Grandparental childcare and parent’s labour supply: Evidence from Europe

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More info: www.factage.eu
The historical importance of grandparents

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Motivation

Demographic change →

Need for longer working lives (current & future) →

More time used for employment by grand-parental generation →

*Potential* less time used for grandparental childcare →

Parent’s labour supply may go down
Potential implications

The link:
Potential less time used for grandparental childcare
Parent’s labour supply may go down

Has implications for:
Projections of overall labour supply (from e.g. pension reforms),
dynamic effects.
Gender equality (if differentiated gender effects).
Inequality (within generations).
Fertility.
Academic outcomes of grandchildren.
General implications for amount of volunteering work.
Related literature

Main studies:

*Dimova/Wolff* (2011) - Europe (SHARE)
*Assave* et al. (2012) – 7 countries (Gender & Generations survey)
*Compton/Pollak* (2014) – US
*Arpino* et al. (2014) – Italy
*Kanji* (2018) - UK

Our contribution:

- revisit EU countries
- (more) explicit treatment of causal effect
- Can include more data points and therefore allow for more heterogeneity (effect of children’s age / mother’s education)
Data – SHARE survey

Data taken from wave 1-6 of the SHARE survey (2004/5 -2015)

Cover 12 countries: AT, BE, CZ, DK, FR, DE, EL, IT, NL, ES, SE and CH.

Our observed information:

Dependent variable:
  mother’s and father’s employment status

Independent variables:
  Grandparents caring at least weekly
  Number of children (of father and mother)
  Age of parent
  Age of youngest grandchild
  Condition on primary working age (25-54 y/o) and youngest child<10 y/o

Total of 50,000+ observations
Some descriptive statistics

Share of population being grandparent
Some descriptive statistics

Labour Force Participation of Grandparents at Age 55-64

- Grandmothers
- Grandfathers
- All
Some descriptive statistics

Some evidence that grandparental care has decreased.
Estimation

The model

\[ \text{mother working}_i = \alpha + \gamma \cdot \text{grandparental childcare}_i + \sum_k \beta_k x_{ki} + \varepsilon_i \]

*mother working* is binary (working / not working)
*grandparental childcare* is binary (caring at least weakly / not caring)
*x other controls*

Estimation either by OLS or Maximum Likelihood (probit / logit)

Endogeneity

Estimated partial correlation may not be causal.

OLS-IV and IV-Probit, instruments:
Distance between parent and grandparent (0/1, cutoff at 25km)
Number of siblings of parent
### Results (1/4)

**OLS – Pooled sample**

<table>
<thead>
<tr>
<th>Dependent variable: parent’s work status (1/0)</th>
<th>(1)</th>
<th>(3)</th>
<th>(5)</th>
<th>(6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WOMEN</td>
<td></td>
<td>MEN</td>
<td>WOMEN Waves 4-6</td>
<td>WOMEN Wave 1</td>
</tr>
<tr>
<td>Weekly childcare (incl. daily care)</td>
<td>0.112***</td>
<td>0.0097</td>
<td>0.093***</td>
<td>0.138***</td>
</tr>
<tr>
<td></td>
<td>(0.00963)</td>
<td>(0.00630)</td>
<td>(0.0125)</td>
<td>(0.0193)</td>
</tr>
<tr>
<td>Observations</td>
<td>27,231</td>
<td>26,260</td>
<td>17,505</td>
<td>4,648</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.140</td>
<td>0.055</td>
<td>0.131</td>
<td>0.134</td>
</tr>
</tbody>
</table>

Sample: SHARE waves 1, 2, 4, 5, 6. Parent aged 25-54 who has less than 5 children and at least one child who is 10 years old or younger. Note: *** p<0.01, ** p<0.05. OLS regressions.
## Results (2/4)

### OLS-IV – Pooled sample

<table>
<thead>
<tr>
<th>Dependent variable:</th>
<th>Employed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Looking after grandchildren</td>
<td>0.134***</td>
</tr>
<tr>
<td>(at least once per week)</td>
<td>(0.029)</td>
</tr>
<tr>
<td>Kleibergen-Paap Wald rk F statistic</td>
<td>891.76</td>
</tr>
<tr>
<td>Hansen J statistic, Chi2(1)</td>
<td>0.195</td>
</tr>
<tr>
<td></td>
<td>(p=.66)</td>
</tr>
<tr>
<td>Observations</td>
<td>24,709</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.137</td>
</tr>
</tbody>
</table>

*Sample: SHARE waves 1, 2, 4, 5, 6. Parent aged 25-54 who has less than 5 children and at least one child who is 10 years old or younger.*  
*Note: *** p<0.01, ** p<0.05. OLS regressions.*
Results (3/4)

Sample: SHARE waves 1, 2, 4, 5, 6. Parent aged 25-54 who has less than 5 children and at least one child who is 10 years old or younger. Note: *** p<0.01, ** p<0.05. OLS regressions.
Results (4/4)

Further results based on pooled sample:

Grandchild age (some importance)
Parents education (not very important)

Macroeconomic importance (approx. 2% LS increase for 25-54 y/o women).

On validity of instruments:
Falsification procedure based on adults not (yet) parents.
Limitations

A lot of noise in key measurements.

One can criticize the instrumental strategy.

Country heterogeneity large (child care service, parental leave policies).

Longevity and increasing age of first birth
Concluding

Link between grandparental care and maternal labour supply
  Country differences prevalent
  Large samples needed to tease out effects

Speaks to the wider issue of ‘total effect’ of longer working lives.
Thank You!