The impact of work hours on fertility: A natural experiment in Korea

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Cutting the number of hours people work might contribute to boosting fertility by reducing work-family conflict, but the impact of the number of hours worked on fertility is largely unknown. Estimating the causal effect is challenging mainly due to the possibility of reverse causality, and difficulties associated with isolating the effect of work hours from correlated influences.

Notably, this study adds valuable evidence to the literature by utilizing a unique natural experiment in Korea. In 2004, the Korean government introduced a law which lowered its legal work week from 44 to 40 hours. This law eliminated work on Saturdays for most workers. The policy started from workplaces with 1,000 employees or more in 2004, and gradually expanded to smaller workplaces (those with 300+ employees in 2005, with 100+ employees in 2006, with 50+ employees in 2007, with 20+ employees in 2008, and with 20 employees or less by 2011). In the last decade, fertility rates in Korea have been one of the lowest in the world, while Koreans have had one of the longest work hours in OECD countries. This paper evaluates whether the policy had an effect on the fertility in Korea, and draws implications for other countries with low fertility rates.

In terms of research design, I use difference-in-difference multivariate regressions analyses. I compare changes in the number of children before and after the policy intervention between two groups, people whose or whose spouses' work hours declined due to the policy (treatment group) and people whose or whose spouses' work hours remained the same despite the policy (control group).

Data and Variables

Data for this study come from the Korea Labor and Income Panel Study (KLIPS), which is an annual longitudinal survey of nationally-representative households and their household members aged 15 or older. The survey started in 1998 with 5,000 households and 13,321 individuals. The first eleven waves have been released and this study analyzes all eleven waves. For the purpose of this study, I restrict the analysis sample into individuals aged 19 to 45 in 1998.

The dependent variable in this paper is the number of children. The KLIPS dataset includes basic demographic characteristics of individual household members regardless of their ages. By comparing the information over waves, I impute the number of newborns in each wave.

The key independent variable of interest is work hours. Legal work hours are estimated from the number of employees in workplace reported in the KLIPS. It should be noted that actual work hours might differ from legal work hours. For the reason, this paper examines actual work hours also. Respondents in the KLIPS reported their actual work hours.

In addition, I will control for various possible correlates such as respondents' age, sex, educational attainment, income, assets, family-friendly workplace policies, and child-care assistance by the extended family (including co-residence status with parents and parents' caring for their grandchildren).

Finally, to investigate broader impact of work on the well-being of the family beyond fertility, I will examine additional outcome variables including workers' and their spouses' health and self-reported satisfaction at home and at work.