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**Legal Reform, Externalities and
Economic Development: Measuring the Impact of
Legal Aid on Poor Women in Ecuador**

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Measuring the Impact of Legal Aid on Poor Women in Ecuador**

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Bruce M. Owen and Jorge Portillo*

Abstract

The authors assisted the World Bank in conducting an economic evaluation of the effectiveness of legal aid clinics for poor women in Ecuador. The legal aid clinics were a small part of a project to promote legal and judicial reform (LJR) in Ecuador, in turn part of a World Bank initiative to promote such reforms throughout the developing world. World Bank support for the clinics was ending just as we began our work.

Measuring the effectiveness of the clinics presented two challenges: deciding what to measure and finding a practical way to measure it. LJR is thought to contribute to economic growth and the reduction of poverty. Reform is also thought to increase the quality of life, because people place an independent value on “the rule of law.” We need to assess the performance of the legal clinics against these goals.

The literature on LJR in developing nations largely ignores the literature on microeconomic analysis of law, and hence lacks a framework for linking legal reform to economic growth at the level of microeconomic agents. Our first task is to apply economic learning to the problem of legal reform—that is, to identify the microeconomic foundations of the rule of law as they apply here. Once accomplished, this model points clearly to what should be measured in evaluating reforms: the positive externality of reforms on expectations of what courts will do.

The second challenge—measurement—is conducted under typical real world constraints. The clinics did not collect or preserve ideal data, an evaluation component was not built into the project, funds for data collection and analysis were limited, and the objectives we ultimately decided to measure were not necessarily those that the clinics set out to achieve.

In light of these difficulties, our econometric results are useful chiefly as a demonstration that empirical evaluation of the contributions of LJR to economic development is possible. We were not able to measure more than a hint of the most important benefits of the clinics—their spillover impact on non-participants. But even without this potentially very large positive externality, the clinics appear to have made a contribution to the economic well-being of poor women in Ecuador.

In the future, legal and judicial reform projects should be undertaken not merely to achieve abstract procedural norms derived from western legal experience, but to promote economic development by capitalizing on the law’s potential leverage or spillover effects on the incentives of economic agents.

Keywords: Legal reform, judicial reform, economic development, legal aid, poverty, women, Ecuador, economic incentives, expectations, domestic violence, project evaluation.

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Part I

Microeconomic Foundations of Economic Development and the Rule of Law

From the time of Adam Smith (1776), economists have focused on the sources of economic development. Plausible development models emphasizing, in turn, savings, investment, technological change, best practices, trade, human capital, and geography have been proposed, as recounted by Easterly (2002). From the time of Bretton Woods, a number of national and international donors and development agencies have labored to support development, spending hundreds of billions on the process. Yet poor nations, by and large, remain poor.

Recently attention has turned to “institutions,” particularly political democracy and the rule of law. Richer countries tend to have these things while poorer countries do not. Does this correlation result from a causative effect? If so, do the institutions cause economic growth or does growth make it possible for people to afford such institutions? And if it is indeed the institutions that cause the growth, are these institutions capable of being transplanted to foreign cultures?¹

To begin to answer these questions we need to understand the links between institutions and economic behavior. How do institutions affect incentives? How do institutions change the opportunities facing individual workers, consumers and investors? If we had models of these links, we could design institutional development strategies that are at least theoretically sound and build evaluation tools to judge the implementation of the strategies.

¹ Recent papers on these topics include Berkowitz, Pistor and Richard (2001), Rodrik (2002), Easterly and Levine (2002) and Rodrik, Subramanian and Trebbi (2002).

The Rule of Law is an institution which poor countries often are urged to adopt or to reform. The rule of law is not a well-defined concept. As lawyers use it, the chief meaning of the term is the supremacy of substantive and procedural rights, as administered by independent courts, over both arbitrary executive power and the might of powerful private individuals. At another level, it is the general acceptance, especially by losers, of a common system of dispute resolution. Relatedly, it is the mechanism by which the state's monopoly of legitimate force is channeled to protect civil, property, and other rights. This "legal" view of the Rule of Law has much merit, but it tends to neglect the important economic benefits of the legal system.

How does the rule of law affect poverty? Income arises, to risk oversimplification, from three major and related sources: trade, production and capital investment, including investment in human capital. Income arises in trade because different people place different values on given commodities, so trade can make each trader better off. Income arises in production because the value of output may be greater than the cost of inputs, especially in the process of eliminating quasi-rents. Income arises from investment because forbearance and risk taking each have economic value. All of these activities require transactions between different individuals in order to generate income, and each transaction is the result of economic incentives—specifically, the expectation of being better off (increasing one's income). National income increases (poverty is reduced) when the number and size of such transactions increase.

The rule of law affects the incentives to engage in trade, production and investment transactions. Indeed, we could define the rule of law for present purposes as the adoption and acceptance of legal institutions that optimize incentives to engage in economic transactions. It is very easy to think of examples.

- When the law establishes and secures well-defined land rights, landowners have much stronger incentives to trade in, or to invest in improving, property. This is so because in the absence of secure property rights there is no expectation that individuals will be able to retain the benefits of such transactions. Land becomes a more secure and liquid asset, enhancing its economic value. Wealth and income increase.
- When the law establishes and enforces effectively the right of women to own property and to retain income, women have much stronger incentives to engage in transactions that increase their incomes—including, for example, educational investments that improve their productivity. Wealth and income increase.
- When the law establishes a mechanism to enforce private contracts, a variety of trades and investments that were not previously possible (because of the risk of opportunistic behavior by a party) suddenly become profitable and take place, increasing economic welfare. Wealth and income increase.
- When the law protects individual liberty from private encroachment (as through criminal law enforcement) or official abuse (as though *habeas corpus*), the chance that any given person will be able to retain and enjoy the fruits of trade, production and investment increases. This enhances the incentive to engage in such activity. Wealth and income increase.

In each of these cases and many others, the economic effects of the rule of law is to change incentives, providing additional motivation to engage in income-producing and wealth-enhancing activities. The fact is that people everywhere respond to economic incentives. In principle, the mere addition or strengthening of the rule of law can greatly enhance the economic welfare of a nation, and begin the process of growth, even without an increase in economic resources, simply by enhancing allocative efficiency through incentive effects.

But what about the costs? Adoption of the rule of law has a number of costs. First, those who benefit from the lawlessness of a society must be compensated or otherwise convinced to accept the losses they will incur under the rule of law. Second, citizens must be educated to understand what the rule of law is, how it works, and what changes it will bring about. The rule of law is meaningless if not widely understood and accepted. Third, the machinery of lawmaking, law enforcement and adjudication must be set up and maintained. These costs must be considered in deciding whether to attempt legal reform.

The Formation of Expectations

The second of the three costs—that of informing and educating citizens regarding the role of courts—deserves further comment, even in this brief treatment of the economic role of the rule of law. The resolution of a dispute or the enforcement of an entitlement by a court has only an inconsequential direct economic effect. This is so for two reasons. First, the action of the court often simply classifies past actions, it cannot change what has already occurred. Second, any given case is seldom in itself significant relative to the economy as a whole. Nevertheless, courts can and do have an enormous impact on future economic decisions through their effects on private expectations.

The microeconomics of the rule of law hinge chiefly on the expectations created by the existence of the legal system. Decisions regarding trade, production, or investment (and corresponding decisions regarding savings and consumption) are based on the anticipated outcomes of present or future actions. The future consequence of current actions is never certain. Instead (in classical probability theory) there is a range of possible consequences, each associated with some likelihood or probability. The net benefit of an action is the weighted sum of these possible outcomes—the “expected value” of the action. Higher positive expected values are better than smaller ones, and for a given expected value greater certainty is better than less certainty. This simple framework for modeling economic

decision making relies both on behavioral assumptions and logic, and it makes testable predictions about how people will behave. These predictions have generally been correct.

The rule of law can affect the expected values of economic decisions in two ways—by changing the expected value of an action or by changing its variance, or degree of certainty. The expected value of an action can be changed if certain outcomes (positive or negative in value) are made unlawful or compensable. The certainty of the expected value can be changed if the law simply clarifies the status of some of the possible outcomes, or if the law makes certain outcomes more or less probable. Further, by clarifying the status of certain outcomes, or merely by specifying the rules that will be used to determine the status of such outcomes, the rule of law enables additional transactions to take place by reducing the costs of negotiation among the parties.

These economic effects of the rule of law operate chiefly with respect to economic decisions that are taken in advance of any event that might give rise to adjudication and with respect to which there may very likely never be any adjudication. Indeed, the likelihood of future litigation is endogenous. In the criminal law this is the concept of deterrence. Some people decide not to commit potentially criminal acts because the existence of the legal system makes them believe that they will be worse off (in expected value terms) if they do so. Thus, most potential crimes are deterred, not by the action of any court or officer, but by the expectation of what the court or its officers will do. The same principle applies to many other areas of law, notably property, contracts and torts.

Because the key to the economic effects of the rule of law is expectations, the formation of expectations is a critical step in the process of installing or reforming a legal system. A legal system by itself, however well-designed, is not a sufficient condition to reap the economic benefits of the rule of law. Economic actors must understand, at least in general terms, what courts do and they must be prepared to

accept what courts do as legitimate, even when they themselves are worse off as a result of a particular decision. In some circumstances achieving this understanding through education and experience may take considerable time and resources.

Measuring the Economic Impact of Legal Reform

What makes establishment of the rule of law a potentially very powerful development strategy is that its major economic effects do not rely on the quantity of legal “output,” measured in conventional terms. The nature of a legal system permits it to encourage trade, production and investment decisions that are made outside the court room, and whose consequences never produce a lawsuit. One might think that the output of a legal system should be measured in terms of cases tried, courtroom in use, judges appointed, backlogs reduced, and so on. But this is almost entirely incorrect. A highly effective legal system, in theory, might exist without a single case ever being tried.

To measure the impact of a legal reform project intended to increase income and wealth we must find a way to measure the effect of the reform either on income directly, or on expectations relevant to trade, production and investment decisions. This requires an explicit understanding of the relationship between the particular legal reform and the economic decisions it affects. It also requires a model of the mechanism by which economic actors form expectations about the law and its impact upon them.

Part II

Legal Aid Clinics for Poor Women in Guayaquil, Ecuador

This paper is concerned with evaluating the performance of a very small sub-component of an LJR project in Ecuador sponsored by the World Bank. The sub-component supplied legal aid services to poor women. The objective of the research simply was to measure the impact of the clinics, as a means of demonstrating the economic approach to evaluation of legal and judicial reform. The current goals of the World Bank are summarized in a brief document, “Millennium Development Goals” (World Bank, 2000). These goals include the reduction of poverty, the empowerment of women, and the promotion of education. We take these goals as given, and ask whether the Ecuador legal aid clinics advanced them.

While the legal aid clinics in Ecuador dealt with a number of issues, we focus on two: child support payments and domestic violence. The most obvious and direct questions about the impact of the clinics are whether they increased the incomes of the women they served, whether domestic violence against these women was reduced, and whether the children of these women received more or better education.² In answering these questions, we also want to know the magnitude of any impacts and we need to specify the alternative that is being compared to the clinics.

² Increased income from child support payments is of course a transfer rather than an increase in aggregate income. Nevertheless in these circumstances a transfer reduces poverty if absent fathers are better off than mothers seeking such support. It is also argued that women are more likely than men to save and invest in human capital formation, such as health and education, so that the transfers may produce Rawls-Nozick superior results.

While the obvious and direct questions just described are an important means of testing whether the clinics had any impact at all, they are not the right questions to ask if one is interested in finding which legal reforms have the greatest economic impact, or if one wishes to compare legal reform with other potential uses of scarce development support resources. The reason is clear: increasing income by sponsoring legal aid clinics that dealt with poverty one poor woman at a time would be extraordinarily expensive. Indeed, such an approach would be well beyond the means of all the development agencies put together, even within the relatively small country of Ecuador.

The right questions to ask are whether the legal aid clinics in Ecuador increased the incomes of the *women they did not serve*, whether domestic violence against these women was reduced, and whether the children of these women received more or better education. In other words, what really matters in assessing impact is measuring the spillover effects on the incomes of people whose economic status was improved because the clinics changed the expectations of poor women and their former domestic partners. As noted above, to focus on the direct effects of the intervention is almost entirely incorrect. It is correct to the extent that the direct effect of the intervention forms one basis for education and information flows affecting the expectations of those not directly involved.

Having said all this, the research described below does focus chiefly on direct effects. There are two reasons for this. First, the practical challenges of mounting an ex post research project of this type in a very poor country experiencing economic turmoil, with limited time and resources, made it impractical to take the next logical step in the research. That step would be to measure the external effects on non-clients of the legal aid clinics. Second, the purpose of the research is to demonstrate an economic approach to evaluation of legal reform projects. Taking the next step in the analysis would not have made a significant marginal contribution to that goal because the major methodological and statistical problems likely to be encountered in measuring the effects of the clinics on non-clients

were met and overcome in dealing with clients. We must be clear however that the size of spillover effects is the major test of the economic effectiveness of legal reform, and that measurement of direct effects is only a first step in the evaluation process.

Legal Aid Clinics in Ecuador—Background

In 1996, the World Bank financed a US\$10.6 million loan for judicial reform in Ecuador. This five-year project was completed in 2002. The loan supported, among many other subcomponents, three legal aid clinics for poor women. Specifically, the subcomponent *Legal Services Pilots for Indigent Women* gave partial grants to local non-governmental organizations (NGOs) that provided services to qualified women and their children. The goal of these grants was to enable poor women to realize their legal entitlements and to improve their socio-economic positions.³ The program supported the work of three local NGOs (*CEPAM, Corporación Mujer a Mujer, and Fundación María Guare*) that provided not only legal information and representation, but also such complementary services as psychological counseling and referrals to shelters for battered women. Three major cities (Quito, Guayaquil, and Cuenca) and two urban outskirts (Duale and Santa Elena) are served by the clinics. Financing for the NGOs was initially granted for the period April 1998 through March 2000, and was later extended until 2002. The subcomponents addressed in this research had a budget of less than US\$400,000 in total for this period.

Ecuador experienced a grave economic crisis during late 1990s. Public social programs were eliminated and there was a drastic decline of state investment in health and education. Unemployment increased to over sixteen percent, and the annual inflation rate reached sixty percent. The poverty rate increased from 29.2 percent in 1995 to 43 percent in 1998 and 69 percent in 2000, while the number of

³ World Bank (1996) p. 24.

people in extreme poverty (insufficient income for a minimum food basket) doubled from 17 percent in 1997 to 34 percent in 1999. Domestic violence is known to increase under these stressful circumstances. Ecuador chose to pursue legal aid clinics specifically for poor women during a time when domestic violence was being actively discussed, and women's groups were demonstrating against perceived inefficiency, inequity, and bias in the judiciary. Approximately twenty percent of households in Ecuador are headed by single women. Single women with children are among the poorest people in Ecuador and their living standards are consistently inferior to those of men.⁴ In addition, they are the victims of violence and abuse that affect not only their emotional well being, but their ability to escape poverty. In a study of the economic costs of domestic violence towards women, Morrison and Orlando (1999) found that domestic violence has a large, negative impact on women's earnings.

Methodology

The ultimate question in evaluating the *direct* economic effect of the activities in Ecuador is, "Were women who had access to legal aid and related services better off than women who did not have such access, holding other factors equal?"⁵ To simplify the analysis and facilitate comparisons with other activities, we focus on a single category of cases: situations in which mothers had separated from the spouse or partner who fathered their child(ren). We consider whether access to legal aid: translates into better legal results (obtaining a favorable child support judgment, or a favorable settlement or decision in paternity or custody

⁴ See World Bank (1995, 2000).

⁵ As explained above, we were unable to tackle measurement of spillover effects (the impact on non-clients' expectations, behavior and well-being derived from the information they received as a result of the project). Measurements of spillover effects could be undertaken using the same methods reported here, by comparing non-client populations that were and were not in a position to be affected by information flows arising from the intervention.

disputes); better economic conditions for poor mothers and their children; decreases a woman's chances of being battered; or any objective improvement in the situation of children.

Although the clinics provide help on a range of legal matters, we narrow the focus of the analysis to women seeking child support. This issue was selected for several reasons: First, it represents a significant proportion of the caseload of the legal aid clinics. Second, the legislation regarding child support is less imprecise than that affecting other rights, which facilitates evaluating a given claim. Finally, there is a substantial body of empirical literature on the subject of child support that, although geared toward developed countries, provides a reference point for conducting empirical work.⁶

The issues related to child support cases lend themselves to quantitative analysis and controlled studies, as well as to cross-country, cross-project comparisons. Women either get custody or they do not; they either get child support or do not, the amount of support awarded can be expressed quantitatively (and is often a matter of public record), and women can be surveyed as to the amount of support actually collected. These objectively measurable outcomes for women using legal aid programs can be compared to the measurable outcomes for control groups of similarly situated women not using legal aid programs. Results obtained by different legal aid providers in the same country can be compared with each other, as can results obtained by legal aid clinics in different countries.

In addition to lending themselves to quantitative economic analysis, these cases provide an entry point for quantitative analysis of the impact of legal aid on domestic violence. Nearly half of the legal aid clients who seek advice on child support matters in Ecuador describe themselves as victims of "severe physical violence" during the time they lived with the former husbands or partners. We are

⁶ See Beller et al. (1993), Del Boca and Ribero (2001), Argys and Peters (2001), Veum (1992), Aughinbaugh (2001).

able to look directly at the impact of domestic violence in these cases, to see if legal aid decreased the level of post-separation violence.

We assume that transfers of economic resources to a mother from her former domestic partner(s) helps to alleviate poverty simply because such women are likely to be worse off economically than their former partners. While this assumption is sufficient for present purposes, we note that such transfers may also reduce poverty by contributing to greater educational and employment opportunities for poor women and their children.

In many respects, evaluating the impact of legal reform is similar to assessing the effect of such traditional development programs as child immunization. Thus, we build on past experience accumulated in conducting such studies and adopt time-tested econometric practices.

We focus on the immediate outcomes of the intervention, namely:

- The amount of child support payments made by the absent fathers, including transfers in kind.
- The existence of an award (based on an entitlement), even if no transfers have actually been made. In this case, the award is still valuable as a claim on the father's future income.
- The settling of paternity disputes, which, in light of the social stigma carried by illegitimate children, may provide significant intangible benefits.
- The incidence of domestic violence, an issue that is frequently intertwined with paternity and child support disputes.

A first consideration is defining the metric that will be used to gauge outcomes for women whose children are entitled to child support. For ease of exposition, let us assume that both the existence and the amount of child support that any given mother is entitled to is fixed in the statutory code, and that it varies with her legally cognizable circumstances (marital status, number and ages of children,

etc.), which the court must determine. A measure of the effectiveness of the legal system in protecting such rights is given by the fraction of the entitlement that is actually received, i.e.,

$$\text{Effectiveness of legal system} = \frac{\text{Actual payment received}}{\text{Value of entitlement}} = \frac{\mathbf{P}(\mathbf{x},\mathbf{y})}{\mathbf{A}(\mathbf{x})}$$

$\mathbf{A}(\mathbf{x})$ is the entitlement in monetary units of any mother with legally relevant factual circumstances defined by the vector \mathbf{x} , and $\mathbf{P}(\mathbf{x},\mathbf{y})$ is the actual average payment received by such a woman.⁷ Here, the vector \mathbf{y} represents the mother’s characteristics that are not relevant in the law to the determination of their entitlements, but which nevertheless affect her ability to obtain the entitlement. Examples include social status and level of education.

Note that this ratio can be easily extended to instances, such as Ecuador, where the amount of the entitlement is not fixed in the statutory code but instead is left to the judge’s discretion. In that case, we can see the value of the entitlement as the sum of an average entitlement $\mathbf{a}(\mathbf{x})$, given by applicable case law and local practices, and a random term \mathbf{e} that reflects the judge’s discretion, i.e., $\mathbf{A}(\mathbf{x}) = \mathbf{a}(\mathbf{x}) + \mathbf{e}$. Although \mathbf{e} varies across women with the same set of characteristics, “generous” rulings cancel “stingy” ones, so that for the whole population a given mother is granted $\mathbf{a}(\mathbf{x})$ on average.⁸

⁷ Net of court and legal costs, if any. Entitlements are not observable because Ecuador has no guidelines linking factual circumstances to specific monetary entitlement values. An “award,” the term used below in the empirical sections, is the quantification of an entitlement by a court or mediator. Actual payments by fathers, which may or may not be pursuant to awards or affected by entitlements, are called “transfers” herein.

⁸ We note that the data collected for this project may also be useful in assessing the predictability of judicial decisions affecting child support entitlements. More predictable decisions translate, in principle, into more settlements and greater positive externalities (spillover effects) on non-clients.

The legal aid clinics assist the client in obtaining as much as possible of the full amount A to which applicable law and practices entitle her. This intervention enters directly as a variable in y , taking the form of legal information, legal representation, or psychological counseling. In addition, legal aid clinics might be able to help a woman increase A by changing her legally relevant circumstances x , such as establishing the paternity of her children in court.

A key question is whether, holding legally relevant facts constant, there is a statistically significant improvement in the outcome associated with the use of the legal aid clinic or the judicial system. Our null hypothesis is that former clients of the legal aid clinics are not better off than non-clients. Specifically, the intervention is effective if, for a given set of observable characteristics (x and y), participation in the legal aid clinic increases either the probability that a mother will be granted the entitlement, $\text{Prob}(A) > 0$, the value of the entitlement A , or the share of the entitlement actually received, P/A .⁹ The impact of the program under study among former clients is measured relative to another group of mothers with comparable characteristics, but without any previous contact with the legal aid clinics.

In order to test our hypotheses, we designed and supervised the administration of a household survey of 180 women who had used the legal aid program and a control group of 182 similarly situated women who did not have access to legal aid. We also rely on the Bank's previous reports and assessments of gender issues in Ecuador, including those related specifically to this activity.¹⁰ Finally, we use secondary sources describing Ecuador's laws and socio-economic situation, such as Ecuador's latest LSMS survey (*Encuesta de Condiciones de Vida*, 1988-1989) conducted by its census bureau (INEC).¹¹ In seeking to develop a model for

⁹ We could also define the success ratio P/A as a dichotomous variable that takes only two values: 1 if some payment is received and 0 otherwise.

¹⁰ World Bank (1996), Rodriguez (2000), World Bank (2000).

¹¹ INEC (1995)

evaluating other legal aid clinics, we also draw heavily on research the World Bank has previously undertaken or commissioned in the areas of justice reform, gender and development. Specifically, we rely on World Bank (2001, 2002b and 2002c).

In addition to the econometric analysis, we conducted “focus group” studies to assess non-quantifiable aspects of the legal aid clinics’ impacts. These studies and their results are described in a later section.

Ecuador’s Legal Framework

Identifying the set of legally relevant factual circumstances \mathbf{x} that define the existence of an entitlement $\mathbf{A}(\mathbf{x})$ requires a review of the relevant legal framework. Under Ecuador’s Civil Code, described more fully in World Bank (2003), both child support and entitlements belong to a group of financial obligations called *alimentos* (literally, “sustenance”) based solely on family ties. Once paternity has been established, the child is entitled to financial support as long as he/she is a minor or is unable to support him/herself due to a mental or physical handicap. A child is entitled to financial support from the moment a child support complaint is filed until the child turns 18 years old (21 years for those still attending school).

Each parent is responsible, according to his/her economic means, for providing the financial support necessary to cover the child’s basic needs, including housing, education, and medical attention. Significantly, the legislation provides no specific guidelines regarding the quantification of entitlements to child support.

The absence of written guidelines or formulas for computing child support entitlements does not preclude substantial predictability if judges in a given jurisdiction behave consistently. In evaluating child support payments, we should keep in mind that a couple might reach an agreement regarding financial transfers outside the legal system. If the outcome of judicial intervention is predictable and if

courts are accessible, such voluntary settlements will be common. The terms of settlements might result from explicit bargaining, or tacit bargaining resulting from social customs or embedded values. For example, a couple might reach an agreement regarding *alimentos* as part of a broader negotiation that includes visitation rights¹² or the division of the couple's assets. Thus, we briefly review the legislation regarding alimony and the division of the couple's assets.

Under Ecuador's law, divorced women are not entitled to alimony. If a married couple is separated (but not divorced), then the husband does have an obligation to provide *alimentos* to his wife. This obligation expires when: (i) the marriage is terminated; (ii) either spouse dies; or (iii) a court rules that the wife has slandered the husband. For women in *de facto* marriages (*unión de hecho*), there is no alimony entitlement. Thus, establishing whether a woman is entitled to alimony requires very little information about the case.¹³ As with child support, the exact level of alimony will depend on the wife's needs and the husband's economic means and needs.

Although a divorced woman is not entitled to alimony, she might have a claim on the couple's assets. In general, a divorced woman is entitled to a share of the joint family assets (*patrimonio conyugal*) and to any personal assets that she might have. This is also the case for *de facto* marriages. Curiously, a woman requesting financial support for herself and for her child cannot make both requests in the same trial.

¹² Ecuador's civil law favors the mother in assigning custody of the children.

¹³ Civil Code: *Código Civil*. Ley No. 104. RO/Sup 315 de 26 de Agosto de 1982; Juvenile Code: *Código de Menores*. Ley No. 170. RO/Sup 995 de 7 de Agosto de 1992; Code of Civil Procedures: *Código de Procedimiento Civil*. Codificación No. 000. RO/ Sup 687 de 18 de Mayo de 1987; Law on *de facto* Marriages: *Ley que Regula las Uniones de Hecho*. Ley No. 115. RO/ 399 de 29 de diciembre de 1982.

Collecting entitlements is often difficult. Although the parent responsible for the child's support can be imprisoned (up to eight days) until he/she pays the last two overdue installments, anecdotal evidence suggests that such extreme measures are rarely applied. Garnishment of wages is permitted but the penalty for employers who fail to comply is trivial. Multiple courts have jurisdiction over child support, and sometimes work at cross-purposes (Rodríguez (2000)). For example, in divorce cases it is common for Civil Court judges to set an amount of child support, even if there is already a similar ruling by a Juvenile Court. This is due to the fact that a divorce is not valid until there has been a formal agreement regarding the custody of the children and their financial support.

Survey Design

Bank support of the legal aid clinics for poor women provided additional funds to expand the work of three local NGOs, *CEPAM*, *Corporación Mujer a Mujer*, and *Fundación María Guare*. The largest and more established of the three NGOs is CEPAM, which operates in both Quito, Ecuador's capital, and Guayaquil, its largest city. These two cities contain almost half of the country's urban population. The provinces of Pichincha and Guayas, which include Quito and Guayaquil respectively, account for 35 percent of all cases filed in civil court during 2000¹⁴ and half of the child support cases filed in juvenile court during 2001.¹⁵ Due in part to budget and logistics limitations, we narrowed the scope of the study to the work carried out by CEPAM in Guayaquil.¹⁶

A chief consideration in the sample design and the fieldwork was gaining access to the relevant mothers. During a pilot test conducted in October 2001, we

¹⁴ See Pico Mantilla (2000).

¹⁵ Ecuador's Juvenile Court statistics, as cited in *El Comercio* (2002).

¹⁶ Ecuador's LSMS survey treats both Quito and Guayaquil as their own analytical domains (stratum) on account of their sizes and socio-economic characteristics.

found that eligible mothers were reluctant to participate in the interviews unless the initial contact was made through someone they already knew and trusted, such as personnel from the legal aid clinic. In addition, we found that the mother's home was not the most appropriate place to conduct the interview due to concerns about confidentiality and safety, particularly for women subject to domestic violence. Tracking down a specific woman who received legal aid and asking about her dealings with a former spouse proved to be a lot more difficult than, for example, selecting a dwelling in a given city block at random and asking residents about their living standards.

CEPAM-Guayaquil provided legal services to over 6,000 women from 1998 through mid-2001 and, for the same period, 733 mothers were given legal advice specifically on child support. We drew a simple random sample of 181 clients from this roster, roughly 1 out of every 4 clients. When CEPAM was unable to contact a given client or to secure her cooperation, the observation was replaced by selecting, at random, another mother from the remaining pool of clients. We also selected a comparable sample of 181 mothers that have never received legal help from CEPAM or similar NGOs. Although the sample size is quite modest, it falls within the range used by comparable surveys.¹⁷ As a comparison, Ecuador's 1998 LSMS survey used a sample size of 756 households to represent Guayaquil's entire urban population.¹⁸

¹⁷ For example, in their study of the economic costs of domestic violence, Morrison and Orlando (1999) interviewed 310 women in Santiago (Chile) and 378 women in Maragua (Nicaragua).

¹⁸ See "Sample Design" in:
www.worldbank.org/lsms/country/ecuador/ec98docs.html

The selection of the comparison group was made through purposive sampling techniques, with the help of CEPAM and related organizations.¹⁹ We established specific criteria for selecting and securing the help of a group of mothers comparable to our treatment group. Specifically, a mother was selected for the comparison group if she: (i) had at least one minor child (younger than 18 years old) whose father was alive but was not a member of the household, (ii) had never received legal help from CEPAM or similar NGOs, (iii) was poor or lived in a neighborhood with high poverty levels, and (iv) was less than 50 years old (the maximum age observed in the pool of clients). In addition, CEPAM kept a log of all non-clients contacted, detailing how the contact was made, which may help in detecting any unintended bias in the selection process.

Survey Results

We start by comparing our sample with a cross-section of all households in Guayaquil. Table 1 shows various socio-economic indicators for both the 362 mothers in our sample and the 765 households interviewed in Guayaquil during the 1998 LSMS survey. For most indicators, our sample shows lower standards of living than the average household in the city, which is what one would expect given that the poor are the target population of the legal aid clinics.

In this section, “cases” refers to mother-father pairs. It is of course the child, not the mother, who is entitled to child support. A given case may involve one or more children of a given mother-father pair; therefore certain regression results below are expressed on a per-child basis. “Entitlement” refers to a legally cognizable potential claim arising from factual circumstances, whether or not a transfer is sought from the father, or an award sought from the judiciary. Entitlements are not observable. An “award” is a formal recognition or quantification of an enti-

¹⁹ Given that our sample design is not fully random, all standard errors are estimated using appropriate “bootstrapping” techniques. See Davison (1997) and MacKinnon (2002).

tlement by a court or mediator. A “transfer” is a child support payment by a father, whether voluntary or not. A “client” is a mother to whom CEPAM-Guayaquil provided legal aid services.

Table 1 – Selected Household Characteristics

	Our Survey	1998 LSMS Survey	
	(Guayaquil)	Guayaquil	Urban Areas
Number of Households	362	765	3,291
Household Size	5.5	4.4	4.3
Number of Bedrooms	2.3	2.7	3.1
People per Bedroom	3.2	2.1	1.8
Female Head of Household (%)	71.0	22.4	21.2
House with Wood Walls (%)	1.7	1.4	2.4
House with Mud Walls (%)	27.9	21.2	15.4
House with Dirt Floor (%)	6.4	5.4	4.1
Networked Electricity (%)	99.4	99.6	99.6
Networked Water (%)	81.8	72.3	78.8
Toilet/Sewer System (%)	33.7	40.5	60.6
Telephone Connection (%)	28.7	32.0	35.6
Refrigerator (%)	61.9	77.4	73.0
Electric Washer (%)	6.1	12.3	11.7
Black and White TV (%)	37.6	36.9	41.2
Color TV (%)	56.9	72.5	73.7
Fan (%)	46.4	74.1	43.6
Air Conditioning (%)	2.2	11.0	4.6
Bicycle (%)	24.6	45.3	48.0

We now focus our analysis on those mothers in our sample that, *prima facie*, are entitled to child support—those with at least one child less than 18 years old whose father is alive but not a household member (for children attending school, the cut-off age is 21 years). Out of the 362 mothers interviewed, 357 are currently entitled (*prima facie*) to child support, or have been entitled to such support at some point during the 12-month period prior to the survey. (Table 2.) Most mothers (81 percent) have between 1 and 3 children and, on average, each mother has 2 children eligible for child support. In some cases, there is more than one absent father. Specifically, for the selected 357 mothers, there are 449 absent fathers dis-

tributed as shown in Table 2. Of these 445 cases (mother-father pairs), 208 correspond to clients and 237 to non-clients.

Table 2 – Number of Cases (Mother-Father Pairs) Considered

Relevant Mothers	Absent Fathers	
	Per Mother	Total
279	1	279
68	2	136
10	3	30
357		445

Frequency of Child Support Awards and Transfers

Although in only 21.8 percent of the cases has the mother formally been awarded child support, either by a court or through mediation, the percentage of cases actually receiving some child support payment is almost double (40.7 percent). This includes transfers of both cash and goods. Table 3 shows cross-tabulations between cases receiving transfers and those with formal entitlements. We note the importance of voluntary settlements and the difficulty of collecting amounts owed.

Table 3 – Number of Cases with Awards and/or Transfers

		Child Support Award		
		Yes	No	Total
Child Support Transfer	Yes	73	108	181
	No	24	240	264
	Total	97	348	445

Table 4 – Selected Characteristics of Clients and Non-clients

	Client	Non-client	Both
Number of cases	208	237	445
Child support award (%)	38.5	7.2	21.8
Child support transfer (%)	52.4	30.4	40.7
Relationship with absent father:			
Formal marriage (%)	35.1	11.4	22.5
de facto marriage (%)	44.7	71.7	59.1
Never lived together (%)	20.2	16.9	18.4
Mother characteristics:			
Mother's age (years)	33.0	31.2	32
Currently lives with partner (%)	11.5	19.8	16.0
Some high sch. education (%)	62.0	47.3	54.2
Some college education (%)	27.9	3.8	15.1
Has a job (%)	69.2	57.0	62.7
Absent father characteristics:			
Has a job (%)	82.2	66.2	73.7
Visits his children (%)	28.4	25.3	26.7
Other children to support (%)	59.1	62.9	61.1
Paternity dispute (%)	31.7	30.0	30.8

If we compare frequencies across clients and non-clients (Table 4), we find that both child support awards and actual transfers are more frequent among the former group. Although this might be due to CEPAM's intervention, it may be due to other factors. For example, clients are more likely to be married or to have a college education. Note that it is quite common (61 percent of eligible cases) for absent fathers to have other children of their own to support, which has a negative impact on the mother's probability of receiving transfers.

The type of conjugal relationship between the mother and ex-partner has a significant effect on the frequency of child support before controlling for other factors. (Table 5.) Thus, having a formal award for child support or receiving transfers is more frequent among those mothers coming from a formal marriage.

This is probably due to the fact that mothers from a formal marriage are less likely to face a paternity dispute (although such situations are not unknown).

**Table 5 – Selected Characteristics by Marital Status
(Clients and Non-Clients)**

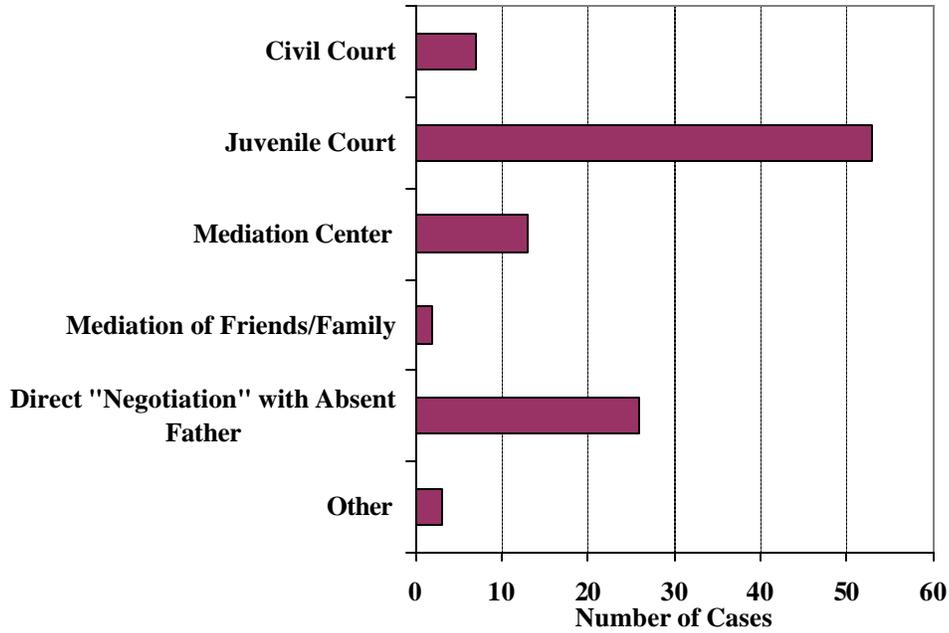
	Relationship with Absent Father			All Cases
	Formal Marriage	<i>De facto</i> Marriage	Never Lived Together	
Number of cases	100	263	82	445
Child support award (%)	45.0	13.3	20.7	21.8
Child support transfer (%)	58.0	34.6	39.0	40.7
Mother characteristics:				
Mother's age (years)	34.7	31.3	31.1	32.0
Currently lives with partner (%)	15.0	16.7	14.6	16.0
Some high school education (%)	65.0	49.4	56.1	54.2
Some college education (%)	22.0	12.5	14.6	15.1
Has a job (%)	72.0	62.0	53.7	62.7
Absent father characteristics:				
Has a job (%)	79.0	73.4	68.3	73.7
Visits his children (%)	29.0	27.4	22.0	26.7
Has other children to support (%)	53.0	61.6	69.5	61.1
Paternity dispute (%)	16.0	30.4	50.0	30.8

Use of the Judicial System

Determining which mothers sought child support is not an easy task because divorce proceedings automatically address this issue—there is no separate proceeding. During a pilot test conducted in October 2001, we found that divorced women receiving child support often indicated that they had never requested the award. In order to avoid confusion, our survey questionnaire only tries to determine who has child support, regardless of whether an explicit request was made.

As Figure 1 shows, the most common way to gain a child support award is through the Juvenile Courts. The next most common is direct negotiation between the mother and the absent father.

Figure 1 – Mechanisms for Obtaining Child Support



Of the 60 cases where the child support award was set by a court, only 44.6 percent have an award that was fixed as a proportion of the minimum wage and only 43.3 percent have made a formal request for an increase in the amount of child support. Less than one third of these requests for a larger amount were successful.

Although we cannot determine precisely who sought child support, we can tell who did not. (Figure 2.) Specifically, our questionnaire identifies those mothers that never were awarded or never received a transfer from the father in question and then asks them whether they ever sought child support. Thus, we can identify 257 (or nearly 58 percent) cases that have never sought child support. We presented the mother with a list of reasons for not seeking child support from the father in question and asked her to choose all applicable options. (Figure 3.)

Overall, the fear of (physical) retaliation and the inability to locate the father were cited most frequently.

The category of “other reasons” for not seeking child support implicitly includes constraints that all poor mothers face to a certain extent, like lack of money to cover the legal fees or lack of time for doing the necessary errands. In order to establish what is the biggest obstacle they face, we also asked those mothers who have never sought child support to choose only one out of four options: lack of money, lack of information, lack of time, or lack of child day-care. Not surprisingly, lack of money to cover legal fees is cited as the main obstacle by both clients and non-clients. Nevertheless, the second biggest obstacle for clients is lack of time, while for non-clients it is lack of information on how to proceed. This confirms the expectation that CEPAM intervention helps in part by narrowing the information gap that prevents some mothers from seeking the child support to which they are entitled.

Figure 2 – Reasons for Not Seeking Child Support

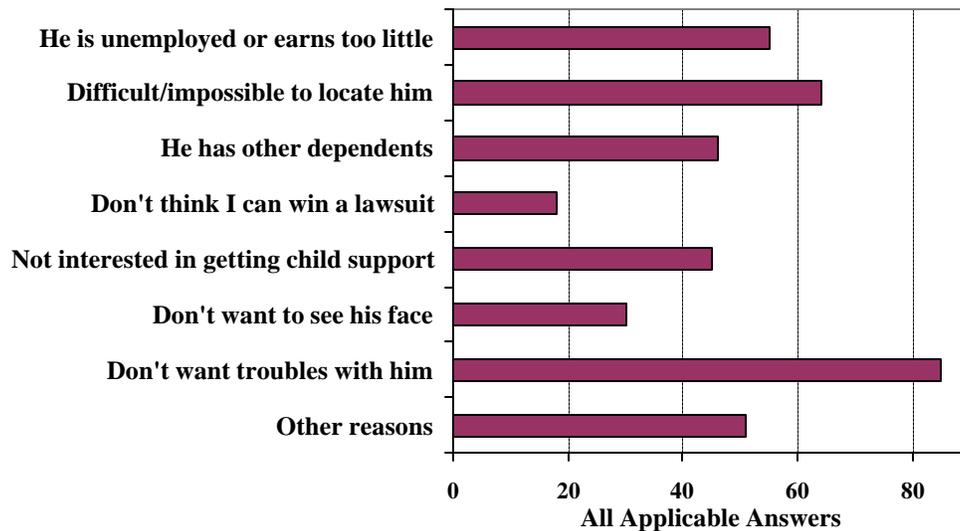
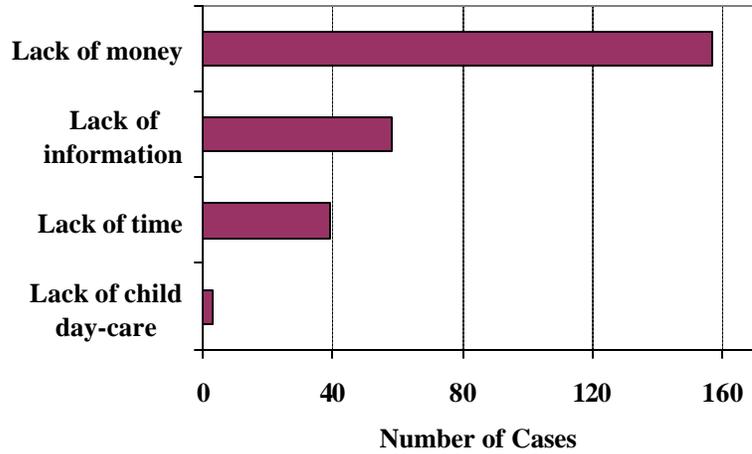


Figure 3 – Major Obstacle For Mothers Seeking Child Support



Attitudes Toward The Judicial System

Each participant was asked at the end of her interview whether she would recommend seeking child support to “a friend who is thinking about it.” (Table 6.) This gives us an indirect assessment of the participant’s own experience. We find that 85.6 percent of clients and 77.2 percent of non-client would recommend seeking an award. Of course, whether the respondent is actually receiving child support makes a difference but, even among those not receiving a transfer, clients have a more positive outlook than non-clients (82.4 percent against 76.3 percent respectively).

Table 6 – Mothers That Recommend Use of the Judicial System

	Client	Non-client	Both
Cases receiving transfer	88.0%	78.8%	84.3%
Cases not receiving transfer	82.4%	76.3%	78.7%
All Cases	85.6%	77.2%	81.4%

We also asked clients to consider a hypothetical scenario where CEPAM’s help was not available. Almost two thirds of clients (63.6 percent) indicated that in such a scenario they would have to seek child support anyway, and over three

quarters (75.2 percent) think that they would have done as well or better than they actually did. Of course, such *ex post* perceptions cannot be taken as a reliable indication of the mother's true behavior in a counterfactual scenario. Instead, they are useful as an indirect measure of customer satisfaction.

Child Support Awards

Our analysis to this point has been based on raw frequency distributions, which makes it difficult to isolate the impact of CEPAM's intervention. Hereafter, we use regression analysis to control for other relevant characteristics. Specifically, we consider a model where the probabilities of receiving an award and/or receiving child support payments are estimated jointly.

We use a probit specification to estimate the impact of CEPAM's intervention on indicators like the incidence of domestic violence after separation, the mother's labor force participation, and the children's school attendance rate. On each case, the dependent variable (Y) is treated as binary response that is equal to 0 or 1, depending on the value taken by an underlying index function Y*:

$$\begin{aligned}
 Y &= 1 \text{ if } Y^* > 0 && \text{yes} \\
 Y &= 0 \text{ otherwise} && \text{no}
 \end{aligned}$$

Y* is a function of a set of explanatory variables X (which includes CEPAM's intervention) and an error term e with mean zero and variance equal to one:

$$\begin{aligned}
 Y^* &= \beta X + e \\
 E[e] &= 0; \text{Var}[e] = 1
 \end{aligned}$$

A related specification, the bivariate probit, is used to estimate the impact of CEPAM's intervention on the probability of getting child support. Having a child support award (Y₁) or actually receiving child support payments (Y₂) are treated as binary variables equal to 0 or 1, depending on the value taken by the underlying index function Y*.

$Y_1 = 1$ if $Y_1^* > 0$	has award
$Y_1 = 0$ otherwise	no award
$Y_2 = 1$ if $Y_2^* > 0$	receives transfer
$Y_2 = 0$ otherwise	does not receive transfers

Where the error terms e follow a joint distribution with mean zero, variance equal to one, and non-zero covariance:

$$Y_1^* = \beta_1 X_1 + e_1$$

$$Y_2^* = \beta_2 X_2 + e_2$$

$$E[e_1] = E[e_2] = 0;$$

$$\text{Var}[e_1] = \text{Var}[e_2] = 1;$$

$$\text{Cov}[e_1, e_2] = \rho \neq 0$$

Here, the vector X includes variables that affect the mother's decision to seek the award as well as variables that affect her chances of succeeding, including the father's willingness and ability to pay child support. The hypothesis that the covariance coefficient ρ is zero was tested and rejected. That is, our estimation yields better results than estimating two separate probit equations, one for Y_1 and another for Y_2 .

A statistical result is "significant" if the odds that it may be due to chance are less than some specified level, commonly 1 in 20. At this conventional significance level, CEPAM increases the chances of having a formal award but not of actually receiving a transfer. At a less stringent significance level (odds smaller than one in ten of an erroneous result), CEPAM increases the probability of both having the award and actually receiving something. Specifically, clients are 20 percent more likely to receive an award and 10.4 percent more likely to actually

receive a transfer. This is in comparison with non-clients after controlling for relevant factors such as—

- Whether there was a formal marriage.
- Whether the mother is currently living with another spouse/partner.
- The absent father's employment status and earnings potential.²⁰
- Whether there was a paternity dispute.
- The presence of severe physical violence prior to separation.
- Whether the absent father visits his children frequently or has a close relationship with them.

Not all variables are statistically significant in both equations (Table 7). We find that in cases where there has been a paternity dispute, severe physical violence prior to separation, or where the father does not visit, his children are less likely to receive a transfer, although these factors do not seem to affect the probability of receiving an award. In addition, mothers that are currently living with a spouse/partner are more likely to receive an award, but this factor has no effect on the probability of actually receiving a transfer.

As expected, unemployed fathers or those with low earnings potential are less likely to make child support payments, but the fact that they are also less likely to be required to do so may reflect a mother's tendency not to seek an award when the expected monetary payoff is very small.

²⁰ Using data from Ecuador's 1998/99 LSMS survey, we estimate an equation where the father's share in the household budget is a function of his occupation, his age and education, his spouse's education, and the number of children. We then use this equation to predict the absent father's earnings potential as a function of the information reported by the mother.

Table 7

Bivariate Probit Model: Probability of Obtaining Child Support Award and/or Receiving a Transfer

Variable	Probability of Award			Probability of Transfer		
	Marginal Effect	Std. Error		Marginal Effect	Std. Error	
CEPAM client	0.1999	0.0424 ***		0.1041	0.0585 *	
Wife/Ex-wife	0.2277	0.0561 ***		0.1806	0.0676 ***	
Living with husband/partner	0.1181	0.0606 *		-	-	
Paternity dispute	-	-		-0.1521	0.0555 ***	
Visits his children	-	-		0.4010	0.0551 ***	
Number of eligible children	-	-		0.0629	0.0323 *	
Severe Violence (pre-separation)	-0.0671	0.0363 *		-0.2250	0.0549 ***	
Father's Earnings Potential:						
Employed	0.1111	0.0498 **		0.2181	0.0874 **	
Unemployed	0.1064	0.0494 **		0.2129	0.0892 **	
Unknown job status	0.0923	0.0502 *		0.1936	0.0882 **	

Number of Observations = 445 cases

Wald Chi-Square (16) = 183.71

rho = .5132

Likelihood ratio test of rho=0:

Chi-Square (1) = 21.26

Standard errors are estimated using bootstrapping techniques.

*** Significant at 1% ** Significant at 5% * Significant at 10%

Child Support Received

Table 8 presents summary statistics for the value of the award granted (**A**) per child, the payment actually received (**P**), and the payment-award ratio **P/A**. Judging by the sample means, it would seem that clients have better outcomes than non-clients, and that children in cases with a formal marriage do better than those with no marriage. Nevertheless, there is great variability in the data in terms of both the standard deviation and the range of extreme values, particularly in the value of the award. Variability reduces the statistical significance of the differences in the means. If we compare medians, which are less susceptible to extreme

values, then the advantage of clients or formal marriages remains unclear. For example, the top half of clients obtained an award greater than \$16.98 per month per child, while the top half of non-clients were granted amounts over \$24 per month per child (Table 8).

We tried to estimate the impact of CEPAM intervention on the fraction of the award that is actually received (P/A), controlling for relevant factors like the mother's marital status or the father's job status. Nevertheless, virtually all explanatory variables in our dataset, including CEPAM intervention, proved not to be useful in explaining the variation in the P/A ratio at conventional confidence levels.

One could view the payments actually received as the outcome of two inter-related decisions by the absent father: first, whether or not to give any child support at all, and second, how much to give. If both decisions are affected by common factors not observed in our data, estimating a payments equation with the subset of cases reporting some child support may result in biased coefficients. A two-step solution to this possible selection bias, originally suggested by Heckman (1979), consists of estimating an equation that explains the probability of receiving some child support for all the cases in our sample, and then using the predictions of such a model to create a proxy for the unobserved factors that affect the two interrelated decisions made by the absent father. Once such a proxy is added as an explanatory variable in the payment equation, estimations based on the subset of cases reporting some child support should yield unbiased coefficients. Using Heckman's approach we find that neither CEPAM intervention nor any of the independent variables tested is significant in explaining variation in the amount of child support actually received. This probably reflects the fact that, in Ecuador's family law, there are no precise guidelines for setting the amount of the award reflecting the entitlement, so that two mothers with what is basically the same set of facts may be awarded different amounts in court. In other words, our survey data do not allow us to take the observed award $A(x)$ and discriminate between

the average award $a(x)$ given by applicable case law and local practices and the random term e that reflects the judge's discretion. This clearly suggests possible beneficial effects from reforms aimed at increasing the predictability of awards, in order to induce more settlements.

Table 8 – Amount of Child Support

	Mean	Median	Std dev	Min.	Max.	Cases
A. Award (in \$ per month per child)						
All cases	33.54	20.00	43.30	0.40	250.00	92
Clients	34.09	16.98	46.44	0.40	250.00	77
Non-clients	30.73	24.00	21.66	10.00	80.00	15
Wife or ex-wife	37.53	20.00	51.16	0.40	250.00	43
Ex <i>de facto</i> wife	28.99	20.00	38.27	2.00	200.00	33
Single mother	32.19	18.49	28.78	8.00	100.00	16
B. Actual Transfer (in \$ per month per child)						
All cases	19.38	12.50	22.18	0.21	120.00	181
Clients	22.77	17.25	24.15	0.33	120.00	109
Non-clients	14.23	6.38	17.76	0.21	88.33	72
Wife or ex-wife	25.80	18.17	27.93	0.21	120.00	58
Ex <i>de facto</i> wife	15.41	7.29	19.17	0.33	100.00	91
Single mother	19.03	15.99	15.23	0.42	61.67	32
C. Transfer/Award Ratio (for those with award > 0)						
All cases	0.956	1.000	1.445	0	10.781	92
Clients	1.014	1.000	1.562	0	10.781	77
Non-clients	0.656	0.688	0.445	0	1.333	15
Wife or ex-wife	0.772	0.972	0.927	0	5.000	43
Ex <i>de facto</i> wife	1.093	1.000	1.937	0	10.781	33
Single mother	1.167	1.000	1.436	0	6.250	16
D. Transfer/Award Ratio (those with both transfer > 0 and award > 0)						
All cases	1.238	1.000	1.536	0.008	10.781	71
Clients	1.323	1.000	1.668	0.008	10.781	59
Non-clients	0.820	0.854	0.325	0.236	1.333	12
Wife or ex-wife	1.070	1.000	0.934	0.008	5.000	31
Ex <i>de facto</i> wife	1.443	1.000	2.116	0.033	10.781	25
Single mother	1.245	1.000	1.451	0.163	6.250	15

It is possible that the data are affected by a reporting bias in which respondents “round off” small awards to zero. For example, a mother who during the 12-month period prior to the interview received a mere 25 cents, may report it as zero because of the long recall period or just because such a token contribution is perceived as “next to nothing.”²¹

We explored an alternative approach to deal with this possible statistical bias. The approach uses all the observations in the dataset, including those cases with zero payment. We use what is called a censored regression or tobit model.

The Heckman Selection Model and the Tobit Model

We use a Heckman selection model to estimate the impact of CEPAM’s intervention on the amount of child support received. In this model, the father’s decision to give any child support at all (Z) is treated as binary response that is equal to 0 or 1, depending on the value taken by an underlying index function Z^* :

$$\begin{aligned} Z &= 1 \text{ if } Z^* > 0 && \text{give some child support} \\ &= 0 \text{ otherwise} && \text{give nothing} \end{aligned}$$

where:

$$Z^* = \beta_1 X_1 + e_1$$

The amount of child support received (Y) is observed only if $Z=1$, and it is given by the regression equation:

$$Y = \beta_2 X_2 + e_2$$

$$E[e_1] = E[e_2] = 0;$$

$$\text{Var}[e_1] = \text{Var}[e_2] = 1;$$

²¹ One of the mothers who participated in the focus groups indicated that the father “has never given anything at all, not even to buy a candy, or for school. All he does is to show up around Christmas and give [the kids] five dollars. Imagine, he gives them five dollars a year! and that’s it.” [emphasis added]

$$\text{Cov}[e_1, e_2] = \rho \neq 0$$

That is, the unobserved term e_2 influencing the amount of child support received is correlated with the unobserved term e_1 influencing the decision to give any child support at all. In addition, we explore an alternative approach for estimating a transfer equation that uses all the observations in the dataset, including those cases with zero payment. In a tobit specification, there is an underlying function (Y^*) representing the amount of child support actually received:

$$Y^* = \beta X + e$$

Where the error term with mean zero and variance equal to one. The amount of child support reported by the mother (Y) equals the underlying amount only if the latter is greater than a given threshold normalized to zero. Otherwise, the reported amount is equal to zero:

$$Y = Y^* \text{ if } Y^* > 0 \quad \text{some child support is reported}$$

$$Y = 0 \text{ if } Y^* = 0 \quad \text{no child support is reported}$$

Using this approach we find that the CEPAM intervention increases the amount of child support actually received by about \$10 per month per child. (Table 9) This is in comparison with non-clients after controlling for relevant factors:

- Whether there was a formal marriage.
- The absent father's employment status and earnings potential.
- Whether there was a paternity dispute.
- The presence of severe physical violence prior to separation.
- Whether the absent father visits his children frequently or has a close relationship with them.

Whether \$10 per month per child has a material effect on economic well-being depends on the mother's circumstances.

Table 9
Tobit Model: Amount of Child Support Received
 (\$ per child per month)

Variable	Transfer Received	
	Coefficient	Standard Error
Constant	-392.457	105.350 ***
CEPAM client	10.471	5.332 **
Wife/ex-wife	22.306	5.904 ***
Paternity dispute	-15.927	5.789 ***
Visits his children	35.162	5.382 ***
Number of eligible children	9.429	3.075 ***
Violence (pre-separation)	-14.020	5.146 ***
Father's Earnings Potential:		
Employed	26.355	7.627 ***
Unemployed	25.892	7.667 ***
Unknown job status	23.801	7.531 ***

Number of Observations = 445 cases

LR Chi-Square (9) = 167.16

Pseudo R-Square = 0.0751

Standard errors are estimated using bootstrapping techniques.

*** Significant at 1% ** Significant at 5% * Significant at 10%

Child Support Payments Relative to Household Budgets

Although half of the mothers entitled to child support did not receive any transfer during the 12-month period prior to the survey, an overwhelming 81.4 percent of them would recommend seeking an award. This at first may seem puzzling, given that even clients have to invest time and money in the effort.

In order to address this issue, the survey collects detailed information about household expenditures on food, which allow us to establish the relative impor-

tance of child support payments to the family budget. Specifically, we compare the amounts received across households using a transfer index defined as:²²

Transfer index =	$\frac{\text{Transfer per eligible child per month}}{\text{Food expenditure per household member per month}}$
------------------	---

Sixty-two percent of the households in this sub-sample of 180 households received no child support transfers. For those that received some child support (68 households), we find that the amount received as a proportion of the household budget varies considerably across households. Nevertheless, their median transfer index is 39 percent. That is, half of the cases receiving some transfer received 39 percent or more of what the household spends a month in feeding one individual. And for the top quartile receiving child support, the transfer covers 92 percent or more of what the household expends feeding one individual.

Thus, child support payments make a significant difference in the standard of living of some households. This finding is corroborated by data collected from focus groups, and suggests that poor women see the transfers as one of many small sources of income. Even if the mother receives nothing today, the award is a claim on the absent father’s income that may yield a transfer at some point in the future, and may contribute to self esteem.

Measuring Domestic Violence

We are interested in measuring domestic violence both as a control variable for taking legal action and as an outcome associated with legal aid intervention. As a control variable, one might argue that women that have been subject to violence and abuse are less likely to engage in litigation for fear of reprisal. In addi-

²² This index is computed only for half of the sample, selected at random for a second round interview.

tion, the incidence of violence after separation may be viewed as an outcome associated with the access to legal counseling in general. For example, in the process of claiming child support, a woman may learn more about her legal rights and be more inclined to combat abuse.

We adopt a broad definition of domestic violence that includes inter-household violence between individuals who formerly belonged to the same household. Although there are several approaches to measuring domestic violence,²³ we chose to measure concrete violent acts and events, without trying to measure attitudes, causes, or consequences surrounding the incidents. Specifically, we followed a methodology similar to the Revised Conflict Tactics Scale (CTS2) developed by Strauss et al. (1996). (Figure 4) The CTS2 consists of a negotiation scale that gauges the couple's negotiation skills and four violence scales that measure the frequency and severity of psychological aggression, physical assault, sexual coercion, and physical injury.

We adapted the CTS2 framework, originally developed for couples living together, to the circumstances of individuals that are divorced or separated. Thus, we dropped items that seem less significant in our context (e.g., "He called me fat or ugly") and added items more relevant for ex-partners (e.g., "He threatened to take the children away from me.")²⁴ We also eliminated sexual coercion as a separate scale, and instead added those acts to the psychological aggression and physi-

²³ See Pico Mantilla (2000), Shrader (2001).

²⁴ For example, in their study of the economic costs of domestic violence, Morrison and Orlando (1999) interviewed 310 women in Santiago (Chile) and 378 women in Managua (Nicaragua).

²⁴ See "Sample Design" in: www.worldbank.org/lsm/country/ecuador/ec98docs.html. The revision of the domestic violence scale was based in part on the results of a pilot test conducted in October 2001 for a small sample of CEPAM clients. The questionnaire included an open-ended question exploring domestic violence after separation.

cal assault scales. Figure 4 lists the violent acts and events that are included in our questionnaire.

Figure 4: Scale for Measuring Severe Domestic Violence

Subscale	Psychological Aggression Scale Items
Severe	Threatened to hit or throw something at you
Severe	Threatened to kill you
Severe	Destroyed something belonging to you
Severe	Threatened to take the children away from you
Severe	Harassed you at work or tried to make you loss your job
Severe	Threatened to assault you sexually or used threats to make you have sex
Subscale	Physical Aggression Scale Items
Severe	Punched or kicked you
Severe	Hit you with something that could hit you
Severe	Choked you
Severe	Burned or scalded you on purpose
Severe	Used a knife or gun on you
Severe	Used force (like hitting, holding down, or using a weapon) to make you have sex
Severe	Assaulted you sexually or raped you
Minor	Pushed or shoved you
Minor	Grabbed you
Minor	Twisted your arm or hair
Minor	Slapped you
Minor	Threw something at you that could hurt
Subscale	Injury Scale Items
Severe	Had a broken bone from a fight with him
Severe	Passed out from being hit in the head by him in a fight
Severe	Went to a doctor because of a fight with him
Severe	Needed to see a doctor because of a fight with him, but you didn't
Minor	Had a sprain, bruise, or small cut because of a fight with him
Minor	Felt physical pain that still hurt the next the day because of a fight with him

In order to compress the interview time, our section on domestic violence is designed to detect only *severe violence*, which is defined as being the victim of at least one severe act of violence (e.g., “He beat me up,”) or of frequent minor acts of violence (e.g., “He twisted my arm.”) Thus, the interviewer has to read out loud all the items in Figure 4 only if the mother answers “NO” to all of them. Conversely, if the mother indicates that, for example, she was kicked by her ex-

husband, then there is no need to go over the other items in the physical assault and injury scales. In that case, the interviewer records the existence of severe physical violence and skip directly to the next module or the next absent father.

Effects on Domestic Violence

Aside from the monetary gains from CEPAM's intervention, there is evidence that clients benefit from a reduction in domestic violence. (Table 10) The incidence of domestic violence *before the separation* is about the same for clients and non-clients. (Comparable data for Ecuador as a whole are not available.)

After separation, the incidence of violence from the absent father diminishes across the board. Nevertheless, this decrease is more pronounced for clients than for non-clients, both in relative and percentage terms. Note that these findings exclude single mothers that never lived with the absent father, because in these cases it is not possible to define a comparable recall period (i.e., it is hard to set a precise date for the break up).

Table 10 – Incidence of Domestic Violence

	CEPAM client	Non- Client	Both
	Number		
Cases considered*	166	197	363
Cases of violence before separation			
Physical violence	102	129	231
Severe physical violence	95	117	212
Severe psychological violence	104	120	224
Cases of violence after separation			
Physical violence	50	84	134
Severe physical violence	44	79	123
Severe psychological violence	88	104	192
Violence before separation	Percent of cases		
Physical violence	61.4	65.5	63.6
Severe physical violence	57.2	59.4	58.4
Severe psychological violence	62.7	60.9	61.7
Violence after separation			
Physical violence	30.1	42.6	36.9
Severe physical violence	26.5	40.1	33.9
Severe psychological violence	53.0	52.8	52.9

*Excludes mothers that never lived together with the father

We explore this issue further by using regression analysis to control for relevant characteristics. We find that CEPAM reduces the probability of experiencing severe physical violence after separation by 17 percentage points. This is in comparison with non-clients after controlling for:

- Severe physical violence before separation.
- Whether the mother has ever reported abuse to authorities (*Comisaría de Mujeres*).²⁵

²⁵ Ecuador provides services for women through special police facilities, the *Comisariías de la Mujer* (Commissariat of Women). The *Comisariías*, staffed by women and dedicated solely to crimes of violence against

- The mother's self-reported race (a proxy for cultural differences and social exclusion).²⁶
- The father's employment status.

When the mother experiences physical violence prior to separation, or the aggression was so severe that she reported it to authorities, the mother is more likely to experience severe physical violence after separation. (Table 11) Cases where the mother identifies herself as black/mulatto or the father is currently employed are more likely to experience physical violence after separation. Factors like the household poverty level, the mother's age or education, or the father's education do not seem to play a role in explaining physical violence.²⁷

women, are charged with receiving complaints and safeguarding women from violence. They must report serious injuries to the criminal courts. *Rodriguez (2000) p. 7.*

²⁶ According to INEC (2000), most people in Guayaquil identify themselves as mestizo (67.7 percent) or white (21.9 percent), and only 8.3 percent as black or mulatto. In contrast, nearly 26 percent of the mothers in our sample describe themselves a black or mulatto.

²⁷ In their study on domestic violence in Lima, Peru, Gonzales de Olarte and Gavilano Llosa (1999), found that poverty is associated with a higher incidence of psychological and sexual violence against women but not of physical violence. Instead, they found that physical violence is more likely if the couple is not married, the man is employed, or if the mother asks for support to relatives or friends.

Table 11

Probit Model: Probability of Severe Physical Violence After Separation

Variable	Prob. Violence Post-separation	
	Marginal Effect	Standard Error
CEPAM client	-0.1712	0.0548***
Violence (pre-separation)	0.4007	0.0452***
Reported to authorities	0.2583	0.0679***
Mother black/mulatto	0.1075	0.0621*
Father employed	0.1081	0.0567*

Number of observations = 363 cases

LR Chi-Square (5) = 102.20

Pseudo R-Square = 0.2199

Standard errors are estimated using bootstrapping techniques.

*** Significant at 1% ** Significant at 5% * Significant at 10%

Note: Excludes cases where the mother never lived together with the father

Child Support Payments and the Mother’s Employment Status

We estimated a crude model of the mother’s labor force participation, to see if child support payments have any effect on the mother’s decision to work. We found no effect, after controlling for factors usually associated with labor force participation:

- The mother’s age.
- The mother’s years of schooling after secondary education.
- Whether the mother is currently living with another spouse/partner.

We find that younger mothers, those currently living with a spouse/partner, and those with no post-secondary schooling are less likely to work. (Table 12) We tested other factors, like the number of children less than 6 years old, but they turned out to be not significant.

Table 12
Probit Model: Probability of the Mother Having a Job

Variable	Prob. Having a Job	
	Marginal Effect	Standard Error
Receiving transfer from any father	0.0680	0.0586
Mother's age	0.0720	0.0254 ***
Mother's age squared	-0.0009	0.0004 **
Living with husband/partner	-0.1687	0.0711 **
Years post-secondary schooling	0.0439	0.0217 **

Number of observations = 357 mothers

LR Chi-Square (5) = 37.64

Pseudo R-Square = 0.0795

Standard errors are estimated using bootstrapping techniques.

*** Significant at 1% ** Significant at 5% * Significant at 10%

Child Support Payments and Children's School Attendance Rate

At a conventional 5 percent significance level, receiving child support payments increases the probability of the child attending school by 4.5 percentage points. This is in comparison with those not receiving a transfer and after controlling for relevant factors:

- The child's age and gender.
- The mother's years of schooling.
- The household's per capita consumption.
- The incidence of physical violence against the mother after separation.²⁸

²⁸ Violence against the mother contributes to an unsettling family environment and also is associated with violence against the children. According to CEPAM-Guayaquil's client database, out of the 946 mothers that for the period 1998-2001 reported being the victim of domestic violence, 35 percent also reported that the spouse/partner inflicted physical harm on their children.

We find that the school attendance rate decreases with the child’s age and that this effect is more pronounced for boys than for girls. (Table 13) In addition, less educated mothers and those experiencing physical violence after separation are less likely to send their kids to school. Finally, higher poverty, measured in terms of per capita consumption, is associated with less frequent school attendance. Note that CEPAM’s impact on the child’s attendance rate is twofold: directly, by increasing the chances of receiving child support and indirectly, by decreasing the incidence of domestic violence after separation (physical violence after separation decreases the child’s probability of attending school by 2 per cent).

Table 13
Probit Model: Probability of Child Attending School

Variable	Probability of Attending School	
	Marginal Effect	Standard Error
Receiving transfer	0.0475	0.0211 **
Violence (post-separation)	-0.0396	0.0228 *
Age - boy	-0.0111	0.0032 ***
Age - girl	-0.0091	0.0031 ***
Mother's yrs. schooling	0.0154	0.0054 ***
Per capita consumption	0.0017	0.0007 **

Number of observations = 430 children

LR Chi-Square (6) = 50.79

Pseudo R-Square = 0.1908

Standard errors are estimated using bootstrapping techniques.

*** Significant at 1% ** Significant at 5% * Significant at 10%

Note: Excludes cases where the mother never lived together with the father.

Part III

Focus Groups

The survey indicates that most eligible mothers recommend seeking child support, despite the fact that most of them do not receive any transfer. In order to address such issues in a more flexible format, we conducted a series of focus groups that included both CEPAM clients and non-clients. Specifically, the themes explored during the sessions were:

- What are the benefits (both economic and extra-economic) of receiving child support?
- What are the major obstacles to getting child support? Why do some fathers not fulfill their obligation?
- What are the reasons for seeking child support? To what extent is the decision affected by related issues, like child custody, domestic violence, etc.?
- What is the level of satisfaction with CEPAM's services?

A total of 24 mothers eligible for child support participated in three separate focus groups, lasting 2 ½ hours each. Of the 24 participants, 18 had initiated some type of legal action (14 through CEPAM and 4 by private means) and the other 4 had never requested child support. The sessions were moderated by specialists on gender issues. Below is a summary of the major findings from the focus groups, which to some extent corroborate the survey results.

Benefits of Legal Aid

As anticipated, participants said that although the amounts of child support were small, they were still important because their families were in very precarious economic conditions. One might view these transfers as just one of several small sources of income which, taken together, play a critical role in the mother's survival strategy.

“The ten dollars I receive [in child support] are not enough... what can I buy with it? Just a couple of things, [food] for two or three days... Whenever I can, I give my children some chocolate milk and, if there is some, a piece of bread at night. Of course, not always. Only when I can afford it, when I get some money washing clothes.”

None of the mothers who obtained child support think that the amount set was fair or sufficient. All but two of the women spoke of the child support (*alimentos*) as paying for food; only two had enough to use it for health, education or clothing expenses.

The time period covered by the activity corresponded with a period of economic crisis in Ecuador that diminished the value of the amounts involved in the transfers. Ecuador’s economy underwent both inflation and “dollarization” during the period covered by the activity. Almost all of the women in the focus groups who had obtained pensions prior to dollarization agreed that their economic status worsened after the transition.

There were also important non-monetary gains from CEPAM’s intervention. Participants cited improved self-esteem and help in coping with the aftermath of domestic violence.

“ I always tell them [mothers in a similar situation] to go to CEPAM... not only to get child support, but also to receive psychological counseling... so that they can improve their self-esteem, so that their children are no longer mistreated.”

Due in part to the stigma carried by illegitimate children, the primary concern for some mothers was to prove paternity, even if at the end they did not get child support payments. Some mothers complained that the father’s lack of involvement in their children’s lives was more damaging than the lack of financial support.

Obstacles to obtaining legal aid

The main deterrent to using the judicial system is the perception that courts are corrupt, nontransparent, and biased against women. CEPAM helps by cutting through the red tape and otherwise reducing transaction costs. CEPAM clients reported that they were able to negotiate the judicial system notwithstanding its problems.

Fear of physical violence and other forms of retaliation is another major concern for mothers when deciding whether to seek child support, which is consistent with the results of the survey.

“I went [to the authorities] only once because he found out about it and threatened to beat me up. I already had problems with him because he wanted to take my daughter away from me... He said he could take her because I did not have a job to support her, because I was too young.”

Satisfaction with CEPAM's services

CEPAM clients reported a greater ability to negotiate the intricacies of the legal system than non-clients. In fact, women who used CEPAM recommended it to those who did not. Women that went through the courts without CEPAM's help would not recommend engaging the judicial system at all.

When asked what they had learned from legal aid, women spoke of ending a situation in which they had felt alone and disempowered, of gaining a better understanding of their own and their children's rights, of the power of the legal process to face paternal irresponsibility, and of having been given a new attitude with which to face life.

Conversely, for absent fathers, child support payments seem to be about more than just money. For some men, the lawsuit is an affront to their traditional dominant status. If, in addition, the absent father is facing economic hardship, the result may be increased violence towards the mother. (All this, of course, is the mothers' understanding of the fathers' perspective.)

There is also some evidence of the positive externalities of legal intervention. Some participants used the threat of legal action as a way to reach an out-of-court settlement with the absent father. In fact, some participants believe that the amount of child support fixed by the court is smaller than what could be received via an out-of-court settlement. In two instances, the mother indicated that, beyond any personal gain, standing up for her rights was a way to improve the conditions of all women.

“Yes, [I do recommend going to court] because, even if you get nothing, at least it contributes to diminish the number of irresponsible fathers. In some cases, just filing the complaint scares the father into reaching a settlement with the mother.”

There are some popular beliefs and *de facto* rules, outside of what the law stipulates, that seem to shape individual decisions about child support. For example, because child support payments are commonly called *alimentos* (literally, “sustenance”), some women have the misconception that the father’s obligation is limited to providing enough for the child to eat. It is also a common belief amongst men, according to the focus group mothers, that once the mother starts living with another man, or once she gets a job, there is no longer an obligation to provide child support. Even more disturbing is the fact that some men try to gain sexual favors from the ex-spouse in exchange for financial support.

Part IV

Conclusion

The empirical evidence is consistent with the legal aid clinics having brought benefits to their clients, and there are some hints of a spillover effect. Whether these benefits are worth their costs is an open question. It is unlikely that supplying every poor person with a lawyer is a viable development strategy. We conjecture, however, that a study attempting to address spillover effects might find more substantial benefits and a far more impressive ratio of benefits to costs.

It is troubling that the program to help fund legal aid clinics in Ecuador contained no provision for capitalizing on spillover effect, such as credible publicity regarding the rights of women and the effectiveness of the clinics in representing them, which might have induced more and more favorable private settlements. In our view the effectiveness of legal reform is almost always a function of its impact on nonlitigants. This in turn relies not merely on the various substantive and procedural characteristics of the judicial system but also on the channels of information by which expectations are formed about what courts will do.

One of the striking findings of the focus groups was the extent to which women valued access to justice for non-financial reasons. Participants articulated their hopes and goals from the legal system with clarity and sophistication. These results suggest that the legal aesthetics of the rule of law are far from meaningless in a development context. Individuals value the sense of increased self-worth that accompanies enforceable legal entitlements, and apparently would be willing to trade off more quantifiable benefits, at some unknown rate, in return. One interesting question for future research is whether the benefits of increased self-worth that were identified in the focus groups also comprise a portion of the spillover benefits for nonlitigants.

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