

Children and Gender Inequality: Evidence from Denmark

Reading Note

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Introduction:

This paper examines how having children affects the gender pay gap. While the historical gender pay gap has decreased over time, in recent years the pay gap has stabilized at around 20%. The authors theorize that this is mostly due to an unequal reaction in how mothers and fathers participate in the labor force upon having children. The paper shows that having a child affects women differently than men in how they participate in the labor force. The paper also shows that to an extent, gender roles are passed down through generations. In summary, the main idea of the paper is that the presence of children explains most of the current gender pay gap.

Body:

The theoretical foundation of the paper is that when a mother has a child, they change their participation in the labor market by either not participating at all, working fewer hours, or choosing jobs that pay less per hour. The authors compare Denmark to the US by noting that while Denmark has historically had a smaller wage gap than the US, the US wage gap is now similar to Denmark's and has stabilized in both countries around 15-20%. Another key part of the authors' theory is that gender identity is passed down through generations, so a woman's decision of how much to work while having children is dependent on what she saw from the labor division of her own parents growing up.

The data the authors use comes from Denmark and follows individual workers from 1985-2013. The event the authors identify for workers is the birth of the worker's first child. Parents are tracked 5 years before and 10 years after this date. The data includes information on hiring company, hours worked and wage rates. The database also connects individual data over generations, so that grandparents, parents, and children can be connected with each other.

The empirical strategy the authors use is an event study, where the year the child is born is $t = 0$. The authors regress measures of labor market participation on event time dummies, age dummies for each parent (to capture individual life cycle factors) and year dummies (to capture overall patterns in the economy). They do this separately for each gender. The authors exploit the variation in what year children are born and at what age the parents are when the children are born. They note that their long run effects capture the total effect of children (because parents may have more within the 10 years following the birth of the first child). They also note that the parallel trends they see in the pre-period are good support for a short-term casual effect but become less relevant for the long-term results. The authors use a DD identification check, as well as an IV approach to test if the event study method is appropriate; both results support their identification strategy.

For the decomposition section of the paper, the authors look at within-person variation. They interact their year and event-time dummies, and they include education dummies that capture choices made prior to childbirth (because any education choice made after childbirth is likely an effect of becoming a parent).

The empirical results show that men and women follow similar patterns throughout their lives up until the first child is born. Then the gender pay gap increases initially to about 30% and decreases over time to about 20%. These effects are generally equal among the three channels identified (participation, number of hours, and wage rate). Over a 20-year time frame, the number of hours worked by men and women start to converge but the wage rates diverge (creating a constant gap). More specific analyses show that beginning in the year after giving birth and continuing in the long run, women (compared to men) are less likely to be managers, more likely to work in the public sector, and more likely to work at firms with female management who have young children. The authors theorize that public sector firms and firms with female mothers in management are more likely to be family-friendly, and thus use these as constructs for that.

The decomposition shows that while the gender pay gap has decreased over time, the amount of the gap due to children has increased, to the point that almost all the gap can now be explained by the presence of children. The authors split the portion of the pay gap not due to children between the amount due to education and a residual. They show that both have decreased substantially over time. The authors distinguish between pre-effects, where workers who expect to have children change their behavior before children are born (such as receiving less education), and post-effects, where workers change their behavior after having a child. They point out that the slight increase in the gap that can be explained by children and the decrease in the gap due to education could mean a decrease in pre-effects but increase in post-effects over time.

In the generational part of the paper, the authors collect data on grandparents and put them into quantiles based on how modern the gender division of labor was. On average, the more a maternal grandmother worked relative to a maternal grandfather, the less the daughter changed her labor participation when having a child. These results held after controlling for grandparent education level, wealth, region, etc.

Conclusion:

This paper finds that the gender pay gap can mostly be explained by the presence of children. The authors note that even when women receive equal pay for equal work, the nature of their behavior in the workplace changes in a way that does not rule out discrimination as a contributing factor to the pay gap. One limitation of the article is that the data comes only from Denmark, which is a small country with a specific culture and workforce structure that may not be generalizable to other places. Another limitation is that while the authors find post-effects, it is much more difficult to measure pre-effects (in other words, how do people change their actions before having children in anticipation of having children?). Overall, however, the paper makes an interesting contribution to the existing understanding of the gender pay gap.