**Does Joint Legal Custody Increase the Child Support Payments
of the Fathers of Nonmarital Children?**

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June 2015

Abstract

This study investigates the effects of joint legal custody on child support payments and the compliance ratio (paid/owed) among noncustodial fathers of nonmarital children who live with their mothers. We use data from the Wisconsin Court Records, and all analyses control for detailed family and case characteristics. Because cases with joint legal custody are generally more advantaged than cases with sole mother legal custody, we use a variety of statistical strategies to estimate these relationships. In regression models, we find that child support payments are about $90/year higher for cases with joint legal custody, but this relationship generally loses statistical significance in propensity score matching analyses designed to compare only similar cases. In contrast, joint legal custody is statistically associated with a higher compliance ratio of 3–4 percentage points, both in the standard regressions and in the propensity score matching models.

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INTRODUCTION

Historically, children born outside marriage had little relationship with their nonresident father; they lived with their mother, she made decisions about their care, and the father provided little or no child support. Even with significant policy changes, the relationship between children born outside marriage and their nonresident fathers is still generally shorter and more fragile than those of divorced and married fathers (Carlson, McLanahan, & Brooks-Gunn, 2008). However, maintaining a strong relationship between nonmarital fathers and their children is quite important, as the father-child relationship is associated with children's academic success, higher self-esteem, and fewer externalizing and internalizing problems (Amato & Gilbreth, 1999; Arditti & Keith, 1993).

In addition to policy changes designed to increase payment of child support, one policy effort intended to improve the relationship between nonresident fathers and their children is joint legal custody, which formally requires that decision-making for the child be shared between fathers and mothers. Prior to the mid-1990s, nearly all paternity (nonmarital) cases in Wisconsin had legal custody (decision-making power) awarded solely to the mother; very few paternity cases had joint legal custody. In 1999, Wisconsin enacted presumptive joint legal custody, that is, legal custody is to be awarded to both parents unless there is evidence supporting a different arrangement. Joint legal custody could increase the connection between nonresident fathers and their children, which could lead to an increase in child support payments.

In this paper we examine whether joint legal custody has this effect on child support payments among paternity cases in which children are placed with their mother. We examine both the dollar amount of payments, and payments as a proportion of the child support order amount (hereafter referred to as "compliance"). Although there has been some research on divorce cases, which generally finds that joint legal custody is associated with higher payments, there has been very little research on paternity cases, and these cases account for an increasing share of the child support caseload.

One of the key difficulties in exploring the effect of joint legal custody on child support payments is that the types of cases awarded joint legal custody may be substantially different from those awarded sole custody. We make three types of comparisons of payments between cases with joint legal custody and those with sole mother legal custody. First, we show the simple difference in payments between these two types of cases. Second, we present multivariate regression models that estimate the relationship between custody and payments, controlling for a variety of observed characteristics. Finally, we conduct these multivariate regression models using propensity score matching to select a smaller sample such that joint legal custody cases are similar to sole mother legal custody cases on background characteristics. If all three methods of comparison show similar results, this will increase our confidence that joint legal custody affects payments.

BACKGROUND AND PRIOR STUDIES

We first briefly explore the legal custody policy context and factors that previous research has found to be associated with different legal custody outcomes. We then highlight prior work on factors associated with child support payments and compliance, especially those few studies that have examined the relationship between joint legal custody and payments. Because there is relatively little prior research that examines paternity cases separately, we draw on literature that combines divorce and paternity cases, or that examines only divorce cases.

Legal Custody in Paternity Cases

In many states, an unmarried woman who gives birth to a child is presumed to have sole legal custody (decision-making power) and to have sole physical placement (the primary residence) of the child unless the court orders otherwise.[1] Paternity establishment in and of itself does not change the child

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[1]For example, Massachusetts, Wisconsin, and Ohio (Massachusetts General Laws, Chapter 209C, section 10; Ohio Revised Code Section 3109.042; Wisconsin Department of Children and Families, 2010). One exception is Oregon. In Oregon, whoever has physical placement of the child when paternity is established has legal custody of the child (ORS 109.175). If the father is not living with the child at paternity establishment, the mother has sole legal custody of the child unless the court rules otherwise.

custody or placement; however, when unmarried parents establish paternity or a child support order in court, legal custody and physical placement of the child can also be reviewed. Several states have imposed a statutory presumption for joint legal custody, requiring the writing of findings for a sole-custody decision (Cuadra, 2010; DiFonzo, 2014; Ver Steegh & Gould-Saltman, 2014). Wisconsin explicitly recognized joint custody in its legislation (§247.24) in the 1970s, and, as noted above, in 1999 Wisconsin enacted presumptive joint legal custody, which then became effective in May 2000 (1999 Wisconsin Act 9).

There is some research showing trends in legal custody and physical placement. Joint legal custody was a very rare outcome among paternity cases in the 1980s and into the 1990s (Seltzer, 1998), but it increased in the late 1990s prior to the presumptive joint legal custody legislation and then again after the legislation, and has been the outcome in about 70 percent of paternity cases since 2002 (Chen, 2015). Placement in paternity cases was awarded solely to the mother in virtually all cases through the mid-1990s; other placement outcomes have increased since then, but even in the most recent data, about nine in ten cases were awarded sole mother placement. In paternity cases (and also divorce cases), joint legal custody is nearly universal when parents have equal-shared physical placement (Chen, 2015). As a result, our focus in this paper is on typical paternity cases, those in which the mother is awarded physical placement.

Factors Associated with Joint Legal Custody

Broadly, joint legal custody has been found to be related to four factors. First, the policy context matters; Wisconsin's change to a presumptive preference for joint legal custody has been shown to be associated with an increase in joint legal custody (Chen, 2015). Moreover, most studies estimate that joint legal custody is more likely in states or counties that favor joint custody (Racusin, Albertini, Wishik, Schnurr, & Mayberry, 1989; Seltzer, 1998; Seltzer & Maralani, 2001), although Huang and colleagues (2003) have a different finding. Second, from a bargaining perspective, joint legal custody may be more likely when fathers have more economic resources, especially if they have more resources than mothers.

Studies consistently find that joint legal custody is more likely when the nonresident parent has more economic resources such as employment or high income (Ottosen, 2001; Seltzer, 1991, 1998; Seltzer & Maralani, 2001). A third perspective suggests that legal custody may be awarded based on the prior roles of the parents, which would maintain consistency and continuity of decision-making. Some research suggests that prior roles are important; for example, mothers who are not working full-time are more likely to receive sole custody, while father involvement prior to separation has been positively associated with the likelihood of joint legal custody (Albiston, Maccoby, & Mnookin, 1990; Ottosen, 2001; Wilcox, Wolchik, & Braver, 1998; but for research that finds no relationship see Seltzer, 1998). Relatedly, mothers or fathers who have been previously married may have multiple family demands or fill multiple roles; some research suggests that those with other commitments may be less likely to be awarded joint legal custody (Ottosen, 2001; Seltzer & Maralani, 2001). Finally, monitoring may matter; fathers with higher child support orders may particularly desire joint legal custody to have more say in how expenditures on the child are determined and to monitor these expenditures more closely (Brinig & Buckley, 1998; Del Boca & Ribero, 1998). The previous research shows that those with higher orders do have a higher likelihood of joint legal custody (Huang, Mincy, & Garfinkel, 2005; Koel, Clark, Phear, & Hauser, 1988; Seltzer, 1991) and that child support enforcement is positively linked to rates of joint legal custody (Huang, Han, & Garfinkel, 2003); both of these findings are consistent with a monitoring perspective.

Correlates of Child Support Payments and Compliance

Several articles on child support have posited that child support payments and compliance with child support orders are both related to the nonresident parent's financial ability to pay, child support enforcement, and the parent's willingness to pay support (e.g., Bartfeld and Meyer, 2003). The willingness (or desire to pay) could be driven by the child's needs, the strength of ties to the child, the relationship with the ex-partner, and the perceived fairness of the child support order (Bartfeld & Meyer, 2003; Goldberg, 2015). This framework is important in this study not only because it highlights how joint

legal custody might be related to payments—primarily through willingness to pay—but also because several of these factors could be linked to both the likelihood of joint legal custody and child support payments. Therefore, careful attention to controlling for these confounding factors will be important in identifying the relationship between joint legal custody and payments.

The empirical literature generally finds strong relationships between child support payments or compliance and the ability to pay support, typically measured by fathers' income, employment, or education (Cancian, Heinrich, & Chung, 2013; Goldberg, 2015; Nepomnyaschy & Garfinkel, 2010). Fathers' prior incarceration, which affects income (Grogger, 1995; Western, 2002) and thus ability to pay, has negative impacts on future child support paid (Nepomnyaschy & Garfinkel, 2010). The amount of payment is lower among fathers with other family obligations (Goldberg, 2015), presumably because less income remains for child support after these other obligations have been met. However, the total amount paid to all mothers is higher when there is more than one obligation (Meyer, Cancian, & Cook, 2005).

The strength of the child support enforcement system has also been found to be related to payments and compliance (Huang et al., 2003; Nepomnyaschy & Garfinkel, 2010; Pirog & Ziol-Guest, 2006). In fact, Bartfeld and Meyer (2003) describe their findings as consistent with the idea that for those nonresident parents who work in formal employment, the child support enforcement system is now so routine that they can be considered "nondiscretionary" obligors. One factor related to the child support enforcement system is the level of the child support order. Obligors with larger orders make higher payments (Meyer, Ha, & Hu, 2008; Seltzer, 1991), although orders that are "too high" compared to resources have been found to result in lower compliance (Meyer, et al., 2008; Takayesu, 2011).

Prior research has documented mixed evidence about the effect of willingness to pay. For example, the number and ages of children, which could be related to the strength of ties or to needs, show a mixed relationship with payments (Allen, Nunley, & Seals, 2011; Goldberg, 2015; Greene & Moore, 2000; Ha, Cancian, & Meyer, 2011; Nepomnyaschy & Garfinkel, 2010). A mother's re-partnering may also dampen the father's willingness to provide for his child, and a mother having a new partner is associated with a lower likelihood of formal child support payments (Berger, Cancian, & Meyer, 2012).

This brief review suggests that cases with joint legal custody may have a higher willingness to pay support. Joint legal custody is unlikely to directly affect the ability to pay, but it could increase payments among those with comparable levels of ability and facing the same child support enforcement system. Prior research generally finds positive associations between joint custody and child support payments (Bauserman, 2002; Fabricius, 2003; Kelly, 2000), although the majority of these studies focus on physical placement (Bowman & Ahrons, 1985) or do not distinguish legal custody from physical placement (Allen et al., 2011; Bauserman, 2002; Del Boca & Ribero, 1998). Moreover, many of the studies that do examine the relationship between child support and legal custody focus only on divorce cases where the mother has physical placement. Early studies that conduct simple mean comparisons show that parents with joint legal custody pay more child support or have a higher compliance ratio than those with sole mother custody (Pearson & Thoennes, 1988). Among studies using multivariate analyses, some find no evidence for the effect of joint legal custody on child support payments or compliance among cases with maternal residence (Braver, Wolchik, Sandler, Sheets, Fogas, & Bay, 1993; Gunnoe & Braver, 2001; Lin, 2000; Meyer & Bartfeld, 1996; Peters, Argys, Maccoby, & Mnookin, 1993; Seltzer, 1991, 1998), whereas others find joint legal custody is associated with higher child support payments (Huang et al., 2003; Sonenstein & Calhoun, 1990). One study estimates a negative association between joint legal custody and child support payments (Arditti & Keith, 1993). In contrast, one study comparing divorced parents in a state without a legal custody presumption with those in a neighboring state where the presumption for joint legal custody was fully implemented shows that parents with joint legal custody pay more child support than those with mother legal custody (Douglas, 2003).

Summary of Prior Research

Although some studies have examined the characteristics of those with joint legal custody, and the relationship between joint legal custody and child support payments, research on joint legal custody remains somewhat limited. One challenge of estimating the effects of joint legal custody is to adjust for all relevant characteristics associated with both legal custody and child support payments. Another

challenge is that some parents voluntarily choose joint legal custody, and the estimation of the effects may not be disentangled from influences of the parents' pre-existing characteristics (Ferreiro, 1990). Several statistical techniques have been employed to try to address these problems, including instrumental variable approaches (Huang et al., 2003), exploiting state variation in custody laws (Allen et al., 2011), or using county differences in the implementation of custody policy (Seltzer & Maralani, 2001). No study that we are aware of has tried to compare joint legal custody cases with sole mother legal custody cases with a matched sample or exclusively with paternity cases.

Our study makes distinct contributions by adding an under-researched and growing population, paternity cases, to the body of the literature on the effects of custody on payments. Moreover, it uses unique paired data on mothers and fathers and advanced statistical approaches to correct for selection bias for cases with joint legal custody.

DATA AND ANALYSIS PLAN

Data and Sample

This study uses data from the Wisconsin Court Record Data (CRD), a random sample of court cases involving minor children filed in 21 Wisconsin counties. We use cohorts 21 to 29, which includes cases coming to court from July 2000 through June 2009, the period after joint legal custody was presumptive.[2] The CRD includes a range of factors that the court could consider in determining custody, placement, and a child support order; in addition to other case, child, and parent characteristics. Data from the court record are merged with administrative data on child support (including orders, payments, and arrears) and the state's unemployment insurance (UI) wage records between 1995 and 2013. Weights are used to account for a sampling strategy in which smaller counties are overrepresented.

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[2]Each cohort includes cases in which parents or the state requested a court action between July of one calendar year and June of the following calendar year. No data were collected for Cohort 22, July 2001 through June 2002. Cases prior to the presumption were collected; however, most of these cases were collected during periods in which joint legal custody was awarded to very few paternity cases, making it difficult to draw comparisons.

The administrative data offer several important advantages. First, they have accurate information on legal custody and physical placement arrangements, child support orders and payments, and earnings. In contrast, large-scale national surveys often have reporting bias. For example, nonresident parents in traditional surveys underreport their earnings (Hotz & Scholz, 2001) and may overstate their child support payments due to social desirability. Second, the court records and administrative data possess unique data on both parents; nonresident parents are generally undercounted in survey data since they do not live with the children and thus are not identified as parents (Coley, 2001). Finally, attrition typical in longitudinal surveys is not present in the administrative data. On the other hand, the UI wage records do not include informal earnings, unearned income, or income of family members; nor do they cover individuals who work in states other than Wisconsin, or certain types of employment. [3] Therefore, they are incomplete measures of economic resources.

To isolate the effect of legal custody on child support payments, this study focuses on paternity cases that have a child support order, and where the mother has physical placement more than half of the time.[4] Cases in which physical placement is equally shared between the parents are not included because they nearly always have joint legal custody. This is an appropriate strategy if the physical placement decision is made first, and then a legal custody decision is made in light of the physical placement arrangement.

We begin with all paternity cases in the court records in cohorts 21 to 29 in which the court record shows the parents are living apart and in which there is one year of observation after the first child support order for a child aged 17 or less ($N = 6,430$). We eliminate 1,287 ineligible cases to focus on legal

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[3]Specifically, self-employed persons (most independent contractors), military personnel, federal government workers, railroad employees, some part-time employees of nonprofit institutions, employees of religious orders, and some students employed by their schools are not included (Hotz & Scholz, 2001).

[4]Mother physical placement includes mother-sole and mother-primary physical placement. Mother-sole physical placement allows fathers to spend 0–24 percent of overnights with their children; fathers with mother-primary physical placement can spend 25–49 percent of the overnights. However, among paternity cases with mother physical placement, fewer than 3 percent are awarded mother-primary physical placement; the vast majority of cases are mother-sole physical placement.

custody among cases in which the mother was awarded physical placement.[5] Because we are examining the father's payments compared to his child support order over the first year of the order, we also eliminate 1,007 cases that do not have a child support order in effect for a year or we cannot ascertain the amount due.[6] To sharpen the analysis, we also eliminate 292 cases with difficulty determining the father's income[7] and (in the base model) 639 cases in which there is more than one child.[8] The final sample for this study is 3,205 paternity cases.

Measuring Child Support and Independent Variables

The outcomes of interest in this study are child support payments and compliance. We measure child support paid by adding all monthly amounts paid on current support to this ex-partner over a 12-month period starting in the first month in which the order is in effect. The compliance ratio is calculated as the amount paid in current support over the year divided by the amount due in current support. A few parents pay substantially more than the amount due on an annual basis; we top-code child support compliance to be 2.0, which affects only 5 cases.

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[5]Exclusions include 737 cases in which information on legal custody is missing when a child support order is set, and 550 cases that were not awarded mother physical placement at paternity establishment. In this study, physical placement is measured at the time of paternity establishment, which may occur before the first child support order. However, in 89 percent of the cases the child support order is set at the time of paternity establishment, rather than in a separate, later court action. For the remaining 11 percent of the cases, there is little evidence that physical placement changes between the paternity establishment date and the first order date.

[6]Exclusions include 690 cases in which parents do not have an order, or have a zero order; 259 cases in which both parents owe child support in the first year; 35 cases in which we are unable to determine the precise amount due (percentage-expressed orders); and 23 cases in which the order was in effect for less than 12 months.

[7]We assume that earnings are an acceptable approximation of income. We exclude 30 cases in which we are unable to determine earnings in the administrative record because the fathers' Social Security number is unknown, making matching impossible. We also exclude 262 fathers who have no UI earnings data at any point between 1995 and 2013 and there is no income data in the CRD. These fathers might be out of state, in prison, self-employed, working in uncovered employment, or not working.

[8]In most (89 percent) court cases in which the records show that the couple had multiple children together, the court case was filed for only the youngest child. These parents had already established paternity and/or child support orders in court for their first child. The determination of placement, legal custody, and payments for this group is likely to differ from how these are considered when there is only one child. In addition, these parents may have been sampled in previous cohorts. Therefore, we eliminate these 639 cases to improve the focus of this study; these cases are included in a sensitivity test.

In our models, all variables are either measured as of a specific point in time or aggregated to cover a year. We use annual amounts of child support orders, payments, arrears, and earnings (all in 2013 dollars). We draw earnings information from the UI wage records and sum these wages across four quarters in the first year of the order for models predicting child support payments and compliance. Annual earnings in the year prior to establishment of the support order is used instead in the propensity score models (this method will be discussed below). For cases with no earnings in the UI records, we use annual income from the CRD where present; this gives data on income for about 30 percent of the cases with missing information.[9] We obtain administrative records on fathers' Supplemental Nutrition Assistance Program (SNAP) participation and incarceration, and on mothers' Temporary Assistance for Needy Families (TANF) and SNAP receipts in any month during the first year after the child support order went into effect (or in the prior year for the propensity score models). Never-married parents may also have birth-related costs (known as "lying-in" costs) recorded in the court action that sets their first child support order, and these are part of the amount owed by the noncustodial parent. To account for retroactive orders and lying-in costs, we include the arrears balance at the time of the order.[10]

Characteristics of parents and children are drawn from data on the court action that sets the child support order, including visitation awards, gender and number of children, age of the child, income of each parent, whether either parent has children by a partner other than the mother or father in this case, year and county in which the order was established. In our base models the type of the visitation arrangement is controlled. Types of visitation awards include reasonable visitation, visitation as parents agree, generous visitation, scheduled visitation, restricted visitation, no visitation allowed, missing, or

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[9]For cases still missing, we code these cases as having zero income and mark them with an indicator variable for missing. We prioritize annual earnings from the UI wage records over income information in the CRD because the CRD frequently has missing income information. We have tested using the maximum value of CRD monthly gross income and annual wages and found no difference in the key results.

[10]For cases with child support arrears at the establishment of the orders, lying-in costs account for 85–90 percent of the arrears.

another arrangement. We group the first three types into one group which we call "unscheduled" because they are at a minimum reasonable visitation with no structured format set.[11]

ANALYSIS PLAN: THREE COMPARISONS

This study aims to assess whether joint legal custody is associated with nonresident fathers paying more child support through three types of comparisons. For each comparison, we focus only on fathers whose child lives with their ex-partners (mother physical placement).[12] Our first comparison simply documents the differences in average payments and the average compliance ratio for cases with joint legal custody and cases with sole mother legal custody. However, as discussed above, cases with joint legal custody and cases with sole mother legal custody may differ in a number of ways. We begin the next analysis by comparing the case characteristics of those with joint legal custody and the other cases. Large observed differences between cases with joint legal custody and sole mother legal custody would mean that it is important to control for these observed factors in the estimation of custody effects.

Our second comparison controls for observed factors that differ between joint legal custody and sole mother legal custody as well as other variables that could affect payments. These models are standard OLS regressions of payments and the compliance ratio.[13] The OLS regression essentially compares child support payments and compliance between those with and without joint legal custody, holding other

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[11]Another reason for this categorization is the distribution of award types; parents in less than 1 percent of all cases were awarded generous visitation; visitation as parents agree was awarded in about 8 percent of all cases.

[12]This approach can be criticized for its conditioning upon physical placement and having a child support order because these characteristics (physical placement and a child support obligation) may affect the amount of financial contribution made by parents. However, because many cases with equal-shared or father physical placement do not have child support orders (Meyer et al., 2005), it is empirically challenging to estimate the effects of legal custody for these parents, even if joint legal custody would theoretically increase payments if they had an order. Also, the estimated effect of legal custody could be biased for this group. By focusing on mother physical placement we are able to reduce the degree of selection on having a child support order, although the results can only be generalized to cases with mother physical placement.

[13]Other types of analyses could also be conducted. For example, we could examine whether anything was paid or whether orders were paid in full, using a logit, probit, or linear probability model. The model of the amount paid could use a tobit to reflect that many cases do not pay at all. Or the compliance ratio could be modeled with a two-sided tobit to reflect that some cases do not pay while others pay the full amount. We have focused this report on the two dependent variables that seem most important, the dollar amount paid and the compliance ratio. We use a straightforward OLS model of the compliance ratio because it facilitates interpretation. Alternative models generally have results that lead to similar conclusions, and these results are available upon request.

variables constant. As such, it is an improvement over our first, simple comparison. However, the regression approach neglects the possibility that certain parents would never be awarded joint legal custody. In the next analysis, we conduct our third comparison, comparing cases matched on observed characteristics to be more comparable.

Propensity Score Matching

The idea behind propensity score matching is to limit the sample to only those joint legal custody cases that are comparable to cases with sole mother legal custody. Propensity score matching requires two steps. The first step is to estimate the probability (propensity) of joint legal custody for all eligible cases. We use a logit analysis and include confounding variables that are thought to be associated with both the awarding of joint legal custody and payments, and also variables associated with payments but not joint legal custody (Brookhart, Schneeweiss, Rothman, Glynn, Avorn, Stürmer, 2006; Ho, Imai, King, & Stuart, 2007). The results of this analysis can be used to calculate the probability that a case would be awarded joint legal custody. We then select cases with joint legal custody that are similar to cases with sole mother custody in the propensity scores, using several matching algorithms.[14] This procedure eliminates cases for which a match cannot be found, consistent with the idea of only including comparable cases in the analysis.

In the second stage of the matching analysis, we use the matched sample to conduct both simple comparisons of child support payments and the compliance ratio, and multivariate analyses for the two outcomes (Bang & Robins, 2005; Robins & Rotnitzky, 2001).

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[14]We use the nearest-neighbor algorithm without replacement and a caliper equal to one quarter of the standard deviation of the predicted log odds as our base algorithm. The sample size of cases with mother legal custody is substantially smaller than the number of cases with joint legal custody; therefore, we prefer to implement matching without replacement to avoid using the same case with mother legal custody too many times for a case with joint legal custody (as recommended by Caliendo & Kopeinig, 2008). We compare results from this base approach with those yielded with other propensity score matching algorithms, including using propensity scores as weight, matching with replacement and varying the caliper.

Sensitivity Tests

The first two sensitivity tests change the sample considered. In our first test, we exclude cases from the two earliest cohorts, cohort 21 (July 2000 through June 2001) and cohort 23 (July 2002 through June 2003). The rationale for this test is that it may have taken some time for courts to apply the presumption for joint legal custody relatively consistently. Limiting the sample to focus on cases after an early implementation period may result in an improved ability to predict legal custody, or the possibility of better matching of the joint legal custody with sole mother legal custody cases. In this test, we recalculate the probabilities of joint legal custody and then apply the new propensity scores to obtain a new matched sample for analysis. In our second test we return to the base sample years (July 2000 through June 2009) but add multiple-child cases. This is an appropriate model if the process of determining legal custody is similar between multiple-child paternity cases and one-child cases.

In our third sensitivity test, we drop fathers' characteristics from both the first-step model predicting joint legal custody and the models comparing payments between joint legal custody and sole mother custody cases. This test helps us to understand how our estimates compare with a variety of previous studies that do not include these variables (because they have data only on custodial mothers). In our fourth and final test, we exclude the visitation variables to increase the comparability of our results to other research.

RESULTS

Comparison 1: Simple Comparison of Payments between Joint Legal and Sole Mother Legal Custody (and Other Results)

The first column of Table 1 summarizes characteristics for all cases in the base sample. Child support payments were fairly low, averaging less than $2,000, and the average father paid 51 percent of the order. At the time of the first child support order, fathers already owed an average of $1,181. Fathers had low income, averaging less than $15,000, but still earned more than mothers, who had an average income of about $10,500. Within couples, relatively few cases had similar incomes (11.2 percent); fathers

Table 1: Descriptive Information on All Cases and by Custody Type and Model Predicting Joint Legal Custody

	All Cases Mean	Sole Mother Legal Custody Mean	Joint Legal Custody Mean	Statistical Significance Level of Difference	Logit for Joint Legal Custody Coeff.	Std. Err.
Child support payment	**$1,926**	**$1,401**	**$2,155**	***		
Compliance ratio	**0.512**	**0.396**	**0.562**	***		
Child support order (in $10,000 in logit)	$2,927	$2,645	$3,050	***	0.975*	0.534
Child support arrears (in $10,000 in logit)	$1,181	$1,248	$1,152		-1.467 ***	0.354
Father's and mother's income and benefits						
Father's income (in $10,000 in logit)	$14,950	$11,197	$16,590	***	0.042	0.079
Father's income squared (in $10,000 in logit)					0.001	0.002
Mother's income	$10,582	$10,594	$10,577			
Mother's income/total income	0.484	0.553	0.454	***		
Mother's income > 1.2 father's income	0.404	0.499	0.362	***	-0.336**	0.161
Mother's income similar to father's income	0.112	0.102	0.116			
Mother's income < 0.8 father's income	0.485	0.400	0.522	***	-0.194	0.168
Missing father's income	0.229	0.334	0.183	***	-0.450***	0.086
Missing mother's income	0.176	0.184	0.173		-0.031	0.172
Father's SNAP receipt	0.133	0.164	0.120	**	-0.251	0.181
Mother's SNAP receipt	0.651	0.641	0.655		0.223**	0.093
Mother's TANF receipt	0.407	0.393	0.413		0.024	0.062
Father incarceration	0.255	0.330	0.223	***	-0.367***	0.101
Visitation arrangements						
Unscheduled visitation	0.698	0.530	0.771	***		
Scheduled visitation	0.148	0.068	0.183	***	0.441***	0.160
Restricted visitation	0.035	0.075	0.018	***	-1.853***	0.394
No visitation allowed	0.036	0.077	0.017	***	-1.909***	0.323
Other or unknown arrangement	0.084	0.250	0.011	***	-3.558***	0.641

(table continues)

Table 1, continued

	All Cases Mean	Sole Mother Legal Custody Mean	Joint Legal Custody Mean	Statistical Significance Level of Difference	Logit for Joint Legal Custody	
					Coeff.	Std. Err.
Characteristics of children						
One boy	0.452	0.466	0.447		0.040	0.062
One girl	0.471	0.461	0.475			
One child, gender missing	0.077	0.073	0.078		0.043	0.099
Child's age	1.789	2.223	1.599	***		
Child older than 2 years old	0.248	0.316	0.218	***	-0.644***	0.189
Characteristics of parents						
Father has other children	0.239	0.276	0.223	**	-0.055	0.121
Mother has other children	0.109	0.081	0.120	**	0.391**	0.190
Both have other children	0.133	0.100	0.147	**	0.443***	0.075
Neither has other children	0.519	0.542	0.509			
Father's age	27.325	27.732	27.147	*	-0.026***	0.007
Years father is older than mother	2.450	2.602	2.383			
Father's is older than mother by 8 years	0.108	0.129	0.099	*	-0.136	0.257
County						
Milwaukee	0.575	0.564	0.579		0.486*	0.271
Other urban county	0.346	0.330	0.353			
Rural county	0.080	0.106	0.068	***	-0.518	0.353
Number of actions required to set an order	1.121	1.127	1.118		0.177	0.118

(table continues)

Table 1, continued

	All Cases Mean	Sole Mother Legal Custody Mean	Joint Legal Custody Mean	Statistical Significance Level of Difference	Logit for Joint Legal Custody	
					Coeff.	Std. Err.
Cohort						
Cohort 21	0.150	0.226	0.116	***	-0.866***	0.292
Cohort 23	0.134	0.142	0.131		-0.125	0.146
Cohort 24	0.125	0.112	0.131		-0.153	0.159
Cohort 25	0.132	0.104	0.144	***	0.063	0.122
Cohort 26	0.131	0.129	0.132		-0.115	0.344
Cohort 27	0.105	0.088	0.112	*	0.151	0.170
Cohort 28	0.114	0.104	0.119		-0.101	0.168
Cohort 29	0.109	0.095	0.116			
Intercept					1.947***	0.349
Sample size	3,205	1,021	2,184		3,205	
Log-likelihood					-11,077	

Notes: Income squared is calculated as $(income/10,000)^2$. The compliance ratio is top-coded at 2.0. Economic characteristics including annual income, program participation, and incarceration are retrieved from data 12 months prior to the establishment of the child support order. All statistics in this table, including the logit coefficients, use sampling weights. Standard errors in the logit model are clustered by county.
* Difference is significant at $p < 0.1$.
** Difference is significant at $p < 0.05$.
*** Difference is significant at $p < 0.01$.

were most likely to have substantially more income than mothers. Other characteristics also showed significant levels of disadvantage for one or both parents, with about a quarter of fathers incarcerated in the prior year and nearly two-thirds of mothers having received SNAP. The average age of children in the sample was between one and two years. Fathers were on average older than mothers by two years. In about half the cases, neither parent had children with another partner, but when it did occur, it was more likely for the father than the mother. Visitation arrangements were scheduled for only about 15 percent of the cases; the most common category of visitation was unscheduled.

The next columns of Table 1 show characteristics of cases with sole mother legal custody (column 2) and those with joint legal custody (column 3), along with the results of tests of whether the characteristics of those with different legal custody types are statistically different (column 4). During our period (July 2000 through June 2009), joint legal custody was awarded in about 70 percent of paternity cases.

Our first comparisons, in which no other variables are controlled for, show that cases with joint legal custody paid on average $2,155, compared to $1,401 for those with sole mother legal custody; the difference of about $750 per year is statistically significant ($p < .01$). Although nonresident parents with joint legal custody had larger orders than those with sole mother legal custody, they paid a higher proportion of their orders; parents with joint legal custody paid on average 56 percent of their order, compared to 40 percent for those with sole mother custody ($p < .01$).

Table 1 also shows that cases with joint legal custody differ from those with sole mother legal custody on a number of parental characteristics, suggesting that further analysis controlling for these characteristics is warranted. Some of the differences are consistent with a bargaining framework; fathers with joint legal custody had higher income, both in absolute terms and relative to the mothers' income, than those in cases with sole mother legal custody. However, we note that more fathers in sole mother custody than joint legal custody cases are missing income data, possibly because they have less formal income and are more economically disadvantaged, or they live in another state and thus are less likely both to have in-state earnings and to be given joint legal custody. Also consistent with the bargaining

perspective, cases with sole mother custody were more likely to include mothers with markedly higher income than fathers.

There are no direct measures of the quality of parent-child relationships in the CRD. However, several of the characteristics associated with joint legal custody may reflect stronger relationships between parents and children. For example, fathers who have stronger ties to their children may be more likely to be awarded scheduled or unscheduled visitation, and as Table 1 shows, fathers with these visitation arrangements were more likely to have joint legal custody.[15] Joint legal custody cases were also more likely to involve a younger child, perhaps reflecting a stronger desire for fathers to be involved early on.[16]

Finally, Table 1 shows the results of a multivariate model predicting joint legal custody. The results document significant differences between cases with joint legal custody and sole mother legal custody, which are generally similar to the bivariate relationships shown in the other columns of Table 1. For example, the logit model for joint legal custody shows that there was a higher likelihood of joint legal custody among cases with higher child support orders, those in which the father had not been incarcerated and those with younger children. Similar to the descriptive differences, joint legal custody was less common when mothers had substantially more income than fathers, and when the father's income is missing. Visitation arrangements are shown to be important; cases with scheduled visitation were most likely to have joint legal custody, followed by cases with unscheduled visitation, and these in turn were more likely to have joint legal custody than those with restricted, no visitation, other, or unknown arrangements. Cases in which the mother, but not the father, has had a child with a different partner were more likely to be awarded joint legal custody, perhaps because the father's bargaining position is

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[15]Among all cases, the vast majority (over 97 percent) of cases with "other" arrangements are those that are missing information on visitation awards. Cases with joint legal custody are more likely to have non-missing visitation arrangements, whereas missing visitation is much more common among sole-custody cases.

[16]The child's age is 1.90 among cases with mother legal custody and 1.38 for those with joint legal custody at the petition of the first court action. Therefore, this age difference is not due to the amount of time it takes for parents to establish a child support order in court.

stronger. Somewhat surprisingly, those cases in which both parents have children with other partners were more likely to be awarded joint legal custody than if neither parent has other children. The last panel shows that those in cohort 21 were less likely to have joint legal custody than those in cohort 29, but there were no differences between the intervening cohorts (23 to 28) and the last (cohort 29).

We use this specification to estimate the propensity scores for matching because it achieves a close balance between cases with and without joint legal custody on observed characteristics. Appendix 1 shows the result of our base matching method. This method results in a sample of 798 cases with joint legal custody and 798 with sole mother legal custody. Only two characteristics (both related to visitation arrangements) show significant differences between cases with and without joint legal custody in the matched sample. Although it would be better to have achieved a total match (no characteristics statistically different), having only two characteristics that differ means considerable balance has been achieved.

<u>Comparison 2: Comparison of Payments between Joint Legal and Sole Mother Legal Custody, Controlling for other Characteristics in a Multivariate Framework</u>

As Table 1 showed, the characteristics of cases with joint legal custody differ from those with sole mother legal custody in several ways; those with joint legal custody were more advantaged on several dimensions. This makes it important to control for these factors. Table 2 summarizes results from OLS regressions for child support payments and the compliance ratio, which control for orders, arrears, visitation awards, and both parents' economic characteristics in the first year after order establishment and demographic characteristics at order establishment. In the payment model, parents with joint legal custody paid more child support than parents with mother custody by a statistically significant $90 a year, which is substantially lower than $754, the simple mean difference between groups in Table 1.[17]

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[17]Most of the decline comes from controlling for the order amount. In a model with only an intercept and the variable for joint legal custody, the coefficient on joint legal is $754 (the simple difference); adding in a variable for order amount, the coefficient on joint legal declines to $352; after adding all the control variables shown, the coefficient is $490. Both Table 1 and Table 2 summarize the weighted statistics. In all of these models, the standard errors are clustered by county to address correlations among cases in the same county court.

Table 2: Joint Legal Custody, Child Support Payments and Compliance

	Child Support Payments		Compliance Ratio	
	Coeff.	Std. Err.	Coeff.	Std. Err.
Joint legal custody	90**	33	0.036***	0.011
Child support order (in $10,000)	6652***	718	**-0.010**	**0.101**
Child support arrears (in $10,000)	480***	126	0.155***	0.023
Father's income (in $10,000)	500***	43	0.104***	0.005
Father's income squared (in $10,000)	-11***	0	-0.002***	0
Relative income (compared to similar incomes)				
Mother's income > 1.2 father's income	-100***	30	-0.095***	0.011
Mother's income < 0.8 father's income	123***	32	0.054***	0.007
Father's SNAP receipt	-116***	37	-0.090***	0.006
Mother's SNAP receipt	-131***	41	-0.051***	0.014
Mother's TANF receipt	-70***	22	-0.044***	0.007
Father incarceration	-247***	74	-0.155***	0.035
Visitation arrangements (compared to unscheduled)				
Scheduled visitation	133***	34	0.081***	0.007
Restricted visitation	182*	96	0.081*	0.041
No visitation allowed	-106	73	0.007	0.029
One boy	25	23	-0.002	0.008
Child older than 2 years old	-36	52	0.001	0.012
Children with other partners (compared to neither parent having children with other partners)				
Father has other children	-225*	119	-0.065**	0.025
Mother has other children	-221***	25	-0.029***	0.005
Both have other children	-145	117	-0.053***	0.018
Father's age	13**	6	0.005***	0.001
Years father is older than mother	-9**	4	-0.004**	0.001
Region (compared to urban counties not Milwaukee)				
Milwaukee	-8	51	-0.032*	0.017
Rural county	132	83	0.076***	0.025
Number of actions required to set an order	-47	51	-0.030*	0.015

(table continues)

Table 2, continued

	Child Support Payments		Compliance Ratio	
	Coeff.	Std. Err.	Coeff.	Std. Err.
Cohort (compared to cohort 29)				
Cohort 21	-362***	69	-0.102***	0.018
Cohort 23	-299***	81	-0.095***	0.017
Cohort 24	-150***	51	-0.065***	0.02
Cohort 25	-170***	45	-0.071***	0.02
Cohort 26	-362***	47	-0.120***	0.015
Cohort 27	-234***	57	-0.087***	0.013
Cohort 28	-121**	47	-0.065***	0.012
Intercept	-599***	168	0.521***	0.062
R-squared	0.827		0.567	
Sample size	3,205		3,205	

Notes: Income squared is calculated as $(income/10,000)^2$. Model also includes indicator variables for missing father's income, mother's income, child gender, and missing (and other) visitation arrangements. Economic characteristics including annual income, program participation, and incarceration are retrieved from data 12 months prior to the establishment of the child support order. The OLS models are weighted. Standard errors are clustered by county.
*Difference is significant at $p < 0.1$.
**Difference is significant at $p < 0.05$.
***Difference is significant at $p < 0.01$.

Similarly, on average, fathers with joint legal custody paid a higher proportion of the child support they owe by 3.6 percentage points, compared to a difference of 16.6 percentage points in Table 1.

Table 2 also provides some information on other correlates of child support payments and the compliance ratio. The father's ability to pay support, measured by his income, strongly and consistently predicts both child support payments and the compliance ratio. The relationship between child support payments and fathers' income is nonlinear; the marginal effect of income is decreasing. From an enforcement perspective, fathers with higher orders are supposed to pay more child support, and they do; however, the coefficient suggests they still pay only about two-thirds of each dollar owed, all else equal. There is no relationship between order amounts and the compliance ratio. These findings are generally consistent with prior evidence. Whether a father has been incarcerated has a direct effect on his labor force participation and thus lowers his ability to pay support; it is negatively associated with both payments and compliance. Fathers receiving SNAP also pay less and comply with their orders less. Mothers on welfare are likely to be paired with disadvantaged fathers; therefore, mothers' receipts of either TANF or SNAP are negatively correlated with both the amount paid and compliance.

Prior research shows mixed support for the idea that fathers with higher willingness to pay child support actually pay more. Fathers who have incomes much lower than the mothers may be less willing to pay, and Table 2 shows that both payments and compliance were lower for these cases than for cases with similar incomes. Similarly, fathers are more likely to pay when they have substantially more income than the mothers, than when they have similar incomes. Fathers who have scheduled visitation pay and comply more than those with unscheduled visitation, perhaps because their scheduled arrangements increase contact with the child, which has been shown to be related to payments. Surprisingly, those with restricted visitation also pay and comply more than those with unscheduled visitation. In general, fathers who have had children with other partners pay and comply less, perhaps because there are more demands on their economic resources or because they are less connected. Fathers also pay and comply less when mothers have had children with other partners, perhaps because they are less connected to these mothers. Older

fathers pay more, although the number of years by which they are older than the mother is negatively associated with payment amount.

In summary, our second comparison shows that fathers with joint legal custody pay more, both in absolute terms and compared to their orders, than fathers in cases with sole mother legal custody, even after we control for a variety of differences between the two types of cases.

<u>Comparison 3: Comparison of Payments between Joint Legal and Sole Mother Legal Custody in a Matched Sample</u>

The first two rows of Table 3 repeat the results from the first two methods of comparing the payments and compliance of cases with joint legal custody and those with sole mother legal custody. The remainder of Table 3 focuses on the propensity score matching results. Propensity scores of joint legal custody are first estimated with the logit regression specification and measures from Table 1. These propensity scores (PS) are then used either to weight all cases (Row C of Table 3) or to select more comparable samples (Rows D1-D4 of Table 3). Row C shows a statistically significant difference in the compliance ratio, but not in the dollar amount of payments; fathers in cases with joint legal custody are predicted to have a 2.5 percentage point higher compliance ratio.

In the remaining rows, different propensity score matching algorithms are used. In row D1, 1,596 cases are used, 798 with joint legal custody and 798 with sole mother legal custody, with our base matching algorithm that tries to ensure that these two groups are comparable. Row D1 shows the simple difference in payments and the compliance ratio among these matched cases, with no characteristics explicitly controlled for. Similar to the results in row C, cases with joint legal custody have significantly higher compliance ratios than those with sole mother custody, by 4.2 percentage points, but there is no statistically discernible relationship between joint legal custody and the dollar amount of payments.

Row D2 uses the same sample as row D1 (generated through our base matching method), but here we show results from OLS regressions with the same full set of controls as in Table 2 (for simplicity, we only show the coefficients on joint legal custody in this table). Adding in these control variables does not change the results for joint legal custody; it is still associated with a higher compliance ratio, but not a

Table 3: Propensity Score Matching Models Compared to Other Models

Method	Algorithm	Child Support Payments		Compliance Ratio		Sample Size
		Coeff.	Std. Err.	Coeff.	Std. Err.	
A. Descriptive difference (Table 1)		754***	119	**0.166*** **	**0.037**	3,205
B. Regression, all controls (Table 2)		90**	33	**0.036*** **	**0.011**	3,205
C. Regression, all controls, with propensity scores as weights		50	42	**0.025** **	**0.012**	3,205
D. Propensity score matching models						
D1. Descriptive difference	NN, no replacement, 1/4σ	36	90	**0.042** **	**0.019**	1,596
D2. Regression, all controls	NN, no replacement, 1/4σ	96	59	**0.043*** **	**0.010**	1,596
D3. Regression, all controls	NN, no replacement, 1/2σ	93*	47	**0.026** **	**0.012**	1,596
D4. Regression, all controls	NN, replacement, 1/4σ	30	61	**0.020**	**0.024**	2,806

Notes: In the nearest-neighbor matching algorithm (denoted as NN), we calculate the probability of joint legal custody for every case; then for every case with joint legal custody we select from among the cases that have mother legal custody the case with the closest probability (a matched case). "No replacement" means that each time we select a matched case, we eliminate that case from the pool of other possible matches. ("Replacement" means matched cases are available to be matched multiple times.) We also set a maximum for how similar the probabilities of joint legal custody must be to consider it a "good match;" for example, the denotation of "1/4σ" indicates that matches must be within one-quarter of a standard deviation of the predicted log odds of joint legal custody.

* Difference is significant at $p < 0.1$.

** Difference is significant at $p < 0.05$.

*** Difference is significant at $p < 0.01$.

detectable difference in the dollar amount of payments. The next row also shows the results of OLS models with controls but on a matched sample generated through a different matching algorithm that allows larger differences between custody types (this method happens to generate the same number of cases). In this method, joint legal custody is associated with both an increased dollar amount of payments and an increased compliance ratio. Finally, we show results for a sample generated through matching with replacement; although this method results in a larger sample, the relationships between joint legal custody and the dependent variables are not statistically significant.

In summary, Table 3 shows that under the matching methods, joint legal custody is associated with the dollar amount of payments in only one model; in contrast, it is associated with increased compliance in every model but one.

Sensitivity Test Results

Finally, we conduct several sensitivity tests to examine whether different populations or the omission of key variables affects the results. The first row in Table 4 shows results from the OLS regressions on the matched sample (under our chosen base algorithm, row D2 of Table 3) for comparison purposes. The first sensitivity test recognizes that it may have taken some time for the courts to use the presumption for joint legal custody more routinely. For this test, we exclude cases that entered the court system in the first few years after the 2000 policy change, instead using only cases decided between July 2003 and June 2009 (cohorts 24 to 29). These results are quite consistent with the base results; joint legal custody is associated with an increase in the compliance ratio but not the dollar amount of payments. The next row returns to the base period and adds cases with multiple children (in addition to the one-child cases in the base sample). These models show statistically significant relationships between joint legal custody and both payments and compliance.

The final rows show an assessment of whether the results are changed by separately omitting father's information and visitation awards, both in the first-stage propensity estimation, and in the second-stage models for payments and compliance. These two tests generally show larger effects than those from

Table 4: Sensitivity Tests, Regressions with the Matched Sample

	Payments		Compliance Ratio		Sample
	Coeff.	Std. Err.	Coeff.	Std. Err.	Size
A. Base (Table 3, Row D2), all cohorts, one-child cases	96	59	0.043***	0.01	1,596
B. Different populations					
B1. Cohorts 24–29, one-child cases	21	95	0.037***	0.011	1,112
B2. All cohorts, including multiple-child cases	125**	51	0.049***	0.016	1,800
C. Alternative specifications					
C1. Base, father's characteristics dropped	222***	63	0.096***	0.019	1,600
C2. Base, visitation awards dropped	117**	43	0.041**	0.018	1,954

Notes: In rows C1 and C2, father's characteristics and visitation awards are excluded from both the models of payments/compliance and the model of joint legal custody used to generate the propensity scores.
* Difference is significant at $p < 0.1$
** Difference is significant at $p < 0.05$
*** Difference is significant at $p < 0.01$.

the models that include all of the variables available to us in the court records. In particular, row C1 suggests that prior research that had information only from custodial mothers is likely to overstate the relationship between joint legal custody and payments.

SUMMARY, IMPLICATIONS AND FUTURE RESEARCH

This study investigates the effect of joint legal custody on the nonresident father's formal child support payments in paternity cases. The results are mixed. For the dollar amount of payments, we find that those with joint legal custody paid $754 more in the first year of their order. However, much of this difference is explained by parents with joint legal custody having higher orders, and by those with joint legal custody being more advantaged on a variety of dimensions compared to those with sole mother custody. Indeed, when we control for these differences, parents with joint legal custody are estimated to pay only $90 more in the first year. Moreover, when we apply techniques designed to include only cases with joint legal custody that are comparable to those with sole mother legal custody, few models show statistically significant differences. This implies that the first comparisons, which show significant relationships, may be overstated.

In contrast, there is a more consistent relationship between joint legal custody and the compliance ratio (the amount paid divided by the amount owed). The simple comparison shows a large difference of 16.6 percentage points, declining to 3.6 percentage points in the model that controls for observed differences. Three of the four propensity score matching models that attempt to examine only comparable cases show statistically significant results, generally of about the same magnitude as that in the regression model without matching.

The propensity score matching models essentially eliminate any economically-advantaged cases with joint legal custody that does not have a comparable case with sole mother legal custody. As a result, in the payment models on the matched sample we see smaller estimates of joint legal custody that are not statistically significant, suggesting that the standard regression analyses may not be comparing comparable cases. However, this does not necessarily mean that regressions with propensity score

matching generate the true estimates. These models can only match on measured characteristics, and unmeasured variables, like commitment to parenting or parental conflict, could be quite important to payments. The lack of findings for payments with most propensity score matching models may be due to the absence of an actually matched comparison group such as could be found in a random experiment.

Why might the compliance models show more consistent relationships than the models examining the dollar amount paid? One possibility is that joint legal custody does affect payments and compliance, but primarily has an effect among more disadvantaged cases with relatively low child support orders. An effect concentrated among cases with lower order amounts could result in small differences in the average dollar amount paid, but larger differences in the compliance ratios, since in the compliance ratios, payments are divided by the amounts owed.

A closely related possibility is that the kinds of cases that do not have matches are driving the differences in the models examining the dollar amount of payments. Our data suggest that there are some cases with joint legal custody in which parents have high orders and high payments; these cases do not have a good match among the cases with sole mother legal custody. In the examination of payments in the multivariate regressions of Table 2, these unmatched cases with joint legal custody are included and contribute to the statistically significant relationships. But these cases are not included in the propensity-score matching models of Table 3 because there are no comparable cases with mother legal custody that can be matched, and therefore, there is no detectable relationship for the dollar amount of payments in the matching analyses. Future research could explore these possibilities further and focus on whether joint legal custody has different effects for different types of cases.

In the OLS model that shows a relationship between custody and payments, the effect size is much smaller (around $90 per year) than estimates in some previous research. For example, Huang and colleagues (2003) estimate effects of about $900 (in 2013 dollars). However, their analysis uses data from the Current Population Survey-Child Support Supplement, which do not include direct information on noncustodial parent's characteristics. The sensitivity test we included that omitted information on nonresident fathers showed larger effects, and hence, it could be that their larger effects are due to the

lack of information on fathers. Another study that finds effects comparable to Huang and colleagues (2003) is by Sonenstein & Calhoun (1990). In their study, they do have information on both parents, but they only have divorce cases and their sample is fairly small (121). Different controls, samples, time periods, and case types may explain the disparities amongst these findings. Our findings are more comparable to prior studies that find small effects (or no effects) (Braver et al., 1993; Gunnoe & Braver, 2001; Lin, 2000; Meyer & Bartfeld, 1996; Peters et al., 1993; Seltzer, 1991, 1998).

This study provides some potential avenues for future research. In addition to deeper analysis of payments on whether joint legal custody may have different effects on different types of cases (particularly those that are less advantaged), research that explores the relationship between joint legal custody and payments over a longer period would be useful. In addition, research on how joint legal custody actually works in practice or on its effects on other measures of father involvement could also be useful.

Policy implications are difficult to discern given the somewhat mixed results. However, the results here suggest consistent effects of joint legal custody on compliance. While we do not know if joint legal custody has positive or negative effects on children, the implementation of the presumption of joint legal custody has made its use relatively routine and low cost, and routine awards of joint legal custody reduces judicial workload and improves efficiency. Combined with the potential that joint legal custody is associated with increased compliance, this suggests the presumption for joint legal custody be continued. However, as this study has shown, it is challenging to isolate the effects of joint legal custody, suggesting that a meticulous understanding of the child's best interest is still worthwhile.

Appendix 1: Matched Sample

	Sole Mother Legal Custody Mean	Joint Legal Custody Mean	Statistical Significance Level of Difference
Child support order	$ 2,777	$ 2,678	
Child support arrears	$ 1,194	$ 1,317	
Father's and mother's income and benefits			
Father's income	$ 12,488	$ 11,616	
Father's income squared (in $10,000)	4.30	4.09	
Mother's income	$ 10,428	$ 10,509	
Mother's income/total income	0.515	0.549	
Mother's income > 1.2 father's income	0.452	0.490	
Mother's income similar to father's income	0.114	0.121	
Mother's income < 0.8 father's income	0.433	0.389	
Missing father's income	0.260	0.302	
Missing mother's income	0.195	0.180	
Father's SNAP receipt	0.140	0.161	
Mother's SNAP receipt	0.625	0.629	
Mother's TANF receipt	0.396	0.386	
Father incarceration	0.285	0.311	
Visitation arrangements			
Unscheduled visitation	0.707	0.784	***
Scheduled visitation	0.093	0.067	
Restricted visitation	0.079	0.058	
No visitation allowed	0.050	0.056	
Other or unknown arrangement	0.072	0.035	**
Characteristics of children			
One boy	0.450	0.454	
One girl	0.481	0.476	
One child, gender missing	0.069	0.070	
Child's age	2.228	2.296	
Child older than 2 years old	0.299	0.336	
Characteristics of parents			
Father has other children	0.270	0.312	
Mother has other children	0.079	0.078	
Both have other children	0.101	0.072	
Neither has other children	0.551	0.539	
Father's age	27.395	27.849	
Years father is older than mother	2.454	2.929	
Father's is older than mother by 8 years	0.113	0.135	
County			
Milwaukee	0.502	0.482	
Other urban county	0.391	0.398	
Rural county	0.107	0.120	
Number of actions required to set an order	1.118	1.129	

(table continues)

Appendix Table 1, continued

	Sole Mother Legal Custody Mean	Joint Legal Custody Mean	Statistical Significance Level of Difference
Cohort			
Cohort 21	0.196	0.217	
Cohort 23	0.144	0.142	
Cohort 24	0.126	0.129	
Cohort 25	0.104	0.084	
Cohort 26	0.130	0.126	
Cohort 27	0.094	0.091	
Cohort 28	0.109	0.113	
Cohort 29	0.098	0.099	
Sample Size	798	798	

Note: Income squared is calculated as $(income/10{,}000)^2$.
* Difference is significant at $p < 0.1$.
** Difference is significant at $p < 0.05$.
*** Difference is significant at $p < 0.01$.

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