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Who Pays?
Receipt of Child Support in the United States

Using a sample of ever-divorced mothers from the National Longitudinal Study of the High School Class of 1972, this study examines the determinants of the receipt of child support. The results, consistent with prior research, indicate that the receipt of child support is mostly dependent on the circumstances of fathers. The circumstances of mothers and children have no direct impact on whether support is received nor on the amount received. Similarly, although measured crudely, the legal environment has no impact on the receipt of child support. The results also indicate the presence of significant sample selection in that (a) *if mothers not due child support were to have an award, they would be less likely to receive support than a comparable set of mothers who are due support; and* (b) *if mothers not receiving support payments were to receive child support, they would receive a lesser amount than a comparable set of mothers who receive support. The policy implications of the results are also discussed.*

Although the "feminization of poverty" is a complex issue that cannot be attributed to a single causal force, child support occupies a central role in the debate about poverty associated with marital disruption. Supposedly, child support is the mechanism by which economic resources are transferred from noncustodial parents (mostly men) to custodial parents (mostly women).[1] Yet, only about 60% of mothers heading a single-parent family have a child support award, and of these women, only 48% receive the full amount due and 26% receive nothing (Office of Child Support Enforcement, 1988). While the figures are higher for ever-married mothers, over 40% of such women do not receive child support (Beller and Graham, 1988). In this study, the determinants of the receipt of child support and the amount of support received are explored with a sample of ever-divorced mothers taken from the fifth follow-up of the National Longitudinal Study of the High School Class of 1972.

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CONCEPTUAL FRAMEWORK

A number of studies, cited below, have sought to determine the correlates of receipt of child support, as well as the amount received. Covariates that have been considered in prior research include characteristics of mothers, fathers, and children (Beller and Graham, 1985, 1986a, 1986b, 1988; Hill, 1984; O'Neill, 1985; Peterson and Nord, 1990; Sorensen and MacDonald, 1983); the structure of the divorce settlement (Beller and Graham, 1985, 1988; Sorensen and MacDonald, 1983); and the nature of the legal environment (Beller and Graham, 1988; Peters, 1986; Peterson and Nord, 1990; Robins, 1986; Weiss and Willis, 1989). This study extends prior research by including indicators of each of these factors in a single multivariate analysis and by using a set of modeling techniques that adjust for the selective sample of mothers who receive child support. Below, expected relationships are outlined and findings from prior research are discussed. Note that while the discussion is couched largely in terms of the receipt of child support, the comments apply as well to the amount of support received. That is, an effect that acts to increase the likelihood that

support is received is also expected to increase the amount received.

The expected relationships presented below are based on a conceptual framework that borrows heavily from the work of Beller and Graham (1985, 1986b) and Weiss and Willis (1985). A basic assumption within this framework is that both parents value the welfare of their children and each therefore benefits from the other's actions to increase the children's welfare. In a two-parent family, propinquity generally acts to maximize the investment of both parents in their children, so that either parent enjoys increments to a child's welfare made by the other parent, while also making contributions toward their benefit. After divorce, however, fathers lose control over the allocation of goods and services in the children's household and cannot assume that their economic contributions will be distributed as they wish between the private consumption of the mother and the children. In addition, fathers receive diminished utility from their children because of distance.

Moreover, it cannot be assumed a priori that all fathers will provide equally for their children. Rather, the nature and extent of resource transfers from fathers to their children are subject to negotiation, with each parent seeking to maximize personal preferences, subject to constraints imposed by concern for the welfare of the children. The outcome of these negotiations is the time and material support provided by the father. It is argued that receipt of child support, as a negotiated outcome, is a function of several interrelated factors: motivation, ability to negotiate, and characteristics of the legal system.

Fathers who are more concerned about the welfare of their children, have more resources, and have greater control over the allocation of resources in the children's household will be more motivated to provide child support. Although the data used in this study contain no direct measures of motivation, it is argued that the motivation of noncustodial parents to provide child support is linked to the income and education of parents, as well as to a variety of other background characteristics.

It is important to emphasize that "motivation" is not constrained here to equal a father's concern for the welfare of his children. Indeed, it is possible that fathers who are concerned about their children's welfare make economic contributions other than child support. For instance, they may purchase clothing for their children or pay for their medical expenses. For the purposes of this study, motivation to provide child support is conceptualized as the willingness of fathers to *transfer cash to the mother* and is assumed to stem from a variety of sources, including concern for their children's welfare.

The ability to negotiate in line with one's preferences is assumed to be dependent on the level of socioeconomic resources possessed. Parents with greater resources are better able to negotiate a position closer to their own preferences. In addition, parents conduct negotiations concerning child support within limits imposed by law (see Mnookin and Kornhauser, 1979). Although courts usually ratify child support decisions made by parents, the use of legal assistance and the nature of divorce laws may influence the likelihood that child support is provided. As noted by Weitzman (1985), no-fault divorce laws produce an atmosphere of "gender neutrality" that may influence the likelihood that women receive a support award, which in turn affects the likelihood of receiving payments.

Expected Relationships

On the basis of this conceptual framework, the income of mothers is expected to be related to the receipt of child support, but in offsetting directions. On one hand, it is expected that fathers are more likely to pay child support when they believe that the mother is financially unable to care for the children. The lack of economic resources on the part of the mother increases the motivation of the father to provide support by increasing the likelihood that support payments will be allocated in a manner that directly increases the welfare of the children (e.g., better housing, clothing, and food). On the other hand, the negative effect of the mother's income on receipt of child support may be offset, partially or wholly, by the fact that mothers with greater economic resources are also better able to negotiate with the father and make effective use of the legal system to ensure receipt of support.

It is anticipated that the income of fathers increases their ability to influence the manner in which transfer payments are allocated and reduces sacrifices in private consumption, thereby increasing motivation to provide support. All else being

equal, higher-income men may also be more motivated to provide resources of higher quality for their children (e.g., greater emotional and material benefits). This notion is supported by models of socioeconomic attainment that show that father's income increases the attainments of children (Sewell, Hauser, and Wolf, 1980).

Net of income, the mother's education is expected to be positively related to the motivation of the father to pay child support. Education increases the likelihood that mothers invest resources, including cash transfers from fathers, in their children (Leibowitz, 1977; Murnane, Maynard, and Ohls, 1981). Mothers with more education also have more ability to negotiate successfully with fathers and the legal system. The father's education may also act to increase his motivation to provide higher-quality resources for his children, thus increasing the probability that child support is paid.

In terms of empirical research, several studies have examined the effect of mother's income on whether child support payments are received. The results are inconclusive, perhaps reflecting the presence of offsetting effects. Some studies find no effect (Hill, 1984; Sorenson and MacDonald, 1983), while others find a negative effect (O'Neill, 1985). Results for mother's education are more consistent, though, indicating a positive effect on receipt of child support (Beller and Graham, 1985, 1986b, 1988; Hill, 1984). The empirical evidence regarding the effects of the socioeconomic resources of fathers on receipt of child support is limited. Available results suggest that the income of fathers is positively related to the payment of child support (Beller and Graham, 1985, 1986b; Hill, 1984; O'Neill, 1985). The education of the father, however, does not appear to be related to payment of child support (Hill, 1984).

In addition to the income and education of parents, the marital status of each is expected to be linked to the receipt of child support. Prior literature has suggested that the remarriage of either parent reduces the father's motivation to pay child support (Beller and Graham, 1985). If the mother remarries, this would increase the economic resources available to the children and decrease the ability of the absent father to control the allocation of resources in the children's household. If the father remarries, the amount of time and money he can devote to his absent children decreases.

The empirical evidence concerning the impact of the marital status of parents is not consistent, though. Contrary to expectations, Hill (1984) reports that receipt of child support is more likely when the father has remarried. Beller and Graham (1985, 1986b, 1988) find that the marital status of the mother has no effect on the likelihood that child support is received, while Cassety (1978), Hill (1984) and O'Neill (1985) report that receipt is less likely if the mother has remarried. If consideration is given to the amount of child support received, Hill (1984) finds no effect of the father's marital status. Both Hill (1984) and Beller and Graham (1985, 1986b, 1988) find a negative effect of the mother's being married on amount of support received.

In view of prior research, several other variables are also expected to affect the receipt of child support. These variables concern the structure of the divorce settlement, the physical proximity of the father, and whether the father visits his children. O'Neill (1985) and Beller and Graham (1985, 1986b, 1988) find that support awards agreed upon voluntarily increase the likelihood of payment.[2] Sorenson and MacDonald (1983) and Beller and Graham (1985, 1988) report that the initial size of the child support award is positively correlated with subsequent receipt. Distance between mothers and fathers (Hill, 1984), the number of years divorced (O'Neill, 1985), and failure to visit absent children (Furstenberg, Peterson, Nord, and Zill, 1983) have all been negatively linked to child support payments. The assumption is that more highly motivated fathers will be more likely to agree to pay support voluntarily, to agree to pay more, and to visit their children. Similarly, while increasing the cost of maintaining contact with children, distance and time act to erode motivation to provide support.

Parents must also negotiate divorce settlements and subsequent compliance to agreements within the context of the existing legal system. The expectation is that willingness to use legal assistance increases the likelihood that child support is received, although this effect may be diluted by the fact that mothers are likely to seek such assistance only when the father does not provide support. There is evidence that not having a child support award is positively related to lack of legal counsel at the time of divorce (Teachman, 1990). In addition, Peterson and Nord (1990) and

Robins (1986) report that mothers who contact the Office of Child Support Enforcement are more likely to receive child support.

Characteristics of the wider legal environment are also likely to influence the receipt of child support. Consistent with Weitzman's (1985) argument about the negative impact of no-fault divorce on women and children, Peters (1986) finds that transfers to divorced wives are lower in states with no-fault divorce laws. However, Weiss and Willis (1989) and Teachman (1990) find no effect of no-fault divorce laws on various child support outcomes. In an attempt to measure the impact of federally mandated requirements to increase the collection of child support, Beller and Graham (1988) find significant but small effects of various child-support enforcement techniques on the likelihood of receiving support, with slightly stronger effects on the amount received.

Strategy

Because the receipt of child support is a multistep process (Peterson and Nord, 1990), the analysis proceeds in several stages. First, the likelihood that mothers are due child support and the likelihood that they receive support are examined jointly. Child support due refers to whether the absent father is legally subject to a child support agreement as of the date of the interview. Although the majority of women due child support received an award at the time of divorce, it is important to recognize that support awards can be either lost or gained after divorce. In the sample used for this paper, 8% of the women with a child support award at divorce reported that child support was not due at the time of the interview. Similarly, 11% of the women without a child support award at divorce reported that child support was due at the time of the interview.

Prior research has estimated the likelihood of receiving child support by using a sample of mothers who are due support, assuming that only mothers due support will receive support. In doing so, previous studies have ignored the possibility that the effects of predictor variables on receiving support may be confounded with the likelihood of being due support. The confounding of effects is possible because (*a*) the subset of mothers who are due support, and are therefore much more likely to receive support, is not a random subset of all mothers who are eligible to be due child support (a phenomenon known as sample selectivity—see Berk, 1983), and (*b*) it is unlikely that all factors associated with the nonrandom selection of mothers who are due support are measured. In other words, the likelihood of receiving support is correlated with the likelihood of being due support, and this correlation cannot be fully explained by the circumstances of mothers.

More specifically, it is likely that the group of mothers who are due support are mothers who would otherwise be more likely to receive support payments. It is likely that mothers who perceive little likelihood of receiving child support payments are (*a*) less likely to pursue an award at divorce, (*b*) more likely to allow an existing award to be nullified, and (*c*) less likely to seek an award following divorce (and circumstances of the mother are likely to be imperfect indicators of such perceptions). Consequently, if mothers who are not due child support were able to secure an award, one would expect a lower probability of receiving support, compared to mothers who have an award and who are matched on other predictors. This also implies that regression results for receipt of child support based on a sample of mothers due child support, and which do not adjust for sample selectivity, may not be generalizable to all mothers. This is especially true in the extent to which the predictor variables are related to whether mothers are due support.

Formally, the model for receipt of child support with adjustment for whether support is due, is of the following form:

$$Y_{\text{due}} = a_d + \mathbf{X}_d\mathbf{B}_d + e_d$$

$$Y_{\text{rec}} = a_r + \mathbf{X}_r\mathbf{B}_r + e_r$$

where $Y_{\text{due}} = 1$ if child support is due, 0 otherwise, and $Y_{\text{rec}} = 1$ if child support is received, 0 otherwise; a_d and a_r are constant terms; $\mathbf{X}_d$ and $\mathbf{X}_r$ are vectors of predictor variables that may contain similar elements; $\mathbf{B}_d$ and $\mathbf{B}_r$ are vectors of coefficients to be estimated; e_d and e_r are error terms assumed to be distributed as bivariate normal and with Cov (e_d, e_r) *not* constrained to equal 0; and Y_{rec} is observed only if $Y_{\text{due}} = 1$ (therefore, the sample size for Y_{rec} will be smaller than that for Y_{due}). The key to this model lies in the correlation between the error terms, e_d and e_r. Sample selectivity implies that $\text{Cov}(e_d, e_r)$ is not equal to 0. Accordingly, the model is estimated by using a

maximum-likelihood bivariate probit software package (LIMDEP—Greene, 1989), which allows for correlated errors and includes an adjustment for sample selectivity.

Second, a model for the amount of child support received is constructed. Whereas most of the discussion above focused around the receipt of child support, similar arguments can be made for the amount of support received. As noted earlier, factors related to the receipt of child support are expected to influence amount of support received in the same direction.

Because the amount of support is recorded only for mothers receiving support, the resulting sample selectivity may mean that the effects of predictor variables on amount of support received are confounded with unmeasured factors affecting the likelihood of receiving support. To the extent to which unmeasured factors increase both the likelihood that support is paid and the amount of support paid, it is likely that mothers not receiving child support would receive smaller payments than similar mothers who receive payments. While prior research has generally acknowledged this possibility and has corrected for selectivity on receipt of support (Beller and Graham, 1986b), a more general model is estimated that recognizes that amount of child support received is doubly selected on being due support and receiving support. The model estimated is of the following form:

$$Y_{\text{due}} = a_d + \mathbf{X}_d\mathbf{B}_d + e_d$$

$$Y_{\text{rec}} = a_r + \mathbf{X}_r\mathbf{B}_r + e_r$$

$$Y_{\text{amt}} = a_a + \mathbf{X}_a\mathbf{B}_a + e_a$$

where Y_{due} and Y_{rec} are defined above; Y_{amt} is the amount of child support received among women due support and who receive any; a_d,a_r, and a_a are constant terms; $\mathbf{X}_d$,$\mathbf{X}_r$, and $\mathbf{X}_a$ are vectors of predictor variables that may have common elements; $\mathbf{B}_d$,$\mathbf{B}_r$, and $\mathbf{B}_a$ are vectors of coefficients to be estimated; e_d,e_r, and e_a are assumed to be distributed as trivariate normal with none of the covariances constrained to equal 0; and Y_{amt} is observed only if $Y_{\text{due}} = Y_{\text{rec}} = 1$.

In a strategy following Heckman (1979), the model is estimated by a two-stage procedure. First, a bivariate probit model for child support being due and receipt of support is estimated. Then the results of this model are used to develop an adjustment for selectivity in an OLS regression for the amount of child support received. The adjustment takes the form of two hazard rates (lambdas) that are included as predictor variables in the equation for amount of support received. The hazard rates are constructed for each mother by measuring the probability of not being due or receiving child support, conditional on being at risk of either. The coefficients for the two hazard rates indicate the size and direction of the correlation between the error terms for the two selection equations (being due support and receiving support) and the substantive equation (amount of support received). Berk (1983) provides a simple description of this two-stage procedure.

Data

The data are taken from the fifth round of the National Longitudinal Study of the High School Class of 1972 (NLS). The NLS has followed respondents from their senior year in high school to early 1986, with intervening follow-ups in 1973, 1974, 1976, and 1979. The original sample was a stratified random sample of all high school seniors enrolled in public, private, and church-affiliated high schools in the United States (Tourangeau et al., 1987). The fifth follow-up is a subsample of 14,489 cases of the 22,652 men and women who had participated in either the base-year survey or any of the intervening follow-ups. Respondents who had dropped out of the study at an earlier point were included in the sampling frame. The response rate for this subsample was excellent—89%. Of particular relevance for this study is the fact that the NLS retained with certainty respondents who were divorced or separated from their spouses. It is unlikely, therefore, that the responses to questions about child support outcomes are adversely affected by sample attrition.

Although the NLS data contain information on child support outcomes gathered from both men and women (the respondents are not a sample of spouses), the analysis is conducted on the basis of responses provided by women. Prior evidence indicates that women are more likely than men to provide accurate information concerning child support (Cherlin, Griffith, and McCarthy, 1983). Unpublished tabulations from the NLS indicate that men in the sample are 50% more likely than women to report that child support payments were made in the last month.

Because very few men are reported as having physical custody of their children, attention is restricted to an examination of the determinants of child support received by women.

The NLS data only contain information on child support reported by ever-divorced mothers. For the present purposes, child support information is also restricted to first marriages. While the latter restriction is not significant, because most ever-divorced women under age 32 (the upper age covered by the NLS) have experienced only one divorce, the restriction to ever-divorced women is more significant. Prior research indicates that marital status is the most significant predictor of child support, with ever-married women being more likely to have an award and receive support. However, it is among ever-married mothers that the most consistent socioeconomic differences in child support outcomes occur (Beller and Graham, 1986a). This is likely true because never-married parents are a select group with a greater proportion of accidental and unwanted pregnancies and a subset of fathers less inclined to fulfill the parenthood role. The ever-divorced parents have assumed the responsibilities of parenthood and subsequently have had to renegotiate, implicitly or explicitly, the terms by which children are nurtured and supported economically.

The NLS also misses individuals who were not in school the spring of their senior year in high school. Variation in the award and receipt of child support according to education is thus truncated, as well as variation on other variables related to education. However, this restriction is likely to have less impact on ever-divorced mothers, because they are more likely than never-married mothers to have graduated from high school.

Disruptions of late marriages (after age 32) and marriages of long duration (more than 14 years) are not observed. This also means that older mothers at divorce are not included. However, the ages covered in the NLS are those at which ever-divorced mothers are most likely to be eligible to receive child support (i.e., to have children under the age of 18). The final sample size is 673 (579 whites and 94 blacks).

The definitions of the variables used in the multivariate analysis are presented in Table 1. Means and standard deviations are presented in the respective multivariate tables. The mother's education and income at divorce and the father's income at divorce measure socioeconomic resources available to each parent. Measures of the parent's income and education at divorce are used for two reasons. First, the NLS does not contain information about the father's income at the time of the survey. Second, it is likely that the amount and receipt of child support affect the mother's income and education (e.g., women not receiving child support are more likely to have to work and may be less able to attend school), thus leading to problems associated with endogeneity.

The father's education is not included because it was not significant in any of the models estimated and evidenced substantial colinearity with other predictors in the model, particularly mother's education and father's income. Number of children is included to measure variation in economic need on the part of the mother. Whether there is at least one child younger than age 6 is included to measure constraints on the mother's labor force participation, largely through increased costs of child care, and thus an increase in her economic need. Race is included as a control, because prior research has consistently found that blacks are less likely to be awarded child support (Beller and Graham, 1985, 1986a, 1986b; Hill, 1984; O'Neill, 1985). Also included are the current marital status of each parent, duration of divorce (duration of marriage is not included because longer marriages in the NLS necessarily imply a shorter duration of divorce), the size of the initial child support award, whether the initial award was made voluntarily, whether the father visits his children as often as specified in the divorce agreement, and the distance the father lives from the mother.

The measures of legal context included are admittedly weak because of the nature of the data contained in the NLS. Two variables are included to proxy variations in the propensity to seek legal counsel and in the larger legal context. The first measure indicates whether the mother retained a lawyer at the time of divorce. It is possible to determine whether the father retained a lawyer, but using a variable with more categories does not lead to a better-fitting model. The assumption is that mothers who used a lawyer at the time of divorce are more likely to use legal remedies to obtain child support payments from the father. The second measure indicates whether the divorce took place in a state where irreconcilable differences, or a similar form of no-fault divorce, are grounds for divorce. It may be the case that no-

TABLE 1. DEFINITION OF VARIABLES USED IN THE ANALYSIS OF CHILD SUPPORT RECEIVED

Variable	Coding
Log of mother's income[a]	Log of yearly income at divorce in 1985 dollars
Mother some college	1 = At least some college 0 = Otherwise
Mother college	1 = College degree or higher 0 = Otherwise
Log of father's income[b]	Log of yearly income at divorce in 1985 dollars
Award at divorce[c]	1 = Child support awarded at divorce 0 = Otherwise
Log of award amount[d]	Log of monthly amount awarded per child at divorce in 1985 dollars
Voluntary award[e]	1 = Child support awarded voluntarily 0 = Otherwise
Child < 6	1 = At least one child < 6 at divorce
Number of children	Number of own children at divorce
Duration since divorce	Months since divorce
Mother remarried	1 = Mother has remarried 0 = Otherwise
Father remarried	1 = Father has remarried 0 = Otherwise
Black	1 = Black 0 = Otherwise
Proximity high	1 = Same neighborhood or town 0 = Otherwise
Proximity medium	1 = Same state or different state < 500 miles 0 = Otherwise
Proximity low	1 = Different state > 500 miles or don't know 0 = Otherwise
Sees children[f]	1 = Visits children at least as often as specified in visitation agreement 0 = Otherwise
No lawyer[g]	1 = Mother is not represented by legal counsel at divorce 0 = Otherwise
No-fault state	1 = Divorce occurred in a state with a no-fault provision 0 = Otherwise
Child support due[h]	1 = Child support due at the time of the interview 0 = Otherwise
Child support received[i]	1 = Child support received last month 0 = Otherwise

[a]About 26% of the mothers in the sample had no income at the time of divorce. These mothers are assigned a value of 0.

[b]Fathers with no income are assigned a value of 0.

[c]The question used is: How did you reach agreement on the child support aspect of your divorce? (*a*) Settled without assistance, (*b*) Settled with assistance of attorneys, (*c*) By court order, (*d*) No settlement, (*e*) Not applicable. Responses *a–c* indicate award of child support at divorce.

[d]Mothers without an award are assigned a value of 0. For mothers who report gaining an award following divorce, the amount of child support awarded is coded as the amount currently due.

[e]The question used is: How did you reach agreement on the child support aspect of your divorce? (*a*) Settled without assistance, (*b*) Settled with assistance of attorneys, (*c*) By court order, (*d*) No settlement, (*e*) Not applicable. Responses *a–b* indicate voluntary award of child support at divorce.

[f]The question used is: Since the time of divorce, have visitations been made according to the agreement? (*a*) Yes, (*b*) No, they have been more frequent, (*c*) No, they have been less frequent.

[g]The question used is: Did you and/or your spouse retain a lawyer? (*a*) I retained a lawyer, but my spouse did not, (*b*) I did not retain a lawyer, (*c*) We each retained our own lawyer, (*d*) Neither of us retained a lawyer, (*e*) We shared the same lawyer. Responses *b* and *d* indicate that the mother did retain counsel.

[h]The question used is: What is the amount of the payment your spouse is supposed to make now? Nonzero values indicate that child support is currently due.

[i]The question used is: What amount did you actually receive last month? Nonzero values indicate that child support was received last month.

fault divorce states are more or less aggressive in the pursuit of child support claims. It is also possible that individuals who divorce under a no-fault regime are less likely to demand compliance with a

support agreement. This measure is constructed from information contained in various issues of the *Book of the States* (Council of State Governments, 1970–1986). A state is coded 0 until the year following the passage of a no-fault divorce statute, and then it is coded 1.

Child support due is a dichotomy measuring whether support is due the mother at the time of the survey. Child support received is also a dichotomy based on a question ascertaining whether support was received in the last month. Models using a broader definition of child support receipt were estimated (based on the regularity of receipt), but the results are not substantively different (not shown).[3] The amount of child support received refers to the log of the amount received in the last month.

Results

Of the ever-divorced mothers in the sample, 78% were due child support in 1986 (82% had an award at the time of divorce). Of women due support, about 64% received payment in the month prior to the survey (or about 50% of all mothers in the sample). The average amount of support received was $149 per child per month ($224 for women receiving any support). At the time of divorce, the average award was $187 per child per month.[4]

Presented in Table 2 are the results from estimating models for the likelihood that (*a*) child support is due and (*b*) child support is received among women due support. The two models contain basically the same predictor variables. The model for receipt of child support does not include whether an award was made at divorce, because this variable has little variance when the sample is restricted to women currently due support, while the model for child support due does not include proximity of the absent father and whether he complies with the visitation agreement. To reduce problems associated with endogeneity, only characteristics measured at the time of divorce were included in this model. The first column of coefficients (β_1) is derived from independent probit equations that assume no correlation between the error terms of the two models (e.g., under the assumption that there is no sample selectivity). The second column of coefficients (β_2) is derived from a bivariate probit model that allows the error terms of the two models to be correlated and controls for selectivity in the model for receipt of child support.

Consistent with the discussion above, the correlation between the error terms for the two models is positive (.38, $p < .05$). This indicates that mothers who are not currently due child support would be *less* likely to receive support, compared to a mother with an award and with identical characteristics, if they were to have an award. Stated otherwise, the positive correlation reflects the fact that women who are due support are *more* likely to receive support than similar women would be who are not due support. Given the relatively large and significant correlation between error terms, the remaining discussion is based on the adjusted coefficients.

As one might expect, the most prominent predictor of being currently due child support is having an award at divorce. None of the indicators of the characteristics of the legal system, the marital status of the parents, nor their socioeconomic resources are significant predictors of being due support. Not having a lawyer at divorce is positively related to being due child support in the independent probit equation, but this effect becomes nonsignificant when error terms are allowed to be correlated. One might be surprised about the positive effect of not having a lawyer on being due child support, especially if not having a lawyer indicates lack of access to the legal system. However, prior research (Teachman, 1990) indicates that lack of legal counsel at divorce does not index ability to use the legal system. Rather, not having a lawyer at divorce appears to be a function of having reached a decision on the terms of divorce prior to entering the court system. Thus, not having a lawyer, in this instance, may be measuring the father's motivation to provide support.

As one might expect, having a large award and having been divorced for a shorter period are positively related to the likelihood of being due support. Surprisingly, the effect of agreeing to a child support award voluntarily is negative. One might have expected this effect to be positive, under the assumption that fathers voluntarily agreeing to provide child support are more motivated to provide for their children. Perhaps the negative coefficient occurs because fathers who willingly agree to pay child support assume that this will be a short-term obligation. Or, following divorce, these fathers may provide for their children through transfers other than formal child

TABLE 2. PROBIT MODELS FOR CHILD SUPPORT DUE AND RECEIVED

Variable	Adjusted[a] β_1	Adjusted[a] β_2	Adjusted[a] *se*	Mean	*sd*
Panel A. Child Support Due (mean = .78)					
Log of mother's income	.030	.029	.020	6.91	4.11
Mother some college	.316	.309	.169	.33	.47
Mother college	-.185	-.156	.414	.06	.25
Log of father's income	.021	.020	.027	9.18	2.60
Award at divorce	1.824*	1.837*	.383	.81	.39
Log of award amount	.139*	.136*	.069	4.33	2.29
Voluntary award	-.424*	-.421*	.163	.54	.50
Child < 6	.302	.303	.213	.78	.41
Number of children	.001	-.008	.132	1.49	.70
Duration of divorce	-.006*	-.005*	.002	80.04	46.03
Mother remarried	-.286	-.278	.173	.48	.50
Father remarried	-.032	-.039	.160	.53	.50
Black	.192	.182	.304	.14	.35
No lawyer	.503*	.477	.262	.11	.31
No-fault state	-.233	-.242	.164	.71	.46
Constant	-.848	-.829	.465		
n			651		
Model χ^2/df			307/15		
Panel B. Child Support Received (mean = .64)					
Log of mother's income	-.022	-.016	.016	7.13	3.98
Mother some college	.130	.182	.133	.37	.48
Mother college	.330	.469	.306	.07	.26
Log of father's income	.063*	.056*	.026	9.29	2.43
Log of award amount	.130*	.217*	.062	5.18	1.42
Voluntary award	.498*	.369*	.140	.56	.50
Child < 6	-.133	-.235	.174	.77	.42
Number of children	-.195	-.209	.157	1.49	.68
Duration of divorce	-.004*	-.004*	.002	74.98	45.61
Mother remarried	-.100	-.121	.135	.45	.50
Father remarried	.285*	.291*	.134	.53	.50
Black	.137	.035	.195	.13	.33
Proximity medium	-.204	-.098	.142	.40	.49
Proximity low	-.851*	-.707*	.163	.24	.43
Sees children	.342*	.398*	.201	.37	.48
No lawyer	.356	.477	.262	.10	.30
No-fault state	-.313*	-.242	.164	.70	.46
Constant	-.145	-.622	.551		
n			468		
Model χ^2/df			98/17		

[a]The correlation between e_d and e_r is .38 ($p < .05$). The adjusted coefficients are corrected for this correlation. The model for support received is also adjusted for selectivity.

*$p < .05$.

support.

It should be emphasized that the model for support due shown in Table 2 includes the presence of an award at divorce as a predictor. Consequently, the model represents a reduced form of a model in which both award at divorce and support due are endogenous. The lack of significant *direct* effects for many of the covariates included in the model may therefore indicate that their influence operates *indirectly* through the presence of a child support award at divorce. Indeed, in a related analysis (Teachman, 1990), it was found that many of the predictors included in the model for support due, especially characteristics of mothers and children, significantly influenced the likelihood of being awarded child support at divorce (e.g., there are indirect effects operating through having a child support award at divorce). It is important to emphasize, though, that the primary focus of this study is to examine the determinants of the receipt of child support and that the major purpose of the model for support due is to develop a control for selectivity.

The results for receipt of child support indicate that, consistent with expectations, fathers with higher incomes are more likely to make child support payments. However, contrary to expectations, fathers who have remarried are more likely

to pay child support than are other fathers. This finding is consistent with results reported by Hill (1984), who suggests that fathers who remarry are "family oriented" and therefore more, not less, motivated to pay support. The effects of a voluntary support agreement (positive), amount of award at divorce (positive), duration since divorce (negative), physical distance (negative), and whether the father visits his children at least as often as stipulated in the divorce agreement (positive) are all consistent with expectations.[5]

Contrary to expectations, the socioeconomic characteristics of mothers have no effect on the likelihood of receiving child support payments. Similarly, the number and ages of children are not important predictors of receipt of child support. Finally, characteristics of the legal system, at least as measured here, are not significant (the tendency for awards granted in a no-fault state to reduce receipt of child support disappears when a control for selectivity is included).

It is instructive to note that the adjustment for selectivity yields substantial changes in the coefficients of several variables. The coefficient for log of award amount becomes much larger (.130 vs. .217). This occurs because of the positive effect of log of award amount on whether child support is due and the positive correlation between whether support is due and receipt of support. That is, women with smaller awards who are due child support are a relatively more select group, with respect to a positive likelihood that support will be received, than women with larger awards, which reduces the observed differential in the likelihood of receipt of support in the sample of mothers who are due support. A similar argument can be constructed to explain the drop in the size of the coefficient for whether child support was awarded voluntarily (.369 vs. .498). The drop in the size of the coefficient for low proximity of the absent father (-.851 vs. -.707) indicates a negative association between proximity and whether child support is due (although the causal nature of such a correlation is open to debate). Overall, the change in the magnitude of coefficients indicates the strength of the potential for bias when sample selectivity with respect to being due support is ignored, with some effects being overestimated and others being underestimated.

Estimates of the effects of the predictor variables on the amount of child support received are presented in Table 3. Two sets of results are shown. The coefficients in the first column (β_1) are derived from a simple OLS regression model of the log of the amount of child support received. In the second column, the coefficients (β_2)

TABLE 3. OLS REGRESSION MODELS FOR LOG OF AMOUNT OF CHILD SUPPORT RECEIVED

Variable	Adjusted[a] β_1	Adjusted[a] β_2	Adjusted[a] *se*	Mean	*sd*
Log of mother's income	.006	.016	.009	7.06	4.01
Mother some college	.118	.171	.111	.38	.49
Mother college	.025	-.026	.183	.09	.29
Log of father's income	.009	.018	.029	9.54	2.01
Log of award amount	.136*	.337*	.090	5.38	1.17
Voluntary award	.119	-.007	.154	.65	.48
Child < 6	-.230	-.046	.122	.74	.44
Number of children	.279*	.212	.126	1.54	.70
Duration of divorce	-.003*	-.005*	.002	68.45	43.57
Mother remarried	-.108	-.168	.098	.42	.49
Father remarried	-.024	-.088	.118	.43	.50
Black	-.060	.053	.142	.12	.32
Proximity medium	-.024	-.044	.083	.43	.40
Proximity low	.108	.029	.313	.15	.36
Sees children	.354	-.013	.198	.42	.49
No lawyer	.042	.119	.215	.10	.31
No-fault state	-.046	-.073	.741	.67	.47
Lambda—support due		.108	.741		
Lambda—support received		2.111*	1.022		
Constant	4.347*	3.022*	.923		
n			297		
R^2			.37		

[a]Adjusted for selectivity with respect to child support due and child support received.
*$p < .05$.

are taken from an OLS regression model of the log of the amount of support received, corrected for double selectivity with respect to support being due and support being received.

There are few predictors of the amount of support received beyond the amount of support owed. In results not reported here, essentially similar results were obtained for a model examining support received as a proportion of support due. A longer duration since divorce is related to less child support received. Number of children is positively related to the amount of support received, although this effect becomes nonsignificant given the control for selectivity.

Of particular note is the very strong effect of the correction for having received child support (the adjustment for selectivity on being due support is inconsequential). This indicates that factors associated with receiving more child support are largely captured by the fact that support is received at all. The positive coefficient for support received indicates that women receiving child support in the last month received a larger amount than would have been the case for women of identical circumstances who did not receive payment.

Selectivity also affects the size of the coefficient for the amount of support due. In the unadjusted model, this effect is underestimated by a substantial amount. Underestimation occurs because of the positive correlation between receiving support and the amount received. Women with smaller awards who receive support payments are a relatively more select group than women with larger awards who receive support payments.

The estimated effect of selectivity associated with the receipt of child support on the amount of support received is considerably greater than that found in prior research (e.g., Beller and Graham, 1986b). While it is possible that differences in samples used explain part of the discrepancy (Beller and Graham used CPS), it is more likely that variations in model specification are responsible. The model reported in Table 3 includes a number of controls not used by Beller and Graham (namely, mother's income, whether the mother had remarried, amount of award at divorce, proximity of the father, whether the father complies with the visitation agreement, and characteristics of the legal system). In addition, the model estimated here allows for double selectivity with respect to child support due and child support received, while Beller and Graham only allowed for selectivity with respect to child support received. Finally, whereas the NLS sample refers to virtually a single cohort of individuals, the CPS data used by Beller and Graham include a much broader range of cohorts that likely differ with respect to period influences on child support outcomes.

Summary and Discussion

In an earlier study (Teachman, 1990), it was found that award of child support and amount awarded were related to the circumstances of mothers, fathers, and children. In the current analysis, there is no evidence indicating that the circumstances of mothers and children directly affect whether child support is received or the amount received. However, one cannot discount the importance of the circumstances of mothers and children in influencing child support payments. First, at least with respect to the mother's economic resources, the lack of an observed effect may be due to offsetting effects attributable to the ability to negotiate and the motivation of the father. Second, the effects of the circumstances of mothers and children are likely to be indirect through the likelihood of having an award and the amount awarded.

It is clear, though, that the circumstances of fathers (his income, marital status, physical proximity, and whether he visits his children) and the structure of the divorce settlement (amount of child support awarded, whether the award was made voluntarily, and how long the couple has been divorced) are the primary factors directly affecting whether child support is received. Overall, these results are consistent with the argument that receipt of child support is linked to the motivation of absent fathers to provide cash transfers to the mother.

There is a striking similarity between these conclusions and those reached by other researchers who used different data sets and different analysis procedures. As Beller and Graham (1985: 498) note, in a study based on 1979 CPS data; "The likelihood of being awarded child support depends upon the needs of the mother and children, and upon the absent father's long-term ability to pay. . . . In contrast, the likelihood of receiving child support depends less upon . . . the circumstances of the woman and more upon the current financial well-being of the ex-husband." Although the specifics vary, essentially the same

conclusion was reached by Peterson and Nord (1990), using data from the Survey of Income and Program Participation.

The amount of child support received is largely a function of the amount of child support awarded and whether any support was received. This suggests that fathers either pay no support or they pay close to the amount due. In tabulations not presented here, most fathers cluster around no support or nearly full support. Of the men who pay support at all, about 75% paid the amount due (nearly 85% paid the amount due or more).

The policy implications of these findings are certainly open to debate but deserve comment. Central to many discussions of child support is the notion that increasing the proportion of mothers with awards will increase the proportion of women receiving support (Office of Child Support Enforcement, 1988). While this is strictly true, the selective nature of women who are due support indicates that such a policy would face rapidly diminishing returns under the current collection system. A greater proportion of all women would receive payments, but the proportion of women due support who receive payments would decrease. The selectivity evidenced for the amount of child support received indicates that diminishing returns will characterize both the receipt of support and the amount received (e.g., by decreasing the ability of fathers to form child support agreements voluntarily).

Noting the strong and consistent effect of the size of the child support award on the amount and likelihood of receipt, one might argue that a concerted effort be waged to increase the size of child support awards. However, to the extent to which the size of awards reflects voluntary decisions made by mothers and fathers, state efforts to increase the size of awards may not be matched by a concomitant increase in the motivation of fathers to pay support. Indeed, under the current system for collecting child support, increased intervention on the part of the state in arranging the size of awards may actually reduce the motivation of fathers to pay support.

The lack of effects of mother's education and income do not bode well for efforts aimed at increasing the participation of mothers in procedures to improve the likelihood of receiving support under the current system. Instead, the results suggest that it may be more profitable to increase the motivation of absent fathers to provide for their children. Of course, this is not easily done. The positive influence of father's income on child support received suggests the possibility of financial inducements, such as structuring tax incentives for payment of support. Other possibilities include procedures that would increase the likelihood that divorce agreements are reached voluntarily (perhaps through mediation efforts) or would increase the father's ability to control the allocation of payments within the mother's household (perhaps by allowing some of the payment to be made in kind—e.g., provision of clothing).

In 1984, Congress enacted specific legislation that considerably strengthened the ability of states to intervene in the collection of child support (e.g., through the interception of income tax returns). The 1988 Family Support Act further increased child support collection provisions (Garfinkel and McLanahan, 1989). The admittedly weak indicators of the legal context used in this study, which showed no significant effects, cannot be construed to measure the impact of specific legislation designed to increase child support collections. Other research, however, has found weak but significant effects of enforcement programs on child support collections (Beller and Graham, 1988; Robins, 1986). A new program in Wisconsin that calls for the immediate withholding of support payments (as opposed to the withholding of delinquent payments) increases payments 15–25%. These findings suggest the potential for the state to influence support payments directly (Garfinkel, 1988).

The general convergence of current and past research on the importance of factors related to the motivation of the father to provide support should stimulate research that more carefully measures motivation and its variations. The importance of sample selectivity in models for support received and amount of support received is strong evidence that there exists considerable variation in the motivation, or some other unmeasured factor, to provide child support that is not captured by the observed variables. Future research should also focus on factors involved in the development of various levels of motivation and how motivation changes over time. Although the NLS data contain no information about the quality of the relationship between the former spouses, a growing body of research indicates that the nature of this relationship may be important

in determining compliance with child support awards (Wright and Price, 1986). It is also important to explore mechanisms by which the state can intervene effectively in the child support process.

Notes

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1. Because most custodial parents are women, the terms *custodial* and *noncustodial parent* are used interchangeably with *mother* and *father,* respectively.
2. In reality, all formal child support awards are "ordered" by the court, even though both parents may have agreed upon the outcome beforehand. The intent of the question used in the NLS was to determine whether the court imposed an award when parents disagreed on child support. However, the question is ambiguous, and it is possible that some voluntary awards are coded as being court-ordered.
3. Of the women who report that they received child support in the last month, 79% report that they receive child support regularly. The comparable figure for women who report that they did not receive child support in the last month is only 2%.
4. Note that, although these figures refer to monthly values per child, the dependent variable used in the multivariate analysis is the log of the monthly amount of child support received by the mother. Confidence in the generalizability of these values would be enhanced if they were similar to figures obtained in the Current Population Survey (CPS). Unfortunately, the CPS sample is much different from the NLS sample. Not only is the NLS sample restricted to women who made it to their senior year in high school, it constitutes virtually a single birth cohort. Thus, the value of child support awards confounds both age and period. If, however, we restrict attention to the value of awards made between 1979 and 1985, when the women were between the ages of 25 and 31, the figure is close to that obtained in the CPS for ever-married women. The NLS figure is $3,559, while the CPS value fluctuates between $3,400 and $3,653 (Graham and Beller, 1990).
5. The effect of visitation should be interpreted with caution, because it may be endogenous. The effects of the other variables are virtually identical, though, if the system of equations is estimated with visitation excluded.

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