And Thou Shalt Honor: children's caregiving, work and religion

Fernanda Mazzotta, University of Salerno

Francesca Bettio, University of Siena

DRAFT

New and old questions

WHAT

- What size is exactly the conflict between hours of work and hours of unpaid care to non-cohabiting parents?
- Do cultural beliefs and attitudes matter?

WHERE

- 11 SHARE countries, all of them EU Member States

WHEN

- 2004 and 2006 (SHARE waves 1 and 2)

WHO

- Adult children over 50 years of age, including stepchildren, with at least one living parent

Value added

- Mixed findings in the literature about the employment effect of informal care, with few contributions focusing on a large number of European countries. We add evidence to findings that are not conclusive and remain scant for Europe.

- No contribution focusing on a set of European countries addresses simultaneity of working choice and selection issues using a structural econometric approach. Bolin uses Share 2004 data but an IV approach ; Spiess and Schneider look at change in hours rather than levels in order to avoid selectivity and adopt a DID approach , with data reaching no later than 2001. We adopt a semi-structural approach

- No contribution has extensively explored the role of cultural attitudes and beliefs.

Why focus on children?

- Male and female children because care from male children is becoming increasingly important, if only for demographic reasons (29% male children giving regular extra-residential care to parents in our final sample)

- Cultural norms and beliefs concern specific family relationships (such as filial/parental obligations) as acknowledged by the questions from the SHARE self-administered questionnaire .We use answers to that questionnaire in order to explore the role of attitudes and beliefs about intergenerational obligations.

Why focus on extra-residential care?

- SHARE data record hours of care for extra-residential care only
- Care by children is overwhelmingly extra-residential: 27.8% of all children with a living parent give regular care inside or outside their own home on a daily or weekly basis. More than four fifths of that care is extra-residential.
- Children giving daily extra residential care to parents are not so likely to also care for a co-residing relative: only 9% in our finale sample. This lessens the problem of non observing hours of residential care.

Reference theoretical framework

- Static, individual utility frame like that of Wolf-Soldo (1994) which simultaneously models labour supply and caring choices
  - No a priori prediction of the sign of the employment effect of caregiving (the final outcome depends on substitution and income effect, preferences, substitutability of formal and informal care, and provisions of formal care)
- compatible with unitary family model
- 'augmented ' by explicit consideration of cultural determinants of preferences. The assumption is that preferences change slowly and their cultural determinants can be treated as exogenous. (however we test for endogeneity)

Why not an intra-household bargaining approach?

- Complexity of the bargaining models that would add to the complexity of modelling simultaneous caring and labour choices.
- The bargaining framework is tailored to investigation of caring issues that may be particularly sensitive to family composition, e.g. whether informal care is substitute or complement to formal care. We ask different questions
- Choice of residence may be important for bargaining (as in those model where non-co-residing is the threat point). But we take it as pre-determined since we confine analysis to extra-residential care.
- SHARE collects data on households, not family members whereas intra-household bargaining typically involves relationships among (all) family members
- Although we do not allow for strategic interaction among family members in the empirical specification we control for presence and sex of siblings.

DATA: the sample

- Observations from pooled samples of SHARE 2004 and SHARE 2006
- 16,598 children (and children in law) with at least one live parent from 11 SHARE countries: Austria, Germany, Sweden, Netherlands, Spain, Italy, Denmark, Greece, Belgium, Czech Republic, Poland
- 5.94 % give daily (not weekly) extra-residential care to parents, including parents in law (71.7 % of these care givers are women)
- 3.89 hours of extra-residential care per (regular, daily) caregiver per day, on average
- 52.69% work, more among men (59.15%) than women (46.83%)

Econometric specification

Variant of Wolf and Soldo (1994); differences with W&S are

(i) Estimation of hours of care (eq. 3.2) ; (ii) inclusion of cultural variables in X_3, X_4.

- (1) $C^* = \alpha_1 W^* + X_1\beta_1 + \varepsilon_1$
- *(2)* $W^* = \alpha_2 C^* + X_2\beta_2 + \varepsilon_2$

- (*3.1*) HW= $\alpha_3 C + X_3\beta_3 + \gamma_1\lambda_1 + \gamma_2\lambda_2 + u_3$;
- *(3.2)* $HC = \alpha_4 W + X_4\beta_4 + \gamma_3\lambda_1 + \gamma_4\lambda_2 + u_4$

Where

- C*, C denote, respectively the latent propensity to care and the observed binary for caregiving, with C=1 if C*≥ 0

- W*, W are, respectively the latent propensity to work and the observed binary for employment, with W=1 if W* ≥ 0

- X_1, X_2, X_3, X_4, are exogenous variables

- λ_1, λ_2, are two correction terms obtained using the double – selection framework proposed by Tunali (1986). In the first stage we use a standard bivariate probit estimation of eqs. 1)and 2). In the second stage the estimated correction terms are plugged in equations 3.1 and 3.2 to correct for sample selection.
- We use presence of brothers and sisters as selection variables in the hours of work equation and presence of brothers in the hours of care equation.

Econometric specification: covariates

Personal and family characteristics of children (entire sample of 16,598 children)

- Age (in six classes): 35 yrs onward, 56.68 years on average
- Partnered: 85%
- Sex: 52% females
- Education (3 level dummy): 40% low; 34% middle; 27% high
- Number of cohabiting (NO) children: 0.46 on average
- Own health (3 level dummy):78% good; 17% fair ; 5% bad
- At least one parent or parent in law with poor health (dummy): 46%
- Has living brothers (dummy): 73%
- Has living sisters (dummy): 72%
- Family wealth: 185,000 € on average
- Rental income : 1,411 € on average
- At least one parent less than 25 km: 47%, on average
- At least one parent-in-law less than 25 km : 32% on average

Institutional variables

- 11 country dummies: AT, BE, CZ, DE, DK, EL, ES, IT, NL, SE, PL
- National coverage rate of home and residential care for the elderly (around 2009): 13.49%
- Statutory retirement age in the country: 60.01 age on average

Econometric specification:covariates

- Two alternative specifications for attitudes and beliefs variables
- Model A: covariates for religion and political views , all treated as exogenous and entered separatedly:
  - Political views: 4 category dummy from left to right 22% left; 25% center; 24% right; 29% no views
  - Religion (5 category dummy): 18% protestant; 15% catholic ; 10% orthodox; 1% other; 8%: none; Religion transmitted from parents (dummy): 38%
  - Religious intensity (frequency of praying ; 3 level dummy) : 25% daily, 16% weekly and 53% less than weekly

Econometric specification: attitudes and beliefs

Model B1:

- Familial Obligation Score: an ordinal variable capturing the strength of perceived child-parent and child-grandparent obligations. The higher the value the weaker the perceived obligations. It ranges from -4.91 to 2.48 in the sample; -1.33 on average
- religion (three variables : see above)
- Political views (5 level dummy: see above)

(all treated as exogenous)

Model B2

- The Familial Obligations Score instrumented by the three religion variables;

  (Good instrument requirements: the three variables are well correlated with the index and religion is often used to instrument 'culture' in the literature on the assumption of weak or no correlation with the error term and, in oru case, pass the Hansen test of istrument validity)

- Political views (5 level dummy; see above)

Familial Obligations Score

- Based on two questions from the self-administered questionnaire;
- An ordinal principal component index (Filmer and Pritchett, 1998; Gwatkin et al. 2000; Vyas and Kumarayake 2006) was computed after coding each question as an ordinal variable.
- The Score can be interpreted as a measure of 'traditionalism' concerning perceived familial obligations. The lower the Score, the stronger the belief that children, parents and grand-parents have strong mutual obligations. The higher the Score, the stronger the belief that care can be outsourced

The questions

6. The following statements are related to the duties people may have in their family. Please tell us how much you agree or disagree with each statement.
(Please tick one box in each row)

		Strongly agree ▼1	Agree ▼2	Neither agree nor disagree ▼3	Disagree ▼4	Strongly disagree ▼5
a)	Parents' duty is to do their best for their children even at the expense of their own well-being.	☐1	☐2	☐3	☐4	☐5
b)	Grandparents' duty is to be there for grandchildren in cases of difficulty (such as divorce of parents or illness).	☐1	☐2	☐3	☐4	☐5
c)	Grandparents' duty is to contribute towards the economic security of grandchildren and their families.	☐1	☐2	☐3	☐4	☐5
d)	Grandparents' duty is to help grandchildren's parents in looking after young grandchildren.	☐1	☐2	☐3	☐4	☐5

7. In your opinion, who – the family or the State -- should bear the responsibility for each of the following...:
(Please tick one box in each row)

		Totally family ▼1	Mainly family ▼2	Both equally ▼3	Mainly state ▼4	Totally state ▼5
a)	Financial support for older persons who are in need?	☐1	☐2	☐3	☐4	☐5
b)	Help with household chores for older persons who are in need such as help with cleaning, washing?	☐1	☐2	☐3	☐4	☐5
c)	Personal care for older persons who are in need such as nursing or help with bathing or dressing?	☐1	☐2	☐3	☐4	☐5

Findings, in pills:

- The 'employment penalty' of caring for one's parents is small but not negligible at the extensive margin (probability of working). At the intensive margin (hours of work lost) the estimated trade off carries no statistical significance

- Among carers the probability of working is significantly lower for women (more than 20 percentage points)

- Being highly religious influences the probability of working and of caring in opposite directions. Being highly religious also reduces hours of work, the effect is either small or weakly significant, while having no significant influence on hours of care.

- Type of religion or transmission from parents have no appreaciable influence, with one exception: the protestant religion significantly and positively affects the probability of working. However, weak results for these two variables are probably due measurement error as we imputed nearly half of the missing observations.

- As one might expect, (strongly) perceived family obligations lower the probability of being in work , and conversely for the probability of being a carer. However, perceived family obligations have no appreciable effect on hours of care or hours of work.

Detailed results for probability of working and of caring . Model A

- The correlation coefficient between the probability of working and that of caring is negative, statistically significant (1% level) and amounts to – 0.11
- For the individual with average sample characteristics, the probability of working conditional on caring is 10 points lower than the probability of working conditional on non caring.
- Being a woman (all other things equal) entails a drop of 22 points in the probability of working conditional on caring
- Type of religion or transmission from parents do not have a significant effect with the exception of protestantism in the probability of work equation: for a protestant the probability of working conditional on caring is 6 percent higher, all other things equal.
- Being very or moderately devout (weekly-daily prayers) decreases the probability of working conditional on caring by 5-6% points, the effect being highly significant (1%) while increasing that of caring by less than one percent (5% significance) .
- Not having political views decreases the probability of working conditional on caring by 4 point % (conventional significance) while having no statistically significant effect on the probability of caring conditional on working.

Detailed results for hours of work and hours of care.
Model A

Hours of work

- being a carer entails a negligible, negative (as expected) and not significant reduction of hours of work (2 minutes per day)
- holding 'leftist' or 'center' political views reduces hours of work by between 11 and 14 minutes per day (statistically significant at 1%)
- No statistical significance for type of religion, while strong religion intensity continues to hinder work, though the effect is small (about 7 minutes) and weakly significant (10% level)

Hours of care

- Being in work reduces daily hours of care by 21 minutes, but the effect is not significant at conventional level.
- Hours of care are apparently not influenced by religion, devoutness or political views at conventional levels of statistical significance.

How do results change when Family Obligations Score is introduced? Model B1

- For the average individual in the sample, the size of the trade-off between caring and working is practically unaffected by accounting for perceived family obligations.
- For and individual who perceives strong family obligations (Score=4) the propensity to work (conditional on caring) reduces by 8 pp. with respect to an individual whose perceptions are weak (Score =0) . The converse happens for the propensity to care (conditional on working), but in this case the increase is much smaller (less than 1% pp.)

- The effects of being devout and of political views on the probabilities of working and caring are practically the same as in Model A.

- Hours of work: the Obligation Score is weakly significant (10%) ,with the coefficient bearing the expected sign (negative); all other results for the covariates of interest are practically unchanged

- Hours of care: the Obligation Score is not significant and the coefficients for the covariates of interest are practically unchanged

How do results change when the Obligation Score is instrumented? Model B2

- Hours of care:
  - The Obligation Score coefficient does not gain significance after instrumentation.
  - Instrumentation changes the value of the marginal effects (coefficients) of some covariates, but never the sign or the statistical significance; the only exception is the sex covariate (female) which loses both weight and significance.
- Hours of work:
  - Instrumentation does not improve significance for the Obligation Score effect.
  - There is little change in the marginal effect of all other covariates.