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Taking different points of view**

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Grandparents' care and mothers' work in Europe
Taking different points of view

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In this chapter, we study the relationship between grandparents' availability for childcare and mothers' work by analysing information that reflects three different points of view: the point of view of mothers, and more generally of families, who have the task of reconciling work and family; the point of view of grandparents, who may (not) be in a position to help their children with the care of their grandchildren; and the opinion spread in different countries regarding duties across generations. We analyse data from different European countries that, in recent years, participated in the following three surveys: the European Statistics on Income and Living Conditions, the Survey on Health Aging Retirement in Europe, and the European Value Study. We find a positive influence of grandparents' help on mothers' emplyment. Grandparents' availability for childcare is influenced by their characteristics as well as by the characteristics of their extended families. Beliefs about the importance of work in life and the role of mothers in the society are, respectively, associated with the probability of giving help and asking for help.

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1. Introduction

Grandparents' care is the one of most widespread forms of childcare nowadays. Despite its heterogeneity in terms of frequency and hours dedicated to the care of grandchildren, the phenomenon is present in countries with different degrees of development and different cultures and institutions and across families with different educational backgrounds and income. Hence, in the last ten years, in disciplines such as economics, sociology, demography, and psychology, there has been considerable interest in understanding the determinants of the help of grandparents (the characteristics of grandparents and their adult children and the characteristics of the context), the frequency of help (daily, weekly, or in emergencies), and the consequences of this kind of help (mothers' work, couples' fertility, and the cognitive functioning and well-being of children and grandparents themselves).[1]

The focus of this chapter is to study the relationship between grandparents' availability to help and mothers' employment. Accordingly, we will use data from different sources of information on a selection of European countries. We will first study the determinants of grandparents' help, taking into account, in a distinct way, the supply and demand for childcare: we will identify the personal characteristics (age, work situation, state of health, etc.) that influence the probability of grandparents being willing to help; on the other hand, we will consider the characteristics of the family in which the grandchildren reside for whom the parents want to ask for help (the number and age of children, being in a couple, education, etc.). Therefore, we will analyse the effect of grandparents' willingness to help on mothers' employment: instead of considering the observed help with childcare, which is endogenous and already represents the equilibrium between demand and supply, we will estimate the effect of the potential supply from grandparents as predicted by the first part of the analysis. Finally, we will investigate whether the effect of grandparents' care is homogeneous across different institutional contexts.

From an economic theoretical point of view, the possibility of having low-cost childcare should lower the reservation wage, so there is a higher probability of the mother offering herself to the labour market (Kimmel, 1998). Furthermore, with respect to other forms of childcare, grandparents' care is free, flexible, and worthy of trust. The likelihood of receiving help from grandparents, however, depends on a number of circumstances: grandparents must not be engaged in a full-time job, they must be in good health, and they must live at a reasonable distance from the home of their adult child. These circumstances interact with the type of help required: help on a daily basis for several hours (substituting a formal educational service); help on a weekly or even daily basis but only in the late afternoon (after time spent in a formal educational service); or help required in an emergency (e.g. a child's illness or school strike).

At the context level, institutions and culture may affect both the demand and the supply of grandparents' care: low availability of formal childcare for pre-school children and of after-school programmes for children at primary school may influence parents' demand; on the other hand, the preference for pleasure or work career may have an impact on grandparents' supply. These context characteristics, together with the average characteristics of families in different countries (birth rates, longevity, statutory retirement age, and mobility), create heterogeneity in the relevance of the

[1] For a review on the relevance of the phenomenon and its determinants, see Bengtson (2001), Blau and Currie (2006), Dalla Zuanna (2001), Douglas and Ferguson (2003), Goodfellow (2003), Guzman (2004), Hank, Cavrini, Di Gessa, and Tomassini (2018), Kimmel (1998), Leopold and Skopek (2014), Lumsdaine and Vermeer (2015), Margolis and Wright (2017), Pulgaron, Marchante, Agosto, Lebron, and Delamater (2016), Schmidt et al. (2016), Stelle, Fruhauf, Orel, and Landry-Meyer (2010), Waldrop et al. (1999), and Wheelock and Jones (2002).

phenomenon: it is very common in Southern European countries but less common in Northern European ones.[2]

What do we know about the effects of grandparents' care? A good number of studies already consider the consequences of this kind of help for many life dimensions. These studies find positive effects on mothers' employment and couples' fertility. When examining the cognitive functioning of children and grandparents, researchers find improvements in verbal communication for both. Grandparents' involvement, in terms of the amount of time, seems to affect their mental well-being: daily care increases the number of depressive symptoms, while a weekly commitment decreases them.[3]

We contribute to this field of research by analysing the issue from three points of view: the point of view of adult children who may ask for help with childcare; the point of view of grandparents who may offer their help; and the beliefs and values across Europe that may exert an impact on these dimensions.

In this chapter, we find a positive association between grandparents' help on mothers' employment, driven by women in less wealthy countries. The chapter is organized as follows. In Section 2, we explain the empirical methods employed, while, in Section 3, we present the three surveys utilized, the criteria for sample selection, and the variables. Section 4 contains the results; the conclusions follow in Section 5.

2. Empirical methods

The object of the chapter is to estimate the effect of grandparents' help in childcare on European mothers' employment:

$$w_i^* = \beta X_i + Z_i'\delta + \varepsilon_i \qquad [1]$$

where w_i^* is a latent variable that captures the probability of mother i working, X_i is help from grandparents, and Z_i' is a vector of variables that may be correlated with grandparents' help and may affect employment. Finally, the error ε_i is the individual error, which follows a logistic cumulative distribution. In the data, we observe $w_i = 1$ if $w_i^* > 0$ and $w_i = 0$ otherwise.

However, the inclusion of observed grandparents' help X in the equation raises problems of endogeneity: there may be unobservable characteristics (e.g. a woman's desire to be economically independent) that may affect the demand for childcare and employment. In addition, the observed value X is the joint result of the demand and the supply of help from grandparents, while we are interested in the effect of its supply. Therefore, instead of [1], we estimate

[2] For a review on the diffusion of grandparents' childcare across different countries and different welfare states, see Albertini, Kohli, and Vogel (2007), Arpino and Tavares (2013), Danielsbacka, Tanskanen, Jokela, and Rotkirch (2011), Fokkema, ter Bekke, and Dykstra (2008), Glaser et al. (2010), Gray (2005), Hank and Buber (2009), Herlofson and Hagestad (2012), Jappens and van Bavel (2012), Kriz (2005), Lee and Bauer (2010), and Leitner (2003).

[3] For a review on the effects of grandparents' help in childcare, see Aassve, Arpino, and Goisis (2012a), Aassve, Meroni, and Pronzato (2012b), Arpino and Bordone (2017), Arpino, Pronzato, and Tavares (2014), Aubel (2012), Compton and Pollak (2014), Del Boca (2002), Del Boca, Piazzalunga, and Pronzato (2018), Dimova and Wolff (2008), Eibich and Siedler (2020), Garca-Morán and Kuehn (2017), Jun (2015), Pronzato, Aassve, Luppi, and Pudney (2020), Rutigliano (2020), and Thomése and Liefbroer (2013).

$$w_i^* = \beta \hat{S}_i + Z_i' \delta + \varepsilon_i \quad [2]$$

where $\hat{S}_i$ is the predicted supply of grandparents' help in childcare. We explicitly model the demand and supply of grandparents' help via the estimation of a bivariate partial observability model (Poirier, 1980). The bivariate partial observability model is specified as follows:

$$S_i^* = G_i' \gamma_i^S + u_i^S \quad [3]$$
$$D_i^* = C_i' \gamma_i^D + u_i^D$$

In this specification, G_i' is a vector of grandparents' characteristics that affect their supply of help, while C_i' summarizes adult children's characteristics that affect their demand. u_i^S and u_i^D are normally jointly distributed.

The estimations of equation [3] give insights into the determinants of the supply and demand of grandparents' care. Among the vector of variables G and C, we also include beliefs and the availability of formal childcare at the country level. The effect of grandparents' care on mothers' work is estimated through equation [2], which we also use for estimating heterogeneous effects in different institutional contexts.

3. Data, sample selection, and variables of interest

The analysis involves the use of different micro data sets: the Survey of Health, Aging and Retirement in Europe (SHARE) for the year 2016; the European Union Statistics on Income and Living Conditions (EU-SILC) for the year 2015; and the European Values Study (EVS) for the year 2017. The use of different cross-country comparable data sets allows us to study the subject from different points of view, integrating information at the European level for the following countries: Austria, Croatia, the Czech Republic, Denmark, Estonia, France, Germany, Italy, Poland, Slovenia, Spain, and Sweden.

The data set from which we obtain the sample for our analyses is SHARE. SHARE is a research infrastructure employed for studying the health conditions, work and pension decisions, childhood and mobility, and family circumstances of European citizens aged 50 years and beyond. SHARE was launched in 2004 in 11 countries and, over time, was extended to 28 countries.

The people interviewed are asked for information about their existing children and grandchildren. We select people aged 50+ with at least one adult child (of a fertile age) and at least one grandchild (younger than 14 years old). These people are the ones who can potentially help by providing care for their grandchildren. The possibility and availability of help may depend on their personal characteristics: being in a couple, age, health condition, work situation, and distance from the home of adult children. Their help will also depend on the characteristics of the extended family: the number of grandchildren that they have and the age of the grandchildren. Adult children's demand for care may also vary depending on their own conditions: whether the female adult child works and the number and age of the children, for example.

Above all, different beliefs and different institutions may influence the demand and the supply of grandparents' help in childcare. Adult children may be less likely to ask for grandparents' help in countries where young children are expected to be looked after by the mother at home or where the availability of formal childcare is widespread. Grandparents may be more reluctant to help if they give importance to their own leisure time or, if they are still in the appropriate age range, to their work career. To take these dimensions into account, we will use information from the EVS and EU-SILC.

The EVS is a repeated cross-sectional survey that provides data on the ideas, beliefs, preferences, attitudes, values, and opinions of Europeans. The EU-SILC collects microdata on work, income, poverty, social exclusion, and living conditions. We will calculate the proportion of people, in each country considered, who agree with the statements 'A child suffers if the mother works', 'Leisure time is important', and 'Work always come first' (EVS) and the proportion of children under the age of 3 who are looked after in formal childcare (EU-SILC).

Our unit of analysis is the adult child. We will examine the probability of working for women aged 21–45 years with at least one child under 14 (for comparison, we will also consider men). This implies, for example, that two sisters may share the same grandparents: in our data set, in this case, we will have one record for each of the two sisters and the grandparents' information will be repeated over the two records.

After studying the determinants of grandparents' care and its effect on mothers' employment, we will study the heterogeneous effects by context. We will test whether the impact of grandparents' help is different in countries characterized by different level of wealth.

4. Results

The first two columns of Table 1 describe how children younger than 13 years old are cared for in different European countries. We observe that in most of the countries considered, at least 20% of grandparents spend time caring for their grandchildren. The number of hours is around 10-20 per week. Care by childminder is instead less diffused. The last column reports the percentage of young children looked after in a formal childcare centre: we observe strong heterogeneities, going from very few children attending formal childcare in Czech Republic and Poland (under 5%) to most children attending these services in Sweden and Denmark (over 60%).

We then describe the sample (Tables 2 and 3) and then estimate the probability of grandparents helping with childcare (Table 4) and the impact of grandparents' help on parents' work (Table 5). Finally, we will take into account the different institutional contexts and the potential heterogeneous effects of grandparents' help (Table 6).

Table 2 reports the descriptive statistics of adult daughters and adult sons. We observe that most of them are in a couple, 35% have tertiary education, and 71% of adult daughters and 94% of adult sons work. On average, they have fewer than 2 children and the youngest child is around 5 years old. At the country level, we observe that – on average – 36% of the European population considered agree with the statement 'A child suffers if the mother works' and 30% of young children are looked after in a formal childcare centre.

Table 3 summarizes the characteristics of the (grand)parents of adult children described in Table 2: 85% of grandparents are in a couple, in 11% of observations only the grandmother is present, and in 4% only the grandfather is present. The average age is 63 years. Almost 20% of grandparents have

tertiary education, 34% are still in paid employment, and 48% state that they are in good health. They have – on average – almost 2 grandchildren, with the youngest aged 5 years (the same information as in Table 2). The number of own adult children, with children themselves, is 2.25. This is important to consider: it is more difficult to provide help if grandchildren are in different households than if they are in the same household (since there is only one adult child with children). Another important determinant of help is the distance between the two households. Finally, we observe that 39% of the European population considered agree with the statement 'Work always comes first' and 92% agree with the statement 'Leisure time is important'.

In Table 4, we report the first set of results. Grandparents in a couple, in good health, and with a high level of education are more likely to offer their help. With respect to grandparents' age, we find that grandparents' help is quite constant between 50 and 70 years old, while declines afterwards. Grandparents' care is more likely when there are more grandchildren and when the grandchildren are older. Given the latter characteristics, their help is less likely if the grandchildren are from several adult children's households. Geographic proximity, as expected, plays a role: closer adult children increase the probability of offering care. Interestingly, grandparents living in countries with stronger adherence to the value. We also observe a negative but not statistically significant effect of 'Leisure time is important' and of 'Work always comes first'. On the demand side, we observe that adult daughters and single parents are more likely to ask for grandparents' care, as well as higher-educated and employed adult children. Countries with greater concordance with the statement 'A child suffer if the mother works' display lower levels of demand for grandparents' care. Albeit not significant, childcare availability has the expected negative sign.

Table 5 comprises the main results of the chapter. The main variable of interest is 'Predicted help supply'. Using estimates from the model estimated in Table 4, we predict – for each mother in our sample – the probability of grandparents being willing to help with childcare. We find a positive and significant effect of potential help from grandparents on her probability of being employed: her odds are more than twice those of a non-helped mother. Interestingly, we observe that the same variable does not affect fathers' probability of working. On the one hand, this may indicate that reconciliation is still considered to be a female issue: if childcare is affordable then the woman can work; if it is not, she is the one who has to give up work. On the other hand, we may see the male equation as a robustness check of our modelling procedure. In fact, to address the endogeneity issue, we include the predicted help in the model instead of the observed help. The non-significance of our constructed variable in the male equation proves that our predicted variable does not capture other unobservable endogenous dimensions. As for the control variables, we observe a positive effect of having a high level of education, a negative effect of having more children, and a positive effect of having older children. Finally, we control for the unemployment rate, observing that, in areas characterized by a high level of unemployment, women have more difficulty in working. For men, we see significant effects of education and unemployment.

The final part of the chapter aims to investigate the heterogeneous effects of grandparents' help with childcare for women in different institutional contexts. In Table 6, we estimate the employment equation for two subgroups of women: women living in more wealthy countries (with higher GDP) and women living in relatively less wealthy countries (lower GDP). Table 6 shows the regressions for the two groups of countries: countries with higher GDP (Austria, Denmark, France, Germany, and Sweden) and countries with relatively lower GDP (Croatia, the Czech Republic, Italy, Poland, Slovenia, and Spain). We observe that coefficient of grandparents' care is only significant important for women in relatively less wealthy countries. In contexts in which incomes are low, the availability of free childcare support makes the most difference.

5. Conclusions

This chapter was devoted to analysing grandparents' care provision. First, we studied the determinants of the supply and demand for grandchildren's care; then, we estimated the impact of potential help from grandparents on mothers' and fathers' work. Finally, we investigated whether the impact of this help is heterogeneous across different contexts.

We observed that the availability of grandparents to care for children has a positive effect and depends on a number of personal variables, such as age, education, health, work, and being in a couple. We also found that having more adult children with more grandchildren makes help less likely, as does a greater distance between homes.

Should grandparents' childcare be encouraged? Although our empirical evidence indicates a strong impact of this help, encouraging or even substituting this childcare for formal childcare leads to a series of problems. Firstly, the opportunities for access would be unequal among families: if maintaining a good relationship with one's elderly parents can be a merit, the facts that they are in good health and geographically close are more coincidental. Secondly, using grandparents as a primary form of childcare would only be effective in a one-child society with only children, because helping more adult children can be difficult. This is not desirable in a society that has to recover in terms of fertility.

What we can learn from these studies is that families need low-cost, flexible, and trustworthy childcare, especially if incomes are low and private solutions are more difficult to manage. These are the key drivers allowing families to reconcile work and family.

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Tables

Table 1: Childcare in Europe

	Childcare by grandparents	Childcare by a professional child-minder	Childcare at day-care centre
Austria	0.35 [9.0]	0.03	0.22
Croatia	0.43 [19.5]	0.02	0.12
Czech Republic	0.41 [8.7]	0.01	0.03
Denmark	0.01 [20.9]	0.00	0.77
Estonia	0.20 [9.1]	0.02	0.21
France	0.17 [11.6]	0.07	0.42
Germany	0.12 [7.8]	0.03	0.26
Italy	0.33 [13.5]	0.03	0.27
Poland	0.26 [18.0]	0.02	0.05
Slovenia	0.39 [11.0]	0.02	0.37
Spain	0.08 [19.7]	0.01	0.40
Sweden	0.01 [12.2]	0.01	0.64

Notes: Percentage of children 0-12 years old looked after by grandparents on a weekly basis [hours of grandparental care], percentage of children 0-12 years old looked after by a professional child-minder, percentage of children 0-2 years old looked after in a childcare centre. Source: EU-SILC.

Table 2: Descriptive statistics of adult children

	Adult daughters	Adult sons
Age	35.43 (5.63)	38.16 (6.27)
In a couple	0.78	0.81
Tertiary education	0.35	0.35
Employed	0.71	0.94
Number of children	1.87 (1.27)	1.84 (1.14)
Age of the youngest child	5.17 (3.58)	5.20 (3.65)
The child suffers if the mother works (at the country level)	0.36 (0.12)	0.36 (0.12)
Childcare availability (at the country level)	0.30 (0.16)	0.30 (0.16)
Observations	6 450	6 615

Source: European Values Study 2017 for the variable 'The child suffers if the mother works'; Eurostat 2015 for 'Childcare availability'; SHARE 2016 for all the remaining variables.

Table 3: Descriptive statistics of grandparents

Age (mean, for couples)	63.30 (7.92)
Female (single)	0.11
Male (single)	0.04
In a couple	0.85
Tertiary education	0.19
Good health	0.48
Employed	0.34
Number of grandchildren	1.86 (1.22)
Age of the youngest grandchild	5.13 (3.60)
Number of adult children with children	2.25 (1.27)
Care given to HH members in need	0.08
Adult child co-resident	0.13
Adult child < 5 km distance	0.33
Adult child 5–25 km distance	0.21
Adult child 25–100 km distance	0.12
Adult child 100 km plus distance	0.21
Job always comes first (at the country level)	0.39 (0.09)
Leisure time is important (at the country level)	0.92 (0.03)
Observations	13 036

Source: European Values Study 2017 for the 'Work always comes first' and 'Leisure time is important' variables; SHARE 2016 for all the remaining variables.

Table 4: Supply and demand of grandparents' care

	Coef.	Robust Std Err.	Sig.
Supply			
Age (mean, for couples)	-0.879	0.511	*
Age squared	0.015	0.008	*
Age cubic	-0.0001	0.00004	**
In a couple	0.588	0.145	***
Female (single)	0.423	0.206	**
Male (single)		(Reference category)	
Tertiary education	0.221	0.071	***
Good health	0.210	0.044	***
Employed	0.004	0.047	
Number of grandchildren	0.121	0.032	***
Age of the youngest grandchildren	0.092	0.009	***
Number of adult children with children	-0.232	0.023	***
Care given to HH members in need	-0.067	0.061	
Adult child co-resident	1.222	0.132	***
Adult child < 5 km distance	0.909	0.073	***
Adult child 5–25 km distance	0.646	0.102	***
Adult child 25–100 km distance	0.399	0.100	***
Adult child 100 km plus distance		(Reference category)	
Work always comes first	-0.620	0.827	
Leisure time is important	-0.277	2.268	
Constant	16.736	11.600	
Demand			
Female	0.320	0.060	***
Age	0.119	0.065	*
Age squared	-0.002	0.001	**
In a couple	-0.031	0.065	
Employed	0.308	0.066	***
Tertiary education	0.267	0.052	***
Age of the youngest child	-0.141	0.023	***
The child suffers if the mother works	-1.543	0.411	***
Childcare availability	-0.062	0.096	
Constant	-0.075	1.372	
Observations		11 612	
/at rho	-1.207	0.157	***

Notes: Bivariate probit model with robust standard errors (equation [3]) clustered at country level. Significance: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 5: Adult children's work

	Adult daughters			Adult sons		
	Coef.	Bootstrap Std Err.	Sig.	Coef.	Bootstrap Std Err.	Sig.
Age	0.355	0.085	***	0.547	0.087	***
Age squared	-0.004	0.001	***	-0.007	0.001	***
In a couple	0.301	0.088	***	0.944	0.135	***
Tertiary education	0.700	0.063	***	0.557	0.115	***
Number of children	-0.338	0.051	***	-0.082	0.046	*
Age of the youngest child	0.109	0.013	***	-0.004	0.019	
Predicted help supply	0.974	0.202	***	-0.382	0.375	
Unemployment rate	-3.743	0.401	***	-5.617	1.043	***
Constant	-6.075	1.448	***	-6.711	1.641	***
Observations		5 744			5 868	

Notes: Logistic regression model (equation [2]) with bootstrap standard errors (100 replications) clustered at country level. Significance: * p < 0.10, ** p < 0.05, *** p < 0.01.

Table 6: Heterogenous effects of grandparents' care

	Adult daughters' labour markets in higher GDP countries (Austria, Denmark, France, Germany and Sweden)			Adult daughters' labour markets in lower GDP countries (Croatia, the Czech Republic, Estonia, Italy, Poland, Slovenia and Spain)		
	Coef.	**Bootstrap Std Err.**	**Sig.**	**Coef.**	**Bootstrap Std Err.**	**Sig.**
Age	0.337	0.117	***	0.381	0.093	***
Age squared	-0.004	0.002	*	-0.005	0.001	***
In a couple	0.418	0.136	***	0.111	0.106	
Tertiary education	1.042	0.116	***	0.554	0.075	***
Number of children	-0.308	0.061	***	-0.321	0.066	***
Age of the youngest child	0.153	0.027	***	0.098	0.014	***
Predicted help supply	0.476	0.326		1.153	0.252	***
Constant	-7.094	2.021	***	-7.799	1.586	***
Observations	2 387			3 357		

Notes: Logistic regression model (equation [2]) with bootstrap standard errors (100 replications) clustered at country level. Significance: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.