

The Minimum Wage and Fathers' Residence with Children

Allison Dwyer Emory, Rutgers University
Daniel P. Miller, Boston University
Lenna Nepomnyaschy, Rutgers University
Maureen Waller, Cornell University
Alexandra Haralampoudis, Rutgers University

Changes in the economy over the last several decades have profoundly reduced the economic prospects of lower-skilled parents. This deterioration has been linked with declines in marriage and increases in divorce and non-marital childbearing, all of which have implications for children's living arrangements and well-being. Among low-income families, the minimum wage can be an important policy tool to increase parental earnings. A higher wage may improve fathers' ability to contribute to their families, making them more desirable partners, or enable mothers to exercise economic independence. In this paper, using nationally representative data from the Current Population Survey from 2007-2014, we examine whether variation in the minimum wage, across states and over time, is associated with fathers' residence with their children in low-income families. Preliminary findings suggest the minimum wage has different implications for family structure depending on which parent is more likely to be affected by minimum wage policies.

The last three decades have seen a decline in the real value of the minimum wage in the United States as well as shift in the demographics of minimum wage workers (U.S. Bureau of Labor Statistics, 2015). The amount of the minimum wage is set through a combination of federal and state laws, and varies by state as well as over time in response to changes in both policy and inflation. In 2014, for example, the minimum wages set by states ranged from \$0 in six states to \$9.82 in Washington. The implications of these policies for socioeconomic inequality are not straightforward, especially since minimum wage policies are not targeted to any specific population or family income bracket (Autor, Manning, & Smith, 2016; Bernstein & Shierholz, 2014; Horrigan & Mincy, 1994; Morgan & Kickham, 2001; Sabia & Burkhauser, 2010). A large proportion of minimum wage earners are now adults supporting families (Belman, Wolfson, & Nawakitphaitoon, 2015; Cooper & Hall, 2013), and changes to the minimum wage can increase the earnings of low wage households with children (DeFina, 2008; Morgan & Kickham, 2001; Neumark & Wascher, 2002). Moreover, earnings and economic insecurity have important implications for nonmarital childbearing, relationship stability, and father absence in low-income families (Cherlin, 2014; Edin & Kefalas, 2011). In this paper, we use nationally representative data from the Current Population Survey and take advantage of state and year variation in the minimum wage to examine the association between the minimum wage and father co-residence with children in low-income families.

The impact of the minimum wage is concentrated among individuals employed at or near the bottom of the earnings distribution. Previous studies have focused on that population to the extent possible, typically using proxies of industry (Card & Krueger, 1994; Kim & Taylor, 1995) or demographic characteristics (Allegretto, Dube, & Reich, 2011; Belman et al., 2015) to identify likely recipients of the minimum wage. This research has identified changes in the minimum

wage with increased earnings with limited impact on employment (Allegretto et al., 2011; Belman et al., 2015; Card & Krueger, 1994). While some studies suggest negative employment consequences for individuals working at jobs easily outsourced or who were out of work at the time of the change (Jardim et al., 2017; Sabia, 2008), most research finds mixed or no evidence for this connection (Allegretto et al., 2011; Belman et al., 2015; Card & Krueger, 1994; Totty, 2015).

Changes to family earnings associated with the minimum wage can also have implications for families and family wellbeing. A growing body of research in the public health field has associated increases in minimum wage with decreased mortality (Tsao et al., 2016), decreased infant mortality and low birth weight (Komro, Livingston, Markowitz, & Wagenaar, 2016), and lower rates of child maltreatment (Raissian & Bullinger, 2017). Despite a large body of research connecting fathering to family economic resources, we are not aware of any research considering the implications of minimum wage policies for family structure and father co-residence.

Children growing up in single parent families are much more likely to be poor and tend to fare worse on numerous indicators of child well-being than children in two-parent families (DeNavas-Walt & Proctor, 2015; McLanahan, Tach, & Schneider, 2013). Two potentially conflicting theoretical pathways link the minimum wage to family structure, and thus the resources available to children in low-income families. First, higher earnings for low-income men may increase the likelihood of fathers' presence in the household. Second, increases to women's earnings may decrease dependence on romantic partners and reduce the likelihood of coresidence with men.

Increases in the minimum wage may make men more attractive partners by increasing their ability to reliably contribute to family finances, potentially increasing the likelihood that

fathers live with their children. There is ample evidence that higher income men are more likely to have a child within marriage and to co-reside with their child and child's mother (Carlson, McLanahan, & England, 2004; Nelson, 2004). Yet deindustrialization, loss of manufacturing jobs, declines in union participation, and tremendous increases in incarceration rates have all had profound impacts on the economic and social well-being of low-educated men over the last three decades (Cherlin, 2014; Mincy, 2006; Sum, Khatiwada, McLaughlin, & Palma, 2011; Western & Rosenfeld, 2011; Western & Wildeman, 2009; Wilson, 1997). The dramatic deterioration in the economic prospects of low-skilled men has been linked with declines in marriage and increases in divorce and non-marital childbearing over the last four decades (Cherlin, 2014; Western & Wildeman, 2009). These trends have created a social and economic climate that may be particularly detrimental for low-income fathers and their ability to provide for and be involved with their children (Bianchi & Milkie, 2010; Edin & Nelson, 2013; Mincy, Jethwani, & Klempin, 2014). Insofar as the minimum wage addresses this economic disadvantage, it may also be associated with increased father involvement with children and their children's mothers.

Women are disproportionately represented among minimum wage workers, and thus most likely to see income changes in response to minimum wage increases (Autor et al., 2016; Belman et al., 2015; Card & Krueger, 1994; U.S. Bureau of Labor Statistics, 2015). Economic theories of specialization suggest that higher earnings for women increase their level of bargaining and independence vis a vis men and may contribute to higher incidence of divorce and nonmarital childbearing (Becker, 1981; Ross, Sawhill, & MacIntosh, 1975), though empirical support for this theory is weak, particularly over the last several decades (Oppenheimer, 1997; Sayer & Bianchi, 2000; Sweeney, 2002). Mothers facing economic insecurity can be vulnerable and dependent on romantic partners to make ends meet (Edin & Lein, 1997). Increased income and

economic security associated with higher wages may allow women to choose or maintain more stable family situations for their children, whether by remaining single or selectively partnering. In a notable study of single mothers, however, Sabia (2008) suggests that low earning single mothers impacted by the minimum wage face net losses in income due to decreases in employment or hours worked.

METHODS

Data. We use 8 years of data from the Annual Social and Economic Supplement (ASEC) from the March Current Population Survey (CPS). Data include measures for each state and the District of Columbia and each year from 2007-2014. These data are then merged with aggregate state-level measures from the years 2005-2014 from the census and American community survey (race), bureau of labor statistics (unemployment), center for disease control (nonmarital births), and data compiled by Hirsch and colleagues about union density (Hirsch, Macpherson, & Vroman, 2001) to allow for lagging these measures. State minimum wage data from the Department of Labor are linked to these survey data by state and year. The analytic sample is limited to families with at least one minor child living with a biological parent, either mother or father (N=238,639).

To test specific theoretical paths and focus our analyses, additional sample limitations are included to examine the relationship between the minimum wage and family structure among families where the mother is likely to be affected (N=79,132), the father is likely to be affected (N=54,325), or the family is likely to be affected (N=129,973) by changes in the minimum wage. Building on prior work using wages to proxy for likelihood (Jardim et al., 2017), we use two parental attributes grounded in prior research on the minimum wage to construct our likelihood measures: parent employment and parent earnings. Parents are considered likely to be affected if

the biological mother is employed but reports earnings from work less than twice the equivalent of 35 hours at minimum wage in the current state/year (likely mother), the biological father is employed but reports earnings from work less than twice the equivalent of 35 hours at minimum wage in the current state/year (likely father), or either biological parent meets these criteria or the combined earnings of all resident parents are less than twice the equivalent of 35 hours at minimum wage in the current state/year (likely family). Earnings are benchmarked at twice the equivalent of full time minimum wage earning to account for spillovers up the earning ladder (Autor et al., 2016). These attributes are measured directly for resident parents, and estimated using multiple imputation for nonresident parents not observed in the household-based CPS. Imputation models use state attributes, household characteristics, and characteristics of resident parents to impute both unobserved values, creating 11 imputed datasets.

Analytic Strategy. To account for the structure of the data and variation at both state and year levels, we use multi-level mixed effects regression models with state and year random effects to estimate the association between the state minimum wage and family structure. Dependent variables capture whether the family contains two biological parents, a biological father, or two parents in the household. The key independent variable is the state minimum wage in the year prior to the family structure measures. Models also control for both state-level and family-level variables to adjust for confounding variables that may shape state minimum wage policies or family responses to these policies. Future planned work will also test whether including measures of mothers' earnings, fathers' earnings, mothers' employment, and fathers' employment mediate the observed relationship between minimum wage and family structure.

Measures. Three key measures of family structure are constructed using the household roster and relationship variables from the CPS. Children in the household report whether any of

the adults in the household are their biological parent, step parent, or adopted parent. Parents also report their relationship to one another- whether in a partnered or marital relationship. Using these measures, researchers were able to collapse respondents into one-observation per family and categorize families with children as having two biological parents present, a biological and a step or social parent present, or having only a single biological parent in the household. These measures were used to create the dichotomous dependent variables used in the analysis: families with two biological parents or not, families with a biological father in the household or not, and finally families with two parents of any kind in the household or not. Among families with two-parents, additional analyses are conducted on the variable measuring whether parents are cohabiting or married.

The minimum wage is measured for each state, and the federal minimum wage in the respective year is substituted if higher than that required by the state. All minimum wage dollar values are adjusted for inflation, and values represent 2015 constant dollars. The minimum wage is then lagged by one year to reflect delays in both implementation, family response to the minimum wage, and known lags in market adjustments to minimum wage changes (Allegretto, Dube, Reich, & Zipperer, 2013). Additional sensitivity analyses were conducted using a two-year lag as well as the year family structure was measured.

State and family level controls are included to further isolate the association between minimum wage and family structure. At the state level, measures of the poverty level, unemployment rate, nonmarital birth rate, unionization rate, black non-Hispanic population, and Hispanic population are measured at each year. As these state level variables can influence the likelihood of states adopting different minimum wage policies (Allegretto, Dube, Reich, & Zipperer, 2013), state level attributes are measured two years prior to the measurement of family

structure and one year prior to the minimum wage measure. Family-level attributes are measured in the same year as family structure, and include both household level variables as well as demographic measures of the “main parent” in the family. Household measures include the age of the youngest child in the family, the number of children in the household, and whether the parents own or rent their home. We also measure the highest level of education of either parent in the family, whether biological or step. The main parent is defined as the biological father if present, or the biological mother if the biological father is not present. The age, race-ethnicity, and citizenship status of the main parent are included in models adjusting for family attributes.

PRELIMINARY FINDINGS

Bivariate models presented in Table 1 suggest that the state minimum wage is associated with family structure in the following year. For families likely to be impacted by the minimum wage, including families where parents earn minimum wage or where parent income is low, the minimum wage has a small and not statistically significant association with family structure. This masks diverging associations by which parent is likely to be earning the minimum wage. In families in which the biological mother is likely to have earnings impacted by changes to minimum wage, there is a negative association between the minimum wage and having two biological parents, a biological father, or two parents of any kind in the family. This finding suggests that higher minimum wages are associated with greater maternal independence when the mothers’ wages are likely to be impacted. In families in which the biological father is likely to be earning the minimum wage, on the other hand, a higher minimum wage is positively associated with having either the biological father or two parents in the household. This finding suggests that higher minimum wages are also associated with greater paternal presence when the father’s earnings are likely to be impacted.

The full models presented in Table 2 examine these associations further by adjusting for family characteristics and lagged state attributes that may influence both family structure and minimum wage as well as state and year random effects. These models likewise find that minimum wage is associated with family structure, but who in the family is likely to be affected matters for the direction of that influence. In families in which the father is likely to be impacted by the minimum wage, we again see a small positive association between the minimum wage and the likelihood that the father lives in the household. In families in which the mother is likely to be affected by the minimum wage, however, we again see a negative association between the minimum wage and children having a father in the household.

Together, these preliminary findings suggest that family structure is sensitive to the minimum wage, and theoretical pathways through both maternal independence and paternal contributions may be both relevant. These analyses will contribute to our understanding of how economic policies like the minimum wage shape affected families. Our preliminary findings suggest that such policies may have implications beyond their intended purpose increasing earnings of low-skilled workers, potentially improving the economic circumstances and well-being of children. *Future analyses will refine these models using logistic regressions, consider alternative specifications of likelihood of impact, and examine whether findings are mediated by mothers' and fathers' earnings.*

Table 1: Bivariate Relationships with State and Year Random Effects

Dependent Variable: Sample:	Two Biological Parents			Biological Father			Two Parent Household		
	Likely Family	Likely Mother	Likely Father	Likely Family	Likely Mother	Likely Father	Likely Family	Likely Mother	Likely Father
N	129973	79132	54325	129973	79132	54325	129973	79132	54325
Minimum	.003	-.01*	.01+	.002	-.01*	.01**	.001	-.01*	.01*
Wage									
Constant	.53	.70	.49	.65	.70	.55	.65	.78	.61
Random									
Effect									
Standard									
Deviations									
State	.07	.06	.05	.07	.06	.05	.07	.06	.05
Year	.02	.01	.01	.01	.01	.001	.01	.01	.00

Note: + p<.01, * p<.05, **p<.01, ***p<.001

Table 2: Multilevel Mixed Effects Regressions, State and Year Random Effects

Dependent Variable: Sample:	Two Biological Parents		Biological Father		Two Parent Household	
	Likely Mother	Likely Father	Likely Mother	Likely Father	Likely Mother	Likely Father
N	79132	54325	79132	54325	79132	54325
Minimum Wage	-.01*	.004	-.01*	.01*	-.01*	.004
Family Controls						
Youngest Child	-.02***	-.02***	-.02***	-.02***	-.02***	-.02***
Own Home	.24***	.17***	.21***	.16***	.18***	.12***
Number of Children in Household	.04***	.05***	.01***	.03***	.02***	.04***
Main Parent Age	.02***	.01***	.02***	.01***	.02***	.01***
Main Parent Citizen	.10***	.12***	.07***	.11***	.07***	.11***
Main Parent Race						
Black, non-Hispanic	-.21***	-.20***	-.22***	-.21***	-.24***	-.25***
Hispanic	-.07***	-.05***	-.08***	-.06***	-.07***	-.04***
other, non-Hispanic	-.08***	-.05***	-.07***	-.04***	-.07***	-.05***
Highest Household Education						
High School	.10***	.05***	.10***	.05***	.14***	.08***
Some College	.16***	.07***	.12***	.03***	.19***	.09***
College or More	.28***	.17***	.22***	.11***	.28***	.16***
State Controls (lagged 2 years)						
Poverty Rate	.00	.00	.00	.00	.00	.00
Unemployment Rate	.00	.00	.00	.00	.00	.00
Porportion	.00	.00	.00	.00	.00	.00
Nonmarital Births						
Union	.00	.00	.00	.00	.00	.00
Black Pop.	.00	.00	.00	.00	.00	.00
Hispanic Pop.	.00	.00	.00	.00	.00	.00
Constant	-.05+	-.03	.08**	.11**	.23***	.31***
Random Effects Parameters (sd)						
State	.02	.02	.02	.02	.02	.02
Year	.01	.01	.004	.002	.01	.00
Residual	.42	.44	.41	.42	.41	.42

Note: + p<.01, * p<.05, **p<.01, ***p<.001

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