Intergenerational private transfers: Portugal in the European context

Paula C. Albuquerque

Published online: 29 October 2014
© Springer-Verlag Berlin Heidelberg 2014

Abstract Intergenerational private transfers should be made important as a common occurrence in familialistic societies when establishing the identity of Southern European welfare state regimes. They function as a safety net and as a way of reinforcing the bonds amongst elements in a family. Although Portugal is undoubtedly a Southern European country, it is frequently ignored in comparative studies, and is assumed to share the characteristics of Spain and Italy. But do these countries really belong to a common, distinctive model? Portugal was included in the fourth wave of the survey of health, ageing and retirement in Europe, which provides a large sample for the study of intergenerational private transfers in this country. It also enables comparison with what happens elsewhere in Europe. We examine the upward and downward flows between generations and identify several important determinants of each type of transfers. Additionally, we show that the different types and directions of transfers are positively correlated, pointing to a self-reinforcement of transfer behaviour in families. We find that Portugal has an especially low probability of private transfers of time and money. After taking into consideration the household-level characteristics, none of the countries included in this study has a significantly lower probability of occurrence of any type of transfer than that of Portugal. A Southern European specific pattern of family transfers is only partially confirmed, yet Portugal and Spain do share the same model.

Keywords Private intergenerational transfers · Country comparisons · Portugal · Europe · Families · SHARE

Introduction

There has been considerable debate about the existence of a distinctive welfare regime that includes the Southern European countries and whether their differences from other European countries—particularly those that fall into the category of the conservative-continental Esping-Andersen's regime—are sufficient to warrant the creation of a separate category. More recently, literature has brought to attention the dynamic essence of this classification, creating the possibility that the basis for analysis may have changed before agreement is reached (Karamessini 2008; Moreno and Mari-Klose 2013; Mari-Klose and Moreno-Fuentes 2013).

In the original Esping-Andersen (1990) categorization of welfare states, these countries were seen as a subtype of the conservative regime. The main characteristics of this regime are the Bismarckian model of state assistance, which is related to occupational status, with special privileges for the civil service, and also the marginal role of the market in welfare provision. In terms of values, this model favours the preservation of the traditional family, values the housekeeping role of the mother and states that services to the family are only provided when the family has no capacity to provide them itself.

Several authors (e.g. Ferrera 1996; Rhodes 1996; Mingione 2001; Minas et al. 2014) argue that the Southern European welfare type is a separate one. Some of its distinctive traits are: pronounced labour market segmentation (public/private, formal/informal, permanent/temporary contracts); underdeveloped social assistance, based on the

Responsible editor: H. Litwin.

P. C. Albuquerque (✉)
ISEG/ University of Lisbon/ SOCIUS, Lisbon, Portugal
e-mail: pcma@iseg.utl.pt

Bismarckian model; and, above all, it is family-based. Family-based corresponds to a large commitment to the family and is associated with a care regime, whereby welfare provision relies heavily on the family. The family acts as a safety net, providing income, home and practical assistance. Informal care is common and women are the prime carers.

Portugal fits the ideal characterization of a strong family society (Reher 1998) when one thinks of the prevalence of intergenerational living arrangements, however the strong rise in the divorce rate as well as that of unmarried cohabitation, show a different picture. Other indicators make Portugal a special case, such as: sustained and remarkably high rates of female employment (Marques and Pereira 1999; Tavora 2012), which is not typical of the Southern European model, as well as a high rate of school attendance of children between the age of three and that of the start of compulsory attendance in full-time pre-school (30 h or more per week), which is also not in accordance with the model. Some of these divergent features are a result of recent developments, therefore the classification of a country in a certain type of model—such as the Mediterranean model—and even the very existence of a category is always open to discussion.

Intergenerational private transfers should be important in familialistic societies, as they are the mechanism used by families to help other generations deal with crises, transitions and ever-lasting needs. Intergenerational transfers may flow up and down the family generations and occur in several forms or currencies. The literature has shown that, although most parents and adult children in Western societies are not constantly giving or receiving significant support (Eggebeen and Hogan 1990; Lye 1996; Hogan et al. 1993; Swartz 2009), the global flow of transfers between adult generations in the family is still considerable and is mainly downward, that is, from older generations to younger ones (financial transfers: Kohli 1999; Attias-Donfut et al. 2005; as are financial and time transfers, if grandparenting is included: Albertini et al. 2007; Litwin et al. 2008 and coresidence: Aquilino 1990; Ward et al. 1992). Initially, data on exchanges at a national level were only available for a small number of countries, namely the United States (Eggebeen and Hogan 1990), France (Attias-Donfut 1997) and Germany (Kohli 1999). However, the release of the SHARE database (Survey of Health Ageing and Retirement) allowed for the inclusion of many more countries in the studies, as well as the possibility to carry out international comparisons.

International comparisons based on SHARE have highlighted significant variations in the patterns of family transfers between countries that may well reflect the welfare regimes mentioned above and also cultural norms or family geographies. Typically, the Nordic countries exhibit a higher

probability of the occurrence of intergenerational transfers—although less intensively—followed by the Central Western European countries, with a lower likelihood in the Southern European countries (Fokkema et al. 2008; Brandt and Deindl 2013; Brandt 2013). Deindl and Brandt (2011) observed that this is more apparent in time transfers, than in the case of financial transfers. The pattern is not totally clear-cut: for instance, Greece seems to fit better with the typical behaviour of the Central European countries (see Table 3 of Albertini et al. 2007; Attias-Donfut et al. 2005; Kalmijn and Saraceno 2008; Schenk et al. 2010).

Since Portugal had not been included in the set of surveyed countries up until 2011, it was not possible to investigate its previous pattern of private transfers. With its current inclusion in Wave 4, we take the opportunity to compare the level of intergenerational exchange in Portugal with that of other European countries. The first set of questions addressed in our study is thus: (i) How prevalent are private intergenerational transfers in Portugal, in comparison to the rest of Europe? And, (ii) is the pattern of transfers in Portugal similar to that of other Southern European countries, which are typically included in the same regime of welfare state?

If the differences between countries in the patterns of family transfers are an expression of different behaviour models, then they should be observed after having controlled for micro-level factors. Therefore, we include a set of determinants of transfers between parents and adult children, which allows us to investigate which are the most relevant ones. In a time of increasing needs but of decreasing resources, it is also important to understand what determines the provision of private transfers. The use of a multivariate probit enables us to address additional research questions which are related to the interaction of the types of transfers. The second set of questions addressed in our study is, thus: (iii) What are the main determinants of each type of transfer? Are the factors that influence one type of transfer also significant in explaining another type? (iv) how is support to one generation associated with support to the other? And, (v) Does the decision by one generation to give one type of transfer relate to its decision to also give another type of transfer, or to the type of transfer that it receives?

The two studies that are closest to ours are those of Attias-Donfut et al. (2005) and Albertini et al. (2007). They also study intergenerational family transfers, modelling the determinants of different types of transfers and the interactions between them, in the European context. However, our study is different from that of Attias-Donfut et al. (2005), because we focus on transfers between parents and adult children, as these are the most important players in intergenerational transfers, whereas Attias-Donfut et al. (2005) include transfers received from anyone or given to

anyone. Our study also differs from Albertini et al. (2007), in that we model downward and upward transfers, whereas they focus on the determinants of transfers to children, although they also consider interactions. The work of Deindl and Brandt (2011) also has similarities with our paper, although they do not model the differences across countries that remain after taking micro-level characteristics into consideration. The other distinctive feature of our paper relates to the countries included in the sample, where we pay special attention to Portugal, a country that has only started to be surveyed recently.

Methods

Procedure

We examine the determinants of the different types of transfers—financial and time transfers that involve both giving to children and receiving from children—using the household as the unit of observation. We thus have four outcome variables. Since the probability of occurrence of any of these transfers may not be independent from the occurrence of another type of transfer, we use a multivariate probit analysis to examine whether a set of explanatory variables helps to predict whether one person (or his/her partner) gives or receives transfers to or from his/her adult children. This econometric model allows for pairwise correlation between the types of transfers and their direction of flow caused by unobserved factors. Thus it takes into account the interaction between the types of transfers. When the correlations of the error terms across equations (ρ s) are statistically significant, this suggests interdependence between two of the types of transfer. The model is estimated with STATA, using the `mvprobit` command, which uses the simulated maximum likelihood method (Cappellari and Jenkins 2003).

Sample

Data are sourced from Wave 4 of the SHARE, which was carried out in 2011. This was the first wave to include Portugal. The number of countries included is 16: Denmark, Sweden, Estonia, Slovenia, Hungary, The Czech Republic, Poland, Germany, Austria, The Netherlands, Belgium, Switzerland, France, Italy, Spain and Portugal.

The respondents in SHARE are individuals aged 50 and above and information is available about their socio-economic, labour market and health status, as well as about their interaction with children and parents. Information also exists about their partners.

In the econometric model, we aggregate data per household and only consider households with people who

have children. Descriptive statistics, with data weighted using the household weights, are presented in Table 1.

SHARE provides imputed values for some variables which exhibit high rates of no-response. When this happens for a variable that is of interest for our analysis, we use the five independent imputations of the missing values that SHARE provides, in order to obtain the coefficients and standard errors by multiple imputation (Little and Rubin 2002).

In the case of other variables with missing data, we use casewise deletion—an admissible procedure when the number of missing data points is very small (usually below 5 %) and the sample dimension is large. When the number of missing observations is small, there are better chances that the remaining cases are representative of the population. In our case, the percentage of missing observations was less than 1 % for time transfers, about 2 % for money transfers and nearly 4 % for children living further than 25 km away. Casewise deletion reduces the sample from 35,730 to 33,647 cases. We tested for the existence of differences between the two groups (those with, and those without information about the existence of transfers). When using a t test, we found that some variables have different means when compared to the cases with missing and non-missing observations, whilst others do not. The variables with more differences are those related to the characteristics of children, the level of education of parents (with a lower mean education for those with missing information on transfers) and “living alone” (people living alone tend to have less missing information on transfers). The levels of wealth, percentiles of income, limitations with ADL and the number of children, show no differences. Since a t test may detect very small differences between respondents and non-respondents with a sample this large, we also compute Cohen’s d test, which standardizes the mean differences, and on this basis, some of the mean differences that were significant are considered small. This is the case, for instance, of the number of grandchildren, the characteristics of the children and “living alone” with respect to information about some of the types of transfer. These tests are not displayed in the paper but are available on request.

Measures

Dependent variables

The dependent variables are dichotomous variables which identify transfers to and from adult children. Each dummy is 1, if a transfer of the corresponding type has taken place and 0 if it has not. We are only interested in cases where transfers are exchanged with children. We include not only biological children, but also step-children and sons and daughters-in-law.

Table 1 Descriptive sample statistics

# Households (weighted)	73,262,705		
# Households (unweighted)	35,730		
	Percent	Mean	SD
Age less than 55	8.7		
Age from 55 to 64	36.3		
Age from 65 to 74	26.7		
Age 75, or more	28.8		
Education of the respondent (ISCED)		1.846	0.800
Low or unknown education—level 1	40.9		
Upper secondary education—level 2	33.6		
Post-secondary education—level 3	25.5		
# IADL (0–7)		0.570	1.394
# ADL (0–6)		0.420	1.141
PPP equivalized net worth (wealth) (–943,108–48,089,819 Euros)		170,316	451,388
PPP equivalized income (0–2,001,764 Euros)		24,905	40,592
One person households	24.1		
Two person households: a couple	39.0		
Other types of households	36.9		
# Children (1–17)		2.390	1.318
# Grandchildren (0–20)		2.709	3.063
Households with only male children	23.8		
With only one son	10.6		
With several sons	13.2		
Households with only female children	24.5		
With only one daughter	11.3		
With several daughters	13.2		
Households with male and female children	51.7		
Households with at least one unmarried child	32.2		
Households with an unemployed, sick or disabled child	14.9		
Households with children living within 25 km	86.5		
Households with all children living further away than 25 km	13.9		
Sweden	2.5		
Denmark	1.5		
Austria	2.4		
Germany	21.7		
The Netherlands	4.1		
Belgium	2.9		
Switzerland	1.6		
France	17.1		
Spain	11.4		
Italy	16.5		
The Czech Republic	3.3		
Poland	9.0		
Hungary	3.0		
Slovenia	0.6		
Estonia	0.4		
Portugal	2.3		
Time transfers to children	33.7		
Time transfers from children	11.6		
Money transfers to children	20.6		
Money transfers from children	3.4		

Obs. data weighted by household weights

Nevertheless, such a transfer may not be identified as an exchange with a child, but as an exchange with a member of the social network of that individual, who happens to be a child. In Wave 4 of SHARE, each respondent was asked to identify up to seven individuals who were part of his/her social network. When constructing the dependent variables we include all relations that have a child as a counterpart, both the cases where the counterpart is classified as a child in the relationship answer categories and also the cases where it is classified as a social network member of the 'child' type.

Money transfers (or financial transfers) are measured as monetary gifts, of at least 250 Euros, which were given or received during the last 12 months. Time transfers are measured as practical help or personal care given or received, from outside the household, or from within the household, over the last 12 months. Information is also available regarding contact, but we do not include this in the time transfers, as it is not possible to know the net direction of this transfer flow. On the other hand, time transfers given to children include childcare by grandparents. The corresponding dependent variable is 1, if parents provide practical help, personal care or grandchild care. The information about childcare by grandparents in SHARE includes both regular and occasional care that has taken place over the last 12 months. In order to only capture childcare provided as a support to children,—avoiding confusion with contact, whose direction may be ambiguous—we count only those cases where childcare is provided “almost daily”.

Parents' characteristics

Age is calculated as the sum of the imputed age in 2010, and the difference between the year of the interview and 2010. Then we segregate it into various categories: less than 55 years old, from 55 to 64, 65 to 74 and 75 or older. We use two variables to express health problems: limitations with instrumental activities of daily living (IADL) and limitations with activities of daily living (ADL). Limitations with IADL reflect difficulties in the performance of everyday activities that facilitate living independently in the community. The seven IADL's are: using a map to figure out how to get around, preparing a hot meal, shopping for groceries, making telephone calls, taking medications, doing work around the house or garden, managing money, such as paying bills and keeping track of expenses.

Limitations with ADL are related to basic self-care activities. The six ADL's are: dressing (including putting on shoes and socks), walking across a room, bathing or showering, eating, getting in and out of bed and using the toilet. When the respondent has a partner in the household, the variable for the household assumes the largest value of the two members of the couple. Seventy-seven percent of

households have zero limitations with IADL and 82 % have zero limitations with ADL (weighted data).

We create an income variable that is equivalized income, adjusted by PPP. For this purpose, we use the imputed total household income variable. As stated in the Release Guide 1.1.1 Wave 4 of SHARE, this imputed variable is expressed in Euros, so that for non-Euro countries, we need to convert the values expressed in local currency and then divide by the PPP exchange rate. In order to obtain the equivalized income, we additionally divide those values by the square root of the household size (see Litwin and Sapir 2009, for a similar procedure). We then group these values into quartiles. The household net worth is the measure used for wealth. We calculate the equivalized wealth, adjusted by PPP, using the same process as for the income variable. The education of the respondent is measured by the international standard classification of education scale (ISCED), aggregated into three levels: “low or unknown education”, “upper secondary education” and “post-secondary education”.

In addition to the above variables, the following were included in the model: living arrangements—alone/couple only (two person household)/other (two or more person household)—, number of grandchildren and country of residence.

Age, living arrangements, income, wealth and health problems, are all attributes that may express capability of giving or the need to receive. The number of children and the number of grandchildren may be associated with family values and also with the possibility of receiving and requests to give. Education may reflect social status, attitudes and values, which also affect the reception and giving of intergenerational transfers. Higher levels of income and of education correspond to higher opportunity costs of providing time transfers, either in terms of foregone income or in terms of unused specialized skills, when the transferred time is taken from work.

Children's characteristics

The gender of children is taken into account by separating households that have only male children or only female children, from households with children of both genders. As the category of mixed gender children would exclude the possibility of one child only, the inclusion of “number of children” as a separate variable could be problematic. Therefore, we create a set of dummy variables, representing one son, one daughter, several children—all sons, several children—all daughters, and the reference category several children—mixed genders. Considering that unmarried children may have fewer competing demands that influence the probability of transfers, we create a variable that identifies households with at least one

unmarried child. We use a dichotomous variable to identify situations where there are children in a particularly difficult condition, such as: unemployed, permanently sick or disabled. Although unemployment is possibly a transitory situation, whereas permanent sickness or disability is not, all the situations may affect the parents' possibility of receiving and also the likelihood of being requested to give. The variable "all children live 25 km away or more" aims to capture the difficulty in providing practical help at a distance.

Results

Transfers in Portugal in comparison to other countries

Corroborating results found for other countries, it is clear that most people are not engaged in private transfers in a given year (see Table 2), although this does not mean that the number of those who do make transfers is negligible. Portugal is at the bottom of the list of sample countries with regards to the proportion of households with people aged 50+ who give or receive financial transfers or

interhousehold time transfers. Similar to that which happens in other countries, the rarest form/direction of transfer involving households with people aged 50+ is that of received financial transfers.

SHARE includes information about who are the main group of persons that gave and received financial transfers and time transfers. Amongst the people mentioned, children are mentioned the most. For Portugal, children added to step-children and sons and daughters-in-law, account for 45 % of the people mentioned as givers of monetary gifts received by the respondents, for 61 % of people mentioned as receivers of monetary gifts given by the respondents, for 25 % of people from outside the household mentioned as providers of help, but only for 4 % of the receivers of time transfers (care and help) from outside the household. For the network of people aged 50+, although children are also more frequently identified as helpers, rather than as the helped, when we look at the 16 countries, they account for 11 % of the total identified receivers of time transfers. This number would change if care to grandchildren was included in the measure of care to children. Although care to grandchildren is much generalized in Europe, intensive care—the type that can certainly be counted as a downward

Table 2 Percentage of households that give or receive transfers by country

	Received financial transfer (%)	Given financial transfer (%)	Received time transfer		Given time transfer		Looked after grandchildren	
			From outside the household (%)	From inside the household (%)	Outside the household (%)	Inside the household (%)	Regularly or occasionally (%)	Almost daily (%)
Austria	10.31	30.88	19.21	7.12	20.93	3.10	38.16	6.33
Germany	6.67	34.29	22.72	5.06	28.41	4.39	43.73	4.28
Sweden	6.65	39.00	17.75	4.66	38.94	2.02	53.49	1.15
The Netherlands	5.85	30.20	20.37	7.55	32.64	5.13	58.15	2.55
Spain	4.62	14.32	15.22	14.40	14.62	4.83	37.12	14.82
Italy	8.74	29.71	22.48	12.46	20.81	5.98	34.10	17.64
France	3.57	28.26	16.85	8.44	25.47	4.39	51.28	4.50
Denmark	8.27	38.11	31.04	5.73	44.55	2.24	55.05	1.76
Switzerland	6.31	31.62	13.64	4.69	26.74	3.13	54.31	3.27
Belgium	6.19	27.45	22.81	9.77	33.48	4.16	55.54	9.28
The Czech Republic	15.24	30.31	32.52	8.67	31.85	4.71	46.14	10.04
Poland	10.01	23.36	14.72	9.53	18.01	4.48	41.85	15.41
Hungary	7.57	17.19	20.52	12.45	17.98	4.15	40.87	10.89
Slovenia	4.26	19.86	10.75	6.91	16.19	5.57	43.78	14.86
Estonia	8.24	23.22	23.51	10.06	24.56	4.80	37.38	6.23
Portugal	3.46	12.03	10.60	11.92	10.19	6.94	35.50	8.86
Total	6.83	27.67	19.72	9.04	24.08	4.67	43.88	9.26

Data from Wave 4 of SHARE, weighted by *chw_w4*. Percentages calculated over the total of answers that were Yes or No for each question. These are total transfers, not just those between parents and children

time transfer—is particularly prevalent in Southern and Eastern European countries. In most of these countries, over 10 % of the sampled households state that they take care of grandchildren almost daily. In Portugal, the percentage is lower (8.86 %), even though it is well above that of most of the Northern European countries (see Table 2).

Table 3 shows the results of the econometric analysis. With a P value of 0 for the Wald test, we can clearly reject the null hypothesis that all coefficients except the intercept are 0. Additionally, the model's functional form is appropriate. If the null hypothesis stating that the correlation coefficients estimates are jointly equal to zero was not rejected, the equations could have been estimated separately as four single probit models. That is clearly not the case in our analysis. Although it could be interesting to know exactly how much each explanatory variable would impact the probability of each type of transfer, the fact that the model estimates four interdependent equations makes this task difficult. Since it is not of primary interest in our study, we only present the coefficient estimates and the corresponding P values. It is common to find papers which present multivariate probits without calculating marginal effects (e.g. Attias-Donfut et al. 2005; Hank and Stuck 2008; Gage 2005; Bangwayo-Skeete and Zikhali 2011).

The results of this multivariate analysis confirm that the occurrence of private transfers between parents and children in Portugal is much less common than in most of the other countries under consideration. This is clear from the inexistence of significant negative parameters associated with the country dummies, when Portugal is used as the reference category. The strongest country differences that remain, after taking household-level differences into account, are those for financial transfers to children, where the only countries that do not have a higher significant transfer probability than Portugal are Spain and Estonia, at the 5 % level. Spain is the country which is most similar to Portugal—followed by Switzerland and Slovenia. The Czech Republic, Poland, Denmark and Italy are the countries with more significant differences at the 5 % level, compared to Portugal, with a higher probability of transferring three of the four combinations of type and direction.

Determinants of transfers

When compared to the oldest age category, the only category of parents that has a significantly lower probability of receiving money is that of the youngest age category (less than 55 years old). In line with other studies, people living alone tend to receive more time and financial transfers from children (Hoyert 1991; Cooney and Uhlenberg 1992; Kalmijn and Saraceno 2008; Brugiavini et al. 2013), whereas households comprising of couples are more likely to transfer money to children. This effect on downward

transfers is in agreement with Albertini et al. (2007), Brandt and Deindl (2013) and Hurd et al. (2011). The number of grandchildren increases the chances of time transfers to children, which we had expected, as giving care to grandchildren is included in our measure of time transfers to children. Those with more grandchildren tend to receive more time transfers from children and tend to give less monetary gifts to children.

Not unexpectedly, health problems, as measured by the number of limitations in ADL and by the number of limitations in IADL, increase the chances of receiving practical help (Eggebeen and Hogan 1990; Couch et al. 1999; Ikkink et al. 1999; Albertini et al. 2007; or Kalmijn and Saraceno 2008). Our results show an increase in the likelihood of receiving financial transfers from children in the case of limitations in IADL only, and no effect on the incidence of financial transfers from parents to children. This is similar to Fokkema et al. (2008), but different from Albertini et al. (2007), who found that the probability of a downward transfer is higher when the parents are in good health. Living more than 25 km away reduces the probability of receiving time transfers, whereas it does not significantly impact on financial transfers (in line with Hogan et al. 1993). Children's gender is an important factor for the likelihood of time transfers: parents of only male children have the lowest probability of providing practical help to their children—in line with previous research (Fokkema et al. 2008)—and, particularly when there is only one son, they have a lower probability of receiving it (as in Spitze and Logan 1990). Although some authors find that married children are less likely to give support (Dwyer and Coward 1991), we found in our study that having at least one unmarried child does not seem to make any difference in our sample.

The economic indicators are associated with the occurrence of downward transfers. The equivalized income level of parents is a clear determinant of downward money transfers. The likelihood of money transfers from parents in the 1st income quartile is significantly lower than that of the subsequent income quartiles. Wealthier parents also have a higher probability of transferring to children, especially money. Parents' income and wealth have no effect on their reception of help/care. Somewhat surprisingly however, income and wealth do not significantly affect the probability of parents receiving money. Having a child who is unemployed or permanently sick or disabled is associated with the existence of monetary gifts to children (as in Fokkema et al. 2008). The level of education (at given income and wealth levels) increases the probability of transferring money to children (as in McGarry and Schoeni 1995; Albertini et al. 2007; Fokkema et al. 2008).

The interaction between the different forms of transfers can be inferred from the correlations between the residuals

Table 3 Determinants of the probability of exchanging a transfer with children

	Time transfers		Money transfers	
	To children	From children	To children	From children
Constant	−1.557 (0.000)	−1.588 (0.000)	−2.155 (0.000)	−2.391 (0.000)
Age less than 55	0.120 (0.522)	−0.253 (0.317)	0.101 (0.479)	−0.341 (0.095)
Age from 55 to 64	0.440 (0.232)	−0.323 (0.153)	0.254 (0.141)	−0.004 (0.969)
Age from 65 to 74	0.516 (0.130)	−0.201 (0.210)	0.156 (0.211)	0.091 (0.574)
Age 75, or more	Ref.	Ref.	Ref.	Ref.
Living alone	−0.072 (0.695)	0.597 (0.000)	0.005 (0.939)	0.239 (0.010)
Couple	0.165 (0.460)	−0.064 (0.637)	0.105 (0.047)	0.000 (0.996)
Other household structure	Ref.	Ref.	Ref.	Ref.
Education of the parent	−0.032 (0.585)	−0.075 (0.128)	0.155 (0.000)	0.068 (0.119)
Number of grandchildren	0.076 (0.048)	0.031 (0.009)	−0.036 (0.000)	0.010 (0.333)
Limitations in instrumental activities of daily living	−0.056 (0.394)	0.187 (0.000)	0.008 (0.796)	0.069 (0.027)
Limitations in activities of daily living	−0.041 (0.143)	0.073 (0.017)	0.002 (0.955)	−0.012 (0.766)
1st Quartile PPP equivalized income	Ref.	Ref.	Ref.	Ref.
2nd Quartile PPP equivalized income	0.080 (0.311)	0.040 (0.655)	0.233 (0.001)	−0.203 (0.074)
3rd Quartile PPP equivalized income	0.084 (0.258)	0.088 (0.321)	0.396 (0.000)	−0.068 (0.523)
4th Quartile PPP equivalized income	0.047 (0.551)	−0.019 (0.841)	0.489 (0.000)	−0.022 (0.864)
1st Quartile PPP equivalized wealth	Ref.	Ref.	Ref.	Ref.
2nd Quartile PPP Equivalized Wealth	0.022 (0.781)	−0.058 (0.500)	0.052 (0.422)	0.070 (0.474)
3rd Quartile PPP equivalized wealth	0.100 (0.385)	−0.069 (0.476)	0.172 (0.008)	−0.077 (0.514)
4th Quartile PPP equivalized wealth	0.172 (0.070)	−0.063 (0.503)	0.329 (0.000)	0.062 (0.621)
All children live 25 km away, or more	−0.356 (0.002)	−0.688 (0.000)	0.020 (0.714)	−0.083 (0.414)
One male child	−0.340 (0.001)	−0.228 (0.052)	−0.120 (0.126)	−0.194 (0.156)
One female child	0.034 (0.844)	0.160 (0.126)	−0.128 (0.064)	0.008 (0.958)
Several children, all male	−0.122 (0.039)	−0.022 (0.817)	−0.047 (0.419)	−0.098 (0.262)
Several children, all female	0.039 (0.506)	0.061 (0.432)	0.023 (0.717)	−0.144 (0.145)
Male and female children	Ref.	Ref.	Ref.	Ref.

Table 3 continued

	Time transfers		Money transfers	
	To children	From children	To children	From children
At least one unmarried child	−0.055 (0.273)	0.060 (0.440)	0.035 (0.414)	0.099 (0.262)
Unemployed, sick or disabled child	0.029 (0.720)	−0.040 (0.663)	0.176 (0.005)	0.066 (0.442)
Sweden	0.234 (0.073)	0.305 (0.083)	0.691 (0.000)	−0.072 (0.704)
Denmark	0.470 (0.001)	0.634 (0.000)	0.742 (0.000)	−0.008 (0.965)
Austria	0.032 (0.797)	0.091 (0.550)	0.580 (0.000)	0.548 (0.000)
Germany	0.087 (0.516)	0.544 (0.002)	0.545 (0.000)	0.293 (0.086)
The Netherlands	0.113 (0.549)	0.004 (0.982)	0.498 (0.000)	−0.233 (0.211)
Belgium	0.324 (0.009)	0.096 (0.564)	0.435 (0.001)	0.048 (0.772)
Switzerland	−0.001 (0.994)	−0.021 (0.902)	0.295 (0.082)	0.041 (0.809)
France	0.110 (0.553)	0.027 (0.868)	0.463 (0.000)	−0.085 (0.617)
Spain	0.140 (0.384)	0.047 (0.753)	0.048 (0.724)	0.220 (0.208)
Italy	0.190 (0.399)	0.348 (0.037)	0.521 (0.000)	0.573 (0.001)
The Czech Republic	0.396 (0.049)	0.937 (0.000)	0.561 (0.001)	0.975 (0.000)
Poland	0.310 (0.045)	0.218 (0.169)	0.643 (0.000)	0.611 (0.000)
Hungary	0.363 (0.006)	0.275 (0.066)	0.459 (0.001)	0.214 (0.252)
Slovenia	0.224 (0.062)	−0.014 (0.928)	0.220 (0.080)	0.168 (0.281)
Estonia	0.129 (0.292)	0.656 (0.000)	0.010 (0.938)	0.485 (0.007)
Portugal	Ref.	Ref.	Ref.	Ref.
Rho Upward Time/Downward Time	0.173 (0.001)			
Rho Downward Money/Downward Time	0.162 (0.000)			
Rho Upward Money/Downward Time	0.153 (0.001)			
Rho Downward Money/Upward Time	0.068 (0.057)			
Rho Upward Money/Upward Time	0.197 (0.001)			

Table 3 continued

	Time transfers		Money transfers	
	To children	From children	To children	From children
Rho Upward Money/Downward Money	0.134			
	(0.001)			

“Upward Time (Money)” means “Time (Money) transfers from children to parents”. “Downward Time (Money)” means “Time (Money) transfers from parents to children”

Observations: 33,647

Likelihood ratio test of $\rho_{21} = \rho_{31} = \rho_{41} = \rho_{32} = \rho_{42} = \rho_{43} = 0$: $\chi^2(6) = 1.7e + 08$

Prob > $\chi^2 = 0.000$

P values are in parentheses

Weighted data from Wave 4 of SHARE

of each transfer equation. We observe that the factors that are not included in the explanatory variables are likely to have an impact of the same type, for the probability to give and to receive transfers of the same form and in the same direction. The reception of financial gifts from children is positively correlated with time transfers to children. The weakest association is between practical help received from children and the offer of financial gifts to children, although it is still statistically significant, at the 6 % level.

Discussion

The inclusion of Portugal in the 4th wave of SHARE reveals a unique performance with regards to the occurrence of private transfers, with low rates of occurrence of intergenerational transfers. Does Portugal fit a typical Southern European behaviour? Previous studies have shown that in Southern European countries (not including Portugal) transfers are less frequently observed, yet when they do occur they are more intensive. Using more recent data, our study confirms that Portugal is well incorporated in this set of countries, showing a profile of low probability for the existence of transfers. However, the Portuguese seem to be even less inclined to use time and to give financial transfers.

In relation to financial transfers, the fact that only gifts of more than 250 Euros are considered, when compared with respective purchasing power, means that this amount represents a lot more to a Portuguese than it does, for instance, to a Dane, and this might justify the finding that a lower proportion of Portuguese households make gifts of such a degree. Nevertheless, this does not explain the difference with other countries, such as the former Eastern Bloc countries.

There is some evidence that countries with a higher prevalence of levels of help with chores tend to show lower prevalence of levels of personal care, and vice versa (Igel

et al. 2009). Considering that help to parents is a somewhat lighter form of time transfer, it is much more common than care given to parents in general, and countries with a lower probability of upward time transfers may be exactly where the probability of care is higher. The questions in Wave 4 of SHARE do not distinguish between both types of time transfers from people outside the household, but the time transfers measured between people within the same household relate to care only, and Portugal is one of the observed countries with a higher proportion of households having such transfers.

The existence of a Southern European family regime is partially confirmed, given the similar patterns between Portugal and Spain for the occurrence of family transfers, even after controlling for micro-level factors. Nevertheless, Italy is remarkably different, making it difficult to include it in the same group. Slovenia would be more easily grouped in a Southern European regime, together with Portugal and Spain. It is possible that these findings reflect an evolution in the pattern of private transfers in Europe.

Confirming the findings of other studies, we observe that need is a major deciding factor with regards to transfers from children to parents—both time and financial transfers—where need is expressed by physical limitations and living arrangement, but is not apparently related to income or wealth. This indicates, for instance, that we should not automatically link living alone with the absence of family support. However, living far from children definitely increases the costs of time transfers, producing a negative impact on the likelihood of the existence of practical support. On the other hand, distance is not significantly related to financial transfers, and there is no evidence of substitution between time transfers and financial transfers moderated by distance.

Parents show a greater likelihood of giving large monetary gifts to their children if they: earn more, are wealthier, are more educated, live as a couple, have fewer grandchildren and have a permanently sick, disabled or

unemployed child. Parents provide more time support if they have more grandchildren, live close to their children, belong to the top wealth quartile and do not only have sons. When parents have no daughters, there is a lower likelihood of giving time transfers to children, which can be interpreted as a sign that women are still mainly responsible for many household tasks and for childcare (Coltrane 2000; Craig 2006), in combination with the existence of stronger bonds with daughters than with daughters-in-law (Fischer 1983). The reason why the number of grandchildren increases the likelihood of transferring time to children is that the provision of care to grandchildren is interpreted as the transfer of time to children. More surprisingly, parents with more grandchildren tend to give less monetary gifts to children. One potential explanation of this phenomenon is that they give monetary gifts to grandchildren, instead of giving them to their children. This is a topic which deserves further research, as the only study that we know of that establishes a relation between monetary gifts given to children and those given to grandchildren, has a time perspective that could not be used in the present context (Hoff 2007). The increase in the likelihood of receiving time transfers from children when there are more grandchildren may be a sign of a demonstration effect (Cox and Stark 1996; Stark 1999) whereby people tend to treat their parents in the same way that they would like to be treated by their own children, in the hope that their example will affect their own children's behaviour. The larger the number of children—i.e. of the oldest generation's grandchildren—the more 'productive' the demonstration effect (Stark 1999), and therefore, the larger the incentive to transfer to the oldest generation.

We can see that the variables included in our model typically help to explain more than one type or direction of intergenerational support. Additionally, the unobserved covariates influence the giving and receiving of the same type of transfers, and there is some complementarity between the two types of transfers. The weakest association is that between time transfers from children to parents and children's receipt of financial gifts. Potential unobserved factors are: family closeness, altruism, tastes and habits and rural/urban location. Those parents who are more likely to transfer (or receive) one form of transfer, are also more likely to transfer (or receive) the other form, which suggests that different types of transfers are used in a complementary way. Additionally, those who receive one type of transfer are more likely to give it. This supports a scenario whereby family transfers are a self-reinforcement mechanism and concentrations of intergenerational interactions exist within certain families, the "high-exchangers" (Hogan et al. 1993). This observation is also compatible with reciprocity motivated transfers (Mutran and Reitzes 1984; Silverstein et al. 2002).

Acknowledgments This paper uses data from SHARE Wave 4 release 1.1.1, as of March 28th 2013. SHARE data collection has been primarily funded by the European Commission through the 5th Framework Programme (project QLK6-CT-2001-00360 under the thematic programme entitled 'Quality of Life'), through the 6th Framework Programme (projects SHARE-I3, RII-CT-2006-062193, COMPARE, CIT5-CT-2005-028857, and SHARELIFE, CIT4-CT-2006-028812) and also through the 7th Framework Programme (SHARE-PREP, No. 211909, SHARE-LEAP, No. 227822 and SHARE M4, No. 261982). Additional funding from the U.S. National Institute on Aging (U01 AG09740-13S2, P01 AG005842, P01 AG08291, P30 AG12815, R21 AG025169, Y1-AG-4553-01, IAG BSR06-11 and OGHA 04-064) and the German Ministry of Education and Research, as well as from various national sources, is gratefully acknowledged (see www.share-project.org for a full list of funding institutions). We also thank the reviewers for their suggestions which helped to considerably improve this paper.

References

- Albertini M, Kohli M, Vogel C (2007) Intergenerational transfers of time and money in European families: common patterns. *J Eur Soc Pol* 17:319–334
- Aquilino W (1990) The likelihood of parent-adult child coresidence: effects of family structure and parental characteristics. *J Marriage Fam* 52:405–419
- Attias-Donfut C (1997) Family relationships in France: the experience of older people. *Ageing Int* 24:32–50
- Attias-Donfut C, Ogg J, Wolff F (2005) European patterns of intergenerational financial and time transfers. *Eur J Ageing* 2:161–173
- Bangwayo-Skeete P, Zikhali P (2011) Social tolerance for human diversity in Sub-Saharan Africa. *Int J Soc Econ* 38:516–536
- Brandt M (2013) Intergenerational help and public assistance in Europe: a case of specialization? *Eur Soc* 15:26–56
- Brandt M, Deindl C (2013) Intergenerational transfers to adult children in Europe: do social policies matter? *J Marriage Fam* 75:235–251
- Brugiavini A, Buia R, Pasini G, Zantomio F (2013) Long-term care and reciprocity: does helping with grandchildren result in the receipt of more help at older ages? In: Boersch-Supan A, Brandt M, Litwin H, Weber G (eds) *Active ageing and solidarity between generations. First Results from SHARE after the Economic Crisis, SHARE*
- Cappellari L, Jenkins S (2003) Multivariate probit regression using simulated maximum likelihood. *Stata J* 3:278–294
- Coltrane S (2000) Research on household labor: modeling and measuring the social embeddedness of routine family work. *J Marriage Fam* 62:1208–1233
- Cooney T, Uhlenberg P (1992) Support from parents over the life course: the adult child's perspective. *Soc Forces* 71:63–84
- Couch K, Daly M, Wolf D (1999) Time? Money? Both? The allocation of resources to older parents. *Demography* 36: 219–232
- Cox D, Stark O (1996) Intergenerational transfers and the demonstration effect. *Boston College Working papers in economics* no. 329
- Craig L (2006) Does father care mean fathers share? A comparison of how mothers and fathers in intact families spend time with children. *Gend Soc* 20:259–281
- Deindl M, Brandt C (2011) Financial support and practical help between older parents and their middle-aged children in Europe. *Ageing Soc* 31:645–662

- Dwyer J, Coward R (1991) A multivariate comparison of the involvement of adult sons versus daughters in the care of impaired parents. *J Gerontol B Soc Sci* 46:S259–S269
- Eggebeen D, Hogan D (1990) Giving between generations in American families. *Hum Nat* 1:211–232
- Esping-Andersen G (1990) *The three worlds of welfare capitalism*. Princeton University Press, Princeton
- Ferrera M (1996) The ‘Southern European’ model of welfare in social Europe. *J Eur Soc Policy* 6:17–37
- Fischer L (1983) Mothers and mothers-in-law. *J Marriage Fam* 45:187–192
- Fokkema T, ter Bekke S, Dykstra P (2008) Solidarity between parents and their adult children in Europe. NIDI report no. 76. The Hague: Netherlands Interdisciplinary Demographic Institute
- Gage A (2005) The interrelationship between fosterage, schooling, and children’s labor force participation in Ghana. *Popul Res Policy Rev* 24:431–466
- Hank K, Stuck S (2008) Volunteer work, informal help, and care among the 50+ in Europe: further evidence for ‘linked’ productive activities at older ages. *Soc Sci Res* 37: 1280–1291
- Hoff A (2007) Patterns of intergenerational support in grandparent-grandchild and parent-child relationships in Germany. *Ageing Soc* 27:643–665
- Hogan D, Eggebeen D, Clogg C (1993) The structure of intergenerational exchanges in American families. *Am J Sociol* 98:1428–1458
- Hoyert D (1991) Financial and household exchanges between generations. *Res Aging* 13:205–225
- Hurd M, Smith J, Zissimopoulos J (2011) Inter-vivos giving over the lifecycle. Rand working paper WR-524-1
- Igel C, Brandt M, Haberkern K, Szydlik M (2009) Specialization between family and state intergenerational time transfers in Western Europe. *J Comp Fam Stud* 40:203–226
- Ikkink K, van Tilburg T, Knipscheer K (1999) Perceived instrumental support exchanges in relationships between elderly parents and their adult children: normative and structural explanations. *J Marriage Fam* 61:831–844
- Kalmijn M, Saraceno C (2008) A comparative perspective on intergenerational support. *Eur Soc* 10:479–508
- Karamessini M (2008) Continuity and change in the Southern European social model. *Int Labour Rev* 147:43–70
- Kohli M (1999) Private and public transfers between generations: linking the family and the state. *Eur Soc* 1:81–104
- Little R, Rubin D (2002) *Statistical analysis with missing data*, 2nd edn. Wiley, New York
- Litwin H, Sapir E (2009) Perceived income adequacy among older adults in 12 countries: findings from the survey of health, ageing, and retirement in Europe. *Gerontologist* 49:397–406
- Litwin H, Vogel C, Künemund H, Kohli M (2008) The balance of intergenerational exchange: correlates of net transfers in Germany and Israel. *Eur J Ageing* 5:91–102
- Lye D (1996) Adult child-parent relationships. *Annu Rev Sociol* 22:79–102
- Mari-Klose P, Moreno-Fuentes FJ (2013) The Southern European welfare model in the post-industrial order: still a distinctive cluster? *Eur Soc* 15:475–492
- Marques A, Pereira P (1999) Taxes and women in the labour force in a Southern European country: the case of Portugal. *Labour* 13:797–819
- McGarry K, Schoeni R (1995) Transfer behavior in the health and retirement study: measurement and the redistribution of resources within the family. *J Hum Resour* 30:S184–S226
- Minas C, Jacobson D, Antoniu E, McMullan C (2014) Welfare regime, welfare pillar and southern Europe. *J Eur Soc Policy* 24:135
- Mingione E (2001) The Southern European welfare model and the fight against poverty and social exclusion. *Encyclopedia of life support systems* 14
- Moreno L, Mari-Klose P (2013) Youth, family change and welfare arrangements: is the South still so different? *Eur Soc* 15:493–513
- Mutran E, Reitzes D (1984) Intergenerational support activities and well-being among the elderly: a convergence of exchange and symbolic interaction perspectives. *Am Sociol Rev* 49:117–130
- Reher D (1998) Family ties in Western Europe: persistent contrasts. *Popul Dev Rev* 24:203–234
- Rhodes M (1996) Southern European welfare states: identity, problems and prospects for reform. *South Eur Soc Polit* 1:1–22
- Schenk N, Dykstra P, Maas I (2010) The role of European welfare states in intergenerational money transfers: a micro-level perspective. *Ageing Soc* 30:1315–1342
- Silverstein M, Conroy S, Wang H, Giarrusso R, Bengtson V (2002) Reciprocity in parent-child relations over the adult life course. *J Gerontol B* 57:S3–S13
- Spitze G, Logan J (1990) Sons, daughters and intergenerational social support. *J Marriage Fam* 52:420–430
- Stark O (1999) *Altruism and beyond: an economic analysis of transfers and exchanges within families and groups*. Cambridge University Press, Cambridge
- Swartz T (2009) Intergenerational family relations in adulthood: patterns, variations, and implications in the contemporary United States. *Annu Rev Sociol* 35:191–212
- Tavora I (2012) The Southern European social model: familism and the high rates of female employment in Portugal. *J Eur Soc Policy* 22:63
- Ward R, Logan J, Spitze G (1992) The influence of parent and child needs on coresidence in middle and later life. *J Marriage Fam* 54:209–221