

# Changes in the Relationship Between Child Support Payments and Educational Attainment of Offspring, 1979–1988\*

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We examine changes over the 1980s in the effect of child support payments on the educational attainment of children age 16 to 19 in the United States, and why child support has a stronger impact than other sources of income. We use 1979 and 1988 Current Population Survey data, covering a period when improvements in enforcement should have increased the proportion of reluctant fathers paying support. We hypothesize and find that the positive effect of child support on education diminished somewhat over this period, both absolutely and in relation to other income.

The apparent recent deterioration in the well-being of our nation's children has raised concern among scholars from diverse disciplines (e.g., Bianchi 1990; Fuchs and Reklis 1992; Haveman and Wolfe 1992). One source of this concern is the increase in constraints on the time and money resources which many parents face when investing in their children, which stem in part from a rising incidence of single-parent families. According to recent estimates, if present trends in divorce and out-of-wedlock births continue, six of every 10 children born today will spend part of their childhood in a single-parent (usually mother-only) family (Norton and Glick 1986). Too often the children's father provides little or no financial assistance and sees his children infrequently, if at all (Furstenberg, Morgan, and Allison 1987). Not surprisingly, the public has come to view child support—that is,

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regular, legally mandated payments from a noncustodial to a custodial parent—as one of the keys to improving children's well-being (Beller and Graham 1993).

In the short run, child support may lift the child out of poverty, facilitate high-quality child care while the mother works, and lead to increased contact with the noncustodial father (Lerman 1986; Wallerstein and Huntington 1983). In the long run, these benefits have been linked to children's greater success later in life (Haveman and Wolfe 1992); educational attainment is the most common focus of study.

Educational attainment of children in single-parent families is lower than of those in intact two-parent families. As might be expected, a significant portion of this difference is due to the lower incomes of single-parent families (e.g., Blau and Duncan 1967; Krein and Beller 1988; McLanahan 1985; Shaw 1982). Breaking down income by source, Beller and Chung (1988) found that child support had a stronger positive effect on educational attainment than did other sources of income. Studies have shown that fathers who pay child support may have closer and greater contact with their children (Chambers 1979; Hill 1988; Seltzer, Schaeffer, and Charng 1989; Wallerstein and Huntington 1983) and that the more they pay, the greater the contact (Seltzer 1991). Beller and Chung speculated that the stronger effect of child support might reflect the greater contact between children and their fathers, but recent research does not support this contention (Graham, Beller, and Hernandez 1994; King 1994).

Still, one suspects that the large effect of child support in relation to other income is due in part to unobservable characteristics of noncustodial fathers who pay it, mothers who receive it, or the agreement (contract) between them. These unobservables—such as interest in the children's development, parents' values and child-rearing practices, or the friendliness of the breakup (Sonenstein and Calhoun 1990)—affect both child support payment and children's educational attainment. Graham et al. examined this hypothesis directly, correcting their estimates for possible sample selection bias, but the instruments used may not have properly identified the child support equation.

In this study we adopt an indirect strategy to address the problem of unobservables. We examine how the effect of child support on children's educational attainment changed between 1979 and 1988. Over this period, government efforts to enforce child support intensified with the passage of new laws—the Child Support Enforcement Amendments of 1984 and the Family Support Act (FSA) of 1988—and with increases in child support expenditures—from \$0.4 billion in fiscal year 1979 to \$1.2 billion in fiscal year 1988 (U.S. Department of Health and Human Services 1983, 1988). As a result, it is likely that a somewhat more reluctant group of fathers were paying child support at the end of the 1980s than at the beginning. Beller and Graham (1993) conclude that “increasingly reticent fathers have been brought into the system, in all likelihood by child support enforcement efforts” (p. 54).

Although it is unknown whether fathers who are required to pay support differ in unobservable ways from those who pay voluntarily, we speculate that they do differ. Thus the 1980s provides a natural experimental period for indirectly investigating the role of fathers' unobservable characteristics. If fathers who are less willing to pay support make up an increasing proportion of payers, if less willing payers have less interest in their children's well-being, and if the payment of child support does not itself increase this interest,<sup>1</sup> then the observed positive effect of child support on education should have diminished over time.

This hypothesis assumes that the educational disadvantage from living in a single-parent family remained relatively constant over time. Krein and Beller (1988), however, speculated that it might diminish as the experience became more common. If this is so, then the child support hypothesis must be expressed in relative terms.

## DATA AND DESCRIPTIVE STATISTICS

We extracted samples from the 1979 and 1988 Current Population Survey (CPS) March/April Match Files of all mothers and their (eldest) children between ages 16 and 19. We excluded children under 16, for whom schooling is generally compulsory, and those over 19 (18 in the year when child support was owed), who in some states can receive child support only if they are still in school. The 1979 match file was the first in an ongoing series that pairs March demographic and income information for some 42,000 households with responses to the April "child support and alimony supplement." Since 1982 the April supplement has been administered every other year; thus the CPS is uniquely suitable for assessing changes in children's well-being associated with changes in child support enforcement during the 1980s. The primary disadvantage of the CPS for this study is that it excludes children no longer living with their mother, with the important exception of unmarried children away at college (Graham et al. 1994). If (as one study suggests) children from nonintact families are more likely to leave home before age 19 but less likely to do so to attend school (Aquilino 1991),<sup>2</sup> then our estimates of the effect of family structure on education will be biased downward; it is unclear, however, how this phenomenon might bias estimates of the effect of child support on education.<sup>3</sup> Furthermore, because we are focusing on changes in these effects over time, attrition bias would be a problem only if these home-leaving behaviors had changed over the 1980s, which is unknown.

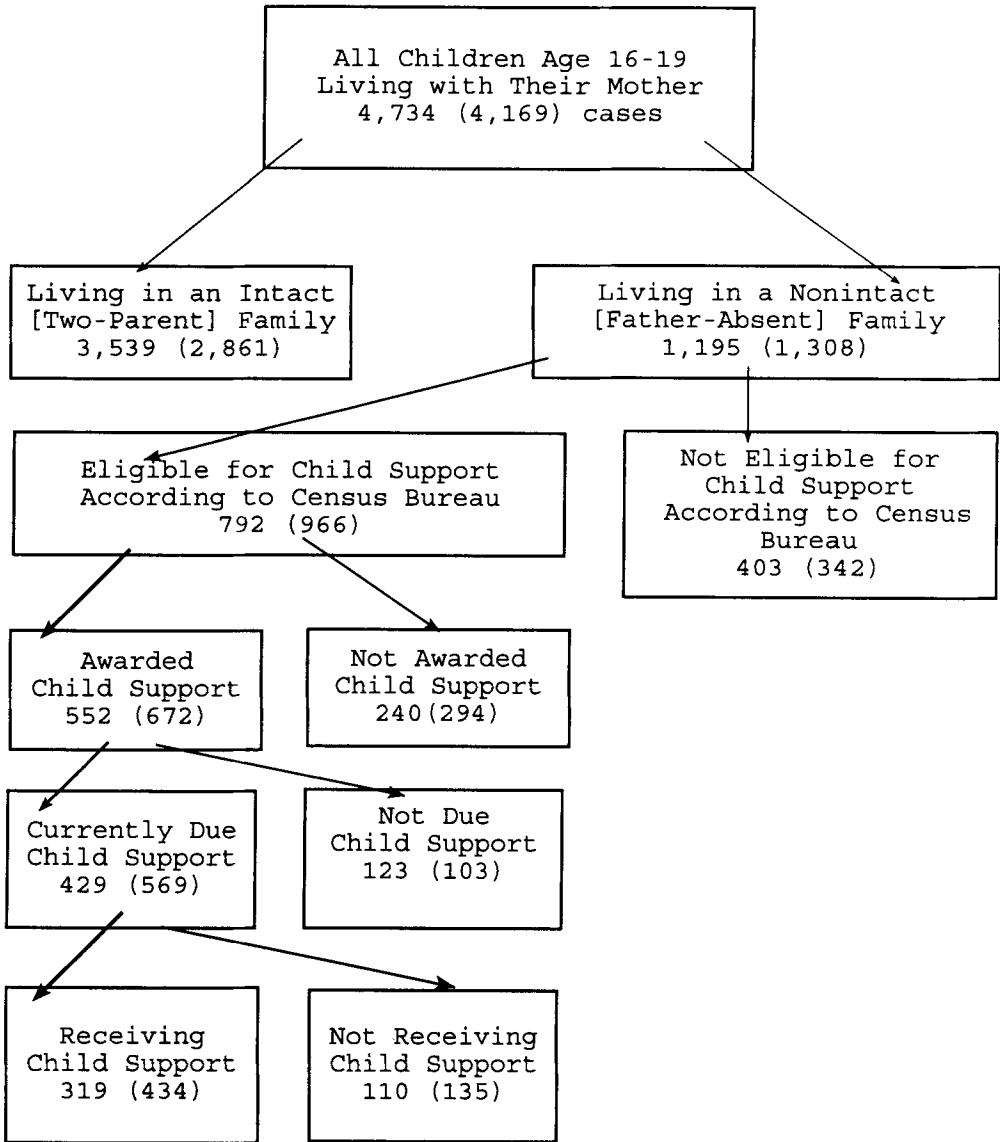
Figure 1 gives an overview of our samples and shows the distribution of cases by family structure and eligibility for child support. The sample of children ages 16 to 19 living with their mother decreased from 4,734 in 1979 to 4,169 in 1988. At the same time, the proportion of children who had ever lived in a nonintact mother-only family increased from 25% to 31%.<sup>4</sup> Not all nonintact families are eligible for child support, and not all families eligible for child support were interviewed by the Census Bureau.<sup>5</sup>

## THEORETICAL AND EMPIRICAL MODELS

### Theoretical Model

Within the framework of human capital and household production theories (Becker 1964, 1981), schooling is an investment in child quality produced by inputs of parents' time and of market goods and services; educational attainment is an output measure of this investment. Children in nonintact families have less invested in their education than do children in intact families because often they have lower family incomes and live in poorer communities. As a result, they receive fewer and lower-quality market goods related to education. Perhaps even more important, children in nonintact families receive less parental time and attention. Absent fathers devote less time to the household. In addition, single mothers are more likely than married women to be working outside the home, have less income to purchase market substitutes for their time in home production, and have no one with whom to share that production.

Mothers who receive child support might invest more in their children's education than those who do not because the added income allows for a greater purchase of education-related market goods (Beller and Chung 1988). In fact, differences in total family income between families with and without child support often exceed (by approximately a factor of 2) the value of child support received, primarily because of higher labor market earnings of mothers with child support income (Graham and Beller 1989). Children who receive child support may also benefit from increased parental time: their mothers may purchase market substitutes enabling them to spend more time with their children, while their fathers, as stated above, may have greater contact with the children.



1988 figures are in parentheses.

Figure 1. Family Structure and Child Support, 1979 (1988)

**Empirical Model**

To measure the impact of family structure and the receipt of child support on children's education, we estimate the following equations across all family types (intact and nonintact) for year t (1979 or 1988):

$$ED_i^t = a^t SE_i^t + b^t INC_i^t + c^t NCSE_i^t + d^t CSE_i^t + e_i^t, \tag{1}$$

and

$$ED_i^t = a^t SE_i^t + b^t INC_i^t + c^t NCSE_i^t + d_1^t RECCS_i^t + d_2^t NORECCS_i^t + e_i^t, \quad (2)$$

where (suppressing the superscript)  $ED_i$  is an educational outcome for the  $i$ th child;  $SE_i$  is a vector of socioeconomic characteristics of the child and the mother;  $INC_i$  is total family income;  $NCSE_i$  is a dummy variable for nonintact families not eligible for child support;  $CSE_i$  is a dummy variable for nonintact families eligible for child support;  $RECCS_i$  is a dummy variable for child-support-eligible families who received child support;  $NORECCS_i$  is a dummy variable for child-support-eligible families who did not receive child support; and  $e_i$  is an error term. We estimate separate equations by year because we expect some or all of the effects to change over time.<sup>6</sup>

We measure  $ED_i$  in three different ways: years of schooling completed; whether or not the child is behind in or has dropped out of high school; and whether or not the child has graduated from high school.  $SE_i$  includes measures of the quantity of available time inputs, such as mother's employment and number of siblings; measures of the quality of time available, such as mother's education and age at the child's birth; demographic characteristics such as child's age, gender, and race; and control variables measuring current location of residence.

$NCSE_i$  indicates whether or not the child ever lived in a nonintact family in which the mother is widowed or, for some other reason, has not been interviewed by the Census about eligibility for child support.  $CSE_i$  indicates whether or not the child ever lived in a nonintact family both eligible for child support and interviewed by the Census (hereinafter called "child-support-eligible"). In Eq. (2),  $CSE_i$  is replaced by  $RECCS_i$  and  $NORECCS_i$ , dummy variables that divide  $CSE$  families into those who received and those who did not receive child support. Coefficients on all dummy variables show the "all else being equal" educational disadvantage of nonintact families relative to intact two-parent families.

The first hypothesis we test is that the negative effect on children's education of living in a single-parent family has diminished over time. This can be represented as

$$|d^{79}| > |d^{88}|, \quad (3)$$

where  $d$  is the coefficient on  $CSE$ . (We express the coefficients in absolute terms because  $d$  is likely to be negative.) The second hypothesis is that the positive effect of receiving child support has diminished over time. This can be represented as

$$\frac{d^{79} - d_1^{79}}{d^{79}} > \frac{d^{88} - d_1^{88}}{d^{88}}, \quad (4)$$

where  $d_1$  is the coefficient on  $RECCS$  and the ratio formulation allows  $d$  to have changed over time. That is, the proportion of the negative effect of living in a single-parent family eliminated by the receipt of child support in 1979 exceeds the proportion eliminated, in 1988. Moreover, because both  $CSE_i$  and  $RECCS_i$  are dummy variables, the magnitudes of their coefficients may be compared directly.

We also examine the impact of child support income on children's education for the child-support-eligible population alone. We estimate the following equation for year  $t$  (1979 or 1988):

$$ED_i^t = \delta^t SE_i^t + \beta^t INCEXCS_i^t + \delta^t CS_i^t + e_i^t \quad (5)$$

where  $INCEXCS_i$  is total income excluding child support and  $CS_i$  is child support income.

For this population, the hypothesis concerning the decline in the effect of child support can be represented as

$$|\delta^{79}| > |\delta^{88}|, \quad (6)$$

where  $\delta$  is the coefficient of CS. In addition, we compare the effect of child support with that of other family income over time:

$$\frac{\delta^{79}}{\beta^{79}} > \frac{\delta^{88}}{\beta^{88}}. \quad (7)$$

That is, we test the hypothesis that the effect of CS on education relative to that of INCEXCS is greater in 1979 than in 1988.

We estimate the equations by ordinary least squares for years of schooling completed and by probit for the two binary dependent variables. RECCS and CS, however, may be correlated with the error term; that is, whether a mother receives child support and how much she receives depend in part on her own personal characteristics and behavior as well as on the absent father's. We can control for some of these factors directly (inasmuch as they may appear in SE), but some determinants of child support—such as the mother's determination or initiative and the father's degree of concern for his child's well-being—may not be observable. If any of these unobservables are also determinants of a child's education, then our estimates of  $d_1$  and  $\delta$  will be biased upward.

We took account of the possibility of this selection bias for Eq. (5); there we used a technique suggested by Vella (1990) which is a generalization of the instrumental variable approach of Barnow, Cain, and Goldberger (1980). This technique consists of first estimating the determinants of the child support variable and then using the residuals as an additional variable in the educational outcome regressions. In all cases, we found the coefficient insignificant, an indication that selection bias is not a problem. Thus, here we show only our original uncorrected estimates.

## RESULTS AND DISCUSSION

### Family Structure

Mean values for each of the educational outcome measures for children ages 16–19 from intact and child-support-eligible families are shown for 1979 and 1988 in Table 1. (We omit further reference to other nonintact families, although we control for their presence in our regressions.) As expected, children from intact families complete more years of school on average than children from nonintact families, are less likely to fall behind in school, and are more likely to graduate from high school. Although educational attainment overall changed little between 1979 and 1988, children in nonintact families ended the period at a slightly greater disadvantage. Age differences account for some of these educational differences: children from nonintact families are one-fifth of a year younger in 1988, but only one-tenth of a year younger in 1979. Table 1 also presents means of some other characteristics that may account for some of the educational differences.

Have the characteristics of child-support-eligible families changed between 1979 and 1988? Most striking is that the proportion headed by never-married mothers was twice as high in 1988 as in 1979, and their real income decreased about 1%. In keeping with our assertion that the composition of the population of fathers paying child support changed adversely over the 1980s, the proportion of eligible families receiving support increases

Table 1. Means of Selected Variables, Children Ages 16–19, 1979 and 1988

Variables	1979		1988	
	Intact Fam.	Elig. CS Pop.	Intact Fam.	Elig. CS Pop.
<b>Education Measures</b>				
Years of school completed	10.83	10.46	10.83	10.40
% behind in school	13.03	20.33	11.92	19.46
% graduated high school	36.45	25.38	35.41	23.08
<b>Demographic and Socioeconomic Characteristics</b>				
Age in years	17.59	17.43	17.53	17.32
% black	7.71	22.47	7.34	23.60
% hispanic	6.10	4.92	6.47	6.73
Mother's age at child's birth	26.81	24.31	25.93	23.93
Years of education	11.75	11.42	12.53	12.19
% working	56.91	68.69	70.46	77.64
% on welfare	0.87	21.84	0.94	13.77
% remarried	0	38.51	0	35.20
% never married	0	3.16	0	8.69
<b>Income Measures</b>				
Family income <sup>a</sup>	45,219	29,208	47,506	28,885
Mother's earnings <sup>a</sup>	6,539	9,432	9,663	12,033
% poor	6.05	23.23	6.26	23.29
Child support <sup>a</sup>	0	1,490	0	1,285
% receiving CS	0	40.28	0	44.93
Sample Size	3,539	792	2,861	966

Source: Current Population Survey March/April 1979 and 1988 Match Files.

<sup>a</sup> In constant 1987 dollars using the CPI-U.

from 40% in 1979 to 45% in 1988, while the average payment (in 1987 dollars) declines 14%, from \$1,490 in 1978 to \$1,285 in 1987.

The first two columns in Table 2 show the overall educational differences in 1979 and in 1988 between children in intact families and in child-support-eligible families, and, among the latter, between families receiving and those not receiving child support. The next two columns show the adjusted differentials—that is, the coefficients on CSE (or RECCS and NORECCS) from Eqs. (1) and (2).

Compared with children from intact families, those from child-support-eligible families are worse off overall on all educational measures in 1988 than in 1979, but the adjusted differential is reduced for years of schooling completed and is reversed for percentage behind in school and percentage graduated from high school. Further, none of the coefficients on CSE change significantly between 1979 and 1988.<sup>7</sup> Thus the evidence is inconsistent with our hypothesis in Eq. (3), that the negative effect of living in a single-parent family on children's educational attainment diminishes over time.

Among children eligible for child support, educational outcomes differ significantly between those receiving and not receiving child support. Children who receive support consistently do significantly better than children who do not, except for the percentage graduating from high school in 1988. When differences in socioeconomic factors and income are controlled, those who receive child support in 1979 actually do no worse on all educational outcomes than children from intact families, whereas in 1988, they are significantly less likely to have graduated from high school.

Table 2. Differences in Educational Outcomes between Children Ages 16-19 in Intact Families and Child-Support- Eligible Families, by Whether or Not Receiving Child Support, 1979 and 1988

	Overall Difference		Controlling for Socioeconomic Factors and Family Income	
	1979 (1)	1988 (2)	1979 (3)	1988 (4)
<b>Years of Schooling Completed</b>				
CS-eligible families	-0.37***	-0.44***	-0.12**	-0.16***
Receiving CS	-0.19**	-0.39***	0.03	-0.06
Not receiving CS	-0.49***	-0.47***	-0.23***	-0.25***
<b>Percent Behind in School</b>				
CS-eligible families	6.9***	7.2***	4.3***	3.9***
Receiving CS	-2.0	2.7	-0.9	2.1
Not receiving CS	11.6***	10.3***	7.1***	5.3***
<b>Percent Graduated High School</b>				
CS-eligible families	-11.6***	-13.0***	-8.0***	-7.1***
Receiving CS	-10.2***	-16.7***	-2.4	-8.4**
Not receiving CS	-12.6***	-10.1***	-11.6***	-6.1*

*Notes:* Socioeconomic factors include whether or not living in the northeast, the northcentral, the south, a standard metropolitan statistical area, or a central city; whether or not child is male, age 17, age 18, age 19, black, or of Spanish origin; years of schooling completed by the mother, age of mother at birth of child, whether mother worked outside the home, and number of siblings. The numbers reported for the last two educational outcomes are partial derivatives obtained by adjusting the probit coefficients.

\* p <.10; \*\* p <.05; \*\*\* p <.01.

How has the portion of the educational disadvantage eliminated by the receipt of child support changed over time? The ratios from Eq. (4), shown in Table 3, consistently indicate a decline in the effectiveness of child support at overcoming the educational disadvantage faced by children in single-parent families. In 1979 the receipt of child support eliminates all of the disadvantage in years of school completed, all of the increase in chances of falling behind in school, and 70% of the decrease in likelihood of graduating from high school, but in 1988 it eliminates only about 60%, 46%, and none, respectively. These results are consistent with our hypothesis that the effect of child support relative to that of family structure diminished over time as a greater number of reluctant fathers began to enter the child support system.

### Income from Child Support

To measure how educational outcomes vary among children receiving different amounts of child support, we present, in Table 4, estimates of coefficients on the amount of child support received and on other family income from Eq. (5) for 1979 and 1988. (The underlying regressions are available from the authors on request.)

In 1979, increases in the amount of child support received generally increase



Table 3. Proportion of the Negative Effect on Educational Outcomes of Living in a Single-Parent Family Eliminated by the Receipt of Child Support, 1979 and 1988

Educational Outcome	1979	1988
Years of Schooling Completed	1.25	0.625
Percent Behind in School	1.21	0.462
Percent Graduated High School	0.70	-0.183

Source: Calculated from Table 2, columns 3 and 4.

schooling. In 1988, however, the effect of child support is in the predicted direction (except for high school graduation), but is insignificant. In 1979, for example, a \$1,000 increase in child support income (in 1987 dollars) increases years of school completed by .025, whereas in 1988 it increases them by an insignificant .022. Likewise, a \$1,000 increase in child support in 1979 lowers the probability of falling behind in school by 2.22%, but in 1988 by only an insignificant 1.13%. In agreement with our hypothesis in Eq. (6), the positive effect of child support income declines between 1979 and 1988, but the changes are statistically

Table 4. The Effect of Child Support and All Other Family Income on the Educational Outcomes of Children Ages 16-19 Eligible for Child Support, 1979 and 1988 (Absolute value of t-statistics in parentheses)

	1979	1988
Years of Schooling Completed		
Child support income	0.025** (2.13)	0.022 (1.43)
Other family income	0.004* (1.83)	0.005*** (2.63)
Percent Behind in School		
Child support income	-2.22*** (2.68)	-1.13 (1.42)
Other family income	-0.09 (1.30)	-0.21*** (2.74)
Percent Graduated High School		
Child support income	0.95 (1.60)	-0.49 (0.67)
Other family income	0.08 (0.93)	0.21** (2.43)
Sample Size	792	966

Notes: Socioeconomic factors include whether or not living in the northeast, the northcentral, the south, a standard metropolitan statistical area, or a central city; whether or not child is male, age 17, age 18, age 19, black, or of Spanish origin; years of schooling completed by the mother, age of mother at birth of child, whether mother worked outside the home, and number of siblings. The numbers reported for the last two educational outcomes are partial derivatives obtained by adjusting the probit coefficients.

\*  $p < .10$ ; \*\*  $p < .05$ ; \*\*\*  $p < .01$

insignificant.<sup>8</sup> These results suggest that increased amounts of child support income may not have become less effective over this period.

Finally, we examine the strength of child support in comparison with other income and ask whether their ratio has diminished over time, as hypothesized in Eq. (7). In 1979, child support consistently has a much larger effect on education than do equal increments of other sources of income; in 1988, child support has a significantly larger effect than other income only on years of school completed.<sup>9</sup> What is more, the ratio is significantly larger in 1979 than in 1988 for all outcomes.<sup>10</sup> For years of school completed, for example, dollar for dollar, child support income is 6.25 times as effective as other income in 1979, but only 4.4 times as effective in 1988; for falling behind in school, it is 25 times as effective in 1979 but only five times as effective in 1988. These results are consistent with the hypothesis that child support income lost much of its advantage over other sources of family income at mitigating the negative effects of living in a single-parent family on children's educational attainment during the 1980s.

## CONCLUSION AND IMPLICATIONS

In this paper we find some evidence of a decline in the effectiveness of child support at mitigating the negative effects of living in a single-parent family on children's educational attainment between 1979 and 1988. Further, we find no evidence that the effect of living in a single-parent family was reduced as the experience became more common. First, the evidence that is consistent with a decline in the effectiveness of child support on educational attainment is: 1) receiving child support eliminates a smaller proportion of the negative effect of living in a single-parent family in 1988 than in 1979, and 2) among child-support-eligible families, the amount by which the effect of child support income exceeds that of other family income declines significantly over the period. Second, we find no significant evidence that increased child support income becomes less effective at reducing the educational disadvantage, although the coefficients change in the predicted direction.

These results are partially consistent with our hypothesis that as more reluctant payers may have been brought into the child support system by stricter enforcement, the effect of child support on children's education may have declined. The results suggest that child support represents in part some unobservable aspects of the father-child relationship which are not as positive among reluctant payers as among voluntary compliers. Even so, other possible explanations for the decline in the effectiveness of child support cannot be ruled out. Because of declines in men's real earnings over this period, a given level of child support payment actually may be associated with a lower level of noncustodial fathers' incomes. Alternatively, a deterioration in the mother's ability to foster her children's education may have accompanied her increased likelihood of never having been married.

Although the effects we estimate are only marginally significant in some cases, thus making our claims tentative, it is noteworthy that we were able to detect any decline at all in the effect of child support before the 1988 changes in legislation that will bring even more reluctant payers into the system. These and other proposed legislative changes might be expected to further reduce the extent to which child support income benefits educational attainment more than does other income, if we are correct about the source of the effect. Only time and the analysis of more recent, more complete data will tell. Presumably, however, child support income will never become less beneficial than other income; hence regular payment will continue to be a desired goal. To encourage the development of the intangible part of the effect of child support among more reluctant

payers, accompanying programs on the development of parenting and other life skills might be advisable.

## NOTES

<sup>1</sup> Although we could not find comparative data over the 1980s on characteristics of fathers who provided child support, some evidence in support of this argument is provided by the finding that "contributing to child support does not, by itself, enable fathers to influence major decisions" (Seltzer 1991:90).

<sup>2</sup> As of 1988, according to data from the National Survey of Families and Households, about one-third of children from nonintact families have left home before age 19, compared with one-quarter of those from intact families (Aquilino 1991).

<sup>3</sup> To assess in part the impact of attrition bias due to children's leaving home, we also performed some earlier analyses on samples of *youngest* children between ages 16 and 20 (Hernandez 1992) and on children ages 16 to 18, but we found little difference in the estimates.

<sup>4</sup> For the population as a whole, the number of 16-to 19-year olds decreased from 1980 to 1988 by 13% (U.S. Bureau of the Census 1990), whereas in our sample it decreased by 14%.

<sup>5</sup> Currently divorced or separated mothers whose former or (most recent) estranged husband was not their child's father were not asked about child support, but should have been asked.

<sup>6</sup> A Chow test indicated that separate equations were warranted at a 5% significance level.

<sup>7</sup> Computed from pooled 1979 and 1988 data with a year interaction term on CSE.

<sup>8</sup> Computed from pooled data with a year interaction term on child support received.

<sup>9</sup> Computed as a t-test on whether the ratio of the coefficients of child support to family income was greater than 1 (i.e.,  $\delta/\beta > 1$ ).

<sup>10</sup> Using a pooled sample of the two years, we created interactions of year with the child support and family income variables, and conducted a t-test between these interaction terms.

## REFERENCES

- Aquilino, W.S. 1991. "Family Structure and Home-Leaving: A Further Specification of the Relationship." *Journal of Marriage and the Family* 53:999-1010.
- Barnow, B.S., G.G. Cain, and A.S. Goldberger. 1980. "Issues in the Analysis of Selectivity Bias." *Evaluation Studies Review Annual* 5:43-59.
- Becker, G.S. 1964. *Human Capital*. New York: Columbia University Press.
- \_\_\_\_\_. 1981. *A Treatise on the Family*. Cambridge, MA: Harvard University Press.
- Beller, A.H. and S.S. Chung. 1988. "The Effect of Child Support Payments on the Educational Attainment of Children." Presented at the annual meetings of the Population Association of America, New Orleans.
- Beller, A.H. and J.W. Graham. 1993. *Small Change: The Economics of Child Support*. New Haven: Yale University Press.
- Bianchi, S. 1990. "America's Children: Mixed Prospects." *Population Bulletin* 45:1-43.
- Blau, P.M. and O.D. Duncan. 1967. *The American Occupational Structure*. New York: Wiley.
- Chambers, D.L. 1979. *Making Fathers Pay*. Chicago: University of Chicago Press.
- Fuchs, V.R. and D.M. Reklis. 1992. "America's Children: Economic Perspectives and Policy Options." *Science* 255:41-46.
- Furstenberg, F.F., Jr., S.P. Morgan, and P.D. Allison. 1987. "Parental Participation and Children's Well-Being after Marital Dissolution." *American Sociological Review* 52:695-701.
- Graham, J.W. and A.H. Beller. 1989. "The Effect of Child Support Payments on Labor Supply of Female Family Heads: An Econometric Analysis." *Journal of Human Resources* 24:664-88.
- Graham, J.W., A.H. Beller, and P.M. Hernandez. 1994. "The Relationship between Child Support Payments and Offspring Educational Attainment." Pp. 317-54 in *Child Support and Child Well Being*, edited by I. Garfinkel, S. McLanahan, and P. Robins. Washington, DC: Urban Institute Press.

- Haveman, R. and B. Wolfe. 1992. "On the Determinants of Children's Wellbeing and Economic Success: A Research Perspective." Presented at the annual meetings of the American Economic Association, New Orleans.
- Hernandez, P.M. 1992. "The Effects of Child Support on Educational Attainment of Young Adults from Single-Parent Families: The Problem of Attrition from the Sample." Unpublished manuscript.
- Hill, M.S. 1988. "The Role of Economic Resources and Dual-Family Status in Child Support Payments." Presented at the annual meetings of the Population Association of America, New Orleans.
- King, V. 1994. "Nonresident Father Involvement and Child Well-Being: Can Dads Make a Difference?" *Journal of Family Issues* 15:78-96.
- Krein, S. and A.H. Beller. 1988. "Educational Attainment of Children from Single-Parent Families: Differences by Exposure, Gender, and Race." *Demography* 25:221-34.
- Lerman, R.I. 1986. "A National Profile of Young Unwed Fathers: Who Are They and How Are They Parenting?" Presented at the Conference on Unwed Fathers, Catholic University, Washington, DC.
- McLanahan, S. 1985. "Family Structure and the Reproduction of Poverty." *American Journal of Sociology* 90:873-901.
- Norton, A.J. and P.C. Glick. 1986. "One Parent Families: A Social and Economic Profile." *Family Relations* 35:9-17.
- Seltzer, J.A. 1991. "Relationships between Fathers and Children Who Live Apart: The Father's Role after Separation." *Journal of Marriage and the Family* 53:79-101.
- Seltzer, J., N.C. Schaeffer, and H.W. Charng. 1989. "Family Ties after Divorce: The Relationship between Visiting and Paying Child Support." *Journal of Marriage and the Family* 51:1013-32.
- Shaw, L.B. 1982. "High School Completion for Young Women: Effects of Low Income and Living with a Single Parent." *Journal of Family Issues* 3:147-63.
- Sonenstein, F.L. and C.A. Calhoun. 1990. "Determinants of Child Support: A Pilot Survey of Absent Parents." *Contemporary Policy Issues* 8:75-94.
- U.S. Bureau of the Census. 1990. *United States Population Estimates, by Age, Sex, Race, and Hispanic Origin: 1980 to 1988*. Current Population Reports, Series P-25, 1045. Washington, DC: U.S. Government Printing Office.
- U.S. Department of Health and Human Services. 1983. *Eighth Annual Report to Congress for the Period Ending September 30, 1983*. Office of Child Support Enforcement. Washington, DC: U.S. Government Printing Office.
- \_\_\_\_\_. 1988. *Thirteenth Annual Report to Congress for the Period Ending September 30, 1988*. Office of Child Support Enforcement. Washington, DC: U.S. Government Printing Office.
- Vella, F. 1990. "A Simple Estimator for Simultaneous Models with Censored Exogenous Regressors." Working Paper 7/90, Department of Econometrics, Monash University, Australia.
- Wallerstein, J.S. and D.S. Huntington. 1983. "Bread and Roses: Nonfinancial Issues Related to Fathers' Economic Support of Their Children Following Divorce." Pp. 135-53 in *The Parental Child Support Obligation*, edited by J. Cassetty. Lexington, MA: Lexington Books.