Relationship between Intergenerational Care and Women's Labor Supply in China

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Motivation

- The female labor force participation rate dropped by 11.24% while the male labor force participation rate dropped only by 4.62% from 1990 to 2010. Under China's two/three-child policies, women will face more conflicts between childbirth, childcare, and work conflicts, leading to lower women's labor supply. Intergenerational care can be a way to improve women's labor supply. Previous studies have shown that grandparental childcare does have a positive effect on women's labor participation. However, there have been discussions about raising the official age of retirement, as a way to boost the labor supply in Chinese economy, which may lead to less grandparental childcare in the future. Therefore, it is significant to figure out the quantitative relationship between intergenerational care and women's labor supply, so as to provide some suggestions towards the two-child/three-child policies and delaying retirement policy.

Literature Review

- Ogawa & Ermisch (1996), Cardia & NG (2003), and Du (2008) suggested that living with parents reduced the time women need to devote to family, so that made them more likely to work. Zamarro (2011) pointed out that grandmothers had become the main source of childcare in Europe, and this "intergenerational resource transfer" encouraged the labor participation of their offspring. However, these research did not explicitly investigate the relationship between grandparental childcare and women's employment rate, and they also neglected the possible endogeneity problems.
- Posadas & Vidal-Fernandez (2013) handled endogeneity with IV and FE estimates, finding that grandparental childcare availability significantly increased mothers' labor participation in the U.S., especially for socio-economically disadvantaged women. Arpino et al. (2014) used "whether grandparents are alive" as IV, and found that grandparental care significantly boosted the probability of women participating in the labor market in Italy. However, these research did not fit with the background in China where paternal grandparents are mostly responsible for raising grandchildren.
- To better deal with endogeneity with more recent data, we make the following contributions:(1) The data used in our paper are from 2010 to 2018, which are the newest official investigation data. (2) We add IV and FE variables in logit and probit models to solve the endogeneity. (3) We select "whether paternal grandparents are alive" as the IV to fit with the cultural background in China.

Data Description

- Our empirical analysis uses datasets from CFPS (China Family Panel Studies), which is a nationally representative, biennial longitudinal survey of Chinese communities. We use data from 2010, 2012, 2014, 2016, and 2018. The key advantage of CFPS is that it includes almost all the variables in interest, such as the individual characteristics (income, employment status, health status, and living status), children care variables and family variables (including the IV "whether grandparents are still alive"). Therefore, it is easy for us to use the data to construct models.

Plan of the Research

- **Step 1:** Create a probit and logit model to analyze the relationship between female labor participation and intergenerational care: $work_{ijt} = \alpha + \beta gpc_{ijt} + \gamma x_{ijt} + \theta province_j + \lambda year_t + \mu_{ijt}$.
  The "work" variable is whether the woman is employed or not. gpc_{jit} is intergenerational care and x are other control variables.
- **Step 2:** Because women's work status also affects whether a child is taken care of by grandparents/maternal grandparents, it causes the reverse causality problem. To solve this, we use "whether the grandparents are alive" as the instrumental variables for intergenerational care. Since whether the grandmother or grandfather is alive usually has a positive relation with intergenerational care and does not decide whether the woman is employed or not. Therefore, we estimate the effect of intergenerational care in the following approach: (1) $work_{ijt} = \alpha_1 + \beta_1 \widehat{gpc_{ijt}} + \gamma_1 x_{ijt} + \theta province_j + \lambda year_t + \mu_{ijt}$

(2) $gpc_{ijt} = \eta_0 + \eta_1 whether\_grandp\_alive_{ijt} + \eta_2 x_{ijt} + \eta_3 province_j + \eta_4 year_t + \psi_{ijt}$

- **Step 3:** The influence of intergenerational care may be different when the number of children is different. Therefore, to investigate different intergenerational care effects, we divide the sample into 3 groups: women with one child, women with 2 children, and women with more than 2 children, and use the same models in the previous part to obtain the quantitative results.
- **Step 4:** Based on the results, give suggestions to the two /three-child and delaying retirement policies.