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Maiti, Abhradeep

Middle Tennessee State University

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Effect of Joint Custody Laws on Children's Future Labor Market Outcomes

Abhradeep Maiti *

Abstract

In a joint custody regime, both parents are given equal preference by the court while granting the custodial rights of their children in the event of divorce. Using 50 years of census data for the United States' population, I show that growing up in a joint custody regime leads to lower educational attainment and worse labor market outcomes. My results are robust to different model specifications and apply to both males and females.

Keywords: Joint Custody Laws, Labor Market Outcomes

JEL Classification: J01, J12, J13

*Department of Economics and Finance, Middle Tennessee State University. Contact: am4m@mtmail.mtsu.edu

1 Introduction

An almost inevitable byproduct of divorce is the issue of the allocation of custodial rights over a child. In the United States, the divorce rate started to increase sharply in the 1960s (Gruber 2004). According to Rasul (2006), one million children in the United States have to survive the difficult process of divorce proceedings every year. A few decades ago, mothers were typically granted the sole custody of a child in the event of divorce under the argument that maternal care is more important to nurture a child (Brinig and Buckley 1998). With the introduction of joint custody laws in the United States around 1973, both parents were given equal preference for custodial rights. As discussed in Nunley and Seals (2011a), joint custody can either mean joint legal custody or joint physical custody. In either of the cases, important decisions regarding the child have to be agreed upon by both parents.

Arguments have been forwarded both in favor of (e.g., Brinig and Buckley 1998) and against (e.g., Singer and Reynolds 1988) joint custody laws. Proponents of joint custody law suggest that it fosters more emotional and financial involvement on the part of the parents, and this extra involvement is better for children. Opponents of the joint custody law suggest that, following divorce, children are better off being cared for by the primary caregiver, and provision of joint custody might lead to an unhealthy domestic environment for the upbringing of a child.

Rasul (2006) provides a theoretical framework to investigate the economics behind joint custody. In Rasul's model, joint custody is optimal if the parent who attaches more importance to the development of the child keeps the majority of custodial rights. However, this result hinges on the assumption that the preferences for child development are relatively homogeneous. With sufficiently heterogeneous parental preferences for child development, sole custody is optimal. If the allocation of child custodial rights is not optimal, then it distorts the investment incentives for parents, and investment in children might be less than optimal. This is an interesting insight worthy of empirical investigation. Rasul's model provides us

with a framework in which joint custody laws may actually harm a child's future prospects. Investment in a child is intended for human capital formation. If, as a consequence of the provision of joint custody, a child has access only to sub-optimal levels of resources while growing up, then it will adversely affect the stock of human capital the child will posses in the future when entering the labor market. Hence, the adoption of a joint custody law could have a significant impact on labor supply and the productivity of the labor force.

This study attempts to explore the impact of growing up in a joint custody law regime on future adult outcomes. In particular, I examine the consequences of children being exposed to a joint custody law regime on both educational outcomes (*years of education*, *high school dropout*, *high school graduate*, *some college*, and *college graduate*) and labor market outcomes (*real total income*, *percentage income over poverty line*, *weeks worked*, *real wage income*, and *employed*). For my analysis, I am using 50 years of census data obtained from the Integrated Public Use Microdata Series and a difference-in-differences (DiD) panel fixed-effect model. My results show that being introduced to joint custody laws as a child adversely affects future educational and labor market outcomes.

2 Background

Before the introduction of joint custody laws in the USA around 1973, mothers were overwhelmingly granted custodial rights in case of a divorce (Brinig and Buckley 1998). The logic behind such decisions was based on the argument that maternal care is more important for the development of a child. However, with the introduction of joint custody laws, fathers were also granted partial custodial rights of their children. The joint custody laws have made custodial rights gender neutral and are more focused on the best interests of the child. When divorced parents share the custody of a child, they need to make decisions regarding the child's development jointly. This system is supposed to be more conducive to a child's

overall development. The idea is that a decision made by one parent and that may be clearly detrimental to a child's future well being can be blocked by the other parent (Brinig and Buckley 1998).

Rasul (2006) serves as the theoretical background for this paper. According to this study, joint custody laws have both "efficiency and distributional consequences". Each spouse's share of marital surplus is determined by the share of custodial rights. If the allocation of a child's custodial rights are made *ex ante*, then it will maximize investment in the child and minimize the likelihood of divorce. However, it is not feasible for couples to decide beforehand the level of resources that are going to be invested in a child. Hence, it is more than likely that the allocation of a child's custodial rights, conditional upon divorce, is going to be decided *ex post*. Any kind of *ex post* allocation of child custody will maximize *ex ante* investment only if the couples have sufficiently heterogeneous preferences for child development. Here, by '*ex ante*' we mean before the parents get divorced and '*ex post*' identifies the post-divorce situation. If the spouses have sufficiently heterogeneous preferences for child development, then it is optimal for the high-valuation parent to have the sole custody. However, for spouses with relatively homogeneous preferences of child development, joint custody is optimal if the high-valuation parent keeps the majority of custodial rights. Hence, joint custody is not universally optimal and the allocation of the child's custody should ideally depend on parental preferences for child development.

Even in cases where joint custody is preferred, it is in the best interests of a child that the high-valuation parent retains the majority of custodial rights. The problem for the judicial system, however, is the fact that the court does not have all the information. For example, the court does not know how spouses value child development. Even determining the high-valuation parent is riddled with problems. Respective monetary investments in children made by parents may give a distorted view of parent's preferences for child development, since investment can also be non-monetary, such as through the investment of time. This

information asymmetry creates a situation where, *the best interests of a child* might not be served by granting both parents an equal share of child custody.

The *Coasian Irrelevance Theorem* holds in Rasul's (2006) model if child custody rights are treated just as other property rights and parents bargain over them simultaneously. Hence, the parent with higher valuation for child development will trade other property rights to gain better custody rights through bargaining. Introduction of a joint custody law marks a shift in the spousal bargaining power within a household. Before the introduction of joint custody laws, mothers were usually expected to receive sole custody of children in case of a divorce. Since joint custody laws made the process of granting child custody gender-neutral, mothers' bargaining position was weakened. This outcome of joint custody laws has important ramifications for the human capital formation of children coming from a separated household. It has been suggested by Lundberg et al. (1997) that a weakened bargaining position for mothers leads to lower investment in children. Hence, joint custody laws, as well-intentioned as they might be, have the ability to hurt the future prospects of a child whose parents have divorced.

Brinig and Buckley (1998), using bonding and monitoring theories, suggest that joint custody laws lead to fewer divorces and higher child support payments. Bonding theories predict that a father will be more emotionally attached to a child if he is expected to keep some ties with the child after divorce. If a state implements joint custody laws, then the fathers living in that state can expect to retain custodial rights of children if and when a divorce takes place. Monitoring theories predict that a parent will be more willing to contribute financially to a child's development if some sort of custodial rights are granted. The key idea is that a parent is willing to invest more if that parent can monitor how the money intended for investment in the child is being spent, then the parent may be willing to invest more. So, even in case of a court mandated child support payment, a parent might be willing to pay more to make sure the child has access to sufficient resources, if the investment

can be monitored. Joint custody laws allow for such provisions, and, therefore, are more conducive for the human capital formation of a child coming from a broken household.

However, granting joint custody of a child to both parents also has its pitfalls. Brinig and Buckley (1998) suggest three possible scenarios where granting joint custody instead of sole custody may be harmful for the child. In the first scenario, joint custody may be awarded to unfit fathers. This may prove to be against a child's best interests since it hampers the developmental process of the child. Brinig and Buckley (1998) argue that, since both parents can monitor a child under a joint custody setting, such issues are unlikely to arise. In the second scenario, a parent may need to forgo other property rights in a divorce settlement in order to gain the sole custody rights of a child. However, Brinig and Buckley (1998) suggest that it does not necessarily make joint custody laws a bad initiative. In the third case, joint custody laws might as well become inactive if couples use it as a bargaining chip instead of an effective instrument to serve the best interests of a child whose parents are divorcing. Brinig and Buckley (1998), however, argue that this kind of *Coasian Irrelevance* might not work in reality since people in general might be unwilling to trade their children for assets or those arrangements might not meet the legal requirements. Using data from the Statistical Abstracts of the United States for the years between 1980-1991, and with the help of Ordinary Least Squares (OLS) and Two Stage Least Squares (2SLS) Fixed Effect methods, they find that joint custody laws reduce divorce levels. Child support payments are also positively influenced by the joint custody laws.

The critics of joint custody laws, however, insist that implementing them is a bad idea (e.g., Singer and Reynolds 1988) and the system under which a court assigns a "primary caretaker" is better.

Using the Integrated Public Use Microdata Series (IPUMS) from the United States Census for 1980 and 1990 waves and a Difference-in-Difference (DiD) method, Nunley and Seals (2011a) find that following the implementation of joint custody laws, parental investment in children (e.g., private school attendance) may actually decline. Since joint custody laws

weaken the bargaining power of mothers, they tend to develop more market-specific skills to be better placed at the bargaining table in case of a divorce. They interpret the results to mean that fathers give investment in a child lower importance following joint custody law implementations.

In a related study, Nunley and Seals (2011b), with the help of the Panel Study of Income Dynamics (PSID) dataset, find that following the introduction of joint custody laws, there are changes in the within-household dynamics with mothers working outside of the home more often whereas fathers increase the propensity of working at home. According to them, since fathers can expect to see their children more often following divorce, they decide to develop skills more suitable for the upbringing of a child. This leads to a reduction in the amount of time spent on outside work. Mothers, however, need not invest so much time developing skills solely for housework since fathers will also share some responsibilities of household work. Hence, mothers can now spend more time working outside of the house. This is another signal of the changed bargaining dynamics inside a household following the introduction of joint custody laws.

Leo (2008) uses US census data to find evidence that children from divorced or separated households will do better academically if they grow up in a joint custody law state. In another recent working paper, Chen (2013) finds that exposure to joint custody laws during childhood reduces the likelihood of high school graduation by about 2 percentage points.

Halla (2013) suggests that joint custody law implementations are responsible for higher marriage and fertility rates as well as higher divorce rates. He also finds evidence of a declining labor market participation for females. However, he does not take into account whether the respondents were exposed to joint custody law regimes as children, nor does he explore labor market outcomes of the well-being of the population. The main source of Halla's data is the National Vital Statistics System (NVSS) maintained by the National Center for Health Statistics (NCHS). He uses a DiD panel fixed-effects model for the purpose of his investigation.

The main theme emerging from the existing literature is that the overall impact of joint custody laws on children is ambiguous. The empirical literature is completely silent (at least to this researcher's best knowledge) on the long run impact of joint custody laws on children. This paper contributes to the existing literature by investigating how joint custody laws affect the future educational and labor market outcomes of children growing up under joint custody law regimes. As Rasul (2006) suggests, joint custody laws might influence the parental decision-making process of investment in child development. That means children might not have access to the optimal level of resources while growing up. This can hamper their ability to form the optimal level of human capital and, in turn, negatively affect future labor supply and labor force productivity. Hence, it is important to investigate whether joint custody laws indeed have such effects. I also investigate the results for male and female subsamples separately to evaluate any gender-based discrimination in resource allocation. My research design allows me to identify both long run and short run effects.

3 Data and Methodology

State level changes in the joint custody laws in the United States have taken place over the years. Indiana was the first state to implement joint custody laws in 1973, followed by New Hampshire in 1974. Arkansas was the latest state to implement joint custody laws in 2003. Washington and West Virginia are the only two states that have not implemented joint custody laws. The timeline of implementation of joint custody laws, along with other divorce related laws (unilateral divorce laws, no fault divorce laws, equitable division of property laws) is given in table 1.

I use the Integrated Public Use Microdata Series (IPUMS-USA) for the United States census years 1960, 1970, 1980, 1990, and 2000. This database is a collection of high-precision

Table 1: Evolution of Joint Custody Law, and Various Divorce Laws

State	Joint Custody	Unilateral	No Fault	Equitable	State	Joint Custody	Unilateral	No Fault	Equitable
AL	1997	1971	1971	1980	MT	1981	1973	1973	1976
AK	1982	1935	1935	pre-1950	NE	1983	1972	1972	1972
AR	2003	-	1937	1979	NV	1981	1967	1931	pre-1950
AZ	1991	1973	1931	pre-1950	NH	1974	1971	1971	1988
CA	1979	1970	1970	pre-1950	NJ	1981	-	1971	1971
CO	1983	1972	1972	1972	NM	1982	1933	1933	pre-1950
CT	1981	1973	1973	1973	NY	1981	-	1967	1962
DC	1996	-	1966	1977	NC	1979	-	1910	1981
DE	1981	1968	1957	pre-1950	ND	1993	1971	1971	pre-1950
FL	1979	1971	1971	1988	OH	1981	-	1974	1990
GA	1990	1973	1973	1980	OK	1990	1953	1953	1975
HI	1980	1972	1965	1955	OR	1987	1971	1971	1971
ID	1982	1971	1945	pre-1950	PA	1981	-	1980	1979
IL	1986	-	1984	1977	RI	1992	1975	1910	1979
IN	1973	1973	1973	1958	SC	1996	-	1969	1979
IA	1977	1970	1970	pre-1950	SD	1989	1985	1985	pre-1950
KS	1979	1969	1969	pre-1950	TN	1986	-	1963	1959
KY	1979	1972	1962	1972	TX	1987	1970	pre-1910	1970
LA	1981	-	1916	1978	UT	1988	1987	1943	pre-1950
ME	1981	1973	1973	1972	VT	1992	-	1969	pre-1950
MD	1984	-	1969	1969	VA	1987	-	1960	1982
MA	1983	1975	1975	1974	WA	-	1973	1921	pre-1950
MI	1981	1972	1972	1983	WV	-	-	1969	1984
MN	1981	1974	1933	1951	WI	1979	1978	pre-1910	1978
MS	1983	-	1978	pre-1950	WY	1993	1977	1977	pre-1950
MO	1983	-	1974	1974					

Note: Source- Brinig and Buckley(1998), Gruber (2004), Halla (2011), Alesina and Giuliano (2007)

samples obtained from the United States census data (Ruggles et al., 2010). I am using the 1% State sample for the five census years. Following Gruber (2004), I collapse the data into state of residence/state of birth/year/age/sex cells. This setting can be justified as the variations in law come at the state/year/age levels (Gruber 2004). This methodology has also been followed elsewhere in the economics literature (e.g., Wolfers 2006, Alesina and Giuliano 2007). In my modified data, each cell becomes the mean of observations for a particular combination of state of residence, state of birth, year, age, and sex. While obtaining the mean I use personal weights so that my data incorporate the underlying microstructure of the American population. A shortened version of the data is provided in Table 1 for illustrative purposes. Table 2 shows how various laws relevant to our current analysis evolved over the years.

For my analysis, I include only the individuals who were born in the United States, are within the age range of 25-50 years, are not enrolled in school, and are earning a non-negative amount of income. I restrict the maximum amount of income to $500,000. I also discard the observations for which worker class, weeks worked, and poverty index data are not available. Observations from the prison inmate population are not included in this study either.

There are nine outcome variables which can be broadly classified into two categories: educational outcomes (*years of education*, *high school dropout*, *high school graduate*, *some college*, and *college graduate*), and labor market outcomes (*real total income*, *percentage income over poverty line*, *weeks worked*, *real wage income*, and *employed*). The variable *years of education* is the total number of years a person has been in school. *High school dropout*, *high school graduate*, and *college graduate* are all indicator variables taking a value of 1 if an individual falls into the specified category and 0 otherwise. *Some college* takes the value of 1 if an individual has been to college but never graduated. *Real total income* and *real wage income* are price adjusted income variables, where the adjustment factors are supplied by IPUMS. The price adjustment converts all income variables to the year 2000 level in real terms. *Percentage income over poverty line* is the value of one hundred times a

Table 2: Data Overview

Year	Age	Gender	AL	AK	AR	...	bAL	bAK	bAR	...	y1960	y1970	...	CUST	KIDCUST	...	RealInc
1960	25	M	1	0	0		1	0	0		1	0		0	0		19118
1960	25	M	1	0	0		0	0	1		1	0		0	0		18606
⋮	⋮	⋮	⋮	⋮	⋮		⋮	⋮	⋮		⋮	⋮		⋮	⋮		⋮
1960	25	F	1	0	0		1	0	0		1	0		0	0		8846
⋮	⋮	⋮	⋮	⋮	⋮		⋮	⋮	⋮		⋮	⋮		⋮	⋮		⋮
1990	32	F	0	0	1		0	1	0		0	0		0	0		16773
⋮	⋮	⋮	⋮	⋮	⋮		⋮	⋮	⋮		⋮	⋮		⋮	⋮		⋮
2000	50	F	0	0	0		0	0	0		0	0		1	0		11737

Note: Each row identifies a collapsed sample observation, with its unique values for each variable such as Age, Gender, State of Residence (Alabama, Alaska, Arkansas, ...), State of birth (bAL, bAK, bAR, ...), year indicator variables (y1960, y1970, ...), Growing up under joint custody laws as children (KIDCUST), outcome variables (RealInc, ...).

There are as many rows as there are unique combinations of the Census Year (Year), the age of a person (Age from 25 to 50), Gender, State of residence, and state of birth.

There are numerous economic and demographic variables in the data set. The table shows just one: real income (RealInc). The values for these are derived as weighted averages of all those persons in the sample with the same values of age, gender, state of residence, state of birth, and Census year. The weight used is the person specific weight as provided in the original data set.

Table 3: Sample Means of Outcome Variables for Adult Females and Males

	Pooled	Adult Female	Adult Male
Years of Education	12.003	12.130	11.893
High School Dropout	0.357	0.361	0.354
High School Graduate	0.122	0.138	0.109
Some College	0.275	0.277	0.273
College Graduate	0.144	0.140	0.148
Real Total Income ($)	36043.56	20334.5	49600.6
Above Poverty	318.492	319.147	317.926
Weeks Worked	3.623	3.319	3.885
Real Wage Income ($)	31785.82	18189.53	43519.54
Employed	0.890	0.810	0.958
No. of Observations	221303	102515	118788

Note: Source- Integrated Public Use Microdata Series (IPUMS-USA)
for the United States census years 1960, 1970, 1980, 1990, and 2000

person's income divided by the poverty level income. A value of 200 will therefore mean that the individual's income is 200% above the poverty threshold. This acts as an indicator of well-being in our model. *Weeks worked* is an index for the number of weeks worked. It takes values from zero to four. *Weeks worked* is zero if no work is done by an individual, 1 if 1-13 weeks have been worked, 2 if 14-26 weeks, 3 if 27-39 weeks, and 4 if 40-52 weeks have been worked. *Employed* is an indicator variable taking the value of 1 if an individual is employed. Again, I am collapsing my data by state/year/age levels, for each age from 25-50, for a total of 26 age years, classified into 51 states of residence including the District of Columbia, and further classified into 51 states of births, ordered by year and separated by sex. Hence, each cell of my modified data corresponds to the cell mean for all the observations falling into a particular combination of state of residence, state of birth, year, age, and gender.

The purpose of the study is to see whether growing up in a joint custody law regime has an economically relevant impact on an individual in the future. To capture whether

an individual was introduced to a joint custody law regime while growing up, I use the information about an individual's year of birth to calculate whether the joint custody law was implemented in that individual's state of birth by the time she turned 18. I estimate a difference-in-differences (DiD) panel fixed effect model (e.g., Gruber 2004, Wolfers 2006, Halla 2011) for the set of my outcome variables. Following Gruber (2004), the model can be written as follows:

$$\begin{aligned} Outcome_{asbt} &= \alpha + \beta_1 CUSTODY_{st} + \beta_2 KIDCUST_{abt} + \beta_3 RACE_{ast} \\ &\quad + \beta_4 KIDUNILAT_{st} + \beta_5 KIDNOFLT_{st} + \beta_6 KIDEQUIT_{st} \\ &\quad + \beta_7 \eta_a + \beta_8 \sigma_b + \beta_9 \delta_s + \beta_{10} \tau_t + \beta_{11} \eta_a * \tau_t + \epsilon_{asbt} \end{aligned} \tag{1}$$

Here, *Outcome* identifies any of the outcome variables. Subscript a denotes age, s represents current state of residence, b stands for state of birth, and t identifies the year. $CUSTODY$ is an indicator variable taking the value of 1 if a joint custody law is implemented in a state in a given year, $KIDCUST$ takes on the value of 1 if joint custody law was in effect in the state of birth before age 18, $RACE$ includes white and black indicator variables. $KIDUNILAT$, $KIDNOFLT$, and $KIDEQUIT$ are binary variables taking the value of 1 if unilateral divorce laws, no fault divorce laws, and equitable property laws were in effect in the state of birth before age 18, respectively. $\eta_a, \sigma_b, \delta_s, \tau_t$ are binary variables for age groups, state of birth, current state of residence, and year, respectively. $\eta_a * \tau_t$ is the set of interaction terms for age groups and year. Gruber (2004) suggests that this interaction term can capture age specific variances over time. I have divided the age range into the following groups: 25-30, 31-35, 36-40, 41-45, 46-50. The indicator variable $KIDCUST$ is constructed following the standard procedure in labor economics (e.g., Gruber 2004, Wolfers 2006). The information about the state of residence of an individual is only available for the year of birth and the current census year.

There can be two possible sources of bias in my analysis. First, bias may come from time invariant omitted variables influencing both my outcomes and the joint custody law implementations. Since we are carrying out the analysis at the state level, state fixed effects should be sufficient to account for this kind of time invariant bias (Angrist and Pischke 2009). I have included current state of residence, state of birth, and time fixed effects in my model. This procedure essentially follows a least squares dummy variable approach (LSDV). Another source of bias may stem from the inability to account for the unobserved trends in the implementation of joint custody laws. May be the states where custody battles are on the rise, are also the states implementing the joint custody laws. Following Gruber (2004), I include linear time trends for current state of residence and state of birth. Gruber (2004) suggests that including trends can sufficiently address the issue of bias coming from unobserved trends. Also, if the directions of results without including trends hold even after the inclusion of trend, then endogeneity through time-varying unobserved heterogeneity is not an issue for our estimates. Nunley and Seals (2011a) and Halla (2011) suggest that there has been no systematic implementation of joint custody laws in the United States over the years. Combining all variables the model can be re-written as:

$$\begin{aligned} Outcome_{asbt} &= \alpha + \beta_1 CUSTODY_{st} + \beta_2 KIDCUST_{abt} + \beta_3 RACE_{ast} \\ &\quad + \beta_4 KIDUNILAT_{st} + \beta_5 KIDNOFLT_{st} + \beta_6 KIDEQUIT_{st} + \beta_7 \eta_a + \beta_8 \sigma_b \\ &\quad + \beta_9 \delta_s + \beta_{10} \tau_t + \beta_{11} \eta_a * \tau_t + \beta_{12} \delta_s * Trends + \beta_{13} \sigma_b * Trends + \epsilon_{asbt} \end{aligned} \tag{2}$$

To account for autocorrelation within the state of residence/state of birth cells over the years, I cluster over state of residence*state of birth*year (e.g., Gruber 2004, Bertrand et al. 2004). The standard errors are also corrected for possible heteroskedasticity.

As can be seen from Table 2, the joint custody law came into effect in various states in the United States between 1973-2003. This within-states over-time variation allows me to

use a DiD panel fixed model. My model is identified by the variation in the timing of joint custody law implementation in different states. I control for unilateral divorce laws, no fault divorce laws, and equitable property laws to make sure that I am calculating the effect of joint custody law itself, and not of any other law changes.

I run the regression for male and female subsamples separately, and also pool the subsamples. In addition, I run the regressions with and without current state of residence and state of birth specific trends.

Sample means of the outcome variables for the whole modified data are provided in Table 3. Means for the male and female subsamples are also provided.

4 Results

The model specification allows us to investigate effects of the existence of joint custody laws both during childhood (through the coefficient of $KIDCUST$) and contemporaneously (through the coefficient of $CUSTODY$). We are mainly interested in the coefficient of $KIDCUST$ since we want to measure the effects of growing up under the joint custody laws.

In Tables 4 and 5, I provide the estimation results for all adults pooled sample, male subsample, and female subsample. Tables 4 contains the results for the educational outcomes. Tables 5 shows the results for the labor market outcomes. The first column in these tables for each sample (pooled, male, female) gives the results from the model without trends (equation 1), and the second column gives the results from the model with trends (equation 2).

For the educational outcomes in the pooled sample (Table 4, columns I and II), if children grow up under joint custody laws, total years of education decreases by 0.066 years when the model doesn't have a trend. This corresponds to a fall by 0.6% of the sample mean. With a trend present, total years of education is reduced by 0.081 years, or 0.7% of the mean.

Table 4: Effect of Growing Up under Joint Custody Regime on Educational Outcomes

	Pooled		Adult Females		Adult Males	
	Without Trend	With Trend	Without Trend	With Trend	Without Trend	With Trend
	I	II	III	IV	V	VI
Years of Education	-0.066	-0.081	-0.127	-0.142	-0.014	-0.014
	(0.065)	(0.070)	(0.087)	(0.095)	(0.094)	(0.101)
High School Dropout	0.028 ***	0.014 ***	0.020 ***	0.012 ***	0.033 ***	0.016 ***
	(0.003)	(0.003)	(0.004)	(0.004)	(0.005)	(0.005)
High School Graduate	0.010 **	0.015 ***	0.002	0.004	0.018 ***	0.026 ***
	(0.005)	(0.005)	(0.006)	(0.007)	(0.007)	(0.007)
Some College	-0.019 ***	-0.002	-0.009	0.009	-0.029 ***	-0.014 **
	(0.005)	(0.005)	(0.007)	(0.007)	(0.007)	(0.007)
College Graduate	-0.011 **	-0.026 ***	-0.007	-0.020 ***	-0.014 **	-0.032 ***
	(0.005)	(0.005)	(0.006)	(0.006)	(0.007)	(0.007)
N	221303	221303	102515	102515	118788	118788

Note: OLS Regression results with coefficient for KIDCUST variable being reported
Standard errors in parentheses
*, **, *** significant at 10%, 5%, and 1% respectively

We need to note that none of these estimates are statistically significant. Being exposed to joint custody laws as children raises the likelihood of being a high school dropout by 0.028 percentage points without trend (7.8% of the sample mean) and by 0.014 percentage points with trends (3.9% of the sample mean). Both of these estimates are statistically significant. Growing up in a joint custody law regime also raises the odds of being a high school graduate by 0.01 percentage points (8.2% of the sample mean) in the model without trend. When a child is exposed to joint custody laws, it lowers the odds of the child graduating from college by 0.01 percentage points (7% of the mean), and the likelihood of the child attending some college at all by 0.019 percentage points (7% of the mean). These estimates refer to the model without trend and are statistically significant. The estimates retain their signs in the model with trend. The rise in high school graduation with a concurrent fall in college graduation may imply that there is a resource constraint for the children whose parents have divorced. A similar argument is made by Gruber (2004) for unilateral divorce laws.

According to Table 4 (III and IV columns), for the female subsample, growing up in a joint custody regime means that the likelihood of being a high school dropout goes up by 0.012 percentage points and the likelihood of being a college graduate falls by 0.020 percentage points, for the model with trends. These estimates are also statistically significant. Years of education falls for growing up under joint custody laws and the odds of graduating high school rise, although they are no longer statistically significant.

For the male subsample (Table 4, columns V and VI), being exposed to a joint custody regime as a child raises the likelihood of being a high school dropout by 0.016 percentage points, in the model with trends. The likelihoods of going to college and graduating from college fall by 0.014 and 0.032 percentage points respectively, in the model with trends.

In the category of labor market outcomes for the pooled sample (Table 5, columns I and II), being exposed to a joint custody law regime reduces real total income by $2,373 (6.6% of the sample mean) and real wage income by $1,989 (6.3% of the sample mean), for

Table 5: Effect of Growing Up under Joint Custody Regime on Labor Market Outcomes

	Pooled		Adult Females		Adult Males	
	Without Trend	With Trend	Without Trend	With Trend	Without Trend	With Trend
	I	II	III	IV	V	VI
Real Total Income	-2152.894 ***	-2373.250 ***	-855.001 ***	-990.632 ***	-3283.428 ***	-3963.648 ***
	(369.124)	(400.631)	(337.729)	(368.147)	(612.790)	(670.589)
Above Poverty	-10.994 ***	-9.916 ***	-8.472 ***	-7.426 ***	-13.643 ***	-12.634 ***
	(1.462)	(1.493)	(2.044)	(2.128)	(1.869)	(1.963)
Weeks Worked	-0.021 ***	-0.022 ***	-0.024 *	-0.040 ***	-0.015 **	-0.014 *
	(0.009)	(0.009)	(0.014)	(0.015)	(0.008)	(0.008)
Real Wage Income	-1765.609 ***	-1989.311 ***	-575.999 *	-758.716 **	-2819.190 ***	-3387.432 ***
	(336.463)	(363.212)	(304.593)	(330.230)	(564.369)	(611.272)
Employed	-0.012 ***	-0.013 ***	-0.014 ***	-0.020 ***	-0.009 ***	-0.009 ***
	(0.003)	(0.004)	(0.006)	(0.006)	(0.004)	(0.004)
N	221303	221303	102515	102515	118788	118788

Note: OLS Regression results with coefficient for KIDCUST variable being reported
Standard errors in parentheses
*, **, *** significant at 10%, 5%, and 1% respectively

the model with trends. The percentage income above the poverty threshold also falls by 9.92 percentage points and weeks worked by 0.022 (0.6% of mean). The likelihood of being employed decreases by 0.013 percentage points (1.5% of the sample mean). We notice that the signs of the coefficients remain the same for our models with and without trend, and the absolute values of the estimates are also close. This is an indication that our model results are robust.

Columns III and IV of Table 5 show the labor market outcomes of growing up under joint custody laws for the female subsample. According to the model with trends, growing up in a joint custody regime leads to a decrease in real total income of $991 and real wage income by $759. The percentage income above the poverty threshold falls by 7.426 percentage points and weeks worked by 0.04. The likelihood of being employed is also reduced by 0.02 percentage points. Again, in all these instances, the directions (sign) remain the same for the models with trends and the models without trends.

In Table 5 columns V and VI, the male subsample results for the labor market outcomes are consistent with the results in the previous results tables. Being exposed to joint custody laws as a child decreases real total income by $3,964 and real wage income by $3,387. The percentage income over the poverty threshold falls by about 13 percentage points and weeks worked by 0.015. The likelihood of being employed also goes down by 0.009 percentage points.

5 Discussion

Rasul (2006) lays the theoretical foundations for our present analysis. Rasul argues that sole custody is optimal if parents have sufficiently heterogeneous preferences for child development. If parents have relatively homogeneous preferences for child development, then joint custody is optimal assuming the high-valuation parent retains the majority share of

the custodial rights. In practice, the court does not have all the information about parental preferences when making child custody decisions. This kind of information asymmetry may lead to less than optimal outcomes. Hence, joint custody may be granted where sole custody is warranted, and vice versa. If custodial allocations are not efficient, then it distorts the investment incentives of parents. Hence, the investment in a child's human capital development may become inadequate. This inadequacy may have serious consequences for the child's future.

I find that growing up in a joint custody law regime leads on average to worse future outcomes for children. In particular, for individuals growing up under the joint custody law regime, the likelihood of dropping out of high school increases, and the odds of graduating from college decreases. The labor market outcomes are equally depressed. Being exposed to a joint custody regime reduces future real total income, the percentage income above poverty, weeks worked, real wage income, and the likelihood of being employed. These results hold true for the aggregate sample, the female subsample, and the male subsample. The results are robust to the inclusion of trends in the model, which suggests that endogeneity through unobserved heterogeneity changing over time is not driving the results.

The findings of this paper can be reconciled with the findings of the existing literature. Nunley and Seals (2011a) argue (following Rasul 2006) that implementation of a joint custody law leads to a weakened bargaining position for mothers. If fathers give investment in child development lower importance than mothers, then shifting the bargaining power in favor of fathers will lead to a lower investment in children. My results are consistent with this line of thinking. Since, mothers have a weakened bargaining position, the investment in children tends to be lower. Elsewhere in the literature, it has been proposed that an increased bargaining power for mothers will lead to greater investment in children (e.g., Lundberg et al. 1997). A lower investment in children will weaken their ability to acquire human capital during their developmental phase, which will lead to weaker labor market outcomes in the future. In my analysis, I find that exposing children to joint custody laws will lead to a

higher likelihood that these children drop out of high school and to a lower likelihood that they graduate from college. These findings provide support to the idea that joint custody laws weaken the bargaining position of mothers, and tend to lower investment in children.

The lower labor market outcomes due to growing up in a joint custody regime can be a result of lower human capital accumulation. Lower total income and lower wage income due to being exposed to joint custody laws as a child also implies earning lower wage rates. A lower likelihood of finding a job and the finding that fewer weeks are worked also support the notion that individuals growing up in a joint custody law regime as children are having a more difficult time later in the labor market.

Gruber (2004) suggests two linkages through which growing up in a unilateral divorce regime might affect the likelihood of graduating college: liquidity constraints and extra stress. I find that for the pooled sample, the odds of graduating high school increases, but the likelihood of attending college and graduating from college decreases. Thus resource constraints may explain lower educational attainment growing up in a joint custody regime.

Another interesting feature of the results in this paper is the large difference between the decrease in future income of males and females. Being introduced to the joint custody regime lowers the future real total income for the female subsample by $991 in the model with trends. However, the decrease in future real total income for the male subsample is far larger at $3,964. Hence, a possible resource constraint affects males significantly more than females. We can provide two reasons for this result. First, the increase in female graduation rates and workforce participation have been relatively recent phenomena. Since we start our analysis in 1960, the effect of being introduced to a joint custody regime as a child may therefore be less severe on females. The second explanation of the lower impact on females is related to the idea of gender-specific discrimination in the allocation of resources in a household. If female children are receiving fewer of the available resources, then a shock in the form of a divorce and the ensuing resource constraint will be less severe for them than for their male counterparts. Since female children already had fewer resources to begin with,

a parental divorce affects them less than it does male children. In sum, our finding may provide indirect evidence of gender-based discrimination with regard to resource allocation among children. Further research into this aspect may be of interest.

Overall, I find that growing up in a joint custody regime has detrimental effects on future educational and labor market outcomes. The existing literature suggests that weakening the bargaining power of mothers in a household will lead to lower investment in children's development. My results are fully consistent with this view.

6 Conclusion

Before the introduction of joint custody laws, mothers were predominantly given the custodial rights in the event of a divorce. The argument in favor of such a system was the recognition that mothers tended to be the "primary caregivers". Joint custody laws made the awarding of custodial rights gender-neutral. Bonding and monitoring theories suggest that a joint custody regime would be a better option than a sole custody regime because it would provide fathers with an incentive to be emotionally closer to their children, and as a consequence, they would be more willing to support their children financially. However, the literature also suggests that if mothers lose their bargaining power, even if only partially, the investment in children tends to be lower. Rasul (2006) suggests that if parental preferences for child development are sufficiently heterogeneous, then sole custody is a better option. Even when joint custody is optimal (under relatively homogeneous parental preference for child development), investment in a child is maximized if the parent who is giving child development more weight retains the majority share of the custodial rights. Hence, an equal spread of custodial rights after divorce may not be in the best interests of a child. My results support this argument. I do not find growing up in a joint custody law regime to be beneficial for children.

The literature on the economics of divorce has not focused yet on the future outcomes of growing up in a joint custody law regime. My results show that being exposed to a joint custody law regime leads to lower educational attainment (higher likelihood of dropping out of high school, lower likelihood of graduating from college) and worse labor market outcomes (lower real total income, lower real wage income, lower percentage income over poverty line income, lower weeks worked, and lower likelihood of being employed). My results are robust do different specifications and hold for both the male and female subsamples.

I also find indirect evidence of discriminatory resource allocation among children based on their gender. Being introduced to joint custody as children, males are more severely affected than females. If female children already had lower resources to begin with, then the resource constraint after divorce does not hurt them as much as it does male children. This may be interpreted as indirect evidence of within-household gender-based discrimination.

Although a joint custody regime is intended to serve the best interests of a child, it appears that it is working in the opposite direction.

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