**Children and Gender Inequality: Evidence from Denmark Reading Note**

By Kevin Standridge

This paper explores the effects of children on the careers of women, and the degree to which children can explain gender inequality in the labor market. This question is of interest to policy makers seeking to understand the sources of gender inequality and helps to provide a potential explanation for why it is so persistent across countries. To examine this question, the authors use administrative data from Denmark to determine how the birth of a first child affects the income of women relative to men. The authors find that men and women have a comparable trend in earnings before the birth of the first child, but that women experience a roughly 20% decrease in earnings after childbirth. The authors then explore potential channels for the effect, and find that after childbirth, women are significantly more likely to enter the public sector, decrease the number of hours worked, and are more likely to have a female manager who also has children. The authors then attempt to determine the fraction of gender inequality explained by childbirth. Of the existing variation, roughly 4/5 are explainable by the birth of children. Finally, the authors explore intergenerational effects and find that the labor penalty is smaller for mothers whose own mothers work more relative to the fathers. Together these results articulate a channel through which gender inequality in the labor market may arise.

The theory underlying this paper is that childbirth represents a shock to the job attribute preferences of women, which men do not experience. The authors choose this shock because despite the best efforts of policy makers, gender inequality has persisted across countries and gender convergence, indicating that there is likely a feature common to all countries driving a portion of the inequality. Childbirth is one of the few attributes that is different across men and women but is present across all countries. The Denmark administrative data used in this paper goes from 1985-2013 and tracks parents labor market outcomes (earnings, hours, etc.) and child births over time. With over 1 million observations, it is one of the most powerful contributions of the paper. The authors use this to create two separate event study regressions, one for women and one for men, which tracks earnings relative to childbirth. By construction, outcomes are normalized to 0 for both groups in year T-1. In doing so, the presented results can be a bit deceptive in that at first glance they appear to imply that men and women have equivalent outcomes prior to childbirth, which may not be true. The author's include controls for calendar year and the age of the individual. It should be noted that so long as they only run the data on the years (-5, 5) they do not need to include individual fixed effects because the individual is perfectly identified by their time periods.

Because of the author's powerful data, they can estimate long term effects, but their design comes with several limitations. First, the choice of whether and when to have children is endogenous, meaning that it could be that women choose to have children when they know that their wages are going to decrease. This concern is somewhat ameliorated but not eliminated by the authors' later cross-sectional tests (i.e., whether they work for a female manager with children). Second, as discussed by the authors, the decision of whether to have children will affect women's choices earlier in life. These differences will be eliminated when the results are normalized to 0, and so the effect of children may be underestimated in their specification. Finally, because the data ends in 2013 and is from Denmark, the generalizability of the results is somewhat diminished. Nevertheless, given that Denmark is an OECD country, the results are still likely applicable in many ways.

The authors examine the portion of gender inequality explained by their penalty, by comparing the estimates from the model described previously to the gender gap in earnings. To capture how this has changed over time, they calculate estimates for the child penalty each year, and compare it to the overall gender gap in earnings for that year. In so doing, they show that the estimates for the child penalty are consistent over time, while the residual inequality is decreasing. This decreasing pattern is particularly true, once the authors account for variation from differences in education. The authors then conclude by linking individuals to their parents and in-laws. By using the quintiles of labor supply of parents and in-laws as a measure of the degree to which families believe a woman should work outside the home, the authors demonstrate that women who had mothers who worked outside the home the most, had a 6% lower child penalty than those who worked the least. Together these results demonstrate that in Denmark, 4/5 (20% of 25%) of gender inequality is due to women's choices following childbirth. Not only has this pattern been stable over time, but it is most pronounced in women whose mothers made similar choices.