
Does Child Support Enforcement Reduce Divorce Rates?

A Reexamination

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ABSTRACT

During the 1990s, expenditures on Child Support Enforcement increased dramatically, as did the amount of money collected in these efforts. This paper examines whether there is a link between the Child Support Enforcement program and the divorce behavior of married couples with children. Previous work, notably that of Nixon (1997), found a significant negative effect of Child Support Enforcement policy on the probability of divorce. However, using a panel of state divorce rates and policy variables, I find that, contrary to this previous study, Child Support Enforcement policy has no significant impact on divorce rates.

I. Introduction

Expenditures on Child Support Enforcement (CSE) have become an increasingly large part of federal and state budgets, with spending rising to almost \$3.6 billion in 1998 (Committee on Ways and Means 2000). Although originally intended to decrease the fiscal burden of the Aid to Families with Dependent Children (AFDC) program and to make noncustodial parents take responsibility for their children, child support enforcement efforts have had effects far beyond budgetary consequences. Several studies have tried to ascertain the effect of this effort on various behaviors, from marital dissolution to remarriage behavior of formerly married mothers. In addition, studies have analyzed the effectiveness of these policies in achieving

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their stated goal: reducing AFDC (or Temporary Assistance to Needy Families)¹ caseloads and increasing payments to children with nonresident fathers.²

This paper attempts to measure the effect of recent increases in child support enforcement efforts on the divorce behavior of couples. In theory, the effect is ambiguous. For the husband, increased child support enforcement would seem to make divorce less likely, since the possible income gain from the avoidance of child-rearing costs if he divorces is reduced if he is compelled to incur those costs in the form of child support. For the wife, however, increased child support enforcement would tend to increase the likelihood of divorce, since the greater the possibility of receiving child support, the less the income loss from divorcing the father. Thus, the effect that child support enforcement has on marital behavior is an empirical issue.

In a recent paper, Nixon (1997) examined the effect of Child Support Enforcement policy on divorce using data from the Current Population Survey, and found that Child Support Enforcement policy had a small, but significant, negative effect on the prevalence of divorce. However, the Nixon study uses only cross-sectional variation to identify the effect of CSE policy on divorce, which may bias her results. In this paper, the effect of CSE policy on divorce is reexamined using state-level panel data, which enables me to better control for unchanging or slowly changing demographic characteristics that affect the probability of divorce, as well as underlying attitudes toward divorce.

The paper proceeds as follows. Section II describes the beginnings of the Child Support Enforcement program, as well as recent legislative developments and sources of cross-state differences in the program. Section III critiques the method used in the Nixon study, and notes the differences in the present study. In Section IV, the data used and the estimation strategy are outlined. Section V presents the estimation results, and Section VI discusses some of the ramifications of these results, as well as some caveats. Section VII concludes the paper.

II. Policy History and Implementation

In 1975, recognizing that the AFDC caseload was increasingly made up of unmarried and divorced women, Congress undertook an effort to reduce public expenditures on welfare by increasing the amount of support provided by nonresident fathers. In passing Title IV-D of the Social Security Act, matching funds were allocated to attempt to increase the enforcement and collection of child support awards.

This Child Support Enforcement program has been amended numerous times since its inception. In 1992, the Child Support Recovery Act was passed, in order to strengthen the criminal penalties associated with attempting to avoid making child

1. In 1996, under the Personal Responsibility and Work Opportunity Reconciliation Act, the AFDC program was abolished, and replaced with the TANF program. In this paper, the term AFDC is used to refer to either program.

2. For example, Freeman and Waldfogel (2001) find that a measure of child support enforcement policies has a strong effect on child support receipt by never married women. Robins (1986) finds evidence that child support enforcement policies are effective at reducing AFDC outlays, but are not effective at reducing dependency on AFDC.

support payments. Under the act, willful failure to pay past due child support in the amount of \$5,000 or more to a child in another state was made a federal misdemeanor for first-time offenders, punishable by a fine and up to six months in prison. For subsequent offenses, the penalty increased to a felony, which carried with it a possible prison term of two years.

Several provisions of the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 were intended to improve the functioning of the Child Support Enforcement program and to crack down on nonpaying fathers, the so-called “deadbeat dads.” As reported in U.S. Department of Health and Human Services (1998), a national new hire reporting system was established to enable employers to check if new employees had outstanding child support arrears that should be garnished from their wages. In addition, uniform procedures across states, streamlined paternity establishment measures, and computerized state-wide collections systems were implemented to aid in the location of fathers, establishment of paternity, and collection of awards. Finally, increased penalties were created for nonpayment of support, including asset seizure, performance of community service, and driver’s license revocation.

Most recently, in 1998, the Deadbeat Parents Punishment Act was signed into law, which made crossing state lines or leaving the country to evade child support obligations a felony, punishable by a fine and up to two years in prison. In addition, the act made willful failure to pay past due child support in amounts greater than \$10,000 or for times longer than two years a felony, even for first-time offenders.

The Federal Office of Child Support Enforcement (OCSE), an office of the Department of Health and Human Services, is the federal agency in charge of this child support enforcement effort. In conjunction with state governments, the OCSE attempts to increase the enforcement of child support orders by “locating absent parents, establishing paternity, establishing child support orders, reviewing and modifying orders, promoting medical support, collecting and distributing support, and enforcing child support across state lines” (Committee on Ways and Means 1998).

Though federal laws determine the outlines under which a state’s child support enforcement agency must operate, and dictate some of the methods and policies that states must have in place, most child support enforcement efforts are carried out by state authorities. As a result, there is substantial variation in the manner in which these laws are administered.

In the period under analysis in this study, states differed in which department handled the Child Support Enforcement Program,³ which level of government administered the program,⁴ which procedures were involved in enforcing child support orders (whether they were judicial or administrative), and how automated and streamlined was the child support enforcement process. In addition, states differed in the activities used to establish paternity, locate parents, and enforce orders, including

3. “Most States have placed the child support agency within the social or human services umbrella agency which also administers the AFDC program. However, two States have placed the agency in the department of revenue and two States have placed the agency in the office of the attorney general.” (Committee on Ways and Means, 1994)

4. “The law allows the programs to be administered either on the State or local level. Ten programs are locally administered. A few programs are State administered in some counties and locally administered in others.” (Committee on Ways and Means, 1994)

differences in whether fathers could voluntarily consent to paternity, which state agencies could be involved in tax and benefit withholding, whether licenses could be revoked, whether new hires were automatically reported to the state CSE office to check if child support payments should be withheld, and how much a noncustodial parent had to be in arrears before a lien could be established. In addition, for policies that were mandated by federal law, speed of implementation of the laws differed across states, providing another source of state-level variation.⁵

As the Child Support Enforcement program has evolved, total expenditures on child support enforcement and the total amount collected have increased steadily, and this is especially true in recent years. From 1990 to 1998, the amount of total child support collections more than doubled from \$6 billion to \$14.3 billion.⁶ Combined expenditures on the program at both the state and federal level have also increased greatly, from \$1.6 billion in 1990 to just over \$3.6 billion in 1998. The numbers of parents located, paternities established, and support obligations established have all followed suit.⁷ This paper, then, attempts to measure the effect, if any, that this recent increase in Child Support Enforcement activities has had on the divorce behavior of married couples.

III. Previous Work

Several studies have tried to ascertain what factors affect the probability of divorce.⁸ In addition, a number of studies have examined the link between Child Support Enforcement and marriage outcomes.⁹ The study most closely related to the present study is that of Nixon (1997), which examines the effect of increased CSE on marital dissolution. Through a simple theoretical model,¹⁰ it is shown that the effect that Child Support Enforcement will have on divorce depends on the relative marginal utilities of income of the husband and wife.

In the empirical section of the paper, two pooled cross-sections of data from the Current Population Survey are used to find that increased CSE has a small, but significant, negative effect on the probability of becoming divorced or separated in the five years prior to the survey year. The estimates imply that a one percentage point increase in the collection rate of child support orders would yield a statistically significant 0.09 percentage point decrease in the average probability of divorce.

The Nixon study, however, has a key weakness that may bias its results, in that

5. For a detailed examination of the differences across states in Child Support Enforcement efforts, see the discussion in U.S. Dept. of Health and Human Services, Administration for Children and Families, Office of Child Support Enforcement (1993), Chapter 2.

6. Measured in current dollars. When adjusted for constant 1996 dollars, this increase is still great, from \$7.2 billion to \$12 billion.

7. For background information on these program features, see Committee on Ways and Means, U.S. House of Representatives (2000).

8. See, for example, Peters (1986), Johnson and Skinner (1986), Peters (1993), Sweezy and Tiefenthaler (1996), and Friedberg (1998).

9. See, for example, Yun (1992) and Bloom et al. (1998).

10. In an appendix available from the author, this model is extended to examine the theoretical effect of CSE policy that does not change the amount of benefits, but changes the probability of receiving benefits. This model provides a rationale for some of the additional CSE policy variables used in the present paper.

it uses only cross-sectional variation to identify the effects of child support enforcement on divorce. However, the degree of fervency with which a state enforces payment of its child support orders, and the rate of divorce in a state, are likely to both be affected by underlying norms and demographic characteristics of a state. For example, the religious makeup of a state may both strongly discourage divorce and favor strong enforcement of child support orders for people who get divorced. Because only cross-sectional variation is used, this correlation would tend to bias the results toward finding a negative effect of stronger Child Support Enforcement policy on divorce. Nixon does note that this may bias the results, and tries to control for these underlying norms. However, the degree to which one can fully control for all underlying norms when using cross-sectional data is uncertain. To the author's credit, adding state fixed effects to the specification was considered, but it was ultimately rejected because there was "insufficient within-state over-time variation in the CSE program data to take this approach" (Nixon 1997, p. 168).

This study, then, reexamines the effect of stronger child support enforcement on divorce rates. Instead of using cross-sectional data from the CPS, I construct a panel of divorce rates using Vital Statistics data available from the National Center for Health Statistics. Because I am using Vital Statistics data, I do not need to aggregate divorces across years, but rather can analyze year-to-year fluctuations in divorce rates. Further, because I am using panel data, and because the time frame from which my data are drawn included much more intertemporal variation in the Child Support Enforcement effort, I am able to use different types of variation, both across states, and across time within states, to identify whatever effect this effort might have had on divorce rates. Thus, in my specifications, I include state fixed effects in order to control for the demographic characteristics and underlying norms that may bias results from using only cross-sectional variation. As a result, my estimates should suffer from less bias of this form.

IV. Data and Estimation Strategy

A. Data

The data for this study come from a variety of sources. The divorce data come from the "Vital Statistics: Marriage and Divorce Data: 1989–1995" dataset, published by the National Center for Health Statistics in the U.S. Department of Health and Human Services. This is the most current, and final, version of this dataset.¹¹

Until 1996, the NCHS sampled data from divorces that occurred in 32 states, the Virgin Islands, Guam, and Puerto Rico. As a result, due to lack of data, nearly 20 states cannot be included in my analysis. The states that are contained in this sample, however, account for approximately 48–49 percent of all divorces in the United States in any given year. Sampling rates ranged from one in 20 divorces for New York to examining every divorce certificate filed in a number of states. In 1991, for example, 127,687 observations were taken from an estimated 580,730 divorces in the relevant states. Information collected included the year the divorce took place,

11. Due to budgetary cutbacks at the National Center for Health Statistics, divorce data ceased to be systematically collected in 1996.

the state of occurrence, the number of children the marriage produced the number of these under the age of 18 when the divorce took place, the age and race of the couple, and various information about the marriage.

These data were used to generate estimates of the proportion of divorces occurring among couples with children under the age of 18 within a state in a given year. Using the actual total number of divorces within a state in a given year, I then use this proportion to calculate an estimate of the number of divorces among couples with children under the age of 18 for each state and year under observation.

Second, population data on the number of "married couple families with children under 18," by state, were taken from the 1990 Census of Population for the United States, General Population Characteristics, Table 43 in U.S. Bureau of the Census (1990). These numbers were then adjusted for population growth from 1991 to 1995, using estimates from U.S. Bureau of the Census (1995).

Divorce rates among the relevant population were then calculated for all states for which data were available for each year under study. The divorce rate used is the yearly rate of divorce among married couples with children under 18. Hence, the effects of Child Support Enforcement in the estimates presented here constitute the effects only on the yearly divorce rate of this population. This is in contrast to Nixon (1997), whose dependent variable is "becoming divorced or separated in the five-year window prior to the survey year," and who thus estimated the effects of Child Support Enforcement on that measure of divorce.

One could, of course, use other measures of the divorce rate, such as the number of divorces per thousand population. I chose to define the divorce rate as above for two reasons. First, Nixon (1997) uses as her sample selection criteria "all child-support-eligible adult women who are divorced or currently married." Hence, this definition of divorce rate most closely matches the sample Nixon uses in her study. Second, child support policy is directed toward divorced couples who have dependent children under the age of 18, and hence Child Support Enforcement efforts would be expected to have its main effects among this population. Further, although child support policy may affect whether some couples decide to get married and/or have children (and hence have some effect on sample selection), these would most likely be second-order effects.¹²

The divorce rate data were then matched to program data from the Office of Child Support Enforcement Annual Report to Congress for the years 1991 to 1995. Each year, the Office of Child Support Enforcement reports on the status of child support enforcement efforts in all 50 states. Beginning in 1991, the reporting required of states by the Office of Child Support Enforcement became much more extensive. Specifically, in addition to data on the amount of collections made and the number of orders that were enforced, data were collected on paternity and location efforts.¹³

12. One also might be concerned that the results from using such data might be biased due to interstate migration to get a divorce. However, it is unclear in which direction the results would be biased, and it is unlikely that such a bias would be substantial, given that in my data only 0.3 percent of all divorces in the sample involved a couple who were not a resident of the state in which the divorce took place.

13. There is still a shortcoming to this data, however. As was true for the data used in Nixon (1997), the state reported data on Child Support Enforcement efforts are not broken into efforts concerning never-married couples versus divorced couples, but are instead aggregated for both. This may introduce some measurement error.

Five different variables are used to represent the strength of child support enforcement policy. In addition to examining the effect of enforcing child support orders and increasing collections, as Nixon does, I also examine the possible effects of increased paternity establishment, increased efforts to locate nonresident fathers, and increases in the average child support order. This is done in order to capture the differential effect that different types of child support enforcement policies may have.

The paternity establishment rate is calculated by dividing the number of paternities established in a given year by the average number of cases needing paternity establishment on the last day of each quarter that year. A one-unit increase in this variable implies that a state has established an additional number of parents equal to the average caseload in a given year. Thus, a higher value represents a more effective paternity establishment effort.¹⁴

The location rate is calculated by dividing the number of absent parents located (including location of physical whereabouts, assets, or sources of income) in a given year by the average number of cases in which a parent needed location on the last day of each quarter that year. A one unit increase in this variable implies that a state has located an additional number of parents equal to the average caseload in that year. A higher value thus represents a more effective location effort.

The average order amount is calculated by dividing the amount of support due for orders entered in a year by the total number of orders entered in that year. These are then adjusted using the CPI deflator, and reported in thousands of dollars.

The order enforcement rate is the percentage of orders in which support was due in a given year for which a payment was made.

Finally, the amount enforcement rate is the percentage of the amount of support due in a given year that was actually collected by the child support enforcement agency.

Summary statistics are presented in Table 1. The average state in my sample has an annual divorce rate among married couples with children of 2.46 percent.

B. Estimation Strategy

If state CSE policy has a significant effect on the probability of a married couple with a child getting a divorce, then the state divorce rate of married couples with children should vary significantly with the strength of CSE policy. If, on the other hand, there is no effect on the divorce rates of these couples, then the coefficients on all of these policy variables should be small and insignificant.

To test, then, whether state-level divorce rates vary significantly with Child Support Enforcement policy at the state-level, I run a state-level panel regression. I specify the state-level divorce rate estimation equation as

$$(1) \text{divorcerate}_{st} = \beta_0 + \beta_1 \text{CSE}_{st} + \beta_2 Z_{st} + v_{st}$$

14. This measure could be interpreted as being analogous to the inverse of the ‘‘inventory turnover rate’’ for the paternity establishment caseload. For example, if one assumed that cases were disposed of in the order in which they were opened, a state with a paternity establishment rate of 2 would turn over their entire caseload every 6 months.

Table 1
Summary Statistics

	Mean	Standard Deviation	Minimum	Maximum
Divorce rate	0.0246	0.0051	0.0139	0.0387
Population	409,200	376,371	22,658	1,573,800
Paternity enforcement	0.334	0.584	0.034	6.006
Location enforcement	1.722	2.630	0.130	17.655
Average order (\$ in thousands)	1.502	0.873	0.135	7.578
Order enforcement	0.642	0.170	0.108	1.000
Amount collected	0.528	0.214	0.057	1.000
AFDC maximum (\$ in thousands)	0.473	0.170	0.155	0.999
Unemployment rate	5.98	1.54	2.40	9.80
Median income (\$ in thousands)	30.772	4.493	22.806	42.872

where CSE_{st} contains one or more measure of Child Support Enforcement policy, Z_{st} are demographic or economic characteristics of state s at time t , and v_{st} is the error term.¹⁵ A two-stage GLS estimation procedure is used, which accounts for the heteroskedasticity in the error term that results from differential sampling rates of divorce records across states.¹⁶

Since a couple's financial situation has been found to affect the likelihood of their

15. A log-odds ratio specification was also estimated. The general results remain unchanged when the model is specified in this way.

16. The variance of the error term comes from two sources. The first is due to sampling variation, or the error in measuring the proportion of divorces that occurred among couples with children under 18, since in many states the Vital Statistics data samples only a subset of all divorce records. The second part is due to lack of fit of the model. Thus, the variance of the error term is

$$(2) \quad \sigma_{v_{st}}^2 = \sigma_{sv_{st}}^2 + \sigma_{\epsilon_{st}}^2$$

Letting \hat{p}_{st} be the proportion of sampled divorces occurring to couples with children under 18, n_{st} be the total number of sampled divorces, and d_{st} be the total number of divorces in state s in year t , my estimate of the divorce rate among couples with children under 18 is

$$(3) \quad \text{divorcerate}_{st} = \frac{\hat{p}_{st}d_{st}}{\text{population}_{st}}$$

Thus, adapting from Maddala (1983), a consistent estimate of the first term of the variance is

$$(4) \quad \hat{\sigma}_{sv_{st}}^2 = \left(\frac{d_{st}}{\text{population}_{st}} \right)^2 \left(\frac{\hat{p}_{st}(1 - \hat{p}_{st})}{n_{st}} \right)$$

Estimation proceeds following a modification of the procedure outlined in Dickens (1990). First, an unweighted regression of Equation 1 is performed. Second, the Maddala approximation of $\hat{\sigma}_{sv_{st}}$ (or 0 if all records were sampled) is subtracted from the squared residuals of this regression, constraining the results to be greater than or equal to zero, to ensure that total variation is at least that which would come from sampling variation. The mean of these is then taken to yield an estimate of $\hat{\sigma}_{\epsilon_{st}}^2$. Third, weights are created, which are the square root of the inverse of the estimated $\hat{\sigma}_{v_{st}}^2$. Finally, weighted least squares is performed.

remaining married,¹⁷ the state-level unemployment rate and the state-level median money income are included in the regressions. In addition, Ellwood and Bane (1985) find a significant negative effect of welfare generosity on divorce rates. To account for this, the maximum AFDC benefits for a family of four is also included in the estimation.

Of course, various other factors may affect the divorce rate in a state at a given time, including the religious and ethnic makeup of a state, the legal environment, and underlying attitudes toward divorce, whether within a state or nationwide. Most of these factors are either largely unchanging from year-to-year, or data on these at the state or national level are either not available or poorly measured on a year-to-year basis. To control for these various factors, time and state fixed effects are included in various regressions.

Following Nixon (1997), state-level divorce rates of married couples with children are initially regressed against each of the policy variables in separate regressions with and without the economic variables. However, contrary to Nixon's data, my measures of CSE policy are not highly correlated (see Table 2), and so I am also able to include them jointly in a regression. Time fixed effects are then added to control for unobserved variables that affect the probability of divorce nationally. Finally, state fixed effects are included to control for unobserved or slowly changing variables that affect divorce rates, and for differences in attitudes toward divorce across states.

V. Results

In the first column of Table 2, I regress the divorce rate separately against each of the measures of child support enforcement policy, with no state or time fixed effects included. As such, all sources of variation in divorce rates are used to identify the effects of the Child Support Enforcement variables. In several of these regressions, Child Support Enforcement policy is found to have a significant negative effect on the prevalence of divorce.

Estimation of the effect of the paternity enforcement variable alone yielded a statistically significant negative coefficient. This estimate implies that a standard deviation increase in the level of paternities established would reduce the divorce rate by 0.128 percentage points, or 5.2 percent. This is somewhat puzzling, because for married couples, paternity of the children would likely not be in doubt, so the paternity enforcement effort would not be expected to yield much of an effect. In addition, referring back to Table 2, this variable is not highly correlated with any of the other regressors, so it is unlikely that what I am picking up is the effect of some other policy variable.

Both order enforcement and the amount collected also entered with significant negative coefficients, implying that a one standard deviation increase in each of these variables would yield decreases in the divorce rate on the order of 4.08 percent and 4.14 percent, respectively.

Location enforcement alone, on the other hand, is estimated to have a positive

17. See, for example, Peters (1993).

Table 2
Correlations Between Child Support Enforcement Policy Variables

	Paternity Enforcement	Location Enforcement	Average Order	Order Enforcement	Amount Collected
Paternity Enforcement	1.000	—	—	—	—
Location Enforcement	0.087	1.000	—	—	—
Average Order	0.040	-0.005	1.000	—	—
Order Enforcement	-0.048	-0.003	0.430	1.000	—
Amount Collected	0.073	0.130	-0.093	0.137	1.000

effect on divorce rate. The coefficient of 0.000197 implies that a standard deviation increase in location enforcement efforts would increase divorce rates by 2.11 percent. This coefficient is, however, insignificant. The average order awarded also had an insignificant coefficient, but the coefficient of -0.000519 implies that a standard deviation increase in the average order awarded would decrease divorce rates by 1.84 percent.

In Column 2 of Table 3, time fixed effects are added to the regression, and these same general conclusions are found. In these specifications, cross-sectional variation is still being used to identify the coefficients, and since Nixon included time fixed effects in that study's pooled cross-section estimations, these specifications use the same type of identifying variation. Scanning this column, the same general conclusions noted above are found. Paternity establishment, order enforcement, and the amount collected all have significant negative coefficients of similar magnitude to those found in regressions that did not include time fixed effects, and location enforcement and the average order both enter insignificantly. Further, in Columns 1 and 2 of Table 4, when economic variables are included in the estimated equations, this pattern of significance largely remains, though the coefficients are slightly smaller in absolute value.

Thus, when using cross-sectional variation, it appears that at least some measures of CSE policy have significant effects on the prevalence of divorce, and that these effects tend to be negative.

In Column 3 of Tables 3 and 4, however, state fixed effects are added to the estimated equations. In these specifications, then, the identification comes solely from within state over time variation. When this is done, in all specifications, the estimated effect of each of the CSE variables drops to insignificance. Further, it is not an increase in the size of the standard errors that is driving the coefficients toward insignificance, since the standard errors on the CSE variable coefficients actually drop substantially when state fixed effects are included. Rather, in all of the specifications, the magnitude of the estimated coefficient drops in absolute value. For example, in Table 3, the estimated effect of paternity establishment when state fixed effects

Table 3
Regressions with Child Support Enforcement Measures Entered Separately

	Divorce Rate		
	(1)	(2)	(3)
Paternity establishment	-2.268** (0.675)	-2.394** (0.680)	-0.141 (0.221)
Location enforcement	0.197 (0.155)	0.209 (0.156)	-0.185 (0.137)
Average order	-0.519 (0.498)	-0.495 (0.492)	-0.059 (0.133)
Order enforcement	-5.991** (2.355)	-5.757** (2.385)	0.015 (0.835)
Amount collected	-4.754** (1.871)	-4.561** (1.904)	0.421 (0.631)
State effects	no	no	yes
Time effects	no	yes	yes
N	151	151	151

Note: Coefficients reported in table are regression coefficients $\times 10^{-3}$. Each horizontal panel reports the coefficients from separate regressions, with the independent variables being the CES measure, a constant, and time and/or state fixed effects where noted. The dependent variable is the state-level divorce rate in a given year among couples with children under the age of 18. Standard errors are in parentheses.

** Significant at the 5 percent level.

* Significant at the 10 percent level.

are included is merely 5.8 percent of the effect when they are not, and the estimated effect of order enforcement is 0.2 percent of its former size.¹⁸

These results could, however, explain the puzzling significant negative coefficient found on the paternity establishment variable, in that it seems plausible that paternity

18. It has been noted, for example, in Altonji and Segal (1996), that when using optimal minimum distance GMM estimators, estimates may be biased downward in absolute value. Since the estimates presented here are of this type, I have rerun these regressions without using any weights to ensure that coefficients are not insignificant due to a downward bias in the estimators.

These results are available from the author. Although the estimates in the unweighted regressions overall tend to be slightly larger in absolute value, the changes in the parameter estimates between the two is quite small. In addition, the pattern of significance of the estimates is the same as in the weighted estimations presented above. Hence, although there may be some downward bias present in the estimations presented here, the main conclusions in the following sections remain unchanged.

Table 4

Regressions with Child Support Enforcement Measures Entered Separately and Economic Variables Included

	Divorce Rate		
	(1)	(2)	(3)
Paternity establishment	-1.867** (0.639)	-1.959** (0.645)	-0.141 (0.225)
AFDC maximum	-2.262 (2.850)	-2.643 (2.873)	0.494 (1.421)
Unemployment rate	0.319 (0.243)	0.176 (0.265)	0.023 (0.107)
Median income	-0.363** (0.107)	-0.344** (0.108)	-0.034 (0.077)
Location enforcement	0.232 (0.154)	0.242 (0.155)	-0.200 (0.000)
AFDC maximum	-4.563 (3.093)	-5.015 (3.135)	-0.639 (1.419)
Unemployment rate	0.336 (0.255)	0.179 (0.279)	-0.055 (0.109)
Median income	-0.328** (0.113)	-0.309** (0.115)	-0.037 (0.076)
Average order	0.087 (0.477)	0.123 (0.482)	0.062 (0.135)
AFDC maximum	-3.063 (3.111)	-3.392 (3.145)	0.678 (0.149)
Unemployment rate	0.256 (0.261)	0.115 (0.285)	0.038 (0.112)
Median income	-0.368** (0.115)	-0.357** (0.116)	-0.010 (0.088)
Order enforcement	-4.497** (2.217)	-4.250* (2.250)	-0.076 (0.866)
AFDC maximum	-2.697 (2.882)	-2.995 (2.922)	0.429 (1.421)
Unemployment rate	0.278 (0.246)	0.146 (0.270)	0.018 (0.107)
Median income	-0.361** (0.108)	-0.348** (0.110)	-0.040 (0.079)

Table 4 (continued)

	Divorce Rate		
	(1)	(2)	(3)
Amount collected	-3.217* (1.793)	-3.154 (1.824)	0.402 (0.645)
AFDC maximum	-3.016 (2.887)	-3.301 (2.923)	0.480 (1.420)
Unemployment rate	0.222 (0.250)	0.080 (0.273)	0.022 (0.107)
Median income	-0.348** 0.109	-0.335** (0.111)	-0.032 (0.077)
State effects	no	no	yes
Time effects	no	yes	yes
N	151	151	151

Note: Coefficients reported in table are regression coefficients $\times 10^{-3}$. Each horizontal panel reports the coefficients from separate regressions, with the independent variables being the CSE measure, economic variables, a constant, and time and/or fixed effects where noted. The dependent variable is the state-level divorce rate in a given year among couples with children under the age of 18. Standard errors are in parentheses.

** Significant at the 5 percent level

* Significant at the 10 percent level.

establishment effort is highly correlated with other unobservable aspects of a state that tend to discourage divorce, resulting in a spurious negative correlation between the two when cross-sectional variation is used.

In Tables 5 and 6, all of the child support measures are jointly included in a regression. In this regression, the pattern found above stays roughly the same. When only the CSE measures are included, both the paternity establishment and the amount-collected variables enter significantly, with negative signs and sizable coefficients of -0.002182 and -0.004751 , respectively. The order enforcement variable drops to insignificance, but still has a sizable coefficient. Overall, the magnitudes of all coefficients are similar to those from the regressions in which they were entered separately. Further, this pattern of significance remains when economic variables and time fixed effects are included. Again, however, when state fixed effects are added, the coefficients drop greatly in magnitude, and all become insignificant.

Thus, it appears that what Nixon estimated may have been biased toward finding a negative effect due to the reliance on cross-sectional variation to identify the parameters. To illustrate this, note that the two measures used here that are also used in Nixon's study, the order enforcement rate and the amount-collected rate, both had sizable significant negative coefficients when only time fixed effects were included so that, as in Nixon's study, cross-sectional variation was used to identify the parame-

Table 5
Regressions with all Child Support Enforcement Measures Included

	Divorce Rate		
	(1)	(2)	(3)
Paternity establishment	-2.182** (0.690)	-2.297** (0.703)	-0.054 (0.246)
Location enforcement	0.248 (0.165)	0.259 (0.167)	-0.159 (0.152)
Average order	-0.412 (0.481)	-0.381 (0.486)	0.066 (0.141)
Order enforcement	-3.679 (3.093)	-3.638 (3.133)	-0.326 (1.104)
Amount collected	-4.751* (2.565)	-4.220 (2.624)	0.362 (0.902)
State effects	no	no	yes
Time effects	no	yes	yes
N	150	150	150

Note: Coefficients reported in table are regression coefficients $\times 10^{-3}$. The independent variables in the above regressions are the CSE measures, a constant, and time and/or state fixed effects where noted. The dependent variable is the state-level divorce rate in a given year among couples with children under the age of 18. Standard errors are in parentheses.

** Significant at the 5 percent level.

* Significant at the 10 percent level.

ters. However, when state fixed effects are added, so that identification comes from within state over time variation, the coefficients drop to essentially zero, and are all insignificant.

To probe this further, I reran all of the regressions using the divorce rate among childless couples as the dependent variable. In these regressions, we would expect there to be no effect of child support enforcement on the divorce rate, since child support payments would not be an issue if the couple were to divorce. These results, presented in Table 7, show a remarkably similar pattern to those reported above. Namely, when cross-sectional variation is used to identify the parameters, paternity enforcement, order enforcement, and the amount collected all enter negatively and significantly.¹⁹ However, when state fixed effects are included in the regression, the coefficients again drop in magnitude and become insignificant.²⁰ Because we would not expect child support enforcement to have any effect on these divorce rates, the significant negative coefficients when state fixed effects are not included in the re-

19. This is in contrast to the robustness checks in Nixon's paper, where no significant effect of CSE policy on the divorce behavior of women without children is found.

20. The sole exception to this is the amount collected variable, which enters with a negative coefficient that is significant at the 10 percent level in some specification when state fixed effects are included.

Table 6

Regressions with all Child Support Enforcement Measures and Economic Variables Included

	Divorce Rate		
	(1)	(2)	(3)
Paternity establishment	-1.921** (0.662)	-2.002** (0.673)	-0.066 (0.249)
Location enforcement	0.266 (0.167)	0.271 (0.169)	-0.182 (0.156)
Average order	0.167 (0.477)	0.195 (0.481)	0.073 (0.143)
Order enforcement	-3.930 (2.965)	-3.610 (3.009)	-0.415 (1.127)
Amount collected	-2.992 (2.520)	-2.685 (2.563)	0.364 (0.912)
AFDC maximum	-4.124 (3.190)	-4.470 (3.230)	0.941 (1.517)
Unemployment rate	0.326 (0.261)	0.181 (0.285)	0.081 (1.175)
Median income	-0.274** (0.117)	-0.263** (0.119)	-0.006 (0.090)
State effects	no	no	yes
Time effects	no	yes	yes
N	150	150	150

Note: Coefficients reported in table are regression coefficients $\times 10^{-3}$. The independent variables in the above regressions are the CSE measures, economic variables, a constant, and time and/or state fixed effects when noted. The dependent variable is the state-level divorce rate in a given year among couples with children under the age of 18. Standard errors are in parentheses.

** Significant at the 5 percent level.

* Significant at the 10 percent level.

gression again suggests that in using cross-sectional variation, the coefficients on the CSE variables might be picking up the effect of unobserved state characteristics that tend to favor stronger CSE policy and frown upon divorce.

VI. Discussion

From these regression results, it appears that the recent increase in child support enforcement efforts has had an insignificant effect on the divorce rate. Thus, I cannot conclude from the results of the estimations that increased Child Support Enforcement has a negative effect on the divorce rate; it may, in fact, have the effect of actually increasing divorce rates. However, whatever the effect of CSE

Table 7

*Regressions with Child Support Enforcement Measures Entered Separately:
Couples Without Children*

	Divorce Rate		
	(1)	(2)	(3)
Paternity establishment	-2.674** (0.804)	-2.766** (0.819)	-0.176 (0.200)
Location enforcement	0.048 (0.185)	0.055 (0.188)	0.029 (0.126)
Average order	0.366 (0.575)	0.390 (0.585)	0.121 (0.809)
Order enforcement	-5.813** (2.822)	-5.750** (2.879)	-0.373 (0.762)
Amount collected	-7.775** (2.186)	-7.796** (2.240)	-1.022 (0.570)
State effects	no	no	yes
Time effects	no	yes	yes
N	151	151	151

Note: Coefficients reported in table are regression coefficients $\times 10^{-3}$. Each horizontal panel reports the coefficients from separate regressions, with the independent variables being the CSE measure, a constant, and time and/or state fixed effects where noted. The dependent variable is the state-level divorce rate in a given year among couples without children. Standard errors are in parentheses.

** Significant at the 5 percent level.

* Significant at the 10 percent level.

policy on the divorce rate, the estimates yielded from this study show that the effect is extremely small.

To illustrate this, in Table 8, I calculate the endpoints of the 95 percent confidence interval of the effect of a standard deviation increase in each of the child support enforcement measures in Column 3 of Table 3. This column contains roughly representative effects of the child support enforcement measures when both state and time fixed effects are included. These figures make it clear that any effect of child support on the divorce rate, positive or negative, are extremely small. The most negative effect found in any of the 95 percent confidence intervals was found for location enforcement, in which a standard deviation increase in location enforcement would decrease the divorce rate by 4.9 percent. The largest positive effect in any confidence interval was found for the amount collected, in which a standard deviation increase in the amount collected yields a 1.4 percent increase in the divorce rate. When one considers that the standard deviation of the divorce rate is roughly 20 percent of the average divorce rate, these effects seem quite small.

These results differ greatly from those in Nixon (1997), who found significant negative effects of child support enforcement policy on divorce probability. A few things should be noted about this difference. First, recall that the definition of divorce

Table 8
*Bounds of the 95 Percent Confidence Interval of Effect of
 Standard Deviation Increase in CSE Variable as Percentage of
 Average Divorce Rate*

	Minimum	Maximum
Paternity establishment	-1.362	0.692
Location enforcement	-4.855	0.895
Average order	-1.133	0.712
Order enforcement	-1.120	1.141
Amount collected	-0.710	1.442

is different in the two papers, with ‘‘divorce’’ in the Nixon paper defined as becoming separated or divorced in the previous five years, whereas ‘‘divorce’’ in this paper is defined as becoming divorced in a given year. Hence, the coefficients in the two papers are not directly comparable. Although it seems unlikely, it may be that the greatest effects of Child Support Enforcement are on the decision of whether or not to separate, instead of on the divorce decision.

Further, it should be remembered that these estimates did not include all states over the years of analysis. Data were only available from states that collected and assembled Vital Statistics data from their divorce records, and this had the effect of excluding nearly 20 states each year from the analysis. It may be that the effect of CSE on divorce was most significant in those states for which I do not have data, and had those states been included, the results may have been different.

Finally, this study covers only a five year time span, 1991–95, due to data constraints.²¹ Although some variation exists across states and time in the measures of child support enforcement effectiveness, a substantial part of the increase in child support enforcement had already passed by the beginning of the time period analyzed. Since Nixon’s data come from 1988 and 1990, it may be that divorce rates were more reactive to Child Support Enforcement policy in earlier years. While it would have been advantageous to include more years of data, this data is simply not available for the measures that were used in the present study.

Notwithstanding the above, the change in significance and large drop in the magnitude of coefficients when state fixed effects strongly argues against using only cross-sectional variation in order to identify the effects of child support enforcement on divorce.

VII. Conclusion

This paper attempted to measure how much, and in what direction, the changes in child support enforcement policy during the Bush and Clinton admin-

21. The new CSE data collection method was begun only in 1991, and divorce data collection ended in 1995. Thus, only a five-year window is available.

istrations had on the divorce rate of couples with children. These estimates show that some measures of Child Support Enforcement policy had a significant negative effect when only cross-sectional variation was used, but that these became much smaller and insignificant once state fixed effects were included.

Thus, it appears that, regardless of what effect the changes in Child Support Enforcement policy had on the receipt of child support by single parents, these changes did not erode or enforce marital stability.

A number of explanations may be offered. For example, informational considerations may need to be taken into account. It may be that people simply did not know about the changes in Child Support Enforcement, or could not infer the magnitude of the changes, and hence could not alter their behavior accordingly. More likely, however, is that the decision to divorce may be such a complex decision, with so many factors playing into it, that variables like the strength of child support enforcement policy play an extremely minimal role.

Therefore, when examining issues surrounding the Child Support Enforcement effort in the United States, it is likely much more worthwhile to consider the direct effects of this program, such as the probability of receipt of support for the custodial parent, or outcomes of the children who receive child support. These results suggest that its effects on divorce, whether positive or negative, are minimal.

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