



Can economic incentives for joint custody harm children of divorced parents? Evidence from state variation in child support laws ☆



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ABSTRACT

US state laws vary widely in the treatment of child support under joint custody. While some states require no child support in joint custody cases, other states require fathers with joint custody to pay the same amount as if they had no custody. The economic incentives generated by those custody laws can affect family decisions and the wellbeing of children of divorced parents, both under joint and sole custody. Merging child data from the SIPP with state child support guidelines, we find that economic incentives for joint custody have negative effects on the human capital development and health of children of divorced parents. Custody data together with parental characteristics and time use data suggest that economic incentives for joint custody may limit children's time spent with relatively high-quality mothers, as fathers pursue joint custody in response to the policy. We do not find an effect of economic incentives for joint custody on the probability of divorce and on the wellbeing of children in intact families. Our results are robust to specification changes, and the negative effects of economic incentives for joint custody on the wellbeing of children tend to be larger for girls and for children aged 12 and under.

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1. Introduction

Research has shown that divorce laws ranging from unilateral divorce provisions to child support legislation affect investment in children (Gruber, 2004; Aizer and McLanahan, 2006; González and Viitanen, 2009; Halla, 2013; Reinhold et al., 2013). Child custody reform represented a marked change in policy, as many states made explicit provisions in their laws

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to favor joint custody, with most states providing legal provisions for joint custody by the mid-1980s.¹ Proponents of joint custody cite the best interests of the children as justification, arguing that children benefit from ongoing support and resources from both parents. However, since joint custody usually implies a reduction in the child support transfer from the father (Del Boca and Ribero, 1998), there could be unintended effects due to negative selection of fathers into joint custody agreements if fathers assume custody to avoid paying child support.^{2,3} In this paper we examine empirically how the interacting incentives of the US custody and child support system may affect the outcomes of children of divorced parents. To do this, we exploit the exogenous variation in the reduction of child support under joint custody across US states.

Since the Family Support Act of 1988, all US states have used a ‘guideline,’ or algorithm, to determine a fixed child support amount based on parental income and the number of children. States differ substantially in both their guideline support amounts and also in their treatment of joint custody. In some states, there is no offset to the child support obligation when custody is shared, while in other states fathers may avoid paying most or all child support by assuming joint custody of the children. The implications of this system for child outcomes are theoretically ambiguous. On the one hand, decreases in child support create an economic incentive for any divorced father to seek custody to mitigate or avoid paying child support (we refer to decreases in child support payments as a result of joint custody as “child support savings” or CSS) or simply because high CSS reduce the total monetary costs of joint custody relative to a situation with no CSS.⁴ Moreover, since child support is usually a transfer from the father to the mother and children, this incentive will be strongest among divorced fathers who place a relatively low weight on their children’s consumption relative to their own, leading to possible negative selection among the fathers who seek joint custody. Regardless of the reason for a father requesting joint custody, the affected children will necessarily spend less time with their mothers, which could negatively impact wellbeing if the additional time that the child spends with the father is at the expense of valuable time spent with mothers.

On the other hand, economic incentives which increase joint custody may also positively affect child outcomes. CSS could have positive effects on children if they lead more divorced parents to choose joint custody and joint custody benefits children.⁵ Given the high costs associated with housing, feeding and having the child in custody part of the time, relatively high CSS can afford some divorced fathers the ability to choose joint custody when the option was previously cost prohibitive. Differing amounts of CSS also affect the distribution of resources between each parent in the event of a divorce and the composition of parents that choose joint custody, with potential impacts on the wellbeing of children. In the end, the effect of economic incentives for joint custody can only be answered empirically. To what extent do varying economic incentives affect fathers’ decisions to seek joint custody? And do these economic incentives positively or negatively affect children’s wellbeing?

To answer these questions, we exploit cross-state and cross-income variation in child support and joint custody laws to compute paternal child support under both joint custody and if the mother maintains sole custody. This cross-state and cross-income variation in child support amounts by type of custody allow us to compute CSS that vary by state and income groups. Merging this CSS data with individual-level data on custody and children’s health and cognitive development from the Survey of Income and Program Participation (SIPP), we find that increased economic incentives for fathers to undertake joint custody lead to a significantly higher incidence of joint custody upon divorce. Moreover, these economic incentives appear to have important unintended consequences for children; higher levels of CSS lead to lower measures of health and of human capital development of children of divorced parents. Our results indicate that higher paternal economic incentives for joint custody generate worse attitudes toward school among children younger than 12 as well as significantly less educational attainment and degree completion among older children. We find a significant decline in educational attainment of 1.67 months with an increase in CSS from 0% to 40% of non-custodial parent income, which is roughly twice the magnitude Gruber (2004) found in response to youth exposure to unilateral divorce. Parental time use data suggest that economic incentives for joint custody may limit children’s time spent with relatively high-quality mothers, as fathers pursue joint custody in response to the policy incentive.

In our analysis we pool all children of divorced parents, regardless of the type of custody. We focus on children of divorced parents because they are most directly affected by custody laws and because we find no effect of CSS on the probability of divorce. We also focus on the pooled sample of children from divorced families since we find that CSS significantly increase the probability of joint custody. Hence, an analysis by type of custody would be biased by a compositional effect if

¹ Rasul (2006) develops a theoretical model of marriage and custody and shows that joint custody is optimal among couples with homogenous valuations of child quality. With heterogeneity in spousal valuation of child quality, it is better for the high-valuation spouse to have the majority of custody.

² As anecdotal evidence, Google Trends data for the U.S., from March 2018 to March 2019, shows that for the search query “joint custody”, the top related query is “joint custody child support”. Ordering related queries by increase in popularity rather than the level of popularity, shows that for the search query “joint custody” the number 2 related query is “who pays child support in joint custody” only after “joint custody with a jerk.”

³ Halla (2015) provides an overview of the literature, though generally the causal relationship between custody arrangements and child outcomes is unclear and the empirical evidence has been mixed.

⁴ We are not claiming that joint custody is cheaper than sole custody for the father when CSS are high. We’re simply highlighting that as CSS grow, the total monetary costs of joint custody for the father fall, even when joint custody is more expensive than sole custody.

⁵ Bauserman (2002) finds that frequent contact between children and both parents can buffer some of the detrimental effects caused by the divorce itself. Del Boca and Ribero (1998) find correlational evidence that nonresidential parents with joint custody transfer more resources to children in addition to those ordered by courts. However, Kalil et al. (2011) find no evidence that proximity to divorced fathers benefit children’s educational achievement or human capital attainment. They actually find that closer proximity to the father tends to have a modest negative association for these outcomes, and even more so for children of highly educated fathers.

higher or lower quality fathers are the ones that select into joint custody in response to the economic incentives generated by the law. In placebo tests, we analyze the effects of CSS on children of intact families and find little effect.

We interpret our OLS on CSS results as causal since we are able to exploit the exogenous variation of CSS across states and income groups, which vary simultaneously, allowing us to control in all specifications for state fixed effects and income. Moreover, because we don't find a significant effect of CSS on the probability of divorce, our group of interest—all children of divorced parents—is unlikely to be affected by compositional changes.

Our paper contributes to the literature by, to the best of our knowledge, being the first that analyzes the effect of economic incentives for joint custody on children's outcomes. The rest of the paper is organized as follows. [Section 2](#) describes the relevant empirical literature and the theoretical implications of economic incentives for joint custody, and [Section 3](#) discusses our identification strategy and data. [Section 4](#) describes our empirical strategy. In [Section 5](#), we present our results. [Section 6](#) concludes.

2. Literature review and theoretical implications

Several papers have explored the unintended consequences of divorce law on family outcomes, including child outcomes. A wealth of research indicates that more liberal divorce laws lead to decreased investment in children and adverse long-term outcomes ([Johnson and Mazingo, 2000](#); [Gruber, 2004](#); [Caceres-Delpiano and Giolito, 2009](#); [Gonzalez and Viitanen, 2009](#)). Recent work has focused on the implications of joint custody on family and child outcomes and finds that joint custody laws have generated important side effects, including less domestic violence and lower male suicide rates in joint custody states (see [Halla, 2013](#)).

Our research indicates that the interaction of child support and custody law may have important unintended effects as well. Since CSS are one component of the more general laws that govern joint custody, CSS can affect children through the same channels as laws that favor joint custody. These mechanisms may include direct effects on parental time investments, changes in bargaining power between spouses which affect monetary and time investments, and broader policy effects on the marriage market, fertility and divorce.⁶ Additionally, CSS may have implications for the allocation of monetary resources (child support payments), i.e., who (the father or the mother) exerts control over these resources. Therefore, CSS can also affect the wellbeing of children in ways identified by the child support literature.

In what follows, we describe, in an informal and intuitive way, the main channels (some of which may overlap) through which CSS can affect the outcomes of children of divorced parents.

2.1. Joint custody direct effects

To the extent that economic incentives for joint custody increase the incidence of joint custody, there is a direct effect of CSS, through joint custody, on the outcomes and wellbeing of children of divorced parents (the *joint custody effect*). There are several channels through which joint custody laws can affect the outcomes of children of non-intact families. Sharing residence equally could affect the children's level of emotional stress in a variety of ways, depending on whether the cons associated with a lack of stability are outweighed by the benefits of more frequent contact with both parents (see [Turunen \(2017\)](#) for a recent review of the different links between shared physical custody and the level of emotional stress of children).

A large number of studies have analyzed the correlation between joint custody and a variety of children's emotional and educational outcomes. Although the results vary across studies, the majority find that children in joint custody arrangements have better emotional and educational outcomes than other children of divorced parents (see, [Nielsen \(2018\)](#) for a summary of the results of 60 studies and [Turunen \(2017\)](#) for a recent review of the literature). The majority of this literature is based on very small samples and cross-sectional comparisons of children in different custody regimes, with imperfect or no controls for the characteristics of parents before divorce. Although some studies control for parents' income or the level of conflict between them, there is an obvious endogeneity problem when heterogeneous parents make different custody decisions.

A few studies have dealt with the endogeneity problem generated by selection into joint custody by investigating the effects of joint custody laws on child outcomes. In contrast to the literature cited above, these studies tend to find negative effects of joint custody on children. [Chen and Logan \(2019\)](#), [Nunley and Seals \(2011\)](#) and [Maiti \(2015\)](#) find that joint custody laws are associated with worse educational and labor market outcomes for children that grew up in US states that had passed joint custody laws, with stronger effects for boys. These studies do not distinguish between children of intact and non-intact families. [Leo \(2006\)](#) analyzes the educational outcomes of children of intact and non-intact families separately and finds negative effects for the former but positive effects for the latter.

⁶ [Pollak \(2018\)](#) points out that anticipated bargaining in marriage may affect the marriage market, which may in turn lead to inefficient marital allocations due to the impossibility of binding commitments within marriage.

2.2. Bargaining effects

Joint custody laws and/or CSS upon joint custody may also increase the bargaining power of fathers by increasing fathers' post-divorce utility and the value of an "exit threat" strategy (the *bargaining effect*). To the extent that joint custody laws increase the bargaining power of men, one should expect a more predominant role of male preferences in relation to the allocation of resources, including time investments devoted to children both in intact and non-intact families. Joint custody laws may also increase married fathers' incentives to invest in their children. Whether these factors lead to better or worse outcomes for children is again theoretically ambiguous [Halla \(2013\)](#).

There are surprisingly very few studies analyzing the impact of joint custody laws on the bargaining power of spouses and how this might affect children's outcomes. The two papers cited above tend to find negative effects of joint custody laws on children, measured by their educational attainment, but only [Nunley and Seals \(2011\)](#) explore the relationship between spouses' bargaining power and investment in children. The authors find that the probability of children's private school attendance declines by 12% in states that adopt joint-custody laws.

Another group of papers has studied the effects of spouses' bargaining power on the welfare of children in situations unrelated to child custody laws. Most of that literature finds that increased maternal bargaining power leads to increased child expenditure and positive effects on children's outcomes (see, for example, [Thomas, 1990](#); [Lundberg et al., 1997](#); [Angellucci and Attanasio, 2013](#)). Finally, the effects of joint custody laws on spouses' bargaining power has consequences for the division of labor within the household, more precisely, on the labor supply of married mothers. These female labor effects can in turn have consequences for the outcomes of children in both intact and non-intact families ([Halla, 2013](#) and [Roff, 2017](#)).

2.3. Parental expenditure effect

Just as changes in CSS may affect bargaining power, regulations that determine the amount of CSS cause a redistribution of resources (mainly child support) from mothers to fathers. This redistribution of resources, and the resulting change in how much control each parent exerts over them, might change the incentives of fathers and mothers when they decide how much to spend on their children (the *expenditure effect*). Although the *expenditure effect* applies more clearly to children of divorced parents, particularly to children under joint custody, (as opposed to the *bargaining effect*, with more direct implications for children of intact families), this effect can easily extend to parents of children in intact families, who foresee the consequences of a divorce.

Moreover, CSS may affect child outcomes through direct effects on child support amounts. Several studies have found that child support receipts produce gains in children that are several times higher than those of other types of income, such as mother's earnings or family income (see, for example, [Knox, 1996](#), and [Argys et al., 1998](#)). Since non-custodians who pay child support and those who do not may differ in unobserved characteristics, the reasons for this relationship are not clear. In trying to understand the channels behind the positive correlation between child support and children's outcomes, [Aughinbaugh \(2001\)](#) finds that non-custodians are willing to pay more child support when child achievement is better, as non-custodial parents interpret this achievement as evidence that custodial parents are acting in the child's interest. This result is consistent with [Aizer and McLanahan \(2006\)](#) that find that policies that compel men to pay child support improve the outcomes of children of intact families through two pathways: an increase in financial resources and a birth selection process, by which men under stricter child support regulations have fewer out-of-wedlock births and more births with more educated women and with a higher propensity to invest in children.

Finally, given the well-known efficiency problem of child support [Weiss and Willis \(1985\)](#), economic incentives that lead to joint custody may induce fathers to make higher child expenditures since joint custody affords the opportunity to make direct payments. [Del Boca and Ribero \(1998\)](#) find some evidence in simulations that joint custody laws tend to mitigate the inefficiencies associated with child support orders due to the father's inability to monitor expenditure on the child, leading to increased direct expenditures on children by fathers and more active paternal involvement. ([Rossin-Slater and Wüst, 2018](#)) look at how a larger child support obligation might incentivize father-child co-residence, and they find that an increase in average obligation was actually associated with a decrease in father-child co-residence, perhaps due to fathers' substitution of money for time spent with his child.

2.4. Crowding out effect

Joint custody driven by economic incentives can shift the distribution of time that the child spends with each of her parents. Not only do parents impart knowledge and skills to their children, but they also pass on attitudes and expectations that help them navigate the world. [Fiorini and Keane \(2014\)](#) find that children spending time in educational activities with parents positively affect their cognitive development. CSS can have negative (positive) effects on children if the presence of CSS causes children to spend more time with 'bad' ('good') fathers at the expense of time with 'good' ('bad') mothers. Even if CSS cause children to spend more time with 'good' fathers, this may come at the expense of time with 'good' mothers, with unclear effects for the wellbeing of children.

Earlier studies have emphasized the importance of the time children spend with their mothers and have shown that reduced time with the mother due to maternal employment has negative effects on children's cognitive outcomes

(Ruhm, 2008; Baum, 2003). More recently, Hsin and Felfe (2014) find that not all time spent with children is equally valuable, as not all types of parental time benefit child development. They find that working mothers with a high school degree are the ones facing the greatest difficulty balancing work and time caring for their children and that residential fathers compensate only partially by spending more time with their children. Alternatively, research also indicates that time spent with fathers can be crucial for child development (see, papers by Bertrand and Pan (2013) and Autor et al. (2019), for example).

3. Identification strategy and data

3.1. Identification strategy: state variation in CSS due to joint custody

To identify the effects of economic incentives of joint custody on outcomes for children of divorced parents, we use state-wide child support guidelines to develop an estimate of CSS generated by joint custody for each set of divorced parents in our sample (CSS_i) at the time that the child support order was established.⁷ State child support guidelines are based on economic estimates of childcare costs. Child support amounts do not appear to vary systematically based on state characteristics or demographics (see Morgan, 2021 for details on guideline determination by state). Crucially, the child support guidelines imply that our CSS measure varies not only across states but also across income levels within each state. Since the child support guidelines generally do not follow a simple functional form that allow us to calculate child support for a given income level, and since noncustodial parent income is unavailable, we use a categorical measure of income (which we discuss in more detail below) and an imputed probability of the noncustodial father's income level (also discussed in more detail in Section 3.2) to estimate CSS for each set of divorced parents.

We use child support guidelines from all 50 states, 12 of which do not take into account joint custody for the purposes of calculating child support orders, that is, 'child support savings' are 0 for those states. We define CSS as the dollar amount saved in monthly child support due to a father having joint custody, and we express this value as a percentage of the non-custodial parent's monthly income. State-level guidelines legally determine the amount of child support that each father is expected to pay, and this amount is based on parental incomes and the number of children as well as the amount of time that each parent spends with the child. Hence, the child support guidelines imply that our CSS measure varies not only across states but also across income levels within each state.

While these guidelines provide a rich source of exogenous variation in child support savings by state, this wide variation in state child support guidelines also makes data collection relatively difficult, since each state has its own algorithm for the computation of child support, which can sometimes be quite complex. As a result, to compute the amount of child support, we accessed current and historical legislative records and/or state-maintained online 'child support calculators' for each of the 50 states. When state sources were not available, we used calculators and legislative records from private law firms and online calculators. Appendix A2 lists the calculators used for each state.

For each state and year from 2000 to 2013, we calculate child support for 1- and 2-child families for three different income groups (low, medium and high) for each parent assuming both sole maternal custody with paternal parenting time of two weekends a month and shared physical custody in which both parents have equal time with the child (ren), leading to a total of 36 separate child support calculations for each state-year and 23,400 calculations overall. As previously noted, we use categorical income to compute child support since state child support guidelines often follow a complex formula with no straightforward functional form.

To define income for the low-income category, we use the federal minimum wage in 2015 of \$7.25 to generate annual income of \$13,195 (in 2015 dollars). To compute income for the 'medium' income category, we used median individual income in 2015, for an annual income of \$37,000 in 2015 dollars. For the high-income group, we used the 90th percentile of income in 2015 to generate an annual income of \$102,000 in 2015 dollars.

Given these nine income combinations (3 income categories for each parent) and two custody scenarios, we can calculate child support as a function of the number of children and therefore compute the dollar amount of child support that the father saves by taking joint physical custody of the child(ren) at any of the nine possible income combinations. Since we used web-based calculators for many of these calculations, we are not able to provide the child support calculation for each state. However, Appendix A1 presents this calculation for four sample states. Fig. A1 presents average CSS by state. CSS vary significantly across states. Massachusetts has the highest state average CSS from joint custody at close to 50% of non-custodial parent's income; in contrast, 12 states do not explicitly include joint custody in the child support algorithm at all. CSS also vary significantly across income groups. For example, the average CS when the custodial and non-custodial parent have low income (L-L) is 11.7%, when both parents have high income (H-H) is 7.9% and when both parents have medium income (M-M) is 11.2%. Combining the state and income variation of CSS we find, for example, that the 95% confidence interval of CSS for the (M-M) income-pair ranges from 9.7% to 12.7%, for the (L-L) group it ranges from 10.2% to 13.2% and for the (H-H) group CSS varies between 6.5% and 9.4%. Although there is not clear pattern across income groups, CSS tend to be higher when both parents have a similar level of income. For example, whereas CSS are on average 11.7% when both

⁷ CSS will vary by the year of the couple's divorce. The child support algorithms used to generate CSS are quite complex and vary within state over time for roughly half of the states in our sample. However, since child support orders are generally fixed at an amount determined at the time of divorce, there is no within family time variation in CSS_i.

parents have a low level of income, CSS decrease to 6.0% when the CP's income is low and the NCP's income is medium (L-M) and fall further to 2.9% when the C's income is low but the NCP's income is high (L-H).

We also tested whether age, race, work status and the level of education are predictors of our measure of CSS after controlling for the variables that enter the CSS calculation (income, state fixed effects and number of children). Evidence that they are not predictors of CSS would strengthen the claim that our CSS variation is exogenous. When we regressed CSS against these predictors, we find that none of the coefficients is significantly different from zero.

While the evidence above supports the claim that there is a large amount of exogenous variation in CSS by state and income groups, we cannot separately identify effects that might occur through effects of CSS on divorce since CSS may theoretically affect marital dissolution. As we show later, this concern appears to be relatively minor given that we find that CSS has essentially no effect on divorce rates.

3.2. Other data

Besides the state child support guidelines discussed above, our second source of data is the 2008 Survey of Income and Program Participation (SIPP), which we use to construct a sample of custodial parents and children of those custodial parents.⁸ Although the 2008 SIPP covers the period between 2008 and 2013, our sample comes from individuals interviewed in the topical module 6 of the 2008 SIPP. That topical module ran between May and August of 2010 and asked questions related to child custody and child support arrangements. Individuals in that sample can be matched to the other core waves and other topical modules of the 2008 SIPP in order to extract relevant information for our analysis, such as income, main socio-demographic characteristics, health and educational outcomes and the marriage history of custodial parents.

As discussed in Section 3.1, our calculation of CSS requires noncustodial parent income. Unfortunately, this is unobserved and must be imputed. To do so, we use the 2004 and 2008 panels of the SIPP to construct a sample of couples that we observe initially married but then divorce during the sample period (between 2008 and 2013 in the case of the 2008 SIPP panel and between 2004 and 2008 in the case of the 2004 SIPP panel). This sample has a total of 1527 couples and 26,547 monthly observations. We use this sample to estimate the income of the father (mother) as a function of the mother's (father's) income and a set of observable characteristics, all of which are observed before the divorce. More specifically, we estimate through ordered logistic regression the probability that a given parent's income is of each of the three levels (low, medium, high)⁹ as a function of the other parent's income and her set of observable characteristics.¹⁰ The results are presented in Appendix Table A1. The table shows that, as expected, a higher income and a higher level of education of one spouse predicts a higher level of income of the other spouse. For example, the average probability that the income of the father is low, medium or high when the income of the mother is low (medium) (high) is 0.43, 0.44 and 0.12 (0.33, 0.50, 0.17) (0.20, 0.52, 0.28), respectively. The number of children and work status have a lower predictive power, with more children predicting a higher income of the father but a lower income in the case of the mother. We match these estimated probabilities to our sample of custodial parents by level of income, education, number of children and work status. After this matching process, each of our custodial parents has a set of three probabilities, the probability that the non-custodial parent is of low, medium or high income. Those probabilities are then used as weights to calculate for each custodial parent a weighted average of three different values of CSS due to joint custody, where each of the three values of CSS are derived from the state guidelines and are a function of the CP's level of income (low, medium or high), the number of children, and the probability of the non-custodial parent income level (low, medium or high). Clearly, given this imputation exercise, our measure of CSS is a noisy proxy for the true value of CSS implying that our estimated coefficients will suffer from an attenuation bias and may be understood as lower bound estimates of the true effects. As a robustness check, we also test two alternative measures of imputation (discussed in Section 5.3), with largely similar results.

Descriptive statistics of our samples are shown in Table 1. The sample of custodial parents consists of 5045 individuals (82% of which are mothers and the rest fathers) of which 2054 declare having a written child custody agreement. Fathers are more likely to be a custodial parent to only one child. In the sample, most parents have a high school degree or fewer years of education, with only 15% holding a college degree or more. Some 11% of custodial parents report having no job during the sample period. Of those who work, a majority (49%) have low income (less than \$25,000). Custodial fathers are more likely to earn a higher income, with an annual income that ranges in the medium range, from \$25,000 to \$69,000 or the high range, more than \$69,000. Most custodial parents are white, especially fathers, representing 68% of the total. Although sole physical custody is the predominant type of custody for both male and female custodial parents, joint custody is more frequent among custodial fathers (26%) compared to custodial mothers (12%).¹¹ Interestingly for our analysis, the likelihood that a given custodial parent is male increases with the amount of CSS, from 16% when CSS is 0 to almost twice

⁸ For the purposes of this paper, we define a 'custodial' parent to be a parent who answers the questionnaire and has a child in the house.

⁹ For the purposes of sorting NCP income into categories, we use the midpoint of our child support calculation thresholds, and we define "low income" as annual income ranging from \$1–\$25,097, "medium income" from \$25,097–\$69,500, and "high income" as income exceeding \$69,500. Income values are expressed in 2015 dollars.

¹⁰ The income of one parent is regressed against the income of the other parent, her level of education dummies, work status dummies, age dummies, state dummies, year, and month dummies.

¹¹ In addition to joint physical custody and sole physical custody, there is another category called "other type" in the SIPP.

Table 1
Descriptive Statistics.

Sample of Custodial Parents				Sample of Children of Divorced Parents			
	(1) All CPs	(2) Female CPs	(3) Male CPs		(4) All children	(5) ≤ 12 years old	(6) > 12 years old
Num. individuals	5045	4142	903	Num. individuals	7577	3887	3690
Age	37.4	36.6	40.8	Age	11.9	7.1	16.9
1 child	57.6	55.3	68.0	In family with 1 child	35.4	32.4	38.6
≥ 2 children	42.4	44.7	32.0	In family with ≥ 2 children	64.6	67.6	61.4
HS or less	59.7	60.2	57.3	Years of completed education	6.6	2.6	10.8
Voc. + Assoc. degrees	25.0	25.3	23.8				
College degree+	15.3	14.5	18.9				
Non-work	11.0	11.4	9.0				
Inc. level 1	49.3	52.8	33.3				
Inc. level 2	32.8	30.9	42.0				
Inc. level 3	6.8	4.9	15.7				
White	55.1	52.3	68.0	White	51.8	47.8	56.1
Black	22.3	24.4	12.9	Black	24.8	27.2	22.3
Latino	17.1	17.9	13.2	Latino	18.1	20.0	16.2
Other	5.5	5.4	6.0	Other	5.2	5.0	5.4
Joint physical custody¹	14.0	12.5	25.8	Joint physical custody¹	14.0	13.3	14.7
Sole physical custody¹	82.8	83.4	65.7	Mother has sole physical custody¹	75.0	76.0	74.0
Written custody agreement	40.7	43.9	26.1	Father has sole physical custody¹	7.4	6.4	8.4
				Written custody agreement	43.7	42.5	45.0
CSS=0	100.0	84.3	15.7	CSS=0	100.0	86.9	13.1
CSS>10%	100.0	82.9	17.1	CSS>10%	100.0	85.1	14.9
CSS>20%	100.0	78.8	21.2	CSS>20%	100.0	83.2	16.8
CSS>30%	100.0	72.1	27.9	CSS>30%	100.0	76.7	23.3

¹ Notes: Percentages are proportions of the sample with a written custody agreement.

as much (28%) when CSS exceeds 30%. For the purpose of this paper, *joint custody* (JC)¹² is defined to include fathers with no written agreement (where we have no information about the type of custody) but where the father is the respondent to the questionnaire and hence identified as a custodial parent (13.2% of all cases). It therefore includes those cases and cases in which the written agreement specifies joint custody. In robustness tests, we estimate the main results omitting the cases in which the father is the respondent to the questionnaire, and we find largely consistent results although some coefficients are less precisely estimated.

The right panel of Table 1 shows the descriptive characteristics of the sample of children of divorced parents. We divide the sample into two groups according to age: 12 and under and more than 12 years of age. Our sample includes a total of 7577 children, 3887 of these children are less than or exactly 12 years old and 3690 are older. The average age of children in the sample is about 12 years old. Most families have two or more children, and older children are slightly more likely than younger children to have parents with joint custody or sole custody by their father. Older children are also more likely to have parents with a written custody agreement.

There may be differences in the characteristics of custodial parents at different levels of CSS due to the inherent presence of the saving incentive. Appendix Table A2 presents the characteristics of fathers and mothers with and without the presence of CSS, showing characteristics of custodial parents with no CSS in columns (1) and (5) in contrast to parents with CSS in the other columns. There are some significant differences between custodial parents with CSS, most notably in their racial distribution, with a larger proportion of Latinos when CSS is high. This is consistent with Fig. A1, where states with a relatively high presence of Latinos rank high in terms of levels of CSS (e.g., California, Texas, New Mexico). In the case of custodial fathers, low-income fathers are relatively overrepresented when CSS is high. In all our specifications, we control for these differences through a set of race and income variables. Furthermore, and as discussed earlier, some of these statistically significant differences become insignificant when we control for the variables that enter the CSS calculation (state fixed effects, income and the number of children).

4. Empirical specification

We estimate the effects of economic incentives on children's outcomes using a simple OLS regression of children's outcomes on CSS, where "children" refers to all children of divorced parents, regardless of custody status. More precisely, we estimate the following empirical specification:

$$Y_i = \alpha_0 + \alpha_1 \text{CSS}_i + \alpha_2 X_i + \varphi_i + \rho_i + u_i \quad (1)$$

where Y_i is the outcome of interest for individual i (child or parent), CSS_i is our calculation of the child support saved with joint custody as a percentage of non-custodial parent's income for parents of child i , which is calculated as a function of

¹² Joint custody is used to refer to joint physical custody.

Table 2

The Effect of Child Support Savings from Joint Custody on the Incidence of Joint Custody.

	(1) All CPs	(2)	(3)	(4) CPs with a written agreement	(5)	(6)
	All	Oldest child ≤ 12	Youngest child > 12	All	Oldest child ≤ 12	Youngest child > 12
Coefficient on CSS (robust S.E.)	0.253*** (0.092)	0.363** (0.167)	0.157 (0.117)	0.415*** (0.153)	0.657** (0.319)	0.181 (0.260)
Panel b. Predicted probability of joint custody at different values of child support savings						
CSS=0%	0.188	0.160	0.235	0.162	0.125	0.213
CSS=12% (sample average)	0.218	0.204	0.254	0.212	0.204	0.235
CSS=20%	0.238	0.233	0.266	0.245	0.256	0.249
CSS=30%	0.264	0.269	0.282	0.286	0.322	0.268
CSS=40%	0.289	0.306	0.298	0.328	0.388	0.286
Number of CPs	5045	2333	1936	2054	886	784
R²	0.645	0.657	0.674	0.404	0.388	0.462

Notes: Joint custody is defined to include father sole physical custody and cases where there are no written agreements (hence, no information about the type of custody) but the custodial parent in the questionnaire is the father. Child support savings from joint custody is implied by the state guidelines and is expressed as the reduction in the amount of child support compared to mother's physical custody and relative to the non-custodial parent's income. CPs: custodial parents are parents with children less than 21 and eligible for the child support questionnaire in the SIPP (topical module 6 of the 2008 panel). 41% of CPs declare having a written child support and custody agreement. Besides income and state fixed effects all models control for the number of children, the age of the CP, the level of education and race. Our income pairs control variables are the interaction between the custodial parent's income category and the probabilities generated from our imputation exercise that the noncustodial parent's income is within each of the three income categories. The predicted probabilities in panel b are estimated at the mean values of the controls. Robust standard errors clustered at the state level. * Significant at the 10% level.

*** Significant at the 1% level.

** Significant at the 5% level.

that child's parents' characteristics and the state-specific guidelines at the time that the child support order was established, X_i is a vector of covariates (including the child's age, race, number of siblings and the custodial parent's age and level of education), φ_i are state fixed effects and ρ_i are income-pair (father and mother) effects. Our income pairs control variables are the interaction between the custodial parent's income category and the probabilities generated from our imputation exercise that the noncustodial parent's income is within each of the three income categories. The inclusion of these variables allows us to control for parental incomes, which, by definition, is correlated with the measure of CSS and could also be correlated with our outcomes of interest. For our dependent variable Y_i , we explore the effect of CSS on three types of outcomes: parents' divorce-related outcomes (the incidence of joint custody, amount of time spent with the father and the amount of child support), child outcomes (attitudes toward school, educational attainment and health levels), and outcomes that proxy for the quality of the time with children.

In Eq. (1), the coefficient of interest is α_1 , the average effect over the entire population of children of divorced parents of a change in CSS. In the empirical section, we present the estimates of both α_1 and the economic impact, i.e., the implied effect of CSS on the outcome of interest, measured at specific values of CSS (0% and 40% of non-custodial parent income). Since our identification strategy exploits variation in CSS across states and income groups, it is essential that we control for income and state effects in Eq. (1). Hence, the identification of α_1 exploits simultaneously within-state variation in CSS (given by differences across income groups) and within-income variation in CSS (given by differences across states). This double variation of CSS (across states and income groups) allows us to identify α_1 while controlling for income and for state fixed effects at the same time. Finally, since our measure of CSS is calculated using discrete income levels and a simplified algorithm, our measure of CSS is subject to measurement error. While this measurement error should bias our results toward zero, some caution should be used in the interpretation of our results.

Throughout the analysis, we also present results from an additional specification, which shows the association between joint custody and the child outcomes from estimating the following OLS regression:

$$Y_i = \beta_0 + \beta_1 JC_i + \beta_2 X_i + \varphi_i + \rho_i + u_i \quad (2)$$

where JC_i is a dummy variable taking value 1 if the child is in joint custody. The results from this analysis are subject to an obvious omitted variable bias (i.e., parents that choose joint custody are not a randomly selected group in the population). However, these effects can be seen as a benchmark and a point of departure for the subsequent analysis. In general, we find a positive association between joint custody and most child outcomes, which is consistent with the correlations found in the prior (non-causal) literature. This positive association contrasts with our finding of, overall, a negative causal effect of CSS on child outcomes (from Eq. (1)).

5. Results

To examine the role of economic incentives for joint custody on child outcomes, Table 2 through Table 4 first establish that increased CSS upon joint custody show the expected effects on paternal joint custody uptake, time spent with children

and child support paid. Table 5 shows the effects of CSS on child education and health outcomes. Since CSS may affect the decision to divorce as well as child outcomes, Table 6 shows the effects of CSS of parents' time spent with the child. Finally, Table 7 presents robustness checks.

5.1. Interaction of child support savings, joint custody, and time spent with non-custodial parent

We first estimate linear regression models of the effect of 'child support savings' on the probability of joint custody. As can be seen from Table 2, we find a strong positive effect of CSS on the incidence of joint custody. We control for state fixed effects and income so that the effect of CSS is identified through its variation within state and income groups, and any state-level unmeasured component (e.g., the different time-invariant treatment of joint custody in a given state, or whether the state is an income-share versus percentage of income state) is controlled for by the state fixed effects. Also, any differences in joint custody patterns associated with differences in the level of income, which could be correlated with economic incentives for joint custody, are captured by our income control variables. Our models then exploit the economic gain out of joint custody, net of the average state and income-level effects, as the source of variation.

We find that as economic incentives for joint custody increase, fathers are more likely to undertake joint custody. As expected, this effect is stronger for custodial parents with a written agreement, because this arrangement is more binding. In Panel b of Table 2, we see the predicted probability of joint custody at different values of CSS. Column (1) shows that the probability of joint custody varies significantly with the level of CSS, increasing ten percentage points, from 18.8% to 28.9%, when CSS increase from 0% to 40%. This increase is even stronger for custodial parents with a written agreement (column 4) as the probability of joint custody rises from 16.2% to 32.8%.¹³ This finding is not surprising since an increase in CSS reduces the costs of joint custody for the father.

The subgroup analysis by the age of the children shows that the positive effect of CSS on the probability of joint custody is entirely driven by parents with children aged 12 and under. In all specifications, the coefficient on this group of parents is large in magnitude and highly significant, whereas in the case of parents with children older than 12 the coefficient smaller and non-significant. The strong and positive effect of 'child support savings' for children aged 12 and under is reinforced by the fact that, absent the economic incentives given by CSS, joint custody is much less frequent for this type of children compared to older ones. For example, in column (5), CSS increases the probability of joint custody for parents of children aged 12 and under from a relatively low incidence of 12.5% to the very high level of 38.8%. In contrast, in the case of parents of children older than 12 (column 6), the effect of CSS is not statistically significant and the probability of joint custody increases from 21.3% to 28.6%. It's not clear why CSS should have a stronger impact on the custody decisions of parents of younger children. One possibility is that in the case of older children, their opinion matters relatively more, since this opinion is often heard and taken into consideration by courts in the context of a contentious divorce. For example, in the state of California, the California Family Code 3042, specifically states that *"if the child is 14 years of age or older and wishes to address the court regarding custody or visitation, the child shall be permitted to do so, unless the court determines that doing so is not in the child's best interests. In that case, the court shall state its reasons for that finding on the record"*. In subsequent sections we will show that, consistent with the pattern observed in Table 2, the negative effects of 'child support savings' on the wellbeing of children tend to be larger for children aged 12 and under.

Next, we consider how the amount of child support varies with CSS in Table 3. Here, we focus on parents with a written agreement since these are the only cases with information about the amount of child support. For illustrative purposes, in column (1) we regress the amount of child support against type of custody. As expected, fathers with joint custody pay less in child support (\$2279.46 compared to \$3284.00 when the mother has sole custody). In column (2), we regress the amount of child support against CSS and we find the expected result (albeit not statistically significant): a reduction in child support as CSS increase. Columns (3) and (4) indicate that the effect of CSS is driven by fathers with joint custody. In column (3) the effect is negative and statistically significant at the 10% level. This is what we would expect, given that CSS only occur in situations with joint custody. Panel b of column (3) shows the estimated impact of CSS on the amount of child support. When CSS increase from 0% to 40% the amount of child support decreases by 46.8% (from \$2749.05 to \$1460.20).

We move now to the analysis in Table 4, which shows the effect of 'child support savings' on the number of days the child spends with the father. We find evidence that CSS lead to the child spending more time with the father. This effect is significant and large in magnitude and driven by children aged 12 and under. For example, from Panel b, we see that when CSS increase from 0% to 40% children spend 16% more days with the father (from 108.32 days per year to 125.63), an effect driven by children aged 12 and under, who experience a statistically significant increase of 31.2% (from 99.76 days per year to 130.93) in the amount of time spent with the father.

The results from Table 4 help us interpret the increase in the incidence of joint custody due to 'child support savings.' If fathers were requesting joint custody with the sole aim of reducing child support, then they could behave strategically and not actually spend more time with their children. However, as shown in Panel b of Table 4, greater CSS lead to considerably more time spent with fathers. This again appears to be more pronounced with younger children, aged 12 and under. Thus, we do not see evidence of any sort of strategic behavior here with respect to time use, at least with respect to this broad measure of time and with respect to children aged 12 and under.

¹³ To put these magnitudes in context, Halla (JEEA, 2013, Table 2) finds that joint custody laws increased the incidence of joint custody in the US by 7.5 percentage points 4-5 years after implementation and by 15 percentage points 16 years after implementation of the law.

Table 3

The Effect of Child Support Savings from Joint Custody on the Amount of Child Support.

	(1)	(2)	(3)	(4)
	OLS on JC	OLS on CSS	OLS on CSS when JC=1	OLS on CSS when JC=0
Coefficient on JC (robust S.E.)	−1004.538*** (342.264)			
Coefficient on CSS (robust S.E.)		−723.533 (981.931)	−3322.109* (1983.267)	607.679 (1174.390)
Panel b. Predicted amounts of child support at different values of the variable of interest (JC, CSS)				
JC=0	3284.003			
JC=1	2279.464			
CSS=0%		3159.840	2749.050	3105.495
CSS=12% (sample average)		3.073.016	2362.397	3178.416
CSS=20%		3015.134	2104.629	3227.031
CSS=30%		2942.780	1782.418	3287.798
CSS=40%		2870.427	1460.207	3348.566
Number of CPs	2054	2054	2054	
R²	0.238	0.232	0.239	

Notes: The dependent variable is the dollar amount of annual child support according to the written agreement. Sample of custodial parents eligible for the child support questionnaire in topical module 6 of the SIPP-2008 panel and with a written agreement. CSS is the child support savings from joint custody implied by the state child support guidelines and is expressed as the reduction in the amount of child support compared to mother's physical custody and relative to the non-custodial parent's income. CPs: custodial parents are parents with children less than 21 and eligible for the child support questionnaire in the SIPP (topical module 6 of the 2008 panel). 41% of CPs declare having a written child support and custody agreement. Besides income and state fixed effects all models control for the number of children, the age of the CP, the level of education and race. Our income pairs control variables are the interaction between the custodial parent's income category and the probabilities generated from our imputation exercise that the noncustodial parent's income is within each of the three income categories. The specification shown in columns (3) and (4) is estimated jointly with an interaction between joint custody and child support savings to capture the effects of child support savings under the two types of custody. The predicted amounts in panel b are estimated at the mean values of the controls. Robust standard errors clustered at the state level. ** Significant at the 5% level.

*** Significant at the 1% level.

* Significant at the 10% level.

Table 4

The Effect of Child Support Savings from Joint Custody on the Actual Number of Days per Year the Child is with the Father.

	(1) All Children	(2) Children ≤12	(3) Children >12
Coefficient on CSS (robust S.E.)	43.273 (26.903)	77.925** (32.688)	6.981 (32.069)
Panel b. Predicted effect of Child Support Savings on children of divorced parents			
CSS=0%	108.322	99.767	116.768
CSS=40%	125.631	130.937	119.56
% change from			
CSS=0% to CSS=40%	16.0%	31.2%	2.4%
Number of children	4165	2043	2122
R²	0.737	0.729	0.761

Notes: Sample of children of custodial parents eligible for the child support questionnaire in topical module 6 of the SIPP-2008 panel and who have a written agreement. The actual number of days spent with the father is information provided by the custodial parent and can be different from the number of days specified in the written agreement. CSS is the child support savings from joint custody implied by the state child support guidelines and is expressed as the reduction in the amount of child support compared to mother's physical custody and relative to the non-custodial parent's income. CPs: custodial parents are parents with children less than 21 and eligible for the child support questionnaire in the SIPP (topical module 6 of the 2008 panel). Besides income and state fixed effects all models control for the number of children, the age of the child, the age of the CP, the level of education and race. Our income pairs control variables are the interaction between the custodial parent's income category and the probabilities generated from our imputation exercise that the noncustodial parent's income is within each of the three income categories. The predicted effects in panel b are estimated at the mean values of the controls. Robust standard errors clustered at the state level. *** Significant at the 1% level. * Significant at the 10% level.

** Significant at the 5% level.

Our results thus far show that CSS result in a greater likelihood of joint custody and more time spent with the father (especially for children aged 12 and under). In the next sections, we examine empirically how children's outcomes are affected and explore the effects on different types of time spent with parents and the characteristics of custodial parents.

5.2. Effects on outcomes

Table 5 and Appendix Table A4 show the results of our analysis on children's education and health outcomes. Table 5 shows the results of estimating Eq. (1) (our main specification), while Appendix Table A4 shows the results of estimating Eq. 2.

In panel (c) of Table 5, we add another specification in which we estimate the relationship between CSS and child outcomes in the sample of children in intact families. The results of this last specification have two interpretations. One is that they act as a placebo test. This rests on the assumption that CSS have a more direct impact on children of divorced parents compared to children in intact families. However, this placebo test interpretation must be taken with caution since CSS have the potential to affect children in intact families through the *bargaining effect*. Hence, a finding that CSS has no relationship with the outcomes of children in intact families could be seen as evidence against the *bargaining effect*. Throughout the text and in the tables, we use the expression placebo test, but we recognize this dual interpretation.

5.2.1. Attitudes toward school

In terms of educational outcomes, we consider children's attitudes toward school and two alternative measures of educational attainment: number of years of completed education and highest degree attained.

In columns (1) to (3) of Table 5, we analyze the relationship between CSS and children's attitudes toward school. In the SIPP, custodial parents are asked questions about their children's attitudes in school across various dimensions, which may proxy the mood of the child. Our dependent variable, attitudes toward school, is the combination of three qualitative variables indicating whether the child is interested in school, whether the child likes to go to school and whether the child works hard in school. We transform these three variables into a binary variable taking a value of 1 when the child scores the highest level in all three variables (56% of the cases) and 0 otherwise (44% of the cases).

In our preferred specification we find a negative effect of 'child support savings' on attitudes toward school, but this is only statistically significant for children 12 and under, where an increase of CSS from 0% to 40% is associated with a 28.1% decrease in the indicator of attitudes toward school. This negative effect contrasts with the association from Eq. (2) Table A4), which indicate that children of fathers with joint or full custody have better attitudes toward school, particularly for children older than 12.

Finally, panel (c) of Table 5 shows the results of our placebo test, in which we estimate our preferred specification on the sample of intact families. In contrast to the above results, CSS has positive, although not always significant effects on children's attitudes toward schooling among children in intact families which differs from the negative effects among children of divorced parents.¹⁴

5.2.2. Educational attainment

We turn now to the results in columns 4 to 6 of Table 5 and Table A4, where the dependent variable is the difference between actual years of education and potential years of completed education (potential years are defined as the age of the child minus 5). Eq. (1) (panel (a) of Table 5) indicates a negative effect of CSS on educational attainment. This effect is significant for all children, but strongest (and statistically significant) for older children. This result is not surprising, considering that any negative effects on educational attainment tend to accumulate over time. Again, the contrast with Eq. (2) (Table A4) is illustrative. There, we find a positive association between joint custody and completed years of education, particularly for older children.

Panel b in Table 5 gives us an idea of the magnitude of these effects. When CSS increase from 0% to 40%, children's educational attainment decreases by 1.67 months (the difference between years of completed education and potential years goes from -0.705 to -0.844). This effect is larger for children older than 12 (2.35 months) compared to children aged 12 or less (0.56 months).¹⁵ The placebo estimates shown in panel (c) of Table 5 confirm that our results are not spurious since we find no association between CSS and children educational attainment in the sample of intact families.

Columns 7 to 9 of Table 5 and Table A4 consider an alternative definition of educational attainment: degree completion.¹⁶ As in columns 4 to 6, we find a negative association between economic incentives for joint custody and the level of education of children, with large and significant effects for secondary education. Also similar to the results for educational attainment, we find that Eqs. (1) and 3 are generally consistent, indicating that the negative effect of CSS on degree completion is driven by children in joint custody due to high CSS. In contrast, Eq. (2) finds a positive effect in all three categories

¹⁴ We generally find no effect of CSS on intact families. As pointed out in Rasul (2006), this positive effect of CSS may occur if CSS increase the probability of the father undertaking joint custody and therefore increase his incentive to invest in the child.

¹⁵ As we show in Appendix Table A.6, the negative effect of CSS on educational attainment for older children found in Table 5 appears to be driven by girls and not boys.

¹⁶ Degree completion is defined as follows: primary education means having completed eight grade or more, secondary education means having completed 12th grade or equivalent or more, whereas college degree means having completed college education or more.

Table 5

The Effect of Child Support Savings from Joint Custody on the Education and Health of Children of Divorced Parents.

	(1) Attitudes toward school	(2)	(3)	(4) Difference between actual and potential years of completed education	(5)	(6)	(7) Degree completion	(8)	(9)	(10) Health level, from 0 to 5, 5 indicating very good health	(11)	(12)
	All Children	Children ≤12	Children >12	All Children	Children ≤12	Children >12	Primary education	Secondary education	Some college	All Children	Children ≤12	Children >12
Coefficient on CSS	−0.105	−0.362*	0.187	−0.347*	−0.117	−0.488*	0.017	−0.334*	−0.159	−0.797*	−1.295**	−0.476
(robust S.E.)	(0.158)	(0.210)	(0.197)	(0.210)	(0.273)	(0.282)	(0.021)	(0.190)	(0.292)	(0.465)	(0.783)	(0.559)
Number of children	4568	2539	2029	6445	2828	3617	4101	1560	1088	7577	3887	3690
R²	0.073	0.078	0.092	0.516	0.084	0.499	0.033	0.192	0.208	0.054	0.046	0.069
Panel b. Predicted effect of Child Support Savings on children of divorced parents												
CSS=0%	0.578	0.661	0.476	−0.705	−0.225	−1.085	0.989	0.831	0.421	0.524	0.577	0.474
CSS=40%	0.535	0.516	0.551	−0.844	−0.272	−1.281	0.996	0.697	0.357	0.448	0.454	0.430
% change from CSS=0% to CSS=40%	−8.0%	−28.1%	13.6%	16.5%	17.3%	15.3%	0.7%	−19.2%	−17.9%	−17.0%	−27.1%	−10.2%
Panel c. Placebo (children of intact families)												
Coefficient on CSS	0.172**	0.116	0.238**	−0.006	−0.050	0.108	−0.029	−0.041	0.068	−0.321	0.091	−0.580
(robust S.E.)	(0.079)	(0.112)	(0.116)	(0.147)	(0.134)	(0.254)	(0.028)	(0.082)	(0.171)	(0.483)	(0.628)	(0.701)
Number of children	10,222	5578	4644	13,020	6328	6692	7433	4183	3265	12,346	6328	6018
R²	0.044	0.042	0.052	0.561	0.082	0.322	0.036	0.172	0.139	0.049	0.054	0.055

Notes: Columns 1 to 3 (4 to 9) (10 to 12): Sample of children aged 5 to 17 (5 to 22) (0 to 22) of custodial parents eligible for the child support questionnaire in topical module 6 of the SIPP-2008 panel. Attitudes toward school is the combination of three qualitative variables: eintschl (whether child is interested in school); elikesch (whether child likes to go to school); ewkshard (whether child works hard in school). The sum of the three variables is transformed into a binary variable taking value 1 when the child scores the highest level in all three variables (56% of the cases) and 0 otherwise (44% of the cases). Potential years of completed education are defined by the age of the child and are equal to age minus five. Degree completion is defined according to the number of years of completed education (Primary: 6 or more years; high school degree: 12 or more years; attending college: 13 or more years). In column 7 the sample is children 12 years of age or older. In columns 8 and 9 the sample is children older than 18. CSS is the child support savings from joint custody implied by the state child support guidelines and is expressed as the reduction in the amount of child support compared to mother's physical custody and relative to the non-custodial parent's income. CPs: custodial parents are parents with children less than 21 and eligible for the child support questionnaire in the SIPP (topical module 6 of the 2008 panel). Besides income and state fixed effects all models control for the number of children, the age of the child, the age of the CP, the sex of the child and the CP's level of education and race. Our income pairs control variables are the interaction between the custodial parent's income category and the probabilities generated from our imputation exercise that the noncustodial parent's income is within each of the three income categories. The predicted effects in panel b are estimated at the mean values of the controls. Robust standard errors clustered at the state level. Placebo estimates are obtained from running the same specification but on the sample of children of intact families. *** Significant at the 1% level.

** Significant at the 5% level.

* Significant at the 10% level.

of educational attainment for children who live with their fathers. As expected, we do not see any significant effects of CSS in the placebo sample.

5.2.3. Health

In columns 10 to 12 of [Table 5](#) and [Table A4](#), we examine the effect of CSS on the health of children. In those columns, the dependent variable is a categorical measure of parent's-reported health of their children. We estimate ordered logistic regressions for the probability of a better health outcome as a function of observable characteristics of parents and children and our measure of CSS. We find that economic incentives for joint custody are associated with worse health outcomes and the effect is strongest for younger children. In [Table 5](#) CSS reduces the probability of the best health outcome by 17.0% for the entire sample of children and by 27.1% for the sample of children aged 12 and under. These two effects are statistically significant at the 10% and 5% level, respectively. In the case of children older than 12 the effect is smaller in magnitude (–10.2%) and not statistically significant. Finally, the results from the placebo test suggest that our results are not spurious.

A previous iteration of this paper also explored the possibility that CSS affect parental expenditures by examining the effects of CSS on expenditures on private schooling and medical expenditures.¹⁷ These results showed some indication that CSS may increase expenditures on private schooling and dental visits. However, the impact of these effects for child outcomes is difficult to interpret, since these may indicate positive outcomes for children (investment in child health and education) or negative outcomes (private school in cases of behavioral issues and/or dental visits due to poor health habits).

5.2.4. Divorce rates

One potential concern with the results presented above is that our population of interest, the children of divorced parents, does not remain constant with CSS but is affected by a higher divorce rate. Previous research has not found a clear effect. [Brinig and Buckley \(1998\)](#) find no effect of the joint custody laws on US divorce rates, and [Halla \(2013\)](#) concludes that the evidence he analyzed does not show a clear-cut effect. Although the analysis of the effect of CSS on family outcomes is outside the scope of this paper, evidence that there is no relationship between CSS and divorce rates would be reassuring and increase the confidence that our results are causal and not driven by compositional changes in the group of divorced parents. In order to examine the effect of CSS on divorce, [Appendix Table A5](#) uses data from the 2011–2013 panel of the American Community Survey (ACS). We choose to use the ACS for this analysis because we want to see how child support guidelines affect the probability of divorce of married couples. The ACS provides a larger sample than what we had available in the SIPP for this analysis (625,197 couples). We run simple OLS regressions of CSS in which the dependent variable is the probability that a married couple divorces in the next 12 months. The identification strategy is the same as in the rest of the paper since we exploit differences in CSS across states and income groups. The sample consists of women aged 16 to 50 and with children living in the household whose marital status was 'married' the year prior to the survey. Besides income and state fixed effects, all models control for the number of children, age of the individual, the level of education, race, number of previous marriages and a quadratic on the number of years married. We run the analysis by the age of the woman, the number of children and the level of education. The results are presented in [Appendix Table A5](#). None of the eight specifications yields a significant effect and overall there is no clear association between CSS and the divorce rate. The analysis for the entire sample (column 1) yields a zero effect, with the divorce rate constant at 2.1% and independent of the level of CSS. The subgroup analyses (columns 2 to 8) reveal an unclear pattern with the rate of divorce increasing or decreasing depending on the group of women. None of the effects are statistically different from zero.

5.2.5. Time spent with children

Our analysis so far has found negative effects of CSS on various educational, health and attitude outcomes of children. These effects seem to be driven by children in joint custody when CSS are high. We find little association between CSS and the outcomes of children in intact families, which indicates that our results are not spurious and that the *bargaining effect* has a limited role. Finally, we find that children in joint custody when CSS are high stay more days with their father. In this section we explore evidence consistent with the *crowding out effect*: that children of parents who undertake joint custody when CSS are high face worse outcomes due to differences in parental time spent with the child. This could happen if fathers in those situations spend less time or lower-quality time with their children compared to that of mothers, or if well-intentioned fathers who undertake joint custody when the economic incentives are high spend more time with children, but at the expense of relatively valuable time spent with the mother. We examine these possibilities in [Table 6](#).

Columns 1 to 4 in [Table 6](#) look at information in topical modules 5 and 8 (child care) of the SIPP to see whether dads in joint custody when CSS are high rely more on others to take care of their children.¹⁸ Those topical modules include questions that address whether the custodial parent makes use of several arrangements to take care of the child, such as the help of grandparents, brothers, other family members, nursery, daycare services or whether the child simply cares for herself. The modules also address whether the child spends time in club or sports activities and after-school lessons. We combine the information about these different arrangements to compute a measure of the total number of arrangements used and we implement ordered logistic regression to estimate the effect of CSS on the number of arrangements used. The results of this

¹⁷ We used these variables because data on expenditures is very limited in the SIPP.

¹⁸ Note that in [Table 4](#) we showed that fathers with JC when CSS are high spend more days with their children. In [Table 6](#), we try to infer the quality of that time.

Table 6

The Effect of Child Support Savings from Joint Custody on Time Use with the Child (OLS and ordered logit on CSS Specification. Children aged 14 or less with custodial fathers and mothers in sole custody).

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Children with custodial fathers				Children with custodial mothers in sole custody			
	Usual hours worked per week ¹		Father relies on others to care for children ²		Usual hours worked per week ¹		Mother relies on others to care for children ²	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Coefficient on CSS	−74.417***	−84.197***	−4.760***	−1.454	46.170***	59.565***	0.464	2.252**
(robust S.E.)	(14.186)	(20.950)	(1.845)	(1.632)	(11.808)	(12.045)	(0.758)	(1.060)
CSS=0%	41.03	41.66	65.11	58.32	16.51	15.21	52.58	46.90
CSS=12% (sample average)	32.10	31.56	56.00	55.12	22.05	22.36	53.81	52.95
CSS=20%	26.15	24.82	49.58	52.96	25.75	27.12	54.63	56.95
CSS=40%	11.27	7.98	33.70	47.49	34.98	39.03	56.67	66.50
Number of Observations	371	334	371	334	2034	2019	2034	2019

¹ Notes: Usual hours worked per week combines the number of hours worked in the main job and in the secondary job. Only 4% of the sample has a secondary job.

² Combines information on the following arrangements for child care: grandparents, siblings, day care, after school care and the child cares for herself. Takes values between 0 and 7 depending on how many of these arrangements are used. Columns 3–4 and 7–8, show the probability that the father(mother) relies on others to care for the child. All specifications control for state fixed effects, income of the custodial parent, level of education, age, and race of the custodial parent, age of the child, number of siblings and marital status of the custodial parent. Robust standard errors clustered at the state level. * Significant at the 10% level.

*** Significant at the 1% level.

** Significant at the 5% level.

analysis are shown in columns 3 and 4. We perform separate analysis for sons (column 3) and for daughters (column 4). We also look at the usual weekly work hours of the father, as this could be a good proxy of the father's availability to spend time with his children. The results are shown in columns 1 (for boys) and 2 (for girls).

Columns 5 to 8 examine mother's time with children. We look at mothers with sole custody as a way to proxy for the effects of mothers under joint custody, for which we have too few observations. Assuming no direct effects of CSS on work among mothers with sole custody, if we observe that mothers with sole custody work more when CSS are high, this suggests that non-working mothers are pulled into the joint custody group (from sole custody) when CSS is high. The structure of these columns is the same as columns 1 to 4.

All the specifications control for state fixed effects, income of the custodial parent, level of education, age, and race, of the custodial parent, age of the child, number of siblings and marital status of the custodial parent. Including marital status improves the precision of the estimates but does not change them significantly. The results support the hypothesis that higher CSS lead to a reduction in high quality maternal time. While male CPs when CSS are high work significantly less and rely less on others to care for the child, mothers with sole custody when CSS are high work more and rely more on others to care for the child, suggesting that mothers that are pulled into joint custody when CSS are high work less and rely less on others to care for their children.

Interestingly, there is a contrast between boys and girls that is consistent with our finding of more negative effects of joint custody when CSS are high for girls than for boys. This contrast is evident in the outcome that measures how much fathers and mothers rely on others to care for their child. For example, fathers in joint custody when CSS are high rely much less on others when they are in charge of a boy, yet not as much when they are in charge of a girl. To the contrary, mothers in sole custody when CSS are high rely on others much more when they are in charge of a girl but not when they take care of a boy.¹⁹ Overall, these results suggest that girls (but not boys) under joint custody when CSS are high spend more time with fathers who rely more on others to care for them and instead spend less time with mothers that used to rely less on others to look after them (*crowding out effect*).

Whether fathers' behavior reflects good intentions and arises because they are not aware of the negative effects on their children is unanswered by our research. It seems, however, that this unintended effect of CSS is partly due to the structure of CSS, which tend to be larger when the father but also when the mother has relatively low labor market attachment and more time to spend with their children.

5.3. Heterogeneous effects and robustness checks

Tables 7a, 7b, and 7c present various robustness tests, while Appendix Tables A6 and A7 examine heterogeneous effects by gender and parental education. To examine the role of our covariates on our outcomes, the last two rows of Table 7a removes each of the custodial parent covariates separately and confirms little effect on the results, although in some cases the

¹⁹ Recall that assuming no direct effects on alternative care arrangement, the increase in their use associated with an increase in CSS among sole custody mothers must imply that mothers who had previously not used alternative care arrangements for their daughters are pulled into joint custody by higher CSS.

Table 7a

The Effect of CSS on Health and Education Outcomes of Children.

<i>Robustness Tests</i>				
	(1) Attitudes towards school (age ≤12)	(2) Difference yrs of education (age >12)	(3) Secondary education completed (age ≥18)	(4) Health level (age ≤12)
Preferred specification				
Coefficient on CSS	−0.362*	−0.488*	−0.334*	−1.295**
(robust S.E.)	(0.210)	(0.282)	(0.190)	(0.783)
CSS=0%	0.661	−1.085	0.831	0.577
CSS=40%	0.516	−1.281	0.697	0.454
Number of Observations	2539	3617	1560	3887
Placebo				
Coefficient on CSS	0.116	0.108	−0.041	0.091
(robust S.E.)	(0.112)	(0.254)	(0.082)	(0.628)
Number of Observations	5578	6692	4183	6328
Not controlling for education				
Coefficient on CSS	−0.348*	−0.389	−0.304	−1.256*
(robust S.E.)	(0.213)	(0.288)	(0.193)	(0.772)
CSS=0%	0.659	−1.099	0.827	0.576
CSS=40%	0.519	−1.254	0.705	0.457
Number of Observations	2539	3617	1560	3887
Not controlling for age of the parent				
Coefficient on CSS	−0.356*	−0.489*	−0.334*	−1.232
(robust S.E.)	(0.212)	(0.280)	(0.190)	(0.776)
CSS=0%	0.660	−1.085	0.831	0.575
CSS=40%	0.517	−1.281	0.697	0.458
Number of Observations	2539	3617	1560	3887

Notes: Robust standard errors clustered at the state level. *** Significant at the 1% level.

** Significant at the 5% level.

* Significant at the 10% level.

Table 7b

The Effect of CSS on Health and Education Outcomes of Children.

<i>Additional Robustness Tests</i>				
	(1) Attitudes towards school (age ≤12)	(2) Difference yrs of education (age >12)	(3) Secondary education completed (age ≥18)	(4) Health level (age ≤12)
Controlling for work-status				
Coefficient on CSS	−0.363*	−0.478*	−0.330*	−1.251
(robust S.E.)	(0.210)	(0.283)	(0.192)	(0.806)
CSS=0%	0.661	−1.087	0.830	0.575
CSS=40%	0.516	−1.278	0.698	0.458
Number of Observations	2539	3617	1560	3887
Controlling for the amount of child support under sole custody				
Coefficient on CSS	−0.357**	−0.475*	−0.334*	−1.249
(robust S.E.)	(0.218)	(0.287)	(0.190)	(0.789)
CSS=0%	0.660	−1.087	0.831	0.575
CSS=40%	0.517	−1.278	0.697	0.457
Number of Observations	2539	3617	1560	3887
Excluding cases in which the father is the CP				
Coefficient on CSS	−0.262	−0.415	−0.255	−1.738*
(robust S.E.)	(0.257)	(0.305)	(0.207)	(0.950)
CSS=0%	0.643	−1.101	0.818	0.583
CSS=40%	0.539	−1.267	0.716	0.421
Number of Observations	2162	2984	1262	3356

Notes: Robust standard errors clustered at the state level. *** Significant at the 1% level.

** Significant at the 5% level.

* Significant at the 10% level.

coefficient of interest loses significance. Similarly, Table 7b shows that controlling for work status does not affect the main results, which is not surprising, considering that we have already accounted for income groups and different combinations of income levels for parents as well. The results are also robust to the inclusion of a control for the amount of child support under sole custody, which is not surprising considering that there is a very low degree of correlation (0.04) between the amount of child support under sole custody and our measure of CSS. We include this control to rule out the possibility that our results are driven by the baseline level of child support, rather than by child support savings. Similarly, excluding cases

Table 7c

The Effect of CSS on Health and Education Outcomes of Children.

<i>Additional Robustness Tests</i>				
	(1) Attitudes towards school (age ≤12)	(2) Difference yrs of education (age >12)	(3) Secondary education completed (age ≥18)	(4) Health level (age ≤12)
Using method II for the imputation of income				
Coefficient on CSS	−0.370*	−0.609**	−0.362**	−1.099
(robust S.E.)	(0.196)	(0.269)	(0.186)	(0.775)
CSS=0%	0.662	−1.069	0.834	0.571
CSS=40%	0.514	−1.313	0.689	0.467
Number of Observations	2539	3617	1560	3887
Using method III for the imputation of income				
Coefficient on CSS	−0.277	−0.697**	−0.281	−2.462***
(robust S.E.)	(0.240)	(0.325)	(0.229)	(0.981)
CSS=0%	0.643	−1.074	0.818	0.599
CSS=40%	0.532	−1.353	0.705	0.371
Number of Observations	2539	3617	1560	3887
Allowing the effect of covariates to vary by the gender of the custodial parent¹				
Coefficient on CSS	−0.342	−0.524*	−0.341*	−1.291*
(robust S.E.)	(0.211)	(0.279)	(0.189)	(0.771)
CSS=0%	0.658	−1.081	0.831	0.577
CSS=40%	0.521	−1.291	0.695	0.455
Number of Observations	2539	3617	1560	3887
Controlling for the amount of child support according to the written agreement²				
Coefficient on CSS	−0.367*	−0.479*	−0.341*	−1.356*
(robust S.E.)	(0.207)	(0.289)	(0.191)	(0.797)
CSS=0%	0.661	−1.087	0.831	0.578
CSS=40%	0.515	−1.279	0.695	0.451
Number of Observations	2539	3617	1560	3887
Adding controls for the interaction between the income of the CP and state fixed effects				
Coefficient on CSS	−0.500**	−0.644**	−0.335*	−1.113
(robust S.E.)	(0.225)	(0.308)	(0.197)	(0.908)
CSS=0%	0.680	−1.065	0.831	0.571
CSS=40%	0.479	−1.322	0.697	0.469
Number of Observations	2539	3617	1560	3887
Adding controls to proxy for the health of the CP and the relationship between the CP and NCP				
Coefficient on CSS	−0.345*	−0.461*	−0.338**	−1.380*
(robust S.E.)	(0.188)	(0.270)	(0.167)	(0.792)
CSS=0%	0.659	−1.089	0.831	0.579
CSS=40%	0.520	−1.274	0.696	0.450
Number of Observations	2539	3617	1560	3887

¹ Notes: All covariates, except CSS and state fixed effects, are interacted with the gender of the custodial parent.² A dummy variable indicates whether there is no written agreement and takes value 1 in that situation. Robust standard errors clustered at the state level. *** Significant at the 1% level.

** Significant at the 5% level.

* Significant at the 10% level.

in which the father was the respondent to the questionnaire and joint custody cannot be determined with certainty does not materially affect our estimates.²⁰

In Table 7c, we show the results of two alternative methods for the imputation of income of the non-custodial parent. In our first alternative method, labeled method II in the table, we assign to each CP of a given income level a set of probabilities for the income level of the non-custodial parent, where those probabilities are computed as the fraction of males (females) with that income level in the married sample whose partners have the same income level as our custodial parent.²¹ As in our main imputation method, CSS is then calculated using CP's income and the imputed probabilities of NCP income to create a weighted average of CSS, given these income probabilities.

In our second alternative method, 'method III' in the table, the level of the non-custodial parent income is imputed using the predicted value of fathers' (mothers') income regressed on a set of mothers (fathers') characteristics (income, education, work status and number of children) in the sample of married couples. We merge these predicted values to the sample of CPs and use them to assign an income level to the non-custodial parent (high, medium or low). This method differs from

²⁰ Recall that we treat cases in which a father with a child in the household was the respondent to the questionnaire and there is no information about legal joint custody as 'joint custody' for the purposes of this paper.

²¹ These probabilities obviously are less precisely estimated than those generated by our preferred imputation process which generates predicted income probabilities from a regression of father's (mother's) income on the mother's (father's) set of observed characteristics among the married sample. As such, this method is simply meant to test the sensitivity of our results to alternative imputation measures.

our preferred imputation method in that each non-custodial parent is assigned an income level with certainty, as opposed to generating CSS as weighted average over the predicted income probabilities.

The above methods obviously use less information to predict non-custodial parents' incomes than our preferred method of imputation and therefore are likely to be more noisy proxies for income. Despite these drawbacks, the results from the alternative imputation methods are largely robust although some coefficients fall in magnitude, as might be expected since these methods have the potential to increase attenuation bias since they use less information to compute NCP income compared to the method we use in the rest of paper. Table 7c also indicates that allowing the effect of the covariates to vary by the gender of the custodial parent or controlling for the amount of child support does not affect our results.

Row 5 of Table 7c shows our estimates with an alternative specification in which we add controls for state by income-group interactions. The identifying source of variation is changes in CSS within state-income groups over time. The purpose of this specification is to test the sensitivity of our results to controlling for differences in income groups across states, which might be correlated with both CSS and child outcomes. These results are quite similar to the main specification, although the health coefficient loses some significance. In row 6, we also include a robustness check in which we control for the parents' health and relationship status²² to check whether household-specific factors which may be correlated with both child outcomes and CSS are driving our results. We again find quite similar results to our main specification.

In Appendix Table A6, we investigate whether the negative educational, attitude and health effects of CSS are different for boys and girls. In general, CSS have a negative impact on both boys and girls, although some of the effects are larger for girls. For example, CSS decrease educational attainment (measured by the difference between actual and potential years of education) by 18.3% for girls and 12.6% for boys and reduce the probability of completing secondary education by 23.9% for girls and 16.4% for boys. In contrast, the effect on health outcomes is similar across genders. These results are consistent with Bertrand and Pan (2013) and Autor et al. (2019) finding that father presence is important, particularly for boys.

Appendix Table A7 looks at how the effect of 'child support savings' varies by the level of education of the custodial parent, following research that indicates that time spent with parents may have differential effects that vary with parental education Hsin and Felfe (2014). There is no clear pattern. For example, the effect of CSS on children's attitudes towards school is the same (–29% when CSS increase from 0% to 40%) regardless of the level of education of the custodial parent. Regarding the educational attainment of children, the result depends on the measure we use. CSS have a stronger negative impact when the custodial parent has more than high school education if we measure child's educational attainment by the difference between actual and potential years of education. However, the opposite is true when we look at the probability that the child completes secondary education. In the case of health outcomes, CSS has a stronger negative impact when the custodial parent has secondary education.

6. Conclusions

We find that as economic incentives for joint custody increase, fathers are more likely to have joint and full custody and pay less in child support. Increases in CSS are also associated with a child spending more days with the father; this effect is significant and large in magnitude and is driven by children aged 12 and under.

We also find negative effects of economic incentives for joint custody on various educational, health and attitude outcomes of children. While the negative effect of CSS on attitudes toward school is concentrated on children ages 12 and under, CSS generate significant negative effects on educational attainment and degree attainment for all children, particularly among older children. Finally, CSS also leads to significantly worse health outcomes, with the strongest effects among younger children.

While the mechanism for these negative effects is not definite, our analyses using time use data contradict the hypothesis that fathers who take joint physical custody when 'child support savings' are high spend less time or less quality time with their children, leading to negative outcomes for children. However, our findings do suggest that high levels of CSS lead to a substitution in children's time away from mothers to fathers, particularly among mothers with lower labor force participation. This result appears to occur because fathers who benefit from high CSS are linked to mothers who have been able to spend more time taking care of their children (mothers who work less).

Overall, these findings suggest that the economic incentives of divorce law may play an important role in children's development following divorce. Given the well-known negative outcomes for children following divorce, policy makers should be cognizant of the role that these incentives may play in worsening or ameliorating these effects.

Declaration of Competing Interest

The authors have no conflicts of interest related to this research to disclose.

²² These controls are dummy variables for the following: whether the CP has frequent anxiety problems; the marital status of the CP; whether the CP was ever married to the NCP; whether the CP has poor health (self-assessed).

Appendix A1. Tables not necessarily for publication

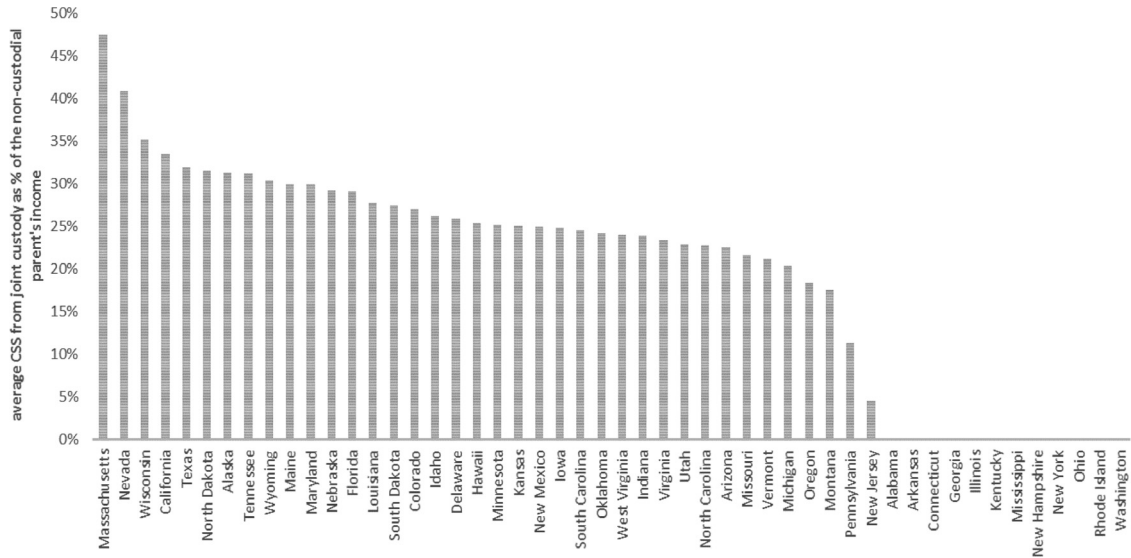


Fig. A1. Ranking of States According to the Average Child Support Savings from Joint Custody.

Table A.1

Income Imputation of the NCP by Ordered Logistic Regression.

	(1) Regression of fathers' incomes on mothers' characteristics	(2) Regression of mothers' incomes on fathers' characteristics
Income level - low	−0.905***	−0.397***
(robust S.E.)	(0.249)	(0.168)
Income level - medium	−0.619***	0.033
(robust S.E.)	(0.242)	(0.153)
Income level - high	..	..
(robust S.E.)	..	..
1 child	−0.086	0.227**
(robust S.E.)	(0.098)	(0.104)
2 or more children	..	..
(robust S.E.)	..	..
Not working	0.177	0.197
(robust S.E.)	(0.132)	(0.168)
Working part-time	..	..
(robust S.E.)	..	..
Working full-time	−0.422***	−0.106
(robust S.E.)	(0.097)	(0.124)
Less than high school	−1.830***	−1.489***
(robust S.E.)	(0.200)	(0.193)
High school	−1.096***	−0.639***
(robust S.E.)	(0.168)	(0.167)
Vocational training	−0.878***	−0.654***
(robust S.E.)	(0.162)	(0.164)
College or more	..	..
(robust S.E.)	..	..
Number of observations (monthly)	26,547	26,547
Number of individuals	1527	1527
R²	0.071	0.060

Notes: 2004 and 2008 panels of the SIPP. Sample of couples that we observe initially married but then divorce during the sample period (between 2008 and 2013 in the case of the 2008 SIPP panel and between 2004 and 2008 in the case of the 2004 SIPP panel). All models include age, state, income, year and month fixed effects. Robust standard errors clustered at the state level.

* Significant at the 10% level.

*** Significant at the 1% level.

** Significant at the 5% level.

Table A.2

Characteristics of Custodial Fathers and Mothers at Different Values of Child Support Savings.

	Custodial Fathers				Custodial Mothers			
	(1) When CSS=0	(2) When CSS>0	(3) When CSS>0.1	(4) When CSS>0.2	(5) When CSS=0	(6) When CSS>0	(7) When CSS>0.1	(8) When CSS>0.2
Age	41.44	40.58	39.32	38.83	36.76	36.53	36.84	38.19
HS or less	59.40	56.60	60.38	65.20	60.95	59.85	59.53	54.31
Voc. + associate degrees	22.64	24.21	24.53	22.80	24.54	25.59	25.55	26.40
College degree+	17.94	19.28	15.09	12.00	14.50	14.54	14.92	19.29
Non work	6.83	9.71	12.79	21.20	11.79	11.29	10.51	4.74
Inc. level 1	30.34	34.37	44.03	69.60	53.70	52.44	48.16	18.00
Inc. level 2	48.71	39.61*	41.30	9.20	29.88	31.27	35.54	64.22
Inc. level 3	14.10	16.29	1.89	0.00	4.62	4.98	5.79	13.04
1 child	69.65	67.41	65.20	59.20	53.38	56.14*	51.92	36.75
≥ 2 children	30.34	32.58	34.80	40.80	46.61	43.85*	48.08	63.25
White	73.50	66.06*	60.38	52.80	56.89	50.36*	49.98	50.22
Black	15.38	11.95	13.42	14.00	28.28	22.68*	21.70	20.91
Latino	6.41	15.54*	18.87	24.40	11.15	20.85*	22.35	23.49
Other	4.70	6.42	7.34	8.80	3.66	6.09*	5.97	5.39
Number of CPs	234	669	477	250	1255	2887	2313	928

* Notes: indicates that the difference between the values when CSS=0 and CSS>0 is statistically different from 0 at the 10% confidence level or higher.

Table A.3

The Effect of Joint and Father Custody on the Number of Days the Child is with the Father.

	(1)	(2)	(3)
<i>OLS estimates of the effect of joint custody</i>			
	All Children	Children ≤12	Children >12
Coefficient on JC	87.182***	89.099***	83.314***
(robust S.E.)	(7.704)	(7.246)	(9.814)
JC=0	82.201	79.977	85.219
JC=1	169.384	169.077	168.533
% change from JC=0 to JC=1	106.1%	111.4%	97.8%
Number of children	4165	2043	2122
R²	0.774	0.769	0.793

Notes: Sample of children of custodial parents eligible for the child support questionnaire in topical module 6 of the SIPP-2008 panel and who have a written agreement. The actual number of days spent with the father is information provided by the custodial parent and can be different from the number of days specified in the written agreement. CSS is the child support savings from joint custody implied by the state child support guidelines and is expressed as the reduction in the amount of child support compared to mother's physical custody and relative to the non-custodial parent's income. CPs: custodial parents are parents with children less than 21 and eligible for the CS questionnaire in the SIPP (topical module 6 of the 2008 panel). Besides income and state fixed effects all models control for the number of children, the age of the child, the age of the CP, the CP's level of education and race. Our income pairs control variables are the interaction between the custodial parent's income category and the probabilities generated from our imputation exercise that the noncustodial parent's income is within each of the three income categories. The predicted effect in panels a and b are estimated at the mean values of the controls. Robust standard errors clustered at the state level. ** Significant at the 5% level. * Significant at the 10% level.

*** Significant at the 1% level.

Table A.4
The Effect of Joint Custody on the Education and Health of Children of Divorced Parents.

	(1) Attitudes towards school	(2) Children ≤12	(3) Children >12	(4) All Children	(5) Children ≤12	(6) Children >12	(7) Highest degree completed Primary (children ≥12)	(8) High School (children ≥18)	(9) Attending College (children ≥19)	(10) All Children	(11) Children ≤12	(12) Children >12
OLS estimates of the effect of joint custody												
Coefficient on JC	0.053** (0.028)	0.036 (0.051)	0.096*** (0.034)	0.108*** (0.039)	0.044 (0.040)	0.161*** (0.063)	0.006* (0.003)	0.057** (0.027)	0.133** (0.056)	0.076 (0.101)	0.219 (0.180)	−0.056 (0.135)
JC=0	0.552	0.604	0.482	−0.774	−0.250	−1.186	0.990	0.776	0.369	0.495	0.528	0.462
JC=1	0.606	0.641	0.578	−0.666	−0.205	−1.025	0.995	0.833	0.503	0.514	0.58	0.449
% change from JC=0 to JC=1	9.8%	6.1%	19.9%	−14.0%	−18.0%	−13.6%	0.5%	7.3%	36.3%	3.8%	9.8%	−2.8%
Number of children	4568	2539	2029	6445	2828	3617	4101	1560	1088	7577	3887	3690
R²	0.074	0.077	0.093	0.517	0.08	0.500	0.033	0.191	0.213	0.053	0.046	0.069

Notes: Columns 1 to 3 (4 to 9) (10 to 12): Sample of children aged 5 to 17 (5 to 22) (0 to 22) of custodial parents eligible for the child support questionnaire in topical module 6 of the SIPP-2008 panel. Attitudes toward school is the combination of three qualitative variables: eintschl (whether child is interested in school); likesch (whether child likes to go to school); ewkshard (whether child works hard in school). The sum of the three variables is transformed into a binary variable taking value 1 when the child scores the highest level in all three variables (56% of the cases) and 0 otherwise (44% of the cases). Potential years of completed education are defined by the age of the child and are equal to age minus five. Degree completion is defined according to the number of years of completed education (Primary: 6 or more years; high school degree: 12 or more years; attending college: 13 or more years). In column 7 the sample is children 12 years of age or older. In columns 8 and 9 the sample is children older than 18. CSS is the child support savings from joint custody implied by the state child support guidelines and is expressed as the reduction in the amount of child support compared to mother's physical custody and relative to the non-custodial parent's income. CPs: custodial parents are parents with children less than 21 and eligible for the child support questionnaire in the SIPP (topical module 6 of the 2008 panel). Besides income and state fixed effects all models control for the number of children, the age of the child, the age of the CP, the sex of the child and the CP's level of education and race. Our income pairs control variables are the interaction between the custodial parent's income category and the probabilities generated from our imputation exercise that the noncustodial parent's income is within each of the three income categories. The predicted effects in panel b are estimated at the mean values of the controls. Robust standard errors clustered at the state level. Placebo estimates are obtained from running the same specification but on the sample of children of intact families.

*** Significant at the 1% level.

** Significant at the 5% level.

* Significant at the 10% level.

Table A.5
The Effect of Child Support Savings from Joint Custody on the Divorce Rate.

	(1) All Married Women	(2) Women <35	(3) Women ≥35	(4) Women w/ 1 child	(5) Women ≥2 children	(6) HS Degree or less	(7) Voc. Training Assoc. Degree	(8) College Degree
Coefficient on CSS	0.000 (0.002)	0.010 (0.007)	−0.002 (0.004)	−0.016 (0.010)	0.000 (0.003)	0.000 (0.006)	0.016 (0.016)	−0.002 (0.003)
Panel b. Predicted probability of divorce at different values of Child Support Savings								
CSS=0%	0.021	0.023	0.020	0.027	0.018	0.026	0.023	0.015
CSS=40%	0.021	0.026	0.019	0.021	0.019	0.026	0.029	0.014
Number of Couples	625,197	210,919	414,278	221,328	403,869	305,683	68,412	251,102
R²	0.011	0.016	0.010	0.011	0.011	0.013	0.011	0.008

Notes: This table uses data from the American Community Survey (2011–2013). Sample of females married the previous year and aged 16 to 50. Children are identified as long as they still live in the household the year of the survey. The divorce rate is calculated as the percent of women previously married that divorced in the past 12 month. CSS is the child support savings from joint custody implied by the state child support guidelines and is expressed as the reduction in the amount of child support compared to mother's physical custody and relative to the non-custodial parent's income. Besides income and state fixed effects all models control for the number of children, age of the individual, the level of education, race, number of previous marriages and a quadratic on the number of years married. Our income pairs control variables are the interaction between the custodial parent's income category and the probabilities generated from our imputation exercise that the noncustodial parent's income is within each of the three income categories. The predicted probabilities in panel b are estimated at the mean values of the controls. Robust standard errors clustered at the state level. *** Significant at the 1% level.

** Significant at the 5% level. * Significant at the 10% level.

Table A.6
The Effect of CSS on Health and Education Outcomes of Children.

Results by the Gender of the Child								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Attitudes towards school		Difference in years of education relative to potential		Secondary education completed		Health level	
	(age ≤12)		(age >12)				(age ≤12)	
	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys
Coefficient on CSS	−0.416**	−0.306	−0.553**	−0.427	−0.413**	−0.280	−1.271	−1.320*
(robust S.E.)	(0.198)	(0.244)	(0.282)	(0.322)	(0.208)	(0.194)	(0.915)	(0.766)
CSS=0%	0.742	0.583	−0.986	−1.184	0.862	0.802	0.577	0.577
CSS=40%	0.575	0.460	−1.207	−1.355	0.696	0.689	0.456	0.453
%Δ (40% - 0%)	−29.0%	−26.7%	18.3%	12.6%	−23.9%	−16.4%	−26.5%	−27.4%

Notes: Robust standard errors clustered at the state level. *** Significant at the 1% level.

** Significant at the 5% level.

* Significant at the 10% level. The difference of the coefficient between boys and girls is never significant at the 10% or lower level.

Table A.7
The Effect of CSS on Health and Education Outcomes of Children.

	(1)	(2)	(3)		(4)	(5)		(6)	(7)	(8)
	Attitudes towards school		Difference in years of education relative to potential			Secondary education completed			Health level	
	(age ≤12)		(age >12)						(age ≤12)	
	Assoc. degrees, College+	HS or less	Assoc. degrees, College+	HS or less		Assoc. degrees, College+	HS or less		Assoc. degrees, College+	HS or less
Coefficient on CSS	−0.379*	−0.335	−0.556**	−0.381		−0.283	−0.403*		−1.081	−1.560*
(robust S.E.)	(0.199)	(0.269)	(0.284)	(0.327)		(0.185)	(0.226)		(0.792)	(0.864)
CSS=0%	0.679	0.596	−0.916	−1.834		0.861	0.679		0.577	0.577
CSS=40%	0.527	0.462	−1.139	−1.986		0.747	0.518		0.457	0.430
%Δ (40% - 0%)	−28.8%	−29.0%	19.6%	7.7%		−15.3%	−31.1%		−26.3%	−34.2%

Notes: Results by the level of education of the Custodial Parent. Robust standard errors clustered at the state level. *** Significant at the 1% level.

** Significant at the 5% level.

* Significant at the 10% level. The difference of the coefficient between boys and girls is never significant at the 10% or lower level.

Appendix A2: Sample Calculation of Child Support amounts, 2013

This appendix illustrates the child support calculations we undertook for four sample states in 2013. Since each state employs a different calculation and these calculations may vary over time, the selected four states simply provide an example of the type of calculations that we used to calculate child support savings from joint custody.

Example 1: Income Shares, Joint Custody in Child Support Algorithm, Kansas

Kansas uses an ‘income shares’ guideline with shared physical custody incorporated into the calculation. To calculate child support, we first calculate total parental gross monthly income. Given summed parental income, the state publishes a set of tables that specify a total child support obligation (see http://www.kscourts.org/rules-procedures-forms/child-support-guidelines/2012_new/CSG%20AO%20261%20Clean%20Version%20032612.pdf). For sole custody, this amount is prorated between the parents according to their percentage of total income. In cases of shared parenting, the state follows a slightly more complicated algorithm as discussed below.

The necessary computations for the calculation of child support in Kansas each of our income categories are as follows:

I. Both parents are ‘low’ income.

If both parents are low income, then total gross monthly income is \$2166 in 2013 dollars. Using the Kansas schedule of child support obligations and assuming the youngest age category, this leads to a total child support obligation of \$349/month for one child and \$528/month for two children. In the sole custody case, the father will owe half of the total child support since his income is half of total parental income, for a child support payment of \$165 and \$264 per month for one and two children, respectively.

In the case of shared parenting, the equal parenting time formula is as follows: compute each parent's child support assuming sole custody. Subtract the lesser amount from the greater amount and multiply by 0.5. Add to this one of the following:

- (a) $0.13 \times \text{total child support obligation}$ if total gross income is equal or less than \$4690,
- (b) $0.15 \times \text{total child support obligation}$ if total gross income is greater than \$4690 but less than \$8125,
- (c) $0.18 \times \text{total child support obligation}$ if that income is equal to or greater than \$8125.

Therefore, if both parents are low income, then child support is $0.13 \times \$349/\text{month}$ and $0.13 \times \$528/\text{month}$ for one and two child families, for a payment of \$45 and \$69 per month, respectively.

II. The mother is 'low' income and father is 'medium' income.

Using the Kansas schedule of child support obligations along with our low- and medium-income categories in 2013 dollars and assuming the youngest age category, this leads to a total child support obligation of \$582/month for one child and \$872/month for two children. In the sole custody case, the father will owe the total obligation times his percentage of total parental income for a child support order of \$429 and \$643 for one and two child families, respectively.

In the case of shared parenting, using the equal parenting time formula, father's child support is equal to $0.5 \times (\$429 - \$153) + 0.13 \times 582$ for a child support payment of \$214 for one child families and $0.5 \times (\$643 - \$229) + 0.13 \times 872$ for a child support payment of \$320 for two child families.

III. The mother is 'medium' income and father is 'low' income.

Using the Kansas schedule of child support obligations along with our low- and medium-income categories in 2013 dollars and assuming the youngest age category, this leads to a total child support obligation of \$582/month for one child and \$872/month for two children. In the sole custody case, the father will owe the total obligation times his percentage of total parental income for a child support order of \$153 and \$229 for one and two child families, respectively.

In the case of shared parenting, using the equal parenting time formula, the mother's child support is equal to $0.5 \times (\$429 - \$153) + 0.13 \times 582$ for a child support payment of \$214 for one child families and $0.5 \times (\$643 - \$229) + 0.13 \times 872$ for a child support payment of \$320 for two child families. In this case, the father receives child support from the mother.

IV. Both parents are 'medium' income.

Using the Kansas schedule of child support obligations along with our low- and medium-income categories in 2013 dollars and assuming the youngest age category, this leads to a total child support obligation of \$807/month for one child and \$1202/month for two children. In the sole custody case, the father will owe the total obligation times his percentage of total parental income for a child support order of \$404 and \$601 for one and two child families, respectively.

In the case of shared parenting, using the equal parenting time formula, the father's child support is equal to 0.15×807 for a child support payment of \$121 for one child families and 0.15×1202 for a child support payment of \$180 for two child families.

V. The mother is 'low' income and father is 'high' income.

Using the Kansas schedule of child support obligations along with our low- and medium-income categories in 2013 dollars and assuming the youngest age category, this leads to a total child support obligation of \$1152/month for one child and \$1704/month for two children. In the sole custody case, the father will owe the total obligation times his percentage of total parental income for a child support order of \$1020 and \$1508 for one and two child families, respectively.

In the case of shared parenting, using the equal parenting time formula, the father's child support is equal to $0.5 \times (\$1020 - \$132) + 0.18 \times 1152$ for a child support payment of \$651 for one child families and $0.5 \times (\$1508 - \$196) + 0.18 \times 1704$ for a child support payment of \$963 for two child families.

VI. The father is 'low' income and mother is 'high' income.

Using the Kansas schedule of child support obligations along with our low- and medium-income categories in 2013 dollars and assuming the youngest age category, this leads to a total child support obligation of \$1152/month for one child and \$1704/month for two children. In the sole custody case, the father will owe the total obligation times his percentage of total parental income for a child support order of \$132 and \$196 for one and two child families, respectively.

In the case of shared parenting, using the equal parenting time formula, mother's child support is equal to $0.5 \times (\$1020 - \$132) + 0.18 \times 1152$ for a child support payment of \$651 for one child families and $0.5 \times (\$1508 - \$196) + 0.18 \times 1704$ for a child support payment of \$963 for two child families. In this case, the father receives child support from the mother.

VII. Both parents are 'high' income.

For total monthly incomes above \$15,500, Kansas employs the following calculation for total child support in the one child case:

First, raise income to the power 0.689838232 and multiply the result by 2.795. The algorithm also specifies that total monthly child support be multiplied by 0.8 to adjust for the younger age category. Therefore, given our high-income categories in 2013 dollars and assuming the youngest age, this implies that total monthly child support in the sole

custody case is calculated as $0.8 \times 2.795 \times 167,08^{0.6898382}$ or \$1831. Since the father's share of total child support is one-half, his monthly child support payment is \$915.

For total monthly incomes above \$15,500, Kansas employs the following calculation for total child support (per child) in the two-child case:

Raise income to the power 0.689838232 and multiply the result by 2.0497. The algorithm also specifies that total monthly child support be multiplied by 0.8 to adjust for the younger age category. Therefore, given our high-income categories in 2013 dollars and assuming the youngest age, this implies that total monthly child support in the sole custody case is calculated as $0.8 \times 2 \times 2.0497 \times 167,08^{0.6898382}$ or \$2686. Since the father's share of total child support is one-half, his monthly child support payment of \$1343.

In the case of shared parenting, using the equal parenting time formula, the father's child support is equal to 0.18×1831 for a child support payment of \$330 for one child families and 0.18×2686 for a child support payment of \$483 for two child families.

VIII. The mother is 'medium' income and father is 'high' income.

Using the Kansas schedule of child support obligations along with our medium- and high-income categories in 2013 dollars and assuming the youngest age category, this leads to a total child support obligation of \$1350/month for one child and \$1990/month for two children. In the sole custody case, the father will owe the total obligation times his percentage of total parental income for a child support order of \$991 and \$1460 for one and two child families, respectively.

In the case of shared parenting, using the equal parenting time formula, the father's child support is equal to $0.5 \times (\$991 - \$359) + 0.18 \times 1350$ for a child support payment of \$559 for one child families and $0.5 \times (\$1460 - \$530) + 0.18 \times 1990$ for a child support payment of \$824 for two child families.

IX. The father is 'medium' income and mother is 'high' income.

Using the Kansas schedule of child support obligations along with our medium- and high-income categories in 2013 dollars and assuming the youngest age category, this leads to a total child support obligation of \$1350/month for one child and \$1990/month for two children. In the sole custody case, the father will owe the total obligation times his percentage of total parental income for a child support order of \$359 and \$530 for one and two child families, respectively.

In the case of shared parenting, using the equal parenting time formula, the mother's child support is equal to $0.5 \times (\$991 - \$359) + 0.18 \times 1350$ for a child support payment of \$559 for one child families and $0.5 \times (\$1460 - \$530) + 0.18 \times 1990$ for a child support payment of \$824 for two child families. In this case, the father receives child support from the mother.

Example 2: Percentage of Obligor Income, joint custody a deviation from child support guidelines, Mississippi

Mississippi uses a simple percentage of obligor gross income to compute child support, with child support computed at 14% of gross paternal income for one child and 20% of gross paternal income for two-child families. Mississippi uses a possible deviation from the guidelines in the case of shared physical custody as opposed to the use of shared physical custody in the child support algorithm, so that shared physical custody is not explicitly included in the child support calculation for the guidelines.

As a result, child support is equal to \$151, \$424, and \$1170 (14% of paternal income) in one-child families and \$216, \$606 and \$1671 (20% of paternal income) in two- child families.

Example 3: Percentage of Obligor Income, Joint Custody incorporated in child support calculation, Texas

Texas uses a simple percentage of obligor net income to compute child support, with child support computed at 20% of net paternal income for one child and 25% of net paternal income for two-child families. To calculate net income, we use a web-based state payroll calculator (<http://www.paycheckcity.com>) which calculated income net of FICA and income taxes. As a result, child support is equal to \$180, \$482, and \$1197 (20% of net paternal income) in one-child families and \$225, \$602 and \$1497 (25% of net paternal income) in two- child families, given our definitions of 'low', 'medium' and 'high' income in 2013 dollars.

In the case of joint physical custody, Texas takes the difference between the obligation for the high earning and low-earning parent assuming sole custody, so that if both parents have the same income, no child support is owed.

Example 4: Income Shares, joint custody a deviation from child support guidelines, Connecticut

Connecticut uses an 'income shares' guideline with shared physical custody treated as a possible deviation from child support guidelines. To calculate child support, we first calculate total parental gross monthly income. Given summed parental income, the state publishes a set of tables that specify a total child support obligation (see <http://child-support.com/ct/connecticut-child-support-calculator-guidelines/>). For sole custody, this amount is prorated between the parents according to their percentage of total income. In cases of shared parenting, the state may allow a deviation from the child support guidelines.

The necessary computations for the calculation of child support in Connecticut each of our income categories are as follows:

I. Both parents are 'low' income.

If both parents are low-income, then total gross monthly income is \$2166 in 2013 dollars. Using the Connecticut schedule of child support obligations and assuming the youngest age category, this leads to a total child support

obligation of \$104/week for one child and \$150/week for two children. The father will owe half of the total child support since his income is half of total parental income, for a child support payment of \$225 and \$325 per month for one and two children, respectively.

II. The mother is 'low' income and father is 'medium' income.

Using the Connecticut schedule of child support obligations along with our low- and medium-income categories in 2013 dollars, this leads to a total child support obligation of \$178/week for one child and \$247/week for two children. The father will owe the total obligation times his percentage of total parental income for a child support order of \$553 and \$767 per month, for one and two child families, respectively.

III. The mother is 'medium' income and father is 'low' income.

Using the Connecticut schedule of child support obligations along with our low- and medium-income categories in 2013 dollars, this leads to a total child support obligation of \$178/week for one child and \$247/week for two children. The father will owe the total obligation times his percentage of total parental income for a monthly child support order of \$218 and \$302 for one and two child families, respectively.

IV. Both parents are 'medium' income.

Using the Connecticut schedule of child support obligations along with our low- and medium-income categories in 2013 dollars, this leads to a total child support obligation of \$237/week for one child and \$324/week for two children. The father will owe the total obligation times his percentage of total parental income for a monthly child support order of \$513 and \$702 for one and two child families, respectively.

V. The mother is 'low' income and father is 'high' income.

Using the Connecticut schedule of child support obligations along with our low- and medium-income categories in 2013 dollars, this leads to a total child support obligation of \$274/week for one child and \$367/week for two children. The father will owe the total obligation times his percentage of total parental income for a monthly child support order of \$1021 and \$1367 for one and two child families, respectively.

VI. The father is 'low' income and mother is 'high' income.

Using the Connecticut schedule of child support obligations along with our low- and medium-income categories in 2013 dollars, this leads to a total child support obligation of \$274/week for one child and \$367/week for two children. The father will owe the total obligation times his percentage of total parental income for a monthly child support order of \$166 and \$222 for one and two child families, respectively.

VII. Both parents are 'high' income.

Using the Connecticut schedule of child support obligations along with our low- and medium-income categories in 2013 dollars, this leads to a total child support obligation of \$377/week for one child and \$496/week for two children. The father will owe the total obligation times his percentage of total parental income for a monthly child support order of \$816 and \$1074 for one and two child families, respectively.

VIII. The mother is 'medium' income and father is 'high' income.

Using the Connecticut schedule of child support obligations along with our low- and medium-income categories in 2013 dollars, this leads to a total child support obligation of \$303/week for one child and \$400/week for two children. The father will owe the total obligation times his percentage of total parental income for a monthly child support order of \$929 and \$1226 for one and two child families, respectively.

IX. The father is 'medium' income and mother is 'high' income.

Using the Connecticut schedule of child support obligations along with our low- and medium-income categories in 2013 dollars, this leads to a total child support obligation of \$303/week for one child and \$400/week for two children. The father will owe the total obligation times his percentage of total parental income for a monthly child support order of \$381 and \$506 for one and two child families, respectively.

Appendix A2. Source list for child support calculations by state

State	Source
Alabama	www.divorcehq.com/cgi-support/suppcalc.pl https://judicial.alabama.gov/library/rules/ja32.pdf https://judicial.alabama.gov/library/rules/ja32_appx.pdf
Alaska	https://webapp.state.ak.us/cssd/guidelinecalc/form
Arizona	http://www.azcourts.gov/familylaw/2011-Child-support-calculator http://www.pycourts.org/sites/default/files/filings/Arizona-Child-Support-Guidelines_0.pdf
Arkansas	https://courts.arkansas.gov/forms-and-publications/arkansas-child-support-guidelines https://courts.arkansas.gov/forms-and-publications/arkansas-child-support-guidelines http://www.paycheckcity.com/calculator/salary/result
California	http://www.childsup.ca.gov/resources/calculatetechildsupport.aspx http://www.leginfo.ca.gov/cgi-bin/displaycode?section=fam&group=04001-05000&file=4050-4

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State	Source
Colorado	https://www.courts.state.co.us/Forms/PDF/JDF%201822%20-%20Child%20Support%20Guideline%20(CIVIL%20UNION%20CHANGE%20ONLY)%20-%20R9%2013.pdf https://www.dshs.wa.gov/sites/default/files/ESA/dcs/documents/coloradotable.pdf http://child-support.com/ct/connecticut-child-support-calculator-guidelines/
Connecticut	
Delaware	http://courts.delaware.gov/forms/download.aspx?id=39228
Florida	https://www.myfloridalaw.com/child-support-law/florida-child-support-calculator/
Georgia	http://www.supportstudies.com/GeorgiaChildSupportCalculator.aspx http://www.divorcehq.com/calculators/georgia-child-support-calculator.shtml http://guidelineeconomics.com/files/GAminority.pdf
Hawaii	http://www.courts.state.hi.us/self-help/courts/forms/oahu/child_support http://lrbhawaii.org/reports/legrpts/lrb/rpts02/famlaw.pdf
Idaho	http://www.idahochildsupportcalculation.com/
Illinois	http://www.paycheckcity.com/calculator/salary/result http://www.divorcenet.com/resources/child-support/child-support-basics/child-support-illinois.htm
Indiana	http://mycourts.in.gov/csc/parents/default.aspx http://www.in.gov/legislative/interim/committee/2000/committees/reports/CCSA3B1.pdf http://grundenlaw.com/did-you-know-indiana-changed-the-child-support-guidelines/ http://lrbhawaii.org/reports/legrpts/lrb/rpts02/famlaw.pdf
Iowa	https://secureapp.dhs.state.ia.us/estimator/#/ http://www.iowacourts.gov/wfdata/frame9507-1382/File43.pdf
Kansas	http://www.kscourts.org/rules-procedures-forms/child-support-guidelines/2012_new/CSG%20AO%20261%20Clean%20Version%20032612.pdf http://www.kscourts.org/rules-procedures-forms/child-support-guidelines/2010-guidelines-final.pdf http://www.kscourts.org/rules-procedures-forms/child-support-guidelines/Archive-Guidelines/KCSG-2
Kentucky	https://csws.chfs.ky.gov/csws/General/EstimateChild.aspx
Louisiana	http://www.dcsf.louisiana.gov/index.cfm?md=pagebuilder&tmphome&pid=146 http://www.supportguidelines.com/glines/la_cs.HTML
Maine	http://www.divorcesource.com/ds/maine/maine-child-support-4599.shtml
Maryland	http://www.dhr.state.md.us/CSOCGuide/App/worksheetsA.do http://lrbhawaii.org/reports/legrpts/lrb/rpts02/famlaw.pdf http://www.familywelfare.umaryland.edu/reports/csguidelines.pdf
Massachusetts	http://www.ma-divorce-center.com/Child_Support_Calculator.html http://www.mass.gov/courts/docs/child-support/task-force-report.pdf http://www.massbar.org/publications/section-review/2009/v11-n2/a-guide-to-some-of-the-more-substantive-changes-in-the-new-massachusetts-child-support-guidelines http://www.mass.gov/courts/docs/child-support/task-force-report.pdf
Michigan	http://cdm16110.contentdm.oclc.org/cdm/fullbrowser/collection/p16110coll8/id/108627/rv/compoundobject/cpd/108629/rec/16 http://cdm16110.contentdm.oclc.org/cdm/compoundobject/collection/p16110coll8/id/108626/rec/15 http://cdm16110.contentdm.oclc.org/cdm/pageflip/collection/p16110coll8/id/108623/type/compoundobject/show/108622/cpdtype/document/pftype/pdf http://cdm16110.contentdm.oclc.org/cdm/pageflip/collection/p16110coll8/id/108636/type/singleitem/pftype/pdf
Minnesota	http://childsupportcalculator.dhs.state.mn.us/CalculatorResults.aspx https://www.leg.state.mn.us/docs/2005/mandated/050236.pdf https://www.hg.org/article.asp?id=24772
Mississippi	http://www.mdhs.state.ms.us/child-support/determine-child-support-obligations/
Missouri	www.teamlex.com/areas/form14.htm http://familylaw.mwortmanlaw.com/2009/01/articles/child-support/new-2009-missouri-child-support-guidelines-and-basic-support-schedule-now-in-effect/ http://www.sos.mo.gov/cmsimages/adrules/csr/current/13csr/13c30-5.pdf
Montana	http://www.divorcehq.com/calculators/montana-child-support-calculator.shtml https://dphhs.mt.gov/Portals/85/csed/documents/guidelinesandindex.pdf
Nebraska	https://supremecourt.nebraska.gov/files/rules/forms/childsup-table.pdf https://supremecourt.nebraska.gov/files/rules/forms/worksheets3.pdf https://supremecourt.nebraska.gov/supreme-court-rules/ch4/art2
Nevada	https://lvfamilylaw.com/child-support-in-nevada/
New Hampshire	https://www.nhbar.org/uploads/pdf/CSG-2012.pdf
New Jersey	http://www.garneslaw.com/NewJerseyChildSupportGuidelines.pdf https://njfamilylaw.foxrothschild.com/2009/04/articles/child-support/finally-a-child-support-formula-for-joint-physical-custody-cases/ http://www.judiciary.state.nj.us/rules/appndx_ix_d.pdf http://www.weinbergerlawgroup.com/children-parenting/child-support/calculations-guidelines.aspx https://www.judiciary.state.nj.us/notices/reports/CS_Case_File_Review.pdf http://riker.com/publications/adjustment-to-child-support-guidelines-calculations-when-parents-have-equal
New Mexico	www2.nmcourts.gov/cgi/prose_lib/csw_out2008.cgi http://www.hsd.state.nm.us/uploads/PressRelease/2f473c14ee654f868b5a25b3cfd15a6d/2008%20(2-4)%20House_Passes_HB_412_NR_2008.pdf

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State	Source
New York	http://www1.nyc.gov/site/hra/help/child-support-calculator.page
North Carolina	https://nddhacts01.dhhs.state.nc.us/home.jsp?TargetScreen=WorkSheet.jsp
North Dakota	http://sogpubs.unc.edu/electronicversions/pdfs/flb13.pdf
Ohio	https://www.nd.gov/dhs/services/childsupport/docs/previous-guidelines-august-2015.pdf
Oklahoma	https://www.nd.gov/dhs/services/childsupport/progserv/guidelines/guidelines.html
Oregon	https://ohiochildsupportcalculator.ohio.gov/home.html
Pennsylvania	http://www.okdhs.org/onlineservices/cscalc/Pages/cscalc.aspx
Rhode Island	https://justice.oregon.gov/guidelines/summary.aspx
South Carolina	http://www.oregonchildsupport.gov/laws/rules/docs/guidelines_commentary.pdf
Tennessee	http://www.pennglazier.com/support2010/support.html
Texas	http://www.alllaw.com/calculators/childsupport/rhode_island
Utah	https://www.state.sc.us/dss/csed/forms/2006_guidelines.pdf
Vermont	http://www.scalc.net/decisions.aspx?q = 4&id=1896
Virginia	http://apps.sd.gov/ss17pc02cal/calculator1.aspx
Washington	https://dss.sd.gov/docs/childsupport/sharedparentingobliwkst.pdf
West Virginia	http://www.tennessee.gov/humanservices/article/child-support-guidelines-downloads
Wisconsin	http://www.kennedylawfirmpllc.com/Divorce/Child-Support.shtml
Wyoming	http://www.jackrobinson.com/how-to-calculate-child-support-in-texas/
District of Columbia	http://www.paycheckcity.com/calculator/salary/result
	https://www.avvo.com/legal-guides/ugc/how-does-the-court-handle-child-support-when-the-parents-are-splitting-custody-of-the-kids
	https://orscsc.dhs.utah.gov/orscscapp-hs/orscscweb/action/public/custodyWorksheet/show
	http://dcf.vermont.gov/ocs/parents/calculator
	http://www.courts.state.va.us/forms/district/dc640.pdf
	http://www.beankinney.com/assets/htmldocuments/Va%20Support%20Statute%20with%20Chart%2000450624xAC2B5.pdf
	https://fortress.wa.gov/dshs/dcs/SSGen/Home
	http://www.legis.state.wv.us/WVCODE/ChapterEntire.cfm?chap=48&art=13&section=502#13
	http://child-support.com/wp-content/uploads/guidelines.pdf
	http://dcf.wisconsin.gov/bcs/pdf/worksheets_shared_placement.pdf
	http://dcf.wisconsin.gov/publications/pdf/dcf_p_dwsc824.pdf
	http://docs.legis.wisconsin.gov/code/admin_code/dcf/101_199/150_b.pdf
	http://docs.legis.wisconsin.gov/code/admin_code/dcf/101_199/150_c.pdf
	http://law.justia.com/codes/wyoming/2011/title20/chapter2/section20-2-304
	http://csgc.oag.dc.gov/application/main/intro.aspx

Notes: Sources accessed from 11/15/2016 to 4/2/2017. To cross-check state policies over time, we employed two sources which cover policies across multiple states: (i) https://static1.squarespace.com/static/5154a075e4b08f050dc20996/t/54e34dd2e4b04c0eab578456/1424182738603/3fall13_venohr.pdf, (ii) <http://lrhawaii.org/reports/legprts/lrb/rpts02/famlaw.pdf>.

References

- Aizer, Anna, McLanahan, Sara, 2006. The impact of child support enforcement on fertility, parental investments, and child well-being. *J. Hum. Resour.* 61 (1), 28–45.
- Angelucci, Manuela, Attanasio, Orazio, 2013. The demand for food of poor urban Mexican households: understanding policy impacts using structural models. *Am. Econ. J.* 5 (1), 146–205.
- Argys, L., Peters, E., Brooks-Gunn, J., Smith, J., 1998. The impact of child support on cognitive outcomes of young children. *Demography* 35 (2), 159–173.
- Aughinbaugh, Alison, 2001. Signals of child achievement as determinants of child support. *Am. Econ. Rev.* 91 (2), 140.
- Autor, David, Figlio, David, Karbownik, Krzysztof, Roth, Jeffrey, Wasserman, Melanie, 2019. Family disadvantage and the gender gap in behavioral and educational outcomes. *Am. Econ. Rev.* 11 (3), 338–381.
- Baum, C., 2003. Does Early maternal employment harm child development? an analysis of the potential benefits of leave taking. *J. Labor Econ.* 21, 409–448.
- Bauserman, R., 2002. Child adjustment in joint-custody versus sole-custody arrangements: a meta-analytic review. *J. Fam. Psychol.* 16 (1), 91–102.
- Bertrand, Marianne, Pan, Jessica, 2013. The trouble with boys: social influences and the gender gap in disruptive behavior. *Am. Econ. Rev.* 5 (1), 32–64.
- Brinig, Margaret F., Buckley, Francis H., 1998. Joint custody: bonding and monitoring theories. *Indiana Law J.* 73, 393–452.
- Caceres-Delpiano, Julio and Eugenio Gjolito, "How unilateral divorce affects children", working paper, 2009.
- Chen, Yang, Logan, Trevon D., 2019. Is the best interest of the child best for children? educational attainment and child custody assignment. *South Econ. J.*
- Del Boca, Daniela, Ribero, Rocio, 1998. Transfers in non-intact households. *Struct. Change Econ. Dyn.* 9 (4), 469–478.
- Fiorini, M., Keane, M., 2014. How the allocation of children's time affects cognitive and noncognitive development. *J. Labor Econ.* 32 (4), 787–836.
- Gonzalez, Libertad and Tarja Viitanen, "The long term effects of legalizing divorce for children", working paper, 2009.
- Gruber, Jonathan, 2004. Is Making divorce easier bad for children? The long run implications of unilateral divorce. *J. Labor Econ.* 22 (4), 799–833.
- Halla, Martin, 2015. Do joint custody laws improve family well-being? Joint child custody laws affect not only divorced families but intact families as well. *IZA World Labor* 147.
- Halla, Martin, 2013. The effect of joint custody on family outcomes. *J. Eur. Econ. Assoc.* 11 (Issue 2), 278–315.
- Hsin, Amy, Felfe, Christina, 2014. When does time matter? Maternal employment, children's time with parents, and child development. *Demography* 51 (Issue 5), 1867–1894.

- Johnson, John and Christopher Mazingo, "The Economic Consequences of Unilateral Divorce for Children", University of Illinois Working Paper, 2000.
- Kalil, Ariel, Mogstad, Magne, Rege, Mari, Votruba, Mark, 2011. Divorced fathers' proximity and children's long-run outcomes: evidence from Norwegian registry data. *Demography* 48, 1005–1027.
- Knox, V., 1996. The effects of child support payments on developmental outcomes for elementary school-age children. *J. Hum. Resour.* 31 (4), 816–840.
- Leo, T.W. "From Maternal Preference to Joint Custody: the Impact of Changes in Custody Law on Child Educational Attainment." Working Paper, Toronto: University of Toronto, 2006.
- Lundberg, Shelly, Pollak, Robert A., Wales, Terence J., 1997. Do husbands and wives pool their resources? evidence from the UK child benefit. *J. Hum. Resour.* 32 (3), 463–480.
- Maiti, Abhradeep., 2015. Effect of joint custody laws on children's future labor market outcomes. *Int. Rev. Law Econ.* 43, 22–31.
- Morgan, Laura W., 2021. *Child Support Guidelines: Interpretation and Application*, 2nd ed. Wolters Kluwer.
- Nielsen, L., 2018. Joint versus sole physical custody: outcomes for children independent of family income or parental conflict. *J. Child Custody* doi:[10.1080/15379418.2017.1422414](https://doi.org/10.1080/15379418.2017.1422414).
- Nunley, John M., Seals, Jr., Richard Alan, 2011. Child-custody reform, marital investment in children, and the labor supply of married mothers. *Labour Econ.* 18, 14–24.
- Pollak, Robert., 2018. How bargaining in marriage drives marriage market equilibrium. *J. Labor Econ.*
- Rasul, Imran, 2006. The Economics of child custody. *Economica* 73, 1–25.
- Reinhold, Steffen, Kneip, Thorsten, Bauer, Gerrit, 2013. The long run consequences of unilateral divorce laws on children—evidence from sharelife. *J. Popul. Econ.* 26 (3), 1035–1056.
- Roff, Jennifer., 2017. Cleaning in the shadow of the law? bargaining, marital investment, and the impact of divorce law on husbands' intrahousehold work. *J. Law Econ.* 60 (1), 115–134.
- Rossin-Slater, Maya, Wüst, Miriam, 2018. Parental responses to child support obligations: evidence from administrative data. *J. Public Econ.* 164, 183–196.
- Ruhm, C., 2008. Maternal employment and adolescent development. *Labour Econ.* 15, 958–983.
- Thomas, Duncan, 1990. Intra-household resource allocation: an inferential approach. *J. Hum. Resour.* 25 (4), 635–664.
- Turunen, Jani., 2017. Shared physical custody and children's experience of stress. *J. Divorce Remarriage* 58 (5), 371–392.
- Weiss, Y., Willis, R., 1985. Children as collective goods and divorce settlements. *J. Labor Econ.* 3, 268–292.