructed identically to tables 5A and 9A for the domestics and porters respectively. See the discussion of each table in preceding sections for explanation of how to read the table's content.

Paternal disability stands out as the largest predictor of selection into ragpicking. Less than three hundredths of one percent of children 10-14 are engaged in ragpicking, but paternal disability raises the probability that a child is observed in ragpicking by nearly two tenths of a percent. While no other characteristic is as strong a predictor as paternal disability, the

observation that the child's family's employment background is an important risk factor persists in the attributable risk estimates. Either owning agricultural land or maternal or paternal work in agriculture substantially lowers the likelihood of observing a child in ragpicking. This may reflect differences in location rather than the household's employment opportunities, but the fact that maternal self employment also is associated with a diminished risk of observing a child as a ragpicker suggests that at least some part of why these are risk factors may owe to employment opportunities.

Estimates of changes in attributable risk are generally uninformative in the conditional specification (See table 13B). The one exception is paternal disability, because that is such a large predictor of selection into ragpicking. Recall (table 12) that 4 percent of ragpickers report a disabled father whereas less than a tenth of a percent of children in wage work report a disabled father. In table 13B, observing a disabled father significantly increases the risk that a child is observed ragpicking, and this increased risk of ragpicking is larger for the landless than for children who come from families with land. The larger magnitudes estimated for landless families are consistent with the descriptive data, which also suggest a link between selection into ragpicking and employment opportunities. However, in general, there are few observable characteristics other than paternal disability that can predict a risk of ragpicking. This suggests that most determinants of selection into ragpicking are outside the scope of the available data.

Another important reason why the attributable risk of ragpicking is so small is that ragpicking is estimated to be extremely rare (less than three hundredths of a percent of children 10-14). In section 3, we discussed how to estimate bounds on attributable risk when the incidence of a worst form is uncertain. In table 13C, we implement this methodology. The incidence of ragpicking is assumed to vary between 0.03 percent and 0.3 percent. The estimates from table 13B are used for one bound and attributable risks are recalculated assuming an incidence of three tenths of a percent to form the other bound. The data pass the test for positive monotonicity suggested in section 3. Table 13C contains bounds on attributable risk for landless households.

Contrasting table 13C and Table 13B highlights the importance of estimates of baseline incidence for computing attributable risk. In very low probability events, it is a challenge to capture covariates that substantially increase the risk of the child entering the worst form simply because the event itself is rare. In general, the patterns recovered by the bounds estimates in table 13C suggest risk factors for entry into ragpicking that are similar to those observed for portering (table 9B) and different with regards to self employment that was observed in table 5C for wage work.

5. CONCLUSION

There are no strong theoretical predictions about how alternative income generation strategies will impact selection into worst forms of child labor. Rising family incomes may decrease pressures to have children work or not attend school. Rising income may mitigate the incentives for child fostering and child migration. Additional employment opportunities inside the household may draw some children into working in the IGA. If the IGA crowd out existing household activities and the child's relative performance in the IGA is poor, IGAs could spur more children to look for work outside their household. Depending on how different types of activities are viewed, it is theoretically possible that IGAs could increase the number of working children or edge already working children into situations where they are more vulnerable to

worst forms of child labor. Of course, by providing additional income, alternative forms of employment, or raising perceived returns to staying at home or getting education, IGAs might also deter entry into worst forms.

The data do not present any compelling evidence of a strong role for income generating activities in influencing selection into worst forms of child labor. This observation is driven by the fact that the available type of parental employment is not a strong predictor of selection into any of the activities studied here. However, the data may suggest a small role for IGA as porters, ragpickers, and domestics are less likely than other types of children to report parental self employment.

There are some further associations in the data that support some role for child employment opportunities in influencing entry into worst forms. Child domestics are more likely to be female, and, thus, have fewer other employment opportunities outside their family (relative to boys). Domestics are more prevalent in areas where wage work is rarer. Owning agricultural land and having a father or mother who is self employed also lowers the probability that a child is observed as a domestic. Similarly, households with porters and ragpickers are less likely to own agricultural land, although this association is not particularly robust for these two populations. Of course, employment opportunities in general are important. Portering is most prevalent in areas where there is the most need for porters just as ragpickers are most prevalent in areas where there is trash and a recycling industry. Maternal wage work also seems to predict portering, and like with domestics, self employment is negatively correlated with ragpicking. However, all of these characteristics predict only a small amount of the observed prevalence of each worst form.

Parental, especially paternal, disability stands out as a strong predictor of observing a child in one of these three worst forms in Nepal. Relative to wage working children, domestics are 7 times, porters are 5 times, and ragpickers are 4 times more likely to report that their father is disabled. It seems theoretically possible that IGA could compensate for the loss of a disabled father's contribution to the household, but it is not clear whether the association between paternal disability and participation in a worst form reflects a loss of income, a loss of employment opportunities within the household, a loss of care or attention, or something else that happens to be coincident with paternal disability and selection into a worst form. One interesting side note on the correlation between parental disability and selection into worst forms is that for domestics, maternal disability decreases the probability a child works as a domestic. This hints at a role for own household labor demand (in this case for domestic services) that may have some influence on entry into worst forms.

A challenge in interpreting these findings is that they reflect correlations in the data and not the causal impact of owning land or a family business on entry into a worst form. In fact, it is straightforward to explain most of these characteristics as being correlates of poverty. So that the results above could mean nothing more than children in these worst forms are more likely to come from a disadvantage background than children in other types of activities. Put another way, perhaps all ragpickers come from an extremely poor household, whereas some wage working children also do but some do not. This could generate all of the patterns above. However, the present evidence is consistent with the view that insurance mechanisms and better social infrastructure for coping with family troubles might be a more direct approach to mitigate entry into worst forms.

Two important cautions deserve special emphasis. First, the empirical methods used herein are not causal and are only useful for estimating the correlates of selection into worst forms in the data. They cannot be used to extrapolate how exogenously changing family earning opportunities through IGAs would impact children. Causal inference about the impact of IGAs can most effectively be accomplished by embedding scientific evaluation into IGA programs at their inception.

Second, while the methodology used to asses the correlates of selection into worst forms is extremely general, its data requirements are not trivial. Namely, four conditions must be met:

1. The type of work that qualifies as a worst form is explicitly identified

2. Reasonable estimates of the incidence of that worst form exist in the population

3. Individual level data on background characteristics of children engaged in the worst form are available

4. Nationally representative data on the same set of background characteristics are available for the general population.

Unfortunately, the data on children in worst forms and the representative data used in this study are not perfectly consistent in how they collect information, and there is limited information that is in common in the targeted surveys and the nationally representative data. This problem is easily resolved if future survey work on children in worst forms would merely be attentive to existing data resources, and survey design would be in part consistent with nationally representative data. Even better of course, would be to integrate target surveys into a broader national survey program and to combine that effort with scientific evaluation of IGAs.

TABLE 1: PREVELANCE RATES OF WORST FORMS OF CHILD LABOR IN NEPAL

	Number	(%)
Children in bonded labour	17,152	13.5
Child ragpickers	3,965	3.1
Child porters	46,029	36.2
Child domestic workers (a)	55,655	43.8
Children in mines	115	0.1
Children in the carpet sector	4,227	3.3
TOTAL	**127,143**	**100**

(a) for urban areas only
source: ILO (2001) using the MES

TABLE 2: COMPARISON OF CHILD CHARACTERISTICS IN DOMESTIC WORKERS SURVEY AND CENSUS

	Domestic Workers Survey		2001 Population and Housing Census								
			Wage Work			Home Enterprise Work			Not Work		
	Mean	SE	Mean	SE		Mean	SE		Mean	SE	
# of observations	486		6,900			25,390			297,506		
Estimated population size	21,659		63,143			254,290			2,592,568		
Age	12.422	0.040	12.419	0.020		12.272	0.010	**	11.823	0.003	*
Female	0.523	0.035	0.370	0.008	**	0.611	0.004	**	0.470	0.001	
Ethnicity											
High Status Hindu Caste	0.416	0.045	0.094	0.005	**	0.253	0.005	**	0.351	0.003	
Tharu	0.287	0.062	0.151	0.007	**	0.062	0.003	**	0.076	0.002	*
Newar	0.020	0.008	0.027	0.003		0.025	0.002		0.057	0.002	*
Dalit	0.084	0.026	0.302	0.009	**	0.202	0.004	**	0.145	0.002	*
Muslim	0.004	0.003	0.100	0.007	**	0.047	0.003	**	0.034	0.001	*
Other	0.189	0.039	0.325	0.008	**	0.411	0.006	**	0.336	0.002	*
Native Language											
Nepali	0.376	0.037	0.222	0.008	**	0.484	0.006	**	0.520	0.003	*
Tharu	0.286	0.062	0.133	0.007	**	0.052	0.003	**	0.058	0.002	*
Other	0.339	0.040	0.644	0.010	**	0.464	0.006	**	0.422	0.003	*
In School	0.467	0.056	0.159	0.006	**	0.271	0.005	**	0.864	0.001	*
Can read and write	0.654	0.039	0.272	0.008	**	0.381	0.005	**	0.875	0.001	*
Completed Some School^	n/a		0.185	0.007		0.291	0.005		0.822	0.002	
Completed Std. 5	0.161	0.024	0.063	0.004	**	0.105	0.003	**	0.346	0.002	*
Completed Post Primary	0.084	0.012	0.025	0.002	**	0.049	0.002	**	0.191	0.002	*

Sample restricted to children age 10-14. **Difference significant at 5% *Difference significant at 10%
^All child domestics report completing grade 1.

TABLE 3: COMPARISON OF BACKGROUND CHARACTERISTICS
IN DOMESTIC WORKERS SURVEY AND CENSUS

		Domestic Workers Survey		2001 Population and Housing Census								
				Wage Work			Home Enterprise Work			Not Work		
		Mean	SE	Mean	SE		Mean	SE		Mean	SE	
Belt												
	Hill	0.546	0.207	0.191	0.011	*	0.495	0.007		0.462	0.005	
	Terai	0.454	0.207	0.789	0.011		0.368	0.006		0.478	0.005	
Region												
	East	0.254	0.173	0.312	0.011		0.192	0.005		0.230	0.004	
	Central	0.448	0.225	0.406	0.012		0.306	0.006		0.335	0.005	
	West	0.158	0.118	0.107	0.006		0.155	0.005		0.223	0.004	
	Mid-West	0.113	0.088	0.112	0.007		0.188	0.005		0.117	0.003	
	Far-West	0.027	0.023	0.063	0.006		0.158	0.005	**	0.094	0.003	**
Household Background												
	Owns Farmland	0.605	0.051	0.508	0.010	*	0.934	0.002	**	0.821	0.005	**

Sample restricted to children age 10-14. **Difference significant at 5% *Difference significant at 10%

TABLE 4: COMPARISON OF PARENTAL CHARACTERISTICS
IN DOMESTIC WORKERS SURVEY AND CENSUS

	Domestic Workers Survey		2001 Population and Housing Census								
			Wage Work			Home Enterprise Work			Not Work		
	Mean	SE	Mean	SE		Mean	SE		Mean	SE	
Father Characteristics											
Reports Characteristics	0.765	0.040	0.910	0.004	*	0.906	0.002	**	0.888	0.001	*
Age	42.367	0.664	43.855	0.196	*	45.175	0.099	**	44.717	0.040	*
Can Read and Write	0.370	0.038	0.290	0.011	*	0.335	0.004		0.573	0.003	*
Completed Some School	0.151	0.021	0.179	0.010		0.162	0.003		0.334	0.003	*
Completed Std. 5	0.147	0.022	0.148	0.009		0.101	0.003	**	0.269	0.003	*
Completed Post Primary	0.085	0.013	0.124	0.009	*	0.068	0.002		0.214	0.003	*
Disabled	0.007	0.004	0.001	0.001		0.002	0.000		0.001	0.000	
Not Work	0.077	0.017	0.057	0.004		0.036	0.002	**	0.066	0.001	
Owns Small Business	0.034	0.007	0.108	0.006	*	0.059	0.002	**	0.109	0.002	*
Employed in Agriculture	0.646	0.048	0.629	0.011		0.862	0.003	**	0.682	0.005	
Mother Characteristics											
Reports Characteristics	0.797	0.031	0.919	0.004	*	0.928	0.002	**	0.953	0.001	*
Age	36.462	0.507	39.468	0.172	*	40.337	0.084	**	39.484	0.035	*
Can Read and Write	0.173	0.043	0.151	0.010		0.075	0.003	**	0.232	0.003	
Completed Some School	0.035	0.009	0.088	0.008	*	0.026	0.001		0.117	0.003	*
Completed Std. 5	0.033	0.009	0.079	0.007	*	0.017	0.001	*	0.090	0.002	*
Completed Post Primary	0.011	0.006	0.072	0.007	*	0.010	0.001		0.068	0.002	*
Disabled	0.002	0.002	0.007	0.002	*	0.006	0.001	*	0.004	0.000	
Not Work	0.260	0.043	0.376	0.010	*	0.161	0.004	**	0.366	0.003	*
Owns Small Business	0.019	0.010	0.099	0.006	*	0.098	0.003	**	0.102	0.001	*
Employed in Agriculture	0.575	0.059	0.477	0.011		0.780	0.004	**	0.556	0.004	

Sample restricted to children age 10-14. **Difference significant at 5% *Difference significant at 10%

TABLE 5A: ATTRIBUTABLE RISK ESTIMATES
FOR BACKGROUND CHARACTERISTICS IN DOMESTIC WORKERS SURVEY

	Unconditional			Conditional		
	Attributable Risk Estimate	95% Confidence Interval		Attributable Risk Estimate	95% Confidence Interval	
		Lower	Upper		Lower	Upper
Household Background						
Owns Farmland	-0.0284	-0.0597	-0.0096	-0.0198	-0.0399	-0.0090
Father Characteristics						
Reports Characteristics	-0.0314	-0.0618	-0.0131			
Can Read and Write	-0.0155	-0.0306	-0.0066	-0.0075	-0.0147	-0.0033
Disabled	0.0753	0.0111	0.1921	0.0497	0.0101	0.1291
Not Working	0.0060	-0.0020	0.0216	-0.0031	-0.0079	0.0015
Owns Small Business	-0.0125	-0.0269	-0.0048	-0.0076	-0.0169	-0.0026
Employed in Agriculture	-0.0036	-0.0165	0.0052	-0.0020	-0.0079	0.0028
Mother Characteristics						
Reports Characteristics	-0.0541	-0.1079	-0.0218			
Can Read and Write	-0.0060	-0.0171	0.0020	-0.0024	-0.0088	0.0042
Disabled	-0.0051	-0.0232	0.0403	-0.0036	-0.0141	0.0186
Not Working	-0.0075	-0.0149	-0.0019	-0.0088	-0.0194	-0.0034
Owns Small Business	-0.0152	-0.0300	-0.0070	-0.0107	-0.0212	-0.0045
Employed in Agriculture	0.0004	-0.0089	0.0067	-0.0057	-0.0168	-0.0009

All regressions include controls for child age, gender, ethnicity, language, belt, and development region. All standard errors corrected for clustering at the block level (primary sampling unit). Estimates computed using King and Zeng's relogit code with prior correction: http://gking.harvard.edu/stats.shtml#relogit. Each estimate of attributable risk in the "unconditional" column is from a separate regression. Each estimate in the "conditional" column is from one regression, including all of the listed covariates plus additional controls for whether mother and father have completed primary or post primary school. All estimates assume an incidence rate of child domestic service of 0.72 percent. Attributable risks are computed for a change in the row variable from 0 to 1 at the mean of all other covariates except all "conditional" estimates are computed at father and mother reports characteristics =1.

TABLE 5B: ATTRIBUTABLE RISK ESTIMATES
FOR VARIOUS SCENARIOS IN DOMESTIC WORKERS SURVEY

	At Mean Landholding Rate			Landless		
	Attrib. Risk Estimate	95% Confidence Interval		Attrib. Risk Estimate	95% Confidence Interval	
		Lower	Upper		Lower	Upper
Disability						
Dad is disabled & cannot work (1)	0.044	0.004	0.131	0.109	0.013	0.273
Mom is disabled & cannot work (2)	-0.004	-0.014	0.019	-0.012	-0.038	0.048
Literacy						
Literate dad (avg sch) & illiterate mom (no sch.) to literate mom (3)	-0.002	-0.006	0.003	-0.005	-0.019	0.008
Illiterate mom & dad to literate dad (no schooling) (4)	-0.007	-0.015	-0.003	-0.020	-0.040	-0.010
Illiterate mom & dad to literate mom & dad (no schooling) (5)	-0.009	-0.020	-0.003	-0.025	-0.056	-0.008
Home Enterprises						
Household w/o self emp. to mom self emp. (6)	-0.010	-0.022	-0.005	-0.029	-0.061	-0.014
Household w/o self emp. to dad self emp. (7)	-0.009	-0.020	-0.004	-0.023	-0.051	-0.010
Household w/o self emp. to mom & dad self emp (8)	-0.012	-0.025	-0.006	-0.035	-0.067	-0.016

Attributable risks computed using results from the "conditional regression" results in table 5a. The first columns compute probabilities for households with mean probability of holding land. The second column computes probabilities for household without landholdings.

(1) - Change in probability that child is a domestic if father moves from not disabled and mean work to disabled and no work (any category).

(2) - same as (1) for mother

(3) - change in probability that child is a domestic if dad is literate with average schooling and mom moves from illiterate to literate (with no schooling)

(4) - change in probability that child is a domestic if illiterate mom and dad shifts to a illiterate mom with literate dad (no schooling)

(5) - change in probability that a child is a domestic if illiterate mom and dad shifts to literate mom and dad (no schooling)

(6) - change in probability that child is domestic if household moves from no self employment to mom self employment

(7) - same as (6) only for father

(8) - change in probability that child is a domestic if household moves from no self employment to both mom and dad in self employment

TABLE 5C: ATTRIBUTABLE RISK ESTIMATES
FOR VARIOUS SCENARIOS, CENSUS WAGE WORKERS

	Average Landholdings			Landless		
	Attrib. Risk Estimate	95% Confidence Interval		Attrib. Risk Estimate	95% Confidence Interval	
		Lower	Upper		Lower	Upper
Disability						
Dad is disabled & cannot work (1)	0.002	-0.004	0.012	0.003	-0.007	0.021
Mom is disabled & cannot work (2)	0.013	0.004	0.024	0.021	0.008	0.041
Literacy						
Literate dad (avg sch) & illiterate mom (no sch.) to literate mom (3)	-0.001	-0.002	0.000	-0.002	-0.003	0.000
Illiterate mom & dad to literate dad (no schooling) (4)	-0.006	-0.007	-0.005	-0.010	-0.012	-0.008
Illiterate mom & dad to literate mom & dad (no schooling) (5)	-0.008	-0.009	-0.006	-0.013	-0.015	-0.010
Home Enterprises						
Household without any self employment to mom self employment (6)	0.001	0.000	0.002	0.002	0.000	0.004
Household w/o self emp. to dad self emp. (7)	0.007	0.005	0.009	0.011	0.008	0.015
Household w/o self emp. to mom & dad self emp (8)	0.009	0.006	0.012	0.014	0.010	0.020

Attributable risks computed using results from the "conditional regression" results in table 5. The first columns compute probabilities for households with mean landholdings. The second column computes probabilities for household without landholdings.

(1) - Change in probability that child is a wage worker if father moves from not disabled and mean work to disabled and no work.

(2) - same as (1) for mother

(3) - change in probability that child is a wage worker if dad is literate with average schooling and mom moves from illiterate to literate (with no schooling)

(4) - change in probability that child is a wage worker if illiterate mom and dad shifts to a illiterate mom with literate dad (no schooling)

(5) - change in probability that a child is a wage worker if illiterate mom and dad shifts to literate mom and dad (no schooling)

(6) - change in probability that child is wage worker if household moves from no self employment to mom self employment

(7) - same as (6) only for father

(8) - change in probability that child is a wage worker if household moves from no self employment to both mom and dad in self employment

TABLE 6: COMPARISON OF CHILD CHARACTERISTICS
IN SHORT ROUTE PORTERS SURVEY AND CENSUS

	Short Route Porters Survey		2001 Population and Housing Census								
			Wage Work			Home Enterprise Work			Not Work		
	Mean	SE	Mean	SE		Mean	SE		Mean	SE	
# of observations	164		6,900			25,390			297,506		
Estimated population size	1,404		63,143			254,290			2,592,568		
Age	13.044	0.107	12.419	0.020	**	12.272	0.010	**	11.823	0.003	**
Female	0.282	0.058	0.370	0.008		0.612	0.004	**	0.470	0.001	**
Ethnicity											
High Status Hindu Caste	0.192	0.036	0.094	0.005	**	0.253	0.005	*	0.351	0.003	**
Tharu	0.126	0.042	0.151	0.007		0.062	0.003		0.076	0.002	
Newar	0.013	0.008	0.027	0.003	*	0.025	0.002		0.057	0.002	**
Dalit	0.285	0.068	0.302	0.009		0.202	0.004		0.145	0.002	**
Muslim	0.037	0.023	0.100	0.007	**	0.047	0.003		0.034	0.001	
Other	0.348	0.058	0.325	0.008		0.411	0.006		0.336	0.002	
Native Language											
Nepali	0.588	0.067	0.222	0.008	**	0.484	0.006		0.520	0.003	
Tharu	0.109	0.042	0.133	0.007		0.052	0.003		0.058	0.002	
Other	0.303	0.059	0.644	0.010	**	0.464	0.006	**	0.422	0.003	**
In School	0.190	0.054	0.159	0.006		0.271	0.005		0.864	0.001	**
Can read and write	0.687	0.046	0.272	0.008	**	0.381	0.005	**	0.875	0.001	**
Completed Some School	0.869	0.056	0.185	0.007	**	0.291	0.005	**	0.822	0.002	
Completed Std. 5	0.159	0.041	0.063	0.004	**	0.105	0.003		0.346	0.002	**
Completed Post Primary	0.085	0.034	0.025	0.002	*	0.049	0.002		0.191	0.002	**

Sample restricted to children age 10-14. **Difference significant at 5% *Difference significant at 10%

TABLE 7: COMPARISON OF BACKGROUND CHARACTERISTICS
IN SHORT ROUTE PORTERS SURVEY AND CENSUS

		Short Route Porters Survey		2001 Population and Housing Census								
				Wage Work			Home Enterprise Work			Not Work		
		Mean	SE	Mean	SE		Mean	SE		Mean	SE	
Belt												
	Hill	0.503	0.086	0.191	0.011	*	0.495	0.007		0.462	0.005	
	Terai	0.497	0.086	0.789	0.011	*	0.368	0.006		0.478	0.005	
Region												
	East	0.131	0.054	0.312	0.011	*	0.192	0.005		0.230	0.004	*
	Central	0.300	0.066	0.406	0.012		0.306	0.006		0.335	0.005	
	West	0.363	0.087	0.107	0.006	*	0.155	0.005	**	0.223	0.004	
	Mid-West	0.172	0.078	0.112	0.007		0.188	0.005		0.117	0.003	
	Far-West	0.034	0.018	0.063	0.006		0.158	0.005	**	0.094	0.003	**
Household Background												
	Owns Farmland	0.671	0.075	0.508	0.010	*	0.934	0.002	**	0.821	0.005	**

Sample restricted to children age 10-14. **Difference significant at 5% *Difference significant at 10%

TABLE 8: COMPARISON OF PARENTAL CHARACTERISTICS
IN SHORT ROUTE PORTERS SURVEY AND CENSUS

	Short Route Porters Survey		2001 Population and Housing Census								
			Wage Work			Home Enterprise Work			Not Work		
	Mean	SE	Mean	SE		Mean	SE		Mean	SE	
Father Characteristics											
Reports Characteristics	0.847	0.044	0.910	0.004		0.906	0.002		0.888	0.001	
Age	48.779	1.696	43.855	0.196	**	45.175	0.099	**	44.717	0.040	**
Can Read and Write	0.263	0.054	0.290	0.011		0.335	0.004		0.573	0.003	**
Completed Some School	n/a		0.179	0.010		0.162	0.003		0.334	0.003	
Completed Std. 5	0.342	0.136	0.148	0.009		0.101	0.003	*	0.269	0.003	
Completed Post Primary	0.251	0.120	0.124	0.009		0.068	0.002		0.214	0.003	
Disabled	0.005	0.004	0.001	0.001		0.002	0.000		0.001	0.000	
Not Work	0.059	0.023	0.057	0.004		0.036	0.002		0.066	0.001	
Owns Small Business	0.053	0.021	0.108	0.006	**	0.059	0.002		0.109	0.002	**
Works for Wages	0.425	0.065	0.571	0.009	**	0.095	0.003	**	0.225	0.003	**
Employed in Agriculture	0.545	0.067	0.629	0.011		0.862	0.003	**	0.682	0.005	**
Mother Characteristics											
Reports Characteristics	0.842	0.036	0.919	0.004	**	0.928	0.002	**	0.953	0.001	**
Age	40.512	1.872	39.468	0.172		40.337	0.084		39.484	0.035	
Can Read and Write	0.065	0.025	0.151	0.010	**	0.075	0.003		0.232	0.003	**
Completed Some School	n/a		0.088	0.008		0.026	0.001		0.117	0.003	
Completed Std. 5	0.042	0.051	0.079	0.007		0.017	0.001		0.090	0.002	
Completed Post Primary	0.042	0.051	0.072	0.007		0.010	0.001		0.068	0.002	
Disabled	0.018	0.017	0.007	0.002		0.006	0.001		0.004	0.000	
Not Work	0.284	0.048	0.376	0.010	*	0.161	0.004	**	0.366	0.003	*
Owns Small Business	0.007	0.004	0.098	0.006	**	0.098	0.003	**	0.102	0.001	**
Works for Wages	0.301	0.057	0.350	0.009		0.027	0.002	**	0.053	0.001	**
Employed in Agriculture	0.503	0.071	0.477	0.011		0.780	0.004	**	0.556	0.004	

Sample restricted to children age 10-14. **Difference significant at 5% *Difference significant at 10%
^All children report parent completing at least grade 1

TABLE 9A: ATTRIBUTABLE RISK ESTIMATES
FOR BACKGROUND CHARACTERISTICS IN SHORT ROUTE PORTERS SURVEY

	Unconditional			Conditional		
	Attributable Risk Estimate	95% Confidence Interval		Attributable Risk Estimate	95% Confidence Interval	
		Lower	Upper		Lower	Upper
Household Background						
Owns Farmland	-0.00033	-0.00078	-0.00003	-0.00009	-0.00028	0.00005
Father Characteristics						
Reports Paternal Char's.	-0.00009	-0.00036	0.00008			
Can Read and Write	-0.00024	-0.00039	-0.00012	-0.00012	-0.00023	-0.00004
Disabled	0.00118	0.00006	0.00503	0.00065	0.00000	0.00315
Not Working	0.00000	-0.00016	0.00025	-0.00010	-0.00018	-0.00003
Owns Small Business	-0.00012	-0.00024	0.00002	-0.00009	-0.00017	-0.00002
Works for Wages	0.00030	0.00010	0.00065	-0.00003	-0.00011	0.00006
Employed in Agriculture	-0.00018	-0.00043	-0.00003	-0.00017	-0.00038	-0.00004
Mother Characteristics						
Can Read and Write	-0.00020	-0.00031	-0.00009	-0.00010	-0.00016	-0.00004
Disabled	0.00143	-0.00009	0.00773	0.00054	-0.00007	0.00236
Not Working	-0.00006	-0.00016	0.00006	-0.00001	-0.00012	0.00010
Owns Small Business	-0.00025	-0.00039	-0.00015	-0.00014	-0.00025	-0.00007
Works for Wages	0.00127	0.00051	0.00257	0.00042	0.00011	0.00105
Employed in Agriculture	-0.00010	-0.00034	0.00005	-0.00005	-0.00024	0.00004

All regressions include controls for child age, gender, ethnicity, language, belt, and development region. All standard errors corrected for clustering at the block level (primary sampling unit). Estimates computed using King and Zeng's relogit code with prior correction: http://gking.harvard.edu/stats.shtml#relogit. Each estimate of attributable risk in the "unconditional" column is from a separate regression. Each estimate in the "conditional" column is from one regression, including all of the listed covariates. All estimates assume an incidence of short route porters of 0.05 percent. Attributable risks are computed for a change in the row variable from 0 to 1 at the mean of all other covariates except all "conditional" estimates are computed at father and mother reports characteristics =1.

TABLE 9B: ATTRIBUTABLE RISK ESTIMATES
FOR VARIOUS SCENARIOS IN SHORT ROUTE PORTERS SURVEY

	At Mean Landholding Rate			Landless		
	Attrib. Risk Estimate	95% Confidence Interval		Attrib. Risk Estimate	95% Confidence Interval	
		Lower	Upper		Lower	Upper
Disability						
Dad is disabled & cannot work (1)	0.0004	0.0000	0.0017	0.0006	-0.0001	0.0029
Mom is disabled & cannot work (2)	0.0008	0.0000	0.0043	0.0016	-0.0001	0.0102
Literacy						
Literate dad (avg sch) & illiterate mom (no sch.) to literate mom (3)	-0.0001	-0.0001	0.0000	-0.0001	-0.0003	0.0000
Illiterate mom & dad to literate dad (no schooling) (4)	-0.0001	-0.0003	-0.0001	-0.0002	-0.0005	-0.0001
Illiterate mom & dad to literate mom & dad (no schooling) (5)	-0.0002	-0.0003	-0.0001	-0.0003	-0.0007	-0.0002
Home Enterprises						
Household w/o self emp. to mom self emp. (6)	-0.0002	-0.0003	-0.0001	-0.0003	-0.0006	-0.0001
Household w/o self emp. to dad self emp. (7)	-0.0001	-0.0002	0.0000	-0.0002	-0.0004	0.0000
Household w/o self emp. to mom & dad self emp (8)	-0.0002	-0.0003	-0.0001	-0.0003	-0.0006	-0.0001
Wage Labor						
Household w/ no wage work to dat (9)	0.0000	-0.0001	0.0001	0.0000	-0.0002	0.0001
Household w/o no wage work to mom & dad (10)	0.0003	0.0001	0.0010	0.0005	0.0001	0.0015

Attributable risks computed using results from the "conditional regression" results in table 9a. The first columns compute probabilities for households with mean probability of holding land. The second column computes probabilities for household without landholdings.

(1) - Change in probability that child is a porter if father moves from not disabled and mean work to disabled and no work (any category).

(2) - same as (1) for mother

(3) - change in probability that child is a porter if dad is literate with average schooling and mom moves from illiterate to literate (with no schooling)

(4) - change in probability that child is a porter if illiterate mom and dad shifts to a illiterate mom with literate dad (no schooling)

(5) - change in probability that a child is a porter if illiterate mom and dad shifts to literate mom and dad (no schooling)

(6) - change in probability that child is porter if household moves from no self employment to mom self employment

(7) - same as (6) only for father

(8) - change in probability that child is a porter if household moves from no self employment to both mom and dad in self employment

(9) - change in probability that child is a porter if household moves from no wage work to father wage work

(10) - same as (9) except mom & dad in wage work

TABLE 10: COMPARISON OF CHILD CHARACTERISTICS
IN RAGPICKERS SURVEY AND CENSUS

	Rag Pickers Survey		2001 Population and Housing Census								
			Wage Work			Home Enterprise Work			Not Work		
	Mean	SE	Mean	SE		Mean	SE		Mean	SE	
# of observations	372		6,900			25,390			297,506		
Estimated population size	974		63,143			254,290			2,592,568		
Age	12.024	0.096	12.419	0.020	**	12.272	0.010	**	11.823	0.003	**
Female	0.198	0.043	0.370	0.008	**	0.611	0.004	**	0.470	0.001	**
Ethnicity											
High Status Hindu Caste	0.163	0.049	0.094	0.005		0.253	0.005	*	0.351	0.003	**
Tharu	0.006	0.003	0.151	0.007	**	0.062	0.003	**	0.076	0.002	**
Newar	0.026	0.014	0.027	0.003		0.025	0.002		0.057	0.002	**
Dalit	0.339	0.104	0.302	0.009		0.202	0.004		0.145	0.002	*
Muslim	0.080	0.059	0.100	0.007		0.047	0.003		0.034	0.001	
Other	0.384	0.071	0.325	0.008		0.411	0.006		0.336	0.002	
Native Language											
Nepali	0.394	0.090	0.222	0.008	*	0.484	0.006		0.520	0.003	
Tharu	0.007	0.004	0.133	0.007	**	0.052	0.003	**	0.058	0.002	**
Other	0.599	0.089	0.644	0.010		0.464	0.006		0.422	0.003	**
In School	0.100	0.026	0.159	0.006	**	0.271	0.005	**	0.864	0.001	**
Can read and write	0.450	0.068	0.272	0.008	**	0.381	0.005		0.875	0.001	**
Completed Some School	0.944	0.019	0.185	0.007	**	0.291	0.005	**	0.822	0.002	**
Completed Std. 5	0.067	0.020	0.063	0.004		0.105	0.003	*	0.346	0.002	**
Completed Post Primary	0.011	0.008	0.025	0.002		0.049	0.002	**	0.191	0.002	**

Sample restricted to children age 10-14. **Difference significant at 5% *Difference significant at 10%

TABLE 11: COMPARISON OF BACKGROUND CHARACTERISTICS IN RAGPICKERS SURVEY AND CENSUS

		Rag Pickers Survey		2001 Population and Housing Census							
				Wage Work			Home Enterprise Work		Not Work		
		Mean	SE	Mean	SE		Mean	SE	Mean	SE	
Belt											
	Hill	0.540	0.190	0.191	0.011	*	0.495	0.007	0.462	0.005	
	Terai	0.460	0.190	0.789	0.011	*	0.368	0.006	0.478	0.005	
Region											
	East	0.165	0.120	0.312	0.011		0.192	0.005	0.230	0.004	
	Central	0.616	0.175	0.406	0.012		0.306	0.006	*	0.335	0.005
	West	0.177	0.122	0.107	0.006		0.155	0.005		0.223	0.004
	Mid-West	n/a		0.112	0.007		0.188	0.005		0.117	0.003
	Far-West	0.041	0.044	0.063	0.006		0.158	0.005	**	0.094	0.003
Household Background											
	Owns Farmland	0.397	0.077	0.508	0.010		0.934	0.002	**	0.821	0.005 **

Sample restricted to children age 10-14. **Difference significant at 5% *Difference significant at 10%

TABLE 12: COMPARISON OF PARENTAL CHARACTERISTICS IN RAGPICKERS SURVEY AND CENSUS

	Rag Pickers Survey		2001 Population and Housing Census									
			Wage Work			Home Enterprise Work			Not Work			
	Mean	SE	Mean	SE		Mean	SE		Mean	SE		
Father Characteristics												
Reports Characteristics	0.871	0.020	0.910	0.004	*	0.906	0.002	*	0.888	0.001		
Age	44.110	0.735	43.855	0.196		45.175	0.099		44.717	0.040		
Can Read and Write	0.299	0.043	0.290	0.011		0.335	0.004		0.573	0.003	**	
Completed Some School	0.166	0.028	0.179	0.010		0.162	0.003		0.334	0.003	**	
Completed Std. 5	0.105	0.022	0.148	0.009	*	0.101	0.003		0.269	0.003	**	
Completed Post Primary	0.082	0.018	0.124	0.009	**	0.068	0.002		0.214	0.003	**	
Disabled	0.035	0.013	0.001	0.001	**	0.002	0.000	**	0.001	0.000	**	
Not Work	0.087	0.017	0.057	0.004	*	0.036	0.002	**	0.066	0.001		
Owns Small Business	0.095	0.042	0.108	0.006		0.059	0.002		0.109	0.002		
Employed in Agriculture	0.088	0.024	0.629	0.011	**	0.862	0.003	**	0.682	0.005	**	
Mother Characteristics												
Reports Characteristics	0.828	0.026	0.919	0.004	**	0.928	0.002	**	0.953	0.001	**	
Age	36.914	0.786	39.468	0.172	**	40.337	0.084	**	39.484	0.035	**	
Can Read and Write	0.127	0.036	0.151	0.010		0.075	0.003		0.232	0.003	**	
Completed Some School	0.088	0.024	0.088	0.008		0.026	0.001	**	0.117	0.003		
Completed Std. 5	0.042	0.017	0.079	0.007	**	0.017	0.001		0.090	0.002	**	
Completed Post Primary	0.021	0.012	0.072	0.007	**	0.010	0.001		0.068	0.002	**	
Disabled	0.013	0.007	0.007	0.002		0.006	0.001		0.004	0.000		
Not Work	0.413	0.050	0.376	0.010		0.161	0.004	**	0.366	0.003		
Owns Small Business	0.032	0.013	0.098	0.006	**	0.098	0.003	**	0.102	0.001	**	
Employed in Agriculture	0.076	0.023	0.477	0.011	**	0.780	0.004	**	0.556	0.004	**	

Sample restricted to children age 10-14. **Difference significant at 5% *Difference significant at 10%

TABLE 13A: ATTRIBUTABLE RISK ESTIMATES
FOR BACKGROUND CHARACTERISTICS IN RAGPICKERS SURVEY

	Unconditional			Conditional		
	Attributable Risk Estimate	95% Confidence Interval		Attributable Risk Estimate	95% Confidence Interval	
		Lower	Upper		Lower	Upper
Household Background						
Owns Farmland	-0.00017	-0.00031	-0.00008	0.00000	-0.00001	0.00000
Father Characteristics						
Reports Characteristics	-0.00002	-0.00006	0.00000			
Can Read and Write	-0.00004	-0.00008	-0.00002	-0.00001	-0.00002	0.00000
Disabled	0.00154	0.00052	0.00376	0.00024	0.00006	0.00064
Not Working	0.00002	0.00000	0.00006	0.00000	-0.00002	0.00000
Owns Small Business	0.00000	-0.00004	0.00009	0.00000	-0.00001	0.00001
Employed in Agriculture	-0.00016	-0.00030	-0.00007	-0.00003	-0.00009	-0.00001
Mother Characteristics						
Reports Characteristics	-0.00012	-0.00023	-0.00005			
Can Read and Write	-0.00001	-0.00003	0.00002	0.00000	-0.00001	0.00000
Disabled	0.00016	0.00001	0.00057	0.00002	0.00000	0.00015
Not Working	0.00001	-0.00003	0.00008	0.00000	0.00000	0.00001
Owns Small Business	-0.00004	-0.00007	-0.00001	-0.00001	-0.00002	0.00000
Employed in Agriculture	-0.00011	-0.00021	-0.00005	-0.00002	-0.00005	0.00000

All regressions include controls for child age, gender, ethnicity, language, belt, and development region. All standard errors corrected for clustering at the block level (primary sampling unit). Estimates computed using King and Zeng's relogit code with prior correction: http://gking.harvard.edu/stats.shtml#relogit. Each estimate of attributable risk in the "unconditional" column is from a separate regression. Each estimate in the "conditional" column is from one regression, including all of the listed covariates. All estimates assume an incidence rate of ragpicking of 0.03 percent. Attributable risks are computed for a change in the row variable from 0 to 1 at the mean of all other covariates except all "conditional" estimates are computed at father and mother reports characteristics =1.

TABLE 13B: ATTRIBUTABLE RISK ESTIMATES
FOR VARIOUS SCENARIOS IN RAGPICKERS SURVEY

	At Mean Landholding Rate			Landless		
	Attrib. Risk Estimate	95% Confidence Interval		Attrib. Risk Estimate	95% Confidence Interval	
		Lower	Upper		Lower	Upper
Disability						
Dad is disabled & cannot work (1)	0.00046	0.00011	0.00121	0.00075	0.00017	0.00208
Mom is disabled & cannot work (2)	0.00009	0.00001	0.00061	0.00014	0.00001	0.00064
Literacy						
Literate dad (avg sch) & illiterate mom (no sch.) to literate mom (3)	0.00000	-0.00001	0.00000	0.00000	-0.00001	0.00000
Illiterate mom & dad to literate dad (no schooling) (4)	-0.00001	-0.00003	0.00000	-0.00001	-0.00004	0.00000
Illiterate mom & dad to literate mom & dad (no schooling) (5)	-0.00001	-0.00004	0.00000	-0.00001	-0.00005	0.00000
Home Enterprises						
Household w/o self emp. to mom self emp. (6)	0.00000	-0.00002	0.00000	-0.00001	-0.00002	0.00000
Household w/o self emp. to dad self emp. (7)	0.00000	-0.00001	0.00001	0.00000	-0.00001	0.00001
Household w/o self emp. to mom & dad self emp (8)	0.00000	-0.00002	0.00000	-0.00001	-0.00002	0.00000
Wage Labor						
Household w/ no wage work to dad (9)	0.00000	0.00000	0.00002	0.00001	0.00000	0.00002
Household w/ no wage work to mom & dad (10)	0.00005	0.00001	0.00017	0.00008	0.00002	0.00024

Attributable risks computed using results from the "conditional regression" results in table 13a. The first columns compute probabilities for households with mean probability of holding land. The second column computes probabilities for household without landholdings.

(1) - Change in probability that child is a ragpicker if father moves from not disabled and mean work to disabled and no work (any category).

(2) - same as (1) for mother

(3) - change in probability that child is a ragpicker if dad is literate with average schooling and mom moves from illiterate to literate (with no schooling)

(4) - change in probability that child is a ragpicker if illiterate mom and dad shifts to a illiterate mom with literate dad (no schooling)

(5) - change in probability that a child is a ragpicker if illiterate mom and dad shifts to literate mom and dad (no schooling)

(6) - change in probability that child is ragpicker if household moves from no self employment to mom self employment

(7) - same as (6) only for father

(8) - change in probability that child is a ragpicker if household moves from no self employment to both mom and dad in self employment

(9) - change in probability that child is a ragpicker if household moves from no wage work to father wage work

(10) - same as (9) except mom & dad in wage work

TABLE 13C: BOUNDS ON ATTRIBUTABLE RISK ESTIMATES
FOR VARIOUS SCENARIOS IN RAGPICKERS SURVEY, LANDLESS HOUSEHOLDS
INCIDENCE RATES BOUNDED BETWEEN 0.3 AND 0.03 PERCENT

	Estimated Bounds		95% Confidence Intervals for Bounds	
	Lower	Upper	Lower	Upper
Disability				
Dad is disabled & cannot work (1)	0.00742	0.00075	0.00017	0.01995
Mom is disabled & cannot work (2)	0.00136	0.00014	0.00001	0.00621
Literacy				
Literate dad (avg sch) & illiterate mom (no sch.) to literate mom (3)	0.00000	-0.00003	-0.00009	0.00000
Illiterate mom & dad to literate dad (no schooling) (4)	-0.00001	-0.00010	-0.00039	0.00000
Illiterate mom & dad to literate mom & dad (no schooling) (5)	-0.00001	-0.00013	-0.00047	0.00000
Home Enterprises				
Household w/o self emp. to mom self emp. (6)	-0.00001	-0.00007	-0.00022	0.00000
Household w/o self emp. to dad self emp. (7)	0.00000	-0.00004	-0.00011	0.00001
Household w/o self emp. to mom & dad self emp (8)	-0.00001	-0.00008	-0.00020	0.00000
Wage Labor				
Household w/ no wage work to dad (9)	0.00007	0.00001	0.00000	0.00022
Household w/ no wage work to mom & dad (10)	0.00080	0.00008	0.00002	0.00238

Attributable risks computed using results from the "conditional regression" results in table 13a assuming an incidence of 0.03 percent and unreported regressions assuming an incidence of 0.3 percent.

(1) - Change in probability that child is a ragpicker if father moves from not disabled and mean work to disabled and no work (any category).

(2) - same as (1) for mother

(3) - change in probability that child is a ragpicker if dad is literate with average schooling and mom moves from illiterate to literate (with no schooling)

(4) - change in probability that child is a ragpicker if illiterate mom and dad shifts to a illiterate mom with literate dad (no schooling)

(5) - change in probability that a child is a ragpicker if illiterate mom and dad shifts to literate mom and dad (no schooling)

(6) - change in probability that child is ragpicker if household moves from no self employment to mom self employment

(7) - same as (6) only for father

(8) - change in probability that child is a ragpicker if household moves from no self employment to both mom and dad in self employment

(9) - change in probability that child is a ragpicker if household moves from no wage work to father wage work

(10) - same as (9) except mom & dad in wage work

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PHYSICAL AND MENTAL HEALTH ASPECTS OF REHABILITATING CHILDREN FREED FROM SLAVERY

Judith Hyde, Kevin Bales, and Marc Levin

1. RESEARCH OBJECTIVES

What are the elements of effective medical and psychological support in programs that help children recover from the physical and emotional distress experienced in the worst forms of child labor? Free the Slaves surveyed such programs serving vulnerable children in Côte d'Ivoire, Haiti, India, and Togo, all intended to reintegrate children into society prepared to exercise the same range of personal, social and economic choices as other citizens.

The study objectives were to:

a) identify the physical and psychosocial needs of children who have been exploited, traumatized, abused or dislocated by worst forms of child labor including slavery;

b) document and evaluate the approaches and means that organizations use to meet these needs and promote the children's reintegration.

In addition, the study sought to identify how the rehabilitative needs of children vary according to such factors as the type, methods and length of their enslavement, their gender and age, and other cultural and family factors. Of particular interest was the rehabilitation of children working in cocoa production.

1.1 THE WORST FORMS OF CHILD LABOR

It is important to separate the child labor that is the norm in most societies, including the developed world, from that which fits under the rubric of the *worst forms of child labor* (WFCL), which includes child slavery. In all human societies work by children is seen as an important part of the socialization process. In societies with extensive access to schooling, this may be a very small part of the child's life — household chores, delivering newspapers, etc. Where families rely more on the immediate production of the household for their income, as in subsistence agriculture, the work of children is both a critical component of family survival and an important process through which the child learns the skills needed for livelihood.

In and of itself, child labor is not intrinsically bad; it is how children are used for their labor and how that work affects them that determine either a positive or negative impact. The damaging effects on children of the worst forms of child labor have been widely recognized, among them: lost opportunity for education, loss of family and community, physical harm including stunted growth, permanent injuries, illness, traumatization, rape, and death.

Research has shown little about whether the needs of children in worst forms of child labor differ markedly from those of children in other traumatic situations. What experts agree upon is that children in all cultures share the same basic needs for safety, food, sleep, hygiene, and medical care. They also need an environment that is gentle, predictable, accepting, and that allows them some control and the opportunity to form positive relationships. These factors are the beginning point for rehabilitation and are the program elements examined in this study.

1.2 DEFINITION OF SLAVERY

Among the worst forms of child labor, slavery may be distinguished by the following:

- the use of violence or the threat of violence to control the person,
- a lack of payment beyond minimal subsistence,
- few or no opportunities to escape, and
- the theft of labor or other qualities of the person for economic gain.

Life is hard for all children living in extreme poverty, and in cultures where children are valued for their labor, there are extra difficulties for those who have been enslaved, such as traumatic bonding that may occur when someone held captive becomes attached to their tormentor.[1]

All children who no longer have parent(s) to care for and about them will suffer to a greater or lesser degree. Children who know or believe that their parents deliberately sent them away will have a different set of emotional problems than children who lose parents through death. Not only do they experience rejection, they also fear they will not be welcome if they return, especially if they have nothing to show for their time away in enslavement.

2. SELECTION OF COUNTRIES

While it is important to address the damage done, reducing the impact of WFCL requires an understanding of the factors that drive children's participation in them. The four countries studied are highly indebted poor countries with elevated risk factors for WFCL, and slavery in particular. Among these interlinked factors are poverty and rural residence, customs removing children from their birth homes, and human trafficking, briefly discussed below. Additional factors, not expanded upon here, include corruption, cultural norms concerning the roles of women and girls, environmental destruction, conflict and social unrest, and the impact of HIV-AIDS upon families and societies.

2.1 POVERTY AND RESIDENCE IN A RURAL AREA

The idea that poverty makes families vulnerable to exploitative and damaging child labor, as well as child trafficking, is well understood.[2] The extent of this poverty, however, is sometimes

[1] Tian Dayton, PhD. Heartwounds: The Impact of Unresolved Trauma and Grief on Relationships, Health Communications, Inc. 1997, p. 99.

hard to grasp. For example, Indian rehabilitation workers describe the origins of trafficked children: rural Bihari families living in huts that cling to roadsides, washed away several months of each year, with no chance to build up assets and no resources to make a living except for their raw labor. When that labor power has no usefulness to landowners, whole families subsist on roots and snails. For such families, the possibility of money arriving from a child who was sent to work in another state can mean the difference between life and death.

While this is an extreme example, similar pressures can exist for families in Côte d'Ivoire, Haiti and Togo. According to the director of UNICEF for West and Central Africa, poverty is a "major and ubiquitous" causal factor behind exploitative child labor and child trafficking. [3]

It is important to distinguish between the economic compulsion to work that children suffer in destitute families, and the exploitative physical compulsion to work that occurs in situations of trafficking or enslavement.

2.2 CUSTOMS REMOVING CHILDREN FROM THEIR BIRTH HOMES

In all of the countries we studied, but especially in Côte d'Ivoire, Haiti, and Togo, there is a cultural norm of *placement* (sometimes translated as "fostering") that drives the worst forms of child labor, including enslavement. The custom consists of "placing" children with relatives who might provide a better life for them, often considered an apprenticeship.[4] Particularly in Togo and Haiti, many villages have little or no schooling available, and the alternative of sending a child to the city, or to another country to earn much-needed money and learn a skill can be appealing to parents and children alike. In Côte d'Ivoire, studies have found placed children include some from Mali and Burkina Faso. The outcome of *placement* for the child can be positive if they are treated well and given a chance to learn; or, dire if the process is simply a cover for trafficking and enslavement, or some other form of exploitation.

While it may be a well-intended social institution, *placement* can lead to exploitation of child labor. It is common for poor rural children sent to town to do the work no longer done by urban children who go to school. In Haiti, such placed *restavec* ("staying with") children, are fundamentally unpaid household servants under extensive if not complete control of the householders. It has been found that other children living in a household where an orphan has been placed will have higher than normal school participation rates.[5] The consequences and contrasts of this outcome are harsh: children from poor, often rural origins who work in drudgery all day living next to other children who play and go to school.

2.3 HUMAN TRAFFICKING

Placement or the offer of work to the child of a poor family can conceal human trafficking. At the same time, traditional labor practices or migration patterns, as well as benign systems of *placement* are so commonplace in the countries studied that it can be difficult to separate responses to poverty that may be reasonable in their context from situations that support the

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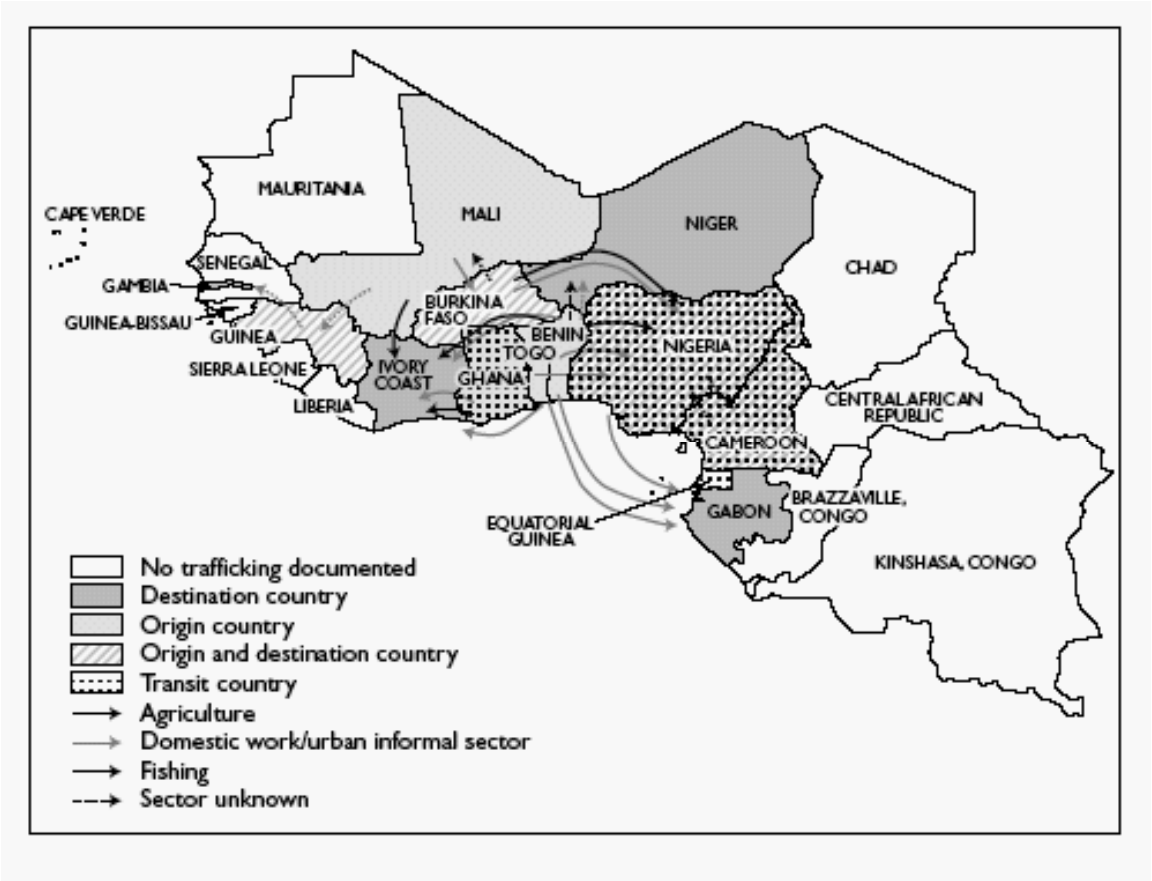
[2] See for example: Bales, Kevin, "Human Trafficking: A Worldwide Concern" Chapter 7 of *Understanding Global Slavery: A Reader*, Berkeley: University of California Press, 2005.
[3] R. Salah, "Child Trafficking in West and Central Africa: An Overview" (paper presented at the first Pan-African conference on human trafficking organized by the Women Trafficking and Child Labour Eradication Foundation (WOTCLEF), February 19-23, 2001), p. 4.
[4] Such placement systems are not unique to the developing world. The end of such "placements" or apprenticeships in Europe and North America came just over a hundred years ago with the advent of compulsory primary education.
[5] Case, A, Paxson, C. Albeidieger, J, 2002. *Orphans in Africa*, Center for Health and Wellbeing Research Program in Development Studies, Princeton University.

worst forms of child labor. Castle and Diarra explore this confusion in their examination of children and young men from Mali who migrate for, or are trafficked into, work in Côte d'Ivoire. They have found:

> The types of hardship experienced by young migrants were similar both within and outside Mali and even sometimes between those who had apparently been trafficked and those who had not. A significant proportion of young people working in both domestic and foreign settings were often exploited, poorly paid or not paid at all, accused of lying or theft, and lived in poor conditions with insufficient food or medical care.[6]

FIGURE 1. ESTIMATED FLOWS OF TRAFFICKED CHILDREN IN WEST AND CENTRAL AFRICA, INCLUDING THE TYPE OF WORK IN WHICH THEY ARE EXPLOITED.



SOURCE: "ETUDE SOUS-REGIONALE SUR LE TRAFFIC DES ENFANTS EN AFRIQUE DE L'OUEST ET DU CENTRE, 2000" (BAZZI-VEIL: UNICEF WEST AND CENTRAL AFRICA REGIONAL OFFICE, 2000)

Those who migrate for work and do not fall into the hands of traffickers may possibly be exploited, cheated, and physically assaulted, but those who do fall prey to traffickers will certainly be. Trafficking is ultimately defined by the situation of the person moving from one place to another. If the final destination includes a work context where coercive control is

[6] Castle, S. and Diarra, A. 2003. The International Migration of Young Malians: Tradition, necessity or rite of passage? London School of Hygiene and Tropical Medicine. P. 2.

exercised, and the person cannot walk away, then trafficking is assumed to have occurred. Clearly, trafficking of children brings them to some of the most dangerous and exploitative forms of labor. Traffickers supply criminals with labor that they would find hard to recruit or control if they were acting within legal boundaries.

Figure 1 shows estimated flows of trafficked children in West and Central Africa, with an indication of the type of work in which they are exploited. Note the two countries included in this study in these trafficking flows: Togo is primarily an "exporting" country of origin, and Côte d'Ivoire is a receiving or destination country.

All of the factors that are known to be drivers of the worst forms of child labor are present and strong in the four countries we studied. In each case of a child in need of rehabilitative care, these factors were present to a greater or lesser extent, often in combination with additional pressures such as abusive behavior of those who controlled them.

2.4 CÔTE D'IVOIRE

Côte d'Ivoire has been set back by uprisings and military action since 2002. The deepening economic recession following civil strife has meant an increase in pressure on women to bring in revenue from the informal sector. This in turn has increased the demand for maids to do the work of the household.[7] Kouakou notes that girls, often trafficked from Ghana, are employed as domestic workers and market vendors and in some cases are forced into prostitution.

According to the International Labor Organization (ILO), an estimated 19.7 percent of children between 10 and 14 are working in the informal sectors, particularly in agriculture — cotton, cocoa, maize and rice growing — and in the mining industry. Boys who are trafficked into agricultural work in Côte d'Ivoire tend to be either Malian or Burkinabe. In 1998, Kouako[8] reported that 750 children were identified as working in the gold mines based in Tortiya and Issia, most of them trafficked from Mali. Employers reportedly pay traffickers 37,500 CFA (US$5), 17,500 CFA for the boy's transportation and 20,000 CFA commission.

There are no statistics on the number of trafficked children intercepted by authorities in Côte d'Ivoire. However, surveys carried out by non-governmental organizations (NGOs) in other parts of the region, before the current civil war, indicated that Côte d'Ivoire was one of the major destination countries for children being trafficked for their labor. According to the Benin NGO, Service Diocesan de Développement et d'Action Caritative (SDDAC), of 109 children intercepted at the Benin border, 75 percent were destined for Côte d'Ivoire.[9] In another study of 170 persons from trafficked children's biological families interviewed in Benin, 28 percent of parents confirmed sending their children to Côte d'Ivoire.[10]

A 1998 UNICEF investigation uncovered the presence of forced child labor in agriculture in Côte d'Ivoire.[11] In 2000, the U.S. State Department concluded approximately 15,000 children aged 9 to 12 were in forced labor on cotton, coffee, and cocoa plantations in the north of the country.[12] A 2001 International Labor Organization (ILO) report also confirmed that trafficking

[7] M. Jacquemin, *Children's Domestic Work in Abidjan, Côte d'Ivoire,* . Ecole des Hautes Etudes en Sciences Sociales, Paris. Childhood 11(3)383-397. London, Sage Publications.
[8] Kouakou K. "International Child Trafficking between Mali and Côte d'Ivoire" UNICEF, 1998.
[9] Bazzi-Veil L. "The Status of Child Trafficking for Economic Exploitation in West and Central Africa" UNICEF, 2000.
[10] Aidhou A. "Report on Trafficking from Benin to Gabon - 1999" AntiSlavery International, 2000.
[11] Unicef State of the World's Children Report: 1997.
[12] U.S. Dep't of State, 2001 Country Report on Human Rights Practices: Côte d'Ivoire, § 6(f), *supra* note 3.

in children is widespread in West Africa.[13] Some of these children become forced workers on farms growing cocoa as well as other crops. Many of these children come from countries such as Benin, Burkina Faso, Ghana, Mali, and Togo. Trafficked children are abused and exposed to significant hazards in the workplace, such as harmful herbicides and pesticides, and the use of sharp tools without protection. The children's vulnerability is increased by the remoteness of many of the Ivorian cocoa farms. In this isolation children can be forced to work in hazardous conditions and controlled by threats of violence.[14]

It is important to note that the reported patterns of migration and trafficking are assumed to have been altered by the civil war that erupted in Côte d'Ivoire in 2002. Although no formal research has been undertaken to precisely determine the nature of the changes, informal reports suggest a slowing of the flow from Mali and Burkina Faso, and a greater reliance on family labor on farms in the areas controlled by rebel forces.

In Côte d'Ivoire there is now a group of twenty experts from government, academia, civil society and trade unions that has conducted an initial evaluation of trafficking and plans more in-depth evaluation next year to enhance capacities and procedures to eliminate trafficking.[15] The actual number of children working on Côte d'Ivoire cocoa farms is not known. A report commissioned by the British Chocolate and Confectioners Association found, "There is evidence that slave labour is used in agriculture, and that child slave labour in particular can be found in other sectors, such as cotton, rice and maize farming, as well as in urban domestic tasks."[16] While acknowledging complexities, it reported, "There is evidence that in certain circumstances the conditions exist in Côte d'Ivoire that would give rise to both the need and opportunity to use such [slave] labour."

The Sustainable Tree Crops Program of the International Institute of Tropical Agriculture reported in mid-2002 that 284,000 children were working in hazardous conditions in West Africa, the majority — some 200,000 — in Côte d'Ivoire. The children were found in dangerous, unprotected, or forced work, and possibly to have been trafficked. In Côte d'Ivoire, the 12,000 children with no relatives in the area of their work were thought likely to have been trafficked.

According to a 2005 International Cocoa Initiative research report, there has been a change in the past decade in the age and gender of child cocoa workers. Increasingly, younger children, and more girls are pushed into migration for work in cocoa. Older males may go back to their home farms during the wet season, but younger children are at the mercy of those with whom they are living and the arrangements their parents have made with the traffickers.[17] ILO-IPEC believes that progress is being made in confronting exploitation of children working on cocoa plantations. Among the gains since 2004 are awareness-raising and capacity- building activities, wide dissemination of tailor-made materials, and withdrawal of more than 3,000 children from the plantations, who were counseled and placed in educational or vocational programs. Special efforts are being made to help children younger than 13 years old.[18] Côte d'Ivoire has ratified both the ILO Minimum Age Convention, 1973 (no. 138), and the Worst Forms of Child Labour Convention, 1999 (no.182) and the government is working on a plan to address child labor.

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[13] IPEC and ILO Combating Trafficking in Children for Labour Exploitation in West and Central Africa, ILO Synthesis Report (2001) [hereinafter Combating Trafficking].
[14] *Id.* at 30; *see also* Woods & Blewett, *supra* note 1.
[15] K. Owen, International Cocoa Initiative, private communication, December 14, 2005.
[16] Summary of National Resources Institute Report on Working Practices in Côte d'Ivoire. (n.d.; approx. Spring 2001).
[17] A. Ibrahim-Tanko and K. Owen, Labour Migration Patterns and Child Trafficking from the upper-East Region of Ghana, August, 2005, p. 6.
[18] Ibid, p. 6.

2.5 TOGO

Togo, a coastal country of six million people between Ghana and Benin, was selected for this study because of the amount of trafficking within and across its borders and its slow rate of compliance with minimum standards to combat trafficking. In 1997, one Togo organization asserted that 313,000 children between ages 5-15 were working in cities in conditions of actual or near slavery.[19]

Togo is one of the poorest nations in the world, with little funding for basic services. Before the age of five, 22 percent of children will be stunted and 15 percent will die.[20] It is estimated that over 70 percent of the population lives on less than $1 a day.[21] One World Bank official has likened Togo to "a patient on an intravenous drip."[22] Most support from the United States and the European Union has been withdrawn due to lack of free elections.

Togo has been identified in an ILO-IPEC report as a receiving and transit point for trafficking, as well as having significant internal trafficking.[23] Government estimates of the number of Togolese children who have been trafficked are drawn from the number of children intercepted at Togo's borders and the number of children rescued and repatriated from abroad. At a regional meeting on child trafficking in January 2002, Togolese government representative Suzanne Aho reported that 297 children had been trafficked from Togo in 2001.[24] In a subsequent interview, she stated that the number of cases of child trafficking recorded in 2001 was 261, as compared to 337 in 1999.[25] Official estimates tend to be much lower than those put forth by non-governmental or inter-governmental organizations. For example, in 1999 the government recorded 337 cases of child trafficking and ILO-IPEC recorded over 800.[26]

Those regions in the country identified as sources of trafficked children are characterized by an especially high birth rate and a relatively dense population. The regions most affected by trafficking are the Maritime region, which covers the Departments of Vogan, Yoto and Afangna, and the Central region, which includes the Departments of Tchaoudjom Gassarm Tchamba, Assoli and Sotouboua.[27] Where children are displaced internally they are taken to Lomé, Atakpamé and Kara in the North of the country. Where the children are trafficked abroad, they are transported to Gabon, Nigeria, Equatorial Guinea and Côte d'Ivoire, with some transiting through Benin and Ghana. All in all, trafficking patterns tend to reflect the migratory movements of the population.

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[19] See WAO-Afrique, 1997, Child Trafficking in Togo: Prospective Study – Lome, Vogan and Cotonou.
[20] UNICEF, p.101
[21] PLAN, For the Price of a Bike: Child Trafficking in Togo, 2005, p.9.
[22] See M. Tovo, "Togo: Overcoming the Crisis, Overcoming Poverty: A World Bank Poverty Assessment" (Washington, D.C.: World Bank, 1996), p. xiii.
[23] International Programme on the Elimination of Child Labour (IPEC) and ILO, "Combating trafficking in children for labour exploitation in West and Central Africa: synthesis report based on studies of Benin, Burkina Faso, Cameroon, Côte d'Ivoire, Gabon, Ghana, Mali, Nigeria and Togo (Geneva: ILO, 2001), p. 6.
[24] "West and Central Africa: United Nations Integrated Regional Information Network (IRIN) focus on regional efforts against child trafficking," IRIN, March 27, 2002, at www.irinnews.org/print/asp?ReportID=19693, p. 2. At the time of the meeting Aho was Togo's director of the Department for the Protection and Promotion of the Family and Children, which is part of the Ministry of Social Affairs. In 2002, she was appointed Minister of Public Health, Promotion of Women and Child Protection.
[25] Human Rights Watch, Borderline Slavery: Child Trafficking in Togo, 2003.
[26] E.M. Abalo, "Problématique du trafic des enfants au Togo: Rapport d'enquête" (Lomé: ILO-IPEC, 2000), p. viii.
[27] Bazzi-Veil L. "The Status of Child Trafficking for Economic Exploitation in West and Central Africa" UNICEF, 2000.

While there has not been extensive documentation of forced child labor in Togo, two recently published reports suggest that this is a major problem area. Serious problems were found in both the large numbers of children trafficked and also in the system for helping children when they emerge from trafficking and exploitation. The Human Rights Watch 2003 report *Borderline Slavery: Child Trafficking in Togo* makes these points:

- There are no precise statistics on the number of children trafficked annually in West Africa.
- Trafficking begins with a private deal based on deceitful promises between a family member and a trafficker. The child may then be moved around from one situation to another.
- Factors facilitating trafficking are poverty, corruption, family breakdown, HIV/AIDS, porous borders, lax regulatory environments, traditional migration patterns, ethnic affinities and inadequate information about trafficking and its risks.
- There are no rescue operations by Togolese or other authorities. Children come into the system when they find their own way to the police or the embassy.

A second report, For the Price of a Bike: Child Trafficking in Togo, (March, 2005) presents a detailed study by PLAN-Togo of trafficking in all regions of the nation, based on interviews with 650 households. Among their findings:

- Almost two-thirds of the families studied had at least one child who had been a victim of trafficking.
- Cultural issues play an important role in the maintenance of trafficking. Polygamy, early marriage of girls, changing roles of the African family, social pressure, violence and lack of communication at the family level are all implicated along with poverty.
- Of the trafficked children who came home, most were unhappy, traumatized, and exhibited anti-social behavior.
- Girls were trafficked at three times the rate for boys.

Both reports call for major policy changes and the creation of legal frameworks better able to protect children and prevent trafficking. Among its 31 recommendations, the Human Rights Watch report stresses the need to prioritize educational and vocational opportunities, especially for girls.[28]

2.6 INDIA

India has a population of over one billion people, with a per capita income equivalent to US$620. Seventy-seven percent of children attend primary school.[29] In a 1996 report, *The Small Hands of Slavery*, Human Rights Watch documented the use of bonded child labor in seven industries including children sweating in stone quarries, held captive at carpet looms, hidden away in domestic labor, working long hours in fields, or picking rags in city streets.[30] It was Human Rights Watch's (HRW) assertion that of the estimated 60-115 million children working in India, "most or all of these children [were] working under some form of compulsion."[31]

[28] Human Rights Watch, Borderline Slavery: Child Trafficking in Togo, 2003, p 46.
[29] World Development Indicators database, August 2005.
[30] Human Rights Watch, The Small Hands of Slavery: Bonded Labor in India, 1996.
[31] HRW, The Small hands of Slavery: Bonded Labor in India, Sept 1996 p2; see also: HRW, Small Change: Bonded Child Labor in India's silk Industry. New York, HRW 15(2) p.6.

According to HRW's estimate, at least 15 million of these children are working in *debt bondage*[32] to pay off a debt incurred not by the children themselves, but by parents, guardians, or other relatives. In India, these debts tend to be relatively modest, ranging on average from 500 rupees to 7,500 rupees, depending on the industry and the age and skill of the child. The creditors-cum-employers offer these "loans" to destitute parents to secure the labor of a child, which is always cheap, but even cheaper under bondage. The parents, for their part, accept the loans.

Bondage is a traditional worker-employer relationship in India. Parents typically need the money to pay for the costs of an illness, provide a dowry to a marrying child, or perhaps put food on the table. The children who are sold to bond masters work long hours over many years in an attempt to pay off the debts. Due to the astronomically high rates of interest charged and the abysmally low wages paid, efforts to repay through labor are usually unsuccessful. As they reach maturity, some of the bonded children may be released by the employer in favor of a newly-indebted and younger child. Many others will pass on the debt, intact or even higher, to a younger sibling, back to a parent, or on to their own children.

The ILO gives this more conservative overview of the situation of child labor in India:

- The 1991 census data reveals that the population of working children is composed of 6.189 million boys and 5.095 million girls. In addition, it is found that the majority of "main" workers are boys, whereas the majority of "marginal" workers are girls.
- According to the 1991 census, about 90 percent of working children live in rural areas.
- Children are engaged in various types of work, including those classified as *hazardous*, i.e. harmful to the physical, emotional, or moral well-being of children.
- An estimated 2 million children work in hazardous industries.
- Although there are inter-state and inter-regional variations in India, the factors that generate child labor, and hazardous child labor in particular, include parental poverty and illiteracy; social and economic circumstances; lack of awareness; lack of access to basic and meaningful quality education and skills; high rates of adult unemployment and underemployment, and cultural values of the family and society.[33]

In their 2003 report on bonded child labor in the silk industry, HRW asserts that in spite of efforts by international bodies and intentions of the government, not much has changed. The U.S. State Department reported from a number of sources in 2001 the use of forced or bonded child labor in brassware, hand-knotted wool carpets, explosive fireworks, footwear, hand-blown glass bangles, hand-made locks, hand-dipped matches, hand-broken stones, hand-spun silk thread and hand-loomed silk cloth, hand-made bricks, and *bidi* cigarettes.[34]

Many of those studying child forced labor feel that the government is doing little to end it, while others see progress.[35] Corruption, turning a blind eye, lack of training, lack of prosecutions, and bureaucratic processes all play a part in the absence of enforcement of the

[32] The United Nations Supplementary Convention on the Abolition of Slavery, the Slave Trade, and Institutions and Practices Similar to Slavery, 1956, defines debt bondage as "the status or condition arising from a pledge by a debtor of his personal services or those of a person under his control as security for a debt, if the value of those services as reasonably assessed is not applied towards the liquidation of the debt or the length and nature of those services are not respectively limited and defined."
[33] IPEC, Subregional Information System on Child Labour, accessed at http://www.ilo.org/public/english/region/asro/newdelhi/ipec/responses/india/index.htm.
[34] U.S. Department of State, Country Reports on Human Rights Practices-2002: India.
[35] See for example: USDOL TDA 2004 report on India available at: http://www.dol.gov/ILAB/media/reports/iclp/tda2004/india.htm.

Bonded Labour System (Abolition) Act, 1976 or the Child Labour (Prohibition & Regulation) Act, 1986. India has not yet ratified ILO Convention No. 182.[36]

2.7 HAITI

Over 80 percent of Haiti's population of 8.4 million lives in poverty, and only 54 percent of children attend primary school. Total Haiti government revenue for 2005 was only $330 million; it is the poorest country in Caribbean, where 17 percent of children under five are underweight, 23 percent are stunted, and one in ten will die before the age of five.[37] Plagued by civil unrest and a total lack of security anywhere in the country, Haiti has found lasting social, economic, or political change elusive. In late 2005 and early 2006 the rule of law further eroded and kidnappings of adults for ransom reached ten a day.[38]

Given the extremity of economic deprivation in Haiti, it is not surprising that desperate families will sometimes abandon or simply give their children away to better-off families or relatives to be fed, clothed and schooled. Haiti's system of domestic child slavery, a culturally accepted way of getting menial household tasks done, uses the French term *restavec,* which means "staying with." However, these are children who are abandoned, given away or snatched to serve better-off families. About 10 percent of Haitian children, that is around 300,000, are *restavecs*, about one quarter of them boys.[39]

The government has done little to address the exploitation of *restavecs,* having signed neither ILO Convention 182 nor Convention 138. The Limye Lavi Foundation, which works with *restavec* children in Haiti, describes their situation:

> Poverty, lack of access to education, political unrest, and natural disaster are the main factors causing economically deprived families to send their children into slavery. Children in the *restavec* system endure emotional and psychological trauma. Many children are lured into slavery through the false promises of education, but rarely are they given the opportunity to attend school. Many men sexually abuse *restavec* girls, and the wives of these men often add psychological abuse.[40]

According to the National Coalition for Haitian Rights, "Haiti's long history of repressive, autocratic governments has only been matched by its equally long history of embracing and signing off on international standards to which it afterwards has paid little attention."[41]

3. THEORETICAL BASES OF THE STUDY

Article 39 of the Convention on the Rights of the Child recognizes the victim's right to psychological recovery, and social reintegration. Psychological recovery implies healing from the distress in mind, body, and spirit caused by external negative experiences; improved functioning; a greater sense of well-being; and a more productive life.

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[36] Human Rights Watch, Small Change: Bonded Child Labor in India's Silk Industry,2003, p. 78.
[37] UNICEF, State of the World's Children, 2006.
[38] Harman, Danna, "From Brooklyn to Haiti: US Cop brings skills, heritage", Christian Science Monitor, 20 January, 2006.
[39] UNICEF funded study done by Institut Psycho-Social de la Famille, 1998, cited in Restavek No More, National Coalition for Haitian Rights, p 16.
[40] Limye Lavi Foundation, "Background and Context", Proposal for Partnership to Free the Slaves, March, 2005.
[41] Ibid, p 60

In order to develop to full potential, all children need a sense of safety, nutritious food, sleep, medical care, secure attachment with caregivers, affection and validation, a sense of belonging, and opportunities for cognitive and spiritual development. What in addition does a child need in order to recover from trauma, exposure to violence, exploitation, instability, or other circumstances that go with enslavement, forced labor, and other worst forms of child labor?

This study was informed by three theoretical approaches to the question of what best helps children to recover from such damage. The first, parental acceptance and rejection theory, is from an academic, research-oriented perspective, and focuses on the child's parents and caregivers. The second, trauma theory, comes from a mental health clinical perspective and focuses on the child himself. The third, psycho-social approach to rehabilitation, is based on the experience of those who work in the field with children in difficult circumstances and focuses on the child's community.

3.1 PARENTAL ACCEPTANCE AND REJECTION THEORY

According to the theory of Parental Acceptance and Rejection (PARTheory) developed by Ronald Rohner of the University of Connecticut, children's maladaptive behavior originates in parental rejection.[42] Children everywhere—regardless of cultural, racial, language, gender, or other such differences—respond in the same way when they experience themselves to be accepted or rejected, lacking a relationship with a consistent caregiver. Through more than forty years of cross-cultural research, Rohner has identified universal characteristics of rejected children: dependence, anxiety, hostility, aggression, passive aggression, problems with the management of hostility and aggression, emotional unresponsiveness, defensive independence, impaired self esteem, impaired self-adequacy, emotional instability, and negative worldview.[43]

According to Rohner, knowing the extent children perceive themselves to be rejected by parents or attachment figures predicts more of the variation in developmental outcomes, such as depression, conduct problems, psychological maladjustment or substance abuse, than any other factor.[44] Not all children who end up in exploitative work have been unloved or uncared for, but no matter how much a caregiver regrets having to send the child elsewhere, it is the child's perception that counts. There is at minimum a sense of abandonment and lack of protection; many children do not feel loved when they are sent to strangers or away from familiar ties.

3.2 TRAUMA THEORY

Some clinicians like Judith Herman, who work with victims of prolonged totalitarian control and trauma, argue that such people suffer from a clinical syndrome that is not adequately characterized by the Post Traumatic Stress Disorder (PTSD) construct. They have proposed a new syndrome, "complex PSTD," which is under review for inclusion in DSMV. For enslaved children who were in a state of captivity, under the control of the perpetrator, and unable to flee, a diagnosis of complex PTSD is usually appropriate. Such conditions of enslavement can cause victims to lose their sense of personal efficacy and to become increasingly dependent on those who hold them captive, if merely to survive. Captivity brings the victim into prolonged contact with the perpetrator and creates a relationship of coercive control and traumatic bonding.

[42] It is important to note that the consistent caregiver seen as essential for the well-being of the child does not need to be, in fact, the biological parent of the child.
[43] Rohner, www.cspar.uconn.edu/intro to PARTheory
[44] Rohner, R, Private communication, 3/06. Rohner pointed out that in social science, the 25% predictive power of PARTheory is two and a half times greater than any other known variable.

"In situations of captivity," writes Herman, "the perpetrator becomes the most powerful person in the life of the victim, and the psychology of the victim is shaped by the actions and beliefs of the perpetrator." The methods of establishing control, she adds, are based upon "the organized techniques of disempowerment and disconnection…[so as] to instill terror and helplessness and to destroy the victim's sense of self in relationship to others." As victims become more isolated, they grow "increasingly dependent on the perpetrator, not only for survival and basic bodily needs but also for information and even for emotional sustenance."[45]

The life-long symptoms of complex PTSD can include:

- persistent dysphoria ("a state of confusion, agitation, emptiness, and utter aloneness"[46])
- self-injury,
- explosive or extremely inhibited anger,
- compulsive or extremely inhibited sexuality,
- amnesia for traumatic events, dissociative episodes, depersonalization,
- reliving experiences either in the form of intrusive memories or ruminative preoccupation,
- a sense of helplessness,
- paralysis of initiative,
- shame, guilt, self-blame, sense of defilement or stigma,
- sense of complete difference from others, isolation, withdrawal,
- repeated search for rescuer,
- persistent distrust, and
- repeated failures of self-protection, sense of hopelessness and despair. [47]

Child psychiatrist Lenore Terr shows persuasively that long-lasting negative effects are present in children who have been subjected to chronic abuse or who have experienced even one episode of terror. Some of these sequelae are fears connected to the event(s), phobias, fear of fear, feeling of being reduced to nothing,[48] fear of the mundane, helplessness, rage which turns into aggression or passivity,[49] denial, numbing, unresolved grief, freezing into permanently saddened states, or even deep depressions, shame, guilt, repeated dreams, and post-traumatic reenactments.[50]

That children in the developing world have been traumatized in the process of enslavement and the worst forms of child labor is not in question. What is not clear is the applicability of different approaches to the treatment of trauma in the context of the developing world. For example, Seedat has noted major gaps concerning children and youth in South Africa and

[45] Judith Herman, *Trauma and Recovery*, 1977, pp. 74-75.
[46] J. Herman, p. 108
[47] J. Herman, p.121
[48] L. Terr, p. 37
[49] L. Terr, p. 63
[50] L. Terr, p. 101

Kenya exposed to sexual abuse, pointing out that very little work has been done on testing the usefulness of established treatments for youth diagnosed with PTSD.[51]

> The overall impression is that research concerning therapeutic techniques for traumatized children in developing countries remains at a very preliminary stage of development. It is not known to what extent western psychotherapeutic techniques, which were originally developed to treat Europeans and Americans, would be appropriate and effective for children in Africa. One concern is that the therapeutic techniques used are centered on the individual patient, rather than on the family or community, which might be more meaningful in many countries in Africa.[52]

3.3 PSYCHOSOCIAL APPROACH TO REHABILITATION

Agencies with extensive field experience such as UNICEF, Save the Children, and PLAN International, are finding an emphasis on individuals too narrow. Individualized approaches fail to take into account the powerful role of the social and cultural context of children's development.[53] One theorist asserts:

> Aside from issues of culture bias and cultural sensitivity, the imposition of Western methods and modes of analysis is an act of psychological imperialism that marginalizes and undermines local ways of understanding and addressing psychosocial problems.[54]

Psychosocial programming is based on the understanding that the most reliable prospect for children's recovery is based on consistent provision of a social context that is nurturing and meets their basic needs. It builds upon a child's natural resilience and family and community support mechanisms, and attempts to provide additional experiences that will promote coping and positive development, despite the adversities experienced.[55] To qualify, a program must be rights-based, child-friendly, gender and age responsive, and culturally sensitive and sustainable. It must also take full account of the best interests of the child, and include them as partners in decision-making processes. In sum, "psychosocial programming is about emotional healing, social reconciliation and community building."[56]

The psychosocial approach also encourages direct work with children, having many of the same elements as psycho-dynamically oriented therapy. A training manual on psychosocial counseling for trafficked youth developed by ILO-IPEC in 2002[57] stresses that the first imperative in working with a child is to establish a sense of safety, a goal shared in all forms of therapy with survivors of abuse and trauma.

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[51] Seedat S, Nyamai C, Ngenja F, Vythilingum B, Stein DJ. (2004) Trauma exposure and posttraumatic stress symptoms in adolescents: A schools' survey in Cape Town (South Africa) and Nairobi (Kenya). British Journal of Psychiatry, 184:169–175, 2004.
[52] S. Kaplan, p. 24.
[53] Arnston, L. and C. Knudson. 2004. "Psychosocial Care and Protection of Children in Emergencies: A Field Guide." Save the Children. p.14.
[54] Wessells in Handbook of Culture, Therapy and Healing, Gielen, Fish and Draguns, eds. p 328
[55] UNICEF, Working with children in unstable situations: A guiding manual for psychosocial interventions, (2002) p 24.
[56] Save the Children, Ibid, p16.
[57] ILO-IPEC Trafficking in Children-South Asia, Specialized Training Manual on Psychosocial Counseling for Trafficked Youth, April, 2002.

Also recommended is an emphasis on solving problems of and in the present moment, rather than focusing on traumatic events in the past. The trauma may be responsible for a number of present-time problems, such as body pain, sleep disturbance, irritability, anxiety or inability to concentrate. The counselor should provide information about trauma and stress, reassuring the child that such problems are to be expected, thus normalizing what the child is going through. Such counseling may offer relaxation and stress reduction techniques such as deep breathing, story reconstruction, thematic group sharing, guided imagery, and meditation training.

4. STUDY DESIGN

There is much attention being paid and much work being done worldwide to bring about change in the worst forms of child labor through reports and collaborative efforts. Among these are UNICEF, PLAN International, CARE, Anti-Slavery International, the International Cocoa Initiative, the World Bank, Human Rights Watch, Free the Slaves, ILO/IPEC, the U.S. Department of Labor, Save the Children, Hagar International, and Ray of Hope. Locally, agencies may abound: in Abidjan alone, there are forty-seven children's agencies and organizations on a network roster.

Given that many NGOs now publish online, a review of the existing literature was complemented by internet research. In addition, we participated in professional forums and meetings that brought together health practitioners, policymakers, NGO leaders, donor organizations and researchers. A week-long seminar organized by the World Bank examined the needs of the most vulnerable children in West Africa.[58]

In view of a dearth of numerical or even recorded data on children under care, it became clear that qualitative rather than quantitative methods would be necessary. The single-visit model of this study also did not permit longitudinal study that would allow conclusions regarding the whole psychological recovery process.

4.1 DEVELOPMENT OF INTERVIEW AND OBSERVATION GUIDE

Enslaved children, given their dehumanizing experiences of coercive control, are at the highest risk for the most severe manifestations of problems. Through staff interviews and observations, suggestive evidence regarding the incidence of such problems was to be gathered.

A Questionnaire and Observation Guide was developed for interviews with organizations and programs responsible for the care and protection of children, as well as children receiving services (The full guide is included in Appendix A). Information to be collected included: basic information about the program(s), description of the children served, description of the treatment(s) offered, staffing information, and a description of any follow-up services offered.

4.2 SELECTION OF LOCAL CONSULTANTS

The Free the Slaves senior researcher, Judith Hyde, who has extensive professional experience in children's advocacy, child mental health and development, and systems for their care in the U.S., selected consultants for Togo, Côte d'Ivoire and Haiti based on their previous experience in appropriate child care agencies and their fluency in English and other relevant languages. It was possible in the three francophone countries for all work to be done by a male-female French-speaking team.

[58] Aide aux orphelins et enfants vulnerable d'Afrique, World Bank Institute, Washington, DC, September 2005.

In Côte d'Ivoire, Kouassi Konan of MESAD and a partner of the International Cocoa Initiative helped identify potential research sites and recommended our consultant Komi Kpeglo. In Togo, with the aid of Cleophas Mally, Director of the NGO WAO-Afrique and a long-time partner of Anti-Slavery International, we located Dominique Niava, an experienced consultant who contacted possible agencies. In Haiti, with the help of David Diggs of Beyond Borders, we were able to secure the services of JeanYves Plaisir, a faculty member at CCNY, New York.

The research in India was carried out by highly experienced staff of three NGOs that serve children emerging from slavery, domestic violence, and prostitution, as reported below.

5. IN-COUNTRY ACTIVITIES

5.1 CÔTE D'IVOIRE AND TOGO

The local consultants made advance contacts with potential child-serving projects to inform them of the work to be done and to invite their participation. In Togo, eighteen program representatives attended a "launch lunch" where the program was explained. Seventeen Lomé programs and NGOs were visited over a five-day period in October 2005. In Abidjan, Côte d'Ivoire, six site visits were made over four days. In Togo and Côte d'Ivoire, interviews were conducted with nine children, thirty adults involved in local child care agencies, three governmental officials, and four NGO representatives.

5.2 INDIA

Researchers from partner organizations visited organizations and rehabilitative centers in Northern India, primarily in the state of Uttar Pradesh and near Delhi. Many children in these facilities came from the neighboring state of Bihar. As such, these agencies are indicative, but not necessarily representative of the range of forms of child labor and child bondage in India.

In India, FTS contracted with Suman, the Director of the Mukti Ashram, to oversee the research in that facility. Information on the Bal Vikas Ashram was gathered by staff member Rajneesh Kumar Radev via discussions with all the staff who interact with children, including the gardener and the cook. He also interviewed approximately 25 percent of the resident boys. Programmatic information was also provided by Aparna, coordinator of the Social Action Research Centre (SARC), a program for women and children survivors of domestic violence, slavery in domestic work, and forced prostitution.

5.3 HAITI

Mounting violence and government instability threatened to eliminate Haiti from the study altogether. However, the confidence of the local consultant in the project's feasibility and value led to the decision to go ahead. Extra precautions were taken: lodging in an out-of-the-way retreat center, run by the Catholic Church; the most dangerous areas avoided; a transportation back-up plan; and all work behind guarded gates, which are omnipresent in Port au Prince.

A full day training session was developed for participants of the Restavek Network, which unites staff from a variety of programs working on the restavec problem, either through shelter, educational programs, and/or advocacy. This allowed us to obtain a wider perspective on their level of awareness of concepts related to children's emotional well-being, such as parental acceptance, effects of trauma, and stages of psychosocial development. The training was attended by twenty-four representatives of thirteen programs. Research, consisting of

interviews with staff and children, observations, and interactive play, was conducted at three centers for *restavec* children during the week of January 8-14, 2006. Appendix B provides a table of the facilities visited in all four countries.

6. LIMITATIONS AND DIFFICULTIES

Exploratory research expects to confront limits as well as unexpected challenges. Difficulties unanticipated during the study design phase became evident during the site visits.

6.1 IDENTIFICATION OF THE TARGET POPULATION

It was difficult to distinguish between children who had been enslaved and other children receiving services. Often staff knew little of the conditions under which children had lived before they arrived at their facility, and could not distinguish between youngsters who had been enslaved or worked in the worst forms of child labor and those who had not.

In India two of the three programs did serve only formerly enslaved children. In Haiti, though all three programs had been described as serving restavec children, we learned that the Timkatek program now served very few. In Togo and Côte d'Ivoire the shelters, drop-in centers, and neighborhood programs served many categories of children — street children, orphans, prostitutes and those affected by AIDS, as well as those rescued from enslavement on cocoa plantations. Some children fit several categories.

In Côte d'Ivoire, attempts were made to meet boys who had been working on the cocoa plantations. Although the director of MESAD, a shelter program in Abidjan, said that they had two such boys there, they were not present during our visit. The Ivorian consultant, who had worked as an *animateur*[59] with children at MESAD in the past, said that it was difficult to identify former plantation workers because they are ashamed of having been enslaved.

6.2 INCOMPLETE CASE RECORDS

We noted wide variation in record keeping in most agencies visited. Manual ledgers were used for most record keeping, even in offices of the governments in Togo and Côte d'Ivoire. Computers were used in only two or three locations. Aggregate or longitudinal data files were not kept, making it difficult for informants to give us answers requiring a generalization, such as our research question on factors affecting the rehabilitative needs of children.

In two of the agencies in Togo and Côte d'Ivoire, there were no records on the children under care. In other agencies, we were told that dossiers were maintained on each child, but the information forms we viewed were often missing basic information about the child's health or history. Detailed information was not obtained about Indian record keeping, but the agencies there do keep dossiers on their clients. Interviews with individual children provided a general sense of the types of histories these children presented. However, these interviews were not of sufficient number or accuracy to draw conclusions about the population as a whole.

[59] Although job descriptions vary from center to center, a rough approximation of the duties of various staff positions would be as follows. The "animateur" is at the lowest rung of the professional ladder and is responsible for leading group activities such as drawing or sports and keeping on eye on things. The "educateur" has a higher level of education and training and may teach classes or have primary responsibility for a group of children. He may meet with them on a weekly basis to go over their projects. The "assistante sociale" has a university diploma or professional certification and in general is in charge of the intake process and record keeping. The "agente de promotion sociale" may do outreach to families, get histories, and check out the home that the child may go back to. The "agente sociale" welcomes visitors, teaches crafts such as knitting, or plays with the children.

In general, the available case histories tended to be inaccurate and incomplete. According to some program staff, children were not reliable informants about their stories, due to shame, memory disturbances, or incomplete understanding of their circumstances. For example, children would not know whether any money changed hands for their labor. Several children, especially boys, had run away to the streets from abusive *placements,* which would perhaps qualify them as target subjects except for the intervening period of living on their own. Whether the majority of children at some time had been trafficking victims is open to question, since it was often difficult to pin down the exact circumstances that preceded their being brought to the shelter. However, it seems reasonable to assume that the great majority of children had experienced loss of parental ties and lacked current family support.

6.3 INTERVIEWING AND OBSERVING CHILDREN

The nearly constant presence of authority figures is presumed to have skewed observations and interviews. Language also posed problems, and many adults did not pause when speaking to allow adequate note taking.

Talking directly with nine children in Côte d'Ivoire, Haiti, and Togo provided insight into their cognitive processes and how they tell their own stories. The yield was necessarily limited by the lack of established relationships with the children, the softness of their voices, their being unaccustomed to talking about themselves to strangers, the frequent presence of authority figures, and the need for translation from vernaculars. Other limitations included their lack of experience in talking freely with adults, difficulty organizing their thoughts, or anxiety. Interviews were also limited by children's vague sense of time, uncertainty about where they had been, and unfamiliarity with relating experiences and feelings. Children said only complimentary things about the programs they were in, such as 'I like it here', and were not able to articulate what was helpful to them and what was not.

6.4 APPLICABILITY OF QUESTIONNAIRE

The questionnaire was sometimes used in full, and sometimes in part without going through the checklists. It guided the general questions covered in all four countries. It was difficult to judge the appropriateness of local approaches to care and rehabilitation of children. A mental health orientation focusing on one's internal state was not readily adaptable to the cultures where the focus tends to be more on external manifestations of both the presenting of problematic behaviors and the external signs of participation, social integration and recovery.

6.5 ABSENCE OF COMPARATIVE DATA

Given that the centers in Togo and Côte d'Ivoire served a broad spectrum of vulnerable children while those in Haiti and India served mostly formerly or currently enslaved children a comparison for goals and methods was considered. But in fact, the differences in approach to psychosocial and physical care among programs were not a function of whether their clients had been enslaved. Programmatic differences were more likely due to factors such as funding, numbers of children, years of experience, and the cultural and political context.

6.6 LACK OF INFORMATION ON CHILDREN IN THE IVORIAN COCOA SECTOR

Our particular interest in the cocoa sector was disappointed by a lack of children from that sector in the agencies we visited. The most likely reason for their absence was that the cocoa-growing region in the center and northeast of Côte d'Ivoire is under the control of rebel forces

and not accessible. The government restricts travel by foreigners outside the immediate area around Abidjan. Ivorian researchers avoid traveling into the rebel-controlled areas because of the dangers. Our researchers were of necessity confined to Abidjan.

A second explanation for not finding children from the cocoa sector is the slowness of the Ivorian government to recognize the extent of the problem, even after the exposure of slavery in the sector. While one NGO was able to establish a transit center on Mali's border with Côte d'Ivoire, and other NGO sent investigators into the cocoa growing region, none were able to establish an effective response mechanism. The International Cocoa Initiative began a program in 2002 of working with cocoa-growing communities to sensitize them to the issue of child and slave labor in cocoa growing. At the same time, preparations for a "safety-net" were carried out, so that any children found in worst forms of child labor, including enslavement, could be removed to an appropriate service provider, the Abidjan-based agency, MESAD. However, just as all these pieces were coming together (training, sensitization and prevention, and rescue), the civil war erupted, closing off most access to the cocoa region. Because of the political situation, the transfer of children to MESAD was slow, and the first ten children freed in the cocoa-growing region arrived in Abidjan in August 2005. Staff had little or no information about the children's experiences. The Director at MESAD explained:

> Our program was launched in August. It's a little early to have a correct estimate of help for children from plantations. From that day we have about ten boys who say they worked on the plantations. The problem is that not having anything documented before that date, it would be pretentious to give an evaluation before completing a year of activity.[60]

Finally, we pursued the suggestion, based on a USAID-supported project, that children were being exploited not only on farms, but also in the transport and export areas such as ports. Local NGOs, as well as the investigators of the International Cocoa Initiative, were not aware of any such exploitative treatment in the port of Abidjan. While all concurred that children were working around the port, as tends to be observed in every part of the city, they agreed there was no indication that these children were enslaved or otherwise suffering in the worst forms of child labor.

These circumstances prevented our addressing the specific question of the rehabilitative needs of children freed from abusive work in the cocoa sector. This does not mean that the problem is eliminated. The ten boys brought to MESAD in August, despite difficulties, are an indication that this abuse is ongoing.

7. THE SITES AND THE CHILDREN THEY SERVE

7.1 CÔTE D'IVOIRE AND TOGO

Selection: In Côte d'Ivoire it was difficult to identify agencies closely focused on the aims of the research since most served a broader category of clients such as disadvantaged, abused or street children. Some centers were projects of large international organizations with multi-faceted programs, like Terre des Hommes, Soeurs Salesiennes de Don Bosco, and the Bureau

[60] Email message from M. Konan, 27 Jan, 2006 – The quoted excerpt reads in the original: "Notre programme ayant demarer en Août, il est un peu tôt pour avoir une estimation correcte des éffectifs d'enfants issue des plantations. A ce jour nous avons documenter une dizaine d'enfants (des Garçons) qui disent avoir travailler dans des plantations de CaCao. Le problème n'ayant pas été documenter avant cette date il serait prétentieux de donner des chiffres avant au moins une année d'activités."

Internationale Catholique de l'Enfance (BICE), which maintain shelters in diverse countries. In Togo, sites were selected providing a range of size and sophistication in first-hand work with children formerly involved in worst forms of labor. Some were single-facility shelters like AD-Togo and AIDES. There were also three drop-in centers for neighborhood children that offered recreational programs, support groups, services for children in conflict with the law, AIDS prevention, food, recreational and creative activities. In addition, we contacted NGOs that influence policy, and governmental bodies concerned with trafficked children.

Facilities: What was striking, across all agencies in these two countries, was the ambitiousness of the programs given their lack of operating funds. Most relied heavily on volunteers, even for psychological and medical services. At one of the larger centers, the *educateurs* receive an annual salary on paper of U.S. $1,960, but might actually only receive food and lodging. Some children were not able to receive needed medical care because of hospital costs. Many centers were trying to generate income by selling products made by the children, such as syrup or place mats. There was a dearth of materials for supporting educational, recreational or therapeutic programs, such as books, paper, toys, balls, games, dolls, and art supplies. Three programs mentioned television viewing as a recreational option. Two had outdoor play equipment like a swing and slide. Most programs were located in enclosed spaces, or compounds that did allow outdoor active movement and running. In most cases, kitchens were small dark rooms with no running water, few cooking pots, limited food supplies, and a fireplace on the ground.

Goals: Program goals for children centered on education and reinsertion: literacy and schooling for younger children; vocational training for teenagers who did not want to go to primary school. Because there were no long-term care alternatives and because governments in both countries exert pressure for children to be returned to their communities and families, all programs worked toward reinsertion (sending a child back to the family) and reintegration (having the child be accepted and helped to function in the community over time). Drawn from their prepared materials, the range of program goals and objectives included:

- To prevent all forms of marginalization and social deviancies which ruin childhood, especially adolescence; to be a crossroads for encounters and exchanges among young people, *educateurs,* and parents; to be a reference point for youth; to become a leisure and recreation center; to be an incubator for projects initiated by youth; to help children lead an active life.
- To offer girls a welcoming home in a climate of family respect; to pursue training; to discover through group life a sense of the common good; to accompany the girl in her evolution after leaving the *foyer*; to establish a constructive relationship with her family to facilitate her reinsertion.
- To organize the youth of this quarter; to help neighborhood youth know the threats and the potentialities of the quarter; to be with youth in the identification of their own problems in order to help them find appropriate solutions.
- To help the child to flourish; to promote autonomy; to help acquire citizenship; to help parents and the community to assume their responsibility.
- To give psychoaffective support; to provide support for conceiving and realizing life projects; [to promote] socialization and education restructuring.
- To prevent prostitution; to provide care of the whole girl; to give literacy and professional training; to fight against the propagation of sexually transmitted diseases.

7.2 INDIA

Selection: Three program sites in Uttar Pradesh and Bihar reported that the majority of children at Mukti Ashram had been engaged in, and were presumed to have been enslaved in, domestic servitude, the carpet industry, brick making, or agriculture. Many of these were bonded laborers from the "lower" ranges of Indian society: Scheduled Castes, Scheduled Tribes, and the most prevalent, *dalits* (formerly called "untouchables"). The Bal Vikas Ashram near Allahabad served boys released from the carpet industry and other exploitative situations. The Social Action Research Centre (SARC) worked with women and children, including domestic servants, affected by violence and sexual exploitation.

Parents of these children were largely illiterate and unemployed or underemployed. They tended to have insufficient income to meet basic needs. Laws against debt bondage and coercive labor call for a rehabilitation package for such children including monetary compensation, placement in school, and depending on needs—housing, land, or other assets that may help the parents overcome their situation of poverty.[61]

The Director of Mukti Ashram has worked with more than 6,000 children since 1991. She pointed out problems children faced when they arrived at her agency:[62] "All the emancipated child laborers manifest improper functioning of the thinking process. They had passed through such traumatic experiences that their brains stopped thinking about anything except following their masters' orders, and fearing punishment for noncompliance. The work pressure and terror environment fostered a kind of fear psychosis that was an impediment to rehabilitation. At the time of emancipation they scarcely remember their parent's name or, in some cases, their village or district name." Mukti Ashram finds it difficult to gather information such as full name, original place of residence, parentage, and identity documents such as birth certificates.

Facilities: Mukti Ashram and Bal Vikas Ashram, had dormitories, classrooms, and full programs of teaching and other activities for their clients. SARC ran a smaller community-based program that emphasized basic literacy, street theater and other supportive activities.

Goals: Mukti Ashram assumed that all child laborers, whether bonded or otherwise, should be brought under the same rehabilitation program. They believe all these children fundamentally need the same sort of psychological rehabilitative support, though they may need different responses to the physical health problems resulting from various forms of work.

The Indian agencies recognized the complex nature of rehabilitation, including eradication of the "mental slavery" seen to hold back progress. Their philosophy of rehabilitation was based on bringing the children into physical and mental health, and into a keen sense of their rights as individuals. Traditionally, government officials, in charge of rehabilitation programs, have had a "charity" attitude towards the beneficiaries, and participants often mistakenly see themselves as recipients of charity. The Mukti Ashram director explained that a program should be structured to falsify this myth of charity, and seek to replace it in the minds of all concerned with the understanding that rehabilitation is a matter of child rights. In addition, material rehabilitation is not complete rehabilitation, because purely financial aids or other material benefits, do not address the emotional needs of the children who are brought to rehabilitation. They need regular counseling and assurance for their safety.

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[61] Free the Slaves, Recovering Childhoods: Combating Child Trafficking in Northern India, (2005) p.72.
[62] The following quotations are from: Suman, Director of the Mukti Ashram, "Note on Institutional background and Program Information" by correspondence, October 2005.

7.3 HAITI

Selection: Of the three programs visited, Timkatek and the Foyer d'Accueil run by Fonds Communautaire de Credit Mutual (FCCM) were shelter programs, while Foyer Maurice Sixto (FMS) was an afternoon program for children still living with their *patrons*.

Facilities: The FMS center, open from 12-5 p.m., offered uniforms, schooling, a meal, a summer recreational program, and *animations*, which are activities like drawing, themed discussions, or group singing and games. FMS was a very large program with 450 children enrolled and 350-400 coming each day, of whom 75 percent were girls. Ten classrooms for elementary level education and a dental and medical clinic occupied the compound of buildings in the Carrefour region of Port au Prince. The staff of sixteen full time and sixteen part-time employees included 10 teachers, vocational instructors, administrators, and other support people.

Goals: Although the centers lacked written goals, their common aim was to improve living, working conditions, and so far as possible schooling for *restavecs* who continue in employment.

8. HOW PROGRAMS MEET CHILDREN'S BASIC PHYSICAL NEEDS

Each of the service providers sought, within their own conception of care, to fulfill needs that can be categorized into physical or psychological and social aspects of a rehabilitation program.

8.1 SAFETY

Côte d'Ivoire and Togo: Physical safety was paramount to the children. Their leading response to a survey conducted by PLAN-Togo asking what they most wanted in a care center was, "a fence."[63] Some were afraid those they had fled might come after them to retaliate or reconscript them. Others did not want to see their parents or whoever had abused them.

Shelter programs visited were behind walls, often with locked gates or guards. One program required visitors to be pre-approved and show a badge to enter; another would not allow in a person claiming to be a child's mother or other relative unless they produced a photo of the child. Some gave the child the right to refuse to see any visitor, including a parent. Program personnel said children knew they did not have to return home if they did not want to.

Programs serving street children, who are literally living on the street and getting by through selling or stealing, had a difficult time creating enough trust to persuade them to come to the shelter. A lengthy process of winning them over in a gentle, non-coercive fashion was the approach used to build trust and gain the children's involvement in the program.

Violence was not permitted in the programs. All of them used nonviolent means of controlling behavior and disapproved of hitting children. Terre des Hommes in Togo had a three-page Code of Conduct on treatment of children by staff. Any form of physical punishment or sexual contact was strictly prohibited, as well as anything that might make the child feel ashamed, degraded, or bad. Since this program is prominent in the network of care centers, others look to its practices for improving or developing their own. Children also feared being physically attacked by other children. No fighting was observed during the site visits, but children told researchers and staff that it did sometimes occur. All programs reported having at least one staff person present during the night when children were apt to feel more vulnerable or fearful.

[63] Professeur Gnansa C. DJASSOA, personal communication.

India: The word *Ashram* means a sanctuary, shelter, or place of religious hermitage. The Bal Vikas Ashram (BVA) served children rescued from bondage by police and labor department officials. These officials thereby became familiar with the rescued children and provided support to BVA's security measures. The local police were invited to speak to a new child to reassure him that police will not let owners or traffickers near him. Nevertheless, slaveholders and brokers sometimes tried to find, and reclaim or harm rescued children. To ensure the children's safety, BVA barred entry to anyone without proper identification and posted a guard. At SARC, children were not allowed to leave the premises without a responsible person vetted by center staff. Girls knew that no one is allowed to enter their rooms without permission.

Rescued children at both BVA and SARC were often terrified. According to one informant,

> they are very much afraid of the rescue team. They are not able to speak, they cry, sometimes they start shouting because they feel that again they will be taken to another owner who may treat them more badly than the previous owner. They feel themselves lonely in this world. They do not believe any one since everyone has cheated them.[64]

A respectful intake process and the constant presence of caregivers helped create a climate of security. Children were brought into the Ashram and shown around, especially where they would sleep; they were allowed to take things at their own pace without pressure to engage in activities. When they observed other children playing happily and saying that they didn't want to leave, the fearfulness and distrust of the newcomers began to diminish.

Haiti: Not surprisingly, safety was the primary concern of all in Port au Prince. Haitian programs maintained strict security against the threats of the world beyond their solid steel gates. The two shelter programs kept their gates locked and children were permitted outside only to go to school. In times of heightened stress, schools did not open at all. Because of the general strike called for the first day of the research visit to Haiti, schools were shut down as a protective measure and operated in a reduced way the rest of the week. Children in two interviews at the Fonds Communautaire de Credit Mutual (FCCM) reported feeling safe, though cut off from former relationships.

8.2 HEALTH

Côte d'Ivoire and Togo: Little information about children's health was collected. Health was not listed as an objective in the written information of any program, except for preventing AIDS and health *education* goals for adolescents. Health status appeared not to be evaluated in a systematic way upon entry into the program. The most comprehensive documentation in any program was a fourteen-page form that asked about everything *but* physical status. Another intake form included one line for "physical development," by which was meant sickness or handicaps. Other forms asked about the child's general state (good, good enough or bad) and hygiene (clean, acceptable or dirty).

Typically an outside doctor or hospital, or the program nurse, treated blatant problems such as wounds. Programs serving prostitutes had on-site voluntary testing for AIDS and STDs. There was one on-site fully staffed clinic with a pharmacy that could also provide STD though not HIV testing. Across all programs, the high cost of treatment for AIDS victims, who were often sick, was a barrier to their getting proper health care.

[64] Rajneesh Kumar Radev, Bal Vikas Ashram report, p 8.

Upon inquiry, we learned that children did have a number of health problems, including parasites (frequent), earaches, oral fungus, typhoid fever, constipation, and stomach pains. Other African child labor studies note the frequency of permanent injuries to hands and wrists, from being hit, crushed and burned.[65] Malaria, a major threat in western Africa, was not mentioned, nor were many mosquito nets in evidence.

India: The poor physical condition of children upon intake made medical care an early priority. Children suffered from old and new injuries, tuberculosis, malnutrition, stunted growth, worms, gastroenteritis, night blindness, black skin patches, and jaundice. A boy rescued from a carpet loom recounted the treatment for his infected fingers he received from the loom owner's wife: she had poured kerosene over them and burned them.[66]

The staff treated most problems, and if more care was needed, a doctor at a government hospital was consulted. At Mukti Ashram there was an infirmary for contagious illnesses; more serious cases go to the hospital. However, believing allopathic treatment was often not suited to children, the staff at both Ashrams were well versed in the use of natural remedies and nutritional supplements, and the children were trained in their use. They relied on *neem, tulsi*, camphor, coconut oil, grass, black pepper, lemon water, and local herbs to cure conditions such as colds, coughs, jaundice, swelling, itches, severe pains, weak hearing and weak concentration.

Haiti: Health problems were frequent among *restavec* children. As reported by staff, they suffered from wounds, skin diseases, blisters, hernias, malnutrition, yellow hair (indicating nutritional deficiencies) diarrhea, malaria, vaginal infections, and sexually transmitted diseases. Upon arrival, children were given a medical examination and treated. FMS had its own facility where medical and dental services were provided to their children and to the neighborhood.

8.3 NUTRITION

Côte d'Ivoire and Togo: All programs provided three meals a day, and occasional snacks. Food was normally purchased daily and prepared on site, sometimes with children assisting, in small kitchens with limited equipment. No obvious signs of malnutrition were seen. However at one center a life-skills educational session with teens featured a presentation recommending a nutritional supplement displayed by the presenter's assistant.

India: The Ashrams recognized that for their first month the children needed more food than in the normal diet, which was a well-balanced vegetarian cuisine. Children were allowed as much food as they want. A doctor was consulted for special dietary needs, and vitamin therapy was also administered. Sitting in sunlight as a source of vitamin D was encouraged for the pain associated with bone deformities. Boys as well as girls were involved in choosing the menus, working in the kitchen and washing their own dishes.

Haiti: Mealtimes were observed in all four centers. Typically, children were served a large helping of a grain or bean dish at long tables. Other menu items included rice, sardines, meatballs, chicken, cornmeal and cabbage. Domestic workers in Haiti are much shorter and 40 pounds lighter than children the same age not in domestic work.[67] It was therefore valuable that the children could have as much of the main dish and drinking water as they wanted. At Timkatek, children are given multivitamins daily.

[65] A. Kielland, M. Tovo, African Child Labor: the Facts and the Faces, p 90.
[66] Film footage, FTS.
[67] UNICEF, State of the World's Children 2006, p. 51.

8.4 SLEEP

During sleep the executive function of the conscious mind goes off duty and terrors and conflicts rise up to be worked on and mastered. Frequent nightmares, of course, detract from the quality of sleep. Psychological aspects of recovery may interfere with primary needs, including sleep. Traumatized children can suffer from intense and persistent nightmares.

Côte d'Ivoire and Togo: The children had become accustomed to sleeping in noise, heat, light, and without conventional bedding. One child recounted that when she was forced to work in a restaurant with almost no time for sleep, she would doze off leaning against the wall. It was hard to determine whether the children in the shelters were getting sufficient sleep, but regular bedtimes from 8 to 9:30 p.m. helped. Some daily schedules also included a "siesta." Sleeping accommodations varied from four-person rooms with beds for teens, to bunk beds in dormitories, to barren rooms with no beds but only thin sleeping mats on the floor. Program staff did not report the children experiencing nightmares. However, nightmares may be more common than staff realize, since children are not used to sharing their inner life with adults.

A girl's dream (Côte d'Ivoire)

Although she had not been enslaved, eight-year-old Marie exemplifies one psychological reaction to traumatic experiences. She had been brought to the shelter five days before because of severe beatings by her alcoholic father. In our research interview, Marie was given drawing materials to reduce tension and anxiety, but still she became progressively non-responsive, incoherent and disassociated. A final question, "What do you dream of?" elicited an elaborate description of a nightmare in which many people with blood on their faces came to take her back. She reported that in the dream, witches including her father who was angry, were chasing her. She woke up when they began to force her to go back.

India: Mukti Ashram children slept from 10:00 p.m. until 6:30 a.m. in bunk beds, 16 to a room. There was electricity for nighttime reading. Newer children were reported to have trouble getting up in the morning.

Haiti: The children in shelters slept dormitory style in bunk beds. The program for girls allowed free access to beds, and at least one girl was observed sleeping during the day. At the boys' shelter, however, where 40 boys are lodged, the dorm room was kept locked during the day and the beds were so close together that some could only be reached by crawling across others. There were also small cupboards just under the ceiling, making beds difficult to access.

8.5 HYGIENE

Côte d'Ivoire and Togo: All programs considered hygiene an important area of concern. One Togo center scheduled two showers a day. Hygiene came up frequently on intake forms and written behavior guidelines. One set of instructions from Côte d'Ivoire read:

1. wash hands before eating
2. to avoid insects change dirty clothes
3. comb hair well
4. wash with a sponge
5. brush teeth right away upon arising.

Though children appeared to be clean, staying clean was a challenge where they live in quarters with dirt courtyards. Some centers expected children to launder and hang their clothes to dry.

India: Unaccustomed to bathing, the children sometimes resisted this new expectation.

8.6 EXERCISE

Côte d'Ivoire and Togo: Gross motor activity for physical development and health was not a concern to most Togolese and Ivorian programs. No one talked about the value of exercise, possibly because daily life regularly required so much physical activity, such as walking to school or an apprenticeship, carrying water, or other forms of manual labor. Programs recognized the value of motor activity as a way of discharging energy and frustration, but not its role in overall development. Some programs had play areas, basketball hoops, or a small jungle gym. One had a tire swing. Girls might be offered dance as a recreational activity.

India: Prior to arriving at a program, many children had been forced to perform repetitive labor that restricted movement or overtaxed a part of the body. For example, many children had been rescued from carpet weaving, a task that required a hunched sitting posture for up to sixteen hours per day and repetitive movements of the hands and arms. The Ashrams included daily yoga and physical therapy to "make them fit." To counteract the damage of repetitive work, exercise regimes were prescribed, such as rotating body parts to improve circulation. Boys participated in active sports like cricket, football, volleyball, and frisbee.

Haiti: The only open spaces available for active play were the roof top of the building at FCCM and a small court yard at FMS. Only at this latter program were group activities involving vigorous movement observed.

9. HOW PROGRAMS ADDRESS PSYCHOLOGICAL NEEDS

In order to thrive, all children need to feel cared about, secure, useful, and accepted by the group. They need a sense of self as separate from others (identity) and a sense of being able to affect their environment (self-efficacy). The second priority of children responding to the PLAN-Togo survey was to be "treated like one of your own children."[68] Children who have been exploited and traumatized have a special need for an environment that is predictable and over which they have some control.

9.1 PREDICTABILITY AND CONTROL

In all countries, programs had a daily schedule of meal times, sleeping and waking, school and recreation. The daily schedule was part of teaching punctuality, which some programs believed helps children recover faster. At Mukti Ashram, for example, children arose at 6:30 a.m. for exercise and meditation, chores, and breakfast. From 9:00 a.m to 1:00 p.m. they attended classes in literacy and vocational training. After a two-hour lunch period there was a two-hour social education class that often focused on the human rights of the child within the larger community. Between 5 and 8 p.m. was free time, followed by dinner.

Côte d'Ivoire and Togo: In the Foyer Marie Dominique, in Abidjan, children were free to choose non-school activities as a group within the broad outlines of the daily schedule. Programs were not set up for individual children to do something on their own. Some programs allowed children to come and go freely beyond the walls. When facing major decisions about the child's plan or schedule, whether to go to school or begin an apprenticeship, the adults had a deciding voice. One boy at a center was disgruntled because he had to

[68] Professeur Gnansa C. DJASSOA, personal communication.

continue washing the windows of cars stuck in traffic when he thought he was ready to move on to an apprenticeship. The area children seemed to have the most say in was whether they would go back to their family. Most programs reported that the child had veto power over contact with the family, although the agencies may strongly encourage exploratory visits.

PLAN-Togo's youth empowerment approach took the principle of control a step further. A key to preventing trafficking and bringing about psychosocial change is helping children have a voice in the community. PLAN-Togo was implementing a successful program empowering young people to run their own radio stations. Such radio stations disseminated information alerting young people how to recognize the dangers of trafficking.

India: For Indian children rescued in a traumatic raid where they felt suddenly overpowered and terrified, it was crucial that experience in the Ashram bear no further resemblance to their former domination. Being fully informed about what to expect in this new setting and having some sense of control were important for all children sheltered there. To that end, Ashrams began gently with new children, showing them around, telling them how the place functions, and inviting him or her to rest and watch.

The assumption was that a child will go back home, although exceptions are made in high-risk cases, or with orphans or children enslaved at a very young age and unable to remember who or where their parents were. The children were encouraged to express their demands or wishes. There appeared to be a balance between giving children free choice around their level of involvement in activities, and requirements for specific programs and activities. At times staff spoke of *making* a child do something, but this may reflect a language gap rather than meaning strong coercion is used. No evidence of such coercion was observed.

A child's expression of preferences (for food, games, books, etc.) was taken as a sign of progress in recovery. Programs emphasized children being able to speak up on their own behalf and eventually to advocate for the rights of all children. Staff worked to develop "the personality" of the child, by which they mean personal magnetism and the ability to influence others.

Haiti: The children attending the afternoon program at FMS in Haiti were still subject to harsh treatment by their *patrons*, but they had recourse: if the staff learned of serious mistreatment, a committee of three or four would visit the *patron* and exert pressure to treat the *restavec* more humanely. A staff person at FMS explained that this policy has led to a radical change; children were more apt to run away from their *patrons* now than to put up with harsh punishment.

9.2 CONSISTENCY AND QUALITY OF CARE-GIVING; POSITIVE ATTENTION

Côte d'Ivoire and Togo: In these programs, there was some recognition that each child needed to have one person to be a point of primary care and reference. The *educateur* or *tantine* roles carried responsibility for listening to a particular child and helping to solve problems. Many programs had posters affirming their commitment to listening to children. Such practices represent a cultural shift and reflected a relatively new awareness that children have the right to speak and that adults should be receptive and respectful of them by allowing them to speak freely. At the same time, most adults are not skilled at drawing out a child, or finding out what a child was thinking or feeling. The traditional pattern of adults giving orders and directions and children obeying was still very much in evidence.

One exception was noted in a drop-in center in Togo where the *educateur* had received training in active listening. We were shown a photo of a session in which he was sitting on the ground

with a boy, mirroring the boy's relaxed posture. A similar program in Côte d'Ivoire had developed ways of getting children to be less self-conscious and talk more freely in a group. These leaders had skill to convey to children that they were liked and important. Most other group leaders were not as fully trained and we concluded that a truly therapeutic experience for a child participant was likely to be more the exception than the rule.

The availability to the children of a single primary caregiver was difficult to determine. But it was doubtful that even the most resource-rich program could meet the full need of such deprived children need. Given the number of volunteers who supplemented the paid staff, we assume that children in shelters are exposed to a changing stream of helpers and caregivers.

In both Côte d'Ivoire and Togo, children appeared to be on a thin diet of emotional sustenance. No signs of affection or physical warmth were observed. Very young children did not even go to their caregivers when strangers entered their space. They appeared unfamiliar with being physically comforted or held. Staff did not point out particular children's strengths or abilities, suggesting that they were not used to thinking in those terms. Moreover, the children displayed emotional hunger. One little girl wrapped herself around the legs of the visiting Director on more than one occasion, apparently seeking a response, which she did not receive. Many appeared to be conflicted between inhibition and longing for adult attention.

India: There was a warmer emotional climate in the Indian programs. Teachers, caregivers and other staff displayed caring, support, and acceptance in a number of non-contact ways: friendliness, praise, shared laughter, special names, and attentive listening. The boys tend to be *dalits*, "who have been discriminated and deprived of their rights in the society and they have never been exposed to [touching and hugging] gestures as a sign of love and belongingness."[69] For these boys, affection was expressed through playing, reading with them, and most importantly, listening to them. Being in an atmosphere where all were treated respectfully was an extraordinary experience for these formerly invisible children.

Ashram children did not have a particular primary caregiver, but they had ready access to the full staff, including the cook and the gatekeeper, as well as teachers, coordinators, counselors, volunteers, training instructors and community organizers who work in the source villages.

Haiti: The best example we observed of meeting children's psychological needs by a compensatory relationship with a surrogate parent was at FMS in Haiti. The project was begun in 1990 by a Haitian priest, Father Miguel, who recognized that children in domesticity (i.e. *restavecs*) had five basic needs that were not being met: survival needs such as sufficient sleep and food; protection and security; the need to belong and be accepted; the need for validation; and the need to reach full potential. Father Miguel, supported by Terre des Hommes Switzerland, launched a program in Port au Prince to sensitize *patron* families in order to improve the working conditions of *restavecs*, and also to provide *restavecs* with educational and psychological support in an afternoon program they could attend when finished with chores.

As the program grew, Father Miguel sensed something was missing: the all-male staff lacked a mother figure. He hired Mami Georges, a trained elementary teacher, to fill that role. In ten years, she has nurtured thousands of children, listening to them, comforting, playing, and even shopping for them. In an interview with this warm, radiant, older woman, it was easy to imagine her gaining trust, engaging withdrawn children, tending the sick, and giving affection.

[69] Suman, private communication, Dec. 6, 2005.

It was common for graduates to continue a relationship with her long after they left. She also has served as godmother to many children and taken at least one fleeing child into her home.

9.3 SOCIAL NEEDS AND RELATIONSHIPS

Children need relationships with others who recognize their individuality, affirm their acceptability, provide them with a sense of belonging, and teach them what they need to manage in society. The relational context begins at birth and is the matrix in which the child learns and develops to the late teens. When they are treated harshly, without nurturance and attention to their needs, they are unable to master early developmental tasks that prepare them for subsequent tasks. Ideally, programs in each country would help children overcome early dehumanizing experiences by providing compensatory or corrective relationships.

Côte d'Ivoire and Togo: The programs naturally reflected cultural norms for adult-child relationships. Adults speak to children to give orders; children obey. Written on a chalkboard in a classroom for adolescents were "the duties of the child: the child should help the parents in domestic work; the child should obey his parents." Children may have been discouraged from talking freely with adults, which can impair language development and problem solving. They have to be trained to converse, as was dome by some programs through discussion groups, and to speak loud enough to be heard. At a lunch table of one shelter, the older girls dominated and younger girls sat silently, seeming uncomfortable at being encouraged to join the conversation.

It would be difficult to say whether the interviewed children struggled more with inhibition, natural immaturity, or cognitive impoverishment. Most had difficulty answering questions calling for a feeling or a preference, though this may have been in response to a strange and foreign interviewer. Many did not know their age or how long they had been in the shelter.

The programs were all strong on setting limits and expectations for *comportement*, in areas such as hygiene, dress, respecting rights, cooperation, drugs, alcohol use, and sexual behavior. Two that worked primarily with teens required a signed contract listing the terms to be met for participation in the program. There did not appear to be much problem with unruly behavior.

All programs recognized the importance of establishing trust and understood that persuasion was the better way than coercion. Those who had the greatest challenge gaining trust were staff members trying to help street children or prostitutes. They succeeded, they said, by repeatedly showing up, explaining the advantages of the center, without applying pressure or coercion, and engaging the child in conversation. In two centers, non-enrolled children were permitted to drop in for food or company. This porous boundary allowed children to feel a connection to the world beyond the wall, and to interact with children who were not as disadvantaged.

The atmosphere in the centers was often relaxed, tolerant, even permissive. There were no apparent generational barriers limiting interaction between adults and children. Many staff spoke of aiming to create a feeling of family. In one program in Togo, boys had been rescued from life as homeless porters at the Benin border where they were regularly robbed and molested at night. The program director, whom they called "grandfather" instead of "sir," expressed his wish that he had funds to hire a woman to be a mother figure for them.

The children seemed to be more given to compliance than complaint. Although they didn't necessarily like being in a shelter, with the stigma associated with being there, they recognized they were better off than before. In the shelter they were fed and not beaten. They had a chance

to learn to live in community— to share responsibilities, take turns, help one another, form alliances, and perhaps even make a friend.

India: Indian programs valued children speaking up, questioning, expressing preferences, or showing anger. Growing assertiveness was deemed "personality development." One program listed as psychological objectives: "the feeling of cohesiveness, self-confidence, interpersonal communication skill and the ability, concern, and courage to express their views."[70]

Follow-up work with children suggested that the Ashrams do a good job of preparing their children for life in society. There are many opportunities on a daily basis for being part of the group. Children recite prayers in unison and sing chant-like songs together; they intoned a group welcome for visitors; they chopped vegetables together, ate together, slept in a dormitory, studied together, attended discussion groups and classes, and were even taught to conduct business meetings. They learned about laws and rights, and were encouraged to think how they might one day be able to make a positive contribution in their home communities. In the Ashrams, the boys all said that they liked being there and didn't want to leave.

Haiti: Some elements of traditional Haitian culture appear to devalue children. The comment of one program director, that the boys in his program were "like animals," is echoed in a treatise on the Haitian family, by Haitian psychiatrist Legrand Bijoux. In his view, generally in Haiti children are regarded as little animals who understand nothing, have no desires of their own, and are brought into the world so that the mother can rest.[71] Bijoux notes that nothing is done to build up a child's confidence in what adults say or do, and that adults deliberately tell children lies as a way to amuse themselves. Worse, he adds, some parents' enjoy frightening children with stories of the devil and werewolves. Children have no right to challenge the word of an adult, or express feelings or opinions. Finally, many parents, without much consideration may move a child around from one social milieu to another, separating him or her from siblings. "*Ils sont prêts à donner leurs enfants en adoption ou en service à n'importe qui*."[72]

With early socialization that may range from indifference to sadism, it is not surprising that Haitian programs focused on positive socialization. Timkatek aims to change the boy's mentality, "to humanize" him. Up to the time of entrance, the child was seen as to have been struggling for survival and not to have mastered basic civil behavior. The staff recognized that "civilizing" was a slow process that takes place through the little details of life. The Director asserted that one way of doing this is by having a little prayer before meals, which helped boys to eat calmly. "*Ils doivent avoir une certaine noblesse devant la nourriture*" said the director. [73]

Boys were taught to function in society by being assigned to work teams to learn housekeeping skills. They were taught about sex to help them learn to "dominate" their sexual instincts, lest they prey on victims. Older boys did not have an opportunity to interact with girls as part of the program; they were exposed to girls and young women only as portrayed on television.

At FCCM entering girls were seen as aggressive, badly behaved, cursing, and frustrated. FCCM offered clear rules in a code of conduct to help them adjust. With three or four exceptions, most girls appeared to be integrated into the group, with positive relationships, taking turns, actively responding to one another, and contributing to a positive atmosphere. They interacted with the

[70] Suman, Mukti Ashram report, p. 8.
[71] Legrand Bijoux, coup d'Oeil sur la Famille Haitienne p.46.
[72] Ibid, p 48. "They readily give away their children into adoption or into servitude to just anyone."
[73] "They should have a certain nobility when approaching their food."

researchers without hesitation and with interest and enthusiasm. None expressed complaints to the interviewers, although one girl wrote complaints in Creole, to keep them secret from staff. She wrote that she didn't like being isolated from her previous life and cut off from friends.

9.4 PSYCHOLOGICAL ASSESSMENT AND TREATMENT

The table provides a basis of comparison across cultures of the perceived problems of rescued children, as well as an insight into the differing mindsets of service providers. The observations are translated from the words of program staff in the four countries studied. An effort has been made to note equivalent symptoms described in the different contexts. The language of service providers in Togo and Côte d'Ivoire seemed to be more judgmental, and in fact, the children in those centers were more apt to see themselves as blameworthy.

Behavioral and emotional observations provided by program staff		
Côte d'Ivoire and Togo	**India**	**Haiti**
Fabrication, lying, hypocrisy, saying what you want to hear		Lying
Shut down, passive, non-reactive, mute	No facial expression, almost silent, disengaged, withdrawn, does not initiate conversation, halting speech	Closed Keep a distance
Trembling, palpitations, perturbation	Tremors	Restless, Turbulent
Unstable		Suicidal
Aggressive	Agression, instant anger, frustration, irritability	Aggressive
Crying all the time	Crying	Crying
Dreamy, unable to focus	Difficulty understanding	Somnolent, daydreaming
Hallucinating (*délire*)		
Wild, out of control	Obsessive demands	Uncivilized, wild
Can't forget	Intrusive thoughts about trauma	
Lost her memories	Poor memory	
Doesn't know what she was saying	Confusion	
Nightmares, trouble sleeping	Sleep problems, nightmares	Bedwetting
Defiant, angry at being here	Escape attempts	Anger
Totally unsocialized, doesn't know how to conform, not behaving well		"Like animals"
Superiority complex, alienates peers	Sense of inferiority	Egotism
Fear	Fear psychosis – fear of dark places, starving, being beaten up, not following orders, death	Fear, timidity, anxiety
No confidence	Helplessness, shattered confidence	
Nervous	Pronounced startle reflexes	React briskly
Stigmatized	Stigma of caste, enslavement, inferiority, illiteracy	Stigma
Identity issues — may not know age	May not know age, names of parents, or village	
Won't go to school		
Can't stand the presence of adults	Aloneness, alienation	
Years of accumulated sadness	Sadness	Sadness

The current functioning of children is the product not only of whatever trauma or mistreatment they may have suffered in a work situation, but of all their experiences in family and community that came before. The exploited child often comes from a family with a limited set of choices; the situation in which their children end up may have seemed to be the best available option. The harsh treatment a child then experiences in a rug loom, cocoa plantation, or kitchen may seem to be a continuation of the hardships he or she has already known.

It is a challenging task to assess and treat children suffering the effects of a lifetime of poverty exacerbated by neglect, abuse, terrifying experiences, physical and psychological trauma. All programs would probably agree that they were providing a safe, secure, accepting environment in which children can learn, make friends, and begin to visualize a different future. They also provided what they could to make it possible for a child to survive on his own and avoid re-victimization. Within that framework, there were a variety of specific methods that facilities and their staff employed in response to the perceived needs of their clients.

Many of the problems recorded in the table translate into western mental health concepts. The trauma theory list of indicators (page 126) includes these equivalents: intrusive memories, ruminative preoccupation, paralysis of initiative, sense of defilement or stigma, explosive or inhibited anger, dissociative episodes, and *persistent dysphoria*, "a state of confusion, agitation, emptiness, and utter aloneness" coming from the coalescence of repeated experiences of terror, rage and grief.[74] According to Terr, two kinds of fears continue to plague the trauma victim: literal fear directly connected to traumatic experiences, and a more subtle kind, such as fear of looming objects, of being alone, of strangers, of the dark, or of being outside.[75] Rohner's cross-cultural studies point to anxiety as a universal sequel to rejection.

The children had little experience talking about their feelings. The caregivers also often lacked acquaintance with the language of feelings, and did not know how to go beyond symptoms like trembling or crying to the underlying cause; they often misread the outward manifestation of inward distress. In one program, a recently arrived girl who had been beaten and scarred with an electric cord was assumed seeking attention when she complained her stomach was hurting.

Children repeatedly made to feel helpless in overwhelming situations may become immobilized and unable to help themselves. Once out of the situation, they may be filled with rage that lasts a lifetime and indiscriminately targets any source of frustration. In cultures relying on corporal punishment it is not surprising that children learn ways to keep rage hidden. Presenting behavior may be described as "instant anger" or being "aggressive; wild, out of control."

9.5 EVALUATION AND ASSESSMENT

On entry to the Indian centers, the children often displayed skeleton-like appearance, wounds, hyper-vigilance, sunken eyes, stunted growth and jaundiced skin, all diagnostic indicators of the harsh treatment they had been subjected to. While many children in an area might suffer from the malnutrition that comes with poverty, the condition of the rescued children was worse. Sometimes they were so weak they couldn't stand for five minutes and fell down during evening prayer. Some children in Ivorian and Togolese programs also arrived in a life-threatening condition that took months or years to repair.

[74] J. Herman, p. 108.
[75] L. Terr, Too Scared to Cry: How trauma affects children, and ultimately us all. 1990, p.46.

No formal psychological or developmental assessments were routinely performed in any of centers visited. Intake forms might include space for impressions of the child, but these were by no means systematic. Observation, chatting, and staff discussion were the principal means of gaining information about the mental status of the children.

> Staff members sit with the children to talk with them, counsel them to know what goes inside. Assessment of each child's condition is done by observing its physical growth, ability to communicate with the other children, and staff members, and ability to understand the message conveyed to them. All this is done through close interaction with them.[76]

A Togo program director trained in Europe gave his opinion that staff had good instincts but were guided only by what occurs in the moment and did not have any theoretical base or system in common. "They have no organized way to address trauma. For children, it's therapeutic just being here. It's very different from everything they know." This director was developing training for social workers and *educateurs*, who had most direct responsibility for the children.

Counseling

All programs reported providing some form of counseling. In Côte d'Ivoire, Haiti, India and Togo, it was often difficult to pin down a precise definition or purpose, beyond being a process which went on between a child and adult by prearrangement or spontaneously. Counseling might focus on a problem or concern of the child or might spring from an adult's assessment that action must be taken to help change something about a child's behavior or emotional state.

Counseling might or might not take place in private. One Togolese center hung straw circular panels from the roof of the gazebo to create an illusion of privacy since they had no spare rooms for sessions. The brochure of an Ivoirian drop-in center listed a service of "supportive listening." However they had no private space where this could take place. The freestanding metal booth labeled "listening room" in the courtyard had been closed by the parent organization due to lack of funds. However, this center did have a large performance room with a stage that was unused during the visit, except for two adults playing checkers in a corner.

Counseling at one Ashram we visited was provided by caregivers who had no special training in psychology, mental health, child development, or child trauma — although there was a staff member with the job title "counselor." Staff training did stress children's need for love and affection, care and support, guidance and security. In this Ashram, individual or group counseling was conducted once the child had settled in, and if a child felt he or she had a problem, he or she could approach anyone, including the Director.

Individual counseling appeared to be a semi-structured and scheduled process in the Indian programs visited. It involved first understanding as much as possible about the child's family, cultural, economic and social background. The most important aspect was to have the child talk about personal problems that could not be talked about with anyone else.

[76] Bal Vikas Ashram investigator, Rajneesh Kumar Radev, personal correspondence, 12/3/05.

> Staff involved in it focus on the feeling of the child before and after rescue operation and try to help them in recovering from bad experiences. Love and affection shown by the counselor plays a crucial role in recovery of the child.[77]

In Haiti, ongoing, scheduled sessions with individual children were uncommon. One program director reported that each child had one private session per month. He listed prayers, affective training, discipline rules, and monthly group meetings with different themes as the primary ways children were helped with their mental health. He added, "We give every child a leaflet or brochure to help them to reconstitute themselves."

Group sessions, reported by nearly all programs, may be a more powerful form of therapy than individual counseling because the stories of others' experiences serve to diminish the sense of isolation, reduce the stigma attached to low status and enslavement, and provide perspective. In the group, children are also encouraged to think of ways to prevent child abuse and enslavement, such as reporting suspected traffickers to the police. Children develop ties to one another through this process, which adds to their feeling of belonging, security and support.

Use of mental health specialists

With almost no psychiatrists, and few psychologists, available, social workers with various levels of training in child development or mental health were more common in the programs. Most of those in Togo and Côte d'Ivoire recognized the occasional need for specialized help and had some reliance on psychologists. Psychiatric help was not available, although by western standards, it would certainly be indicated for children described as "delirious" (hallucinating) or "carrying years of accumulated sadness." Psychotropic medication was almost unheard of.

There was no mention of psychiatry or psychotropic medications in any Indian program. One Ashram reported they do occasionally call upon psychologists to provide trauma therapy, as well as providing individual and group sessions themselves. Only one of the three Haitian programs reported using psychological consultation, but only once every two months. All Haitian programs recognized the children were not adjusting well and needed additional help.

The amount of psychologist time available to the programs varied from daily to once every two weeks, to an on-call basis. "Most kids are not pathologic," said one psychologist serving a program in Togo. "They go wild at first. At nights sometimes they go overboard." Some program directors expressed a need for more psychological assistance, but recognized that there were few psychologists in their geographical area, and little money to pay them. The director of one program serving prostitutes said they had access to a psychologist, but the girls refused such help as they believed it to be completely irrelevant to their lives.

Three psychologists in Togo and one in Côte d'Ivoire were interviewed to learn how they go about helping the children. They all remarked that shared cultural patterns inhibiting children from talking to adults, and the extra layer of maltreatment by adults, made the psychologist's traditional role of getting children to open up particularly challenging. "An exploited child won't talk about what has happened. I'm not sure why not," said one psychologist.

Instead of exploring the interior life of a troubled child or what it means to be without mother or father, the psychologists were more apt to focus on the child's behavior and external problems, and to make suggestions to the child or the staff for solving them. One goal of therapeutic help, according to one psychologist, was to get the child to break ties with the tragic

[77] Rajneesh Kumar Radev, Free the Slaves research notes, p, 9.

past. That was accomplished through theme drawings, making and using puppets, putting on a circus, and gymnastics and running around (referred to as *ergotherapie*).

The pain of separation

Because her mother could not provide for her, Deezou, who is now 11, was sent to work in someone else's house in exchange for food. There she had to wash the clothes, sweep the floor, wash the dishes, clean the shower, and watch the baby. Once her mistress threw scissors at her, causing a wound to her back.

One day when she was given nothing to eat, she went to neighbors for food. That angered the mistress, who beat her. Deezou ran away to the police, who brought her to the shelter where she had been for several months. "They do help me here," she said. Her mother lives in a distant village and Deezou has not seen her. When the interviewer said "It must be very hard not see your mother," she nodded and tears began to run down her cheeks.

Soothing, smoothing things out and solving practical problems of daily living, rather than exploring and treating, seemed to be the province of mental health specialists. One Ivorian psychologist had invented his own tools of the trade. Wooden boxes, open on one side, with a mirror attached to the opposite side, were used to calm agitated children by asking them to trace a dotted design while looking in the mirror, a frustratingly difficult operation. For children who had trouble sleeping, he had made CD's of five kinds of music, each geared to a different need, which he played on his computer for the would-be sleeper on a cot in his crowded office. He sometimes relied on a child's handwriting, magnified for clues to the child's make-up and problems, a skill that is normally thought to require special orthographic training.

When asked about outcomes for the children, this psychologist reported positive results. The raped girl, who did not talk during her initial sessions, now was smiling, spoke, and went to her training course. The boy traumatized by war could now sit still and understand. His nightmares were quiet. Another boy was now a good worker at his apprenticeship. The psychologist felt that defiant children take a longer time to help, and complained that often it was hard to find the parents of children in the shelter. He ended saying, "And there are so many children."

A Togolese female psychologist worked with teen girls who were formerly exploited as street porters, and may also have been involved in prostitution. To get the girls to go into a twelve-bed rehabilitation center, the staff social worker slowly gained their trust in the marketplace and finally convinced them to go into the center. The psychologist, who kept a confidential record, required a girl to sign a contract for behavioral change, first exploring what she saw as her bad behaviors, such as lying, stealing, or "not being able to communicate." The social worker also helped her to see whether she was motivated to change.

The main ways of promoting positive change, in addition to providing a safe shelter, were by getting the girls to take responsibility for the cooking and other household tasks, by group discussion, and by loving them as human beings. To manage anger, they were taught to relax by deep breathing and to discharge aggression through exercise. Faith and a spiritual life were encouraged. The staff also worked with the girl's family. They assessed progress by the girl's improved behavior. When asked how they knew whether a girl actually felt better about herself, the response was "by looking at her life now. She no longer sleeps outside."

Religious teaching

In all settings, developing spiritual awareness was thought to make children feel good. Incorporated into the daily schedule in the Ashrams were group prayers for one another and the Ashram. God was referred to in regular discourse in programs run by Christian organizations and orders. The degree to which this helps the child or fosters a strong faith is unclear.

9.6 APPLICATION OF THEORY TO ASSESSMENT AND TREATMENT

The story of one exploited child is examined from each of the three theoretical perspectives discussed above. Each of the theories could inform a clinical assessment and treatment plan for Therese.

Therese's story (Togo)

As she tells it, Therese doesn't have any place she comes from. Nor does she know how old she was when her father placed her with a stranger. Working in the restaurant was really hard. For about two years she lived this schedule:

- Get up at 2 am to cook food to be sold between 7 a.m. and 11 a.m.
- After a short rest, cook all afternoon for the evening meal.
- Serve food from 6 p.m. to 11 p.m. Wash dishes.
- Sleep on a thin mat on the floor from midnight until 2 a.m.
- She was so tired she sometimes slept leaning against the wall, for which she would be beaten or have her ear pulled. Crying increased the beating, but she would cry anyway.

One day she ran away and rested. A lady took her to the radio station where lost children were announced. She was reclaimed by the restaurant lady who took her back to her father.

Her father understood that the restaurant was not a good placement for her, so he gave her to a woman who sold material in the market. Her domestic service consisted of taking care of the woman's baby at a relative's house, then returning home at the end of the day to begin her housework. She could go to bed only when it was all finished, around midnight. At this house she was beaten more than before. One day after she finished all her work, she left the door open by mistake. For that she was beaten with ropes and a pestle.

She ran away and eventually found her father. After hearing her account, he kept her with him for a couple of months. Another woman needed help selling water and agreed to pay her $2-$4 a month. She did as instructed, but never received any money. She would be beaten and shouted at if she did not sell enough water. One day, water customers told her to come back to their stall at the end of the day when they would have money to pay her, but when she went back, they were gone. She was beaten again.

She ran away again, ending up in the market where she joined other child porters, and prostitutes. She asked in vain where to find the road to her father's village. Four years ago, a woman found her in a market stall and took her to a rescue center in Lomé. From there she went to a long-term program for young prostitutes. That program's tireless search for her father was finally successful, and Therese got to see him once more before he died. Now 17, she has finished training as a seamstress and is waiting for her diploma. She hopes the center will help her set up a shop, but does not know if that is possible, because they have not discussed it.

Parental acceptance and rejection theory

Clinical assessment. We would be alert to characteristics consistent with a history of parental abandonment and rejection. We know nothing about the quality of Therese's early nurturing or what became of her mother, but we do know that her father sent her away again and again into abusive situations. If the initial episode of sending her to live and work for others occurred before Therese had the cognitive faculties to understand why her father acted as he did, she would have felt profoundly rejected and abandoned. This is true regardless of his motives, or any personal or environmental conditions beyond his control that may have informed his actions and curtailed his options. Young children feel a strong sense of loss when separated from their parents, even when a parent has been abusive. In addition, we would expect Therese to have a negative worldview, feelings of inferiority, depression, or anger, a lack of confidence, and anxiety.

Clinical intervention. It is probably too late to make up for the absence of a nurturing, protective, loving caregiver. The best one could do at this point would be to provide her with a surrogate parent, someone who would take a genuine and affectionate interest in her over many years. Often this is impossible to achieve. The level of damage to the child's ability to trust, to experience affection without fear or to manage deep ambivalence toward caregivers may be very high. In that case, a setting of greater emotional neutrality, like a group residence with paid caregivers, might be more helpful.

Trauma theory

Clinical assessment. We would direct our focus to the effect of innumerable beatings by those who had authority over Therese and possessed unlimited power over her. The consequences of these deeply damaging events were exacerbated by her subsequent experiences in the market as porter or prostitute. Taken as a whole, the cumulative weight of these experiences might qualify Therese for a diagnosis of complex PTSD using Herman's taxonomy. Whatever her innate personality, it would have undergone profound alteration as she coped with the chronic abuse meted out by powerful adults. Therese would likely face a future of turmoil and instability in psychologically important relationships, periods of acute fear, and somatic manifestations of chronic anxiety and depression like constant fatigue, insomnia, gastrointestinal problems and migraine headaches. Therese would also be highly vulnerable to re-victimization.

Clinical intervention. Trauma theorists, including Herman, maintain: "The core experiences of psychological trauma are disempowerment and disconnection from others. Recovery, therefore, is based upon the empowerment of the survivor and the creation of new connections. Recovery can take place only within the context of relationships; it cannot occur in isolation."[78]

Recovery from trauma is best accomplished within the context of a relationship with a therapist, who knows how to establish safety, diminish helplessness, restore autonomy, foster insight, develop empathic connection, nurture an ability to trust, work with rage, negotiate boundaries, set limits, and develop a positive self view. Yet such therapists do not exist in Therese's immediate world, and may not be available in her country at all. John Frederick describes such a situation, for girls returning to Nepal from India.[79]

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[78] Herman, p. 133.

[79] John Frederick, reporting on the level of development of mental health awareness in Asian programs serving child sex workers says "with the exception of a few NGOs, no facility uses trained clinicians for assessment, ongoing counseling or any except extreme psychological problems, if then. With returnees from India, PTSD is hard to assess

Psychosocial approach

Clinical assessment. This theory suggests the presence of severe and prolonged developmental disruption, arrest, or regression as the basis for the problems presented by Therese. It is based on the notion that a child's natural resilience will lead to recovery from harsh circumstances if the child can live within a benevolent social context. Therese's psychosocial development has been severely inhibited and damaged by the acute and chronic horrors she has experienced throughout her life. She has been robbed of opportunities to achieve critical milestones of cognitive and emotional development.

Clinical intervention. Therese may recover a degree of normal functioning within a secure and predictable environment that, at least in part, may restore developmental opportunities. Though ideally that environment is one's family of origin, surrogate families and residential treatment facilities may also be capable of fulfilling these requirements. Some of Therese's experiences in the two centers that have cared for her seem to have been restorative. For over three years she has been reaping the benefits that come with living in a safe and stable environment and being treated in ways that reflect the programs' strong ethic of protection, child rights, and empowerment through education and professional training.

The center where Therese now lives serves as the psychosocial locus for recuperative work during her stay. It strives to provide a number of the elements that repair and enhance development: mutual respect; shared responsibilities; support to achieve goals; regular daily routine; boundaries (girls are only allowed off site on Sunday afternoons); group process for decision making; working together to earn money for support; attention to medical, educational, vocational, and recreational needs; consistency from caregivers; and validation rather than judgment. When asked what happens to the girls when they leave, the center director answered that they marry or they go back to their families, or they die of AIDS.

The various theoretical perspectives agree that Therese is facing a very difficult future. She apparently has not yet developed enough assertiveness to discuss her most pressing question, whether the center will help her set up a shop, with the adults she has lived with for three years. This may reflect a problem in relatedness that has not yet been worked through

10. HOW PROGRAMS GAUGE SUCCESS AND FAILURE

Each program in every country reported a high level of treatment success. However, concepts of success or failure may differ according to cultural context. A program with the goal of "stabilizing" children claims a high rate of success, defined as achieving obedient participation in program activities. Various additional measures of success are used informally by staff.

10.1 COMPLETION OF TRAINING

In the Ivorian and Togolese context, one measure of success outweighed all others: becoming economically productive and self-sustaining. Particularly gratifying were those "graduates" who operated their own shops and took in younger apprentices from the program. Such a man was Mitterand, a former street child. Now 25, he paints signs in a tiny atelier, assisted by two

as such, although is clearly evident in about 5% of the cases. Symptoms of complex trauma are evident, as many present with severe depression, severe social alienation, aggressive behaviors, refusal to speak, etc. Suicidal threats and attempts occur (and the suicide rate of women of childbearing age in Nepal is very high, in any case.) However, with the exception of one organization (CVICT), no facility has the capacity to identify or address PTSD, and would not understand or be able to address complex trauma." Email correspondence, dated August 1, 2005.

apprentices. Helping another youngster learn the trade was his repayment to the center for all it did for him. Ivorian and Togolese programs count as failures children who do not complete the prescribed plan of school or vocational training. Amina was presented as a failure story.

A "failure" story (Togo)

When both her parents died, Amina went to live first with her grandfather, then her aunt. To correct Amina's "behavior," her aunt carried out a sara ritual, involving seclusion, putting food three times down a toilet hole, and finally having Amina serve food to everyone, and join in. Amina was thirteen when her aunt decided to take her to work in Gabon, along with three other children. At first Amina was happy at the prospect of a boat ride but became frightened by its small size and by being transferred twice from boat to boat. When they reached a port, finally, the children were exhibited on the dock to people who came to buy them. She was considered too young to be a good worker, but a woman took her anyway. The woman threatened her with police action if she did not work harder. Soon she was selling oranges in the market.

After a while, her aunt reclaimed her and gave her to a Malian family to be a domestic servant. She was treated better, but then her aunt moved her to another Malian family where she had to work selling couscous until 1:00 a.m., and then start again with only four hours sleep. Her aunt got the money from the sales; Amina was never paid. She fled to her aunt who simply returned her the next day. More placements followed until one day when she was selling milk she was knocked down by a "moto" and her milk container was destroyed. For this she was beaten. As the owner attempted to put pepper in her genitals as punishment, she fought back and escaped.

With the help of another woman, she found her way to the Togolese embassy, which facilitated her return by plane to the care of the Directorate for Child Protection, the governmental agency charged with assisting trafficked children. After a day in prison, the aunt paid restitution to fund a small account of about $270 to aid Amina's future. Amina also received $50 to spend as she wished. Now fifteen, and out of the rehabilitation center, she lives with relatives, including an older sister. She did not want to go to school any longer because she felt she was too big for the class and did not do well. Although she wants to learn hairdressing, she has been told she must learn to be a seamstress. It is not clear whether she will receive further training.

10.2 PERSONALITY DEVELOPMENT

The Indian programs focused on symptom amelioration. The table of behavioral and emotional observations (page 144) lists many signs of distress identified in clients. One ashram reported that almost all boys (98 percent) are asymptomatic when they leave. Indicators of personal adjustment were also sought. Ashram interviewees were almost poetic in describing how well children under their care were doing. They saw them as surprisingly quickly becoming healthy, happy, smiling, self-confident, responsible, assertive, "cohesive," able to get close to others, literate, and empowered. The ashrams also provided education in life skills, business management, bookkeeping, agriculture, and vocational areas. Their goal was to rehabilitate children to the point where they could go back to their families, and also become economically self-sufficient and positive change agents in their communities. Sanjay's was a success story.

A success story (India)

When Sanjay's father died, his mother was unable to provide for him and his six brothers and sisters; at age six, he was sent into bonded labor, to work in the carpet looms. He was sold several times until he was found by an activist who contacted CHILDLINE in Allahabad. After rescue he was placed at the Bal Vikas Ashram (BVA). Since he could not remember the name of his village, he remained there a year. When his mother was finally located, he went to live with

her and now attends primary school. Through Bal Vikas Ashram's income generation project, his family received money to buy a cow, which provides income from its milk and offspring. The family plans to pursue animal husbandry, and Sanjay is ready to apply skills for daily living that he learned at BVA to earn a living and participate fully in the life of the community.

10.3 IMPROVED CONDITIONS FOR EMPLOYED CHILDREN

Foyer Maurice Sixto described its success over ten years helping child domestic servants in Haiti. Its work does not usually lead to reinsertion, but to improved conditions for *restavecs* where they were. If a child reports mistreatment, the host family receives a visit from the FMS committee, inquiring how things are going and suggesting other ways of discipline. *Patrons* are persuaded to allow children to attend school or training programs after their work is finished. FMS provides free uniforms, a meal, and an education (something *patrons* are supposed to under their agreements with the families). FMS argues it is in the employer's interest to let a *restavec* attend because work is finished more quickly by a child looking forward to something.

A Dutch missionary, Sister Marte Vonrompay, was working with 48 *restavecs* using the same strategy as FMS. She did not think the *restavec* system should be abolished entirely because many biological families lacked the ability to provide for their children. She worked to educate *patrons* about children's rights and encouraged the children to learn their duties and carry them out well. She informed us that the *restavecs* with whom she had been working were given better food, some free time, and better sleeping accommodations.[80]

10.4 REINSERTION AND REINTEGRATION IN THE HOME COMMUNITY

The usual expectation in all countries and shelter programs was that children will go home to parents or extended family. Yet this is difficult, expensive, and often may not prevent re-trafficking of children. Reinsertion, as it is now practiced, is considered problematic by many caregivers and at least one program director whom we interviewed in Africa.

Re-integration of children is profoundly difficult due to extensive gender discrimination, possible dysfunction and extreme poverty of their families, the absence of women in the workplace or living independently, reluctance of families and communities to accept children whom they do not believe they can adequately care for, stigma arising from their abusive experiences, the absence of employment opportunities, and the lack of educational provision in their home areas. Added to the difficulties of locating many families, their reluctance to receive a child back, their possible unsuitability as caregivers, and the likelihood of re-exploitation or mistreatment, reinsertion is a dubious approach to providing for children in the long term. Ideally there would be frequent visits for a year or more to provide guidance to the receiving caregivers, to assure that the child is not exploited again, and to arouse the community to protect children. Few programs can afford this level of monitoring and intervention.

Kielland and Tovo point out the difficulties of rescuing, restoring and then reinserting a child:

> Rescue operations can be very complex in at least two ways. First, the rescuer must be prepared to take the responsibility for the children rescued, with all that is involved. Sometimes this turns out to be both more costly and more difficult than anticipated. For instance, the child's parents may turn out to be unsuitable for reunification efforts, or the child turns out to have developed conditions, such as HIV or severe psychiatric disorders, that demand great resources to be dealt

[80] Telephone interview with consultant Jean Plaisir.

> with. Second, rehabilitation and reinsertion require long-term follow-up, which is both costly and difficult. Not coincidentally this is one of the most common weaknesses of many current projects. For example, evaluating a reinsertion project for children who had been intercepted during trafficking, the project team found that 80 percent of the children had been re-trafficked. Enormous amounts of money tend to be wasted because not enough attention is paid to follow-up, thus jeopardizing sustainability and wasting resources.[81]

Terre des Hommes has twenty years experience in *insertion* (a term they prefer, not wanting to put the child back into exactly the same situation). They attempt to do three follow-up visits with each of the 300 children a year they return, but this strains staff capacity. Consequently, they are developing partnerships with local organizations to monitor placements. They have found bringing a child back home is not always a happy moment; it implies that the decision to send the child away was a failure. The child has who has now been exploited is no better off. In addition, a child questioning the decision of parents or other adults often meets disapproval.

Terre des Hommes (TDH) is now questioning whether reinsertion is a desirable goal. In Togo, where three-quarters of trafficked children are used as domestic servants, if a child is taken away, the "host family" typically just replaces her within weeks.[82] Instead of rescuing, TDH is considering an option of improving a child's situation with her "host family." TDH would try to persuade them to send the child to school, allow communication with parents, and provide access to medical care. The experience of the Haitian programs suggests this is a viable option.

10.5 THE CHILD'S ROLE IN THE DECISION

Although there is considerable variation among villages and countries, often a village has nothing to offer a child to make it attractive for the child to return: no school, no electricity, no water, no employment possibilities, no strong relationships, a dead end.[83] Many children are returned against their will. John Frederick, Director of Ray of Hope in Nepal, reports that in Asian countries the family circumstances that led to trafficking are not considered in the decision to return a child. Children are routinely returned to abusive and trafficking families.

A child expressing reluctance to return should be taken very seriously. The director of one Ashram did so only when hearing a boy who cried and begged not to be sent home because "my father is a drunkard and he will send me back to the looms."[84] Most projects do not have the option of alternative long-term care. As Kielland points out:

> exactly how to respect children's will is a real challenge since sometimes they have a limited understanding of their alternatives, and may therefore defend their right to stay in an unnecessarily tough situation. In addition, children are often loyal, even to abusive parents and exploitative employers. In particular, those who are used to exploitation and abuse from early on can easily be manipulated into loyalty with the wrong people. Besides, acceptance and submission is a survival mechanism. It is therefore important to stress that listening to a child should not mean to give that child sole responsibility for decisions that can be critical for his/her future.[85]

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[81] Kielland & Tovo, p. 156.
[82] Frederick Baele, Terre des Hommes, Togo, personal interview, Lome, Togo, October, 2005.
[83] F. Baele, Terre des Hommes, private communication, December, 05.
[84] Unpublished film interview at Bal Vikas Ashram, conducted by FTS, August, 2005.
[85] Kielland, private communication, December '05.

FMS sought to return only the most seriously abused and youngest Haitian *restavecs* to their biological families. Decisions to seek reinsertion were made by a committee consisting of the founding director, Père Miguel, the social worker and two others. The committee searched for the family, even if far away. They explored with the family their attitude toward the child, their ability to have the child back, and what kind of help they might need to ease their situation. FMS provided the resources necessary for the child, upon return, to continue in school.

A successful reinsertion story (Haiti) told by Mami Georges of FMS

Robert, age eleven, was sent to work in a beautiful house. He was expected to sell water in the market. Once he used a few coins from the proceeds to buy something to eat. His employer beat him with a cowhide strap, which was observed and reported by children enrolled at FMS. The center allowed Robert to come for the afternoon meal to assuage his hunger. One Saturday, when FMS was closed, he was so hungry he used all the water proceeds for food. That time he was so badly beaten that he came knocking on my door. My heart was broken. I called Père Miguel who came the next day. We contacted the police who authorized the FMS committee to take custody. When he had recovered, we went looking for his family in Gonaïves. We discovered that the family's house was even more beautiful than the employer's house in Port au Prince. The parents said that they had thought he would have a better life in the city than they could give him. They had not understood at all what his life would be like. We made sure they would send him to school. They were so happy to have Robert back. In gratitude, they sent turkeys and eggs to FMS.

11. DISCUSSION

Kielland and Tovo tackle the thorny question of whether placing limits on child employment in Africa represents a form of cultural imperialism. They conclude that child labor

> should be reduced in Africa today because it interferes with good child development and it jeopardizes economic growth. Regardless of culture, most people share the desire to raise smart and strong children who will turn into successful and responsible adults, and that is what this debate should be about. Integration of knowledge does not necessarily require dramatic cultural change.[86]

Heavy and prolonged laboring quickly wears children out. According to Meillassoux:

> they cease to represent the seeds of the future either for their families or for themselves.... They need to be put to work at an ever younger age. And the children themselves rarely have enough time or energy left to devote to their studies and prepare for the future.[87]

We did not undertake addressing the contention of some in the field of child labor that attempts to remove children from the labor force, including worst forms of child labor, should be undertaken only if better economic alternatives exist for the children and their families.[88] Instead, we set out to identify the needs that should be addressed in order to successfully reintegrate children who have been enslaved in Côte d'Ivoire, Haiti, India and Togo. We

[86] Kielland & Tovo, p. 161.
[87] Meillasoux, in Schlemmer,ed. P.320.
[88] That question has been a source of debate among reformers and policymakers, even in the United States. As late as 1922 a broad coalition of child advocates in this country held that social and economic safety nets should precede legislation that set a minimum age for employment, lest child safety were to come at the expense of family starvation. This argument became a catalyst for relatively swift and dramatic changes in family and income maintenance policy at the state and federal level.

discovered that it was possible to identify the impact of enslavement and the worst forms of child labor for many children, but impossible to explain how these needs vary according to differences in gender, age, type and length of enslavement, or cultural factors. We had assumed a level of record keeping that was not present. In addition to complete case records, longitudinal and aggregate data would have been required to answer these questions.

11.1 CASE MANAGEMENT

We discovered in nearly all agencies surveyed, that case management was, at best, rudimentary. The lack of intake information, uncertainty of the role of some caregivers, and absence of a coherent plan for each individual meant that while children were safe, they may not have been progressing as well as they might have been. Progress from intake through treatment and rehabilitation, to reintegration and autonomy, can be both charted and facilitated through reasonably simple management tools. Record-keeping as a treatment and planning tool and a suggested interview protocol are provided in Appendix A. Clearly, there must be sensitivity when collecting information from an abused child who reaches a shelter. However, given that proviso, from an initial assessment an appropriate treatment plan can be constructed.

We observed a number of appropriate rehabilitative activities that could be part of an initial or ongoing plan occurring in the agencies surveyed. These included:

- child participatory activities, giving children a sense that they have some control over their own environment and activities,
- sharing time, when children talk together about themselves, sharing feelings and concerns,
- cooking and other joint maintenance work, giving children a feeling of accomplishment and caring for others,
- art, music, dance and other creative therapies,[89]
- education (in addition to the information and skills learned, education gives the child a sense of accomplishment and of working in a group toward a planned future), and
- the chance to establish a compensatory relationship with a trusted caregiver or volunteer, helping the child to build up a healthy relationship, trust and attachment.

11.2 THE NEED FOR PSYCHOLOGICAL RECUPERATION

While these activities set the stage for growth and healing, they may not be sufficient to address a child's emotional trauma. Some children will require much more support to address their feelings of despair, hopelessness, fear, anxiety, complex PTSD, stigmatization, disrupted sense of sexuality, or their anti-social behaviors. The table (page 144) cataloging reported "problem" behaviors clearly shows extreme psychological and physical symptoms and needs. A child who is hallucinating, given to instant rage or expressing physical manifestations such as bedwetting or the inability to sleep without nightmares is clearly in need of intervention and support, from whatever theoretical or practical orientation. There is, however, little consensus on what comprises effective rehabilitative counseling.

[89] To help with such activities, we recommend an ECPAT publication compiled and written by Colin Cotterill, Ideas Bank of Creative Activities for Children at Drop-in or Residential Centres (Low budget activities for non-literate children). Available online at www.ecpat.net.

The children we observed risk the annihilation of their selfhood. Children need to be prized by someone, even if not a parent. Resilience demands that each child feel special. While it can be awkward to single out individual children in a group setting, it remains imperative to build in each child the confidence that derives from feeling individually recognized and cared about.

In Côte d'Ivoire and Togo, praise, rewards, or singling out for special mention were not observed, nor was use of such tokens as pencils or stickers as rewards. The focus was on the children's problems, not their strengths. Indian interviewees reported they do praise children, but it is not clear whether the group or an individual wins adult approval, or what form it takes. The most potent form of praise is specific to the child's actual accomplishment or contribution, rather than general, blanket remarks or praise for having stopped a negative behavior.[90]

Having a constant primary caregiver engenders the feeling of being important to someone. The longer a relationship has to develop, the more powerful it can be. In the safety of that relationship, children can begin to build trust to share what is personal to them. It is of enormous benefit to future adaptation to experience the give and take, warmth, energy, and pleasure that can come from a relationship with a person who listens to them, and whom they can count on to be on their side and advocating for their interests.

In considering the notion of *psychosocial recuperation* of exploited children, one must consider the great divide between cultures that think of mental health as it relates to the separate self, and cultures that have more of a socio-centric view of the self. Individualistic psychotherapy promotes self-exploration and insight; the collectivist perspective tends toward harmony, integration into family and other primary groups.[91] This study has attempted to glimpse how culture influences therapy, and the interventions deemed appropriate in each country studied. At the same time, all of our observations have come from the individualistic point of view.

An individualistic model of psychotherapy was not apparent in the programs visited. In these more collectivist societies, where the family, especially siblings, the clan, and the village have more salience, children have weaker ties to birth parents. Raising a child is more of a group project, and if the group becomes weakened by loss of leadership, civil unrest, internal conflict, economic desperation, or natural disaster, children become more vulnerable.

11.3 COLLECTIVE APPROACHES

Those interventions that strengthen groups appeared to be most culturally appropriate. Almost all programs included some kind of group work. There were topical discussions, social learning groups, unstructured opportunities to chat, problem-solving, peer mediation, and even therapy groups where children were expected to tell what had happened to them, though not to discharge intense feelings. Many programs also offered parent groups and expected their participation. In Togo, PLAN-sponsored community organizers help villagers form clubs to promote child protection and prevent trafficking; a youth radio station is one of their resources.

Children are further helped to feel a part of the group through regular participation in unison expressions, such as chanting a welcome for outsiders, singing, praying, and recitation. In one ritual at Bal Vikas Ashram, boys raised their fists as part of a song about their rights as children,

[90] Rudolf Dreikurs, M.D, & Loren Grey PhD *A Parents' Guide to Child Discipline (1970,* Hawthorne Books). p. 28; see also: Felice Kaufman, PhD, *Family Education: What your Child Needs to Know,* www.familyeducation.com/experts/advice.
[91] Gielen, Fish & Draguns, p.382.

and concluded by shouting slogans that called on government to end child labor and for children to stand up for their rights. An inspirational song written by the director of one program was sung at the start of every gathering. Such group activities built cohesion and solidarity, drawing in children who were more inhibited or shut down.

Children were also given chores, teaching a sense of responsibility. In all centers, boys and girls had regular responsibilities for keeping their area tidy, doing dishes and laundry, helping in the kitchen, and assisting other children. One center expected children to earn a little money in the market. Sometimes it was important for children to contribute to their own support or find a way, directly or indirectly, to pay back the center after they left. These practices helped children feel good about themselves by contributing to the good of the community.

11.4 INDIVIDUALISTIC APPROACHES

So far this discussion has focused on ways of helping children in accordance with a psycho-social care model. We turn now to how more individually-oriented approaches (the Rohner model of parent-child relationships and the Herman model of the effects of trauma) may be put into practice. How relevant are these theories to the cultures of the countries visited, where adults pay greater attention to outward behaviors than to the interior life of the child?

There is some basis for believing that feelings are intricately linked with behavior: "Change your behavior, and you'll feel better." The implication is that it is too time-consuming and difficult to reconstruct the damaged insides; stick with what shows. What, however, does this allow for the consideration of internal psychological damage? Research has found that rejected children show a consistent set of negative personality characteristics, regardless of culture, though other factors may also be explanatory.[92] Two decades of work on the effects of trauma make a persuasive case that children who are traumatized are harmed in long-lasting ways. And these effects damage their personal relationships and standing in the community.

> Socially divisive forms of psychopathology invariably bring the individual into positions of conflict with group mates and lead to social isolation, retaliatory punishment and violence, and/or banishment. The result can be misery and suffering for the person showing the "psychopathology" as well as impaired biological fitness. And although many individuals who show such behavioral pathologies may have been abused, exploited, and generally mistreated (and their behavior the result of this), their sense of suffering and misery is often screened and concealed. Frequently, it is not easy to erase the impression that the 'afflicted persons' are following selfish interests, pursuits, and social agendas.[93]

The emphasis in the African and Indian programs appeared to be on conformity. Although many programs in these countries say they are fostering children's creativity through art projects, dramatic enactments, song, dance, and story telling, even in these creative areas, there are signs of working from a scripted template. Some examples we observed:

- When given drawing materials, children copied the clown on the crayon box or copied each other.

[92] Ronald Rohner, Abdul Khaleque, &David Cournoyer, *Parental Acceptance-Rejection Theory, Methods, Cross-Cultural Evidence, and Implications,* Journal of the Society for Psychological Anthropology, (September 2005, Vol 33, No. 3) p.300.
[93] "Culture and the origins of psychopathology" Horacio Fabrega, Jr. in Handbook of Culture, Therapy and Healing, p. 27.

- A child was told what to draw by an adult, and then told whom the figures represent.
- A costumed performance for visitors was, for the most part, like an Indian version of a chorus line, with children all doing and chanting the same thing.
- Puppets were used didactically.
- No spontaneous pretend play was observed, nor were the typical toys or props.
- Fifty-five toddlers of working mothers were walking around in a day care center gazebo without anything to play with.

It is important to recognize the tension between social conformity, and helping individual children recognize and name their feelings and have a strong sense of personal identity and boundaries. The membrane between individuals is thinner, more porous, in collectivist cultures. Nevertheless, it is the individual who is hurt. The physical pain of being beaten, cut by scissors, having fingers burned, hands smashed, vagina invaded, and the psychic pain of being criticized, humiliated, ignored, yelled at, or given away accumulates in the the child's spirit. Intense pain is not forgotten. If it does not have a way to come out in the context of a benevolent relationship, it festers and corrupts the health and integrity of the individual.

11.5 ONGOING QUESTIONS

A series of recurrent questions and issues has yet to find an initial consensus, much less a resolution. Specifically, we highlight:

- Understanding the child: how children feel, think, communicate and express their needs, and the caregiver's conception of the child and childhood.
- The nature of the role of the caregiver and other adults; how much "guidance" is needed in the healing process as opposed to the innate healing capacity of the child if allowed to live in a safe and supportive environment, including balancing the autonomy of the child against the authority of the adult?
- What is actually meant by *rehabilitation*, what the child's role in the healing process might be, what the role of counseling is, and what other important forms of support and care exist?
- How best to achieve reintegration: how to determine if it is appropriate in any given case, how to link repatriation to a child's right to decide his or her future, how to define and support the roles of the community and the family in reintegration.
- How we might engender professionalism and a high quality of care in contexts of significant shortages in economic and human resources.
- Challenges that reflect the cultural and socio-economic context: gender and caste; tribal, ethnic or class discrimination; stigma and discrimination against the sexually abused; how to support economic autonomy in environments lacking opportunities or options.

We cannot answer all of these questions or resolve all of these issues, and we note that, in the research literature, others have also called for more extensive — particularly longitudinal — research in hopes of finding consensus on these issues. Yet we saw first-hand remarkable individuals doing their best in difficult situations to help previously enslaved and abused children into healing and rehabilitation. From them we can draw a set of key themes and recommend appropriate and necessary actions and suggestions.

12. RECOMMENDATIONS

Key Theme: The setting for rehabilitation must provide safety, basic needs, and predictability, in a secure environment with opportunities for learning and play.

NECESSARY ACTION: All facilities serving formerly enslaved and exploited children should assess their ability to provide such a place. Clear and agreed-upon standards of care and reintegration should be established.

Key Theme: There is a distinct need for a case management system that includes recording the physical and emotional condition and needs of each child, monitoring the child's progress, and bringing to bear a coherent plan for the child's recuperative process.

NECESSARY ACTION: Staff training in assessment, case planning, appropriate roles and responsibilities, and record keeping will underpin a workable case management system.

SUGGESTION: Assessment should include a method of estimating a child's level of development and psychological status. (See Appendix B.)

Key Theme: Across the developing world, there is a significant shortage of both trained personnel and opportunities for staff training for agencies aiming to meet the needs of vulnerable children.

NECESSARY ACTION: Build up the human resource capacity of agencies, including the range of skills of all staff. More mental health practitioners trained in trauma recovery are particularly needed.

SUGGESTION: Short informational booklets about child development, the effects of trauma and rejection in simple language should be widely distributed among caregivers, parents, and community organizers.

SUGGESTION: There are already many manuals offering guidance on particular aspects of rehabilitation; one on rehabilitation of slaves soon to be released by Free the Slaves. These should be made available in appropriate languages free of charge to all relevant programs.

Key Theme: Children who have experienced loss, trauma, rejection and/or exploitation tend to have serious physical and emotional difficulties. They are best helped by compensatory relationships in which they experience warmth, trust, support and guidance.

NECESSARY ACTION: In the hiring process, screen candidates for capacity to work with children in a positive manner.

SUGGESTION: Child care shelters should make every effort to assign a single "go-to" person for each child, and to put in place structures that facilitate this relationship, including a way that they can stay connected after the child leaves.

SUGGESTION: Train staff to promote positive relationships among age-mates, by specifically teaching conflict resolution skills, the effect of one person's behavior on others, and culturally appropriate pro-social behavior.

Key Theme: The form and nature of the rehabilitative process must be located within the cultural and social context of the child. While increasing the capacity of agencies to provide rehabilitation and reintegration requires the establishment of structures and protocols applicable to all service providers in all countries, it also requires bringing local knowledge and practices into the rehabilitative process.

NECESSARY ACTION: Use materials that are universally applicable and based on the common needs of traumatized children everywhere, but adapt them to the local culture.

Key Theme: Reintegration is a considerable challenge, and its complexities must be addressed at the community level.

NECESSARY ACTION: Support community-based reintegration activities such as preliminary screening of families for willingness and suitability; making clear the need for strong family and community involvement; creating an "exit strategy" for the child at the start of the rehabilitation process; and providing favorable conditions for the child to return to, including economic support and educational opportunity.

NECESSARY ACTION: Carry on dialogue with communities to understand and identify solutions. It is not that the community does not know the risks to its children, but it does not necessarily appreciate the consequences (physical and moral) of these risks and hazards, or it may be conscious that the risks and hazards of remaining in the community could be worse. There are a lot of unspoken stories and taboos within a community and to engage them through a lengthy dialogue allows some of these taboos to break down. Communities are then in a better position to make appropriate decisions for their children.[94]

SUGGESTION: Provide training for income-producing activity with consideration of whether the skill is actually going to prove useful and ensure a livelihood. If there is already a surplus of seamstresses, hairdressers, embroidery workers, or auto mechanics, children will have a hard time competing with adults who have established networks. They then become a further drain on the community rather than adding to its economic viability. Other types of income-generating activity, especially those that do not rely on local customers, will serve the community and the children better.

13. CONCLUSION

We found that while levels of commitment, dedication, and energy were high, the general capacity for physical care and psychological rehabilitation of dramatically abused children was low across nearly all agencies. While some trained psychologists were available in some instances, few agencies had access to such professionals at all times. Moreover, while some materials are emerging to help, these are primarily directed at the "upper" or individual counseling end of the rehabilitative process.

However, from the success of the mother-figure in Haiti and other examples, we know that rehabilitation can be fostered at many levels within an agency. To that end, training is needed across agency staff in such areas as intake and information collecting, case management, social work, art and recreational therapy, nutrition and exercise, rights-based education, life skills development, guidance and life planning, family interventions, and fostering peer activities.

[94] K. Owen, ibid.

13.1 BUILDING STANDARDS OF CAREGIVING

We find that all agencies we visited are doing better in some areas and worse in others. There is no perfect service provider, no agreed-upon perfect model for care and rehabilitation, no "magic bullet" to meet the needs of abused children. We look to the further elaboration and dissemination of basic standards of care for the rehabilitative process. John Frederick states:

> Quality care is a basic right of all who enter a caregiving facility, whether it is for medical treatment or psychosocial treatment. Quality of care standards are developed and used for three basic purposes: to provide the most effective and responsive care for survivors; to maintain professional, transparent and accountable care practices; and to support caregivers in their work.[95]

Standards must be developed through consensus and conversation within the context of care, and including NGO and agency staff and directors, caregivers, experts in psychology, medicine, nutrition, exercise, law and social work, government representatives, donor representatives and the children themselves. At one level these are aspirations, but they are also more, for they are the baseline of protection for children who have already been harmed.

While we recommend that local cultural practices should inform the rehabilitative process, they cannot be allowed to overturn basic standards in care, such as prohibition of physical or psychological punishment or any action that would deny the rights of a child. Frederick has outlined standards applicable to care for children who have suffered WFCL:

Principles for the Child

- Basic human rights (genuine participation, privacy and confidentiality, right to family, and many others),
- Facilities and interventions are child-centered,
- Each child is provided individual case management,
- Children have access to the outside world, and
- Interventions are culturally appropriate.

Principles Guiding Care

- Systems are in place for case management, abuse prevention, crisis management, confidentiality, referral, etc.,
- Operations are transparent, monitored and open to all members of the case management team,
- Roles and responsibilities of the staff are clarified, and
- Care is provided for caregivers.

Principles Guiding Basic Activities of the Rehabilitation Process

- Facilities have a designated function in the case management process (intake, intensive care, general care, pre-reintegration),
- Facilities strive towards a personal, humanistic family-like environment, and

[95] John Frederick, quoted in ILO-TICSA, Creating a Healing Environment, Vol. 1, Proceedings, John Frederick (ed.) 2002, p. 40.

- Case management planning leads towards 'de-institutionalization,' and effective and rapid reintegration.[96]

Kielland and Tovo, in grappling with the limitations of the current rescue, rehabilitation, reinsertion approach in Africa conclude:

> The prospects for "rescued" children are typically not good, especially in the long run, and evaluation reports have yet to identify the "right" approach on rehabilitation. The only element that seems to be a common denominator for successful projects is to have highly committed people involved.... A good project worker is available to the traumatized child...24 hours a day and over a period of several years, and he or she feels a profound commitment to protecting and rebuilding the dignity of the child.[97]

The commitment to protecting and rebuilding the dignity of the exploited child was abundantly evident in all the programs in this study. Again and again, those who have taken on the difficult work of restoring children to physical and psychological health spoke with compassion and understanding about the needs of their young charges and concern for their futures. A great many people are doing what they can, but there are not enough people and resources yet to provide for all the children who need help.

[96] John Frederick, quoted in ILO-TICSA, Creating a Healing Environment, Vol. 1, Proceedings, John Frederick (ed.) 2002, p. 42.
[97] Kielland & Tovo, p.157.

APPENDIX A
Interview and observation guide for Programs to help children freed from slavery or WFCL

1. Basic information about interviewee and program

Listen for number of others involved, what category of program (residential, emergency shelter, foster care, informal network), ties with government or other NGOs, length of child's involvement, goals, theoretical assumptions about children's needs, degree of recognition and acceptance of the program by the community.

a) Do you help children who were once enslaved or working for no pay?
b) How long have you been doing this?
c) How many children have you assisted?
d) Tell me a little about how your program works.

2. The children

Listen for degree of awareness or sensitivity to the child's experience before coming here and in the program. Encourage specific illustrations of a generalization. If there is time, have the informant apply the questions to specific children, as a case study.

a) Demographics
   1. age range
   2. gender ratio
   3. where they come from
   4. range of lengths of stay
   5. histories (type of work, how treated, circumstances of enslavement and rescue, family, special impediments to rehabilitation e.g. language differences)
   6. knowledge of full name, parentage, their original place of residence, official documentation such as identity card, birth certificate

b) Describe what the children are like when they are first rescued, or you first encounter them.

c) Physical condition
   1. growth, appetite, signs of malnutrition
   2. illness, parasites, HIV status if known
   3. signs of physical abuse (abrasions, burns, bruises, scars, missing hair)
   4. sleep problems, nightmares
   5. tremors, pronounced startle reflex
   6. bladder, bowel function
   7. teeth
   8. stomach pain

d) Psychosocial status
   1. affect(emotionally shut down, labile, giddy, fearful, anxious, detached)
   2. aggression
   3. withdrawal
   4. cognitive delays
   5. dissociation
   6. obsessive repetition

e) Early adjustment
   1. begins to communicate more freely
   2. smiles
   3. thinks of or tries to escape
   4. approaches other children
   5. plays by self

6. plays with other children
7. initiates conversation
8. expresses a preference, makes choices
9. enjoys being touched or hugged

3. Treatment: What are your goals for the child?

Listen for indications of the general climate of the program — degree of warmth and acceptance of the children, laughter, ease, permissiveness, gentleness of expectations, ability to soothe or reassure.

a) What is the child's day like?
b) How do you help the child to feel safe?
c) How much freedom of choice or activity does the child have?(Is gender relevant?)
d) How do you help the child to develop a sense of identity as an autonomous self?
e) How do you assess each child's condition?
f) How do you help the child to play and talk with other children?
g) How do you help the child overcome stigma?
h) Which of the following forms of treatment are ever used and how well do they work?
    1. Individual counseling, group counseling
    2. Trauma therapy
    3. Active listening
    4. Herbal remedies, psychotropic medications
    5. Cleansing rituals
    6. Healing massage
    7. Behavior modification
    8. Art, music, drama or play therapy
i) How do you prepare the child to go back to his family or manage in society?
    1. Provide vocational training
    2. Encourage family visits
    3. Investigate viability of family for child's return
    4. Teach literacy, teach numeracy
    5. Educate about children's rights
j) Is the child consulted about involvement in the program or what happens to him after the program?

4. Information about staffing

a) How many paid staff? Role of volunteers?
b) What are the roles of staff?
c) Are credentials required?
d) Does a child center have to be licensed by the government?
e) Do externally set standards exist?
f) Does the staff get ongoing training?
g) What are the major challenges faced by the staff?

5. Follow-up

a) What, if anything, do you keep track of after a child has left your care?
b) Do you provide any services after the child leaves? (e.g. legal help, help with access to education or entitlements, referrals to other sources of help, connection with possible work sites)
c) If yes, how well do the previously enslaved children do when reintegrated into their villages or relocated elsewhere?

APPENDIX B
Guide to Decision-making in the Care of Children Emerging from the Worst Forms of Child Labor and Slavery

When children emerging from enslavement, commercial sexual exploitation, or another worst form of child labor, arrive at a care facility for protection, stabilization and, eventually, reintegration into a community, the caregivers face a daunting task. They must provide services to young clients whose lives have been shattered and whose needs are vast and complex — and do so with very limited resources and, in most cases, very little training. The regrettable fact is that these children cannot wait for a perfect crisis intervention and stabilization system, so we have focused on interventions that are not highly resource dependent.

Over our decade of work on modern slavery, service providers have made it clear that they are looking for practical tools and guidance. Reviewing the existing intervention literature, we were struck by the likely value of a simple guide focused on the immediate actions needed in the first "make-or-break" weeks after children arrive at a shelter. That critical period will most likely determine the extent and quality of their long-term recovery.

Several colleague organizations have been generous in sharing their work, and we have drawn especially on the ECPAT *Training Guide for The Psychosocial Rehabilitation of Children who have been Commercially Sexually Exploited*, and the ILO-IPEC *Child-friendly Standards and Guidelines for the Recovery and Integration of Trafficked Children*. These, however, place major emphasis on the lengthy multi-faceted processes of rehabilitation and community integration.

With this guide to decision-making, Free the Slaves intends to add significantly to the knowledge of what providers must attend to immediately, so as to make the rehabilitation process to take hold later on. The guide should be seen as a starting point rather than a finished product—a first step toward a fully field-tested tool. We welcome feedback both from organizations working with children and from other researchers.

There are few "if/then" propositions among the interventions we propose. In the case of the first two sections, *Establishing a safe living environment* and *Physical care and health,* each action stands alone and need not be part of a series to achieve its crisis-reduction and stabilizing effects. The third section, *Psychosocial assessment,* was developed with awareness of most caregivers' lack of formal mental health or social work training and the absence of experienced clinical professionals in the areas where most slaves are freed. Traumatized children present complex clinical challenges. Yet even in countries where social service and mental health care systems are well-developed, foster parents, group home staff, shelter workers, and others with limited formal training are relied upon to provide frontline and critical therapeutic care.

We see the highly dedicated people we interviewed as possessing the same capabilities. Thus, the interventions we have suggested that they undertake as part of their psychosocial assessments are indeed therapeutic in and of themselves, and carry little risk to the children sitting before them in tremendous shock and pain.

1. Establishing a safe environment

Children who have been enslaved or been in other worst forms of child labor should be placed in a child-friendly environment that protects them from further abuse by those who have exploited them, potentially including some members of their family, the media, community

members, and abuse from staff or visitors to the shelter. Children must feel that the environment is one that supports them, not one that is punishing them.

- A child who has been enslaved, trafficked, or otherwise subject to the worst forms of child labor should not be held in detention at any time.
- Children should not be held in an institutional care facility inappropriate to their age and needs for an indefinite or extended period of time, unless there is no other alternative.
- If there is an immediate external threat to the child from any person who might attempt to find the child while in care, the child will need to be moved to a place of safety.
- Each child should be protected from all forms of neglect, physical and psychological abuse (including verbal abuse) at all times, and treated with respect.
- The child's sense of security should help inform security measures. For some children the presence of walls and barriers is reassuring; for others, security provided through the people caring for them, rather than through bars on the windows, reduces their sense of being incarcerated.
- Each should have their own bed or sleeping area and, if resources permit, separate areas for eating, sleeping, studying and recreation.
- The child should be able to influence their environment in some fashion. For example, children should be allowed to decorate designated areas of the facility.
- A child should have access to legal help, especially to prevent deportation or being charged with crimes related to trafficking and, later, for filing a criminal and/or civil complaint against the trafficker or person who held the child in forced labor.
- Children should not suffer discrimination on the basis of age, sex, nationality, race, language, religion, ethnic or social origin, birth or other status.
- A child's right to privacy should be respected and protected at all times.
- Each child should be made aware of their rights as well as their responsibilities within the shelter and within the larger community.
- Children should be provided an orientation as soon as possible to the facility and have the way of life and routines of the shelter home explained to them.

2. Physical care and health

- If seriously ill or injured, the child must be taken for medical or psychological treatment immediately. Following this, if further treatment is needed, a written plan should list the actions that staff need to take to arrange such treatment.
- All children will need a full medical evaluation as soon as possible, including dental and reproductive health. In many cases they will require ongoing medical care. According to UN guidelines, the child should not be subject to mandatory HIV/AIDS testing. Ensure the child's understanding of and consent to any medical tests that are needed.
- Children will need healthy, nutritious food and clothing that is appropriate to the climate and to their daily routine.
- Many of the children will come with disabilities and special needs that must be attended to. These include high levels of agitation, fear and distress despite all attempts to comfort them, chronic pain, severe withdrawal, hallucinations, and great difficulty in

making themselves understood or even in speaking. Pregnancy will entail heightened anxieties.

- Many children will show signs of treatable malnutrition. These include being underweight, night blindness, chronic fatigue or an inability to focus their attention.
- Proper light, heat and ventilation are important to building and maintaining the child's health.
- Children need opportunities to make friends, learn to live and play cooperatively with other children, and to engage in regular physical activity.

3. Psychosocial assessment

From the moment the child arrives at the facility, caregivers must begin the process of assessing the child's condition and needs. Information collected at this time will be crucial to planning the care and rehabilitation of the child. At the same time, it must be remembered that a child who has suffered extreme exploitation may not be able to clearly explain their needs or their experiences. Time will be needed for the child to come to trust caregivers, and ideally a familiar, warm person will work closely and reassuringly with the child through this process. The overall assessment will take at least two weeks, and possibly as long as a month.

Basic considerations:

- Begin to assess and record the child's condition and needs as soon as the child arrives at the facility.
- Make sure that you respect the privacy of other children by not attaching names to examples of what other children have told you.
- Tell the child why you are gathering information and what will be taking place in terms of his care during the time the child will be staying at the facility.
- Determine if the child knows his or her name, age, family and place of origin, as well as the conditions and locations in which he or she was held against their will and forced to work.
- Do not rush or pressure the child to give information. Help the child to feel comfortable and collect information at the child's pace. If the child becomes distressed, give the child the chance to stop for the day and reassure the child that you will keep him or her from becoming frightened or overwhelmed.
- Encourage children to voice their own preferences, wishes and plans for the future and to ask questions. This should include trying to get an understanding of the likely safety of returning the child to their family, and whether it is safe to contact their family with information about the child's presence at the facility. At a later stage, it will be important in most cases to meet with the family and community to determine whether returning home is the safest and best option for the child.
- Collect and record facts and evidence about traffickers, other exploiters and all crimes committed against the child.
- If at all possible, have those conducting the assessment be of the same cultural background and able to speak the child's preferred (native) language. If not, provide interpreters who are trained and experienced in dealing with child victims of trafficking.

The interview itself:

- Before interviewing the child, in order to get the fullest, most reliable answers, take plenty of time to make the child as comfortable as possible. One way to increase the

child's comfort level is to do an activity that requires no response, such as showing a picture book or how something works, or chatting about other children and their experience at the facility.

- No two children who have been through the worst forms of child labor have reacted or been affected exactly the same way. So, you may need to try more than one way to gain their trust and participation. For example, some children become very anxious with eye contact or physical contact. Other children find gentle touching to be comforting. Use a relaxed, soft voice.
- You will want to know about and record as much as you can about the following:
  1. The child's level of fear, anxiety, sadness, agitation and inhibition.
  2. Problems they have with thinking clearly and paying attention.
  3. The ways in which the child relates to others, whether hesitantly, aggressively, fearfully, overly affectionately, or perhaps not at all.
- Set a context for your questions. For example, you can say that sometimes children who come to the shelter tell you how they feel and that doing so helps them to feel better.
- You can further help the child to talk about him- or herself and ask you questions by telling them some of the things that other children have told you and say that you wonder if some of them are true for him or her too.
- Once children are relaxed and feel safe, they may tell you a lot of what they are feeling without your having to prompt them.
- What they have to tell you may take many interviews to come out. As they develop trust in you, they may feel more able to give you an accurate version of what happened.
- Write down as much as you can after the interview. It is helpful to review those notes before you start the next session with a child.

Encouraging children to talk about feelings

Here are some examples you can give of what other children have sometimes told you. Remember not to rush or feel you have to include everything on this list.

1. I get scared often.

Explore whether the child is still scared or less scared since they came to the shelter. Explore what they are currently scared about and reassure them that they will come to feel better.

The following can be used in a similar way.

2. I feel like talking to the other children.
3. I feel like eating meals.
4. I cry or feel like crying every day.
5. Sometimes I get so angry I might really hurt someone or something.
6. I have trouble sitting still.
7. I don't like to be around adults.
8. I have trouble understanding what people are telling me.
9. I have very strange thoughts and dreams that scare me sometimes.
10. I go to sleep easily at night.
11. I am a good person.
12. I expect my life to get better.
13. Sometimes I think it would be better if I were not living anymore.
14. I have to watch out all the time to protect myself from others.
15. I can't stop worrying.

APPENDIX C
Child care programs and organizations contacted

Agency and informants	Population served and nature of center	Services offered	Ages served, number served, & staffing	Additional notes
Côte d'Ivoire				
MESAD (Le mouvement pour l'éducation la santé et le développement) Kouassi Konan, Président Ake Michael, Psychologiste	Shelter for children engaged in professional training or attending school Drop-in centers serving Street children, Orphans Children in conflict with the law, Poor children	Shelter 6 neighborhood clubs and listening centers Psychosocial support, Medical care, Apprenticeship support, Computer training, Socialization, Reinsertion	1500 children, mostly boys ages 10-17 44 staff: 12 volunteers, 27 paid, 5 contracted	They would rather not have girls but there is nowhere else for them. Psychologist was conducting staff training.
BICE – Côte d'Ivoire (Bureau international catholique de l'enfance) Director	4 centers & 4 projects for street children, abused children, girls in domestic servitude, living with mothers in detention, handicapped, victims of war	Shelter, Apprenticeships Psychosocial support, Medical care, Legal aid, Schooling, Recreation, Reinsertion	In 2002, several thousand children 49 paid staff: 2 psychologists; 12 volunteers, 9 interns	
BICE – Centre Sauvetage Psychologiste Project Director	Trafficked children, Sex abused, Runaways, Forced marriage, Child soldiers, Domestic servants, Lost children	Shelter Psychosocial support Medical care Reinsertion	50 in residence Drawn from the staff of BICE center above	Minimum equipment
Soeurs Salesiennes de Don Bosco Soeur Vicky, Project Director of the center	Girls: Abused, Street children, At risk, Parents unable to provide for	Shelter Literacy Schooling Vocational training Sports, arts Socialization Reinsertion	30 beds for girls, ages 9-15; Neighborhood children use play facilities after school 22 nuns living in the compound; Each girl has a *tantine*	Clean, tidy, attractive milieu, warm ambiance
HOPE Worldwide Project of International Churches of Christ Lucille Konan, Director Ekrakou Romain, Educateur Nina Toyo, Sunday School Coordinator Julien Toyo, Accountant	Orphans Children affected by AIDS	AIDS prevention Psychosocial support Neighborhood support groups (Club des Amis) Home visits Food distribution	1000 per year ages 5-17	Special training in active listening, good at getting children to open up
CEIJA (Centre d'écoute et d'insertion des jeunes d'Adjame) M. Phillipe, Director Educateur	Neighborhood children Some adults	Employment referrals Consultation Recreation	Unknown by agency Director, psychologist, educateur, comptroller	No place for counseling Barren 3 old video games

Togo				
WAO Afrique Centre Espérance Cleophas Mally, Director Dede Houedakor, Center Coordinator	Short term transit center Trafficked girls Victims of abuse	Mediation Recreation Reinsertion	100 girls per year ages 6-17 Coordinator, Social worker, Social work assistant, Nurse, 2 cooks, Gardener, Guard, Psychologist once a week	
DGPE (Direction générale de la protection de l'enfance) Bossa Salimatour Bonfoh-Ali, Directrice, Child Protection	Trafficked children	Short-term hostel Literacy Apprenticeships Sensitization of family Reinsertion	55 boys per year staffing unknown	Government agency directly involved in child protection work
Terre des Hommes Centre Oasis Frederic Baele, Togo Delegate Prof. Gnansa Djassoa, Psychologist	Trafficked children Abused Runaway Lost	School on site Apprenticeships Reinsertion Follow-up	775 children in 2004; ages 0-18 17 educateurs and social workers, doctor, child psychiatrist, nurse, administrators	
CAJED (Comité d'aide aux jeunes en difficulté) Boniface N'tapi, Coordinator	Street children Porters	School fees Apprenticeships	9 boys ages 8-14 2 paid(?) staff	Children come and go freely
Centre la Providence Soeur Pascaline, founder and director Educateur	Shelter and day program Sex workers	Shelter Vocational training Health and sex education Literacy	25 girls in shelter; 10 in day program; ages 12-17 8 staff work in teams of 2; outreach on the street	
AD – Togo (Action développement) Tsevi Adomayakpor, Executive Secretary Edwige Kuwonu, Project Coordinator	Trafficked children Street children Children in conflict with the law	Literacy School fees Vocational training Loans to parents Group work Neighborhood action Reinsertion	30 per year two on-call volunteer psychologists nurse	Parents' school. Conducting needs assessment of the Quarter. Selling weavings and liquid soap
PSI – Togo (Population Services International) Soeur à Soeur program Marie Yawo, Project Coordinator	Drop-in program for girls Sex workers	Creative activities (pottery, bead work, drama), Vocational training, Domestic arts Medical, STD, HIV testing, Day care for babies	50 girls per week for activities; Ages 10-24; 14 per month for professional training 4 paid staff, 8 volunteer *animatrices,* On-call psychologist	
CLORED (Centre de loisirs et de re-educa-tion pour les enfants) Ben Koami Dewouna, Executive Director Two educateurs	Shelter Street children	School on site Group work Apprenticeships Reinsertion	Ages 6-17 2 teachers, 2 assistants, 2 guards, sub-office head, assistant, psychologist, doctor, gynecologist on-call	Signed contracts required. Want child to repay either directly or indirectly by supporting apprentices

BICE Franck Aziakh, Project Director Alda Segia	Residential center Child porters Street sweepers	Mothers' group Home visits Sex education Loans Skills training reinsertion	25 porters 12 girls, ages 14-18 Several animateurs 4 child care social worker psychologist	Advocating laws against use of child porters
AIDES (Action international pour le développement économique et social) Espace Fraternité Chile Mack Adodo, Executive Director	Shelter Street children Orphans	Outreach Lunch for non-residents School fees Medical care Reinsertion	27 children, ages 6-17; 18 this year Educateurs Psychologist bi-weekly	Good play area. Teacher from another program was leading session with mixed age group before lunch.
2M FEED (Mission mondiale pour la femme et l'enfant déshérité Odile Sessou, Présidente	Shelter Orphans Abandoned Abused Extreme poverty	School on site Adoption Religious education Reinsertion	20 children, ages 2-16 Volunteer sociologist, Night time resident	Supports center through her couturier business
ANGE (Les amis pour une nouvelle generation des enfants) Gabriel Kossi Amouzou, Executive Director M. Klake, Animateur	Drop-in center Street children Jailed children	Schooling Twice weekly drop-in recreation Getting children out of jail and into project	Not clear President, secretary, treasurer, 6 animateurs	Executive Director had advanced training, including active listening
UNICEF Farida Noureddine, Child Protection Officer	Intergovernmental agency. Current priorities: Trafficking, AIDS, sex abuse, violence			
CARE Claudine Nensah-Awute, National Coordinator	NGO Priority: Trafficking			
PLAN Bel Aube Houinato, Director of Programs Stefanie Conrad, Country Officer	NGO Political action Working to establish minimum standards of care			Ten-year plan: Healthy start Learning for life Protection of the child
India				
SARC (Social Action and Research Centre) Ranjana Gaur, Director Aparna, Coordinator	Shelter and community program Women and children survivors of domestic violence, slavery in domestic work, and forced prostitution	Rescue, Legal aid, Counseling, Shelter, food, clothing, Medical care, Education Human rights training, Vocational training, Job search, Family reunification, Awareness raising, Women's community organizing against violence, Training of police and other justice officials and NGOs, Research and documentation	65 children ages 2-17 over last two years Team of volunteers to do case work and field work	Small, informal Children lodged with director

Bal Vikas Ashram (run by Diocesan Development and Welfare Society) Rajneesh Kumar Radev, DDWS TIP Uttar Pradesh State Manager	Shelter Boys, mostly enslaved in rug weaving Other industries: sari making, brickworks, hotels, shops, railway station, begging	Rescue, Legal aid, securing compensation, Shelter, food, clothing, Medical care, Counseling, Education, Human rights training, Vocational training, Family reunification, Preventive work in home communities, Awareness raising in destination communities of trafficked children	336 children since 2000; license for 60 beds; 69 boys ages 6-17 rescued in last 6 months 13 paid staff: manager, supervisor, coordinator, 2 teachers, 3 vocational trainers Cook, 2 gardeners, guard, driver	Emphasizes work with receiving community
Mukti Ashram Balika Ashram Suman, Director Consultant	Shelter Bonded laborers formerly engaged in rug waving, domestic work, agriculture, brickworks	Shelter, food, Medical care Counseling Vocational training Literacy Reintegration	6000 boys and girls since 1991; ages 6-18 16 paid staff: 2 teachers, counselors, training instructor, manager, cook, watchman, contracted medical practitioner	

Haiti				
FMS (Foyer Maurice Sixto) Wenes Jeanty, Executive Director J.P. Elie, Executive Secretary Marie Pascal Douyon, Social Worker Mami Georges Rameau	Afternoon drop-in program Restavecs: boys and girls in domestic servitude FMS also has shelter, not included in study	Schooling Vocational training Community sensitization Medical and dental care Summer camp Recreation Follow-up	450 children 75% girls ages 4-17 16 full-time staff 16 part-time staff, including 10 teachers, social worker executive secretary director	Two visits, observed children at play and in an art lesson.
Timkatek Père Simon, Director Fritz, Manager	Shelter and drop-in Boys of the street	Schooling Seek foster homes	40 boys sheltered; 125 daily total attendance; ages 12-18 Director, Female Coordinator, Manager, 6 teachers, 2 cooks, 2 launderers, Janitor, 2 volunteers to monitor lunch and discipline	Observed lunch, children playing cards, watching TV
FCCM (Fonds communautaire de crédit mutuel) Frère Sainvistal Pierre, Director Nadege Simon, Secretary and administrator	Shelter and drop-in Restavec girls Boys in external program	Schooling Health care Vocational training Recreation Child rights AIDS education Religious instruction	60 girls sheltered 300 boys and girls in external program 2 animators, 2 social workers, 2 cooks, 2 launderers, 2 cleaning women, Secretary, accountants, translator, janitor, 4 religious leaders	In dangerous Carrefour district Observed children in singing game, at lunch
Sister Marthe Vonrompay	Restavec girls	Advocacy	48 girls	Information based on phone interview

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NUTRITION AND INJURY AMONG CHILD PORTERS IN EASTERN NEPAL

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1. INTRODUCTION

1.1 CHILD LABOR IN NEPAL

Child labor is a pervasive global problem that exposes children to risks and can result in physical, mental, social, or moral harm and often interferes with their education (ILO-IPU, 2002). In Nepal, child labor is endemic: an estimated 42 percent of children between the ages of five and 14 years are economically active. This working population represents 2.6 million of the estimated 6.2 million children in this age group in Nepal (ILO, 2001). Child laborers are usually defined as less than 18 years of age, however in Nepal persons over the age of 14 are allowed to work legally. In 2000, the Nepalese legislature enacted the Child Labour (Prohibition and Regulation) Act, which restricted children under the age of 16 from engaging in hazardous occupations.

An impoverished country where over half of the population lives on less than one dollar per day, Nepal ranked 140th out of 177 countries in the UNDP's 2004 Human Development Index, (UNDP, 2004). While a variety of conditions are associated with poverty and child exploitation, the following have been documented as major contributors to the phenomena of child labor in Nepal: 1) lack of access for children to education; 2) rural-urban migration; 3) disrupted families; 4) inadequate law enforcement; 5) social customs devaluing children; and 6) poorly educated parents (ILO, 2001).

The ILO has conducted five rapid assessments of child labor in Nepal, which encompassed child porters, bonded child laborers, domestic child laborers, ragpickers, and trafficked children. Though not derived from nationally representative samples, the ILO assessments provide the following estimates of numbers of child laborers in various occupational categories:

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57,000 bonded child laborers, 55,655 domestic child laborers, 46,029 child porters, 3,965 ragpickers, and 12,000 trafficked girls, many for sex work. (KC *et al*, 2001a; KC *et al*, 2001b; KC *et al*, 2001c; Sharma *et al*, 2001a; Sharma *et al*, 2001b). The extent of child labor and its negative repercussions on the well-being of children have been recognized by the Nepalese government, which ratified the ILO Convention on the Worst Forms of Child Labor (No.182) on the 3rd of January, 2002. This Convention commits Nepal to "take immediate and effective measures to prohibit and eliminate the worst forms of child labor" (ILO-IPU, 2002).

When determining the worst types of child labor, ILO Recommendation No. 190 outlines possible exposures that could potentially categorize an occupation as a "worst form of child labor." These include exposures to: 1) physical, psychological or sexual abuse; 2) work underground, under water, at dangerous heights, or in confined spaces; 3) work with dangerous machinery, equipment and tools; 4) manual handling or transport of heavy loads; 5) an unhealthy environment exposing workers to hazardous substances, agents or processes, or to temperatures, noise, or vibration levels that are damaging to health; 6) work under difficult circumstances, including long hours, or during the night; or 7) unreasonable confinement on the employer's premises. Based upon these suggested guidelines, article #4, 'manual handling or transport of heavy loads' and article # 6, 'work under difficult circumstances, including long hours,' child porters in Nepal could be considered to be suffering "the worst form of child labor." In addition, some child porters are subject to article #1, 'physical, psychological or sexual abuse.'

Because socioeconomic status is a likely contributor to poor health outcomes and is itself the primary reason for children to become economically active, it is difficult to attribute poor health status such as under nutrition, stunting, and injury to child labor. Nevertheless, several studies in other developing nations have evaluated the relationship between physical labor and measures of health and well-being. A study of Inca porters in Peru attributed all the subjects' health problems to their work as porters (Bauer, 2003). Multiple studies have observed correlations between child labor and stunting. A recent paper concluded that the two primary factors associated with adolescent stunting among boys in Jordan were duration of labor and low income (Hawamdeh and Spencer, 2003). Another study found that Indian boys who participated in physical labor as children suffered significant growth retardation when compared to those not subjected to harsh labor (Satyanarayana, 1986). In Nepal, where a significant portion of children from impoverished households are economically active, the incidence of stunting is high. While many Nepalese children are at risk for other long-term health impacts, this is particularly the case for those who are involved in the worst forms of child labor.

1.2 PORTERS IN NEPAL

The majority of child porters in Nepal work in the commercial commodity transport sector which is known to provide lower remuneration and be more hazardous than portering for tourist trekkers. Commercial porters provide the most common means of transportation of goods in Nepal. Their work provides a major share of off-agricultural seasonal income, and is an essential form of supplementary income for many rural Nepalese families.

The ILO Rapid Assessment of Child Porters classifies portering into long distance and short distance. The Assessment denotes those porters who carry loads over longer distances and overnight as long distance porters; short distance porters carry loads on a daily basis and do not overnight on route. An estimated 76 percent of the estimated 42,000 long distance porters in

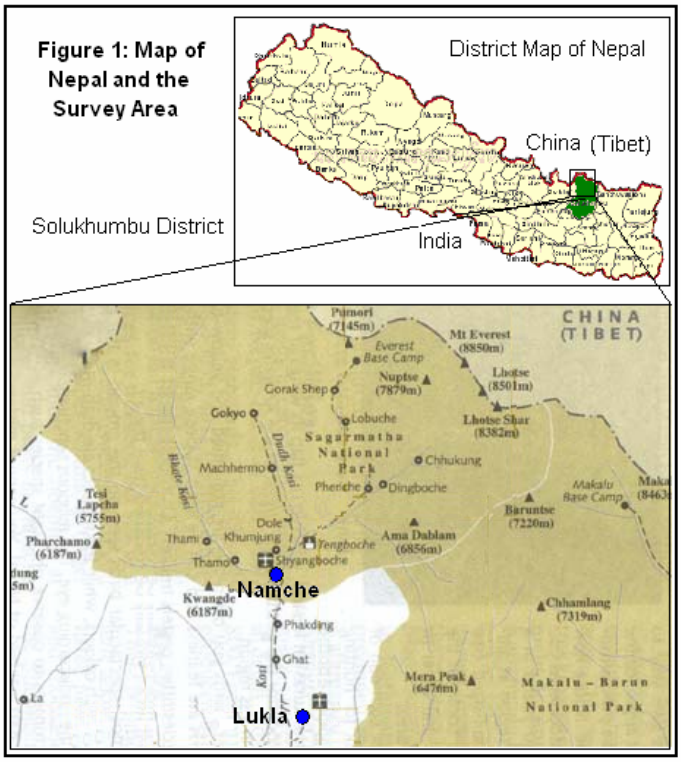
Nepal under the age of 14 entered the portering trade between 10-14 years of age The average age upon entry is one year earlier than their counterpart short distance porters. The primary factor associated with an increased likelihood of children engaging in long distance portering is economic vulnerability. Of the long distance porters sampled for the ILO rapid assessment, an estimated 91 percent live in the rural eastern hills and mountains of Nepal, a particularly impoverished region. Though other factors may play a role in driving children to porter, the low incomes of subsistence farmers and need for additional family income make rural children especially vulnerable to portering (KC, 2001a).

Long distance porters are exposed to greater physical hazards and carry heavier loads than short distance porters. Trips for long distance porters average 6 days in length, and load weight averages 35 kg or 77 lb. Porters must carry their own food and often do not eat regularly or adequately; many child porters lack sufficient caloric intake and micronutrients for healthy development. The ILO rapid assessment found that over 40 percent of the child porters were ill or injured while portering, and 60 percent of those did not seek medical attention because of cost. In addition, long distance porters were likely to spend earnings on expenses associated with being away from home. With much of their remaining income remitted to their families, child porters are left with little disposable income for themselves (KC, 2001a).

Most studies of child porters focus on the economic factors that result in child labor with limited or no attention to the health outcomes associated with portering. However, the existing data reveals a common theme: child labor, and child portering in particular, is hazardous and detrimental to children's health and well-being. The Johns Hopkins Bloomberg School of Public Health and Porter's Progress, a non-governmental organization dedicated to assisting porters in Nepal, conducted a study that aimed to examine the relationship between portering and health outcomes. The Study focused particularly on nutrition and injury among long distance child porters in Eastern Nepal.

2. METHODS

The study was conducted between September and December, 2005 in the Solukhumbu District (figure 1) which includes Sagarmatha National Park and Mount Everest. In the mountains of Eastern Nepal, the Solukhumbu district was chosen because it is a center of portering activity in the region.[2] The primary urban areas in the district are Lukla and Namache. Commercial commodities move from these centers to rural regions of the district over a network of trails.



Adapted from "District Map of Nepal, Compare InfoBase Pvt. Ltd. 2004-2005"

Because of the large volume of commercial activity including trekking, the region draws children from surrounding districts to work as porters. Long distance commercial porters ages 10-16 were identified as the study population because of their exposure to occupational hazards as compared to short distance porters, tourist porters, and children who are not engaged in portering. The vulnerability of long distance commercial child porters is a result of their harsh working conditions, which include bearing heavy loads, long trip lengths, poor remuneration, inadequate diet, and lack of familial care and protection. The primary objectives of the study were: 1) to characterize the nutrition status and assess the nature of injuries among long distance commercial child porters, and 2) to compare nutrition and injury outcomes in long distance commercial child porters with children who are not engaged in portering.

Because no information was available on injury patterns in child porters, sample size calculations for the proposed project were based on nutritional parameters of body mass index (BMI) and anemia among Nepalese adolescents (MMWR, 2000; Kurz, 1996). A total sample of 374 child porters was required to allow for the detection of a 15 percent difference in prevalence

[2] Porter's Progress identified Solukhumbu district, and particularly the area between Lukla and Namache as a central area of the portering industry.

of both low BMI and anemia with 80 percent power and alpha=0.05. A final sample of 500 individuals (250 individuals in the study and comparison groups) was identified to allow for non-response and to increase the ability to detect differences on injury outcomes.

Porters in Eastern Nepal are highly mobile, and little is known about the age and sex distribution of those involved in portering. Consequently, it is difficult to design a random sample of porters and evaluate the representativeness of that sample as compared to the entire porter population. A sample design was developed that aimed to incorporate porters passing through a variety of locations along principal long distance porter routes in Solukhumbu District. Porters were sampled near markets, along trails, or in villages where they slept overnight. Sampling was conducted through unannounced visits by local survey staff who invited groups of porters to a survey station.

The control group was selected with the aim of having a similar comparison group in terms of socioeconomic status, caste/ethnicity, and location of residence. Controls which employed 10 children sampled from the same communities that child porters identified as their "home village" used the segmentation method outlined by The Food and Nutrition Technical Assistance Project (FANTA) (1997). Once a residence was identified, the head of the household was informed of the study, and if there were members 10-16 years of age, consent for the child to participate in the study was requested from a guardian. If a household had more than one child in the specified age range, one child was randomly selected to participate; if a child was absent, a time was scheduled for a return visit.

Porters and non-porters were read consent forms, and if they agreed to participate in the study, the survey team proceeded with the interview, collection of a finger-stick blood sample (to measure anemia), and anthropometric measurements. The interview focused on background demographic and socioeconomic information; education; income generating activities; food consumption; and health status, including history of injury, morbidity, and utilization of health services. The interview questionnaire was developed in English and translated to Nepali. After pilot testing, it was translated back into English.

The study based its primary nutrition indicators on anthropometric measurements and finger-stick tests for anemia. More sophisticated and in-depth analyses could have revealed micronutrient deficiencies and other measures of nutritional status; however, resource limitations and logistical constraints imposed by the rugged environment precluded the collection of large blood samples and more sophisticated measures of body mass. The anthropometric measures collected included weight and height. The primary nutrition outcomes of interest were low height for age (stunting) which reflects chronic malnutrition and low weight for height or BMI which are measures of current nutritional status; a classification of acute malnutrition was based on low BMI. Mid-upper arm circumference (MUAC) measures were also collected, but, because of a lack of validated cutoff points for adolescent populations, estimates of malnutrition were not based on these measures.

All interviewers had a portering background and at least some secondary education. Interviewers received one week of training in sampling, data collection, interviewing techniques, and anthropometric measuring. Height and weight measurements were taken using standard methods and locally procured equipment (FANTA, 2003). Hemoglobin levels were determined using the finger stick method and a Hemopoint H2 (Stanbio, Boerne, TX). Children with hemoglobin < 10g/dl were given counseling about dietary needs, supplementation, possible parasitic infections, and were then referred to a local health clinic.

Including the interview and anthropometry, the total interaction time with children lasted less than 30 minutes. To compensate for their time, upon completion of the survey, children were allowed to select a winter hat or a pair of winter socks.

Children were coded as having low height for age (stunting) if their z-score was more than two standard deviations below the mean of age/sex counterparts in the NHANES reference population. Low BMI was defined as BMI below the 5th percentile when compared to age and sex specific distributions from the NHANES populations (CDC, 2000). Anemia was defined by hemoglobin *or* hematocrit below the age- and sex- specific cutoff points from the NHANES reference population.

Data analysis was performed using STATA Version 8 (Stata Corp, College Station, TX) and SPSS Version 12.0 (SPSS Inc., Chicago, IL). Comparison of frequencies and means were conducted using chi-squared and t-tests, respectively. Descriptive statistics are presented in the tables at the conclusion of this report. Univariate and multivariate regression was used to assess the relationship between porter status and selected outcomes in order to control for the differences in age and sex composition between porter and non-porter groups. Multivariate models that controlled for age and sex were also developed for each outcome. The best-fit multivariate models were selected based on statistical significance of predictor variables ($p<.05$), maximization of the R^2 value, and minimization of the F-statistic or maximization of the -2 log likelihood (i.e. sex and age may not always be presented in the final model). Best fit multivariate models are presented for all outcomes where porter status was a significant predictor, however many models only account for a small degree of variance in dependent variables.

The Nepalese Ministry of Health granted permission to conduct the survey. Each respondent as well as the parents of children in the control group (it was not feasible to seek parental consent among porters because they did not travel with parents) granted informed verbal consent before interviews were conducted. The Johns Hopkins Bloomberg School of Public Health Committee on Human Research approved the study.

3. RESULTS

3.1 DESCRIPTIVE CHARACTERISTICS OF CHILD PORTERS

A total of 250 porters were interviewed. One porter was dropped from the final data set because the criteria for long distance portering (>1 day) and portering for pay were not met, resulting in a final sample of 249. The majority of porters were 15-16 year old males; only 6 percent of porters studied were females, and 9 percent were age 14 or younger. Child porters had completed an average of 4.5 years of education. Only 41 percent (95 CI: 35-48) reported attending school within the past month. The predominant ethnic groups were Rai (39 percent), Tamang (18 percent), Sherpa (17 percent), and Brahmin/Chhetri (13 percent). The vast majority reported their district of permanent residence as Solukhumbu (82 percent); other reported districts of permanent residence included Khotang (10 percent), Okheldunga (6 percent), and others (3 percent).

Portering

On average, the children in the sample had been portering for 2.2 years (95 CI: 2.0-2.4) and began portering at 13.2 years (95 CI: 13.0-13.5) of age. The vast majority of porters (73 percent) indicated that the decision to become a porter had been their own; 20 percent and 6 percent, respectively, reported entering portering because of parents' or other relatives' influence. Portering in Nepal is highly seasonal because of the severe climate at higher altitudes. In the study population, 71 percent of the child porters indicated that portering was a seasonal activity, 14 percent reported portering year round, and another 14 percent indicated portering only occasionally. Children reported portering an average of 5.1 months (sd=3.8) per year, working an average of 19.4 days (sd=4.7) per month, for 7.8 hours (sd=1.6) per day. The mean for total days worked per year was estimated at 104 days (sd=103) based on the reported months worked per year and days working per month.

Mean monthly income from portering was reported at 2,224 rupees (95 CI: 2035-2412), which is equivalent of USD $31 (95 CI: 29-34) (Universal Currency Converter, 2006). Daily incomes ranged between 41 and 333 rupees (USD $0.57-3.62), with an average daily wage of 114 rupees (95 CI: 108-120) (USD $1.58, 95 CI: 1.50-1.67). In most cases, portering wages were either paid as a flat daily rate (58 percent) or based on the weight of the load (39 percent). Average load weight was 47.5 kg (95 CI: 46-49); however, porters paid on the basis of weight reported carrying loads that averaged 6.9 kg (95 CI: 3.7-9.6) heavier than those receiving a daily rate. Load weight increased by an average of 3.9 kg (95 CI: 2.1-5.8) per additional year of age. Additionally, loads carried by males were 8.4 kg (95 CI: 2.5-14.3) heavier than those carried by females. Overall, 77 percent of porters reported controlling their own income; however, a significant minority (23 percent) reported that their income from portering was controlled by their parents.

Food Security and Nutrition

A majority of child porters did not have adequate access to food: 61 percent (95 CI: 55-67) reported having reduced the size or frequency of meals consumed within the past year because there was not enough to eat and 58 percent (95 CI: 52-64) reported having not eaten for a full day within the past year because there was not enough food. On the day preceding the survey, the average frequency of food consumption among porters was 4.0 times per day (sd=1.0) and 6 percent (95 CI: 3-10) of porters reported consuming food two or fewer times per day. Dietary diversity was evaluated based on consumption of eleven food groups/categories on the day preceding the survey. On average, porters consumed foods in 5.3 groups (sd=1.6), and 18

percent (95 CI: 14-24) of porters reported not consuming any protein rich foods[3] on the day preceding the survey, suggesting that porters may not have adequate diets.

Prevalence of low height for age or stunting among child porters was found to be 75 percent (95 CI: 69-80) among porters and was similar between males and females (p=.790). Mean BMI among porters was 20.0 (sd=2.4); prevalence of low BMI according to age- and sex-specific cutoffs was 6 percent (95 CI: 3-9) and was similar between the sexes (p=.342). Mid-upper arm circumference averaged 20.5 cm (sd=2.3), though the prevalence of malnutrition was not estimated using the MUAC data obtained because cutoffs have not been validated for adolescent populations (Woodruff and Duffield, 2000). Average hemoglobin and hematocrit levels among porters were 13.9g/dl (sd=2.1) and 42 percent (sd=4.6), respectively. Overall, 30 percent (95 CI: 24-36) of porters were found to be anemic (by low hemoglobin or hematocrit based on age- and sex specific cutoffs); prevalence of anemia was 53 percent among females as compared to 28 percent among males (p=.039).

Injury

The vast majority of porters, 92 percent (95 CI: 87-95), reported having an injury within the past year. The most commonly reported injuries reported were back or muscle pain (77 percent; 95 CI: 72-83), sprains (72 percent; 95 CI: 66-77); lacerations (39 percent; 95 CI: 33-45); and fractures/broken bones (6 percent; 95 CI: 3-9). Child porters sought medical care for injury or illness an average of 1.7 times (95 CI: 1.5-1.9) within the past year. Notably, 50 percent (95 CI: 44-57) reported not seeking medical attention because of economic reasons.

Twenty-seven percent (95 CI: 21-33) of child porters reported accidents while portering in the past year. They suffered an average of 0.6 portering accidents (95 CI: 0.4-0.7) per year. Females reported an average of 1.0 portering accidents in the past year as compared to 0.5 among males, however this finding was statistically insignificant (p=.239); accident rates were also similar between older (15-16 years) and younger (14 and under) porters (p=.273). A variety of factors[4] were assessed as predictor variables for portering accidents in multivariate logistic (accident or no accident in the past year) and linear regression models (number of portering accidents, past year) however, models did not adequately predict accident outcomes and are not presented.

Social and Behavioral Risks

Thirty-eight percent (95 CI: 32-45) of child porters studied reported alcohol consumption and one quarter of those reporting alcohol consumption indicated that they consumed alcohol one or more times per week. No significant differences in alcohol consumption among porters were observed by sex or age group (p=.692 and p=.522, respectively). Fifteen percent (95 CI: 11-20) and 2 percent (95 CI: 1-5) of porters reported smoking and drug use, respectively. Prevalence of smoking among male and female porters was 16 percent and 0 percent, respectively (p=.095). Drug use was also similar between the sexes (p=.185). No significant differences in smoking or drug use were observed by age group (p=.154 and p=.374, respectively).

Feeling alone or being without emotional support was reported by 66 percent (95 CI: 59-71) of porters, and 85 percent (95 CI: 81-90) reported feeling mentally stressed. Overall, 91 percent (95 CI: 87-94) of child porters indicated they felt that portering negatively impacted their general well-being. Physical and sexual assault within the past year was reported by 34 percent (95 CI:

[3] Defined as a dichotomous measure based on the reported consumption of milk products, eggs, meat, poultry, seafood, or pulses/legumes including dahl.
[4] Independent variables included age; sex; height; weight; low height for age; BMI; low BMI; anemia; average hours per day spent portering; number of days per year spent portering; and weight of load.

28-40) and 7 percent (95 CI: 4-11) of child porters, respectively. No significant differences in rates of physical and sexual assault were observed between male and female porters (p=.964 and p=.976, respectively) or by age group (p=.831 and p=.742, respectively).

3.2 COMPARATIVE ANALYSIS OF PORTERS AND THE CONTROL GROUP

A comparative analysis using child porters and children in a control group was performed using regression models. Significant differences between porters and non-porters were observed for a variety of characteristics. The control group differed significantly from porters in age and sex composition. In general, porters were older than controls: mean age among porters and controls, respectively, was 15.5 and 13.6 (p<.001). The control group had a significantly greater proportion of females, at 88 percent, as compared to 12 percent among porters (p<.001). Multivariate regression models that controlled for age and sex differences were employed for all comparisons between porters and non-porters.

Education

Educational attainment and school enrollment were lower among porters than controls. Only 42 percent (95 CI: 35-48) of porters reported having attended school within the past month, compared to 78 percent (95 CI: 72-83) of non-porters (p<.001). After adjusting for age and sex, porters were 2.2 times (95 CI: 1.4-3.4) as likely not to have attended school [within the past month] as their non-portering peers. Among children enrolled in school, the frequency of attendance was significantly lower among porters: 68 percent (95 CI: 58-77) of porters reported attending school most days or almost always, compared to 94 percent (95 CI: 89-97) of controls (p<.001). The average grade level of porters currently enrolled in school was 6.1 (sd=1.8), compared to 5.2 (sd=1.7) among controls; however, after adjusting for age, the difference was rendered statistically insignificant.

Mean educational attainment was 4.7 (sd=2.4) years and was similar between porters and non-porters when age differences between the two groups were not considered (p=.180). After controlling for differences in age and sex composition, portering status was a significant predictor of lower educational attainment: porters completed an average of 0.8 fewer years of education (95 CI: 0.3-1.3) than non-porters. Porters were significantly more likely to have never attended school than non-porters: 16 percent (95 CI: 11-21) of porters had never attended school, compared to 9 percent (95 CI: 6-14) of children in the comparison group (p<.001).

Food Security and Nutrition

Several indicators examined in the study suggest child porters suffered greater levels of food insecurity and malnutrition than controls. A total of 62 percent of porters reported reducing size and/or frequency of meals within the past year as compared to only 23 percent of controls (p<.001); 58 percent of porters and 21 percent of controls, respectively, reported having gone entire days without eating in the past year because of lack of food (p<.001 for both comparisons). These findings remained statistically significant when considering the differing age and sex composition between the two groups: porters were 2.6 times (95 CI: 1.6-4.3) as likely to reduce the size or frequency of meals and 2.9 times (95 CI: 1.9-4.5) as likely to have days without eating as controls.

Both porters and non-porters consumed food an average of four times on the day preceding the survey. Consumption of two or fewer meals was reported by 6 percent of porters and 2 percent of non-porters (p=.016). Diet diversity, as measured by an index score based on consumption of food groups/categories, was greater among controls than porters: controls consumed foods from an average of 6.5 groups as compared to 5.3 groups among porters (p<.001). Protein

consumption on the day preceding the survey was reported by 92 percent of controls and 81 percent of porters, respectively (p=.005). This difference remained significant after adjusting for age and sex, where porters as compared to controls, were 2.1 times (95 CI: 1.3-3.6) as likely to have consumed no protein [on the day preceding the survey].

Prevalence of stunting was 75 percent (95 CI: 69-80) among porters and 67 percent (95 CI: 61-73) among controls (p=.057); however, this difference was not statistically significant when controlling for age and sex (p=.652). Prevalence of low BMI was 6 percent and 7 percent among porters and non-porters, respectively (p=.532). Linear regression models for BMI found that, on average, porters had a BMI that was 0.75 (95 CI: -0.19 – -1.31) lower than non-porters after controlling for age and sex. Anemia prevalence was 30 percent among porters and 26 percent among controls (p=.380). However, after adjusting for age and sex, the risk of anemia was 1.9 (1.1 – 3.1) times greater in porters than controls.

Injury

In many cases, prevalence of injury in porters and controls differed significantly by injury type. Prevalence of injuries in the past year by injury type and porter status is as follows: back/muscle injuries—77 percent porters, 67 percent non-porters (p=.027); sprains—72 percent porters, 65 percent non-porters (p=.054); wounds/deep cuts—39 percent porters, 28 percent non-porters (p=.016); broken bones or fractures—6 percent porters, 5 percent non-porters (p=.778). Injuries within the past year[5] were reported by 92 percent of porters and 84 percent of children in the control group (p=.007) however, these differences were not statistically significant once age and sex were considered. Non-porters sought medical care an average of 2.0 times in the past year, compared to 1.7 medical visits among porters (p=.067). Half of the child porters reported not seeking care for illness or injury within the past year because of economic reasons, compared to 27 percent of controls; this difference remained significant in age and sex adjusted models where porters were 2.0 times (95 CI: 1.3-3.0) as likely as non-porters to have not sought medical care due to economic reasons.

Social and Behavioral Risks

Prevalence of alcohol and tobacco use were both significantly higher among porters than controls: respectively, 38 percent and 15 percent of porters drank alcohol and smoked, compared to 12 percent and 3 percent of controls (p<.001 for both comparisons). After adjusting for age and sex, porters were 2.9 times (95 CI: 1.7-4.9) more likely to consume alcohol than controls. The smoking rates were found to be statistically similar. Overall, 1.4 percent of respondents reported drug use, which was found to be similar between the groups (p=.226).

Feelings of inadequate emotional support or aloneness were reported by 66 percent of porters and 37 percent of non-porters (p<.001). The age- and sex-adjusted risk for this outcome among porters was 2.0 percent (95 CI: 1.3-3.1). Feelings of stress and/or mental torment were reported by 86 percent and 67 percent of porters and controls, respectively (p<.001); after controlling for age and sex, porters were 1.9 times (95 CI: 1.1-3.3) more likely to report feeling stressed or mentally tormented than children in the control group. Physical assault within the past year was reported by 34 percent of porters and 20 percent of controls (p<.001) however, this finding was statistically insignificant after adjusting for age and sex. Sexual assault within the past year was reported by 7 percent of porters and 1 percent of non-porters; after adjusting for age and sex, risk of sexual assault was 10.1 times (95 CI: 2.3-43.9) greater among porters than their non-portering peers.

[5] Assessed as a dichotomous variable: injury or no injury during the past year.

4. DISCUSSION

Long distance child porters in Eastern Nepal were identified as the study group because of the particularly deplorable working conditions to which they are exposed, including long working days, harsh environmental conditions, heavy loads, and extended periods away from their families. In addition, the partnership between Porters Progress, a non-governmental organization in Nepal and Johns Hopkins University, allowed for greater understanding of the issues faced by child porters. It also facilitated better access to this group compared to other types of child laborers in Nepal. The research was intended to provide the basis for future advocacy and programmatic interventions to improve the circumstances faced by child porters.

Child labor is common in Nepal. It results from a variety of underlying conditions that increase the likelihood of children becoming economically active at a young age. Previous research cited in this report provided the researchers with an indication of the underlying conditions that both push children to become child porters and place them at risk while employed as porters. The primary factor driving children into the labor force is poor socioeconomic status, characterized by poor households needing the additional income to survive. Other factors include social norms that accept child labor, low educational attainment of parents, limited access to education, limited access to health care, age, ethnic discrimination, and poor enforcement of laws intended to protect children.

In trying to understand the health effects of portering, one of the primary difficulties confronted is that the children of Nepal face many of the same threats whether they become porters or not. Viewed in the overall context of poverty, social exclusion and vulnerability, portering in Nepal can be seen as a coping strategy that is undertaken either voluntarily or as a result of relatives' influence. Child labor, and the underlying conditions of vulnerability which put children at risk for becoming engaged in labor, result in both short and long term negative impacts on their well-being. The present study attempted to characterize the conditions under which child porters labor. The study particularly focuses on the impacts of nutrition and injury on child well-being.

4.1 DESCRIPTIVE CHARACTERISTICS OF PORTERS

As noted in the ILO rapid assessment of the situation of child porters in Nepal, child porters are among the most neglected, abused and exploited segments of the population. The present study found that child porters are subject to excessive physical burdens, injury, exposure to elevated levels of sexual assault, and physical hazards. They are also deprived of adequate nutrition needed to sustain good health and development. In addition, they have limited access to health care services, primarily due to economic barriers. Average incomes of child porters in the study were a mere USD $1.58/day. Though the majority of children who become porters do so voluntarily (73 percent of the children in this study indicated that it was their choice to become porters), they overwhelmingly come from impoverished areas of the country and from socially excluded caste and ethnic groups.

The physical burdens of child porters are staggering. Although Nepalese law prohibits minors from carrying loads of more than 25 kg (55 lb.), most carry far more. The current study found that the average load was 6.9 kg (15 lb) heavier when payment was based on the weight of load carried versus a flat rate. Overall, the loads reported in the present study were an average of 47.5 kg (105 lb.). This figure is greater than that previously found in the ILO child porter rapid assessment and greater than the legally allowed limits in Nepal (KC *et al*, 2001a).

Presumed logic coupled with anecdotal reports received by the research team suggests that the weight of loads carried by child porters is positively correlated with injuries. This logic is supported by the nature of most frequently found injuries (back or muscle pain, sprains, lacerations and bone fractures). Though 92 percent of child porters in the present study reported injury in the past year, the results could not confirm a statistical correlation between weight carried and frequency of injuries. Nonetheless, this finding is notably greater than the reported results in the 2001 ILO child porter assessment where it was reported that 40 percent of child porters suffered illness or injury while portering.

A prominent finding of the study was that the majority of child porters did not have access to adequate food. The ILO rapid assessment of the situation of child porters in Nepal reported that "child porters lack sufficient calorie intake and nutrients necessary for healthy development." The current research substantiated this report by finding that 61 percent of the child porters did not have adequate access to food or dietary diversity (variety of foods eaten), and that consumption of protein was low.

Findings of care seeking behavior were relatively similar to previous studies: 50 percent (95 CI: 44-57) of child porters in the study reported not seeking medical attention because of economic barriers as compared to 60 percent in the ILO study (KC *et al* 2001a).

The psychological distress faced by children living and working away from home is amplified by the dangers involved. In addition to high rates of injury and illness suffered by child porters, many reported observing serious injuries or the deaths of other porters. Within the past year 20 percent (n=50) and 12 percent (n=29) of child porters reported witnessing serious injury or death, respectively, to other porters. Of the 29 deaths observed,[6] the circumstances of death are known in fifteen cases: seven deaths were attributed to falls, six to altitude sickness, and two to avalanches. The current study noted that overall, 91 percent of child porters indicated they felt portering negatively impacted their general well-being.

4.2 COMPARISON OF PORTERS AND THE CONTROL GROUP

Child porters are less well off and suffer greater threats to their well being than their non-porter peers in respect to many (but not all) of the indicators studied. It is particularly notable that indicators, such as alcohol consumption and feelings of stress and aloneness were significantly greater among child porters than their peers, a finding that may indicate that the psychological impact of working away from familial support is particularly difficult for children. Alcohol consumption among porters (38 percent) after adjusting for age and sex was 2.9 times greater than non-porter controls. Feelings of inadequate emotional support or aloneness were reported by 66 percent of porters compared to 37 percent of non-porters. Feelings of stress and/or mental torment were reported by 86 percent of child porters, which, after controlling for age and sex, was 1.9 times more than children in the control group.

Another finding of the study that could be attributed to the lack of familial support was the elevated level of sexual assault faced by the child porters. Within the last year (prior to the interviews with the child porters) 7 percent of porters and 1 percent of non-porters reported being sexually assaulted. After adjusting for age and sex, risk of sexual assault was 10.1 times greater among porters compared to their non-portering peers.

[6] Twenty nine children in the sample reported having observed deaths within the past year, however, it was not possible to ascertain whether all deaths reported were different; it is possible that the same death was observed and reported by multiple children in the sample.

One unexplained finding in the study was that non-sexual physical assault within the past year was reported by 34 percent of porters and 20 percent of controls, a difference that, after adjusting for age and sex, was not statistically significant.

Though the prevalence of stunting (75 percent), a measure of long-term malnutrition among child porters was not statistically different than non-porter peers, the level of low BMI (body mass index) was worse for child porters, indicating that porters faced short-term malnutrition at greater levels than their non-porter peers. The prevalence of anemia, another measure of malnutrition, among child porters (30 percent) was 1.9 times greater in porters than controls.

After controlling for differences in age and sex composition, portering status significantly predicted lower educational attainment. Overall, porters completed an average of 0.8 fewer years of education than non-porters. In addition, porters were significantly more likely to have never attended school than non-porters: 16 percent of porters had never attended school as compared to 9 percent of children in the comparison group. Among children (both porters and non-porters) enrolled in school, the frequency of attendance was significantly lower among porters (68 percent of porters reported attending school most days) than non-porters (of which 94 percent reported attending school most days).

Though they suffered greater numbers of accidents and injuries, non-porters sought medical care an average of 2.0 times in the past year as compared to 1.7 medical visits among porters. Half of the porters reported not seeking care for illness or injury within the past year because of economic barriers, compared to 27 percent of controls. This difference remained significant after adjustment was made for age and sex. Due to economic barriers, porters were twice as likely as non-porters to have not sought medical care.

Interviews conducted among key informants during the course of this study revealed that long distance commercial porters do not have the same access to various community resources and market driven regulations as trekking porters. Though most non-governmental organizations (NGOs) such as Porters Progress Nepal and International Porter Protection Group provided support to porters regardless of the type of portering in which they engage, the percent of long distance commercial porters who gain access to this support is relatively low.

5. LIMITATIONS

A major challenge in study design and implementation was identifying and sampling an appropriate comparison group. Initially, the control group was to be matched by age, sex, village, and caste, attempting to approximate similar socioeconomic status and background. However, due to political insecurity and time limitations, "home" porter villages were not always accessible; additional factors, including but not limited to children not being present due to attendance in secondary schools in other villages, also complicated the sampling process. Consequently, the control group was comprised of a particularly disadvantaged group which was less likely to attend regional secondary schools and more likely to be economically active. The controls are potentially from a similarly low socioeconomic status as the porter group since they share a similar underlying cause for early participation in the labor force (in retrospect, comparison of porters to children who are involved in other forms of labor is in some ways ideal, for characterizing other child laborer populations is of interest). However, sample issues precluded the original age/sex matched study design and limited comparison of porters and non-porters to regression models that account for age and sex differences in the two groups.

The cross sectional design also significantly limited the study: measuring injury and other health outcomes retrospectively over the past year precluded sampling of porters who were so severely injured or died, allowing for possible underestimation of adverse events.

6. CONCLUSIONS & RECOMMENDATIONS

The findings of this study provide direct evidence in support of a number of recommendations made in the International Labor Organization's document "Nepal Situation of Child Porters: A Rapid Assessment," which organizes its recommendations into three categories: *Prevention, Protection,* and *Rehabilitation*. We are recommending *long term* and *immediate* interventions to improve the well being of child porters. Because poverty is the single largest underlying condition leading to child labor, we highly recommended to the international community and the government of Nepal to focus efforts on improving the rural economy. An improved economy would reduce pressure on families and children to adopt the highly risky strategy of turning to portering as a means of survival.

In addition to efforts to improve the economy, specific efforts to improve the quality and accessibility of education is essential to providing long-term opportunities for children in Nepal. Educational and economic development are long-term solutions to address the needs of Nepalese children. However, this generation of Nepalese children is in need of more immediate measures to improve their well being.

We are particularly concerned about the findings of highly elevated rates of sexual assault on child porters, the relatively poor access to health care, the high levels of alcohol consumption and the low levels of educational attainment. We believe all of these attest to the need for immediate direct interventions that will lead to greater care and protection of child porters.

Shorter term means of improving the well-being of Nepalese children would be to support the indigenous and international efforts of organizations such as Porters Progress, the Edmond Hillary Foundation and similar organizations. These organizations advocate for and provide direct services and places of refuge to child porters in the most difficult circumstances.

SPECIFIC IMMEDIATE RECOMMENDATIONS ARE:

- Advocacy for the enforcement of Nepalese law regarding work conditions for children;
- Advocacy for improved policing to prevent the assault (both physical and sexual) of children;
- Advocacy for greater levels of national and international funding to strengthen support groups for child porters;
- Programs to disseminate information about the existing resources available to child porters at hospitals and clinics in areas of high portering traffic (including those operated by the Edmund Hillary Foundation);
- Provision of catch-up or remedial educational opportunities for child laborers that they can access while continuing to work. These educational opportunities should include practical applications such as first aid and nutrition education and information about sexually transmitted infections and pregnancy.

TABLE 1: BASIC DESCRIPTIVE CHARACTERISTICS OF PORTER SAMPLE

	N	Mean/Percent (95 CI)
Mean age (SD)	249	15.5 (15.4-15.6)
Age categories		
14 or younger	22	8.8%
15-16	227	91.2%
Sex		
Male	234	94.0%
Female	15	6.0%
Caste/Ethnic Group		
Rai	98	39.4%
Tamang	47	18.4%
Sherpa	42	16.9%
Brahmin/Chhetri	35	14.1%
Other	27	12.9%
District of Permanent Residence		
Solukhumbu	205	82.3%
Okheldunga	16	6.4%
Khotang	25	10.0%
Other	3	1.2%
Average years portering	250	2.2 (2.0-2.4)
Age when first began portering	250	13.2 (13.0-13.5)
Months per year portering	250	5.1 (4.6-5.6)
Days per month portering	250	19.4 (18.8-20.0)
Hours per day portering	250	7.8 (7.6-8.0)
Average distance traveled per day—km	250	4.3 (4.2-4.5)
Average weight of load—kg	250	47.5 (46.0-49.0)
Average monthly portering income	250	2224 (2035-2412)

TABLE 2: DIET AND FOOD CONSUMPTION AMONG PORTERS

	N	Mean / Percent
Average meals consumed - previous day	249	4.0 (3.9-4.1)
Average dietary diversity score[7]	246	5.3 (5.1-5.5)
Protein consumption—previous day[8] (%)	204	82.3% (76.9-86.8)
Consumption of select foods—previous day		
Milk/milk products	15	6.0% (3.4-9.8)
Eggs	43	17.3% (12.8-22.6)
Meat or poultry	110	44.2% (37.9-50.6)
Pulses/legumes (includes dahl)	156	62.7% (56.3-68.7)
Reduced size of meals or skipped meals because there was not enough food—past year	152	61.0% (54.7-57.1)
Did not eat for a full day because there was not enough food—past year	144	57.8% (51.6-64.3)

[7] The dietary diversity score was calculated based on reported consumption of eleven categories of food on the day preceding the survey and is intended as a marker of dietary quality.
[8] Protein consumption is defined as a dichotomous variable and is based on the reported consumption of milk products, eggs, meat, poultry, seafood, and pulses/legumes on the day preceding the survey.

TABLE 3: USE OF ALCOHOL, CIGARETTES, AND DRUGS AMONG PORTERS

	N	Percent (95 CI)
Alcohol Consumption	95	38.2 (32.1-44.5)
Frequency of alcohol consumption		
Daily	5	5.3
Weekly	19	20.0
Monthly	2	2.1
Rarely/less than monthly	69	72.6
Smoking	37	14.9 (10.7-19.9)
Drug/smak use	5	2.0 (0.7-4.6)

TABLE 4: INJURY, ILLNESS, AND CARE SEEKING AMONG PORTERS

	N	Percent (95 CI)
Portering accident within past year	248	27.1 (21.6-33.0)
Injury/illness while portering—past year	227	91.5 (87.3-94.7)
Back or muscle pain—past year	192	77.4 (71.7-82.5)
Sprains—past year	179	71.9 (65.9-77.4)
Wounds/deep cuts—past year	97	39.0 (32.9-45.3)
Broken bones/fractures—past year	14	5.6 (3.1-9.3)
Other injury—past year	6	2.4 (0.9-5.2)
Any injury—past year	227	91.2 (86.9-94.4)
Diarrhea—past month	196	78.7 (73.2-83.6)
Respiratory infection/cough—past mo	234	94.0 (90.3-96.6)
Fever—past month	227	91.2 (86.9-94.4)
Other illness—past month	22	8.9 (5.6-13.1)
Any illness—past month	246	98.8 (96.5-99.8)
Avg. number of times medical care was sought for injury or illness—past year	233	1.7 (1.5 – 1.9)
Provider of care		
Hospital	187	77.6
Clinic	3	1.2
Other	3	1.2
No care sought	48	19.9
Frequency of care seeking while portering		
Always	21	8.5
Sometimes	169	68.2
Never	57	23.1
Did not seek care within the past year because of economic reasons	125	50.4 (44.1-56.8)
Feel that portering negatively impacts well-being and/or health	225	91.1 (86.8-94.3)

TABLE 5: ANTHROPOMETRY AND ANEMIA

	N	Mean/Percent (95 CI)
Mean Weight (kg)	249	46.9 (46.0-47.8)
Mean Height (cm)	244	152.8 (151.8-153.8)
% below age/sex 3rd percentile cutoff[9]	182	74.6% (68.6-79.9)
Mean Body mass index[10]	244	20.0 (19.7-20.3)
% below age/sex 5th percentile cutoff	14	5.7% (3.2-9.4)
Mean Mid-upper arm circumference (cm)	249	20.5 (20.2-20.8)
Mean Hemoglobin level	244	13.9 (13.6-14.2)
% anemic by age/sex specific Hb	60	24.1% (18.9-29.9)
Mean Hematocrit	200	42.3 (41.7-42.9)
% anemic by age/sex specific Hct	30	15.1% (10.4-20.8)
Anemia prevalence (by Hb or Hct)	74	29.7% (24.1-35.8)

[9] Based on NHANES reference data for sex and age specific height distributions; height (cm) and weight (km) were measured to the nearest whole number; classifications of low height or BMI for age are conservative estimates for overall prevalence.
[10] Calculated using the formula: [weight (kg) / height^2 (cm)]*10,000.

TABLE 6: COMPARISON OF 15-16 YEAR OLD MALES—PORTERS VS. NON-PORTERS

	Porters (n=213)	Non-porters (n=52)	p-value
Background Characteristics			
Caste/Ethnic Group			
Rai	35.2%	38.5%	.194
Tamang	20.7%	9.6%	
Sherpa	18.3%	32.7%	
Brahmin/Chhetri	15.0%	7.7%	
Other	10.8%	11.5%	
District of Permanent Residence			
Solukhumbu	80.8%	94.2%	.235
Okheldunga	7.0%	1.9%	
Khotang	11.3%	3.8%	
Other	1.0%	0	
Education			
School attendance, past month (%)	40.8%	55.8%	.052
Average years of education completed	4.7	5.2	.203
For those not attending school:			
Average highest grade completed	3.6	3.6	.985
Plans to return to school	47.1%	47.6%	.999
Quality of Diet			
Average meals consumed—previous day	3.9	4.1	.333
Average dietary diversity score[11]	5.3	6.3	<.001
Protein consumption—previous day[12] (%)	83.0%	92.3%	.094
Consumption of select foods—previous day			
Milk/milk products	6.6%	7.7%	.780
Eggs	18.4%	32.7%	.024
Meat or poultry	42.7%	59.6%	.028
Pulses/legumes (includes dahl)	63.8%	80.8%	.020
Reduced size or skipped meals because there was not enough food—past year	62.4%	38.5%	.003
Did not eat for a full day because there was not enough food—past year	59.0%	36.5%	.004

[11] The dietary diversity score was calculated based on reported consumption of eleven categories of food on the day preceding the survey; it is intended as a marker of dietary quality.
[12] Protein consumption is defined as a dichotomous variable and is based on the reported consumption of milk products, eggs, meat, poultry, seafood, and pulses/legumes on the day preceding the survey.

TABLE 7: COMPARISON OF 15-16 YEAR OLD MALES—PORTERS VS. NON-PORTERS

	Porters (n=213)	Non-porters (n=52)	p-value
Use of Alcohol, Cigarettes, and Drugs (past year)			
Alcohol Consumption	39.0%	25.5%	.072
Frequency of alcohol consumption			
Daily	6.0%	15.4%	.662
Weekly	16.9%	15.4%	
Monthly	1.2%	0	
Rarely/less than monthly	75.9%	69.2%	
Smoking	16.9%	7.7%	.096
Drug/smak use	1.4%	0	.389
Emotional Health and Safety (past year)			
Felt alone/without emotional support	65.7%	55.8%	.339
Mentally stressed/tormented	84.5%	78.8%	.325
Physically assaulted	33.8%	34.6%	.881
Sexually assaulted	7.0%	1.9%	.206

TABLE 8: COMPARISON OF 15-16 YEAR OLD MALES—PORTERS VS. NON-PORTERS

	Porters (n=213)	Non-porters (n=52)	p-value
Injuries			
Back or muscle pain—past year	76.4%	73.1%	.526
Sprains—past year	70.4%	76.9%	.548
Wounds/deep cuts—past year	38.0%	40.4%	.848
Broken bones/fractures—past year	5.2%	9.6%	.342
Other injury—past year	2.4%	0	.184
Any injury—past year	92.0%	90.4%	.709
Illness			
Diarrhea—past month	76.5%	73.1%	.016
Respiratory infection/cough—past month	93.0%	96.2%	.669
Fever—past month	91.1%	94.2%	.716
Other illness—past month	9.4%	9.6%	.420
Any illness—past month	98.6%	98.1%	.785
Care Seeking			
Number of times medical care was sought for injury or illness—past year	1.7	1.7	.778
Provider of care			
Hospital	77.7%	65.4%	.257
Clinic	0.5%	1.9%	
Other	1.0%	1.9%	
No care sought	20.9%	30.8%	
Did not seek care within the past year because of economic reasons	51.6%	36.5%	.051

TABLE 9: COMPARISON OF 15-16 YEAR OLD MALES—PORTERS VS. NON-PORTERS

	Porters (n=213)	Non-porters (n=52)	p-value
Mean Weight (kg)	48.0	46.3	.063
Mean Height (cm)	154.5	149.1	<.001
Proportion below height cutoff	72.7%	86.3%	.044
Mean Body mass index[13]	20.0	20.8	.030
Proportion below BMI cutoff	5.3%	0%	.094
Mid-upper arm circumference (cm)	20.7	21.2	.282
Hemoglobin level	14.1	14.1	.729
Hematocrit	42.8	42.2	.268
% Anemic (by Hg or Hct)	25.4%	26.9%	.816

[13] Calculated using the formula: [weight (kg) / height^2 (cm)]*10,000.

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