



Grandchildren and their grandparents' labor supply[☆]

Peter Rupert^a, Giulio Zanella^{b,*}

^a University of California–Santa Barbara, USA

^b University of Bologna, Italy



ARTICLE INFO

JEL classification:

D19

J13

J14

J22

Keywords:

Labor supply

Grandparents

Child care

ABSTRACT

Working-age grandparents supply large amounts of child care, an observation that raises the question of how having grandchildren affects grandparents' own labor supply. Exploiting the unique genealogical design of the PSID and the random variation in the timing when the parents of first-born boys and girls become grandparents, we estimate a structural labor supply model and find a negative effect on employed grandmother's hours of work of about 30% that is concentrated near the bottom of the hours distribution, i.e., among women less attached to the labor market. Implications for the evaluation of child care and parental leave policies are discussed.

1. Introduction

According to the American Community Survey of the US Census Bureau there are about 70 million grandparents in the US (almost 1/3 of the adult American population), with an annual inflow of about 2 million. Most of these have grandchildren well before the end of working age and make large transfers to their offspring, both money and time transfers in the form of grandparent-provided child care. In the literature, much is known about the labor supply consequences of becoming a parent, something is known about the effect of grandparent-provided child care on parents' labor supply, but surprisingly little is known about the effect of grandparent-provided child care on grandparents' own labor supply. This paper addresses this issue and asks: How does becoming a grandparent affect the labor supply of older workers?

We structure this empirical question in a dynamic model of the allocation of time in which senior workers are altruistic towards their offspring and also directly value time spent with children. In the model, becoming a grandparent has an ambiguous effect on the labor supply of senior workers because grandparents can transfer child care time (thus working less, possibly) but also assets (thus working more, possibly). Such ambiguity is resolved empirically by combining structural labor supply methods and an IV design that exploits the different timing of becoming a grandparent for the parents of first-born girls and first-born boys. While the gender of one's first child is arguably random in the US,

the parents of first-born girls have grandchildren earlier because girls marry and have children at a younger age than boys.

Results indicate that becoming a grandparent reduces female labor supply along the intensive margin by about 30% (a large effect reflecting the LATE nature of our estimate), with zero effect for men. This asymmetric effect by gender is consistent with the different responsiveness of men and women to changes in the opportunity cost of time, as has been documented repeatedly in the literature on labor supply elasticities, as well as with the fact that women provide more grandparenting time than men. No significant effect along the employment margin is found for either women or men, although this is due to large standard errors. Going beyond the baseline estimates, we find that these labor supply adjustments by employed grandmothers take place at the lower quantiles of the hours distribution, i.e., among women less attached to the labor market. We also find evidence that becoming a grandparent, which we label the “extensive margin” of grandparenting, is much more important in generating these effects than having additional grandchildren, i.e., the “intensive” margin of grandparenting, consistent with the presence of economies of scale in family-based child care. Moreover, our data suggest that the negative labor supply impact of grandchildren is stronger during the early years since becoming a grandmother.

These results have implications for the evaluation of child care and parental leave policies. A common argument in support of subsidized child care is that this provision increases the labor force participation of

[☆] We are grateful to Kelly Bedard, Andrea Ichino, John Kennan, Peter Kuhn, Shelly Lundberg, Magne Mogstad, three anonymous referees, and various seminar participants for valuable comments, as well as Toru Kitagawa for kindly sharing with us the R code to implement the test for instrument validity. All errors are ours.

* Corresponding author.

E-mail addresses: rupert@econ.ucsb.edu (P. Rupert), giulio.zanella@unibo.it (G. Zanella).

young mothers, with possible positive spillovers on income tax revenues. This argument overlooks the presence of nonmaternal, nonpaid sources of child care different from subsidized child care centers and which mothers may be already using, such as grandparents. If these are providing for a substantial portion of child care needs (it is shown below that grandparent-provided child care is of first-order importance in the US), then expanding the public provision of child care may affect the labor supply of young women only marginally. Grandparents' involvement in child care explains why [Havnes and Mogstad \(2011\)](#) find that a 1975 reform expanding subsidized childcare in Norway for children aged 3–6 caused a little increase in maternal labor supply and a large decrease in informal child care arrangements. Similarly, simulating a quantitative model with free nonmaternal sources different from public child care centers, [Bick \(2016\)](#) finds that a policy subsidizing daycare universally in Germany would increase the participation rate of mothers with children aged 0–2 by relatively little. However, even if subsidizing child care affected mothers' labor supply marginally, our results suggest that such a policy would affect the labor supply of older female workers with grandchildren. Similarly, the involvement of grandparents in child rearing suggests that parental leave policies replace, in part, grandparental care with parental care. Based on our results, a side effect of a generous parental leave is to strengthen the labor market attachment of older women with grandchildren. Therefore, the correct evaluation of the benefits and costs of child care and parental leave policies requires bringing grandparents into the picture. These are little-explored questions.¹ Such broader family perspective also suggests new policies aimed at reconciling work and child care duties. For instance, if the rationale of parental leave is to reconcile work and child bearing, and if working-age grandparents also engage in child care, then the government should consider forms of “grandparental leave” to support the attachment of older workers to the labor market. In principle, every employed family member who is a potential source of child care (not just parents) would benefit from a temporary leave for child care duties. Thus, our analysis suggests that public child care, parental leave, and forms of “grandparental leave” are complementary in sustaining young mothers' labor supply while also increasing the earnings of older workers.

Survey data on informal child care arrangements and time-use data suggest that the labor supply effects we estimate are plausible. According to the Survey of Income and Program Participation, in 2011 as many as 23.4% of all children under 5 years old living with their mother benefitted from grandparent-provided child care (between 5 and 14 years it is 13.4%), up from less than 15% in 1987. For 93% of these, grandparents were the primary child care arrangement. These statistics do not include children living with their grandparents, which according to the US Census Bureau amounted to about 7% of all children below 18 years old in 2010, up from 3.2% in 1970. The corresponding time transfer is large. In the Health and Retirement Study (HRS), individuals are asked how much time altogether they spent taking care of their grandchildren during the past 12 months. Grandmothers who were between 50 and 64 years old at the time of the first interview in 1992 and who had provided at least 1 h of grandchild care reported spending, on average, 816.5 annual hours. The corresponding figure for grandfathers was 346.9 h. These magnitudes agree, by and large, with those produced by more reliable time-use data. In the American Time Use Survey (ATUS), pooled 2003–2014 waves, 16% of women and 10.8% of men in the age range 50–64 report spending time in primary childcare.² Among those who do (i.e., conditional on a strictly positive time transfer), annual hours of childcare are 657.1 for

women and 500.9 for men. Such large time transfers beg the question of how much grandparenting comes at the expense of other forms of “leisure” and how much comes at the expense of market labor supply? Providing an answer is the main contribution of the present paper.

This is a novel question. Abundant evidence has been produced about the causal effect of child bearing on parental labor supply, and the vast majority of studies find a negative effect.³ More recently, researchers have begun investigating the effects of grandparent-provided child care on parental labor supply, the idea being that by providing free and flexible child care, grandparents may reduce the impact of child bearing on parents' labor supply. In an early paper, [Cardia and Ng \(2003\)](#) calibrate an OLG model and show that grandparent-provided childcare has a positive effect on the labor supply of parents. In an empirical counterpart of this calibration study, [Dimova and Wolff \(2011\)](#) use cross-country data from the Survey of Health, Aging, and Retirement in Europe (SHARE) and show that this is the case for young European mothers. [Posadas and Vidal-Fernandez \(2013\)](#) instrument the availability of grandparent-provided child care with death of the maternal grandmother in the National Longitudinal Survey of Youth 1979 (NLSY79), and find that the availability of grandparents increases the labor force participation of mothers in the US. [Compton and Pollak \(2014\)](#) employ data from the US Census and from the National Survey of Families and Households (NSFH), and show that spatial proximity to grandmothers increases the labor supply of women with young children, presumably because of the availability of grandparent-provided child care. [Aparicio-Fenoll and Vidal-Fernandez \(2015\)](#) find that an increase of the legal female retirement age enacted in Italy in 2000 caused grandmothers to provide less child care and decreased the labor force participation of their daughters.⁴ However, very little is known about the effects of grandparent-provided child care on grandparents' own labor supply. Existing studies are descriptive in nature, do not address causality, and report mixed correlations. [Lei \(2008\)](#) uses HRS data from 1996 to 2002, and finds a small positive correlation between the number of grandchildren and grandmother's labor supply along both the intensive and the extensive margin. However, when including fixed effects the correlation becomes negative and insignificant. [Ho \(2015\)](#) also uses HRS data and finds a positive correlation between the birth of a new grandchild and married grandparents' employment. She also finds a positive correlation between married grandmothers' hours of market work and the presence of a grandchild in the household. [Zamarro \(2011\)](#) estimates on SHARE data the effect of being an employed grandmother on the probability of providing child care. Instrumenting employment status with eligibility for social security benefits, she finds a negative effect. A recent paper by [Frimmel et al. \(2017\)](#) comes closest to what we do. These authors use data from Austria and find that women are more likely to leave the labor market after the birth of their first grandchild.

We take a systematic approach to this question using data from the Panel Study of Income Dynamics (PSID) to estimate the effect of

³ Studies providing indirect evidence of this connection via the evaluation of public child care programs on women's labor supply have a long tradition in modern labor economics, starting with [Heckman \(1974\)](#). More recent evidence has been produced using a variety of instruments—beginning with the seminal study of [Rosenzweig and Wolpin \(1980\)](#) using twin births as an exogenous shock to fertility—to address the endogeneity of children, such as twin births ([Bronars and Grogger, 1994](#), for unmarried mothers in the US, and [Jacobsen et al., 1999](#), for married mothers), sibling-sex composition ([Angrist and Evans, 1998](#), for men and women in the US, and [Cruces and Galiani, 2007](#), for women in Argentina and Mexico), gender of first-born child ([Chun and Oh, 2002](#), for women in South Korea) early access to the pill ([Bailey, 2006](#), for women in the US), abortion legislation ([Bloom et al., 2009](#), in a large cross-country panel data set. However, when using self-reported measures of infertility as instruments, both [Aguero and Marks \(2008\)](#) in a sample of Latin American countries, and [Rondinelli and Zizza \(2010\)](#) in sample of older Italian women find no effect of child bearing on female labor force participation.

⁴ Additional, possible effects of grandparenting not directly related to labor supply have also been explored. [Reinkowski \(2013\)](#) finds some positive correlation in SHARE data between taking care of the grandchildren and grandparents' physical and psychological health.

¹ For Norway, [Andresen and Havnes \(2016\)](#) find no significant effect on grandparents' labor supply of an expansion of subsidized child care for toddlers enacted during the early 2000s.

² These ATUS statistics refer to household and non-household children. The activities included are caring for and helping, activities related to children's education and health, and travel related to all of these.

Download English Version:

<https://daneshyari.com/en/article/7369516>

Download Persian Version:

<https://daneshyari.com/article/7369516>

[Daneshyari.com](https://daneshyari.com)