



The effects of welfare and child support policies on union formation

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Abstract. We use data from a new longitudinal survey – the Fragile Families and Child Wellbeing Study – to examine how welfare and child support policies, and local labor market conditions, affect union formation among unmarried parents who have just had a child together. We use multinomial logistic regression to estimate the effects of the policy variables along with economic, cultural/interpersonal, and other factors on whether (relative to being in a cohabiting relationship) parents are not romantically involved, romantically involved living apart, or married to each other about one year after the child's birth. We find that – contrary to some previous research – higher welfare benefits discourage couples from breaking up, while strong child support enforcement reduces the chances that unmarried parents will marry; local unemployment rates do not appear to be strongly associated with union formation decisions after a nonmarital birth.

Keywords: Child support enforcement, Nonmarital childbearing, Union formation, Welfare policy

Introduction

Today, fully one-third of all births in the United States are to unmarried parents, up from six percent in 1960 (Hamilton et al. 2003; Ventura & Bachrach 2000). Many children born outside of marriage will live below (or just above) the poverty line, and many will spend time on welfare (Hoffman & Foster 1997). Many children will receive little support from their non-resident fathers – either financial or emotional (Furstenberg et al. 1987; Garfinkel et al. 1994; Seltzer 1994). Yet, the benefits for children of growing up with two biological parents, on average – higher educational attainment, better behavioral outcomes and mental health – are now well-documented (Chase-Landale et al. 1995; Kiernan & Cherlin 1999; McLanahan & Sandefur 1994). Further, it is now widely

acknowledged that marriage is associated with adult wellbeing, in addition to increasing family stability for children (Waite & Gallagher 2000).

Some of the disadvantages associated with father absence are due to low income. Thus, policymakers have responded to the increase in nonmarital childbearing by making it more difficult for non-resident fathers to avoid child support obligations. Mothers who seek public assistance must assign their child support rights to the state and cooperate with state officials in identifying the non-resident father of their child. The changes in child support legislation have resulted in increases in child support awards and collections (Case et al. 2003; Garfinkel et al. 1998). The welfare system has also undergone important changes in recent years, including setting time limits on the receipt of welfare benefits, imposing work requirements on recipients, and, in many states, extending benefits to two-parent families. These changes have altered the costs and benefits of being single, relative to being married or cohabiting, for many low-income mothers. Changes in living arrangements since 1995 (fewer children living with single parents and more with two parents) suggest that families may be responding to the new rules and incentives (Acs & Nelson 2001; Dupree & Primus 2001), although this requires additional investigation.

Most recently, policymakers have proposed programs to increase marriage among low-income couples. Democrats have sought to do this by increasing the employability of non-resident fathers and extending Temporary Assistance to Needy Families (TANF) benefits to two-parent families. Republicans, and the Bush Administration in particular, are seeking to increase marriage by providing low-income couples with programs to increase relationship skills. The extent to which policies can – and do – affect union formation and dissolution, however, is unclear, particularly for unmarried couples who endeavor to raise their child(ren) together (Mincy & Pouncy 1997).

This paper uses new data from the Fragile Families and Child Wellbeing Study to examine whether welfare and child support policies affect family formation and parental relationships among parents who had a child outside of marriage in the late 1990s. The paper addresses only one of several avenues of policy effects: welfare and child support are expected to affect marriage and fertility decisions before a child's birth, as well as family formation behavior after a nonmarital birth. Yet, we examine only the latter here. Although the Fragile Families sample precludes examining all possible policy effects, given the high fraction of births in the US today that are nonmarital and the subsequent fluidity

of parental relationships, the effect of policies on relationships subsequent to a nonmarital birth is of great interest. The next section presents the theoretical arguments for why we would expect welfare and child support policies to affect family formation and reviews previous empirical research. The third section describes the data, variables and methods. The fourth section reports our results, and the final section discusses our findings.

Theoretical expectations and empirical research

Cash welfare

According to economic theories of marriage and divorce (Becker 1973, 1974, 1981), individuals decide to marry if they expect that marriage will make them better off. Similarly, when deciding whether or not to divorce or separate, each individual compares the expected utility from remaining together to that of becoming single again (and possibly remarrying). Increases in expected happiness outside of marriage that leave marital happiness unaltered increase the probability of divorce, non-marriage and nonmarital births. Divorce or non-marriage occurs when the sum total of utility to both partners of being unmarried exceeds the total utility of being in the partnership.

The impact of welfare programs on marriage depends upon the rules and culture of the program. Programs, like the old Aid to Families with Dependent Children (AFDC) program, that provide benefits only (or primarily) to unmarried parents are expected to decrease marriage because they increase the mother's wellbeing outside marriage but provide no increase within marriage. Programs that provide benefits to married as well as to unmarried parents could either increase or decrease marriage depending upon the other gains available to the parents inside and outside marriage. Under the AFDC program, two-parent families were subject to additional eligibility criteria regarding the father's work history, and one-half of states prohibited two-parent participation prior to 1988. With the passage of the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) in 1996 (when AFDC was replaced by TANF), states were given the option to eliminate the work rules for two-parent families; as of this writing, 33 states have taken advantage of this option, while 17 have maintained the more stringent requirements (State Policy Documentation Project 2003). Although TANF appears to be more available to married couples than was AFDC previously (and should therefore do less to discourage

marriage), most state TANF programs continue to determine welfare eligibility and benefit levels from family income (rather than individual income), providing an inherent disincentive to two-parent families. In some states, welfare benefits are reduced by one dollar for each dollar of earned income. Welfare programs with such steep income tests increase the wellbeing of mothers outside marriage more than they increase wellbeing inside marriage.

While program eligibility requirements and income tests have discouraged marriage, they may have created an incentive for women to cohabit. Early on, many states withdrew benefits if a welfare recipient was discovered living with an unrelated man. Officials would sometimes conduct surprise bedroom checks and other types of searches in order to establish that a welfare recipient was not cohabiting. After these “man in the house” laws were deemed unconstitutional in 1968, eligibility rules became more similar to those applied to married women. Still, AFDC distinguished between mothers cohabiting with a man who was not the child’s father (who could qualify for the basic AFDC program) and mothers living with the child’s father (who were required to enroll in the more stringent two-parent program) (Moffitt et al. 1995). Moreover, it is easier to hide the income contributions and existence of a more unofficial partner than a spouse, so it is possible that the stringency of the income testing created an incentive for women to cohabit rather than marry. (However, one study (Primus & Beeson 2001) finds that when properly understood/implemented, TANF rules do not differentiate between married and cohabiting couples who have a child in common).

A vast empirical literature has investigated the topic of how welfare affects family demography. Research during the 1970s and 1980s found mixed effects of welfare on family formation, leading some to conclude there were no effects (Bane & Jargowsky 1988), while others argued that studies with better data and methodology were more likely to find the predicted negative effects (Garfinkel & McLanahan 1986). A recent review finds is that welfare benefits have small but significant positive effects on single motherhood (Moffitt 1998), at least among whites. New research post PRWORA suggests that welfare benefit levels have no net effect on marriage (Bitler et al. 2004; Gennetian & Knox 2003). A few researchers have examined the effects of policies on the living arrangements of single mothers, but most of these studies include divorced as well as never-married mothers and do not distinguish co-residence with the biological father of the child versus another partner (Folk 1996; London 2000; but see Sigle-Rushton & McLanahan 2001 for an exception; Winkler 1992, 1993).

Child support enforcement

Drawing on economic theory, the expected effects of child support enforcement on the union formation and dissolution of new unwed parents are uncertain. Enforcement reduces the incomes of non-resident parents (typically fathers) outside marriage, thereby increasing the relative attractiveness of marriage (or cohabitation) to them. At the same time, enforcement increases the incomes of resident parents (typically mothers) outside marriage, thereby decreasing the relative attractiveness of marriage (or cohabitation) to them. The net effect is theoretically indeterminate.

The effects of child support enforcement may be more complicated for low-income families who are receiving – or potentially eligible for – welfare. Although the child support system has become increasingly effective, children born outside of marriage are less likely to have a child support order established than children born within marriage. In part, this may be due to the fact that unmarried parents prefer informal support arrangements and up until recently the government has largely ignored low-income fathers (Waller & Plotnick 2001). If unmarried parents have an informal agreement between themselves such that he contributes money “under the table” or makes in-kind contributions, any welfare received by the mother is in addition to any support received by the father. Since economic stability is generally associated with marriage and family formation, in this case (under a weak enforcement system), the additional income from welfare (and child support) may encourage family formation because parents are better able to pool their resources (Mincy & Dupree 2001). Yet, strong child support enforcement reduces the likelihood that couples can maintain such an informal support arrangement and may increase conflict between them: the mother may perceive that the father is not doing enough to help her and her child(ren), while the father may perceive that the mother is “going after him.”

At the same time, assuming couples are fully informed about welfare and child support rules, it is also possible that strong child support enforcement could encourage marriage and cohabitation among TANF recipients. This is because mothers receiving TANF will gain little or nothing in the short-run from the father’s increased child support payments; if the mother receives child support payments in excess of \$50, they will reduce her welfare benefits dollar for dollar (unless she lives in Wisconsin where the full amount is passed through). Therefore, the mother has little incentive to avoid marriage, and the father has a positive incentive to marry in order to eliminate his child support

obligation. The five-year time limit weakens this effect, however. Moreover, in a strong enforcement environment, fathers with children from a previous union are more likely to pay child support to another household, which reduces their ability to support their new family and makes them less desirable partners. In short, the direction of the effect of strong child support enforcement on union formation, particularly for low-income families, cannot be predicted from theory and, thus, it becomes an empirical question.

Several researchers have examined the effects of child support on union formation and dissolution. Nixon (1997) finds that stronger child support enforcement reduces the chances of divorce, especially among women who are likely to be eligible for welfare. Folk et al. (1992) find that child support receipt does not affect remarriage for non-black divorced mothers in the short run, although Yun (1992) finds that it lowers (slightly) the probability of remarriage in the long run. Yun also finds that irregular child support payments increase marriage, whereas regular payments reduce marriage. Finally, Bloom et al. (1998) find that child support enforcement deters remarriage (or first marriage) of non-resident fathers, but Scully (2001) finds no effects of enforcement on divorced fathers' remarriage. All of these studies are based on data that are limited to or dominated by divorced mothers and fathers. Even more important, none examines the effects of child support enforcement on union formation (or dissolution) between unwed biological parents. A related literature has explored how child support affects nonmarital childbearing; these studies show that stronger child support enforcement reduces nonmarital childbearing, indicating that the economic cost of child support enforcement for men appears to dominate the potential economic benefit for women (Case 1998; Garfinkel et al. 2003; Plotnick et al. 2004).

Based on the empirical literature, it appears that the effects of public and private transfers may go in opposite directions, with welfare benefits slightly discouraging the formation of families, and strong child support enforcement – in some cases but not always consistently – encouraging families to form or stay together (or discouraging couples from having a child outside of marriage in the first place). A recent paper by Mincy and Dupree (2001) assessed policy effects on family formation among unwed couples with a child together using data from the Fragile Families Study. They examined how welfare benefit levels and the child support collection rate among TANF cases are related to plans for – and actual status of – being romantically involved, co-resident or married at the time of a baby's birth. With respect to plans, they found that higher welfare benefit levels are positively related to all three relationship types (relative to having no romantic relationship), and that

strong child support decreases the likelihood of being romantically involved or co-resident, but has no effect on marriage. For actual family formation outcomes, they find that welfare benefit levels are related to a greater likelihood of being romantically involved or married (but not co-resident) compared to no romantic relationship, and stronger child support reduces the likelihood of being co-resident (but not the other two types). These results were based on a relatively small sample using preliminary data – only seven of the 20 Fragile Families cities.

Labor market conditions

Beyond the policy variables, local employment opportunities are also expected to influence union formation decisions. As Wilson (1987) has argued, lack of job opportunities for men reduces their “marriageability” and hence decreases marriage. Fitzgerald and Ribar (2004) find that employment is negatively associated with female headship. Lichter et al. (1991) find strong evidence that higher local unemployment rates discourage marriage, and Edin’s (2000) qualitative interviews with poor women suggest that men’s employment is a key aspect of their suitability for cohabitation as well as marriage. At the same time, using British data, Ermisch (2002) finds that unemployment rates discourage the formation of cohabiting and marital unions only indirectly by encouraging childbearing outside of marriage.

In this paper, we use new data to examine the factors affecting family formation among unwed parents following a nonmarital birth in the late 1990s. Our analyses focus on whether unwed parents who live in cities with public policies and labor market conditions that are more conducive to marriage are more likely to have a romantic relationship, live together, or legally marry than parents who live in cities that are less conducive to marriage. Our paper builds upon and extends the work of Mincy and Dupree (2001) in several ways: we use data for the full Fragile Families sample (all 20 cities), we predict relationship status about one year after a nonmarital birth, we include a measure of the city labor market conditions, and we include measures of relationship quality and status at the time of the baby’s birth.

Data, variables and methods

The data used in this paper come from the Fragile Families and Child Wellbeing Study, which follows a cohort of 4,898 births in 20 large US cities in fifteen states (3,712 nonmarital births and 1,186 marital births;

see Reichman et al. (2001) for detailed information on the design of the Fragile Families Study. Mothers (and most fathers) were interviewed in the hospital within 48 hours after the birth of their child. Parents are/will be re-interviewed when their child is about one, three and five years old.

The Fragile Families data are unique in that they provide information on the nature of unmarried parents' relationships, and about fathers' characteristics (including those who do not live with the child), which has typically been unavailable in previous national studies. Also, the cities in the study were selected on a stratified random basis to represent different combinations of three policy and labor market variables – welfare generosity, toughness of child support enforcement, and the city unemployment rate – so the data are well suited to an examination of the effects of policies and economic conditions on family formation. Some of the cities in the sample have strong child support enforcement systems, whereas others have relatively weak child support systems; some cities have generous welfare benefits, whereas others have meager benefits; finally, some cities have strong labor markets, whereas others have relatively weak markets.

Data collection in the 20 cities is staggered over a 19-month period. The baseline survey began in Austin, Texas, and Oakland, California, in the spring of 1998 and was completed in the last five cities in the fall of 2000. The first follow-up survey was conducted just over one year after the baseline survey. Response rates for unmarried parents at baseline were 87 percent and 75 percent, respectively, for mothers and fathers. Fathers' response rates vary by the nature of his relationship with the baby's mother; the data are most representative of cohabiting fathers (almost 90 percent response rate) and least representative of fathers who are not romantically involved with the mother at the time of birth (38 percent response rate). At the one-year follow-up, about 89 percent of unmarried mothers and 79 percent of unmarried fathers who were interviewed at baseline were interviewed again; given the low attrition rate, we suspect that attrition does not notably bias our results.

In this paper, we use data from the baseline and one-year interviews. Our sample includes all parents who were unmarried at the time they gave birth to the Fragile Families focal child and the mother was interviewed at the one-year survey, yielding a sample of 3,286 couples. Thus, we are exploring union formation decisions conditional on – and subsequent to – a nonmarital birth: some couples may choose to marry, while others may remain unmarried and live together, remain romantically involved but live apart, or end their romantic relationship altogether. Although the Fragile Families sample includes marital as well as nonmarital births, the pro-

portions of marital and nonmarital births in each city were fixed by the sampling design. As a consequence, the data are not suitable for pooling the married and unmarried samples in order to estimate the effects of welfare and child support policies on union decisions.

Variables

For our dependent variable (union status approximately one year after a nonmarital birth), we combine several pieces of information about parents' relationships, reported by mothers at the one-year follow-up survey. Mothers are asked about their marital status, cohabitation status, and the type of relationship they have with the baby's father. From this information, we develop mutually exclusive and exhaustive categories of: married, cohabiting, "visiting" (romantically involved but living apart), and not in a romantic relationship. Couples who are romantically involved but not cohabiting are a special case and have not been examined in previous research; they are similar to divorced couples insofar as the non-resident father is obligated to pay child support, yet they are different from divorced couples insofar as their romantic relationship is still intact. Understanding how welfare and child support policies affect union stability and father involvement among this group of parents is of great interest to policymakers (Sorenson et al. 2000).

Our primary independent variables of interest are three measures that reflect state welfare generosity, the strength of the state child support enforcement system, and the strength of the local labor market, respectively. To measure the generosity of state welfare programs, we use the maximum TANF plus food stamps benefit level for a mother with two children in 2000 (Committee on Ways and Means 2000). This amount ranges from \$504 (Tennessee) to \$846 (Wisconsin); in the analyses, the variable is coded in units of \$100.

To measure the strength of the child support enforcement system, we use data from the 2000 Census, 5% PUMS extracts. The PUMS data is the best single source for measuring the strength of child support enforcement because the sample is very large, and the measure is at the city level. The PUMS data allow us to construct measures of the proportions of never-married mothers that receive child support in each city, measured by the amount of "unearned income" reported. (Though in the Census, this category aggregates child support with many other sources of unearned income, an analysis of data from the Survey of Income and Program Participation (SIPP) indicates that for never-married mothers, child support constitutes 91 percent of the total income in this category). This ratio, however, reflects not only the

strength of child support enforcement, but also differences across cities in fathers' ability to pay child support and other factors, such as unemployment rates, welfare generosity, and race/ethnicity that affect the difficulty of collecting child support. For example, low-income fathers have less ability to pay support, and high unemployment further reduces a father's ability to contribute. Race/ethnicity may be important, since black fathers are more likely to have children on welfare, who will gain little or nothing from his child support contributions. We, therefore, adjust our measure of enforcement to purge it of differences across cities in the difficulty of enforcement. This is done by regressing the probability of receiving a child support payment on demographic characteristics of the mother – years of schooling, race/ethnicity, whether an immigrant, age, number of children, whether any child is less than age 6, the median earnings of males age 18–65 in the city, and the state TANF benefit level; then, we use the regression estimates to obtain a predicted value of child support in each city. We then take the ratio of the actual divided by the predicted amount at the city level in order to obtain an adjusted child support effectiveness ratio, which is standardized to have a mean of zero and a standard deviation of 1.0. (We thank Lenna Nepomnyaschy for sharing this and the other child support enforcement measures with us. Alternative measures are discussed in her dissertation (Nepomnyaschy 2003)).

To measure city labor market conditions, we use the average municipal unemployment rate in the past three years before the baby's birth. While the unemployment rate is not a policy variable, it represents an important environmental variable. The average unemployment rate is presented in percentage points and ranges from 2.47 percent (Indianapolis) to 6.53 percent (Corpus Christi).

Beyond the primary policy variables described above, we also explore various alternative specifications of the welfare and child support variables. We use three alternative welfare variables. We use the average maximum monthly TANF benefit for a family of three, averaged over the two years prior to the baby's birth; these figures range from \$185 in Tennessee to \$348 in Wisconsin (Committee on Ways and Means 2000). We also include two welfare measures adjusted for housing costs (based on the 1999 Fair Market Rent (FMR)): the first subtracts the FMR from the TANF plus food stamps benefit level; the second divides the TANF plus food stamps benefit by the FMR. Since the latter measures welfare as a proportion of average housing costs, we have more confidence in this specification.

For child support enforcement, we utilize three additional measures. First, we use the Current Population Survey (CPS) instead of the PUMS

to ascertain the amount of child support collected on behalf of never-married mothers. The CPS is superior to the PUMS in that child support is measured independently of other unearned income. It is inferior to the PUMS in that sample sizes are much smaller, and the measure is at the state – rather than the city – level. We use three years of CPS data prior to year of the baby's birth (only two years for babies born in 2000). State-level information on the amount of child support collected on behalf of never-married mothers is divided by the total amount of child support owed for all single mothers under the Wisconsin percent-of-income guidelines. (We thank Theresa Heintze for sharing this child support measure with us.) We take the average effectiveness ratio for the three years prior to the year of the baby's birth (only two years for babies born in 2000).

Our second and third alternative specifications use administrative data from the Office of Child Support Enforcement (OCSE) for two measures of the child support collection rate. Both measures are averaged over 1997 through 1999. One uses the number of cases with any collection by state divided by the total number of OCSE cases; the other is similar except both the numerator and denominator are limited to TANF cases. All else equal, administrative data are preferable because they include all cases in the state, rather than a sample (as with the PUMS and the CPS). The limitation is that the OCSE data are not limited to unmarried mothers. Indeed, both the full caseload and the TANF caseload collections are dominated by divorced and separated mothers. This is less true for the TANF caseload, but the TANF figures are more likely plagued by measurement error because of the tremendous decline in caseloads that followed the replacement of AFDC by TANF. The PUMS-based measure most successfully – and the OCSE-based measures least successfully – predicts actual child support order rates and payment rates in the Fragile Families cities; yet, the OCSE-based measures more effectively predict payment amounts.

Various background variables about mothers and fathers are included in all of our models. All variables are from the time-of-birth (baseline) interview, except parents' fertility history and the one-year relationship status (our dependent variable), which come from the one-year survey. Mother's race is represented by dummy variables for non-Hispanic white, non-Hispanic black (reference), Hispanic, and other race. An additional dummy variable is included to indicate that the mother and father are of different racial/ethnic backgrounds. Mother's age and father's age are each specified as continuous variables. Mother's family background is represented by a dichotomy for whether she lived with both of her parents at age 15, and we include the same for fathers. Several

variables reflect parents' fertility history: whether the parents have other children together, whether the mother has other children with another man, and whether the father has children with another woman (these three variables are not mutually exclusive). We include measures of mothers' and fathers' self-reported health status as continuous variables, ranging from 1 (poor) to 5 (excellent). Also, we include a variable for the length of time between the baseline and one-year interviews (measured in months), which reflects exposure to various union states. We also include a dummy variable to indicate that the father was not interviewed in the baseline survey (we explain how we deal with missing data below).

To measure parents' human capital, we use mothers' and fathers' level of education, specified as three dummy variables – less than high school (reference category), high school degree, and some college or higher. We would expect parents' attitudes toward marriage and gender to affect union formation, and we include separate variables for mothers and fathers on all attitudinal items. Parents' attitudes toward marriage are determined by the average score of their responses to two statements about the importance of marriage: (1) "It is better for a couple to get married than to just live together," and (2) "It is better for children if their parents are married;" responses range from "strongly disagree" (1) to "strongly agree" (4). Mothers' (fathers') distrust of men (women) is represented by the mean of two indicators (again ranging from "strongly disagree" to "strongly agree"): "Men (women) cannot be trusted to be faithful" and "In a dating relationship, a man (woman) is largely out to take advantage of a woman (man)." Traditional attitudes toward gender roles are measured by two questions with the same response choices: (1) "The important decisions in the family should be made by the man of the house," and (2) "It is much better for everyone if the man earns the main living and the woman takes care of the home and family." We also include the frequency of each parent's religious attendance as a continuous variable, ranging from 1 (not at all) to 5 (once a week or more).

We would expect parents' relationship at the time of their baby's birth to be a strong predictor of their relationship status approximately one year later. We include four measures of the quality of parents' relationship at baseline (separate items for mothers and fathers): physical violence, frequency of conflict, level of supportiveness, and whether each parent has a substance problem. Physical violence is represented by a dummy variable coded as 1 if the mother (father) responds that the father (mother) "often" or "sometimes" "hits or slaps her (him) when he(she) is angry." Frequency of conflict is represented by the mean of each parent's reports about whether they have "never" (1), "sometimes"

(2), or “often” (3) had conflict about six items in the last month – money, spending time together, sex, the pregnancy, drinking or drug use, and being faithful. (For couples who are no longer romantically involved, mothers are asked about the frequency of conflict during the last month they were together with the father; since this was likely a contentious time in their relationship, differences in conflict between couples still together versus those no longer romantically involved may be exaggerated). Supportiveness in the relationship is measured by each parent’s report about the frequency that the other parent “is fair and willing to compromise when (they) have a disagreement”; “expresses affection or love for her (him)”; “insults or criticizes her (him) or her (his) ideas” (coding was reversed) and “encourages or helps her (him) to do things that are important to (her/him).” Again, response options are “never” (1), “sometimes” (2), and “often” (3). The items were averaged to obtain an overall supportiveness score (range = 1–3), with higher scores indicating a greater level of supportiveness. Also, the mother reports whether she and/or the father “(has) problems such as keeping a job or getting along with family and friends because of alcohol or drug use.” In our final model, we also add variables for parents’ relationship status at the time of the birth – visiting (romantically involved but living separately), cohabiting, or not romantic (reference).

Methods

We use several procedures for dealing with missing data. Among items reported by mothers, for any variables with more than 10 missing observations, we assign to the missing cases the overall mean for all unmarried mothers and include a flag variable to indicate the case has missing data assigned on a particular variable. For father-reported variables, we follow a similar procedure and include a dummy variable to indicate that the father was missing data on a particular variable (when he was interviewed). In addition, in cases where the father was not interviewed (and where we had no information on a given variable about the father from the mother), we substituted means and included a dummy variable to indicate that a father did not participate in the baseline survey.

For our multivariate analyses, we use a multinomial logit regression model. This method uses maximum-likelihood estimation techniques to predict the likelihood of being in a particular category of the dependent variable as compared to a reference category. Our reference category is cohabitation, so we estimate the likelihood that a couple is not

romantically involved (broken up), in a visiting relationship, or married about a year after the baby's birth, as compared to cohabiting.

We estimate three models. Model 1 includes the policy/labor market variables along with background variables, including education. Model 2 adds the variables reflecting parents' attitudes and relationship quality. Model 3 adds variables for the relationship status at baseline.

The policy variables in model 1 reflect the overall effects of policy on unmarried parents' family formation decisions at one year. These coefficients are more likely to reflect selection bias, for, as noted above, welfare and child support may affect fertility and marriage before birth and, thereby, affect who is in the Fragile Families sample. The policy variables in model 2 reflect the effects of policy on parents' decisions, net of attitudes and relationship quality at birth. And finally, the policy variables in model 3 reflect the effects of policy on family formation decisions, net of parents' relationship status at the time of the birth. Model 3 is the most conservative estimate of policy effects because the latter controls for differences in relationship status at birth.

Insofar as policies affect fertility and marriage, our sample of unmarried parents is selective of adults who are less averse to, or have a stronger taste for, nonmarital childbearing. Moreover, the selection is likely to be stronger in cities where policies are stronger. Consequently, our estimates of the effects of policy could be reflecting differential selection into Fragile Families city samples, rather than the effects of policies on post-birth behaviors. An analysis of selection into the sample and correction for it are beyond the scope of this paper. To the extent that policies affect selection into the sample, however, they should also affect and be reflected in baseline relationship statuses. Thus, controlling for baseline relationship status may be a crude way of controlling for sample selectivity. This is one more reason why we believe model 3 should be given more weight than model 1.

Main results

Table 1 reports descriptive statistics about our sample of parents that were unmarried at the time of their baby's birth ($n = 3,286$). With respect to the policy variables, the mean maximum benefit level of TANF plus food stamps in 2000 (for a family of three) is \$670 (standard deviation = \$107). The average child support effectiveness ratio (unstandardized shown here) for never-married mothers is 1.07 (standard deviation = 0.26). Finally, the average municipal unemployment rate across the 20 cities is 4.0 percent (standard deviation = 1.24).

Table 1. Sample descriptives for parents unmarried at time of baby's birth

	Percent/Mean	(SD) ¹
<i>Policy/labor market variables</i>		
Maximum TANF + food stamps in 2000 (\$100s)	6.70	(1.07)
Child support effectiveness ratio for never-married mothers	1.07	(0.26)
Municipal unemployment rate	4.00	(1.24)
<i>Background Characteristics</i>		
Mother's race		
Black non-Hispanic	55.2	
White non-Hispanic	14.6	
Hispanic	27.6	
Other non-Hispanic	2.6	
Parents are of different race/ethnicity	13.8	
Mother's age	23.83	(5.56)
Father's age	26.62	(7.12)
Family background		
Mother lived with both parents age 15	36.0	
Father lived with both parents age 15	39.2	
Parents' other children		
Parents have other biological children together	31.2	
Mother has children with another man	42.4	
Father has children with another woman	35.2	
Mother's self-reported health		
Poor	0.7	
Fair	7.8	
Good	27.9	
Very good	33.2	
Excellent	30.3	
Father's self-reported health		
Poor	0.7	
Fair	7.2	
Good	21.9	
Very good	36.8	
Excellent	33.4	
<i>Human capital</i>		
Mother's education		
Less than high school	39.8	
High school or the equivalent	34.0	
Some college or higher	26.2	
Father's education (mother report)		
Less than high school	37.9	
High school or the equivalent	38.2	
Some college or higher	23.9	

Table 1. Continued

	Percent/Mean	(SD) ¹
<i>Attitudes and relationship quality</i>		
Positive attitudes about marriage (range = 1–4)		
Mother	2.74	(0.69)
Father	2.91	(0.69)
Traditional gender role attitudes (range = 1–4)		
Mother	2.03	(0.60)
Father	2.35	(0.63)
Distrust of other gender (range = 1–4)		
Mother	2.10	(0.56)
Father	2.00	(0.55)
Frequency of church attendance (range = 1–5)		
Mother	2.90	(1.35)
Father	2.65	(1.29)
Physical violence		
Father hits/slaps (reported by mother)	4.3	
Mother hits/slaps (reported by father)	15.0	
Frequency of conflict between them (range = 1–3)		
Mother's report	1.47	(0.41)
Father's report	1.45	(0.38)
Level of supportiveness of other parent (range = 1–3)		
Mother's report about father	2.58	(0.42)
Father's report about mother	2.63	(0.38)
Substance problems (both reported by mother)		
Mother has a problem	3.5	
Father has a problem	6.2	
<i>Parents' relationship status</i>		
At time of baby's birth		
Cohabiting	48.2	
Romantically involved but living apart	34.7	
Not romantically involved	17.2	
At 1-year follow-up survey		
Married	9.1	
Cohabiting	41.1	
Romantically involved but living apart	7.7	
Not romantically involved	42.0	
Mean # of months between mother interviews	15.01	(3.42)
Unweighted number of cases (<i>n</i>)	3,286	

¹ Standard deviations on means are shown in parentheses.

The majority of unmarried parents are non-white and are in their twenties. More than a third of both mothers and fathers have one or more previous children by another partner. With respect to human capital, many parents have very low education. Mothers have relatively positive attitudes toward marriage, rather non-traditional gender-role attitudes, and moderate levels of gender distrust. Fathers are slightly more positive about marriage and traditional gender roles, and slightly less distrustful of the opposite sex; yet, this difference by gender partially reflects the fact that not all fathers were interviewed, and those who were interviewed are likely more positive about relationships than those not interviewed. With respect to parents' relationship quality, reported physical violence is rare, the average frequency of conflict is relatively low, reported supportiveness of the other parent is quite high, and substance problems are infrequent. At the time of the baby's birth, just under one-half of all unmarried parents were cohabiting, 35 percent were romantically involved but living separately, and 17 percent were no longer romantically involved. At the one-year follow-up, 9 percent of parents had gotten married, 41 percent were cohabiting, only 8 percent were in a visiting relationship, and fully 42 percent had broken up. The average length of time between the baseline and one-year surveys was about 15 months.

Table 2 shows a cross-tabulation of parents' relationship status at the birth of their baby and approximately one year later. Among unmarried

Table 2. Relationship status at birth and one year later for mothers unmarried at baby's birth

Time of birth	One year after birth of child				Cases (<i>n</i>)
	Married	Cohabiting	Visiting	Not Romantic	
Cohabiting	14.6	59.6	4.6	21.2	1,582
Visiting	5.3	32.1	14.0	48.6	1,139
Not romantic	1.4	7.6	3.9	87.1	564
Number of cases (<i>n</i>)	299	1,352	253	1,381	3,285

Notes: Based on mothers' reports. Cohabitation is measured with more detail at 1 year than at the baseline interview. At the time of the baby's birth, couples are counted as cohabiting if the mother answers "yes" to the question of whether they are living together; at 1 year, they are counted as cohabiting if the mother reports that they live together "all or most of the time" or "some of the time." Visiting couples are those who report they are romantically involved but living separately. Couples labeled "not romantic" at baseline include those who report they are "just friends" or that they "hardly ever" or "never" talk; at 1 year, this category includes those who are friends, "not in any kind of relationship" or separated/divorced.

couples, cohabiting relationships are much more stable over time than other types of relationships, including those where the parents are romantically involved but living apart. Overall, three-fourths of couples who were cohabiting at the time their child was born remain in a co-residential union about one year later – 15 percent are now legally married to each other, and 60 percent are still cohabiting. Being romantically involved but living apart at the time their child was born (which we refer to as visiting) appears to be a very unstable status: only 14 percent of parents in this category remain there one year after the child's birth. Thirty-seven percent of visitors have “moved closer” in their relational involvement – 32 percent are cohabiting, and five percent have gotten married. Yet, nearly half of those who were visiting at baseline are no longer romantically involved. (Few couples moved *into* the visiting category within one year of a nonmarital birth; this is largely because couples who are cohabiting and decide to stop cohabiting typically break up completely, and only a small fraction of all non-romantically involved couples at baseline enter a visiting relationship by one year later). Of those who were not romantically involved at the time of birth, 87 percent remain such at the one-year follow-up; surprisingly, a small but non-trivial fraction of such couples (9 percent) are now romantically involved, including one percent (eight couples) who got married.

Results from the multinomial logit models are shown in Table 3. The relative risk ratios ($\exp(b)$) are presented for ease of interpretation; a ratio equal to exactly 1.0 indicates that a given independent variable has no effect on a given dependent variable, and a ratio higher (lower) than 1.0 indicates that a given independent variable has a positive (negative) effect on the dependent variable. So, for example, the first number in column 1 of Table 3 tells us that a \$100 increase in the value of the TANF + FS benefit is associated with a 12-percent reduction in the risk of breaking up, relative to cohabiting. The second number (moving down the column) tells us that a one-unit increase in the child support enforcement measure is associated with a 7-percent (but not statistically significant) increase in the risk of breaking up.

As noted earlier, the reference category in our multinomial logit models is cohabitation. The left-most panel of Table 3 shows the likelihood that couples are no longer romantically involved at the one-year follow-up survey (i.e., are broken up). The coefficients reflect the association between increases in welfare benefits and the risk of moving from non-romantic involvement to cohabitation and moving from cohabitation to non-romantic involvement; however, according to Table 2, the former transition is rare. With respect to the policy and

Table 3. Results from multinomial logit models (odds ratios) predicting parents' relationship status at one-year follow-up (reference group = cohabiting couples)

	Non-Romantic			Visiting			Married		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
<i>Policy variables</i>									
TANF + FS benefit level (\$100)	0.879**	0.904*	0.911*	0.925	0.946	0.942	0.980	0.995	0.995
Child support effectiveness ratio	1.073	1.053	1.030	0.958	0.939	0.908	0.833 +	0.832	0.829
Municipal unemployment rate	0.972	0.958	0.958	1.004	1.006	0.987	0.896 +	0.927	0.926
<i>Background characteristics</i>									
Mother's race (reference = black non-Hispanic)									
White non-Hispanic	0.666**	0.718*	0.893	0.411**	0.478*	0.709	2.058**	2.781**	2.803**
Hispanic	0.625**	0.680**	0.802*	0.310**	0.323**	0.424**	2.084**	2.293**	2.278**
Other non-Hispanic	0.957	0.964	1.177	0.511	0.561	0.711	2.203 +	2.457 +	2.403 +
Parents are of different race	1.143	1.069	0.978	1.090	1.116	1.035	0.692 +	0.687	0.683 +
Age									
Mother's age	1.007	1.002	1.012	1.023	1.020	1.023	1.025 +	1.031*	1.032*
Father's age	0.989	0.990	0.991	0.972 +	0.972 +	0.976	1.006	1.006	1.007
Family background									
Mother in intact family age 15	0.806*	0.846	0.841	0.968	0.972	0.980	1.056	1.031	1.038
Father in intact family age 15	0.797*	0.860	0.846	1.283	1.237	1.218	0.765	0.688 +	0.684 +
Other children (reference = none)									
Parents have other children together	0.591**	0.519**	0.652**	0.885	0.826	0.992	1.080	1.158	1.149
Mother has children with another man	0.967	0.965	0.971	0.726	0.721**	0.724**	0.827	0.838	0.825

Table 3. Continued

	Non-Romantic			Visiting			Married		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Father has children with another woman	1.298**	1.269**	1.333**	1.235	1.247	1.226	0.673	0.654*	0.662*
Self-reported health status									
Mother's health	0.931 +	1.012	1.000	0.991	1.035	1.019	1.000	0.993	0.997
Father's health	1.047	1.095 +	1.091 +	0.926	0.947	0.929	1.055	1.023	1.028
Months since birth	1.041**	1.048**	1.060**	0.989	0.994	1.001	1.049*	1.056*	1.055*
Father not interviewed	2.424**	2.197**	1.284	2.103**	1.920**	1.434*	0.721	0.748	0.808
<i>Human capital</i>									
Education (reference = less than high school)									
Mother high school degree	0.807*	0.769**	0.759**	0.866	0.852	0.861	1.186	1.187	1.159
Mother some college +	0.804*	0.741**	0.731*	1.264	1.157	1.197	1.199	1.143	1.151
Father high school degree	1.064	1.123	1.127	1.299	1.226	1.233	1.047	0.999	0.995
Father some college +	1.284 +	1.386*	1.445*	1.113	1.098	1.184	1.978**	1.852**	1.816**
<i>Attitudes and relationship quality</i>									
Positive attitudes about marriage – Mother	0.956	0.993	0.993	1.056	1.056	1.073	1.600**	1.606**	1.606**
Father	0.950	0.974	0.974	1.023	1.023	1.028	1.446**	1.446**	1.436**
Traditional gender role attitudes – Mother	0.837 +	0.900	0.900	0.951	0.951	0.941	1.078	1.078	1.078
Father	0.892	0.885	0.885	1.118	1.118	1.104	0.948	0.948	0.941
Distrust of other gender – Mother	1.241*	1.180 +	1.180 +	1.145	1.145	1.169	0.643*	0.643*	0.641*

Father	0.898	0.959	0.939	0.982	0.926	0.917
Frequency of church attendance – Mother	1.078*	1.027	1.164*	1.117*	1.203**	1.203**
Father	1.100*	1.083 +	1.112 +	1.102	1.133 +	1.139 +
Physical violence						
Father hits/slaps (reported by mother)	1.195	1.013	0.220*	0.218*	1.288	1.287
Mother hits/slaps (reported by father)	0.920	1.012	0.761	0.714	0.623*	0.618*
Frequency of conflict between them						
Mother's report	1.203	1.151	1.008	1.002	0.942	0.961
Father's report	1.601**	1.539**	1.298	1.147	1.139	1.156
Level of supportiveness of other parent						
Mother's report about father	0.384**	0.555**	0.627*	0.709	1.826 +	1.788 +
Father's report about mother	0.460**	0.558**	0.608*	0.659 +	1.050	1.018
Substance problems (both reported by mother)						
Mother has a problem	1.216	1.141	1.079	1.072	1.027	1.012
Father has a problem	1.984**	1.644*	1.913*	1.755 +	1.133	1.225
Relationship at baseline (reference = non-romantic)						
Visiting		0.231**		1.249		1.253
Cohabiting		0.076**		0.295**		1.389
Pseudo R-squared	0.118	0.176	0.118	0.224	0.176	0.176
Number of observations (n)	3,188	3,188	3,188	3,188	3,188	3,188

+ p < 0.10; *p < 0.05; **p < 0.01 (two-tailed tests).

Note: Models are estimated with robust standard errors clustered on city.

labor market variables, we see that higher welfare benefits are associated with a reduced likelihood of breaking up – relative to cohabitation; there is no significant difference for visiting or marriage. Stronger child support enforcement is associated with higher break-up rates – and higher unemployment with lower break-up rates, but neither coefficient is statistically significant. These results are consistent across all three models. The middle panel of Table 3 shows results for the likelihood that couples will be in a visiting relationship (compared to cohabiting) at the one-year follow-up. While the results suggest that the effects of welfare and child support policies are in a negative direction (and inconsistent for unemployment), none of the estimates is statistically significant.

Results for the likelihood of being married at the one-year follow-up are shown in the right-most panel of Table 3. Higher welfare benefits, stronger child support enforcement, and higher unemployment all discourage marriage, but the welfare effect is close to zero and not close to being statistically significant. In model 1, the child support and unemployment effects are significant at the 6-percent and 9-percent levels, respectively. The magnitudes of the child support and unemployment effects in model 3 are similar to those in model 1, but the levels of statistical significance decline to 10 percent and 21 percent, respectively. However, because a relatively small number of parents are married or in visiting relationships at one year, the results for these two statuses are less reliable than those for being non-romantic (*vis-à-vis* cohabitation), and the coefficients are less likely to reach statistical significance.

In short, in our main analyses, we find support for the idea that welfare and child support policies, and the tightness of the labor market, have some effects on unwed couples' union-formation decisions in the first year after they have a child together. The welfare and child-support results differ from and extend previous research. Generous welfare benefits discourage couples from breaking up, compared to cohabiting. When unmarried couples have greater access to (real or potential) income from welfare, they are more likely to continue living together. Strong child support enforcement appears to discourage unwed couples from marrying within one year of a nonmarital birth, *vis-à-vis* cohabiting. The effects of unemployment are consistent with prior research, but the standard errors are very large, especially for the model that controls for baseline status. These findings are generally consistent with analyses by Mincy and Dupree (2001) of the same data. Apart from this research, however, these questions have been previously unexamined. How much confidence can be placed in our main results is discussed in the robustness section below.

Though our primary focus is on the effects of the policy variables, the effects of the demographic variables are also of interest; our results are generally consistent with the literature on divorce and marriage (where the latter have comparable variables to those available in the Fragile Families data) and very consistent with a related paper using the same data (Carlson et al. 2004). White and Hispanic mothers are less likely to break up or be in a visiting relationship, and they are more likely to be married, compared to blacks. Parents' being of different race/ethnic backgrounds is negatively related to marriage (marginal significance). Parents' fertility history has important effects on their union formation: parents who have other children together are less likely to break up, the mother's having other children reduces the risk that the couple is visiting compared to cohabiting, while father's having other children increases the risk of breaking up and reduces the risk of marriage. A longer amount of time between the baseline and one-year interviews is linked with a greater likelihood of being at the extremes of the relationship spectrum (breaking up or getting married), and non-interviewed fathers are more likely to be non-romantic or visiting, compared to cohabiting.

Not surprisingly, we find that parents' education is an important factor for family formation among unmarried parents, and we note differences by gender. Women's higher education decreases the chances of breaking up but is not linked with visiting or marriage, while men's having a college degree increases the likelihood of both breaking up and of marriage. Education does not appear to distinguish visitors from cohabitators.

Turning to the measures of parents' attitudes and relationship quality, we find that (not surprisingly) positive attitudes about marriage are strongly linked with marriage but not with the other statuses. Mothers' gender distrust increases the likelihood of breaking up – and decreases the risk of marriage, relative to cohabitation; yet, it is important to note that mothers' gender distrust may have *resulted* from fathers' untrustworthy behavior in the relationship, so this measure is not necessarily independent of relationship quality. Both mothers' and fathers' church attendance are positively related to all three statuses shown in the table, implying that all else equal, more religious couples are less likely to cohabit. Relationships where the mother reports the father is physically violent are less likely to be visiting compared to cohabiting, and where the father reports the mother is violent are less likely to be married. Fathers' reports of frequent conflict are strongly linked to a greater likelihood of breaking up, and both parents' assessments of how supportive is the other partner are associated with a lower likelihood of

breaking up. Also, when the mother reports the father is supportive, they are more likely to have moved into marriage (marginal significance). The father's having a substance problem is linked to breaking up or visiting, compared to cohabiting.

With respect to the how parents' relationship status at the time of birth relates to their relationship about one year later, those that were in some sort of romantic relationship at baseline (either visiting or cohabiting) are less likely to have broken up a year later. Cohabiting couples at birth are less likely to be visiting one year later (which is not surprising, since cohabiting couples who decide to stop living together also probably break off their romantic relationship and hence would not move into a visiting relationship).

Robustness tests

That generous welfare benefits discourage cohabiting unwed parents from breaking up, and strong child support enforcement discourages such parents from marrying, is surprising because previous literature finds that generous welfare and weak child support deter marriage. These results may not be inconsistent with previous literature because, as discussed above, new avenues of family formation effects are investigated in this study among a sample of couples who have experienced a nonmarital birth together. Still, our findings are different and, therefore, their robustness is worth investigating.

Table 4 displays the marginal effects of the coefficients of the welfare and child support variables for different measures of these two variables; to obtain these figures, we re-estimated our multinomial logit models again, holding all independent variables at their mean values. To simplify, we present only models 1 and 3. For all estimates, the model structure is the same as in the main analyses: model 1 includes the policy, background and education variables, and model 3 adds measures of parents' attitudes, relationship quality and relationship status at time of birth. We also present only the marginal effects for the welfare and child support variables which are measured differently, rather than presenting the marginal effects for all three policy/environmental variables for each variation. Empirically, we find that the other unemployment and child support estimates do not change much when we alter the welfare measure, and the welfare and unemployment rates do not change much when we alter the child support measures. The first panel shows the results from our main analysis presented in Table 3 but

Table 4. Alternative specifications of policy variables (marginal effects)

	Non-Romantic			Visiting			Married		
	Model 1	Model 3	Model 1	Model 3	Model 1	Model 3	Model 1	Model 3	
<i>Main models (odds ratios shown in Table 3)</i>									
TANF + FS benefit level (in \$100)	-0.030 **	-0.022*	-0.000	-0.000	0.003	0.002	0.003	0.002	
Child support effectiveness ratio (PUMS-based)	0.024 +	0.013	-0.003	-0.003	-0.013*	-0.008 +	-0.013*	-0.008 +	
Municipal unemployment rate	-0.004	-0.009	0.001	0.000	-0.006 +	-0.002	-0.006 +	-0.002	
<i>Welfare benefit specifications</i>									
TANF, 2-year average (in 100s)	-0.2022 **	-0.016*	0.000	0.000	0.003	0.002	0.003	0.002	
(TANF + FS)-FMR (in dollars)	0.2000	0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	
(TANF + FS)/FMR	0.2039	-0.017	0.005	0.000	0.002	0.006	0.002	0.006	
<i>Child support specifications</i>									
Effectiveness ratio (CPS-based)	0.2040 **	0.022*	-0.004 +	-0.002	-0.007	-0.002	-0.007	-0.002	
OCSE payment rate for all cases	0.2007	-0.002	0.006 +	0.003	-0.004	0.001	-0.004	0.001	
OCSE payment rate for TANF cases	0.2010	0.008	0.004	0.002	0.012**	0.009	0.012**	0.009	

+ p < 0.1; *p < 0.05; **p < 0.01.

Note: Reference group is cohabiting couples.

displays marginal effects instead of relative risk ratios. Each additional \$100 in TANF benefits is associated with a 2 percent lower break-up rate, while each point on the child support effectiveness scale is linked to a 0.8 percent lower chance of marriage.

The second panel presents three alternative measures of the generosity of welfare: maximum TANF for a family of three (without including food stamps), the absolute difference between the TANF plus food stamp benefit and the fair market rent (FMR), and the welfare benefit as a proportion of the FMR. The inclusion of the fair market rent variable is an attempt to adjust the welfare benefit for differences in cost of living across cities. The TANF-plus-food-stamps and TANF-only estimates are very similar to one another. Adjusting the welfare benefit level for differences in the cost of living produces a bigger difference in the estimates for the proportion variable, and the welfare variable now has a positive sign (but is not statistically significant).

The third panel of Table 4 shows results using three alternative specifications for the child support variables. The CPS-based effectiveness measure shows similar results to the PUMS-based measure, except that the magnitude and significance of the effect on break-ups are larger. The OCSE-based measures show somewhat different results from the main results, especially the one limited to TANF cases. This measure, which is statistically significant, suggests that strong enforcement encourages rather than discourages marriage. Although we believe the PUMS measure is superior to the OCSE measure because it is based on child support collections for never-married mothers (rather than being dominated by collections for previously married mothers), nonetheless, these results give us pause. Clearly more investigation into the most appropriate measure of child support enforcement at the local level is warranted, and various measures should be examined with a range of samples.

Conclusion

Though economic theory predicts that welfare should discourage marriage, the theoretical effects on cohabitation and romantic involvement for non-cohabitators are unclear. Similarly, theory offers no clear prediction about the direction of the effects of child support enforcement on union formation. Previous research has found that generous welfare discourages marriage and that strong child support enforcement may encourage marriage, although the findings are mixed. There is also some evidence that generous welfare may encourage cohabitation. Except for Mincy and Dupree (2001), however, no one has examined the effects of welfare on romantic involvement or of child support on either romantic involvement

or cohabitation. Finally, there is a substantial body of research that supports the hypothesis that unemployment inhibits marriage.

The research reported in this paper examines the effects of welfare and child support policies, and unemployment rates, on unwed parents' union formation decisions. For our preferred measures of welfare and child support policies, the effects appear to go in opposite directions from previous research on marriage – higher welfare benefits discourage couples from breaking up, while strong child support enforcement reduces the chances that unmarried parents will marry. Though we find that higher unemployment is associated with lower marriage, in nearly all cases the effects are small, and in no cases are the coefficients significantly different from zero. How much confidence can be placed in our overall findings? The sensitivity tests reported in Table 4 indicate that the results are sensitive to alternative measures of welfare generosity and child support enforcement stringency and that more research on the optimal method of measuring local policy regimes is warranted.

There are at least three possible mechanisms for how the child support effect (assuming it is a true effect) may be operating: first, the threat of child support may increase conflict among already precarious couples, leading them to break-up; second, potential (or actual) child support income may enable women to have the economic security to leave otherwise unsatisfying relationships (the so-called “women's independence effect”); or third, men in strong enforcement states may be more likely to have previous support obligations, thus decreasing their attractiveness (as a breadwinner) to the focal child's mother. Which (if any) of these mechanisms may be correct is a topic for future investigation.

Finally, even if both results using our preferred welfare and child support measures hold up over time, more research on the relative magnitudes of these effects, versus the previously documented effects on marriage and fertility, would be warranted before we could confidently draw any policy implications. Future research should also address the extent to which selection into the Fragile Families sample may be biasing the results.

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