ISSN 2279-9362

Collegio Carlo Alberto

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No. 532
December 2017

Carlo Alberto Notebooks

www.carloalberto.org/research/working-papers

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The uneven impact of women's retirement on their daughters' employment

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January 2018

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Abstract

Family support is stronger in countries with weak family policies. In this paper, I test whether the impact of women's retirement on their daughters' employment differs between countries with strong and weak family policies. Using SHARE and self-collected historical data on early and full retirement ages in 20 European countries, I find that women's retirement leads to an increase in their daughters' employment in countries with low family benefits, while the opposite is true in high family-benefits countries. The positive effect found in low family-benefits countries can be explained by a decrease in monetary transfers and an increase in grandchild care following retirement. Instead, the reduction in help with practical matters and contact with daughters can explain the negative effect in high family-benefits countries.

JEL codes: J08, J13, J22

Keywords: women's retirement, daughters' employment, intergenerational transfers, grandchild care

Introduction

In a context with aging population and persistent gender gap in labor force participation, female employment has turned into a key policy variable for the sustainability of the European pension system (OECD, 2012). Increasing female employment became an essential requirement to meet the European Commission's objective of raising the employment rate of the population aged 20 to 64 to at least 75% by 2020. The literature has focused their attention on two key determinants of female employment: institutions and the social context (Jaumotte, 2003). Institutions have the potential to help women reconcile work and family life through formal childcare, subsidies, maternity leaves, and taxation. Societies influence female employment through social norms (e.g., the "male breadwinner" model). Moreover, families as the basic unit of society have a potentially determinant role through the provision of money and time transfers including grandchild care.

Some European countries have responded to the demographic transition by implementing profound changes to their social security systems. In many cases, these reforms have led to a gradual increase in the legal retirement ages, with the aim to raise labor market participation at the end of the life cycle (Milligan and Wise 2012). Higher retirement ages of women affect their availability for monetary and time transfers to their daughters which in turn may influence their daughters' employment.

There are several channels by which women's retirement may impact on their daughters' employment decision and their overall effect is in principle ambiguous. On the one hand, retirement decreases availability of money for transfers (differences between pre-retirement income and retirement benefits are typically positive) and a reduction in money transfers implies higher daughters' labor force participation. On the other hand, retirement can increase availability for time transfers (including grandchild care), which in turn increase daughters' employment. However, some women may change their habits as a consequence of retirement and be less available for time transfers (for instance, if they travel, spend time in a second house by the sea, etc.). Finally, daughters may experience a higher opportunity cost of working if they enjoy spending time with their retired mothers.

The above-mentioned mechanisms depend substantially on the cultural and institutional context. For instance, women may transfer more money and devote more time to their daughters in more family-oriented cultures and poorer welfare states. Social norms may partly determine how women use their time after retirement. For instance, some societies expect retired women to

spend time helping their daughters, while in others it is customary that retirees become tourists and travel. Gauthier and Smeeding (2003) and Gershuny, Harvey and Merz (2004) show that there are large cross-national differences in the patterns of time-use after retirement.

European countries significantly differ in their social protection and welfare systems (Esping-Andersen, 1999, and Ferrera, 1996), family models (Jurado Guerrero and Naldini, 1997, and Trifiletti, 1999), care systems (Saraceno, 2000, and Bettio and Platenga, 2004) and labor markets (Mingione, 2002). Some countries are characterized by both very strong family values and a low degree of individualism, and by the lack of explicit family policies, as evidenced by a very limited number of family-friendly social provisions (Flaquer, 2000). This model prevails for instance in the Southern European countries, where it is taken for granted that households must provide for the welfare of their members and little emphasis is placed on formal family policy (Esping-Andersen, 1999, called this the familialistic model).[1] This fact creates interdependence among family members, which end up strengthening family ties.

The familialistic model stands in sharp contrast with the nordic and continental models, which are characterized by weaker family ties and more family-oriented policies. As the strength of family policies is at the core of family responses to the needs of their members, I define two sets of countries according to the level of family benefits (FB): above and below the OECD average. I then analyze the effect of women's retirement on daughters' employment separately. Countries with FB above the OECD average are: Austria, Germany, Sweden, France, Denmark, Belgium, Czech Republic, Ireland, Luxembourg, Hungary, Croatia. Instead, those with FB below the OECD average are: Greece, Italy, Netherlands, Poland, Portugal, Slovenia, and Spain.

In my empirical analysis, I exploit data from SHARE, a multidisciplinary cross-national

[1] According to Esping-Andersen (1999), the familialistic model is characterized by: (a) the centrality of the family as caregiver and as locus of solidarity and welfare provision; and (b) a male bread-winner bias in social and employment protection. Leibfried (1992), Petmesidou (1996) and Ferrera (1996) refer to the role of the family in developing strategies to protect and augment the welfare of members: (a) pooling income from different sources, (b) mobilizing clientelistic networks to get social benefits and access to public sector jobs, (c) securing and transferring home ownership, and (d) providing income and protection to unemployed members. Jurado Guerrero and Naldini (1997) list a series of behavioral and attitudinal traits common to familialistic countries: (a) several generations living together in one household, (b) high degree of institutionalization of marriage, (c) low female employment rates, (d) high continuity of female employment patterns, (e) family-oriented attitudes, (f) high valuation of children, and (g) relations between generations seen more in terms of obligations. Reher (1998) focuses on two distinctive patterns present in all familialistic countries: young adults leave their parental home at marriage and there is a high degree of solidarity for the needy and vulnerable members of the family. For Trifiletti (1999), the specificity of familialistic countries lies in the state not guaranteeing a family wage for the male breadwinners and hence the families need more income earners. Finally, Saraceno (2000) and Bettio and Plantenga (2004) both emphasize that the familialistic model relies heavily on informal care, but formal care arrangements for children and the elderly are underdeveloped in these countries. For a complete review of the literature, see Jurado Guerrero and Naldini (forthcoming).

individual-level survey of individuals above 50 years of age living in 20 European countries. I make use of the 2004, 2007, 2011, 2013 and 2015 waves in version 6 of the dataset. SHARE contains information on demographics, family, labor market history, social environment, economic situation, and health of surveyed individuals. Crucially for my analysis, it also provides information on gender, age, labor market status and household composition of up to four children. Moreover, it also includes information on money and time transfers, including grandchild care, provided by surveyed individuals to their children, as well as information regarding frequency of contact between surveyed individuals and their children. This information allows me to test whether transfers and/or time spent together are behind the effect of retirement eligibility on daughters' employment.

As Coe and Zamarro (2011), I implement an empirical specification in the spirit of the Regression Discontinuity Design in Campbell (1969), Angrist and Lavy (1999), and Van der Klaauw (2003), among others, using country-specific early and full retirement ages as cutoffs. I account for the influence of women's age on daughters' employment using a polynomial and exploit the sharp increases in the probability of retirement at the legal retirement ages. In practice, I estimate the causal impact of women's retirement on daughters' employment using an instrumental variable regression where the probability of being retired is instrumented by dummies for being above the early and full retirement ages.

I find that women's retirement reduces daughters employment by 18 percentage points in high FB countries while it increases daughters' employment by 18 percent in low FB countries. My results for low FB countries are in line with previous studies on the role of women's retirement eligibility on daughters' employment in Italy: Aparicio-Fenoll and Vidal-Fernández (2015) and Bratti, Frattini and Scervini (2016). The former makes use of changes in the full retirement age and find that women's retirement leads to a 21.4% increase in their daughters' labor force participation.

Bratti, Frattini and Scervini (2016) show that women with cohabiting children under 15 and mothers eligible for retirement are 11% more likely to be in the labor force than women whose mothers are not eligible. Additionally, I find that the positive effect found in low FB countries can be explained by the reduction in money transfers and the increase in grandchild care following retirement. I also find some evidence that the negative effect in high FB countries arises because women tend to provide less help with practical matters and reduce contact with their daughters after retirement.

This paper relates to the literature on the impact of women's transfers on their daughters' employment. Most of this literature has focused on grandchild care. Cardia and Ng (2003) extend an overlapping generation model to allow for both time and money transfers and calibrated it to the US economy. They find that intergenerational time transfers in the form of grand-parenting have important positive effects on labor supply and capital accumulation of daughters. Dimona and Wolff (2010) present a theoretical framework to analyze the effect of grandparents' time and money transfers on maternal labor supply. Using SHARE, they find a strong positive impact of grandchild care on the decision of mothers to participate in the labor force, but no impact of money transfers. These results contrast with those of Aasve et al. (2012), who use data from the Generations and Gender Survey, and conclude that there is no effect of grandparents' childcare on mothers' employment in the majority of analyzed countries (France, Georgia, Netherlands and Russia) while the effect is positive in Bulgaria, Germany and Hungary.

This paper also relates to the literature on women's retirement and transfers to their children. Using data from the Health and Retirement Study, Lei (2006) investigates the determinants of transfers to children and paid employment of older woman. Results show that American women who have a new grandchild are likely to provide more money and time transfers to their children but do not change their labor supply. Zamarro (2011) focuses on the determinants of time transfers and how grandmothers combine them with paid work. Using SHARE, she finds a negative and very significant effect of participating in the labor market on the probability of taking care of grandchildren on a regular basis. She also finds that in some countries the childcare provided by grandmothers has a positive effect on the labor force participation of their daughters. In this paper, I directly address the impact of women's retirement on daughters' employment and explore several channels that could explain this impact, including childcare.

The remainder of the paper is as follows. Section 1 explains the methodology used to estimate the impact of retirement on daughters' employment. Section 2 describes the database and the sample included in the estimation. In Section 3, I interpret the results. Finally, Section 4 presents the conclusions.

I Methodology

In order to get a first sense of the relationship between women's retirement and their daughters' employment in high and low FB countries, I start with an OLS regression of daughters' employ-

ment on a retirement indicator and its interactions with high and low FB country dummies:

$$E_{imct} = \alpha_0 + \alpha_1 R_{mt} \cdot F_c + \alpha_2 R_{mt} \cdot (1 - F_c) + \alpha_3 X_{mt} + \alpha_4 Z_{it} + \alpha_5 D_c + \alpha_6 D_t + \varepsilon_{imct} \quad (1)$$

where E is a dummy equal to one if daughter i of mother m living in country c is employed at time t, R is a dummy equal to one if the mother is retired, F is a dummy equal to one for high FB countries, X includes a set of the mother's characteristics, including age, age squared, their interactions with the high FB indicator, and education level binary variables, and Z is a vector of the daughter's characteristics, including age dummies, education indicators, marital status, dummies for the number of children and age of the youngest child. D_c and D_t represent country and year binary variables. Finally, ε is the error term.

A positive coefficient α_1 (alternatively α_2) indicates that daughters of retired women are more likely to work in high (alternatively, low) FB countries. The set of demographic controls assures us that we are comparing relatively similar retired and non-retired women. However, the decision to retire can be endogenous to daughters' employment status, for instance if mothers retire to have more time available to help their employed daughters or to spend more time with their non-employed daughters. For this reason, I turn my focus to early and full legal retirement ages as exogenous shifters of retirement status. In particular, as Coe and Zamarro (2011), I control of women's age and age squared, and exploit the significant increases in the probability of retiring at the legal retirement ages cutoff.

Legal early and full retirement ages are key policy variables themselves and the coefficients associated with them are informative of the influence of retirement policies on young women's employment. I explore the role of retirement eligibility by first running a reduced form regression in which I substitute the retirement dummy in the equation above for dummies equal to one if the mother is above the early and/or full retirement age in her country:

$$\begin{aligned} E_{imct} \;=\; & \beta_0 + \beta_1 ERE_{mct} \cdot F_c + \beta_2 FRE_{mct} \cdot F_c + \beta_3 ERE_{mct} \cdot (1 - F_c) + \\ & \beta_4 FRE_{mct} \cdot (1 - F_c) + \beta_5 X_{mt} + \beta_6 Z_{it} + \beta_7 D_c + \beta_8 D_t + \varepsilon_{imct} \end{aligned} \quad (2)$$

where ERE and FRE are dummies for age-based early and full retirement eligibility, respectively.[2]

[2]Focusing on legal retirement ages rather than including all eligibility criteria is useful because: (i) it is a well-defined and comparable criterion across countries, (ii) it is the most widely used policy variable to cope

I also use the exogenous variation induced by early and full retirement eligibility in actual retirement by means of an instrumental variable strategy. The first and second stages for the estimation of the causal impact of women's retirement on daughters' employment can be written as:

$$R_{mt} \cdot F_c = \gamma_0 + \gamma_1 ERE_{mct} \cdot F_c + \gamma_2 FRE_{mct} \cdot F_c + \gamma_3 ERE_{mct} \cdot (1 - F_c) + \gamma_4 FRE_{mct} \cdot (1 - F_c) + \gamma_5 X_{mt} + \gamma_6 Z_{it} + \gamma_7 D_c + \gamma_8 D_t + \upsilon_{imct} \quad (3)$$

$$R_{mt} \cdot (1 - F_c) = \delta_0 + \delta_1 ERE_{mct} \cdot F_c + \delta_2 FRE_{mct} \cdot F_c + \delta_3 ERE_{mct} \cdot (1 - F_c) + \delta_4 FRE_{mct} \cdot (1 - F_c) + \delta_5 X_{mt} + \delta_6 Z_{it} + \delta_7 D_c + \delta_8 D_t + \upsilon_{imct} \quad (4)$$

$$E_{imct} = \lambda_0 + \lambda_1 \widehat{R_{mt} \cdot F_c} + \lambda_2 R_{mt} \cdot \widehat{(1 - F_c)} + \lambda_3 X_{mt} + \lambda_4 Z_{it} + \lambda_5 D_c + \lambda_6 D_t + \omega_{imct} \quad (5)$$

where I test for weak instruments using the Angrist and Pischke (2009) procedure and λ_1 and λ_2 are the estimates of the causal effect of women's retirement on their daughters' employment in high and low FB countries, respectively. These estimates constitute local average treatment effects, and thus are identified from the set of women that retire because of achieving early or full retirement age.

Finally, I explore which factors explain the causal estimates by including the interaction of different potential channels with the high and low FB dummies in Equation (4). In particular, I study how the estimated effects change when I account for money transfers, their quantity, help with practical matters, the frequency of contact between women and their daughters, and grandchild care.

II Data

The data used in this study come from the Survey of Health, Ageing and Retirement in Europe (SHARE), which is a cross-national micro database on health, socioeconomic status and social and family networks. It contains information on more than 120,000 individuals aged 50 or older.

with the demographic transition and the crisis, and (iii) it is the only retirement eligibility criteria that is not manipulable. For instance, one may work more years or choose a specific sector to become entitled to retirement benefits, but it is unlikely that individuals manage to report a different birth date.

SHARE covers 20 European countries, and is available for the years 2004, 2007, 2011, 2013, and 2015.[3]

My sample includes 50-to-70-year-old women with 23-to-50-year-old daughters. I choose the 50-70 age range for women because these are the ages at which most women retire. I select the 23-50 age range for daughters to avoid including daughters still in education (university graduation typically occurs at 22) and not to overlap with the sample of mothers. There are 38,124 observations of mother-daughter pairs in these age ranges in SHARE (22,274 in high FB countries and 15,850 in low FB countries). From these, I select observations with information on daughters' employment, education and family composition, as well as mothers' education. This leaves me with 24,233 observations to include in my regressions (14,251 in high FB countries and 9,982 in low FB countries). I then use the information on mothers' age, country of residence and year of the survey to define retirement eligibility according to my own-elaborated historical database on country-specific early and full retirement ages.

The distinction between high and low FB countries is based on OECD Family Policy data for 2013 which is presented in Figure 1. Family benefits are defined as public support that is exclusively for families (e.g. child payments and allowances, parental leave benefits and childcare support) and are computed as a percentage of GDP.

Table 1 shows the descriptive statistics for the overall sample and the subsamples of high and low FB country residents included in the regressions. The proportion of employed daughters is 70% and the corresponding figures are 72% and 68% in high and low FB countries, respectively. As for mothers, the proportion of retired 50-70 years old women is 52%, and is very similar for high and low FB countries. This is consistent with the proportions of women above early and full retirement ages which are 59% and 47%, respectively, in both sets of countries. The average ages of women and their daughters are 61 and 33 in both samples. However, the two samples differ in the level of education of females. Both mothers and daughters are significantly less educated in low FB countries (there is a 4 percentage points difference between the two sets of countries in terms of women with tertiary education). The percentages of married daughters are similar in the two sets of countries (56%). Surprisingly, monetary and time transfers are more common in high FB countries. However, these transfers do not include shared food or housing which may be more common in those countries. I approximate the latter using a dummy for having contact at

[3]There is an additional wave available for 2009 but it is a special issue and questions are different from those in other waves.

least several times per week, which is 10 percentage points higher in low FB countries. Finally, the incidence of grandchild care is high in both sets of countries, but surprisingly, grandmothers in high FB countries provide more childcare (31% versus 24%), which is corroborated by EU-SILC data.[4] The transfer pattern described by the data is consistent with findings in Albertini, Kohli, and Vogel (2007). They found that transfers from parents to children are less frequent but more intense in the Southern European countries than in the Nordic ones, with the Continental European countries being somewhere in between the two.

III Results

Table 2 shows the results of the OLS estimation of Equation (1). In both sets of countries, there is a positive association between women's retirement status and their daughters' employment. The magnitude of the conditional correlations does not change as we add controls. The estimates are lower and not statistically significant for high FB countries.

Table 3 shows the reduced form estimates resulting from regressing daughters' employment on age-based early and full retirement eligibility. Differences between high and low FB countries emerge: while full retirement eligibility decreases daughters' employment by 4 percentage points in high FB countries, it increases the probability of daughters' employment by almost 3 percentage points in low FB countries. Estimated effects are strongest when all controls are included. Effects are not significant for early retirement.

Table 4 includes the result of estimating the first stages as in equations (3) and (4). There are significant increases in actual retirement probability at the legal retirement age cutoffs. Moreover, being above early and full retirement ages can be used as instruments because F-statistics of the excluded instruments (computed following Angrist and Pischke, 2009) are well-above the Stock and Yogo (2005)'s critical values (they are 1,463 and 1,454 for high and low FB countries, respectively). The increase in the probability of retirement associated with the full retirement age is 10% and 15% in high and low FB countries, respectively. The corresponding increase for early retirement age is 16% and 12% in high and low FB countries, respectively.

[4] In a report for the European Commission, Mills et al. (2014) state that: "When looking at the Mediterranean countries, where welfare state provisions are often lower than in other countries and need to be supplemented with relatively large support from kin networks (Kovacheva et al. 2011), it is surprising that prevalence rates of childcare by grandparents and other kin is not more prominent. Portugal, Greece and Italy all have prevalence rates over 20 percent for childcare by grandparents for less than thirty hours per week, but they still are markedly lower than for instance in the United Kingdom." (page 30).

I present the results of estimating Equation (5) in Table 5. Women's retirement decreases their daughters' employment probability by almost 18 percentage points in high FB countries and increases the probability by almost 18 percentage points in low FB countries. The magnitude of the estimated coefficients is high compared to the 11 percentage points in Bratti, Frattini and Scervini (2016), in line with the 21.4% in Aparicio-Fenoll and Vidal-Fernandez (2015) and relatively low as compared to the 32.3% in Arpino et al. (2014).

Finally, Table 6 shows the result of exploring the mechanisms underlying the estimated effects. I find that the negative effect of women's retirement on daughters' employment in high FB countries is reduced when I account either for help with practical matters or contact with daughters. This is consistent with retired women spending less time helping their daughters (for instance if they move to a second house or travel as tourists). I also find that the positive effect of women's retirement on daughters' employment in low FB countries is reduced when I account for money transfers. Hence, the reduction in money transfers after retirement can partially explain why some daughters react to maternal retirement by becoming employed. Interestingly, I also find that the positive effect vanishes when I control for childcare provided by the retired woman. This corroborates the hypothesis of previous papers that the impact of women's retirement on daughters' employment could be mediated by the provision of grandchild care (Aparicio-Fenoll and Vidal-Fernandez, 2015, and Bratti, Frattini and Scervini, 2016). This result could also explain why female retirement increases daughters' fertility (Battistin, De Nadai, and Padula, 2015). The fact that accounting for childcare explains the effect of retirement on daughters' employment in low FB countries but not in high FB countries is consistent with findings in Kohli and Albertini (2008) that daughters' needs in order to reconcile family and working life have different effects on parental support strategies in different European countries.

IV Conclusion

Previous literature has found positive effects of women's retirement on their daughters' employment in Italy. This paper shows that the same effect is found for the sample of all countries with FB below the OECD average (Greece, Italy, Netherlands, Poland, Portugal, Slovenia, and Spain). However, women's retirement reduces daughters' employment in countries with FB above the OECD average. This difference could be explained because families tend to substitute the role of the state in countries with insufficient family policies while women tend to rely on state

support to reconcile work and family life in high FB countries.

The current paper is the first to provide empirical evidence on the channels through which retirement affects daughters employment. In particular, I find that the reduction in money transfers could partially explain the positive effect found in low FB countries but grandchild care is playing a major role. In low FB countries, working women may be constrained in the amount of childcare they provide to their daughters and hence, women's retirement enables them to help their daughters work. I also find that reductions in help with practical matters and contact with daughters could be behind the negative effect of retirement on daughters' employment in high FB countries. The negative effect could also be explained if women's retirement increases daughters' opportunity cost of working because they enjoy spending time with their retired mothers or if retired women act as non-working women role models for their daughters. Exploring those potential mechanisms requires more specific survey data and is left for further research.

My results indicate that pension systems should be designed together with policies for female labor market integration. Furthermore, authorities should take into account that the side effects of retirement policies on the labor force participation of young individuals differ according to the strength of family policies.

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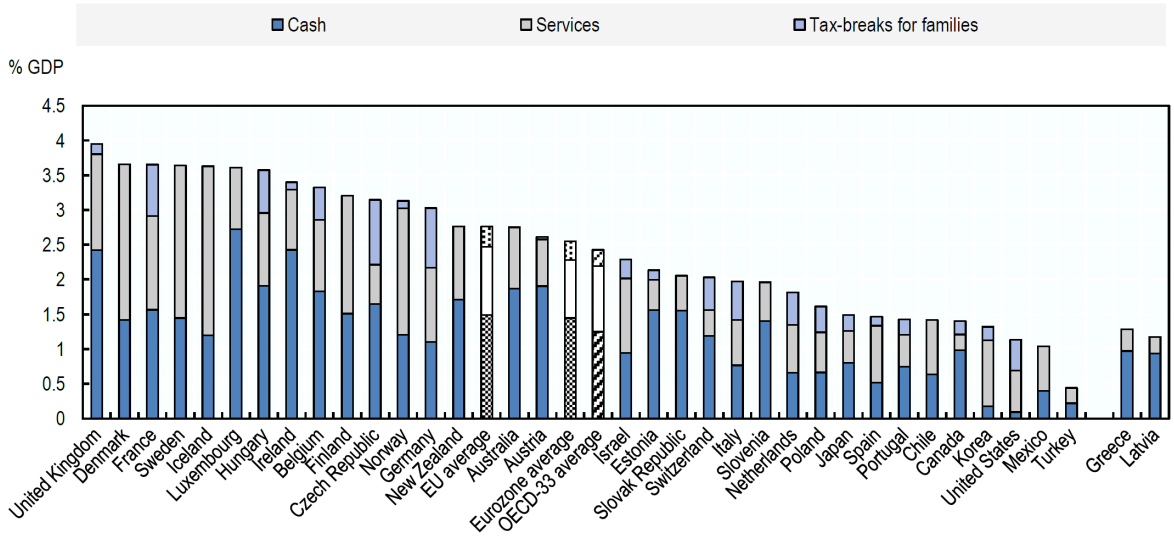
Figure 1: Public spending on family benefits



Source: OECD Family Database available at http://www.oecd.org/els/family/database.htm. Year 2013.

Tables

Table 1: Descriptive statistics

Variable	All countries	High FB	Low FB
Employed daughter	0.703	0.719	0.681
Retired	0.519	0.521	0.515
Early retirement eligibility	0.59	0.591	0.589
Full retirement eligibility	0.475	0.473	0.477
Age	61.244	61.164	61.358
Primary education	0.639	0.585	0.717
Lower secondary	0.065	0.071	0.056
Upper secondary	0.128	0.171	0.066
Tertiary education	0.154	0.169	0.133
Other education	0.014	0.004	0.028
Daughter age	33.348	33.573	33.027
Married daughter	0.558	0.556	0.562
Daughter primary education	0.481	0.419	0.570
Daughter lower secondary	0.011	0.011	0.01
Daughter upper secondary	0.161	0.224	0.071
Daughter tertiary education	0.324	0.34	0.301
Daughter other education	0.023	0.007	0.047
Daughter number of children	1.023	1.096	0.918
Daughter age youngest child	3.934	4.21	3.54
Money transfers	0.038	0.051	0.02
Missing transfers info	0.358	0.382	0.325
Transfer quantity	84.891	111.698	46.619
Missing quantity info	0.02	0.028	0.009
Time transfers	0.018	0.027	0.006
Help missing info	0.065	0.065	0.066
Often contact	0.267	0.224	0.327
Childcare	0.278	0.307	0.235
Childcare missing info	0.009	0.01	0.007
Number of observations	24,233	14,251	9,982

Data source: Share 2004, 2007, 2011, 2013, and 2015 waves. The sample includes 50-70-year-old women and their 23-50-year-old daughters. Countries with FB above the OECD average are: Austria, Germany, Sweden, France, Denmark, Belgium, Czech Republic, Ireland, Luxembourg, Hungary, Croatia. Those with FB below the OECD average are: Greece, Italy, Netherlands, Poland, Portugal, Slovenia, and Spain.

Table 2: OLS results. Women's retirement and their daughters' employment

	(1)	(2)	(3)
Retired*High FB	0.014	0.014	0.015
	(0.011)	(0.011)	(0.011)
Retired*Low FB	0.039	0.039	0.038
	(0.012)***	(0.012)***	(0.012)***
Education controls	N	Y	N
Children controls	N	N	N
Obs.	24,593	24,593	24,234
R^2	0.055	0.06	0.085
F statistic	24.91	23.58	25.99

Data source: Share 2004, 2007, 2011, 2013, and 2015 waves. The sample includes 50-70-year-old women and their 23-50-year-old daughters. All regressions include women's age and age squared interacted with high and low FB country dummies, daughters' characteristics (age dummies and a married indicator), country of residence and year dummies. In the second column I add education dummies for women and their daughters and in the third column, I also include daughters' number of children and age of the youngest child.

Table 3: RF results. The impact of women's legal retirement ages on their daughters' employment

	(1)	(2)	(3)
Full retirement age	-.037	-.039	-.039
*High FB	(0.015)**	(0.015)**	(0.015)***
Early retirement age	-.001	-.005	-.009
*High FB	(0.015)	(0.015)	(0.015)
Full retirement age	0.021	0.024	0.031
*Low FB	(0.018)	(0.018)	(0.018)*
Early retirement age	0.019	0.027	0.029
*Low FB	(0.017)	(0.017)	(0.017)
Education controls	N	Y	N
Children controls	N	N	N
Obs.	24,608	24,608	24,249
R^2	0.055	0.06	0.085
F statistic	24.081	22.975	25.832

Data source: Share 2004, 2007, 2011, 2013, and 2015 waves. The sample includes 50-70-year-old women and their 23-50-year-old daughters. All regressions include women's age and age squared interacted with high and low FB country dummies, daughters' characteristics (age dummies and a married indicator), country of residence and year dummies. In the second column I add education dummies for women and their daughters and in the third column, I also include daughters' number of children and age of the youngest child.

Table 4: FS results. Women's legal retirement ages and actual retirement

	Retired*High FB			Retired*Low FB		
	(1)	(2)	(3)	(4)	(5)	(6)
Full retirement age	0.101	0.101	0.097	-.003	-.003	-.003
*High FB	(0.009)***	(0.009)***	(0.009)***	(0.008)	(0.008)	(0.008)
Early retirement age	0.16	0.16	0.163	-.002	-.002	-.002
*High FB	(0.009)***	(0.009)***	(0.009)***	(0.008)	(0.008)	(0.008)
Full retirement age	-.005	-.005	-.006	0.152	0.152	0.15
*Low FB	(0.01)	(0.01)	(0.01)	(0.009)***	(0.009)***	(0.009)***
Early retirement age	-.010	-.010	-.010	0.118	0.119	0.119
*Low FB	(0.01)	(0.01)	(0.01)	(0.009)***	(0.009)***	(0.009)***
Education controls	N	Y	N	N	Y	N
Children controls	N	N	N	N	N	N
Obs.	24,593	24,593	24,234	24,593	24,593	24,234
R^2	0.684	0.684	0.684	0.701	0.702	0.7
F statistic	901.408	782.397	593.712	976.891	847.669	640.608

Data source: Share 2004, 2007, 2011, 2013, and 2015 waves. The sample includes 50-70-year-old women and their 23-50-year-old daughers. All regressions include women's age and age squared interacted with high and low FB country dummies, daughters' characteristics (age dummies and a married indicator), country of residence and year dummies. In the second column I add education dummies for women and their daughters and in the third column, I also include daughters' number of children and age of the youngest child.

Table 5: IV results. The impact of women's retirement on their daughters' employment

	(1)	(2)	(3)
Retired*High FB	-.128	-.151	-.178
	(0.062)**	(0.062)**	(0.062)***
Retired*Low FB	0.141	0.178	0.176
	(0.069)**	(0.069)***	(0.074)**
Education controls	N	Y	N
Children controls	N	N	N
Obs.	24,593	24,593	24,234
R^2	0.045	0.046	0.067
F statistic	24.628	23.276	25.598

Data source: Share 2004, 2007, 2011, 2013, and 2015 waves. The sample includes 50-70-year-old women and their 23-50-year-old daughters. All regressions include women's age and age squared interacted with high and low FB country dummies, daughters' characteristics (age dummies and a married indicator), country of residence and year dummies. In the second column I add education dummies for women and their daughters and in the third column, I also include daughters' number of children and age of the youngest child. Retired is instrumented using dummies for being above early and full retirement ages.

Table 6: IV results. Potential mechanisms

	transfer	quantity	help	childcare	contact
	(1)	(2)	(3)	(4)	(5)
Retired*High FB	-.239	-.235	-.166	-.254	-.162
	(0.082)***	(0.08)***	(0.066)**	(0.089)***	(0.062)***
Retired*Low FB	0.14	0.148	0.221	0.041	0.216
	(0.086)	(0.086)*	(0.069)***	(0.098)	(0.068)***
Transfer*High FB	-.043				
	(0.018)**				
Transfer*Low FB	-.038				
	(0.032)				
Quantity*High FB		6.20e-07			
		(1.62e-06)			
Quantity*Low FB		-6.77e-06			
		(4.33e-06)			
Help*High FB			0.012		
			(0.023)		
Help*Low FB			0.003		
			(0.058)		
Childcare*High FB				0.05	
				(0.01)***	
Childcare*Low FB				0.051	
				(0.013)***	
Contact*High FB					0.007
					(0.008)
Contact*Low FB					0.003
					(0.009)
Obs.	15,546	15,060	22,647	13,187	24,234
R^2	0.061	0.061	0.066	0.076	0.066
F statistic	16.285	15.72	23.78	17.648	24.981

Data source: Share 2004, 2007, 2011, 2013, and 2015 waves. The sample includes 50-70-year-old women and their 23-50-year-old daughters. All regressions include women's characteristics (the interactions of age and age squared with high and low FB country dummies, and education dummies) and daughters' characteristics (age dummies, a married indicator, education binary variables, dummies for number of children, and age of the youngest child). They also include country of residence and year dummies. Retired is instrumented using dummies for being above early and full retirement ages.