Parenthood and Earnings Changes within and across Organizations: How Do Women's and Men's Experiences Differ?

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Abstract

Despite much interest in the role parenthood plays in shaping the gender inequality in pay, previous research rarely compares how parenthood contributes to wage changes within and across firms for women and men. More important, the small number of studies examining the motherhood wage penalty or fatherhood wage premium within and across organizational settings generally rely on comparisons between parents and their childless peers, rather than longitudinal observations of the same individuals before and after parenthood. As a result, such studies cannot effectively account for unobserved heterogeneity or demonstrate how parenthood affects pay growth for individuals working for the same employer. Using 26 waves of the National Longitudinal Survey of Youth 1979 and fixed effects models, we examine the extent to which women's and men's starting pay across organizations vary according to their parenthood status, as well as how parenthood is associated with earnings changes within each employer spell. We find a motherhood penalty in the starting pay across employing organizations, but not in wage growth within organizations. Conversely, the transition to fatherhood leads to a wage premium within organizations, but not across organizations. We argue that these results are most consistent with the discrimination perspective for explaining the parenthood effects, because a negative bias against mothers is likely to be more salient when employers set wages for new recruits than for existing employees, whereas a positive bias favoring fathers should be more prominent when employers judge existing employees than they do new workers.

Research on gender and family has long noted that parenthood has divergent effects on women's and men's earnings. Whereas women typically undergo a wage decrease with the arrival of each child (Budig and England 2001; Fuller 2017; Gangl and Ziefle 2009; Gough and Noonan 2013; Yu and Kuo 2017), men's earnings tend to increase with their transition to fatherhood (Glauber 2008; Hodges and Budig 2010; Killewald 2013). As a result of the wage penalty associated with motherhood and wage premium tied to fatherhood, the gender gap in pay widens as women and men move through the life course. Parenthood thus constitutes a key factor explaining gender inequality in the labor market.

Corresponding to the important role of parenthood in shaping the gender pay gap, much research has devoted to explaining the motherhood wage penalty (Budig and England 2001; Correll, Benard, and Paik 2007; Gough and Noonan 2013; Staff and Mortimer 2012), as well as exploring factors that mitigate or amplify this penalty (Anderson, Binder, and Krause 2002; England et al. 2016; Gangl and Ziefle 2009; Yu and Kuo 2017). A handful of recent studies especially call attention to the organizations in which mothers work, for that employing organizations are potential driving forces for wage disparities within a population (Baron and Bielby 1980; Petersen and Morgan 1995). Specifically, Petersen and colleagues (2010) and Fuller (2017), using linked employer-employee data from Norway and Canada, respectively, investigate whether the motherhood pay penalty is attributable to the unequal wages between mothers and nonmothers within the same organization or to the sorting of the two groups into different organizations. In both cases, mothers' lower earnings are found to mostly result from their greater concentration in establishments that pay less.

Although the small amount of studies examining within- and across-organizational motherhood wage penalty are informative on the mechanism through which mothers' wage

disadvantages occur, their findings generally derive from comparisons between mothers and their childless peers, rather than from observations of the same women before and after entering motherhood (Fuller 2017; Petersen et al. 2010). The problem of the former approach is that it does not allow researchers to take into account unobserved personal traits, such as commitment to employment, that may lead women to both become mothers and choose certain type of establishments to work. Without long-term observations of the same women, we also cannot tell whether motherhood may hamper the growth of women's earnings while they work for the same employer. Similarly, existing research on the fatherhood wage premiums within and across employing organizations is very limited. To our knowledge, only one study of Canadian men investigates the extent to which fathers' and their childless counterparts' sorting into differing establishments plays in explaining the former's higher wages (Cooke and Fuller 2018). The study, however, lacks longitudinal observations, making it impossible to account for unobserved heterogeneity or estimate whether fatherhood contributes to wage changes within organizations.

Understanding how parenthood alters women's and men's earnings when they remain with the same employer vis-à-vis when they move across organizations is important not only because it informs the exact pathways to the wage gap between fathers and mothers, but also because it helps disentangle the mechanisms frequently proposed to explain the effects of parenthood on earnings. One explanation that becoming a parent may increase men's and decrease women's pay, for example, is that having a child enhances men's motivation to work and provide for the family, whereas it reduces women's time and energy available for their jobs (Budig and England 2001; Gough and Noonan 2013; Killewald 2013). According to this argument, the motherhood wage penalty and fatherhood wage premium are reflections of the divergent levels of effort and productivity between mothers and fathers. If this is the case, then

parenthood should hamper women's, while amplifying men's, wage growth both within a given organization and across organizations, as parenthood's effects on women's and men's effort should not depend on organizational settings. Conversely, because discrimination based on the assumption that motherhood reduces women's work effort is likely to be weaker when an employer is already familiar with the woman's job performance (Fuller 2017), the explanation of mothers' disadvantage focusing on discrimination would expect the wage impact of having a child to differ when women remain with the same employers from when they move across organizations.

In this study, we utilize the detailed work history data from 26 waves of the National Longitudinal Survey of Youth 1979 (NLSY79) to examine how parenthood alters the earnings of women and men within and across employing organizations. Because the NLSY79 data collection spans 36 years (1979-2015), and the survey records each employer for respondents' jobs throughout this long period of time, we are able to observe respondents multiple times within the same employing organization as well as between different organizations. The data enable us to use a fixed-effects modeling approach, which can largely reduce unobserved heterogeneity, to study how parenthood status is linked to changes in women's and men's starting wages across firms. At the same time, we can use the same approach to address to the question of whether the transition to parenthood, or having an additional child, contributes to wage increases or decreases for women and men within organizations.

Background and Hypotheses

Research on the effects of parenthood on earnings has proposed three main explanations for such effects: (1) effort and productivity, (2) selection into workplaces, and (3) discrimination. The first two explanations focus on how parenthood changes women's and men's own behavior

and preferences, whereas the third one centers on how parenthood alters employers' perception of male and female workers.

The three explanations has different implications for the within- and across-organizational parenthood wage effects. To begin, the perspective emphasizing effort and productivity argues that the gender division of labor within the family leads women to have greater domestic obligations and men to feel a greater need to provide financial resources for the family after having a child (Gough and Noonan 2013; Killewald 2013). Thus, men put greater effort into paid work, while women reduce their effort in the workplace, as they transition into parenthood. The changes in men's and women's effort and, potentially, productivity are thought to account for the fatherhood wage premium and motherhood wage penalty. Based on this argument, both the motivation for fathers to put more effort into work and the responsibilities that distract mothers from putting full energy into work are constant, regardless of whether one is working for the same employer or different employers over time.[1] As a result, mothers can be expected to encounter a wage penalty both within and across employers. Likewise, fathers will experience a wage premium regardless of whether they remain with the same employer or move across firms.

The second explanation, focusing workers' selection into workplaces, maintains that having a child strengthens women's preferences for jobs that are compatible with their family obligations (Budig and England 2001; Petersen et al. 2010). This change in preferences may lead mothers to choose occupations or establishments that are relatively family responsive at the expense of earnings. By contrast, becoming a parent provides men more incentives to seek jobs

[1] Because a new employer can gauge a worker's productivity based on previous employers' references or other available measures of prior work performance, if mothers do reduce their effort and fathers increase theirs, their wages should reflect the differences in productivity even as they move to new firms.

that pay more, as it increases their responsibility as the provider for the family. Fatherhood therefore will make men more likely to choose jobs that pay more, even if it requires them to sacrifice other job amenities (e.g., a short commute, predictable working hours). Moreover, being a father may make a man bargain harder for pay when moving to new jobs. For all these reasons, parenthood is argued to be associated with higher earnings for men, but lower earnings for women.

If the selection to different jobs and workplaces account for the motherhood wage penalty and fatherhood wage premium, we are likely to find the transition to parenthood to have a positive effect on men's wages across organizations when we compare their wages at the point of hire. At the same time, motherhood can be expected to negatively affect women's starting pay across organizations, after taking into account many other characteristics related to earnings. According to this argument, however, parenthood is less likely to affect wage growth within organizations, because individuals who remain in their pre-childbirth workplaces is unlikely to be able to bargain for higher wages or trade job flexibility with pay on the basis of parenthood.

The third explanation for the motherhood wage penalty and fatherhood wage premium is employer discrimination, which tends to be against mothers and favoring fathers. This perspective contends that employers' ability to measure workers' productivity is limited, which prompt them to use parenthood status as a proxy for workers' productivity levels. Because mothers' divided devotion makes them unlikely to be the "ideal workers" employers have in mind (Correll et al. 2007), employers may reward mothers less financially. Conversely, the belief that fathers have greater financial responsibility as the family's provider is thought to make employers see fathers as more productive workers, especially when there lacks objective

measures of job performance (Fuller and Cooke 2018). Thus, employers' discrimination may contribute to a higher pay for fathers.

Although the discrimination favoring fathers may boost fathers' earnings both within and across organizations, we expect the effect of such discrimination to be stronger when employers are dealing with men who they already know. Because employers are likely to be more trusting of their existing employees than new recruits, they may more easily assume that the former would be motivated by their fatherhood status to work harder than they do the latter. Following this same logic, employers' greater trust in their existing employees than strangers who apply for their jobs may make employers discount the potential performance of mothers who are new recruits more than mothers who have worked for them for some time. Thus, based on the discrimination perspective, the motherhood status is more likely to have a negative impact on women's wages at the point of hire—hence across organizations—than during the period with the same employer, whereas the fatherhood status may enhance men's pay more within than across organizations.

Based on the discussion on the relevant theories and hypotheses, Table 1 summarizes the three perspectives' implications for within- and across-organizational wage changes with parenthood. We list the hypotheses separately for women and men, as parenthood is expected to have opposite effects on their wages.

Data and Methods

The data for the study come from 26 waves of the NLSY79. The survey began to collect data from a nationally representative cohort of youth ages 14-22 in 1979 and recorded the respondents' information annually through 1994 and biannually thereafter. The last wave of the NLSY79 included in our sample was fielded in 2014-2015, with nearly all the respondents in

their fifties. We pool all the waves together to create a person-year sample with time-varying variables.

To examine parenthood and wage changes within and across organizations separately, we further organize each respondent's yearly observations by employer spell. Because the NLSY79 provides a unique employer ID for every job respondents have ever held, we are able to tell whether a respondent has been working for the same employer in consecutive waves. We consider all the years when respondents continuously work for the same employer as one employer spell.[2] As the NLSY79 has been collecting information for 36 years, most respondents have experienced employer spells that span multiple years. We are therefore able to observe how women's and men's earnings change within each employer spell and to which extent such changes correspond to their shift in parenthood status.

Following previous research on the motherhood wage penalty, we use linear models with individual and survey-year fixed effects to predict log hourly earnings (Budig and England 2001; Yu and Kuo 2017). By including individual and survey-year fixed effects, our models control for any time-invariant personal traits and economic fluctuations of the survey year that may affect earnings. For the analysis of within-organizational wage changes, we further include employer-spell fixed effects, which account for any time-constant organizational characteristics responsible for women's and men's earnings. Because employer spells are nested in individuals (i.e., an individual could have several employer spells), models containing employer-spell fixed effects no longer need to include individual fixed effects.[3]

[2] When a respondent returns to an employer for whom he or she worked before at least one year of interruption, we consider it as a new employer spell, assuming that the respondent and his or her employer might have renegotiated the position, working conditions, and pay upon his or her return.

[3] Given that a given individual typically has the same occupation while working for the same employer, including the employer spell fixed effects also exempts the need to include occupation-related characteristics or occupation fixed effects.

To estimate how parenthood status affects across-organizational pay for women and men, we select one yearly observation per employer spell to ensure that our analysis is not confounded by wage changes within organizations. Specifically, we select the first observation of each person-employer spell, so that our comparison will reflect pay differences at (or soon after) the point of hire. In the fixed effects models predicting across-organizational pay changes, we also include occupation fixed effects to estimate the extent to which changes in occupational characteristics as men and women move across organizations account for how they are penalized or rewarded by parenthood.

In addition to the parenthood status, the models control for respondents' educational level, school enrollment status, total work experience, job tenure, region, urban residence, and whether they work full-time. We fit models separate by gender. The NLSY79 longitudinal weights are applied to all models. We also estimate robust standard errors for all models.

Preliminary Findings

Table 2 presents a series of fixed effects models predicting log hourly earnings for men. To test whether men's and women's earnings are more responsive to the transition to parenthood or having each additional child, we alternate two different measures of parenthood status in the models. The first measures the number of biological children in four categories: (1) no child, (2) 1 child, (3) 2 children, and (4) 3 and more children. The second is a binary variable indicating whether respondents had any biological child at the time of observation. We begin with two basic models estimating how a change in fatherhood status or the number of children is associated with men's starting pay across organizations. Models 3 and 4 add fixed effects for broad occupational categories (i.e., 21 occupations; such as executive and administrative occupations, sales occupations, machine operators and assemblers, and mechanics and repairers),

and Models 5 and 6 include fixed effects for detailed occupations based on based on Meyer and Osborne's (2005) classification (259 occupations in total). The inclusion of these occupational fixed effects enables us to tell whether, beyond occupational sorting, the sorting into different employers also explains parenthood's effects on wages. The last two models, Models 7 and 8, focus on the wage changes within the same employer, as they use the full person-year sample and include person-employer fixed effects.[4] That is to say, these models estimate how a change in parenthood status corresponds to changes in wages within a person-employer spell.

According to Table 2, neither the transition to parenthood nor the increase in the number of children has a significant effect on men's starting pay across organizations, once we take into account a series of human capital and geographical differences. Adding occupational fixed effects ultimately does not change this lack of association. When examining the wages changes within each person-employer spell, however, we find that being a father is positively associated with hourly wages. The results also indicate little difference by the number of children, suggesting that it is the status of fatherhood, rather than the increase in the provider responsibility with each additional child, that leads to the fatherhood wage premium within organizations.

Table 3 presents the same models as those specified in Table 2, but for women. Unlike for men, there is a significant motherhood wage penalty across organizations. Models 1 and 2 indicate that being a mother reduces women's starting pay across organizations, and that having an additional child appears to penalize mothers further, although the relationship between the number of children and wages is not exactly linear. Adding fixed effects for broad occupational

[4] The inclusion of employer fixed effects, however, makes the models automatically exclude all person-employer spells that was recorded only in one wave, as fixed effects models require at least two observations for the same unit (in this case, the person-employer).

categories affect the results little. Including detailed occupational fixed effects explains more of the motherhood penalty in starting pay across organizations, but a sizable penalty (over 6%) remains for mothers. Conversely, being a mother or having an additional child has virtually no effect on changes in women's earnings within any given organizations. Having transitioning to motherhood does not lead women to have less pay growth within the same organization, compared to not making such a transition.

Our preliminary findings that the fatherhood wage premium typically occurs when men work for the same employers, whereas the motherhood wage penalty occurs as women move across organizations, are generally consistent with the discrimination-based perspective. As stated earlier, if effort and productivity are mostly responsible for the motherhood wage penalty and fatherhood wage premium, we should find such penalty and premium both within and across organizations. Moreover, we are likely to find the penalty and premium to correspond to the number of children, not just the status of being a parent. Similarly, if the selection into different workplaces is the key mechanism, we should find fathers to benefit when they move across organizations, but our results are not so. In the case of the discrimination perspective, because employers are more likely to apply a positive bias to people they know than people they do not know, but more likely to have a negative bias on people they do not know than people they know, we argue that the bias favoring father is likely to be more salient within organizations, whereas the bias against mothers is more salient when employers offer wages to new recruits. In this sense, our results about within- and across-organizational parenthood effects for women and men are most consistent with the discrimination argument.

Table 1: Explanatory Frameworks and Hypotheses about Parenthood and Earnings

	Within-organization pay changes	Across-organizational pay changes (at the point of hire)
A. Effort and productivity		
Fatherhood	+	+
Motherhood	-	-
B. Selection to jobs/workplaces		
Fatherhood	No effect	+
Motherhood	No effect	-
C. Discrimination		
Fatherhood	+	Weak positive effect
Motherhood	Weak negative effect	-

Table 2: Fixed Effects Models Predicting Log hourly Earnings for Men

Fixed effects	Starting pay across organizations						Within organizations	
	(1) Person & survey year		(1) + broad occupation		(1) + detailed occupation		Person-employer & survey year	
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Education (*ref.* < high school):								
High school	.161*	.162**	.160*	.162*	.133*	.134*	.036	.036
	(.063)	(.063)	(.064)	(.064)	(.058)	(.058)	(.066)	(.066)
Some college	.312***	.314***	.295***	.298***	.262***	.263***	.102	.101
	(.066)	(.066)	(.066)	(.066)	(.061)	(.061)	(.071)	(.071)
University and above	.600***	.604***	.587***	.590***	.515***	.517***	.322***	.322***
	(.071)	(.071)	(.072)	(.072)	(.067)	(.067)	(.083)	(.083)
Enrolled in school	-.219***	-.220***	-.200***	-.201***	-.187***	-.188***	-.072***	-.072***
	(.019)	(.019)	(.020)	(.020)	(.019)	(.019)	(.014)	(.014)
Marital status (*ref.* never-married):								
Married	.071***	.072***	.063***	.065***	.066***	.066***	.033**	.033**
	(.016)	(.016)	(.016)	(.016)	(.015)	(.015)	(.010)	(.010)
Separated	-.006	-.006	-.009	-.009	-.018	-.017	.015	.015
	(.026)	(.026)	(.027)	(.027)	(.026)	(.026)	(.021)	(.021)
Divorced	-.069**	-.068**	-.054*	-.053†	-.064*	-.063*	.018	.019
	(.026)	(.026)	(.027)	(.027)	(.026)	(.026)	(.016)	(.016)
Widowed	.050	.054	.019	.022	-.006	-.004	-.087	-.085
	(.097)	(.097)	(.104)	(.104)	(.106)	(.106)	(.181)	(.181)
Number of children (*ref.* none):								
One	.025		.031		.025		.047***	
	(.019)		(.019)		(.019)		(.012)	
Two	.020		.024		.011		.037**	
	(.021)		(.022)		(.021)		(.014)	
Three and more	-.010		-.005		.011		.048*	
	(.031)		(.033)		(.030)		(.022)	
Parent		.022		.028		.020		.045***
		(.017)		(.018)		(.017)		(.011)
Work experience (months)	.005***	.005***	.005***	.005***	.005***	.005***	.006***	.006***
	(.001)	(.001)	(.001)	(.001)	(.001)	(.001)	(.001)	(.001)
Work experience squared	-.000***	-.000***	-.000**	-.000**	-.000***	-.000***	-.000***	-.000***
	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)
Job tenure (months)	.001	.001	.001	.001	.001	.001	.000	.000
	(.001)	(.001)	(.001)	(.001)	(.001)	(.001)	(.001)	(.001)
Job tenure squared	.000	.000	.000	.000	.000	.000	-.000***	-.000***
	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)
Working full-time	.075***	.075***	.046**	.046**	.027	.027	-.199***	-.199***
	(.016)	(.016)	(.017)	(.017)	(.017)	(.017)	(.025)	(.025)
Region (*ref.* northeast):								
North central	-.151**	-.150**	-.124*	-.123*	-.099*	-.099*	-.071	-.070
	(.051)	(.051)	(.052)	(.052)	(.045)	(.045)	(.047)	(.047)
South	-.076†	-.075†	-.055	-.054	-.038	-.037	.020	.020
	(.043)	(.043)	(.045)	(.045)	(.039)	(.039)	(.037)	(.037)
West	-.052	-.051	-.008	-.006	-.009	-.008	-.097†	-.096†
	(.062)	(.062)	(.059)	(.059)	(.051)	(.051)	(.050)	(.050)
Urban residence	.076***	.076***	.076***	.076***	.064***	.064***	-.010	-.010
	(.016)	(.016)	(.017)	(.017)	(.016)	(.016)	(.011)	(.011)
N	26,555	26,555	24,472	24,472	25,079	25,079	52,026	52,026

Note: Values in parentheses are robust standard errors. The NLSY79 longitudinal weights are applied in all models.
† $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$

Table 3: Fixed Effects Models Predicting Log hourly Earnings for Women

Fixed effects	Starting pay across organizations						Within organizations	
	(1) Person & survey year		(1) + broad occupation		(1) + detailed occupation		Person-employer & survey year	
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Education (*ref.* < high school):								
High school	.365***	.367***	.323***	.325***	.096†	.096†	.033	.034
	(.062)	(.061)	(.061)	(.061)	(.052)	(.052)	(.083)	(.083)
Some college	.467***	.470***	.404***	.407***	.159**	.159**	.076	.079
	(.064)	(.064)	(.065)	(.064)	(.055)	(.055)	(.087)	(.087)
University and above	.706***	.710***	.631***	.635***	.419***	.419***	.201*	.204*
	(.070)	(.069)	(.071)	(.070)	(.062)	(.062)	(.091)	(.091)
Enrolled in school	-.133***	-.134***	-.124***	-.125***	-.101***	-.101***	.007	.007
	(.021)	(.021)	(.021)	(.021)	(.020)	(.020)	(.015)	(.015)
Marital status (*ref.* never-married):								
Married	-.025	-.024	-.038†	-.037†	-.015	-.015	.018	.018
	(.019)	(.019)	(.019)	(.019)	(.019)	(.019)	(.013)	(.013)
Separated	.025	.026	.028	.029	.017	.017	.018	.018
	(.028)	(.028)	(.029)	(.029)	(.027)	(.027)	(.021)	(.021)
Divorced	.020	.021	.019	.020	-.002	-.002	.003	.003
	(.024)	(.024)	(.025)	(.025)	(.025)	(.025)	(.020)	(.020)
Widowed	-.072	-.072	.031	.031	.020	.020	-.106*	-.104*
	(.086)	(.086)	(.078)	(.078)	(.076)	(.076)	(.046)	(.046)
Number of children (*ref.* none):								
One	-.088***		-.090***		-.062**		-.005	
	(.021)		(.022)		(.021)		(.015)	
Two	-.122***		-.115***		-.070**		.003	
	(.021)		(.022)		(.021)		(.014)	
Three and more	-.105**		-.106**		-.059		-.031	
	(.038)		(.040)		(.037)		(.040)	
Parent		-.098***		-.097***		-.065**		-.003
		(.021)		(.022)		(.020)		(.015)
Work experience (months)	.005***	.005***	.004***	.004***	.004***	.004***	.005**	.005**
	(.001)	(.001)	(.001)	(.001)	(.001)	(.001)	(.002)	(.002)
Work experience squared	-.000***	-.000***	-.000**	-.000**	-.000*	-.000*	.000	.000
	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)
Job tenure (in months)	.003***	.003***	.003**	.003**	.002**	.002**	-.001	-.001
	(.001)	(.001)	(.001)	(.001)	(.001)	(.001)	(.001)	(.001)
Job tenure squared	-.000*	-.000*	-.000*	-.000*	-.000*	-.000*	-.000***	-.000***
	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)
Working full-time	.056***	.057***	.017	.018	.020	.020	-.084***	-.084***
	(.015)	(.015)	(.016)	(.016)	(.015)	(.015)	(.015)	(.015)
Region (*ref.* northeast):								
North central	-.071	-.071	-.075	-.075	-.079†	-.079†	-.009	-.009
	(.043)	(.043)	(.046)	(.046)	(.044)	(.044)	(.085)	(.085)
South	-.092*	-.092*	-.094*	-.094*	-.104**	-.105**	-.005	-.005
	(.037)	(.037)	(.040)	(.040)	(.039)	(.039)	(.077)	(.077)
West	.047	.046	.038	.038	.042	.042	-.066	-.066
	(.045)	(.045)	(.048)	(.048)	(.046)	(.046)	(.089)	(.089)
Urban residence	.026	.026	.032	.032	.025	.025	.001	.001
	(.019)	(.019)	(.021)	(.021)	(.019)	(.019)	(.017)	(.017)
N	23,976	23,976	22,042	22,042	22,687	22,687	46,907	46,907

Note: Values in parentheses are robust standard errors. The NLSY79 longitudinal weights are applied in all models.
† $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$

REFERENCES

Anderson, Deborah J., Melissa Binder, and Kate Krause. 2002. "The Motherhood Wage Penalty: Which Mothers Pay It and Why?" *The American Economic Review* 92:354-358.

Baron, James N. and William T. Bielby. 1980. "Bringing the Firms Back in: Stratification, Segmentation, and the Organization of Work." *American Sociological Review* 45:737-765.

Budig, Michelle J. and Paula England. 2001. "The Wage Penalty for Motherhood." *American Sociological Review* 66:204-225.

Cooke, Lynn Prince and Sylvia Fuller. 2018. "Class Differences in Establishment Pathways to Fatherhood Wage Premiums." *Journal of Marriage and Family* 80:737-751.

Correll, Shelley J., Stephen Benard, and In Paik. 2007. "Getting a Job: Is There a Motherhood Penalty?" *American Journal of Sociology* 112:1297-1338.

England, Paula, Jonathan Bearak, Michelle J. Budig, and Melissa J. Hodges. 2016. "Do Highly Paid, Highly Skilled Women Experience the Largest Motherhood Penalty?" *American Sociological Review* 81:1161-1189.

Fuller, Sylvia. 2017. "Segregation across Workplaces and the Motherhood Wage Gap: Why Do Mothers Work in Low-Wage Establishments?" *Social Forces*.

Fuller, Sylvia and Lynn Prince Cooke. 2018. "Workplace Variation in Fatherhood Wage Premiums: Do Formalization and Performance Pay Matter?" *Work, Employment and Society* 32:768-788.

Gangl, Markus and Andrea Ziefle. 2009. "Motherhood, labor force behavior, and women's careers: An empirical assessment of the wage penalty for motherhood in britain, germany, and the united states." *Demography* 46:341-369.

Glauber, Rebecca. 2008. "Race and Gender in Families and at Work: The Fatherhood Wage Premium." *Gender and Society* 22:8-30.

Gough, Margaret and Mary Noonan. 2013. "A Review of the Motherhood Wage Penalty in the United States." *Sociology Compass* 7:328-342.

Hodges, Melissa J. and Michelle J. Budig. 2010. "Who Gets the Daddy Bonus?: Organizational Hegemonic Masculinity and the Impact of Fatherhood on Earnings." *Gender & Society* 24:717-745.

Killewald, Alexandra. 2013. "A Reconsideration of the Fatherhood Premium: Marriage, Coresidence, Biology, and Fathers' Wages." *American Sociological Review* 78:96-116.

Meyer, Peter. B. and Anastasiya M. Osborne. 2005. "Proposed Category System for 1960-2000 Census Occupations." *Working Paper 383* U.S. Bureau of Labor Statistics

Petersen, Trond and Laurie A. Morgan. 1995. "Separate and Unequal: Occupation-Establishment Sex Segregation and the Gender Wage Gap." *The American Journal of Sociology* 101:329-365.

Petersen, Trond, Andrew M. Penner, and Geir Høgsnes. 2010. "The Within-Job Motherhood Wage Penalty in Norway, 1979–1996." *Journal of Marriage and Family* 72:1274-1288.

Staff, Jeremy and Jeylan T. Mortimer. 2012. "Explaining the Motherhood Wage Penalty During the Early Occupational Career." *Demography* 49:1-21.

Yu, Wei-hsin and Janet Chen-Lan Kuo. 2017. "The Motherhood Wage Penalty by Work Conditions: How Do Occupational Characteristics Hinder or Empower Mothers?" *American Sociological Review* 82:744-769.