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Abstract

This paper provides the first causal evidence on the effect of parental divorce on noncognitive skills by exploiting state-cohort variation in the adoption of unilateral divorce laws. Using data from the National Survey of Midlife Development in the U.S., we show that these divorce law adoptions had a detrimental effect on persistence and conscientiousness of women who faced a higher probability of parental divorce due to exposure to unilateral divorce laws in childhood. Our results suggest that reduced financial resources in childhood rather than changes in parenting style may have caused the adverse effects.

Keywords: noncognitive skills; unilateral divorce laws; conscientiousness; persistence; parenting style; MIDUS
JEL Classification: J12, J13, J24, K36

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1. Introduction

Noncognitive skills are important determinants of economic outcomes (Lindqvist and Vestman 2011), but much less is known about the long-term effects of family environment on noncognitive skills. The timing of the adoption of unilateral (no-fault) divorce laws in the U.S. in the twentieth century led to an exogenous change in the probability of divorce that differed by state and cohort, and thus allows for the causal identification of the effect of a change in family environment on noncognitive skills. Children with divorced parents have lower social and emotional well-being (Amato 2005), though it is unknown whether this is the result of the divorce itself or its correlation with unobserved family characteristics. Social and emotional well-being is closely related to noncognitive skills, which might, thus, explain why the negative effects of divorce reach into adulthood, manifesting themselves in worse economic outcomes (Gruber 2004).

Especially likely to be affected by divorce are those noncognitive skills whose formation is most dependent on parental time and resources. In particular, we investigate the effect of a change in divorce laws during childhood on persistence and conscientiousness. These have been shown to be important predictors for economic outcomes (Abuhassan and Bates 2015) and are likely to be affected by the quantity and quality of parental inputs and the stability of the home environment (Eisenberg et al. 2014).

Using data from the National Survey of Midlife Development in the U.S. (MIDUS) and a difference-in-differences analysis, we demonstrate that women who were children when unilateral divorce became legal report lower levels of persistence and conscientiousness in adulthood. We find smaller or no effects for men, similarly to Gill and Kleinjans (2020), who documented that only women's noncognitive skills were affected by the fall of the Berlin Wall.

2. Divorce Laws and Noncognitive Skills

The switch to unilateral divorce laws may have affected children's noncognitive skills by initially increasing divorce rates (for about ten years, see Wolfers 2006) and by reducing marriage-specific investments (Stevenson 2007). Divorce significantly reduces the time fathers spend with their children, even in recent cohorts (Hamermesh 2021). Spending time with fathers is important for children's cognitive skill acquisition (Amato 2005; Del Boca et al. 2014) and

likely noncognitive skill formation as well. For example, father absence lowers educational achievement and increases children's behavioral problems (McLanahan et al. 2013). Divorce also reduces financial resources (Amato 2005). Economic and social disadvantage acts as an early-life stressor, whereas income transfers positively affect the emotional health and noncognitive skills of children and teenagers (Akee et al. 2018). And, lastly, divorced mothers work more, spend less time in home production, and are more stressed and less satisfied with their lives (Hamermesh 2021). This reduces the quality of maternal inputs and may partially explain their less effective parenting (Amato 2005).

Unilateral divorce laws not only increased divorce rates but also changed the incentives to get married and invest in the marriage. They lowered marriage-specific investment and increased mothers' labor force participation (e.g., Stevenson 2007), which may have also decreased the quantity and quality of parental investment.

3. Data

Our analysis employs restricted data from the 1995 MIDUS. This nationally representative data set provides noncognitive outcomes and family relationship information, includes a substantial number of exposed individuals, and allows estimating long-term impacts because noncognitive skills were assessed in adulthood. We use the information on 30 states that adopted unilateral divorce law provided by Gruber (2004).

To allow controlling for age at the time of the law adoption, we reshaped the data, generating repeated observations by individual across calendar years. Then, for each year between 1938 and 1983 we keep only those respondents who are younger than 18 years, and thus were potentially affected by the law adoption and are 25-64 years old adults at the time of the survey. Additionally, the sample is restricted to at least 20 observations in the year-state-gender cell. The resulting sample includes 13,907 repeated (770 unique) observations of men and 17,013 (928 unique) observations of women, with 20% of observations in years following the law adoption.

The dependent variables are constructed using factor analysis, with a mean of zero and variance of one. Persistence includes five items that measure a person's ability to complete tasks

and reach set goals. Conscientiousness combines such traits as being organized, responsible, hardworking, and careless (reverse-coded).

4. Econometric Approach

To assess the impact of unilateral divorce laws on noncognitive outcomes, we follow a difference-in-differences design that exploits cross-state differences in the timing of the law adoption and the differential exposure to them across cohorts (see, e.g., Gruber 2004). We thus estimate the following model linking the noncognitive skill Y of individual *i* from state *s* in year *t* to the adoption of unilateral divorce laws:

$$Y_{ist} = \alpha + \beta[\text{Exposed to law before age 18}]_{st} + \gamma_s + \mu_t + X_{ist}\theta + e_{ist} \qquad (1)$$

where $[\text{Exposed to law before age 18}]_{st}$ equals one if a respondent resided in a treated state after the law adoption. The state dummies, γ_s, control for time-invariant unobserved determinants of noncognitive skills that vary across states and the year dummies, μ_t, for the aggregate unobserved influences on outcomes that vary over time. X_{ist} is a vector of predetermined demographic characteristics (race and age). The identification rests on the assumption that the adopting and control states are otherwise identical except for the difference in the divorce laws.

Using exposure to unilateral divorce laws - rather than an indicator for parental divorce - eliminates the potential for endogeneity bias arising from unobserved differences between children of divorced parents and those from intact families.

5. Results

Table 1, Panel A shows our main results. We find no effect of being exposed to unilateral divorce laws on persistence and conscientiousness in adulthood for men but strong effects for women. Persistence of women who were exposed is 0.413 of a standard deviation lower than of women who were not, and conscientiousness is 0.332 of a standard deviation lower. Panel B reports the results of our placebo test in which we split up the respondents residing in the adopting states into those who turned 18 within ten years and those who turned 18 within 11 or more years before the law adoption. There are no differential pre-trends between adopting and control states for either gender, lending credibility to the parallel trend assumption. We also find that the effects are nonlinear and more pronounced for women exposed to the law in early

childhood (results not shown).[1] Clustering standard errors by individual rather than state, adding state-specific linear time trends, or utilizing the original rather than reshaped data set does not alter these findings (results not shown).

To explore potential mechanisms, we assess the role of financial resources in childhood and nonmonetary parental inputs as recalled in adulthood. As shown in Table 2, women exposed to the law before age 18 are more likely to report below average financial resources in childhood and to have been on welfare. The latter effect is large, with an increase of 5.1%-points compared to a baseline of 6.9%. This is consistent with unilateral divorce laws leading to more divorces, resulting in reduced financial resources. Including these variables in our main regression, however, lowers the coefficients of interest only slightly (results not shown). Our analysis reveals no effect on parental love or time for our treatment group.

Even though there is little evidence that treated men's noncognitive skills were affected, their parental inputs differ. They received more paternal love and maternal time than the control group. They faced no difference in financial resources. Treated men also received more paternal love than treated women ($p < 0.01$). We find no differential probability of parental divorce for treated women and treated men (results not shown), so these differences likely reflect differential responses of parents of girls and boys to the change in divorce law, be it through differences in behavior after a divorce or in marriage persistence.

These patterns suggest that financial resources and, potentially, perceived (and recalled) paternal love, as well as differences in paternal response depending on the gender of the child might explain the effect of unilateral divorce laws on noncognitive skills. Due to data limitations we are unable to explore this further.

6. Conclusions

This paper uses the exogenous adoption of unilateral divorce laws to examine the causal link between the probability of experiencing parental divorce during childhood and noncognitive skills in adulthood. Our analysis indicates that women who were children at the time unilateral divorce laws were adopted report lower levels of persistence and conscientiousness in adulthood.

[1] There are also possibly effects on the conscientiousness of men exposed to the law in early childhood but small cell sizes prevent us from investigating this further.

Since these noncognitive skills are predictive of an array of social and economic outcomes this could help explain why adverse effects of parental divorce persist into adulthood.

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TABLES

Table 1

The Long-term Effects of the Adoption of Unilateral Divorce Laws on Noncognitive Skills

	Men		Women	
	Persistence	Conscientiousness	Persistence	Conscientiousness
Panel A: Main Results				
Exposed to law before age 18	-0.077	-0.124	-0.413***	-0.332***
	(0.154)	(0.106)	(0.101)	(0.099)
Observations	13,907	13,907	17,013	17,013
R-squared	0.041	0.038	0.057	0.055
Panel B: Placebo Test				
Exposed to law before age 18	-0.079	-0.122	-0.427***	-0.333***
	(0.156)	(0.110)	(0.099)	(0.106)
Turned 18 within 10 years before law	-0.012	0.009	-0.071	-0.006
	(0.075)	(0.059)	(0.069)	(0.117)
Observations	13,907	13,907	17,013	17,013
R-squared	0.041	0.038	0.057	0.055

Note: Also included are a constant, age, as well as dummies for race, state of residence, and year. Robust standard errors are clustered by state and shown in parentheses. *** p<0.01, ** p<0.05, and * p<0.1.

Table 2

Mechanisms: Parental Inputs

	Monetary		Nonmonetary			
	Below average financial resources	Family on welfare	Maternal love	Paternal love	Maternal time	Paternal time
Panel A: Men						
Exposed to law before age 18	-0.031	-0.007	0.001	0.099**	0.071**	0.066
	(0.044)	(0.031)	(0.033)	(0.039)	(0.033)	(0.054)
Observations	13,829	13,843	13,790	13,382	13,791	13,382
R-squared	0.057	0.044	0.040	0.029	0.042	0.026
Panel B: Women						
Exposed to law before age 18	0.104***	0.051**	-0.002	-0.105	0.008	-0.072
	(0.036)	(0.024)	(0.036)	(0.063)	(0.030)	(0.062)
Observations	16,979	16,954	16,797	15,784	16,787	15,784
R-squared	0.039	0.054	0.051	0.035	0.041	0.045

See notes to Table 1. All outcomes are 0 or 1. Maternal (paternal) love = 1 if a child received a lot or some love from the mother (father) and 0 otherwise, and maternal (paternal) time = 1 if a child spent a lot or some time with a mother (father).