Econ 613 Reading notes
Children and Gender Inequality: Evidence from Denmark
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Previous literature demonstrates that human capital and discrimination affect gender inequality in earnings and wage rate but the remaining difference in gender is unexplained. Therefore, the paper's motivation is to identify possible factors resulting in the remaining difference and the paper identifies almost all of the remaining gender inequality can be attributed to children.

Firstly, the paper estimates the impact of the first children on the trajectory of several work outcome variables such as earnings, hours worked and wage rates, for gender groups by adopting an event study approach. The paper finds that before women and men become parents, the movements of variables are nearly the same but at the precise moment the first child arrives, the variables paths diverse: women experience an immediate drop in all variables, while men experience no visible changes. Moreover, ten years later, those variables have plateaued below its level just before childbirth, whereas variables in the male group are essentially unaffected. The gaps are very stable around 3 years after the first child. (Figure 3) Then the paper expands the event study horizon from 10 years after the first child to 20 years, finding hours worked do eventually begin to converge, at the same time wage rates keep diverging and consequently, the earnings gap is constant. (Figure 4)

However, there are three underlying concerns of the approach: (1) The first child effect might contain all other effects of children born after the first one. (2) The estimated percentage of an event study is based on level-specification rather than log-specification. (3) Use of calendar-year measure of earnings and labor supply create attenuation bias in the first year dip compared to continuous time representation. The paper consequently conducts three extensions and robustness checks to ruling out the concerns: (1) Replicating the event study of earnings in subsamples that condition on the total number of children the women ends up having. (Figure A.I.) (2) Quantile regressions based on a 1/7 subsample shows median impacts are roughly similar to mean impacts. (Figure A.II.) (3) The paper reproduces the effect of the child on four work outcomes variables on a sample restricted to childbirths in January for which the definition of the calendar year and event years coincident. (Figure A.III.)

Furthermore, the paper estimates the impact of the first child on occupational rank, probability of being manager, probability of public sector job, family friendliness of firm. (Figure 5) It is shown that parenthood has a negative effect on women's prospects of becoming managers and occupational rank and women begin to move into the public sector and family-friendly firm in the years following childbirth. The women's career trajectories change sharply due to children. creating substantial gender inequality in a range of quantitative and qualitative dimensions.

Later the paper lays out the identification assumptions of event study approach, providing two important robustness checks that support our strategy: a difference-in-differences extension of the event study (Figure 6) and an IV-approach based on sibling sex mix (Figure 7).

Secondly, the paper adopts a standard Oaxaca-Blinder decomposition framework to decompose gender inequality in earnings in order to delve into the unexplained part by estimating the impact of children. The decomposition should be viewed as casual rather than purely correlational and residual gender inequality included potential pre-effects of children. In the first step, the paper shows earnings penalty by birth cohort and extrapolates child penalties to earlier birth cohorts. In the second step, the result of decomposition analysis implies that the gender inequality that remains today is all about children and there may have been a shift over from pre-effects to post-effects of children that make us underestimated the importance of children in the beginning of the period. (Figure 9) Additionally, when including the educational controls, it only has a small

impact on the estimation of child-related gender inequality and while the child-related gender gap has been growing over time, the educational-related inequality gender gap has been shrinking dramatically. (Figure 9)

Finally, the paper explores the persistence and determinants of child penalty by event study and administrative ATP measure of hours worked, controlling for the characteristics such as education, wealth level, and birth cohort. For child penalty persistence, the paper obtains positive intergenerational correlations everywhere in level (Table 1) and in rank (Table A.I): between women and their own mothers and their mothers-in-law, as well as between men and their own mothers and mothers-in-law. On the other hand, a clear downward-sloping relationship between the child penalty on mothers and the relative labor supply of the maternal grandmother and a zero effect of the paternal grandparents are supported. (Figure 10)

Appendix: