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# The Accumulation of Economic Disadvantage: The Influence of Childbirth and Divorce on the Income and Poverty Risk of Single Mothers

Susan Harkness

**ABSTRACT** This study examines how motherhood earnings penalties in combination with the cost of partner absence affect single mothers' economic well-being. Using longitudinal data from the Panel Study of Income Dynamics for 1990–2015 and fixed-effects models with individual-specific slopes reveals that when needs are controlled for, the transition to parenthood is as strongly linked to reduced family income as partner absence is. I consider different routes to single motherhood and predict that income penalties will differ for women entering single motherhood at a first child's birth and for women who were married at first childbirth but later separated. I show that previously married mothers face larger income penalties than those who were single at first childbirth because they see larger declines in their earnings following childbirth. The results illustrate how marriage and parenthood, alongside partner absence, shape the economic prospects of single-mother families. These findings highlight the importance of reducing gender inequalities in the labor market to improve single mothers' economic well-being.

**KEYWORDS** Motherhood pay penalties • Separation • Single mothers • Income • Life course analysis

## Introduction

Motherhood is associated with large employment and earnings penalties (Harkness and Waldfogel 2003; Kleven, Landais, Posch et al. 2019), affecting the incomes of all families with children (Sigle-Rushton and Waldfogel 2007). However, such penalties are likely to be particularly damaging for single mothers, for whom reduced earnings are coupled with the absence of a male breadwinning partner and poverty risk is high (Moullin and Harkness 2021). Single fathers, by contrast, are much less likely to be living in poverty because they do not face the same labor market penalties to parenthood (Moullin and Harkness 2021; Nieuwenhuis and Maldando 2018). For the 1 in 4 children growing up in single-mother families in the United States, reduced income is associated with a series of negative outcomes, including emotional problems and reduced educational attainment (Reardon 2011; Thomson et al. 1994).

**ELECTRONIC SUPPLEMENTARY MATERIAL** The online version of this article (<https://doi.org/10.1215/00703370-10065784>) contains supplementary material.

The weak labor market attachment among all mothers and the associated reduction in their earnings potential (Kleven, Landais, Posch et al. 2019) are one reason single mothers may be economically disadvantaged. Other explanations are the absence of a male partner's earnings and greater economic needs stemming from caring for children (Sørensen 1994). Numerous studies have examined how partner absence affects the incomes and poverty risk among all single mothers (e.g., Brady et al. 2017; Page and Stevens 2004) and among those becoming single mothers as a result of separation (e.g., Tach and Eads 2015). Far less attention has been paid to motherhood earnings and employment penalties as a source of single mothers' disadvantage. Yet, research has found that maternal employment influences single mothers' poverty risk, with their children less likely to be poor in countries with high rates of maternal employment (Esping-Andersen 2014).

In this article, I examine how parenthood affects families' economic well-being, with particular attention given to those who become single mothers. To better understand single mothers' economic disadvantage, I examine how changes in female earnings following a first birth interact with the absence of a partner's income to affect their incomes. I then go beyond considering individual-level outcomes (earnings) to explore household-level outcomes (income), showing how reductions in maternal earnings following parenthood affect family income and assessing the implications for single mothers. I allow for the possibility that labor market penalties to motherhood vary by marital status at the time of the first birth; for example, married mothers may be more likely to reduce their participation in the labor market or their hours of work than unmarried (single or cohabiting) mothers at the time of first birth (Loughran and Zissimopoulos 2009). As I show, differences in these penalties affect single mothers' economic well-being.

Family change may invoke private responses that may help mediate income losses. For example, within couples, men may work more to compensate for reductions in their partners' earnings; child support payments may compensate for the absence of a male partner; and other family members, especially grandparents, may provide help. Changes in the tax and welfare system also compensate families as their incomes and needs change. I show how these mechanisms moderate the losses in income associated with parenthood and partner absence and assess their contribution to the total income penalty to single motherhood.

To address these issues, I leverage long-running panel data from the Panel Study of Income Dynamics (PSID) and fixed-effects models with individual slopes (FEIS), allowing me to isolate the effects of parenthood and separation on income and poverty risk. The inclusion of FEIS is important because although single mothers have substantially lower incomes and face a higher risk of poverty than mothers with partners, the extent to which single motherhood contributes to low income and poverty is the subject of considerable debate. Before they have children, women who go on to become single mothers are already disadvantaged; at the time of the first birth, they are (on average) younger, less educated, and less likely to be employed, and they have lower incomes than those who marry (Kiernan et al. 2020). Cross-sectional estimates can account for some of these differences, but critical unobservable differences remain (Page and Stevens 2004). By using longitudinal data and following women over a long period, I reduce potentially important sources of bias that may occur in cross-sectional estimates as a result of the correlation of the independent variables in

the models with unmeasured individual-specific effects. Moreover, decisions about having a child and getting married or divorced are likely to be affected by individuals' earnings or income trajectories (see, e.g., Ludwig and Brüderl 2018). To account for time-invariant heterogeneity and heterogeneous slopes, the models include individual fixed effects and individual slopes.

Overall, I show that motherhood earnings penalties are a major contributor to the lower incomes and increased risk of poverty of single-mother families in the United States. In line with other studies (Kleven, Landais, Posch et al. 2019), I find that motherhood is associated with large earnings declines. Linking changes in individual earnings to changes in family income, I then show that after I control for needs, first births are as strongly associated with reduced income as partner absence is. Much of the past research has looked at how partner absence, rather than motherhood-related earnings losses, affects income. A major contribution of this study, then, is looking beyond family structure and highlighting the importance of motherhood earnings penalties for explaining single mothers' disadvantage and illustrating how these penalties vary with pre-motherhood marital status.

## Previous Research

### Parenthood, Marital Status, Earnings, and Family Income

Labor force participation may help women buffer the worst economic consequences of single motherhood, including the risk of poverty (Gornick and Jäntti 2010). Yet, the literature also shows that motherhood substantially affects women's employment and earnings (Budig and England 2001; Budig et al. 2012). Research on motherhood penalties in the labor market suggests that women in the United States experience a "large, immediate and persistent drop in earnings after the birth of their first child," whereas men's earnings are largely unaffected (Kleven, Landais, Posch et al. 2019:123). This earnings decline results from women's reduced labor force participation, work hours, and wage rates (for similar findings on U.S. women's labor supply declines, see Kuziemko et al. 2020). Kleven, Landais, and Sogaard (2019) assessed how factors such as occupational choice and grandparent employment contribute to motherhood-related earnings gaps in Denmark, but they did not examine variations by marital status. The influence of fatherhood on wages is less clear; some studies have found that fatherhood is associated with higher hourly wages (Glauber 2008, 2018; Lundberg and Rose 2000), but others suggest that selection plays an important role (Ludwig and Brüderl 2018). Still other studies suggest that fatherhood premiums depend on family circumstances: married men receive positive wage premiums, but these premiums vanish when men's wives work full-time (Killewald 2013). Despite limited evidence for fatherhood wage premiums, fatherhood is associated with significant increases in work hours (Percheski and Wildeman 2008) and annual earnings (Hodges and Budig 2010).

In this article, I move beyond considering individual-level outcomes (earnings) to examine family-level outcomes (income and poverty), which is important because past research focused on the influence of partner absence—rather than motherhood-related earnings losses—on income and poverty risks. Despite the mature literature on how motherhood

affects employment and earnings, only a handful of studies have examined parenthood effects on household income. Looking across countries, Todd and Sullivan (2002) assessed the relationship between children, family earnings, and income. They found that the relative incomes of families with children are lowest in countries where children are associated with the largest declines in household earnings and, in particular, mothers' earnings (see also Bronchetti and Sullivan 2004). Taking a similar approach, Sigle-Rushton and Waldfogel (2007) showed that differences between mothers' and nonmothers' earnings are important drivers of differences in income between families with and without children. One limitation of these studies is that because they use cross-sectional data, they could not directly explore the relationship between changes in maternal earnings following childbirth and family income. Nor could they assess how changes in earnings associated with parenthood affect the incomes of single mothers—a group for whom selection issues are particularly important. Using longitudinal data and following women over a substantial period allows me to directly address these issues.

I also explore whether the economic consequences of single motherhood differ for women who were unmarried at the time of their first birth and those who were married at first birth but later separated. There are several reasons to expect women's partnership status at first birth to affect their subsequent employment and earnings. Among married couples, traditional models of the household predict that to reap gains from marriage, husbands typically specialize in paid work and wives specialize in unpaid household work (Becker 1981). Specialization may also be driven by cultural norms. For example, notions of the ideal mother emphasize "intensive motherhood," which should be "child-centered, expert-guided, emotionally absorbing, labor-intensive, and financially expensive" (Hays 1996:54). These ideals are prevalent across the socio-economic spectrum (Edin and Kefalas 2011; Macdonald 2009; Milkie et al. 2015) but are particularly prevalent among married mothers and the most educated (Altintas 2016). By contrast, women who are single upon becoming mothers are likely to have fewer income sources to draw on and will therefore, *ceteris paribus*, be more likely to work and have greater employment continuity than married mothers.

The design of the tax and welfare system also drives differences in single and married mothers' employment. For low-income families in the United States, financial support has become increasingly conditional on employment, encouraging single mothers to work (Moffitt and Garlow 2018). The Earned Income Tax Credit (EITC) leads to further differences: the credit encourages unmarried mothers' employment but disincentivizes married mothers from paid work because it is based on family income, which discourages second earners—almost always women—from working (Eissa and Hoynes 2004; Neumark and Shirley 2017). Overall, all else being equal, mothers who were married at first birth are therefore more likely to reduce their working hours or leave employment than mothers who were single.

Although women may increase their labor market participation following divorce or separation (Özcan and Breen 2012; Tamborini et al. 2015), lost work experience is likely to have a long-lasting impact on their earnings. Human capital theory suggests that work experience losses are associated with lower productivity and wages, and numerous studies have shown that motherhood earnings penalties are substantially reduced when differences in work experience are accounted for (England et al. 2016; Wilde et al. 2010). Over and above work experience losses, employment discontinuity is further associated with reduced earnings (Lundberg and Rose 2000; Waldfogel 1997).

Divorce and separation also affect labor supply decisions. For mothers, the loss of a partner's income is expected to increase both participation and work hours. However, the extent to which labor supply increases after divorce or separation also depends on personal circumstances—including the opportunity cost of paid work, which will be influenced by children's ages and women's earnings potential—as well as labor market conditions and institutional arrangements (van Damme and Uunk 2009). Moreover, women may increase their labor supply in the years before separation in anticipation of divorce (Özcan and Breen 2012).

### Partner Absence

The absence of a male partner has long been viewed as a primary cause of single-mother poverty. Partnership typically has economic benefits: by pooling income and exploiting economies of scale, couples can improve their standard of living. Conversely, a single adult must command more than half the income of those in couples to achieve the same standard of living (Sørensen 1994). Children also affect income needs. Because mothers typically retain custody of children following a separation, differences in family size play an important role in asymmetries in the effect of a separation on mothers' and fathers' incomes (DiPrete and McManus 2000). Yet it is the absence of a *male* partner that is particularly damaging to single mothers' incomes; because women earn less than men and because this difference widens substantially when they have children (Budig et al. 2012; Kleven, Landais, Posch et al. 2019), women are much less able to support their families financially. However, fathers who are absent may also have lower earnings potential than those who were married when a first child is born and remain married. Research has shown that marriage is strongly correlated with socioeconomic status (Kalmijn 2013), whereas the risk of divorce and separation is heightened by economic adversity, including job loss and financial stress (Amato and James 2010; Eliason 2012; Poortman 2005). Moreover, weak economic opportunities for low-skilled men are linked to a growing share of births out of wedlock and to the postponement of marriage (Gibson-Davis 2009; Oppenheimer 1994), which may imply poor earnings potential of the prospective partners of women who are unmarried at the time of birth.

Although absent fathers may continue to support their children financially, these payments are rarely sufficient to offset the absence of a male partner's earnings (Grall 2016). Given the contractual obligations of marriage, mothers who are divorced are more likely than never-married mothers to receive child support; further, the payments they receive are likely to be higher because previously married fathers are more likely to be employed and have higher incomes than unmarried fathers (Lerman 2010; Sariscsany et al. 2019).

### Welfare and Tax

Changes in family structure and household earnings trigger responses in the tax and welfare system, which can help mitigate losses in income (DiPrete and McManus 2000). For all families, the progressive nature of the tax system provides some

compensation for changes in income and family needs. For those with low to middle incomes, means-tested financial assistance is delivered through the EITC and Child Tax Credit (CTC); for those with low incomes, cash assistance is provided by Temporary Assistance for Needy Families (TANF). Spending on EITC and CTC (introduced in 1997) has expanded considerably since the late 1990s (for a detailed review, see Nichols and Rothstein 2016). TANF's introduction in 1997, as a replacement for Aid to Families with Dependent Children, was associated with a decline in welfare caseloads and the redirection of payments away from the lowest-income families toward those in the labor force (Moffitt 2008; Moffitt and Garlow 2018). Since the 2000s, real spending on TANF has further declined, with the safety net for low-income families shifting away from providing direct cash support and toward a system of refundable tax credits and in-kind support for food through the Supplemental Nutrition Assistance Program (SNAP) (Hardy et al. 2018).

Overall, the tax and welfare system is expected to redistribute income to families with children. The effect on the distribution of income, however, is unclear: eligibility for support through the tax credit system extends to those with relatively high incomes, but many of those with the lowest incomes—including single mothers—are ineligible for cash-based welfare receipt. My focus is on income, but other forms of welfare assistance (e.g., food stamps, housing assistance, and Medicaid) go disproportionately to low-income single-mother families (Moffitt and Garlow 2018) and have important distributional effects (Wimer et al. 2016).

### Empirical Issues in Estimating Parenthood and Partnership Penalties and Premiums

The extent to which the dramatic gaps in the incomes and poverty risks of single-mother and couple families result from the absence of a male breadwinner is the subject of a large body of research. Using cross-sectional data, researchers have examined how income and poverty rates would change if single mothers were to marry (Sigle-Rushton and McLanahan 2002; Thomas and Sawhill 2002). More recently, studies have estimated single-mother poverty penalties by comparing single and partnered mothers' poverty risk (Brady et al. 2017; Rothwell and McEwen 2017). Invariably, these studies found that after differences in observable characteristics (e.g., education) are accounted for, single mothers have lower incomes and higher poverty risks than mothers in couples. These findings do not, however, account for unobserved differences between partnered and single women, nor do they differentiate between mothers who were unmarried at first birth and those who separated in the years following childbirth. This limitation is important: studies have shown that single mothers differ from mothers in couples in unobservable ways, and thus cross-sectional estimates of the costs of partner absence are substantially larger than those obtained after controlling for preexisting differences using FE (Page and Stevens 2004).

Although FE estimates can help eliminate potentially large sources of bias present in cross-sectional estimates, additional sources of bias may remain. In particular, marriage and fertility decisions may be influenced by economic opportunities. Those who marry or have children are more likely to be on an upward earnings or income trajectory (see, e.g., Killewald and Lundberg 2017; Ludwig and Brüderl 2018).

Moreover, whose earnings are growing may also matter. Women may be more likely to have children when their earnings prospects are weak (because the opportunity cost of childbirth will be lower) but their partners' earnings are growing (DiPrete 2002; Ludwig and Brüderl 2018). Conversely, divorce, separation, or having a child while single may be a response to poor or deteriorating economic prospects (Cools et al. 2017; Killewald and Lundberg 2017). Some studies have considered this possibility by allowing for individual differences in the rate of income or earnings growth, but other studies may have overestimated the financial consequences of partner absence. In my empirical analysis, I account for differences in levels and rates of growth of income by using FEIS.

Preexisting trends in earnings growth may themselves reflect gender differences in *expectations* about paid work and care (Combet and Oesch 2019). If, for example, income growth changes following marriage in anticipation of becoming a parent, including individual-specific slopes may understate the association between childbirth and income. This is a potentially important consideration because studies have shown that marriage, which is often a precursor to childbirth, is associated with greater household specialization and reduced female earnings (Loughran and Zissimopoulos 2009; Musick et al. 2020). If so, the inclusion of individual slopes—if they are affected by the expectation of future earnings declines—will underestimate motherhood penalties. I therefore compare the results from the FEIS models with those obtained when only individual-specific FE, without slopes, are included.

## Methods

### Data

I use data from the 1990–2015 Panel Survey of Income Dynamics (PSID), which was conducted annually from 1968 to 1996 and biennially thereafter. The PSID gathers data on all individuals residing in households and follows these individuals over time. Demographic data and individuals' fertility histories are taken from the original PSID data files. Income data come from the Cross-National Equivalence Files (CNEF), which provide income measures derived from the PSID, including pre- and postgovernment household income, estimates of annual taxes paid by respondents, and household composition variables needed (Burkhauser et al. 2000); the CNEF uses the National Bureau of Economic Research's TAXSIM model to estimate federal and state income taxes. I merge this information with data from the original PSID files. The PSID sample includes oversamples of low-income, Latino, and immigrant families; the provided sample weights adjust the data to be nationally representative.

Individual women are the unit of analysis. Given my interest in the influence of motherhood and partnership on economic outcomes, the sample includes all individuals first observed when they were of childbearing age (which I assume to be 40 or younger) but who had not yet become parents. Respondents are followed during their working ages (19–59), yielding a total of 49,465 observations. Because I am interested in labor market outcomes, I exclude full-time students from the sample (3,241 observations). I also exclude those with missing income information (222 observations). As is common in the literature, I exclude person-year observations of



individuals living in households with income in the top or bottom percentile of the household income distribution (across all individuals in the PSID) to avoid problems of top coding and to exclude negative or zero incomes (1,590 observations). Because information collected in the PSID is for the previous financial year, income data for new mothers may be overestimated; the data will include information from before the first birth. In the regression models, I therefore exclude observations for the year when women are first observed as new mothers (2,045 observations). Finally, because I am interested in income changes, I further restrict the sample to individuals observed three or more times across waves, excluding 3,160 observations; this restriction also reflects a minimum data requirement for the models used, as described later. The resulting sample is 39,207 observations and 5,165 individuals.

All women who meet the preceding criteria are included in the sample, regardless of their status within the household; I include those who are household heads, spouses, and other extended household members. I apply cross-sectional and longitudinal weights, as appropriate. In robustness checks, I test the sensitivity of the results to weighting and to alternative sampling inclusion restrictions. Table A1 (online appendix) displays information on sample characteristics. At first childbirth, women who were single were younger, less educated, and more likely to live with their parents than women who were married.

## Outcome Variables

To understand how motherhood and the dissolution of partnerships affect household income, I first examine how earnings of women and any partner change and how they vary with changes in other sources of household income. I then consider effects on income and poverty risk. I examine three types of income sources. The first is labor income, which I break down into labor income of the woman, her partner (= 0 if no partner is present), and all other household members. Labor income includes gross earnings from employment and income from self-employment. The second source is household nonlabor income, which I separate into income from private transfers (including child support payments, alimony, and other private income transfers) and income from pensions and investment income. The third source of income is household taxes and transfers, which are the sum of all state benefits minus taxes and pension contributions.

I report two aggregate measures of household economic well-being: income and the poverty rate. Income is defined as disposable income, adjusted for family size using the square root scale and normalized for a family of four (multiplying by  $\sqrt{4/s}$ , where  $s$  is the number of individuals in the household). Households are defined as being poor if their disposable income falls below the official Census Bureau threshold of income needs, a needs-adjusted measure of income reported for each household in the PSID (see Grieger et al. 2008). All measures are annual, deflated to 2015 prices, and reported in U.S. dollars.

As in other studies decomposing income changes into their component parts (Kleven, Landais, Posch et al. 2019; Page and Stevens 2004; Todd and Sullivan 2002), I specify the dependent variables in levels rather than logs. Doing so allows me to retain observations taking a value of zero. Further, because income components

are additive when reported in levels but not when logged, using levels allows me to examine how different sources of income contribute to overall change. I convert the levels into normalized effects by dividing income and its components by average annual equivalized disposable income. The resulting estimates should therefore be interpreted as shares of average income. Robustness tests using logged income are reported in the online appendix.

### Explanatory Variables: Childbirth and Partnership Status

To examine how the transition to parenthood affects income, I construct dummy variables for having a first birth while married or while single using information on whether women became first-time parents since the previous interview (and had a youngest child age 2 or younger) and on marital status at the time of the interview. A small number of women were married at the time of birth but separated by the time of interview (33 individuals), and some mothers were cohabiting at the time of birth but married soon after (49 mothers). As is common in the literature, I define new mothers who were cohabiting with a partner as single mothers. In the working sample, approximately 1 in 10 single mothers had a cohabiting partner. Separation is coded 1 if women divorced or separated in subsequent years. I sum the coefficients on childbirth and separation to give a total single-mother income penalty. Models include a dummy variable if single mothers marry or remarry. This shows the degree to which repartnering offsets falls in income associated with single motherhood. I control for being single without children, the omitted category being married women without children.

### Additional Controls

Other controls are dummy variables for living with parents, living with other adults, the number of additional children born, a quadratic in age, and a set of dummy variables for the year of observation. My use of panel data and FEIS obviates the need to control for fixed characteristics, such as race or education, because these characteristics are absorbed in the FE.

### Methods and Empirical Specification

My approach follows the literature estimating the joint effect of motherhood and partnership on wages and employment using FE models (Harkness 2016; Loughran and Zissimopoulos 2009). As discussed earlier, to avoid confusing the association of childbirth and separation with preexisting income trends, I allow for individual-specific slopes as well as individual FE (Rüttenauer and Ludwig 2020). The estimated equation takes the following form:

$$Y_{it} = \mathbf{D}_{it}\alpha + \mathbf{X}_{it}\beta + \mu_i + \iota\delta_i + \gamma_t + u_{it}. \quad (1)$$

The dependent variables are denoted as  $Y_{it}$ , where  $Y$  is the outcome of interest for individual  $i$  at time  $t$ . The matrix  $\mathbf{D}_{it}$  is a set of demographic controls, which includes dummy variables for having a child while married, for having a child while single, for separation, for marrying or remarrying after childbirth, and for being single (unpartnered or cohabiting) without children. The coefficients on first birth and separation describe predicted changes in economic outcomes relative to being married without children.  $\mathbf{X}_{it}$  is the set of additional controls described earlier. Individual-specific FE,  $\mu_i$ , account for time-invariant unobserved heterogeneity;  $\delta_i$  is an individual-specific slope effect;  $\gamma_t$  represents year effects, which allow for variations over time; and  $u_{it}$  is an error term. Panel-robust standard errors are reported. Summing the regression coefficients across the different components of income gives the total association changes in the explanatory variables with pretax or posttax income (before accounting for changes in family size). All models are estimated using the Stata package *xtfeis* (Ludwig 2019). Note that the base used to normalize income does not affect the coefficients' sign or significance, although their magnitude is dependent on the scale (Bronchetti and Sullivan 2004).

To understand why the earnings of mothers and fathers change, I estimate the impact of the transition to parenthood on women and their partners' employment and annual working hours. I use the same models as described earlier, but I use FE models without individual slopes because changes in employment and hours of work are bounded. I also conduct several robustness checks on the model specification. First, I compare the main results with those using logged income for income. Second, to allow for the possibility that income may recover or decline further in the years following birth or separation, I compare the estimates with those from models including a variable indicating the number of years since first birth and for the time since separation. Finally, to assess potential differences by race, I run separate models for Black women and White women.

## Results

### Descriptive Statistics

Before examining the models, I illustrate variation in my sample's income and its composition between women who are married and women who are single, as well as between women with and those without children (Table 1). On average, after I adjust for needs, single mothers' equivalized incomes are approximately half those of married women with children, and poverty rates are 26% and 3%, respectively. Maternal earnings are also lower for single women and make up a far more significant share of income. The earnings of other household members are a further important source of single mothers' income because (as I describe later) these mothers are particularly likely to coreside with parents. By contrast, private transfers, mostly composed of child maintenance and alimony, represent a small income share for single mothers. Finally, taxes and transfers have little net impact on single mothers' incomes but reduce the incomes of married mothers and women without children. Differences in the incomes of single and married mothers partly reflect differences in mothers'

**Table 1** Household income components for single and married women, with and without children (estimation sample)

	Single (no or cohabiting partner)				Married			
	Children		No Children		Children		No Children	
	Income	% Disposable Income	Income	% Disposable Income	Income	% Disposable Income	Income	% Disposable Income
Female Earnings	23,691	64	31,179	65	30,294	38	39,453	54
Male Earnings	4,953	13	2,905	6	65,856	83	52,727	72
Other Earnings	5,978	16	20,868	44	843	1	362	0
Private Transfers <sup>a</sup>	2,388	6	1,297	3	1,511	2	1,145	2
Pensions and Assets	668	2	2,139	4	2,094	3	3,061	4
Total Market Income	37,678	101	58,388	122	100,598	126	96,748	132
Net Tax (welfare tax)	-512	-1	-10,717	-22	-20,887	-26	-23,575	-32
Disposable Income	37,198	100	47,672	100	79,711	100	73,173	100
Equivalized Disposable Income	43,336		69,852		81,446		100,936	
Poverty Rate (CPS) (%)	26		8		3		1	
Sample Size (unweighted)	8,618		11,728		12,118		6,743	

*Notes:* Amounts are reported in 2015 U.S. dollars. Cohabiting male partners' earnings are reported for single women. Cross-sectional weights are applied.

<sup>a</sup> Private transfers include alimony, child support, and in-household transfers.

characteristics. Table A1 (online appendix) reports the characteristics of the sample on which the models are run and reveals an expected set of findings: at first birth, single mothers were, on average, less educated, younger, less likely to be homeowners, and more likely to live with their parents than married mothers.

### Earnings Penalties to Parenthood and Other Income Changes

The results from the model are reported in [Table 2](#), with coefficients expressed as a percentage of average income. The coefficients on the dummy variables for first births and separation describe predicted changes in economic outcomes relative to being married without children.

#### *Mothers' Earnings*

The first column of [Table 2](#) shows the effects of childbirth and separation on the earnings of women who were married and women who were single at first birth. The coefficients on childbirth (top panel) show that married mothers' earnings were  $-0.257$  lower, equivalent to a 26% reduction in average income. Those who were single saw smaller declines, at 11%. Differences in the size of the coefficients are statistically significant. These findings are similar to those of Bronchetti and Sullivan (2004), who found that married mothers with children younger than 6 had lower earnings, with a 15% reduction if they had one child and a 28% reduction if they had three children, and that single mothers had slightly smaller earnings penalties. More recently, Kleven, Landais, Posch et al. (2019) reported that 31% of U.S. women in the United States experienced a long-run earnings penalty to having children; this figure is expressed as a share of predicted earnings rather than income.

The second panel shows changes in women's earnings following separation. Previously married mothers saw an average increase of 12% (as a share of average income) upon separation—a finding in line with Tamborini et al.'s (2015) results showing that divorce was associated with a 10% increase in earnings in the early 1990s. Nonetheless, the increase I found was not sufficient to offset earnings declines associated with childbirth. Moreover, overall, previously married single mothers faced larger earnings penalties than women unmarried at birth, and this difference was statistically significant.

#### *Fathers' Earnings and Other Sources of Private Income*

The second column of [Table 2](#) shows changes in spouses' earnings following childbirth and separation, revealing a 10% increase in spouses' earnings following childbirth. Previous studies have similarly found childbirth to encourage specialization within marriage (Juhn and McCue 2016, 2017; Loughran and Zissimopoulos 2009), with fathers' higher earnings offsetting motherhood earnings penalties (Bronchetti and Sullivan 2004). The coefficient on divorce or separation (second panel) shows that the absence of a male partner's earnings was associated with a

**Table 2** The association of motherhood and separation with family income components: Fixed-effects models with individual-specific slopes

	Earnings			Other Private Income			Disposable Income <sup>a</sup>
	Women's Own (1)	Male Partner (2)	Other Household Members (3)	Transfers (alimony, child support) (4)	Pension/Assets (5)	Taxes and Benefits (6)	
First Birth							
Married	-0.257** (0.026)	0.099** (0.031)	0.084** (0.016)	0.008* (0.005)	0.006 (0.008)	0.045** (0.015)	-0.014 (0.027)
Single	-0.109* (0.043)	-0.535** (0.049)	0.160** (0.036)	0.015* (0.009)	0.014 (0.012)	0.170** (0.023)	-0.286** (0.048)
††							††
Separation							
Divorce/separation	0.115** (0.041)	-0.780** (0.080)	0.02 (0.025)	0.068** (0.012)	-0.008 (0.010)	0.202** (0.029)	-0.383** (0.049)
Remarriage							
Marry or remarry	-0.059* (0.026)	0.312** (0.048)	-0.003 (0.018)	0.007 (0.009)	0.012† (0.007)	-0.075** (0.022)	0.194** (0.035)
Other							
Coreside with parents	-0.212** (0.018)	-0.103** (0.023)	1.312** (0.048)	0.004 (0.005)	0.073** (0.012)	-0.199** (0.019)	0.876** (0.038)
Coreside with others	-0.288** (0.028)	-0.072** (0.024)	0.639** (0.080)	-0.012† (0.007)	0.055* (0.028)	-0.026 (0.028)	0.295** (0.064)

Table 2 (continued)

	Earnings		Other Private Income				Disposable Income <sup>a</sup>
	Women's Own	Male Partner	Other Household Members	Transfers (alimony, child support)	Pension/Assets	Taxes and Benefits	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Total Effect of Single Motherhood							
Married at first birth	-0.142** (0.049)	-0.681** (0.086)	0.104** (0.030)	0.076** (0.013)	-0.002 (0.013)	0.247** (0.033)	-0.397** (0.056)
Single at first birth	-0.109* (0.043)	** (0.049)	0.160** (0.036)	0.015* (0.009)	0.014 (0.012)	** (0.023)	** (0.048)
Sample Size (unweighted)	39,207						

Notes: Dependent variables are normalized with respect to mean equivalized income for a family of four. Coefficients are interpreted as the percentage change in the dependent variable as a proportion of mean equivalized income. Single women are defined as women who are unpartnered or cohabiting. Male partners' earnings are the earnings of married or cohabiting male partners and may therefore take on positive values for single women. For women without a partner in the household, partner earnings are zero. The total effect of single motherhood is found by summing the coefficients on birth and divorce/separation for those who are married or separated. Controls are included for age and age squared, single and having no children, and cohabiting having no children (the base is married couple with no children). Observations for the year of first birth are excluded. Standard errors are shown in parentheses. Longitudinal weights are applied.

<sup>a</sup> Disposable income in column 7 is the sum of columns 1–6.

\* $p < .10$ ; \*\* $p < .05$ ; \*\*\* $p < .01$

\*\* The difference between the coefficients for single and married mothers is statistically significant.

78% decline in income. As expected, the absence of a married partner had a smaller impact on the incomes of mothers who were unmarried at first birth—a finding in line with prior research showing partner absence to have a greater influence on income for mothers who separate from a partner than for those not living with a partner at the time of birth (Page and Stevens 2004).

The third column of Table 2 shows changes in other household members' earnings, which account for a particularly important source of income for new mothers who are unmarried. The influence of childbirth and separation on income from private transfers (alimony, child support, and other transfers between households) is shown in column 4. Previously married mothers were more likely to retain financial support from their ex-partners following separation, with private transfers accounting for a 7% change in income. In comparison, women who had a child while unmarried received much less support, at just 2% of average income. Prior research similarly found that child support is insufficient to offset the financial consequences of separation (Grall 2016) and that those who were not previously married are less likely to receive child support or receive only small awards (Nepomnyaschy et al. 2012; Radey and Padilla 2009). Finally, changes in pension and asset income (column 5) had little influence on income.

### *Tax and Welfare*

Changes in taxes and benefits moderated the association of childbirth and separation with income (Table 2, column 6). For mothers who were married at first birth, changes in taxes and benefits were associated with a 5% increase in income following a first birth and a 20% increase after divorce. For unmarried mothers, the equivalent increase was 17% following a first birth.

### **Standards of Living and Poverty Risks**

Changes in disposable income (Table 2, column 7) are found by summing the coefficients in columns 1–6. To see how families' standards of living change, we then need to adjust for household size. Moving from disposable income to equivalized income illustrates how changes in needs affect economic well-being. These results are reported in Table 3.

Once I account for changes in needs following childbirth (given that children increase income needs but married mothers' disposable income does not change following childbirth), I find a strong negative association between childbirth and income. First births were associated with a 41% reduction in income for married women. Few studies are directly comparable. In a somewhat similar study, though, Sigle-Rushton and Waldfogel (2007) found that for middle-educated women, having two children was associated with a 28% lower accumulated income over early adulthood. Divorce leads to large disposable income losses, which are moderated by reduced income needs. For women in our sample, divorce was associated with a 27% decline in equivalized income—an effect of similar magnitude to changes reported in other studies. For example, DiPrete and McManus (2000) reported a 26% decline in income following divorce for U.S. women in the 1990s. Using more recent



**Table 3** The association of motherhood and separation with equivalized income and poverty: Fixed-effect models with individual-specific slopes

	Equivalized Disposable Income		Poverty	
First Birth				
Married	-0.410** (0.032)		0.018* (0.008)	
Single	-0.504** (0.057)	††	0.107** (0.027)	††
Separation				
Divorce/separation	-0.272** (0.048)		0.043* (0.019)	
Remarriage				
Marry or remarry	0.128** (0.040)		-0.057** (0.021)	
Other				
Coreside with parents	0.545** (0.036)		-0.051** (0.012)	
Coreside with others	0.056 (0.062)		-0.022 (0.037)	
Total Effect of Single Motherhood				
Married at first birth	-0.682** (0.058)		0.061** (0.021)	
Single at first birth	-0.504** (0.057)	††	0.107** (0.027)	††
Sample Size (unweighted)	39,207			

*Notes:* Equivalized disposable income is normalized with respect to mean equivalized income for a family of four. The coefficients in the first column are interpreted as the percentage change in the dependent variable as a proportion of mean equivalized income. Poverty is a dummy variable for equivalized income falling below the Census Bureau threshold of minimum income needs. Single women are defined as women who are unpartnered or cohabiting. The total effect of single motherhood is found by summing the coefficients on birth and divorce/separation for those who are married or separated. Controls are included for age and age squared, single and having no children, and cohabiting having no children (the base is married couple with no children). Observations for the year of first birth are excluded. Standard errors are shown in parentheses. Longitudinal weights are applied.

\* $p < .05$ ; \*\* $p < .01$

†† The difference between the coefficients for single and married mothers is statistically significant.

data, Hauser et al. (2018) and de Vaus et al. (2017) found declines of 25% and 30%, respectively.

My results suggest that a first birth and divorce have a similar effect on married women's income: the coefficient on childbirth is larger than that on separation, but the difference in the size of the coefficients is not statistically significant. Overall, these penalties combine to produce a total single-mother income penalty of 68% for previously married mothers. For unmarried mothers, the single-mother penalty is smaller: childbirth is associated with a 50% reduction in income. Differences between previously married and single mothers are statistically significant at the 95% level.

The last outcome I examine is poverty (Table 3, column 2). A first birth increased married women's risk of poverty by 2 percentage points, and separation increased

it by another 4 percentage points, for an overall single-mother poverty penalty of 6 percentage points for previously married mothers. As predicted, the poverty penalty associated with becoming a single mother was higher, at 11 percentage points. Using cross-sectional data, Brady et al. (2017) found a single-mother poverty penalty of 14% in the United States. However, using longitudinal data allowed me to account for preexisting differences in the risk of poverty. Thus, given the importance of selection into single motherhood, my estimates are lower, as expected.

### Private Responses: Coresidence and Repartnering

Table 3 also shows the effects of remarriage and coresiding with parents or other adults on economic outcomes. Mothers who remarry saw a small decline (of 6%) in their own earnings, consistent with Tamborini et al.'s (2015) finding that remarriage attenuates the influence of divorce on earnings. However, a new partner's earnings offset declines in women's earnings, and after I adjust for changes in income needs, income overall rises by 13%. Nonetheless, these gains were insufficient to offset the cost of divorce or separation. Similarly, Page and Stevens (2004) showed that although remarriage helped restore income to its prior levels, divorced women's income never reached that of continuously married parents, whose income continued to grow. The earnings of other adult household members may also respond to the arrival of children. For example, grandparents may increase their labor force participation when their daughters become single mothers and move home. I find some indication that the earnings of other household members (who were not the child's parents) increased in response to the birth of a first child (Table 2, column 3).

The coefficients on the variables *living with parents* and *living with other adults* show the effect of living arrangements on income. Living with other adults, particularly women's parents, increases income because of the presence of other earners in the household. I find that living with parents had a greater influence on family income than remarriage; it was associated with a 55% increase in income. Coresiding with adults other than parents, however, did little to increase income or reduce poverty risk. These findings support the conclusions from research emphasizing the importance of household doubling up and multigenerational coresidence for single mothers' incomes (Pilkauskas, 2012; Pilkauskas et al. 2014).

### Explaining Changes in Mothers' and Fathers' Earnings: Employment and Hours

To understand changes in earnings, I examine the association of childbirth and separation with employment and working hours (Table 4). Employment rates were 9 percentage points lower, and annual work hours were 352 hours lower, among unmarried mothers at first birth compared with married mothers. For married women, motherhood was associated with an 18-percentage-point reduction in employment and a 719-hour decline in annual work hours. Married men's annual hours did not significantly increase.

Among married couples only, I assess how differences in labor market trajectories of new mothers and fathers contributed to changes in income composition. As a share of disposable income (before adjusting for needs), married mothers' earnings fell by

**Table 4** Fixed-effects model of changes in employment and working hours of mothers and fathers and changes in earnings shares

	Married Couples					
	Women (all women)		Male Partners		All Married Couples	
	Employed	Annual Hours	Employed	Annual Hours	Male Earnings Share	Female Earnings Share
First Birth						
Married	-0.180** (0.011)	-719** (25)	-0.021** (0.008)	18 (24)	0.170** (0.012)	-0.207** (0.011)
Single	-0.091** (0.020)	-352** (43)	-0.549** (0.019)	-1,231** (48)	—	—
Separation						
Divorce/separation	0.134** (0.018)	396** (41)	-0.658** (0.017)	-1,501** (43)	—	—
Sample Size (unweighted)	39,207		18,861			

*Notes:* For all women, male partners include husbands and cohabiting partners; for women who are unpartnered, partners' employment status and hours are coded as zero. The total effect of single motherhood is found by summing the coefficients on birth and divorce/separation for those who are married or separated. Female and male earnings shares are expressed as a proportion of disposable income (before adjusting for needs), and models are run on married couples only. Controls are included for age and age squared, single and having no children, and cohabiting having no children (the base is married couple with no children). Standard errors are shown in parentheses. Observations in the year of first birth are excluded.

\*\* $p < .01$

21 percentage points. This decline in earnings shares is of a similar magnitude to that reported by Musick et al. (2020). Finally, Table 4 shows that increased labor supply helped drive the change I found in maternal earnings associated with divorce: employment increased by 13 percentage points, and annual work time increased by 396 hours.

## Robustness Checks

### *Sample Selection and Sample Weights*

I first evaluate the impact of alternative sample exclusion restrictions: (1) including students and (2) restricting the sample to those older than 22. The results for income and poverty, shown in Table A2 (online appendix), are robust to the alternative sample restrictions.

Next, I evaluate the effect of the inclusion of sample weights. The results presented earlier are based on models taking account of attrition by using the PSID-provided longitudinal weights. Including these weights, though, reduces sample sizes and increases standard errors. Thus, studies using longitudinal data to examine the influence of family changes on earnings (Kleven, Landais, Posch et al. 2019; Ludwig and Brüderl 2018) or income (Jenkins 2008) frequently present unweighted results. I therefore also run the models without weights and find the results to be similar.

### *Model Specification*

To check the validity of the results to alternative specifications, I conduct several robustness tests. First, the reported models account for preexisting trends in income and earnings, and these trends may themselves reflect gender differences in expectations about work and care, as discussed earlier. If income growth changes following marriage in anticipation of becoming a parent, then including individual-specific slopes may understate the association between the transition to parenthood and income. I check for this possibility by comparing my estimates from FEIS models with those from models with only FE. I also compare these estimates with those based on cross-sectional data but including additional controls for time-invariant characteristics. Results for income and poverty risk are shown in [Table 5](#).

For married mothers, the coefficients on childbirth from the cross-sectional, FE, and FEIS models are similar. Differences between the models are not statistically significant, suggesting that neither differences in unobserved characteristics nor differences in the rate of income growth before childbirth explain changes in income. That the birth of a child, rather than prior trends, affects parents' earnings is perhaps unsurprising given the findings from previous studies. For example, studying male and female earnings, Kleven, Landais, Posch et al. (2019) found large and persistent declines in female earnings following childbirth, while another study found that women systematically underestimate the influence of childbirth on their postbirth labor supply (Kuziemko et al. 2020). The results for childbirth to unmarried mothers, however, are sensitive to the model specification; the inclusion of FE to account for time-invariant unobservable characteristics leads to a considerable reduction in the estimated association of childbirth with income and poverty risk (differences are statistically significant), whereas the inclusion of FEIS reduces the size of the estimates even further. These results highlight the importance of accounting for unobserved heterogeneity when assessing the influence of unmarried motherhood on income and poverty. For divorce, the inclusion of FE also reduces the size of the estimates substantially, again illustrating the importance of accounting for unobserved heterogeneity. Differences between the FE and FEIS estimates are harder to interpret; the inclusion of FEIS increases the size of the estimates (although differences are not statistically significant). This finding suggests that income was growing before divorce and may be a result of wives' increasing their labor supply and therefore household income in anticipation of the divorce, consistent with Gregg et al.'s (2009) findings for the United Kingdom. If so, the FEIS may underestimate the cost of divorce.

Income may recover or further decline in the years following childbirth or separation. Moreover, the number of children, and not the transition to parenthood per se, may affect income. To test these possibilities, I include controls for time since first birth, time since divorce, and the number of additional children born ([Table A3](#), online appendix). The results are similar, although there is some indication that income may decline further in the years after a first birth. I find no indication of a trend following separation.

Finally, I compare the results for income and poverty risk with models in which income is logged. Because the units of measurement differ, the coefficients are not directly comparable. Nonetheless, the results in [Table A4](#) (online appendix) show that the estimates and their significance are comparable.

**Table 5** The association of motherhood and separation with family income components: Cross-sectional, individual fixed effects (FE) and individual fixed effects with slopes (FEIS)

	Equivalent Disposable Income			CPS Poverty		
	Cross-Sectional	FE	FEIS	Cross-Sectional	FE	FEIS
First Birth						
Married	-0.421** (0.035)	-0.430** (0.019)	-0.410** (0.032)	0.023** (0.006)	0.027** (0.006)	0.018** (0.008)
Single	-0.755** (0.036)	-0.609** (0.031)	-0.504** (0.057)	0.168** (0.014)	0.109** (0.016)	0.107** (0.027)
Separation						
Divorce/ separation	-0.375** (0.038)	-0.237** (0.027)	-0.272** (0.048)	0.082** (0.014)	0.051** (0.013)	0.043** (0.019)
Sample Size (unweighted)	39,207					

*Notes:* Equivalent disposable income is normalized income with respect to mean equivalized income for a family of four, and the relevant coefficients are interpreted as the percentage change in the dependent variable as a proportion of mean equivalized income. Poverty is defined using the Census Bureau income needs threshold. Single women are defined as women who are unpartnered or cohabiting. The total effect of single motherhood is found by summing the coefficients on birth and divorce/separation for those who are married or separated. Controls are included for age and age squared, single and having no children, and cohabiting having no children (the base is married couple with no children). Observations for the year of first birth are excluded. Cross-sectional models include the same controls as the FE models plus controls for education (high, middle, and low) and race (Black, White, and other). Models are run on the same samples as the FEIS models in [Table 2](#). Cross-sectional and longitudinal weights are applied as appropriate.

\*\* $p < .01$

### *Differences by Race*

Finally, the effects of childbirth and separation may differ by race. In [Table A5](#) (online appendix), I report the results separately for Black women and White women. Black women typically suffer smaller penalties to motherhood and separation than White women, although birth and separation are still negatively associated with income. These results are consistent with research showing that the independent influence of father absence on children's outcomes is smaller for those already facing socioeconomic disadvantage ([Cross 2020](#); [Fomby and Cherlin 2007](#)).

## **Discussion**

This study presents new evidence on income and poverty penalties to single motherhood in the United States. Studies of such penalties have focused on the cost of partner absence. Conceptualizing single-mother penalties as resulting from penalties to motherhood *and* partner absence, I move beyond prior studies to provide a fuller account of the reasons for single mothers' disadvantage. Using 25 years of panel data, I show how labor market penalties to motherhood combine with the cost of partner absence and child-related increases in financial needs to affect

economic well-being. My findings show that in the United States, the transition to motherhood has as large an impact on single mothers' income as the absence of a married partner. For all families, parenthood is associated with reduced family income because mothers' earnings decline just as income needs grow. Among married women, income composition also changes with specialization, making families more reliant on male earnings after children are born (Juhn and McCue 2016, 2017; Loughran and Zissimopoulos 2009) and heightening women's economic vulnerability in the event of a divorce or separation. Although divorce is associated with increased maternal earnings (Tamborini et al. 2015), I find that earnings do not recover to prebirth levels and only partially catch up with those of mothers who were unmarried at first birth, whose earnings showed lesser declines after childbirth. One consequence of these differences in earnings penalties is that single-motherhood income penalties are larger for previously married mothers than for women who were not married at first birth.

Taken together, this study's findings illustrate the importance of prior life course events in determining single mothers' incomes. How women fare in the labor market upon motherhood (which is related to their marital status) has an important bearing on their economic well-being if they become single mothers. Studies have shown that men who become single parents do not face the same poverty penalties as women (Nieuwenhuis and Maldando 2018) because they do not suffer the same labor market penalties to parenthood (Moullin and Harkness 2021). Consequently, the absence of a male breadwinner remains a major cause of single mothers' low income (Sigle-Rushton and McLanahan 2002), with important implications for welfare policy. This notion is consistent with studies concluding that policies enabling female employment, such as the provision of job-protected family leave and support for childcare, may be more effective in reducing poverty and inequality than social transfers (Förster and Verbist 2012; Maldonado and Nieuwenhuis 2015).

Although the present study exploits high-quality longitudinal data, it has some limitations. First, while using panel data with FE and FEIS can help address several selection problems associated with unobservable time-invariant characteristics, fertility and partnership decisions and decisions that influence earnings and income are highly interdependent. The estimates presented in this study account for individual differences in income levels and rates of income change, but endogeneity issues may remain. For example, unobservable time-variant characteristics may influence the results. The estimates are informative, allowing us to observe the relative importance of different life course events in influencing single mothers' incomes. However, the effects should not be interpreted as causal.

Second, in assessing economic well-being, the analyses include only measures of income and not noncash benefits, such as SNAP or Medicaid, which are targeted at lower income families. The value of these benefits to low-income families is substantial. For example, Hoynes and Rothstein (2016) reported that the combined value of SNAP and Medicaid substantially outweighs the value of EITC for families with incomes below \$25,000. The exclusion of noncash benefits may thus lead to an overestimation of the cost of single motherhood and an underestimation of the redistributive role of the state (see also Fox et al. 2015).

Third, although I follow new mothers for up to 25 years before and after the first birth, I do not examine the consequences of motherhood or single

motherhood over a longer period. Nor can I examine very short-term income changes (e.g., over a few months), although evidence suggests that changes in income in the months following a first birth may be large and lead to considerable economic insecurity (Stanczyk 2016).

Fourth, small sample sizes prevent me from examining differences in mothers' experiences by, for example, education, age at first birth, or cohabiting status. Nor can I explore changes across cohorts to see how new mothers' experiences have changed over time. Finally, I cannot measure fathers' support with childcare within couples or in single-mother families. Adjusting for fathers' in-kind support is likely to increase the estimated cost of partner absence if fathers in couples are more involved in child-rearing than fathers who are not present in the household.

Overall, this study highlights the importance of a life course approach to understanding single-mother penalties. Looking beyond partnership dissolution to understand how earlier life course events influence women's income and earnings potential provides important insights for policy and research. The results suggest that improvements in single mothers' economic position will require policies that focus on maintaining female employment and earnings following childbirth. Interventions such as welfare-to-work policies that focus on moving mothers into work after they become single parents are likely to arrive too late. The results of this study also show that single motherhood is a leveler: previously married mothers, who were financially better off before single motherhood, see the largest income declines upon becoming single parents. These large declines occur partly because married women become more economically dependent following childbirth than unmarried mothers and suggest that marriage provides little protection against the economic risks brought about by future divorce. ■

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## References

- Altintas, E. (2016). The widening education gap in developmental child care activities in the United States, 1965–2013. *Journal of Marriage and Family*, 78, 26–42.
- Amato, P. R., & James, S. (2010). Divorce in Europe and the United States: Commonalities and differences across nations. *Family Science*, 1, 2–13.
- Becker, G. S. (1981). *A treatise on the family*. Cambridge, MA: Harvard University Press.
- Brady, D., Finnigan, R. M., & Hübgen, S. (2017). Rethinking the risks of poverty: A framework for analyzing prevalences and penalties. *American Journal of Sociology*, 123, 740–786.
- Bronchetti, E. T., & Sullivan, D. H. (2004). Income packages of households with children: A cross-national correlation analysis. *Socio-Economic Review*, 2, 315–339.
- Budig, M. J., & England, P. (2001). The wage penalty for motherhood. *American Sociological Review*, 66, 204–225.
- Budig, M. J., Misra, J., & Boeckmann, I. (2012). The motherhood penalty in cross-national perspective: The importance of work–family policies and cultural attitudes. *Social Politics*, 19, 163–193.

- Burkhauser, R., Butrica, B., Daly, M., & Lillard, D. (2000). *The cross-national equivalent file: A product of cross-national research* (CNEF Working Paper No. 20). Columbus: Ohio State University.
- Combet, B., & Oesch, D. (2019). The gender wage gap opens long before motherhood. Panel evidence on early careers in Switzerland. *European Sociological Review*, 35, 332–345.
- Cools, S., Markussen, S., & Strøm, M. (2017). Children and careers: How family size affects parents' labor market outcomes in the long run. *Demography*, 54, 1773–1793.
- Cross, C. J. (2020). Racial/ethnic differences in the association between family structure and children's education. *Journal of Marriage and Family*, 82, 691–712.
- de Vaus, D. A., Gray, M., Qu, L., & Stanton, D. (2017). The economic consequences of divorce in six OECD countries. *Australian Journal of Social Issues*, 52, 180–199.
- DiPrete, T. A. (2002). Life course risks, mobility regimes, and mobility consequences: A comparison of Sweden, Germany, and the United States. *American Journal of Sociology*, 108, 267–309.
- DiPrete, T. A., & McManus, P. A. (2000). Family change, employment transitions, and the welfare state: Household income dynamics in the United States and Germany. *American Sociological Review*, 65, 343–370.
- Edin, K., & Kefalas, M. (2011). *Promises I can keep: Why poor women put motherhood before marriage*. Oakland: University of California Press.
- Eissa, N., & Hoynes, H. W. (2004). Taxes and the labor market participation of married couples: The earned income tax credit. *Journal of Public Economics*, 88, 1931–1958.
- Eliason, M. (2012). Lost jobs, broken marriages. *Journal of Population Economics*, 25, 1365–1397.
- England, P., Bearak, J., Budig, M. J., & Hodges, M. J. (2016). Do highly paid, highly skilled women experience the largest motherhood penalty? *American Sociological Review*, 81, 1161–1189.
- Esping-Andersen, G. (2014). How family change and income inequality affect children's life chances. *Journal for a Progressive Economy*, 2014(2), 18–22.
- Fomby, P., & Cherlin, A. J. (2007). Family instability and child well-being. *American Sociological Review*, 72, 181–204.
- Förster, M., & Verbist, G. (2012). *Money or kindergarten? Distributive effects of cash versus in-kind family transfers for young children* (OECD Social, Employment and Migration Working Papers, No. 135). Paris, France: OECD Publishing.
- Fox, L., Wimer, C., Garfinkel, I., Kaushal, N., & Waldfogel, J. (2015). Waging war on poverty: Poverty trends using a historical supplemental poverty measure. *Journal of Policy Analysis and Management*, 34, 567–592.
- Gibson-Davis, C. M. (2009). Money, marriage, and children: Testing the financial expectations and family formation theory. *Journal of Marriage and Family*, 71, 146–160.
- Glauber, R. (2008). Race and gender in families and at work: The fatherhood wage premium. *Gender & Society*, 22, 8–30.
- Glauber, R. (2018). Trends in the motherhood wage penalty and fatherhood wage premium for low, middle, and high earners. *Demography*, 55, 1663–1680.
- Gornick, J. C., & Jäntti, M. (2010). *Women, poverty, and social policy regimes: A cross-national analysis* (LIS Working Paper Series, No. 534). Luxembourg: Luxembourg Income Study.
- Grall, T. (2016). *Custodial mothers and fathers and their child support: 2013* (Current Population Reports, No. 60-255). Washington, DC: U.S. Census Bureau. Retrieved from [www.census.gov/content/dam/Census/library/publications/2016/demo/P60-255.pdf](http://www.census.gov/content/dam/Census/library/publications/2016/demo/P60-255.pdf)
- Gregg, P., Harkness, S., & Smith, S. (2009). Welfare reform and lone parents in the UK. *Economic Journal*, 119, F38–F65.
- Grieger, L. D., Danziger, S., & Schoeni, R. F. (2008). *Estimating and benchmarking the trend in the poverty rate from the Panel Study of Income Dynamics* (Report No. 08-633). Ann Arbor: Population Studies Center, University of Michigan, Institute for Social Research.
- Hardy, B., Smeeding, T., & Ziliak, J. P. (2018). The changing safety net for low-income parents and their children: Structural or cyclical changes in income support policy? *Demography*, 55, 189–221.
- Harkness, S. E. (2016). The effect of motherhood and single motherhood on the employment and earnings of British women: A lifecycle approach. *European Sociological Review*, 32, 850–863.
- Harkness, S., & Waldfogel, J. (2003). The family gap in pay: Evidence from seven industrialized countries. In S. W. Polachek (Ed.), *Research in labor economics: Vol. 22. Worker well-being and public policy* (pp. 369–414). Bingley, UK: Emerald Group Publishing.



- Hauser, R., Burkhauser, R. V., Couch, K. A., & Bayaz-Ozturk, G. (2018). Wife or frau, women still do worse: A comparison of men and women in the United States and Germany after union dissolutions in the 1990s and 2000s. In M. Erlingagen, K. Hank, & M. Kreyenfeld (Eds.), *Innovation und wissenstransfer in der empirischen sozial- und verhaltensforschung* [Innovation and knowledge transfer in empirical social and behavioral research] (pp. 167–188). Frankfurt, Germany: Campus Verlag.
- Hays, S. (1996). *The cultural contradictions of motherhood*. New Haven, CT: Yale University Press.
- Hodges, M. J., & Budig, M. J. (2010). Who gets the daddy bonus? Organizational hegemonic masculinity and the impact of fatherhood on earnings. *Gender & Society, 24*, 717–745.
- Hoynes, H., & Rothstein, J. (2016). *Tax policy toward low-income families* (NBER Working Paper 22080). Cambridge, MA: National Bureau of Economic Research.
- Jenkins, S. P. (2008). Marital splits and income changes over the longer term. In M. Brynin & J. Ermisch (Eds.), *Changing relationships* (pp. 217–236). New York, NY: Routledge.
- Juhn, C., & McCue, K. (2016). Selection and specialization in the evolution of marriage earnings gaps. *Russell Sage Foundation Journal of the Social Sciences, 2*(4), 237–269.
- Juhn, C., & McCue, K. (2017). Specialization then and now: Marriage, children, and the gender earnings gap across cohorts. *Journal of Economic Perspectives, 31*(1), 183–204.
- Kalmijn, M. (2013). The educational gradient in marriage: A comparison of 25 European countries. *Demography, 50*, 1499–1520.
- Kiernan, K., McLanahan, S., Holmes, J., & Wright, M. (2020). Unmarried families in the UK and the U.S. In J. Falkingham, M. Evandrou, & A. Vlachantoni (Eds.), *Handbook on demographic change and the lifecourse* (pp. 122–140). Cheltenham, UK: Edward Elgar Publishing.
- Killewald, A. (2013). A reconsideration of the fatherhood premium: Marriage, co-residence, biology, and fathers' wages. *American Sociological Review, 78*, 96–116.
- Killewald, A., & Lundberg, I. (2017). New evidence against a causal marriage wage premium. *Demography, 54*, 1007–1028.
- Kleven, H., Landais, C., Posch, Y., Steinhauer, A., & Zweimüller, J. (2019). Child penalties across countries: Evidence and explanations. *AEA Papers and Proceedings, 109*, 122–126.
- Kleven, H., Landais, C., & Søgaard, J. E. (2019). Children and gender inequality: Evidence from Denmark. *American Economic Journal: Applied Economics, 11*(4), 181–209.
- Kuziemko, I., Pan, J., Shen, J., & Washington, E. (2020). *The mommy effect: Do women anticipate the employment effects of motherhood?* (NBER Working Paper 24740). Cambridge, MA: National Bureau of Economic Research. <https://doi.org/10.3386/w24740>
- Lerman, R. I. (2010). Capabilities and contributions of unwed fathers. *Future of Children, 20*(2), 63–85.
- Loughran, D. S., & Zissimopoulos, J. M. (2009). Why wait? The effect of marriage and childbearing on the wages of men and women. *Journal of Human Resources, 44*, 326–349.
- Ludwig, V. (2019). *XTFEIS: Stata module to estimate linear fixed-effects model with individual-specific slopes (FEIS)* (Revised version) [Computer software]. Boston, MA: Boston College, Department of Economics.
- Ludwig, V., & Brüderl, J. (2018). Is there a male marital wage premium? New evidence from the United States. *American Sociological Review, 83*, 744–770.
- Lundberg, S., & Rose, E. (2000). Parenthood and the earnings of married men and women. *Labour Economics, 7*, 689–710.
- Macdonald, C. (2009). What's culture got to do with it? Mothering ideologies as barriers to gender equity. In J. C. Gornick & M. K. Meyers (Eds.), *Gender equality: Transforming family divisions of labor* (pp. 411–434). London, UK: Verso.
- Maldonado, L. C., & Nieuwenhuis, R. (2015). Family policies and single parent poverty in 18 OECD countries, 1978–2008. *Community, Work & Family, 18*, 395–415.
- Milkie, M. A., Nomaguchi, K. M., & Denny, K. E. (2015). Does the amount of time mothers spend with children or adolescents matter? *Journal of Marriage and Family, 77*, 355–372.
- Moffitt, R. (2008). A primer on U.S. welfare reform. *Focus, 26*(1), 15–25.
- Moffitt, R., & Garlow, S. (2018). Did welfare reform increase employment and reduce poverty? *Pathways, 2018*(Winter), 17–21.
- Moullin, S., & Harkness, S. (2021). The single motherhood penalty as a gender penalty: Comment on Brady, Finnigan, and Hübgen. *American Journal of Sociology, 127*, 621–636.
- Musick, K., Bea, M. D., & Gonalons-Pons, P. (2020). His and her earnings following parenthood in the United States, Germany, and the United Kingdom. *American Sociological Review, 85*, 639–674.

- Nepomnyaschy, L., Magnuson, K., & Berger, L. M. (2012). Child support and young children's development. *Social Service Review*, *86*, 3–35.
- Neumark, D., & Shirley, P. (2017). *The long-run effects of the earned income tax credit on women's earnings* (NBER Working Paper 24114). Cambridge, MA: National Bureau of Economic Research.
- Nichols, A., & Rothstein, J. (2016). The earned income tax credit. In R. A. Moffitt (Ed.), *Economics of means-tested transfer programs in the United States* (Vol. 1, pp. 137–218). Chicago, IL: University of Chicago Press.
- Nieuwenhuis, R., & Maldonado, L. C. (2018). Single-parent families and in-work poverty. In H. Lohmann & I. Marx (Eds.), *Handbook on in-work poverty* (pp. 171–192). Cheltenham, UK: Edward Elgar Publishing.
- Oppenheimer, V. K. (1994). Women's rising employment and the future of the family in industrial societies. *Population and Development Review*, *20*, 293–342.
- Özcan, B., & Breen, R. (2012). Marital instability and female labor supply. *Annual Review of Sociology*, *38*, 463–481.
- Page, M. E., & Stevens, A. H. (2004). The economic consequences of absent parents. *Journal of Human Resources*, *39*, 80–107.
- Percheski, C., & Wildeman, C. (2008). Becoming a dad: Employment trajectories of married, cohabiting, and non-resident fathers. *Social Science Quarterly*, *89*, 482–501.
- Pilkuskas, N. V. (2012). Three-generation family households: Differences by family structure at birth. *Journal of Marriage and Family*, *74*, 931–943.
- Pilkuskas, N. V., Garfinkel, I., & McLanahan, S. S. (2014). The prevalence and economic value of doubling up. *Demography*, *51*, 1667–1676.
- Poortman, A.-R. (2005). How work affects divorce: The mediating role of financial and time pressures. *Journal of Family Issues*, *26*, 168–195.
- Radey, M., & Padilla, Y. C. (2009). Kin financial support: Receipt and provision among unmarried mothers. *Journal of Social Service Research*, *35*, 336–351.
- Reardon, S. F. (2011). The widening academic achievement gap between the rich and the poor. In G. J. Duncan & R. J. Murnane (Eds.), *Whither opportunity* (pp. 91–116). New York, NY: Russell Sage Foundation.
- Rothwell, D. W., & McEwen, A. (2017). Comparing child poverty risk by family structure during the 2008 recession. *Journal of Marriage and Family*, *79*, 1224–1240.
- Rüttenauer, T., & Ludwig, V. (2020). Fixed effects individual slopes: Accounting and testing for heterogeneous effects in panel data or other multilevel models. *Sociological Methods & Research*. Advance online publication. <https://doi.org/10.1177/0049124120926211>
- Sariscsany, L., Garfinkel, I., & Nepomnyaschy, L. (2019). Describing and understanding child support trajectories. *Social Service Review*, *93*, 143–182.
- Sigle-Rushton, W., & McLanahan, S. (2002). For richer or poorer? Marriage as an anti-poverty strategy in the United States. *Population*, *57*, 509–526.
- Sigle-Rushton, W., & Waldfogel, J. (2007). The incomes of families with children: A cross-national comparison. *Journal of European Social Policy*, *17*, 299–318.
- Sørensen, A. (1994). Women's economic risk and the economic position of single mothers. *European Sociological Review*, *10*, 173–188.
- Stanczyk, A. B. (2016). *The dynamics of household economic circumstances around a birth* (Working paper). Washington, DC: Washington Centre for Equitable Growth.
- Tach, L. M., & Eads, A. (2015). Trends in the economic consequences of marital and cohabitation dissolution in the United States. *Demography*, *52*, 401–432.
- Tamborini, C. R., Couch, K. A., & Reznik, G. L. (2015). Long-term impact of divorce on women's earnings across multiple divorce windows: A life course perspective. *Advances in Life Course Research*, *26*, 44–59.
- Thomas, A., & Sawhill, I. (2002). For richer or for poorer: Marriage as an antipoverty strategy. *Journal of Policy Analysis and Management*, *21*, 587–599.
- Thomson, E., Hanson, T. L., & McLanahan, S. S. (1994). Family structure and child well-being: Economic resources vs. parental behaviors. *Social Forces*, *73*, 221–242.
- Todd, E., & Sullivan, D. (2002). Children and household income packages: A cross-national analysis. *American Economic Review: Papers & Proceedings*, *92*, 359–362.
- van Damme, M., & Uunk, W. (2009). Female-supportive policies and women's employment after divorce. In H.-J. Andreß & D. Hummelsheim (Eds.), *When marriage ends: Economic and social consequences of partnership dissolution* (pp. 233–262). Cheltenham, UK: Edgar Elgar Publishing.

- Waldfogel, J. (1997). The effect of children on women's wages. *American Sociological Review*, 62, 209–217.
- Wilde, E. T., Batchelder, L., & Ellwood, D. T. (2010). *The mommy track divides: The impact of child-bearing on wages of women of differing skill levels* (NBER Working Paper 16582). Cambridge, MA: National Bureau of Economic Research.
- Wimer, C., Fox, L., Garfinkel, I., Kaushal, N., & Waldfogel, J. (2016). Progress on poverty? New estimates of historical trends using an anchored supplemental poverty measure. *Demography*, 53, 1207–1218.

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