

Changes in the Motherhood Penalty in the U.S., 1970-2010

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Parenthood is deeply implicated in gender gaps in earnings; on average, mothers earn less than childless women, while fathers earn more than childless men. In the United States, there has been a dramatic increase in the number of mothers in the labor force over the last several decades. We document a surprising acceleration in the closing of the earnings gap between mothers and childless women during the 2000s, following several decades of relative stability, and we identify the key factors that account for this change. We also assess the extent to which differential changes in the selection of mothers and childless women into the full-time, full-year labor force influence the measured evolution of the motherhood penalty.

Studies of the motherhood penalty have proliferated in recent years (Anderson, Binder, and Krause 2003; Budig and England 2001; Budig and Hodges 2010; Correll et al. 2007; Waldfogel 1997), but studies of changes in the penalty are scarce. Avellar and Smock (2003) examine the motherhood penalty in the United States from 1975 to 1998 using fixed effects models for women with at least two years of reported wages. They establish that the penalty did not decline over that time, even though this was the period when the gender gap in wages was most reduced. In light of this finding, Avellar and Smock (2003, p. 605) conclude that “if women continue to be the parents largely responsible for child care, mothers will be unable to catch up to childless women or to men without such responsibilities.” In contrast, Petersen, Penner, and Høgsnes (2014) find that the motherhood penalty in Norway declined between 1976 and 1996. Contrasting their findings with those of Avellar and Smock (2003), Petersen et al. attribute the improved relative status of mothers in Norway to an expansion of family policies that did not occur in the United States.

While scholars have not examined changes in the motherhood penalty in the United States in more recent years, there are at least two reasons to expect that progress has been slow. First, the closing of the gender earnings gap, much of which is attributable to the differential impact of parenthood on the earnings of men and women, has stalled (Blau and Kahn 2006; Cohen, Huffman, and Knauer 2009; England 2010; Huffman 2011). Given that the motherhood penalty remained stable while the gender gap narrowed during the 1980s (Avellar and Smock 2003), the hope that it narrowed while the gender gap remained stable seems optimistic. Second, the United States continues to provide little policy support for mothers attempting to combine paid employment with caretaking – one of the key explanations given by Petersen et al. for the narrowing gap in Norway. Surprisingly, despite these realities, our preliminary findings suggest that the motherhood penalty narrowed rapidly during the 2000s (Figure 1).

We propose to test for statistically significant changes in the motherhood penalty in the United States between 1970 and 2010 and to identify the sources of these changes. We will use data from the March Current Population Survey, and our primary analysis sample will include prime-age workers employed full-time, year-round. For each decade in the study period, we will test for changes in both the raw motherhood penalty and the penalty net of controls for observable

demographic and human capital characteristics. We will then use an adaptation of the standard Oaxaca-Blinder decomposition (Blinder 1973; Oaxaca 1973), first proposed by Smith and Welch (1989), to decompose changes in the raw penalty into components due to changes in levels and returns to demographic characteristics, potential experience, education, occupation, and industry. We prefer the method of Smith and Welch (1989) to the method of Juhn, Murphy, and Pierce (1993), used in widely cited studies of changes in the gender wage gap (Blau and Kahn 1997, 2006), because it allows us to examine changes in the returns to individual characteristics. To assess the sensitivity of changes in the motherhood penalty to growth in overall income inequality, we will also estimate models in which earnings are measured as the percentile rank of a worker in the earnings distribution of childless women (Mandel and Semyonov 2005).

Finally, we will assess the extent to which differential changes in the selection of mothers and childless women into the full-time, full-year labor force can account for measured changes in the motherhood penalty over time. While other researchers have argued that selection bias poses a minimal problem for estimating changes in the motherhood penalty because the bias affects estimates of the penalty in each time period (Avellar and Smock 2003), recent research on the gender earnings gap suggests that the magnitude – and even the sign – of selection bias may change over time. Mulligan and Rubinstein (2008) show that the selection of women into the labor force changed from negative in the 1970s to positive in the 1990s and that changes in selectivity can account for most of the narrowing of the gender earnings gap over that period. To determine whether changes in selectivity played out similarly for mothers and childless women, we will compare estimates of the motherhood penalty from median regressions on our original sample of full-time, year-round workers to estimates from regressions on samples that include women with weaker attachment (Blau and Kahn 2006; Olivetti and Petrongolo 2008).

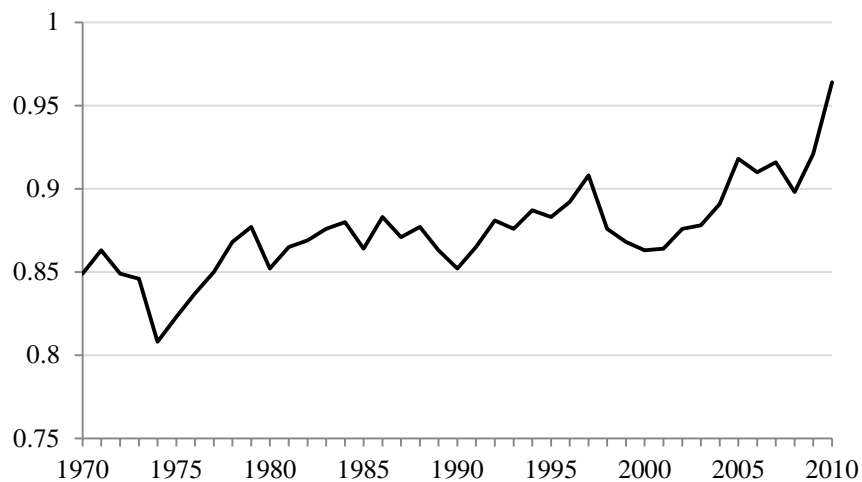


Figure 1
Ratio of mothers' earnings to childless women's earnings, 1970-2010

Notes: Data are from the March CPS samples of the Integrated Public Use Microdata Series (King et al. 2010). Sample includes civilian workers between the ages of 25 and 44 who worked full-time, full-year.

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