The Effect of Child Support Enforcement on Abortion in the United States

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Abstract: This project aims to answer a critically important question of public policy: does effective child support enforcement lead to a change in the incidence of abortion across the United States? In 2005, there were approximately 1.21 million abortions across the country. In the past, studies on abortion prevalence have focused on the influence of numerous state laws regarding the conditions under which an abortion can be performed, after controlling for each state's individual sociodemographic profile and economic characteristics, political climate, and provider availability. Most commonly, these studies have specifically examined the withdrawal of Medicaid funding and the imposition of parental notification/consent laws, and generally—though not always—find that these policies tend to decrease the incidence of abortion. Notably, income security also seems to make a difference with respect to abortion; indeed, poor women are four times as likely to have an abortion as non-poor women. In this project, we reproduce earlier work on the link between strong child support enforcement and non-marital births before taking this income-related research a step further by examining the influence of strong child support enforcement on the incidence of abortion in the states. More specifically, using state-level data collected from 1978-2003, we employ regression analysis to examine whether financial security as measured by 5 types of child support enforcement effectiveness impacts fertility decisions and outcomes. We find that using particular measures of child support enforcement effectiveness decreases nonmarital births and increases the incidence of abortion.

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INTRODUCTION

The most recent data available show that abortion continues to decline in use as a method for dealing with unwanted pregnancy in the United States. In 2005, there were approximately 1.21 million abortions in the United States (Jones et al. 2008, 9). This represents a drop of 8% since 2000, when there were 1.31 million abortions performed. Mirroring this trend, the abortion rate of 19.4 per 1,000 women of childbearing age in 2005 was 9% lower than it had been in 2000, and the lowest it has ever been since 1974 (Jones et al. 2008, 9).

But these declines mask important variation among subgroups of the population, especially when analyzing the data by socioeconomic status. More specifically, for the very poor and near poor, both the unintended pregnancy rate as well as the abortion rate have increased during the period between 1994-2001, the most recent span of time for which data are available. For those individuals living between 100-199% of the poverty line, the unintended pregnancy rate rose from 65 to 81 per 1,000 women. The abortion rate rose for this group as well, from 31 to 36 per 1,000 women. Even more striking, those individuals with an income of less than 100% of the poverty line experienced a jump in their unintended pregnancy rate from 87 to 112 per 1,000 women. Similarly, this group's abortion rate rose from 37 to 42 per 1,000 women (Finer and Henshaw 2006, 93).

As income levels have a clear association with the incidence of abortion, governmental policies that affect personal finances may be similarly influential on this fertility outcome. This article thus addresses one such pivotal policy as it relates to abortion: enhanced economic transfers between parents via a strong child support enforcement program. More specifically, we employ time-series, cross-section data across the states during the period 1978-2003 to replicate past findings related to child support's effect on nonmarital births but most importantly to map

out if the child support system has any impact on this critical social outcome of abortion prevalence.

CHILD SUPPORT ENFORCEMENT AND ABORTION IN THE STATES

The 1973 Supreme Court decision, *Roe v. Wade*, found that the constitutional right to privacy included a woman's right to terminate her pregnancy within a highly specified framework of trimester regulation. While this ruling legalized abortion at the national level, states retained a certain degree of autonomy as well as a variety of policy tools at their disposal to make abortion a more or less attractive reproductive option. Researchers have thus utilized this resulting substantial variation in the incidence of abortion among the states in order to understand the particular constellation of factors that contribute to this type of pregnancy termination.

Interestingly, in this body of research so far, scholars have largely neglected to explore the potential for enhanced financial stability for largely women in the form of child support to affect the incidence of abortion across the states. The child support enforcement program in the United States is primarily a vehicle to transfer money from noncustodial parents—typically fathers—to custodial parents—typically mothers. Evolving from its beginnings in 1975, the predominantly state-run program engages in all aspects of enforcing support, from parental location, to paternity establishment, to the creation of award obligations and, finally, to collections (Crowley 2000). While the original intent of lawmakers was to pursue fathers of children receiving welfare, or Aid to Families with Dependent Children (AFDC), in order to recoup these public expenditures, the program became so popular that working, middle, and upper class women organized to be included as program beneficiaries as well. They achieved

this victory with the Child Support Enforcement Amendments of 1984, which mandated that the states provide equal services for all women, regardless of class (Crowley 2003). The income-generating potential of child support enforcement for these dual constituencies has driven much of the research on the program over the past several decades, with studies stressing the importance of child support in preventing women from relying on welfare, moving them off the welfare rolls, and elevating them in terms of their own socioeconomic status (Bartfeld 2000; Garfinkel 2001; Huang, Kunz, and Garfinkel 2002; Mead 1999).

Recent research on the child support enforcement program, however, has gone a step further in demonstrating that it might also have a significant effect on couples' fertility decisions. More specifically, at the aggregate level, effective child support has been also associated with lower non-marital birthrates in the states; at the individual level, effective child support has been linked to a decreased likelihood that individual men will participate in an unwanted pregnancy, and a reduced probability that a man will be the father of a non-marital child (Case 1998; Garfinkel et al. 2003; Huang 2002; Huang 2005; Huang and Han 2004; Plotnick et al. 2004). This research is also revealing in that it highlights that effective child support alters the costs of childbearing for men and women differently. More specifically, it raises the cost of having children from the male perspective by forcing fathers to financially care for their children, but lowers the cost of having a child from the female perspective by guaranteeing mothers adequate economic support. The question for researchers has been which effect dominates: male or female pressures. Thus far, as discussed above, scholars have found that the male effect outweighs the female effect at least in *two pre-birth events*: by diminishing unwanted pregnancies and by reducing non-marital births.

In this analysis, beyond attempting to confirm the relationship between child support and non-marital births established in previous studies, we take fertility-impact research a step further by examining the influence of strong child support enforcement on a *third pre-birth event*: the incidence of abortion. Child support's reduction in non-marital births can be generated through a variety of causal pathways. As stated above, these monetary transfers can have a direct, restraining impact on men who might otherwise be inclined to participate in risky sexual activity, either through encouraging regular contraception use or through motivating abstinence. These behaviors are relatively uncontroversial. However, the reduction in non-marital births could also come with a high social cost of public divisiveness if it results in an increase in the incidence of abortion (Jelen and Wilcox 2003). For example, researchers studying the impact of family caps on fertility outcomes —limitations on welfare benefits beyond a certain number of children— have reported mixed effects on the incidence of abortion (Argys, Averett, and Rees 2000; Camasso and Jagannathan forthcoming; Joyce et al. 2004; Sabia 2008). In this analysis, we thus seek to contribute to the discussion of exactly how state-level child support enforcement impacts the full spectrum of fertility decisions and outcomes by focusing on abortion.

Measuring Child Support Effectiveness

There are a variety of ways to measure child support effectiveness, the key independent variable in this analysis, across the states (Freeman and Waldfogel 2001). One of the most common methods utilizes the discretion that historically the states have maintained in designing their own enforcement procedures. Researchers then count the number of policies or laws in each state, which in the past have included such options as the presence of genetic testing to establish paternity, the availability of paternity establishment procedures until a child reaches age

18, long arm statutes to enforce support across state lines, the existence of presumptive guidelines for awarding support, and the use of mandatory withholding of support from paychecks. The more policies or laws the state has on its books, the stronger it is at enforcement (Case 1998; Huang 2002; Plotnick et al. 2006).

The problem with using this type of measure here relates to the long duration of this study, 1978-2003. Over the course of these decades, federal laws gradually have pushed the states toward more uniformity in the enforcement procedures that they must use on their caseloads, thereby reducing the explanatory power of this variable. Fortunately, the Federal Office of Child Support Enforcement (OCSE) collects a variety of state-level, budgetary data that can be used along with data from the Current Population Surveys (CPS) to operationalize effectiveness throughout the entire period in our analysis.

We employ five measures of child support effectiveness here. The first three are constructed solely from OCSE data and thus are based solely on cases that are enrolled in the formal, child support system. They include the percentage of all cases with a collection, the amount of dollars collected per case (Jagannathan 2004), and the amount expended per case in enforcing support. While capturing slightly different concepts, they provide us with an indication of the internal efficiency of the child support system in serving the current cases under the states' jurisdictions.

Clearly, though, internal efficiency is only one aspect of child support performance (Garfinkel et al. 1998). The last two measures combine information obtained from OCSE and the CPS. Scholars have used child support expenditures (from OCSE) per single mother family (from the CPS) in the states as a way of capturing how much money is being spent on the potentially eligible clientele rather than the formally enrolled child support caseload (Huang

2002; Jagannathan 2004; Plotnick et al. 2006). This variable enables researchers to hone in on the issue of state capacity to fully address the child support collection problem. We use this measure here and add one other: child support expenditures per single parent family. According to the 2006 Current Population Survey, approximately 16.2% of all custodial parents are fathers, and slightly less than half of these men have a child support award due to them (Grall 2007, 3). While fathers owed support represent a small fraction of parents overall, we nonetheless include both single mother and single father families in this last variable in order to maximize comprehensiveness of the state capacity measure.

Other Influences on the Incidence of Abortion

Of course, in addition to the strength of the child support system, other factors clearly matter in influencing the incidence of abortion in the states. In past research that attempted to explain the reasons behind this state-level variation, scholars began by focusing on each state's sociodemographic characteristics. The percentage of women who are teenagers (ages 15-19) out of all women ages 15-44 within each state was hypothesized as being associated with a higher incidence of abortion (Blank, George, and London 1996; Brown and Jewell 1996). These are women who are either not ready for parenthood or perhaps at the time in their lives when they would prefer not to be parents of small children. In other studies, the percentage of African-Americans in the population (logged here) (Altman-Palm and Tremblay 1998; Blank, George, and London 1996; Meier et al. 1996) as well as the percentage of the population living in metropolitan areas were also hypothesized as being associated with a higher incidence of abortion (Altman-Palm and Tremblay 1998; Blank, George, and London 1996; Meier et al. 1996; Ohsfelt and Gohmann 1994).

Scholars have considered other state-level sociodemographic characteristics as serving as buffers against high levels of abortions. Since married couples might be less likely to have an abortion, researchers have hypothesized that states with high marriage rates might have a lower incidence of abortion as well (Blank, George, and London 1996; Haas-Wilson 1996; Haas-Wilson 1997). Religious attitudes against abortion, measured by the percentage of each state's population that is Catholic, have also been argued to keep the incidence of abortion low (Medoff 1997; Ohsfelt and Gohmann 1994). Lastly in terms of sociodemographic characteristics, scholars have viewed education as a bulwark against higher abortion levels. While previous research has included the percentage of the population with a high school diploma (Altman-Palm and Tremblay 1998; Garbacz 2000; Haas-Wilson 1996; Medoff 1997), due to issues of multicollinearity in our data set, we use the percentage of women out of total college enrollment as the key indicator of educational attainment in the states.

The directional impacts of economic security are more complicated. Higher poverty rates might lead to a higher incidence of abortion due to decreased access to contraception in these communities. Likewise, in terms of employment, higher levels of women in the labor force signal higher opportunity costs of their time if they were to have an unplanned pregnancy, thus leading to a higher incidence of abortion (Blank, George, and London 1996; Haas-Wilson 1996; Haas-Wilson 1997; Medoff 1997; Medoff 1998). The impact of a state's unemployment rate depends on whether women's labor supply is pro or countercyclical. If it is procyclical, then the higher the unemployment rate, the lower the value of women's time, and the lower the incidence of abortion. If it is countercyclical, then the opposite result will obtain (Blank, George, and London 1996; Medoff 1997).

Scholars have also noted that economic security as generated by specific public policies might make a difference with respect to affecting the incidence of abortion. On this point, they have focused on examining the impact of welfare benefits (logged here), positing that higher levels of benefits might depress abortion rates in the states (Blank, George, and London 1996; Matthews, Ribar, and Wilhem 1997; Medoff 1997; Ohsfelt and Gohmann 1994). These studies, however, have produced mixed results on this fertility decision.

Political factors also can shape states' abortion statistics. The partisan affiliation of the state legislature may provide an environment that is either hostile or accommodating to the practice of abortion (Blank, George, and London 1996; Medoff 2002). In general, Republicans are more inclined to oppose abortion than are Democrats. In addition, while not all female representatives are pro-choice, the higher the percentage of women representatives in the state legislature, the more the state might be open to advancing the availability of abortion services, thereby producing a higher the incidence of abortion (Haas-Wilson 1996; Haas-Wilson 1997; Medoff 2002). Others have posited that women legislators only make a difference in terms of transforming public policy when they reach a critical mass in the state legislature—at least at a level of 15%--so that we will only see the impact of women lawmakers on abortion when they are at this point numerically in their legislature or above (Crowley 2004). Beyond pure partisanship, political ideology can impact public policy and come in two forms. A state's citizens' ideology is generally considered to be the mean position of the electorate on a liberal-conservative continuum. A state's government ideology, in contrast, can be defined as the mean position of elected officials along the same liberal-conservative continuum, adjusted, of course, to the power that they have over public policy decisions. Berry et al. (1998) have devised annual measures of both concepts on a scale ranging from 0-100 (with 100 being most liberal), using

roll call voting scores of state congressional delegations, the outcomes of congressional elections, the partisan division of state legislatures, the party of the governor, and other assumptions regarding political behavior. More liberal ideologies of both types are predicted to be associated with a higher incidence of abortion.

Researchers have also examined the influence of other policy levers on the state-level incidence of abortion. First are parental notification and consent laws (Altman-Palm and Tremblay 1998; Blank, George, and London 1996; Haas-Wilson 1996; Haas-Wilson 1997; Matthews, Ribar, and Wilhem 1997; Medoff 2007; Ohsfelt and Gohmann 1994). Notification refers to the process by which a minor must inform her parent(s) about her intention to obtain an abortion; consent pertains to the procedures that must be in place indicating that a parent or parents have approved the minor's decision to have an abortion. Even though the Supreme Court has held that minors have a right to a judicial bypass when notification or consent by their guardians would impose an undue hardship on their well-being, both types of laws are predicted to decrease the incidence of abortion.

Second, perhaps one of the most studied changes in public policy related to abortion is the availability of Medicaid funding (Blank, George, and London 1996; Haas-Wilson 1996; Haas-Wilson 1997; Levine, Trainor, and Zimmerman 1996; Matthews, Ribar, and Wilhem 1997; Medoff 1997; Medoff 1998; Medoff 2007; Meier et al. 1996; Ohsfelt and Gohmann 1994). In 1976, Congress stopped federal funding of abortions for women receiving Medicaid through what is known as the Hyde Amendment. After initially being blocked by a court order, the law went into effect in 1977 and has been in place since then.[1] In reaction to this development, many states have chosen to continue funding abortions for low income women through their own state

[1] However, there was a seven month period in 1980 when, due to another restraining order, the law was temporarily suspended once again.

funds. States that do not use their own funds are predicted to have a lower incidence of abortion.

Finally, the number of abortion providers has also been posited as influencing the incidence of abortion as well (Altman-Palm and Tremblay 1998; Blank, George, and London 1996; Haas-Wilson 1996; Haas-Wilson 1997; Meier et al. 1996). Over the past two decades, the number of providers in the United States has been declining, and as of 2005, 87% of counties in the United States had no abortion providers (Jones et al. 2008, 10). Also contributing to this trend, since 2000, the availability of mifepristone, a medicine which induces an abortion, has mitigated the need for doctors to be prepared to surgically complete the procedure (Jones et al. 2008). However, the availability of providers is still critical for those who need or desire the surgical procedure. Since some of the same factors that tend to raise abortion demand may also raise the number of abortion providers in the long run equilibrium, we consider the abortion provider variable to be endogenous. In order to get an unbiased provider effect, we use instrumental variables regression and following one component of Haas-Wilson's (1997) analysis employ the number of non-ob/gyn physicians and the number of hospitals in each state and year as instruments for providers. All of the independent variables included in this discussion, including their measurement and data sources, are included in Table 1.

[Table 1 about here]

METHODOLOGY

The first of our dependent variables is simply the percentage of all births to unmarried women in the states and is drawn from various years of the *Statistical Abstract of the United States.* The other central dependent variable involves abortion data, which are collected by the states. Historically, there has never been a federal mandate that this information be generated for national statistical purposes. There are two main sources of data that are available for

researchers: The Alan Guttmacher Institute (AGI) and Center for Disease Control and Prevention (CDC) via cooperation with state health agencies. Each source has its own strengths and weaknesses (Blank, George, and London 1996). The AGI directly surveys abortion providers in the states and uses this information to estimate the actual number of abortions performed each year; as AGI data are based on samples, there is some margin of sampling error in the final generated numbers, among the many other types of errors related to survey research that can be present. The CDC, on the other hand, collects data on the actual number of abortions performed from state health agencies. However, some state health agencies do very little data collection, some only request it from abortion providers, and some require a response from abortion providers. The CDC then attempts to aggregate these data streams at the federal level.

In addition to their differing methods of collecting data, the AGI and CDC also report the geography of abortion prevalence in distinct ways. Since 1985, AGI has only collected data on abortion by state of occurrence. On the other hand, CDC has quite consistently collected data on abortion by state of residence as well. We argue that this latter measure is central to informing our research question. That is, it does not matter where a woman might go for an abortion, or the state of the abortion occurrence; rather, we hypothesize that what is partly driving the abortion decision is the strength of the child support regime in the state in which she (and likely her partner) live. Abortion statistics by state of residence—rather than where that abortion occurs—is thus the better measure for a couple's fertility choices in response to their respective state policies for child support. We therefore utilize the CDC measure of abortion ratio—the number of abortions per 1,000 live births—by state of residence. These are drawn from the CDC's *Abortion Surveillance Summaries*, typically published annually over the course of this study.

Given a lack of federal mandate for the systematic collection of abortion data across all states and given CDC's reliance on the state health agencies to do the reporting on their own, not all of CDC abortion data are reliable. Because of this data quality concern, our analyses only use CDC abortion data for the following 41 states that have the most complete statistics on file: Alabama, Arizona, Arkansas, Colorado, Connecticut, Georgia, Hawaii, Idaho, Illinois, Indiana, Kansas, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin, and Wyoming.

Even among states that report abortions more or less consistently to the CDC, data can be missing for some years in our time series. In these instances (about 5% of the state-year observations), we use linear interpolation to impute the missing data. We utilize the same method of linear interpolation in the case of some independent variables: abortion providers and one of its instruments, the number of non-ob/gyn physicians, percent black, percent living in a Metropolitan Statistical Area (MSA), marriage rate, percentage of Republicans in the state legislature, and percent below the poverty line.

Empirical Estimation

Our data are organized as state-year observations and contain a total of (41 states x 26 years) 1066 observations. We estimate fixed effects regression models of the following form:

$$Y_{st} = \beta_1 T_t + \text{Child Support}_{st}\,\lambda + \beta_2 D_{st} + \beta_3 E_{st} + \beta_4 P_{st} + \beta_5 PP_{st} + \beta_6 A_{st} + \sigma_s + \varepsilon_{st} \qquad [Eq.1]$$

where:

subscript *s* and *t* denote, respectively, each of the 41 states and a specific year from 1978-2003. Y represents one of the two dependent variables – the non-marital births percentage and abortion ratio

for state *s* in year *t*. T represents a linear and quadratic function of time, a specification deemed prudent because of the length of the time series. Child support represents one of five indicators of state child support effectiveness (percentage of all cases with a collection, amount of child support collected per case, child support enforcement expenditures per case, amount of child support enforcement expenditures per single mother family and per single parent family), and λ represents the coefficient of interest to this paper. *D* is a vector of demographic variables (percentage of teen-aged females out of all women in childbearing years, logged percentage black, percent living in an MSA, marriage rate, percent Catholic, and percent women enrolled in college). *E* captures a vector of economic measures (female labor force participation rate, percent below poverty level, unemployment rate, and logged welfare benefits), and *P* is a set of political climate variables (percentage of state legislature that is Republican, percentage of women in the state legislature, indicator of a state with $\geq$ 15 percent (token) women representatives, citizen ideology and government ideology). *PP* represents a vector of other public policy variables related to abortion regulation (parental consent/notification for minors' abortions and Medicaid restrictions), and *A* represents a vector of abortion availability (number of providers per 100,000 women ages 15-44), and σ represents a vector of state fixed effects, i.e., unmeasured variables that vary across states but are time invariant within a state, and ε is a random error term that varies by state and year.

Our regression analyses were conducted using XTIVREG in STATA 10.0, with robust standard errors calculated by clustering on state and assuming heteroskedastic standard errors. It should be noted that the XTIVREG procedure with robust standard errors corrects for both the within panel-overtime correlation and for heteroskedasticity across panels, but does not adjust for the possibility of correlation across panels (e.g., regional correlation).

Distribution of Study Variables

The distribution of the study variables for the 41 states over the 26 year study period are provided in Table 2. The means for the qualitative independent variables like Parental and Medicaid represent the proportion of state-years in which this policy is observed.

[Table 2 about here]

RESULTS

In Table 3 we present our results on the non-marital birth analysis (percentage of births to unmarried mothers) in a series of five models. Each model uses a separate measure of child support effectiveness as the focal independent variable and all models contain the same demographic, economic, political, abortion policy, and abortion availability covariates.

[Table 3 about here]

As the table shows, only one of the five child support effectiveness measures - the amount of child support collected per case – shows a statistically significant effect on non-marital births (Model 2). Specifically, Model 2 shows that an additional dollar of child support collected per case by a state reduces its percentage of out-of-wedlock births by .002 percent or that a $100 increase in the child support collected leads to a reduction of non-marital births by about two-tenths of a percent. The model also shows that covariates behave in the expected direction, with the percentage of teenaged women, residence in an MSA, percent below poverty, logged state welfare benefits, and number of abortion providers, all having a positive effect on non-marital births while the marriage rate, the percent of women college enrollees, and the state unemployment rate have the expected negative effect on this type of birth.

Table 4 has the same structure as Table 3 with respect to modeling sequence and covariates, and shows our findings regarding child support effectiveness on abortions.

[Table 4 about here]

Again, only one of the five measures of child support effectiveness has a statistically significant impact on abortion ratio (number of abortions per 1000 live births). However, the measure that is significant in this instance is the percentage of all cases with a collection, the focal independent variable in Model 1. A 10 percent increase in the state's collection rate increases the number of abortions per 1000 births by about 4, a substantial effect. The percentage of teenaged women in the state, women's labor force participation rate, and state welfare benefits are all significantly positively related to abortion ratio while the percentage of women in the state legislature and Medicaid restrictions significantly lower abortions. All the covariates exhibit the hypothesized sign with the exception of the percentage of women in the state legislature. This latter result may have been produced as a result of great ideological diversity in the representation of women in state government.

DISCUSSION AND CONCLUSION

This analysis sought to analyze the impact of child support enforcement on two critical, pre-birth statistics. First, we sought to confirm previous findings from other studies that child support effectiveness reduces nonmarital births in the states. Second, we proceeded with a completely new state-level analysis by exploring the relationship between child support effectiveness and the incidence of abortion. In addition, this study utilized five different measures of child support effectiveness in order to differentiate between the impact of internal, OCSE caseload effectiveness versus external effectiveness in reaching all potential clients in the states' populations. Across the two analyses conducted here, we found that one of five of the child support effectiveness measures had a statistically significant impact on the dependent variable. In the case of nonmarital births, the variable of child support dollars collected per case

was statistically significant in the negative direction. In the case of the abortion ratio, the variable of percentage cases with a collection had a positive effect.

These findings suggest that first of all, analyses that explore the relationship between child support effectiveness and fertility outcomes may be sensitive to how this effectiveness is measured. Interestingly, both measures that produced a statistically significant result were drawn from the internal caseload data rather than measures that capture how well the system is interacting with the states' potential clientele overall. In addition, both measures reflected how well the program was doing in actually collecting real dollars for families rather than money expended in enforcing these cases. Putting these two pieces of the puzzle together, it may be that data from the *actual child support caseload that also involve collecting and distributing real child support dollars* send the strongest signal to couples about their potential monetary obligations in the future.

In terms of the public policy implications of this research, child support's effect on reducing the nonmarital birthrate that was documented here and in previous work shows that the male influence is potentially more important than the female influence in fertility decisions. That is, by witnessing a strong, effective child support program, men might fear their future financial obligations, but women might be emboldened by a reliable income stream to have additional children. This dominant male effect of reducing the percentage of births to nonmarital parents could mean that either men are engaging in abstinence more frequently, using contraception more regularly, or emphasizing the abortion option with their partners when they experience unwanted pregnancies. The analysis presented here, while not purporting to completely solve this puzzle, is suggestive that part of the price of child support reducing nonmarital births might involve raising the incidence of abortion.

REFERENCES

Altman-Palm, Nancy, and Carol Horton Tremblay. 1998. "The Effects of Parental Involvement Laws and the AIDS Epidemic on the Pregnancy and Abortion Rates of Minors." Social Science Quarterly 79 (4):846-862.

Argys, Laura M., Susan L. Averett, and Daniel I. Rees. 2000. "Welfare Generosity, Pregnancies and Abortions among Unmarried AFDC Recipients." Journal of Population Economics 13 (4):569-594.

Bartfeld, Judi. 2000. "Child Support and the Postdivorce Economic Well-Being of Mothers, Fathers, and Children." Demography 37 (2):203-213.

Berry, William D., Evan J. Ringquist, Richard C. Fording, and Russell L. Hanson. 1998. "Measuring Citizen and Government Ideology in the American States, 1960-93." American Journal of Political Science 42 (1):327-348.

Blank, Rebecca M., Christine C. George, and Rebecca A. London. 1996. "State Abortion Rates: The Impact of Policies, Providers, Politics, Demographics, and Economic Environment." Journal of Health Economics 15 (5):513-553.

Brown, Robert W., and R. Todd Jewell. 1996. "The Impact of Provider Availability on Abortion Demand." Contemporary Economic Policy 14 (2):95-106.

Camasso, Michael J., and Radha Jagannathan. forthcoming. "How Family Caps Work: Evidence from a National Study." Social Service Review.

Case, Anne. 1998. "The Effect of Stronger Child Support Enforcement on Nonmarital Fertility." Pp. 191-219. Fathers under Fire: The Revolution in Child Support Enforcement. Irwin Garfinkel, Sara S. McLanahan, Daniel R. Meyer and Judith A Seltzer, editor. New York: Russell Sage Foundation.

Crowley, Jocelyn Elise. 2000. "Supervised Devolution: The Case of Child Support Enforcement." Publius: The Journal of Federalism 20 (1/2):99-117.

Crowley, Jocelyn Elise. 2003. "The Gentrification of Child Support Enforcement Services, 1950-1984." Social Services Review 77 (4):585-604.

Crowley, Jocelyn Elise. 2004. "When Tokens Matter." Legislative Studies Quarterly 29 (1):109-136.

Finer, Lawrence B., and Stanley K. Henshaw. 2006. "Disparities in Rates of Unintended Pregnancy in the United States, 1994 and 2001." Perspectives on Sexual and Reproductive Health 38 (2):90-96.

Freeman, Richard B, and Jane Waldfogel. 2001. "Dunning Delinquent Dads: The Effects of Child Support Enforcement Policy on Child Support Receipt by Never Married Women." Journal of Human Resources 36 (1):207-225.

Garbacz, Christopher. 2000. "Abortion Demand." Population Research and Policy Review 9 (2):151-160.

Garfinkel, Irwin. 2001. "Child Support in the New World of Welfare." Pp. 442-460. The New World of Welfare. Rebecca M. Blank and Ron Haskins, editor. Washington, D.C.: Brookings Institution.

Garfinkel, Irwin, Chien-Chung Huang, Sara S. McLanahan, and Daniel S. Gaylin. 2003. "The Roles of Child Support Enforcement and Welfare in Non-Marital Childbearing." Journal of Population Economics 16 (1):55-70.

Garfinkel, Irwin, Cynthia Miller, Sara S. McLanahan, and Thomas L. Hanson. 1998. "Deadbeat Dads or Inept States? A Comparison of Child Support Enforcement Systems." Evaluation Review 22 (6):717-750.
Grall, Timothy. 2007. *Custodial Mothers and Fathers and Their Child Support: 2005*: Current Population Reports, U.S. Census Bureau. P60-234.
Haas-Wilson, Deborah. 1996. "The Impact of State Abortion Restrictions on Minors' Demand for Abortions." The Journal of Human Resources 31 (1):140-158.
Haas-Wilson, Deborah. 1997. "Women's Reproductive Choices: The Impact of Medicaid Funding Restrictions." Family Planning Perspectives 29 (5):228-233.
Huang, Chien-Chung. 2002. "The Impact of Child Support Enforcement on Nonmarital and Marital Births: Does It Differ by Racial and Age Groups?" Social Service Review 76 (2):275-301.
Huang, Chien-Chung. 2005. "Pregnancy Intention from Men's Perspectives: Does Child Support Enforcement Matter?" Perspectives on Sexual and Reproductive Health 37 (3):119-124.
Huang, Chien-Chung, and Wen-Jui Han. 2004. "Perceptions of Child Support and Sexual Activity of Adolescent Males." Journal of Adolescence 27 (6):731-748.
Huang, Chien-Chung, James Kunz, and Irwin Garfinkel. 2002. "The Effect of Child Support on Welfare Exits and Re-Entries." Journal of Policy Analysis and Management 21 (4):557-576.
Jagannathan, Radha. 2004. "Children's Living Arrangements from a Social Policy Implementation Perspective." Children and Youth Services Review 26 (2):121-141.
Jelen, Ted G., and Clyde Wilcox. 2003. "Causes and Consequences of Public Attitudes toward Abortion: A Review and Research Agenda." Political Research Quarterly 56 (4):489-500.
Jones, Rachel K., Mia R.S. Zolna, Stanley K. Henshaw, and Lawrence B. Finer. 2008. "Abortion in United States: Incidence and Access to Services, 2005." Perspectives on Sexual and Reproductive Health 40 (1):6-16.
Joyce, Ted, Robert Kaestner, Sanders Korenman, and Stanley K. Henshaw. 2004. "Family Cap Provisions and Changes in Births and Abortions." Population Research and Policy Review 23 (5-6).
Levine, Phillip B., Amy B. Trainor, and David J. Zimmerman. 1996. "The Effect of Medicaid Abortion Funding Restrictions on Abortions, Pregnancies, and Births." Journal of Health Economics 15 (5):555-578.
Matthews, Stephen, David Ribar, and Mark Wilhem. 1997. "The Effects of Economic Conditions and Access to Reproductive Health Services on State Abortion Rates and Birthrates." Family Planning Perspectives 29 (2):52-60.
Mead, Lawrence M. 1999. "The Decline of Welfare in Wisconsin." Journal of Public Administration Research and Theory 9 (4):597-622.
Medoff, Marshall. 1997. "A Pooled Time-Series Analysis of Abortion Demand." Population Research and Policy Review 16:597-605.
Medoff, Marshall. 1998. "Estimates of the Abortion Demand of Young and Older Teenagers." Population Research and Policy Review 17:539-549.
Medoff, Marshall. 2002. "The Determinants and Impact of State Abortion Restrictions." American Journal of Economics and Sociology 61 (2):481-493.
Medoff, Marshall. 2007. "Price, Restrictions and Abortion Demand." Journal of Family and Economic Issues 28 (4):583-599.

Meier, Kenneth J., Donald P. Haider-Markel, Anthony J. Stanislawski, and Deborah R. McFarlane. 1996. "The Impact of State-Level Restrictions on Abortion." Demography 33 (3):307-312.
Ohsfelt, Robert L., and Stephan F. Gohmann. 1994. "Do Parental Involvement Laws Reduce Adolescent Abortion Rates?" Contemporary Economic Policy 12 (2):65-76.
Plotnick, Robert D., Irwin Garfinkel, Sara S. McLanahan, and Inhoe Ku. 2006. "The Impact of Child Support Enforcement Policy on Nonmarital Childbearing." Journal of Policy Analysis and Management 26 (1):79-98.
Plotnick, Robert, Irwin Garfinkel, Sara S. McLanahan, and I. Ku. 2004. "Better Child Support Enforcement: Can It Reduce Teenage Premarital Childbearing?" Journal of Family Issues 25 (5):634-657.
Sabia, Joseph. 2008. "Blacks and the Family Cap: Pregnancy, Abortion, and Spillovers." Journal of Population Economics 21 (1):111-134.

VARIABLE CATEGORY	VARIABLE NAME	MEASUREMENT and SOURCE
Dependent Variables	**Unmarried Births**	Percentage of all births to unmarried mothers; *The Statistical Abstract of the United States, Various Years. Washington, DC: U.S. Census Bureau.*
	Abortion Ratio	Number of abortions per 1,000 live births; *Abortion Surveillance Summaries- Center for Disease Control and Prevention, Various Years. Washington, DC: U.S. Department of Health and Human Services.*
Child Support Effectiveness Measures	**% of Cases with a Collection**	Percentage of all cases with a collection; *Office of Child Support Enforcement (OCSE) Annual Reports to Congress, Various Years. Washington, DC: U.S. Department of Health and Human Services.*
	Child Support $ Collected Per Case	Child support dollars collected per case; *OCSE Annual Reports, Various Years.*
	Child Support $ Expended Per Case	Child support enforcement expenditures spent per case; *OCSE Annual Reports, Various Years.*
	Child Support $ Expended Per Single Mother Family	Child support enforcement expenditures spent per single mother family; *OCSE Annual Report, Various Years and Annual Social and Economic Supplement (ASEC), Current Populations Surveys (CPS), Various Years. Washington, DC: Bureau of Labor Statistics and U.S. Census Bureau.*
	Child Support $ Expended Per Single Parent Family	Child support enforcement expenditures spent per single parent family; *OCSE Annual Reports, Various Years, and the CPS, Various Years.*
Sociodemographic Measures	**% Teen Females**	Percentage of women 15-19 out of all women 15-44; *U.S. Census Bureau, Population Division http://www.census.gov/popest/archives/*
	ln(% Black)	Log of the percentage of the population that is Black; *U.S. Census Bureau, Population Division http://www.census.gov/popest/archives/*
	% Metro	Percentage of state living in a Metropolitan Statistical Area; *The Statistical Abstract of the United States, Various Years. Washington, DC: U.S. Census Bureau.*

	Marriage Rate	Marriages per 1,000 in the population; *The Statistical Abstract of the United States*, *Various Years.*
	% Catholic	Percentage of state that is Catholic; *Glenmary Research Center, Religious Congregations & Membership in the United States 2000: An Enumeration by Region, State and County Based on Data Reported for 149 Religious Bodies (CD) and from the Association of Religion Data Archives (http://www.thearda.com/)*
	% Female College	Percentage of state enrolled in college out of total that are women; *The Statistical Abstract of the United States*, *Various Years.*
Economic Security Measures	**% in Poverty**	Percent below poverty level; *The Statistical Abstract of the United States, Various Years.*
	Female LFP	Female labor force participation rate; *The Statistical Abstract of the United States*, *Various Years.*
	Unemployment Rate	Unemployment rate; *The Statistical Abstract of the United States, Various Years.*
	ln(Welfare)	Log of average monthly welfare benefits (AFDC/TANF +food stamps) for a family of three; *The Green Book, U.S. House of Representatives Committee on Ways and Means, Various Years. Washington, DC: U.S. Government Printing Office; "The Welfare Rules Databook: State TANF Policies," U.S. Department of Health and Human Services (http://www.acf.hhs.gov/programs/opre/welfare_employ/state_tanf/index.html); (www.nal.usda.gov/foodstamp/FOODSTAMPREPORTS); Food Stamp Household Characteristics Reports, "Characteristics of Food Stamp Households," Various Years .*
Political Measures	**% Republican**	Percentage Republicans in state legislature; *The Book of the States, Various Years. Lexington, KY: The Council of State Governments.*
	% Female Legislators	Percentage women in state legislature; *Center for American Women and Politics (CAWP), Eagleton Institute of Politics, Rutgers, The State University of New Jersey (http://www.cawp.rutgers.edu/fast_facts/levels_of_office/StateLeg-HistoricalInfo.php); Cox, Elizabeth M. 1996. Women State and Territorial Legislators, 1895-1995: A State-by State Analysis, with Rosters of 6,000 Women. Jefferson, NC: McFarland.*

	Token	State has 15% or more women state legislators (1=yes, 0=no); *Authors' calculation.*
	Citizen Ideology	Measure of citizen ideology (scale 1-100, 100 being most liberal); *Berry et al.'s data available at http://www.uky.edu/~rford/Home_files/page0005.htm.*
	Government Ideology	Measure of government ideology (scale 1-100, 100 being most liberal); *Berry et al.'s data available at http://www.uky.edu/~rford/Home_files/page0005.htm.*
Abortion Policy Measures	**Parental Restrictions**	Law imposing parental consent for minor abortions (1=yes, 0=no or enjoined); *Who Decides? The Status of Women's Reproductive Rights in America, Various Years, NARAL Pro-Choice America*; *Greenberger, Marci D. and Katherine Connor. 1991. "Parental Notice and Consent for Abortion: Out of Step with Family Law Principles and Policies." 1991. Family Planning Perspectives. 23(1):31-35; Data also from Rebecca Blank.*
	Medicaid Restrictions	Law imposing Medicaid funding restrictions on abortion (1=yes, 0=no or enjoined); *Who Decides? The Status of Women's Reproductive Rights in America, Various Years, NARAL Pro-Choice America*
Abortion Availability Measures	**Providers**	Number of abortion providers per 100,000 women ages 15-44; Guttmacher Institute Data
	Non-ob-mds	Total Physicians who are not Ob-GYNs; *Physician Characteristics and Distribution in the United States. Various Years. Chicago: Survey and Data Resources, AMA.*
	Hospitals	Total Hospitals; *Hospital Statistics (American Hospital Association). Various Years. Chicago: Healthcare InfoSource.*

Table 2: Distribution of Study Variables

Variable	Observations	Mean	Std. Dev.	Min	Max
Abortion Ratio	1066	242.9299	109.2107	25.52858	710.7222
Unmarried Births	1066	25.2877	8.287637	5.07831	48.4
% of Cases with a Collection	1066	24.28117	15.42426	3.2	78.13165
Child Support $ Collected Per Case	1066	581.7957	436.8567	28.56358	2363.477
Child Support $ Expended Per Case	1066	162.8916	107.1569	20.52654	757.97
Child Support $ Expended Per Single Mother Family	1066	326.1639	257.464	4.954823	1554.27
Child Support $ Expended Per Single Parent Family	1066	265.0133	197.5536	4.285564	1185.443
% Teen Females	1066	16.73881	2.180789	12.02882	23.92548
ln(% Black)	1066	1.570059	1.389206	-1.505363	3.604614
% Metro	1066	65.78772	21.94971	0	100
Marriage Rate	1066	11.76412	15.00269	5.4	172.1
% Catholic	1066	19.47856	13.6628	1.555465	63.65459
% Female College	1066	54.06368	3.045866	36.6319	62.12915
% in Poverty	1066	13.05807	3.878947	2.9	27.2
Female LFP	1065	57.93736	5.496282	35.4	71.2
Unemployment Rate	1066	5.913227	2.038393	2.2	18
ln(Welfare)	1066	6.200887	.2777354	5.320568	6.92795
% Republicans	1040	42.6363	17.74608	2.836879	90.47619
% Female Legislators	1066	17.50917	8.294378	1.149425	40.81633
Token	1066	.5778612	.4941323	0	1
Citizen Ideology	1066	48.76007	15.63942	9.750619	95.83107
Government Ideology	1066	50.00793	24.32438	0	97.91666
Parental Restrictions	1066	.3902439	.4880338	0	1
Medicaid Restrictions	1066	.6791745	.467013	0	1
Providers	1066	4.189762	3.652419	0	21.67915
Non Ob-gyns	1066	935.0053	288.9926	398.716	2100.056
Hospitals	1066	12.60481	7.798242	4.082344	38.53278
Time	1066	13.5	7.50352	1	26
Timesquare	1066	238.5	208.7274	1	676

Table 3 : Regression of Non-marital Births on Various Child Support Measures

Independent Variables	Model 1 b/se	Model 2 b/se	Model 3 b/se	Model 4 b/se	Model 5 b/se
% of Cases with a Collection	-0.024 (0.01)				
Child Support $ Collected Per Case		-0.002** (0.00)			
Child Support $ Expended Per Case			0.001 (0.00)		
Child Support $ Expended Per Single Mother Family				0.001 (0.00)	
Child Support $ Expended Per Single Parent Family					0.000 (0.00)
% Teen Females	1.194*** (0.32)	1.171*** (0.31)	1.134*** (0.28)	1.199*** (0.28)	1.221*** (0.30)
ln(% Black)	4.083 (2.35)	4.870 (2.49)	3.303 (2.01)	3.758 (2.11)	3.935 (2.23)
% Metro	0.154*** (0.04)	0.151*** (0.04)	0.150*** (0.04)	0.156*** (0.04)	0.155*** (0.04)
Marriage Rate	-0.314** (0.10)	-0.320*** (0.10)	-0.300*** (0.09)	-0.323*** (0.09)	-0.327*** (0.09)
% Catholic	0.132 (0.18)	0.140 (0.19)	0.057 (0.16)	0.102 (0.17)	0.109 (0.18)
% Female College	-0.191* (0.09)	-0.196* (0.09)	-0.175* (0.09)	-0.187* (0.09)	-0.192* (0.10)
% in Poverty	0.215* (0.10)	0.207* (0.09)	0.206* (0.09)	0.222* (0.09)	0.225* (0.09)
Female LFP	0.005 (0.04)	0.008 (0.04)	0.003 (0.04)	-0.000 (0.04)	-0.000 (0.04)
Unemployment Rate	-0.388** (0.14)	-0.387** (0.14)	-0.373** (0.14)	-0.399** (0.14)	-0.403** (0.14)
ln(Welfare)	19.174*** (4.80)	18.733*** (4.65)	18.605*** (4.43)	19.688*** (4.47)	19.805*** (4.63)
% Republicans	-0.030 (0.02)	-0.031 (0.02)	-0.027 (0.02)	-0.028 (0.02)	-0.028 (0.02)
% Female Legislators	0.119 (0.07)	0.116 (0.07)	0.105 (0.06)	0.120 (0.06)	0.123 (0.06)
Token	-0.375 (0.58)	-0.329 (0.56)	-0.319 (0.55)	-0.401 (0.54)	-0.429 (0.56)
Citizen Ideology	0.027 (0.02)	0.027 (0.02)	0.022 (0.02)	0.024 (0.02)	0.025 (0.02)
Government Ideology	0.023 (0.01)	0.022 (0.01)	0.021 (0.01)	0.023 (0.01)	0.024 (0.01)
Parental Restrictions	0.168 (0.43)	0.249 (0.42)	0.145 (0.40)	0.102 (0.43)	0.101 (0.44)
Medicaid Restrictions	1.412* (0.59)	1.410* (0.59)	1.392* (0.59)	1.444* (0.58)	1.455* (0.59)
Providers	3.146* (1.57)	3.132* (1.55)	2.804* (1.41)	3.197* (1.40)	3.260* (1.48)
Time	1.511*** (0.27)	1.505*** (0.26)	1.513*** (0.24)	1.546*** (0.24)	1.568*** (0.25)
Timesquare	-0.028*** (0.01)	-0.027*** (0.01)	-0.031*** (0.01)	-0.031*** (0.01)	-0.032*** (0.01)
Constant	-149.771** (46.15)	-147.226** (45.16)	-141.536*** (42.01)	-152.567*** (41.91)	-154.229*** (43.92)
R^2 (Fixed Effects) **Wald χ^2**	0.76 62717.8	0.76 63610.8	0.79 72429.5	0.75 61231.3	0.74 59637.1

p<0.05, ** p<0.01, *** p<0.001

Table 4: Regression of Abortion Ratio on Various Child Support Measures

Independent Variables	Model 1 b/se	Model 2 b/se	Model 3 b/se	Model 4 b/se	Model 5 b/se
% of Cases with a Collection	0.386* (0.16)				
Child Support $ Collected Per Case		-0.003 (0.01)			
Child Support $ Expended Per Case			-0.028 (0.03)		
Child Support $ Expended Per Single Mother Family				-0.006 (0.01)	
Child Support $ Expended Per Single Parent Family					-0.014 (0.02)
% Teen Females	12.668*** (3.48)	12.593*** (3.44)	10.099** (3.20)	14.879*** (3.34)	14.696*** (3.44)
ln(% Black)	-4.001 (25.69)	2.520 (27.68)	-14.545 (23.00)	16.236 (25.20)	14.802 (25.88)
% Metro	0.067 (0.44)	0.066 (0.44)	-0.027 (0.42)	0.144 (0.48)	0.117 (0.47)
Marriage Rate	0.453 (1.06)	0.518 (1.06)	1.345 (0.98)	-0.147 (1.04)	-0.052 (1.06)
% Catholic	1.442 (2.01)	2.124 (2.09)	0.731 (1.81)	3.213 (2.01)	3.021 (2.05)
% Female College	1.693 (1.04)	1.625 (1.05)	1.968* (0.97)	1.275 (1.10)	1.303 (1.10)
% in Poverty	-0.333 (1.04)	-0.393 (1.03)	-1.054 (1.03)	0.115 (1.08)	0.040 (1.09)
Female LFP	1.546** (0.48)	1.624*** (0.48)	1.752*** (0.47)	1.525** (0.53)	1.540** (0.52)
Unemployment Rate	0.219 (1.58)	0.279 (1.58)	1.407 (1.57)	-0.558 (1.62)	-0.436 (1.63)
ln(Welfare)	142.451** (52.57)	138.272** (51.62)	99.560* (50.65)	169.008** (53.29)	164.558** (53.68)
% Republicans	0.142 (0.20)	0.100 (0.21)	0.127 (0.20)	0.082 (0.22)	0.091 (0.22)
% Female Legislators	-1.597* (0.73)	-1.582* (0.73)	-2.022** (0.66)	-1.172 (0.73)	-1.223 (0.75)
Token	5.552 (6.32)	5.863 (6.26)	9.965 (6.24)	2.540 (6.43)	2.969 (6.52)
Citizen Ideology	0.163 (0.24)	0.224 (0.24)	0.143 (0.22)	0.282 (0.25)	0.272 (0.25)
Government Ideology	-0.050 (0.14)	-0.047 (0.14)	-0.144 (0.14)	0.027 (0.15)	0.014 (0.15)
Parental Restrictions	-1.331 (4.71)	-0.381 (4.65)	1.270 (4.63)	-1.777 (5.11)	-1.547 (5.05)
Medicaid Restrictions	-13.213* (6.52)	-13.385* (6.53)	-17.294* (6.74)	-10.923 (6.93)	-11.253 (6.88)
Providers	10.810 (17.15)	11.468 (17.22)	-2.885 (16.19)	22.741 (16.70)	21.144 (17.10)
Time	-2.093 (2.91)	-2.810 (2.84)	-4.664 (2.78)	-1.029 (2.84)	-1.067 (2.91)
Timesquare	-0.126 (0.07)	-0.074 (0.06)	-0.029 (0.07)	-0.115 (0.07)	-0.111 (0.07)
Constant	-1033.925* (505.53)	-1028.001* (501.58)	-627.145 (480.84)	-1347.586** (499.67)	1302.603 (508.79)
R^2 (Fixed Effects) **Wald χ^2**	0.46 46456.3	0.45 45825.8	0.49 49130.8	0.34 38287.0	0.36 39488.9

p<0.05, ** p<0.01, *** p<0.00