

**Annika Meng**

# **The importance of money for contact and care behavior**



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### **Abstract**

This paper doubts that the strategic bequest motive is the relevant mechanism for the relationship of the majority of parent-child pairs. I look at two additional variables in this context, namely inter-vivo transfers and elderly care needs, to examine if European society behaves such egoistic as it is predicted by the strategic bequest motive. I cannot confirm the significant positive reaction of children in their contact behavior on their parent's bequeathable wealth employing SHARE data.\*\* This result is driven by using original wealth data only, not imputed data.

JEL classification: D12, D31, J14

Keywords: strategic bequest, imputed values, inter-vivo transfer, private annuity, elderly care

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## 1 Introduction

The strategic bequest motive, as firstly formulated by Bernheim et al. (1985), tries to explain why parents hold more bequeathable wealth than would be expected under the life cycle hypothesis. The assumption is that they do so to buy additional attention and affection from their children than they would usually receive if they do not have anything to bequeath. The bequest must thus imply a higher utility to the parent than when it is spend on consumption during lifetime.

This view is, however, very restrictive on parent-child behavior. Inter-vivo transfers from parents to their children or grandchildren could serve the same purpose and could have advantages for both parties: First of all, parents could save inheritance tax, and possibly also income tax if their children underlie a lower tax rate. Second, children could have a higher utility of additional money when they are younger. Expenditure on education or starting a family is a high financial burden as this usually occurs when the children's own income is still low. A bequest, however, can be expected to occur much later in life when the children's financial position is already consolidated. As the utility of children is also included in the utility function of the parents, inter-vivo transfers are likely to be advantageous to them. Thus, they can also be used strategically. Children could feel obliged to care for their parent's wishes. However, they could also be willing to do so anyway out of a feeling of general reciprocity and love. On the other hand, it could well be the case that children cannot be influenced to give attention to their parents if the affection between them is not so strong. Bernheim et al. (1985, p.1071), however, assume that a bequest gives higher utility to the parents than a present to children earlier in life does.

I assume that the majority of parents love their children and they are happy if their children show their love to them voluntarily. This is even more important when the dignity in personal help is concerned. When care or regular help is needed, statistical evidence shows that most people would like to receive care from a partner, child, or another relative (Schupp and Künemund, 2004). If parents would have to buy care services, then it might be more advantageous to pay a professional care provider than a child who is reluctant to give care. As the sample which will be used here only looks at individuals who are older than 50, I also introduce this point into the analysis and look at the same empirical model if receiving care from children is the dependent variable.

In summary, parents who get along well with their children do not need bequeathable wealth to discipline them. If parents do not get along well with their children there is no need to hold wealth or make gifts, either. The correlation between bequeathable wealth and attention could therefore be not positive as stated by the strategic bequest motive but it could be insignificant or even negative as professional care services are more expensive than family care.

The remainder of this paper is as follows: Section 2 summarizes previous literature on strategic bequests and related scattered evidence, on inter-vivo transfers and care services by children. Section 3

introduces the data set, its methodology as well as some descriptive statistics. Section 4 presents the empirical model and discusses the results. Section 5 concludes.

## 2 Literature review

The econometric analysis of the strategic bequest motive, has been conducted by three contributions so far: Bernheim et al. (1985) used a pooled dataset which contains three years of the Longitudinal Retirement History Survey (LRHS). They look at married couples with at least one child and estimate weighted OLS and 2SLS regressions of an attention index on bequeathable and non-bequeathable wealth. The authors state that their evidence confirms the strategic bequest motive although this is only true for the 2SLS regression. Another weakness of Bernheim et al.'s (1985) analysis is examined in a comment by Perozek published in 1998. She shows that the result is vulnerable to different definitions of the dependent variable "attention index". Going further, she uses data from the National Survey of Families and Households (NSFH) which, in contrast to Bernheim et al.'s data, also contains information on children. The inclusion of children's characteristics diminishes the effect bequeathable wealth has on attention and indicates that these variables are important determinants of contact behavior. The latest study was conducted by Angelini in 2007 with the first wave of the Survey of Health, Ageing and Retirement in Europe (SHARE) which contains data on ten European countries. Like Perozek (1998), she also follows the examination procedure of Bernheim et al. (1985). Her results strongly confirm the strategic bequest motive and are robust for different samples. The wealth effect is however driven by housing and not by financial wealth. Unfortunately, she does not expose her results to different attention index measures.

But a substantial part of parents make equal bequests to their children. This again puts doubt on the strategic bequest motive. A descriptive analysis by Light and McGarry (2003) gives an idea why evidence on the motives of bequests is mixed. An overwhelming part of a sample of mothers from the National Longitudinal Survey (NLS) plans to divide their estate equally among their children while only 8% intends to make unequal bequests. When asked for reasons of treating children differently, exchange motives have a relative importance of 25% which is only a small fraction of the sample. Menchik (1980) and Wilhelm (1996) used data which only contain the upper tail of the bequest distribution and found that a large fraction of their samples receive an equal share of the estate (62.5% and 68.6% exactly equal bequests respectively). In line with these findings is the analysis by Kopczuk and Lupton (2005) who show that parents who are wealthier and more educated, have a lower probability of having a bequest motive. Another study by Tomes (1981) finds that an inheritance is used to equalize among siblings for different human capital investments in the past and thus leads to unequal bequests. However, Menchik (1988) says that the data used by Tomes (1981) contains measurement error as it only includes self-reported information on bequests. In addition, he read the wills of the participants in Tomes' Cleveland sample and found that only 5 in 115 cases gave an explanation for an unequal bequest that goes in line with the strategic bequest motive (Menchik, 1988,

p.112). A last study to be mentioned is the analysis by Behrman and Rosenzweig (1998). They discover that siblings do not visit their parents equally but receive equal bequests in the Minnesota Twin Survey. Arrondel and Masson (2002) say in a detailed literature review on models of family transfers that the results heavily depend on the dataset which is used. However, I will show that I get deviating results from the one's of Angelini (2007) who works with SHARE as well.

Contrary to Bernheim et al.'s (1985, p.1071) opinion, I think that inter-vivo transfers could serve the same reason as strategic bequests do: Parents could use monetary gifts to "pay" their children for services they provided to them (Behrman and Rosenzweig, 2004, p.637). Unequal transfers are more often observed than unequal bequest. One possible explanation is given by (Bernheim and Severinov, 2000, p.5), who state that unequal bequests are more easily observable by all children while unequal inter-vivo transfers are not, a view that is also shared by Light and McGarry (2003, p.17). The incidence of inter-vivo transfers is however low: Attias-Donfut et al. (2005) as well as Albertini et al. (2007) both conducted a detailed descriptive analysis of time and financial transfers in the SHARE data. Although these articles do not use the same samples, the results are conclusive about the magnitude of transfers. 66% of monetary transfers go to children (Attias-Donfut et al. (2005), p.163). From Albertini et al.'s analysis we can see that 21% of respondents in SHARE have given financial transfers to their offspring. In their sample, these amount to 2,914 Euro on average. Higher income of donors leads to higher transfers in Attias-Donfut et al.'s sample. However, the overall rate of financial transfers is rather low, even among high income individuals (Attias-Donfut et al. 2005, p.171). Co-residence with other family members has a negative effect on receiving a transfer. In general, the transfer increases with higher income. Albertini et al. (2007) add that this is especially true for Southern European countries (p. 326). They say as well that only the likelihood of receiving a transfer is economically relevant but not the amount given by the donor. In addition, it is important to note that the social support which is received from children is also increasing with the monetary transfer amount given to them (Albertini et al. (2007), p. 329). The mechanism of the strategic bequest motive might thus hold for inter-vivo transfers. However, I do not expect to find clear-cut results as the incidence of transfers seems to be too rare to discover the expected positive effect on contact. As far as time transfers are concerned, 53.3% of all time transfers are provided by children in Attias-Donfut et al.'s sample (p.163). This includes 16% of respondents who received help from outside the own household (Albertini et al. (2007), p.324). These statistics confirm the expectation that strategic behavior might be weaker for parents who are in need of care.

Only scattered analysis on the relation between care giving and bequests has been conducted so far: Callegaro and Pasini (2007) examine the health perception of elderly parents and simultaneously, the care giving decision of children with the first SHARE-wave. They include parent's real wealth in their analysis but cannot find a positive marginal effect of wealth on informal care giving. In addition, their results show that care giving by siblings is not a complement but a substitute which contradicts

the theoretical effect of a bequest rule. In another SHARE analysis on the substitutability of informal and formal care, Bonsang (2008) notes that wealthier parents receive less informal care while home owners get more. In a detailed literature review, Arrondel and Masson (2002) conclude that past empirical evidence that helpers have not received more transfers than non-helpers and that the parents that are cared for have actually lower income and wealth than those who do not receive help.

### 3 Data and Methodology

The Survey of Health, Ageing and Retirement in Europe (SHARE) is a multidisciplinary panel database of micro data on health, socio-economic status and social and family networks of more than 30,000 individuals aged 50 or over. The first wave was collected in 2004 with eleven participating European countries. Two additional countries joined the sample in 2006/2007 when the second wave of SHARE was surveyed. The panel structure of the data set can be used since the end of 2008. Due to the research topic in this paper, a balanced panel has to be used. This leads to the deletion of some countries available in SHARE.<sup>1</sup> For details on the sampling procedure, questionnaire contents and fieldwork methodology, readers are referred to Börsch-Supan et al. (2005).

The data set I use is organized in a child level form to exploit the available information as much as possible. The original units of observation in SHARE are the parents<sup>2</sup>. Questions for up to four children are answered by a family respondent of a couple or by a single with children. It is therefore necessary to merge the child information to every parent for some cases and to assume that the children's naming by the respondent is at random. In addition, some of the parameter values of two alive parents have to be aggregated to make sure that the characteristics of both are connected to the information on children. In the end, the youngest partner is kept in the data set as he/she might have a lower mortality risk.

I use different samples for children whose parents can be single, separated, divorced, or widowed, and couples. They should show even smaller effects of bequeathable wealth on receiving attention as the remaining partner is likely to get the largest part of the inheritance when the other one dies. The descriptive analysis also comprises the differences between the distribution of bequeathable wealth between the individuals with and without children.

I condense the available categorical information from seven different categories to a binary dependent variable which is equal to one if the parent has contact for several times a week (intensive contact) and zero if attention is less. Unfortunately, the questionnaire asks for visits as well as

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<sup>1</sup> Denmark, Sweden, Austria, France, Germany, Switzerland, Belgium, the Netherlands, Spain, Italy, Greece and Israel participated in the first wave. The Czech Republic and Poland joined SHARE in the second wave. As Israel has not been surveyed for the second wave yet, its respondents from the first wave as well as those from the Czech Republic and Poland have to be dropped from the data set.

<sup>2</sup> Several generations can be distinguished in SHARE. An individual older than 50 years is asked for information on himself, his parents and his children. I therefore use the individual which answered the questionnaire and the information he gave on its children.

telephone calls and e-mail contact in one single variable. In addition, I construct the attention index used by Angelini (2007) for comparative reasons although index measures are highly criticized by Perozek (1998, p. 438). In a next step, I then look at the regression results when receiving help is the dependent variable.

The paper uses several wealth measures which are calculated from the original answers of the respondents. I thus do not use imputed values. Although I have fewer observations than Angelini (2007), there are still enough left to conduct the analysis. The single sample comprises 1,374 parent-child pairs, 4608 observations are left for the couple sample when at least one child is considered. Bequeathable wealth includes all kinds of savings that are asked for in the SHARE data set as well as real assets like e.g. housing wealth.<sup>3</sup> Furthermore, I distinguish between public and private annuity wealth. As public annuity wealth cannot be inherited, it should not be significant in the analysis. Private annuity wealth could, however, have a negative effect on attention. First, it is rational for individuals without children to hold more wealth as annuities. Second, children could interpret this kind of wealth as a signal of the parent's unwillingness to inherit all their wealth to them. Inter-vivo transfers to children can also be identified in the data set and were given by 17.17% of single parents and by 21.17% of couples. The transfer amount is about 2881 and 3882 euros on average per year. This equals about 12% and 5.3% of mean financial wealth respectively.

As far as severe limitations and special needs are concerned, the paper uses (Instrumental) Activities of Daily Living measures, ((I)ADL), to identify care needs. In addition, several other control variables are included into the regression equation. Gender, age, being retired or self-employed and the number of children are included as additional parental characteristics. Information on gender, age, marital and employment status as well as distance and co-residence and the number of children are available for up to four children of the respective parents.

### **Descriptive statistics**

The strategic bequest motive predicts that parents hold c.p. more wealth in bequeathable form to give their children an incentive to provide more attention than they would usually be willing to give. This implies that parents on the one hand should hold more bequeathable wealth than those who do not have children. People without children could on the other hand have advantages from holding more wealth in an annuitized form to decrease the risk from lifetime uncertainty. To get an idea of these

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<sup>3</sup> Financial assets consist of savings, bonds and stocks, life insurance and bequeathable private retirement accounts, mutual funds and contractual savings. Real assets include housing wealth which also includes other than the main estate, the value of cars as well as the value of a business share.

expectations in the couple and single sample used here, I compare descriptive statistics of parents and non-parents before I turn to estimating effects for parents in a regression analysis.<sup>4</sup>

Contact between parents and their children is quite intense in the pooled **couple sample**. The overall mean shows that contact for at least once a week is the rule (5.65). The standard deviation is small (1.29). 45% of parents in the couple sample are female and their mean age is 65 years. However, parents are somewhat older than those individuals in the sample who do not have any children. This small difference in age can also be tracked to the percentage of retired parents. While about 60% of parents are retired, only 35% of non-parents are. Parents report to be less in need of help with (Instrumental) Activities of Daily Living. The number of children is about 2.29 and the mean number of grandchildren amounts to 2.72. The mean number of the children's offspring is however only 1.39. 50% of reported children are female and the overall mean age is 37 years. Their life is thus likely to be settled which is confirmed by the following status variables: Most of the children live in a partnership themselves (73%) and 85% are employed. As far as distance is concerned, 35% of children live within a radius of 5km from their parent's home. An additional 26% lives within 25km and another 15% within 100km which is about one hour by car. The rest lives more than 100km away from their parents. Furthermore, 200 children (4.3%) still live in the same building as their parents.

The intensity of contact in the **single sample** is nearly equal to the one in the couple sample. The mean intensity is 5.42 with a standard deviation of 1.59. The distribution of child contact is therefore more spread among children with only one parent than among those with two parents. In addition, it is somewhat less intense. 76% of parents are female while only 53% of non-parents are. The mean of both groups is three years higher than in the couple sample and is thus about 69 and 65 years respectively. The difference in retirement is not that large as in the couple sample. 60% of parents are retired and this is only three percentage points higher than for those who do not have children. Contrary to the sample with two parents, single parents report to be much more in need of help. 27% of parents compared to 20% of those who do not have children need assistance in Activities of Daily Living. The difference is even larger when one looks at Instrumental Activities of Daily Living. 35% of single parents compared to 20% of non-parents report the need of help in this category. These statistics thus fit to the ones for age. The mean number of children is 2.09 in the single sample. The number of their offspring is 1.5. The mean number of grandchildren amounts to 2.03. Again, 50% of children are female but the overall mean in the child's age is now 42 years. This is not surprising as the mean age of parents in the sample is also higher than in the couple sample. The mean of those children who are married and employed are somewhat lower. The means are 68% and 78% respectively. Less single parents, namely 94 or 6.8%, live together with their children. The distribution

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<sup>4</sup> The respondents without children can of course not be included into the regression analysis as they have no children and can thus not be added to the child level file.

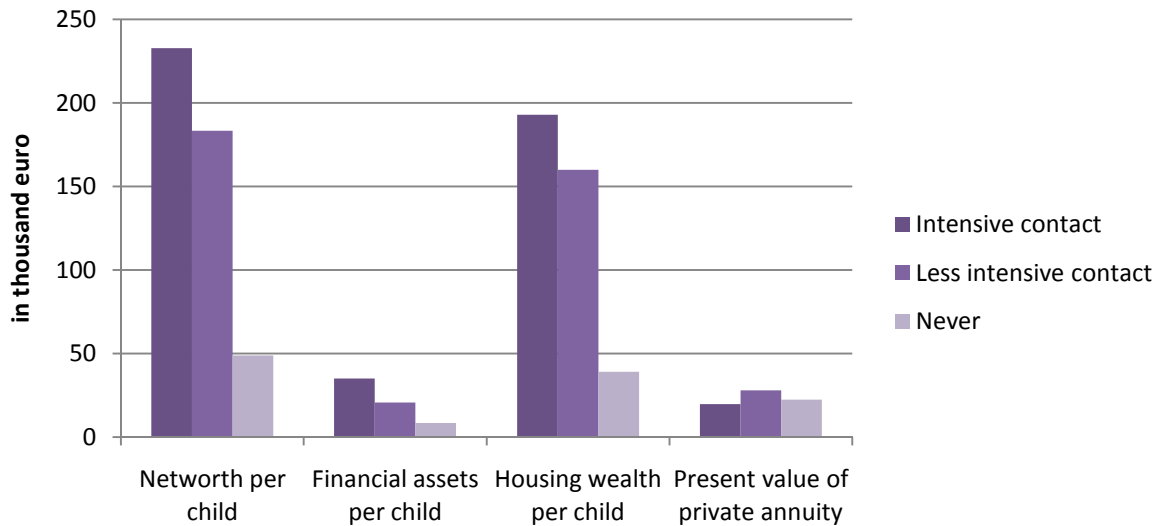


of children on the different distance levels is similar to the one in the couple sample. Details on all descriptive results can be found in the appendix.

*Monetary variables*

The descriptive results for the monetary variables are an important first indication of what can be expected in the regression analysis. Bequeathable wealth is a composition of financial assets and real assets which mainly consist of housing wealth. Parents in the couple sample have a higher amount of wealth in each of the categories than non-parents, a finding that is expected under the strategic bequest motive. The picture is reversed for the single sample which might indicate that singles have more difficulties in accumulating wealth.<sup>5</sup> The relation for non-parents is indeed similar although less clear-cut. However, none of the differences described here are significant! This is due to the large standard deviations in the distribution of monetary variables which is found in the original data. The same holds for private annuity wealth although its magnitude is much smaller.

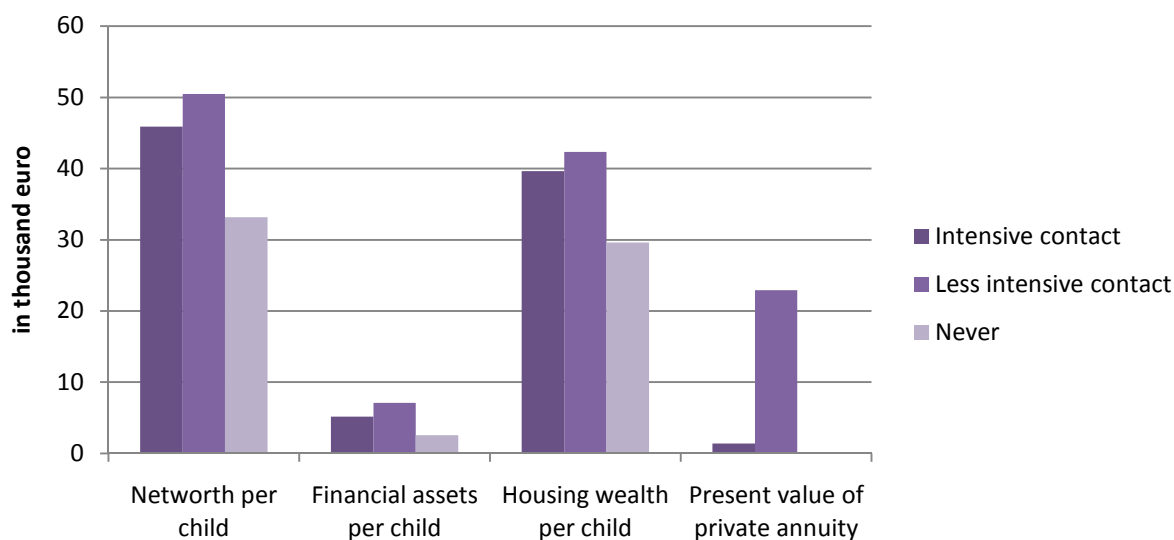
**Figure 1: Distribution of wealth by contact - couples**



*SHARE 2004, 2006, weighted averages*

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<sup>5</sup> This should especially be true for those parents who raised their children alone or who have divorced or separated from their partner. In addition, it is not very likely that this effect stems from dissaving as the difference in age between the couple and single sample is only three years.

**Figure 2: Distribution of wealth by contact - singles**

*SHARE 2004, 2006, weighted averages*

I divided the ordinal seven category information of contact into three different groups to illustrate the distribution of the mean values of monetary variables in thousand euros per child over different intensities of contact behavior. Figure 1 for the couple sample presents a picture that can be expected under the strategic bequest motive. The mean values of wealth variables are higher when parents have more contact to their children. The bequeathable wealth could serve as an incentive for children to stay in close touch. Figure 2 shows that such a clear-cut result cannot be found for the single sample. Bequeathable wealth is higher for those parents who have a frequency of contacts between once a week to less than once a month with their children.

In summary, the relative strength of the effect of bequeathable wealth between the couple and single sample is ambiguous. Although children of single parents have more to lose if they fall back on intestacy, the overall wealth of parents living in couples is much larger. The incidence of inter-vivos may be too low compared to the wealth measures to discover any strategic usage of these transfers in the couple sample. It could be more successful to find an effect in the regression with single parents. The expected negative effect of private annuities is more likely to be found in the latter sample as well. The same is true for the (I)ADL measures. As far as child characteristics are concerned, stronger effects of the children's status variables are expected in the sample of couple parents as their kids are more time constrained by their own family and occupation.

#### **4 Empirical results**

The heir of a single parent is the child under intestacy. The child is also the most likely heir if a testament exists as it is one of the closest relatives. The surviving spouse of parents who still live in a partnership is going to inherit the largest part of the deceased's wealth in most European countries. The incentive of the child to provide contact is therefore smaller in the sample where both parents are

still alive. In contrast, single parents rely more heavily on attention and help by their children. These have therefore a higher incentive to react to high bequeathable wealth in this case. In addition, children with only one surviving parent have much more to lose under the threat of disinheritance. Furthermore, an only child forgoes relatively more inheritance than children who have siblings. Their legal portion is larger than when it has to be shared with siblings. Thus on the one hand, the strongest wealth effects in the regression results may be found for singles when only children are included. On the other hand, Bernheim et al. (1985) stress the importance of a credible threat of disinheritance. Because of close family ties to children, they expect to find the strongest effects in those families which have at least two children.

The results of Bernheim et al. (1985) and Angelini (2007) cannot be verified in the cross-sectional and panel regressions. Regardless of the inclusion of only children, bequeathable wealth per child is never significant. This is true for both, the single and the couple sample although this is not expected according to their descriptive statistics. Therefore, I divide the overall effect of **bequeathable wealth into financial assets and real assets** to disclose the inheritance incentive in more detail.

This approach is not very successful though. The finding that is most in line with those of the aforementioned authors is a positive significant effect in financial wealth for the **single parents** in 2004 with at least two children. The coefficient is significant at the 5% level and also the economic effect is not too small. An additional 1000 euros in financial wealth around its mean of 3000 euros, increases the probability of intensive contact by 1.3%. Evidence for the strategic bequest motive is however not overwhelming. Firstly, the positive effect can neither be found in 2006 nor in the single sample which includes only children. This indicates that the threat to disinherit a child is only credible if more than one child is present like predicted by Bernheim et al. (1985). Secondly, the effect in financial wealth is the opposite of what Angelini (2007) found in the couple sample where only real wealth has a significant positive effect on contact. Private annuities have a negative effect on contact in the sample with only children in 2004 which is in line with my argument in the introduction. This effect also prevails in the panel regression results. However, the result is thus not robust in the cross-sectional analysis and its economic importance is negligible. This last statement is also true for inter-vivo transfers. As expected, they have a very small and positive effect on contact but only in the cross-sectional model for 2006. In contrast to the monetary variables, some parent and children's characteristics have a significant impact on intensive contact to single parents. The parent's age has a negative but small effect on contact and decreases its probability by about 5%. If the parent is female, the probability of contact increases between 11 to 16%<sup>6</sup>. A female child increases this probability as well by 15 to 20%. There seem to be closer ties between mothers and their daughters. An interaction

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<sup>6</sup> The result for the sample with only children is written down first. The second value is always from the sample with parents who have at least two children.

effect which captures this effect is nevertheless not significant. The distance dummies have the largest impact on intensive attention. Living up to 5km away from the parent's residence increases the probability of contact by nearly 50% compared to living more than 500km away. The likelihood decreases to about 29% for a distance of 5 to 25km and to 15 to 23% for a distance between 25 and 100km. The effect is not robust if children live more than 100km away but if it is significant, it is still large compared to living more than 500km away.

**Table 1: Contact behavior regression for single parents (single sample)**

	With only children			With at least two children		
	Logit 2004	Logit 2006	Panel Logit, RE	Logit 2004	Logit 2006	Panel Logit, RE
Financial assets in million per child	0.173 (0.323)	0.096 (0.712)	0.068 (0.070)	2.553** (1.189)	-0.368 (1.408)	1.334* (1.429)
Real assets in million per child	0.126 (0.145)	-0.041 (0.105)	-0.021 (0.022)	-0.211 (0.370)	-0.190 (0.116)	-0.114 (0.122)
Average public annuity in million euros	0.000 (0.018)	0.036 (0.028)	0.018* (0.019)	-0.007 (0.019)	0.084 (0.067)	0.018* (0.019)
Average private annuity in million euros	-0.971*** (0.277)	-0.599 (0.656)	-0.840 (0.868)	- -	-0.418 (0.543)	-0.620 (0.664)
Inter-vivo transfer to the child in thousand euros	0.012 (0.008)	0.012* (0.007)	0.006 (0.006)	0.008 (0.006)	0.003 (0.009)	0.003 (0.003)
Parent is female	0.110** (0.042)	0.143*** (0.043)	0.103** (0.107)	0.087 (0.047)	0.155*** (0.048)	0.094** (0.101)
Parent's age	-0.049* (0.028)	-0.047* (0.027)	-0.042* (0.043)	-0.056* (0.031)	-0.066** (0.030)	-0.047 (0.050)
Number of ADL help needed	-0.083 (0.228)	-0.279 (0.170)	-0.039 (0.041)	-0.035 (0.258)	-0.420** (0.186)	-0.115 (0.123)
Number of IADL help needed	-0.196 (0.231)	0.459** (0.194)	0.040 (0.041)	-0.145 (0.246)	0.601** (0.265)	-0.022 (0.023)
Child is female	0.190*** (0.043)	0.175** (0.043)	0.151*** (0.156)	0.207** (0.049)	0.146*** (0.049)	0.132*** (0.141)
Up to 5 km away	0.431*** (0.050)	0.432*** (0.048)	0.376*** (0.388)	0.404*** (0.053)	0.422*** (0.050)	0.336*** (0.359)
Between 5 and 25 km away	0.250*** (0.058)	0.265*** (0.059)	0.218*** (0.225)	0.232*** (0.062)	0.259*** (0.062)	0.198*** (0.212)
Between 25 and 100 km away	0.190*** (0.060)	0.133** (0.061)	0.178** (0.184)	0.166*** (0.063)	0.137** (0.066)	0.143** (0.153)
Between 100 and 500 km away	0.168*** (0.065)	0.103* (0.062)	0.129** (0.133)	0.167** (0.068)	0.118* (0.067)	0.124** (0.133)
Observations	734	734	1468	611	618	1236
chi2	146.642	144.183	205.503	113.308	126.193	122.518

Robust standard errors in parentheses, \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Cross-sectional logit models and panel logit, re model present individual marginal effects.

SHARE 2004, 2006

Financial assets in the **couple sample** are however significant in both years. But, the effect for 2004 is positive and very small while the effect for 2006 is negative and by far larger than the one of 2004 in

magnitude. Although the coefficients are only significant at the 10% level, this is the opposite of what is expected under the strategic bequest motive! A one thousand euro increase in financial assets decreases the probability of intensive contact by about 0.1%. This effect is thus economically small and it does not show up in the panel regression results. Other monetary variables in the couple sample show no robust effects except for inter-vivo transfers. However, a substantial increase in the transfer by 1000 euros, increases the probability of intensive contact by only 0.2%. Again, only the parent and child characteristics have a larger significant impact in having contact several times per week. The parent's age has a negative but small effect of 3% on intensive contact. Having an additional child decreases the probability of this amount of attention by about 5%. This implies that children act as substitutes or do not compete against each other. This result is somewhat surprising under the strategic bequest motive but is in line with descriptive findings not shown here. One would think that children whose parents have a high amount of bequeathable wealth would try to outperform their siblings in providing contact to parents. However, it could also be the case that parents with more than one child might demand relatively less attention from a child when other siblings are around. In addition, the relative threat point for siblings is also lower as their legal portion decreases with the number of siblings. Further, like in the single samples, having a female child increases the probability of intensive contact by 10 to 15%. Furthermore, the distance dummies are robust over all specifications as well although the effects are somewhat less pronounced in the couple samples. It is interesting to note that having a working child only has a significant negative effect in the panel analysis. Overall, the results are quite robust over the cross-sectional and panel regressions except for the last mentioned variable and most importantly for financial wealth.<sup>7</sup>

**Table 2: Contact behavior regression for parents living in couples (couple sample)**

	With only children			With at least two children		
	Logit 2004	Logit 2006	Panel Logit, RE	Logit 2004	Logit 2006	Panel Logit, RE
Financial assets in million per child	0.009*	-0.299*	0.001	0.008*	-0.325*	0.002
	(0.005)	(0.158)	(0.003)	(0.005)	(0.181)	(0.003)
Real assets in million per child	-0.001	0.016	0.000	0.000	0.019	-0.001
	(0.003)	(0.021)	(0.001)	(0.003)	(0.027)	(0.001)
Present value of public annuity in million euros	-0.001	-0.028	0.000	-0.001	-0.018	0.000
	(0.002)	(0.022)	(0.000)	(0.002)	(0.021)	(0.000)
Present value of private annuity in million euros	-0.015	0.025	-0.002	-0.010	0.022	-0.001
	(0.023)	(0.026)	(0.004)	(0.024)	(0.026)	(0.002)
Inter-vivo transfer to the child in thousand euros	0.000	0.002*	0.000	0.001	0.003*	0.001*
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Parent's age	-0.044**	-0.023	-0.004***	-0.001	0.012	0.001
	(0.019)	(0.020)	(0.008)	(0.020)	(0.020)	(0.003)

<sup>7</sup> The complete results for the care behavior regressions can

Number of ADL help needed	0.140 (0.196)	0.550*** (0.181)	0.096*** (0.208)	-0.034* (0.020)	-0.021 (0.020)	-0.010** (0.018)
Number of IADL help needed	0.336* (0.192)	-0.288** (0.117)	-0.028 (0.062)	-0.049 (0.194)	0.556*** (0.210)	0.104*** (0.196)
Number of children	-0.047*** (0.009)	-0.046*** (0.009)	-0.010*** (0.022)	0.400** (0.197)	-0.287** (0.127)	-0.027 (0.051)
Child is female	0.113*** (0.028)	0.152*** (0.030)	0.027*** (0.060)	0.122*** (0.029)	0.156*** (0.031)	0.034*** (0.065)
Up to 5 km away	0.373*** (0.029)	0.361*** (0.031)	0.086*** (0.188)	0.392*** (0.031)	0.370*** (0.033)	0.112*** (0.212)
Between 5 and 25 km away	0.245*** (0.035)	0.256*** (0.036)	0.057*** (0.124)	0.254*** (0.037)	0.266*** (0.038)	0.076*** (0.143)
Between 25 and 100 km away	0.171*** (0.037)	0.164*** (0.037)	0.039*** (0.086)	0.175*** (0.039)	0.170*** (0.039)	0.052*** (0.099)
Between 100 and 500 km away	0.044 (0.037)	0.073** (0.037)	0.013 (0.028)	0.048 (0.039)	0.079** (0.039)	0.021* (0.039)
Child is working	-0.045 (0.029)	0.010 (0.034)	-0.010* (0.023)	-0.042 (0.032)	0.010 (0.037)	-0.013* (0.025)
Observations	2404	2404	4808	2189	2189	4378
chi2	417.108	409.526	763.476	391.288	377.970	839.809

Robust standard errors in parentheses, \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Cross-sectional logit models and panel logit, re model present individual marginal effects.

SHARE 2004, 2006

Overall, it is interesting to note that the cross-sectional regression models were not able to find a stable effect of the number of **ADL and IADL** in which help is needed. This is in particular true for the couple samples where the coefficient of IADL needs changes its sign from 2004 to 2006. The marginal effect of ADL needs is however positive but only significant in 2006. Its impact is high though as an additional ADL need around the mean increases the probability of intensive contact by 56%. The opposite is true for the single sample when only children are excluded. There, the effect of ADL needs is negative in 2006 while it is positive for IADL needs in both single samples. Both measures are not significant in the panel random effects specification but the positive effect of the number of ADL needs in a couple household on contact prevails to be positive and large as the likelihood of intensive contact increases by 30%. A decreasing health status has thus completely different impacts on parents living as couples or singles. This result does not change when self assessed health dummies are included into the regression equations instead.

In all regression equations, **country dummies** were included. I use the usual classification<sup>8</sup> into northern, central and southern European countries to capture differences which might stem from traditional family relationships and institutional differences. The impact on intensive contact is always

<sup>8</sup> The classification is as follows: Northern countries: Sweden, Denmark, The Netherlands; Central countries: Austria, Germany, Belgium, France, Switzerland; Southern countries: Italy, Spain, Greece.

highly significant at the 1% level. The contact probability for northern and central countries is lower than for southern countries which are the reference group here.

### **Endogeneity problem**

The three previous studies on the strategic bequest motive have pointed out that bequeathable wealth could induce an endogeneity problem in the regression. The argument is that on the one hand parents who love their children more than other parents c.p. do, want to hold more wealth. On the other hand, children who feel more affectionate to their parents than other children c.p. do, are in need of more contact to them. Bernheim et al. (1985, p.1062) instrumented bequeathable wealth with lifetime earnings. Perozek (1998) concentrates on the total based socioeconomic index (SEI) from 1985<sup>9</sup> for this purpose which ranks occupations by the primary jobs income. Angelini (2007, p.8) also instruments with the parent's education and in addition uses the number of rooms of the parent's house as a measure for the standard of living of the family. Although all of these variables are likely to be highly correlated with bequeathable wealth, none of the authors can plausibly argue that the instruments are not correlated with the attention measure. Higher lifetime earnings of parent's might stem from higher education which increases their wage level. The parent's education however is agreed to be an important determinant of their children's education, which is again correlated with the children's wage. Children with higher wages could either provide less attention because their opportunity costs are c.p. higher than those of other children which earn less or they could be able to visit their parents more often as they can afford to travel more easily. Another possibility is that parents with higher lifetime earnings pay the children's travel costs. The same argument holds for the socioeconomic index used by Perozek (1998) and for the parent's education. Furthermore, the number of rooms in the parent's house could be correlated with contact as children can be accommodated more easily. Especially younger children might even still have their nursery in the parent's house.

Distance of the children's residence to their parent's home is likely to be endogenous as well. Children who want to keep close physical contact with their parents might decide to stay within a closer distance than other children c.p. do. Perozek (1998, p. 431) is aware of this but refrains from instrumenting distance as she does not have good instruments in her data set. Angelini (2007) assumes that distance is exogenous in her regression function. Greenwell and Bengston (1997) argue that socioeconomic attainment and family commitment are early factors that predetermine where children settle. The first factor can be interpreted as exogenous because it should highly depend on the child's education and partner. The second factor contains the same endogeneity problem already mentioned above. I agree with Perozek (1998) that an instrument for distance is hard to find as affection and emotional needs are difficult to observe. The settlement decision is not well understood until now and depends on various other factors like having siblings.

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<sup>9</sup> For more details see Perozek (1998), p. 431.

In the regression equation which is employed in this paper, even more explanatory variables are endogenous. These are, next to bequeathable wealth and distance, private annuity wealth and inter-vivo transfers. I instrumented private annuity wealth with the (former) responsibility for employees and inter-vivo transfers with the reason why an intergenerational monetary transfer was given. Employees with higher responsibility might be more aware of the advantages that private annuity savings can provide in later life than other employees because these assets require some financial literacy. Contact, however, is not directly affected by responsibility of parents at work. The reason for giving a gift is asked in the SHARE questionnaire. I create a dummy variable which is one if there is no special reason for the transfer and zero if parents have a special reason for it. The argument that the reason for giving a transfer is not correlated with contact is weak though because it is difficult to distinguish between altruistic and exchange motives among the available choice categories. The relationship with wealth is also low as the mean of transfer amounts is low as well. Overall, both instruments are problematic especially because the incidence of both exogenous variables is low in general. The test statistics of cross-sectional GMM estimation indeed show that the instruments are not reliable enough. Test results on weak instruments and endogeneity are mixed over the different samples used in this study. I am therefore not able to solve the endogeneity problem in the cross-sectional analysis.<sup>10</sup>

Another method to solve at least part of the endogeneity problem is its interpretation as unobserved heterogeneity which is unique between a child and its parent(s). It is plausible for most cases that this general attitude does not change over the two years that are available in this data set. A fixed effects estimator would thus eliminate this unobserved factor. However, I am not able to present reliable conditional logit estimates as I lose too many observations. We have already seen that random effects panel estimation show about the same results as the cross-sectional results do. Some of the coefficients are much smaller though.

Not solving the endogeneity bias is less of a problem when one looks at the regression results so far. None of the monetary variables has a significant effect on the contact variable. Following the line of argumentation above, it is likely that the coefficients of these variables are overestimated because the bias predicts more contact provided by children and higher wealth holding by parents which are independent of strategic behavior. The effects are very small and economically and statistically not significant. Solving the endogeneity problem would thus decrease the coefficients even more.<sup>11</sup>

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<sup>10</sup> The results are available from the author on request.

<sup>11</sup> Bernheim et al. (1985) found negative effects of bequeathable wealth on the attention index in OLS analysis. In 2SLS regressions however, the effect turns to be positive which would mean that the effect was underestimated! An explanation for this finding is not provided though.



### Comparison to previous results - imputed values

The effects of the wealth variables are the opposite of those of Angelini (2007, p.24) although she uses cross-sectional SHARE data reconstructed into a child level data set as well. While real assets have a significant effect in her analysis but not financial assets, this finding is reversed in my regression result under a similar specification. The reason for these differences are the monetary variables that are employed. Angelini (2007) uses imputed wealth data to estimate her results while I make listwise deletion if respondents did not fill in a monetary amount or the bracket values. Although I do not have enough observations to conduct a reliable panel analysis, I can show that the usage of imputed values drives the outcome of the strategic bequest motive analysis. If I use the average of the five imputed values from SHARE, I indeed receive a significant positive coefficient for bequeathable wealth in million per child or a positive and significant coefficient for real asset wealth.<sup>12</sup> It is still economically small but much higher than in my previous analysis.

I did not use imputed values because item non-response in the financial asset variable is only large for the value of saving and checking accounts where 23.5% do either not fill in the bracket values or directly refuse to answer. For all other monetary variables employed here, this percentage is below 5% (Börsch-Supan and Jürges (ed.), p.139f). In addition, it is said that “there are substantial differences between the distribution of imputed values and the distribution of observed values” (Börsch-Supan and Jürges (ed.), p.135). They also point out that this can be the case if missing values do not miss at random. I introduce a dummy into the regression analysis which is one if the value is missing and would therefore be deleted in my analysis, or imputed in Angelini’s case, and zero if it is non-missing. With respect to the dependent variable contact/attention, I found a significant effect of the dummy which confirms this expectation. However, employing listwise deletion or imputations is still an issue when dealing with monetary variables. In either case, one does not have reliable information why respondents refused to answer these questions. Because values might not be missing at random, imputations would not be random either as their estimation relies on the characteristics which are correlated with a dummy that controls for the missing status of the imputed variable. I have shown that imputations might be as problematic as listwise deletion because Angelini (2007) and I receive completely different results.

Apart from the differences in the wealth variable, the findings for female parents, number of other children and distance of Angelini (2007) can be confirmed here. However, some significant effects in her analysis have no impact in mine. When I re-estimate her model<sup>13</sup> with my data, I cannot confirm the effects of disposable wealth share, bad health, depression, and the marital status of the child. The effect for having siblings is stronger in my case while the country category effect is smaller.

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<sup>12</sup> The results are available from the author on request.

<sup>13</sup> The results are available from the author on request.

### **A comparative care behavior regression**

Contact is something parents would like to get from their children. But physically, they could do without it. This might change when parents are in need of care or substantial help around the house or with other aspects of daily life and paperwork. Some parents might have a high enough regular income or enough wealth to pay for a professional to provide those services. However, a large part of individuals is likely to prefer care or help from close relatives whom they trust and whom they get along well with. Therefore, I exchange the dependent variable “intensive contact” with a binary variable which is equal to one if care or help is received from children who live in or outside the parent’s household. I expect to find either no effect of bequeathable wealth again or even a negative effect as wealthier parents could on the one hand afford professional service providers and on the other hand are more likely to have children whose opportunity costs of giving help themselves are high. Although the strategic bequest motive comprises care giving as one form of attention and contact, and although receiving a bequest becomes more likely as the health of elderly parents decreases, I assume that children first of all react to parent’s needs for care and help and not to their wealth. If this would not be the case, the professional care supply for parents with a binding budget constraint would have to be extended a lot in the next decades.

The results that are presented here are for comparative reasons to the usual strategic bequest regression function only. I am aware of the fact, that this is neither presenting a special thought-through model nor is it able to disentangle care demand and supply effects.

The most interesting finding is the negative effect real bequeathable wealth has on receiving help from one’s children. Although this effect is economically small, it is strongly significant for 2006 and for the random effects estimation in all couple and single samples. In the couple sample without only children, financial wealth has also a negative effect on the dependent variable which is significant at the 1% level. This might indirectly confirm a tendency of wealthier people to rely on professional help. Thus, this is in line with the result Arrondel and Masson (2002, p.35) find in their literature review. Private annuity wealth shows also some effect for singles but it is not robust in sign and magnitude. The number of ADL in which help is needed has a positive effect in the single sample now. However, IADL are once negative for the sample without only children in 2006. In the couple sample, however, no explanatory power can be assigned to these two variables. The positive effect of the distance dummies is mitigated a lot in all samples compared to the contact regressions. This implies that non-physical contact like telephone calls which was included into the dependent contact variable was responsible for the high effects in these dummy variables. Receiving help is only

restricted to physical contact though and the effect of distance is not capturing spurious regression anymore.<sup>14</sup>

**Table 3: Care behavior regression for single parents**

	With only children			With at least two children		
	Logit 2004	Logit 2006	Panel Logit, RE	Logit 2004	Logit 2006	Panel Logit, RE
Financial assets in million per child	0.117 (0.286)	0.161 (0.568)	0.008 (0.028)	4.640*** (1.711)	0.982 (1.102)	0.111 (0.407)
Real assets in million per child	-1.117 (0.321)	-0.578** (0.293)	-0.053*** (0.194)	-2.174*** (0.373)	-0.785** (0.330)	-0.090*** (0.328)
Present value of public annuity in million euros	0.000** (0.018)	-0.018 (0.015)	0.000 (0.002)	0.000 (0.018)	-0.014 (0.010)	-0.001 (0.003)
Present value of private annuity in million euros	0.470 (0.068)	-1.310* (0.747)	0.025*** (0.091)	0.658*** (0.081)	-2.642*** (0.983)	0.029*** (0.105)
Inter-vivo transfer to the child in thousand euros	0.005 (0.003)	-0.002 (0.006)	0.000 (0.000)	0.005 (0.003)	-0.003 (0.007)	0.000 (0.000)
Parent is female	0.052 (0.038)	0.031 (0.035)	0.003 (0.012)	0.087* (0.045)	0.015 (0.040)	0.003 (0.011)
Parent's age	0.009 (0.023)	0.009 (0.024)	0.000 (0.000)	0.000 (0.025)	-0.004 (0.023)	-0.001 (0.003)
Number of ADL help needed	0.599 (0.204)	0.785*** (0.202)	0.029** (0.106)	0.669*** (0.244)	0.986*** (0.186)	0.042*** (0.152)
Number of IADL help needed	-0.018 (0.173)	-0.560 (0.354)	-0.008 (0.030)	-0.001 (0.206)	-0.551 (0.333)	-0.006 (0.022)
Child is female	0.032 (0.046)	-0.004 (0.040)	0.000 (0.001)	0.020 (0.053)	-0.030 (0.043)	-0.001 (0.004)
Child's age	-0.006 (0.011)	-0.004 (0.011)	0.000 (0.001)	-0.006 (0.013)	-0.003 (0.012)	0.000 (0.001)
Up to 5 km away	0.201** (0.068)	0.202*** (0.067)	0.013*** (0.047)	0.211*** (0.073)	0.168*** (0.068)	0.013*** (0.046)
Between 5 and 25 km away	0.126* (0.067)	0.062 (0.058)	0.008** (0.029)	0.157** (0.072)	0.048 (0.060)	0.008** (0.031)
Between 25 and 100 km away	0.108** (0.074)	0.054 (0.064)	0.006* (0.023)	0.105 (0.081)	0.039 (0.066)	0.006 (0.021)
Between 100 and 500 km away	0.006 (0.064)	0.048 (0.068)	0.001 (0.005)	0.014 (0.076)	0.062 (0.076)	0.003 (0.010)
Observations	734	721	1468	601	611	1236
chi2	127.203	114.920	361.306	120.46	114.85	86.27

Robust standard errors in parentheses, \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Cross-sectional logit models and panel logit, re model present individual marginal effects.

SHARE 2004, 2006

<sup>14</sup> The complete results for the care behavior regression are available from the author on request.

**Table 4: Care behavior regression for parents living in couples (couple sample)**

	With only children			With at least two children		
	Logit 2004	Logit 2006	Panel Logit, RE	Logit 2004	Logit 2006	Panel Logit, RE
Financial assets in million per child	-0.001 (0.002)	-0.209 (0.181)	0.000 (0.000)	0.000 (0.002)	-0.368*** (0.131)	0.000 (0.000)
Real assets in million per child	-0.024 (0.019)	-0.120** (0.052)	-0.007** (0.017)	-0.022 (0.018)	-0.127** (0.063)	-0.007* (0.018)
Present value of public annuity in million euros	-0.011** (0.006)	0.024** (0.010)	0.000 (0.000)	-0.011* (0.006)	0.027*** (0.010)	0.000 (0.000)
Present value of private annuity in million euros	-0.149 (0.125)	0.001 (0.017)	-0.003 (0.007)	-0.129 (0.116)	0.003 (0.018)	-0.003 (0.007)
Inter-vivo transfer to the child in thousand euros	0.000 (0.001)	-0.003 (0.002)	0.000 (0.000)	0.000 (0.001)	-0.004 (0.003)	0.000 (0.000)
Parent is female	0.013 (0.011)	0.007 (0.013)	0.001 (0.003)	0.015 (0.012)	0.001 (0.014)	0.001 (0.003)
Parent's age	-0.003 (0.008)	-0.019** (0.007)	-0.002** (0.004)	-0.007 (0.008)	-0.019** (0.008)	-0.002* (0.005)
Number of ADL help needed	-0.031 (0.051)	-0.018 (0.077)	0.000 (0.001)	-0.064 (0.058)	-0.070 (0.080)	-0.006 (0.016)
Number of IADL help needed	0.053 (0.059)	0.051 (0.055)	0.005 (0.013)	0.032 (0.061)	0.052 (0.052)	0.006 (0.015)
Child is female	-0.004 (0.017)	0.045** (0.020)	0.001 (0.004)	-0.008 (0.018)	0.038* (0.021)	0.001 (0.002)
Child's age	-0.004 (0.005)	-0.004 (0.006)	-0.001 (0.002)	-0.004 (0.005)	-0.005 (0.006)	-0.001 (0.002)
Up to 5 km away	0.070** (0.033)	0.027 (0.027)	0.005** (0.014)	0.070** (0.034)	0.027 (0.028)	0.006** (0.015)
Between 5 and 25 km away	0.044* (0.030)	0.017 (0.024)	0.004 (0.010)	0.041 (0.030)	0.012 (0.025)	0.004* (0.010)
Between 25 and 100 km away	0.074** (0.041)	-0.003 (0.021)	0.004* (0.010)	0.079*** (0.043)	-0.005 (0.022)	0.004* (0.010)
Between 100 and 500 km away	0.007 (0.024)	-0.018 (0.019)	-0.001 (0.003)	0.008 (0.025)	-0.019 (0.020)	-0.001 (0.003)
Observations	2404	2318	4808	2189	2110	4378
chi2	87.583	116.996	307.022	90.01	138.36	234.35

Robust standard errors in parentheses, \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Cross-sectional logit models and panel logit, re model present individual marginal effects.

SHARE 2004, 2006

## 5 Discussion

The results of this study must be considered from several angles. From the pure results of **contact behavior**, one can conclude that bequeathable wealth in financial or real asset form does not have a robust positive influence on the attention parents receive from their children. This is true for parents living in couples or as singles. If a significant coefficient is estimated, it is only showing up in one of the two years in this study, it is changing its sign over the samples and it is always economically small. The same is true for private annuity wealth. Public annuities are not significant in

the analysis which was expected as it cannot be inherited by children. The coefficients of inter-vivo transfers always have the correct sign, but their effect is not robust or economically convincing as well. The bequeathable wealth variables in the **care behavior** regression have at least a robust tendency towards a significant negative influence on receiving care or help from children. Again its economic importance is small and one can wonder why the effect of real assets is more pronounced than the one of financial assets. Real wealth mainly comprises housing wealth. Thus, to buy professional care instead of relying on children would imply selling a house or moving into a less expensive accommodation. However, a cautious policy implication from both behavioral regressions would imply that parents should rather invest in private annuity wealth rather than to keep their money in bequeathable form. Firstly, they cannot influence their children strategically anyway as we have seen in the contact behavior equation. Secondly, literature on informal care provision suggests that parents might not be able to rely heavily on care or help provided by their children (Häcker and Raffelhüschen, 2007). Private care insurance could thus serve as a means to pay for professional services and mitigate care risk at the same time. Parents might thirdly fear to be a burden to their children and prefer formal help. Professional services could also be of better quality which is especially true if children are rather reluctant to care or give help. This could be also advantageous for children who have too high opportunity costs to care for their parents.

Futur research should try to give some answers to this quite speculative conclusion. One has to keep in mind that the above effects represent the market outcome of giving time support to parents which then promise or give a financial transfer as a reward. It is necessary to disentangle the demand and supply effect which works behinds this scene. An instrument that explains the demand of parents and which is as well highly correlated with their wealth, has to be independent of the children's supply of services at the same time. The parent's health status does not fulfill these characteristics. However, variables which describe if the parent's accommodation is handicapped accessible are likely to have a very low positive incidence and are therefore only weak instruments.

Several technical limitations of the strategic bequest analysis from the past could not be solved here. Firstly, the dependent variable contact comprises physical and non-physical attention measures. This is not only disturbing the distance measure as the kind of contact parents and children have, is supposed to be of high importance for the strategic bequest motive. One would assume that physical contact is much more valued to telephone or e-mail contact by most parents. The transaction costs of non-physical contact are lower and thus the "price" that children are paying for lower as well. Another shortcoming is the missing information on the children's income and household income. Those who earn more are likely to live farther away. They might be less constrained by travel costs but at the same time their opportunity costs are higher. As Menchik (1988, p.109) correctly points out, this could also lead to less possibilities to manipulate those children and Cox (1987, p.515) add that they have to be compensated more for a given attention level. I agree with Menchik (1980, p.380) that the rather

non-conclusive results I found in my analysis are driven by the large variance of the wealth and annuity variables. In addition, the averages of the monetary variables in my study are quite high compared to official statistics. This impression is also confirmed by the comparison to the results which are obtained with imputed wealth measures as their usage tends to smooth the variable's distributions. Apart from this, Arrondel and Masson (2002) state that the distribution of wealth has to be kept in mind when interpreting the results. They title the bottom 80% in income "life-cycle savers" (Arrondel and Masson, 2002, p.21). Those people have a low elasticity of bequests which are thus mainly accidental. The richest 20% of parents in income, however, could use bequests as a means to receive the luxury good 'contact' which cannot be provided by the market.

Overall, this paper has shown that the results of the strategic bequest motive from the past should not be over-interpreted. Scattered evidence from past literature already puts doubt on the strong findings of Bernheim et al. (1985) and Angelini (2007). Furthermore, they are vulnerable to the distribution of the monetary variables in the data set and thus to using imputed values. In addition, the regression model suffers from a rough contact measure and omitted variable bias in all conducted studies on the strategic bequest motive so far.

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**Table 5: Contact behavior regression for the single sample with only children**

	<b>OLS 2004</b>	<b>Logit 2004</b>	<b>OLS 2006</b>	<b>Logit 2006</b>	<b>Panel OLS, FE</b>	<b>Panel Logit, FE</b>	<b>Panel OLS, RE</b>	<b>Panel Logit, RE</b>
Financial assets in million per child	0.197 (0.367)	0.173 (0.323)	0.131 (0.854)	0.096 (0.712)	0.059 (0.894)	3.151 (39.956)	0.088 (0.575)	0.068 (0.070)
Real assets in million per child	0.075 (0.147)	0.126 (0.145)	-0.055 (0.120)	-0.041 (0.105)	-0.220 (0.173)	-4.648 (17.375)	-0.073 (0.134)	-0.021 (0.022)
Present value of public annuity wealth in million euros	-0.002 (0.021)	0.000 (0.018)	0.023*** (0.007)	0.036 (0.028)	0.026 (0.017)	0.662 (0.512)	0.020* (0.011)	0.018* (0.019)
Present value of private annuity wealth in million euros	-0.318*** (0.043)	-0.971*** (0.277)	-0.457 (0.375)	-0.599 (0.656)	-0.288** (0.133)	-33.790 (92.058)	-0.309** (0.120)	-0.840 (0.868)
Inter-vivo transfer to the child in thousand euros	0.008*** (0.002)	0.012 (0.008)	0.013** (0.006)	0.012* (0.007)	-0.002 (0.005)	-0.447 (0.629)	0.004 (0.003)	0.006 (0.006)
Parent is female	0.107** (0.044)	0.110** (0.042)	0.146*** (0.044)	0.143*** (0.043)			0.117*** (0.036)	0.103** (0.107)
Parent's age	-0.047* (0.026)	-0.049* (0.028)	-0.048* (0.025)	-0.047* (0.027)	-0.008 (0.040)	-0.553 (1.702)	-0.047** (0.021)	-0.042* (0.043)
Parent's age squared	0.000* (0.000)	0.000* (0.000)	0.000** (0.000)	0.000** (0.000)	0.000 (0.000)	0.007 (0.012)	0.000** (0.000)	0.000* (0.000)
Retired	-0.032 (0.040)	-0.044 (0.039)	0.006 (0.040)	0.000 (0.040)	-0.062 (0.058)	-0.560 (1.913)	-0.026 (0.026)	-0.022 (0.023)
Self-employed	-0.002 (0.083)	-0.013 (0.083)	0.054 (0.128)	0.059 (0.147)	0.015 (0.033)		0.026 (0.049)	0.023 (0.023)
Number of ADL help needed	-0.081 (0.225)	-0.083 (0.228)	-0.265 (0.177)	-0.279 (0.170)	0.042 (0.268)	1.600 (14.815)	-0.061 (0.191)	-0.039 (0.041)
Number of IADL help needed	-0.242 (0.227)	-0.196 (0.231)	0.453** (0.190)	0.459** (0.194)	0.016 (0.266)	-0.107 (15.796)	0.023 (0.171)	0.040 (0.041)
ADL help needed by age	0.001 (0.003)	0.001 (0.003)	0.003 (0.002)	0.004 (0.002)	-0.001 (0.003)	-0.035 (0.185)	0.001 (0.002)	0.000 (0.000)
IADL help needed by age	0.002 (0.003)	0.002 (0.003)	-0.006** (0.002)	-0.006** (0.002)	-0.000 (0.003)	0.002 (0.209)	-0.000 (0.002)	-0.001 (0.001)
Number of children	-0.016 (0.016)	-0.016 (0.015)	-0.007 (0.016)	-0.009 (0.015)			-0.014 (0.014)	-0.015 (0.016)
Child is female	0.184*** (0.047)	0.190*** (0.043)	0.174*** (0.047)	0.175*** (0.043)			0.161*** (0.037)	0.151*** (0.156)

Child's age	0.008 (0.013)	0.009 (0.013)	0.008 (0.013)	0.008 (0.013)			0.011 (0.011)	0.010 (0.011)
Child's age squared	-0.000 (0.000)	0.000 (0.000)	-0.000 (0.000)	0.000 (0.000)			-0.000 (0.000)	0.000 (0.000)
Child is married	0.026 (0.047)	0.033 (0.045)	0.027 (0.045)	0.035 (0.042)	-0.027 (0.061)	-0.340 (2.591)	0.010 (0.035)	0.012 (0.012)
Daughter is married & working	-0.085 (0.063)	-0.091 (0.060)	-0.049 (0.063)	-0.051 (0.061)	-0.027 (0.080)	-1.008 (9.088)	-0.054 (0.041)	-0.059 (0.060)
Up to 5 km away	0.497*** (0.060)	0.431*** (0.050)	0.487*** (0.062)	0.432*** (0.048)	0.195 (0.157)	1.880 (4.995)	0.446*** (0.066)	0.376*** (0.388)
Between 5 and 25 km away	0.291*** (0.064)	0.250*** (0.058)	0.296*** (0.067)	0.265*** (0.059)	0.120 (0.144)	0.295 (4.463)	0.267*** (0.070)	0.218*** (0.225)
Between 25 and 100 km away	0.226*** (0.068)	0.190*** (0.060)	0.148** (0.071)	0.133** (0.061)	0.187 (0.134)	1.841 (5.345)	0.208*** (0.071)	0.178** (0.184)
Between 100 and 500 km away	0.200*** (0.075)	0.168*** (0.065)	0.112 (0.075)	0.103* (0.062)	0.099 (0.099)	1.280 (7.462)	0.142** (0.072)	0.129** (0.133)
Child is working	0.055 (0.051)	0.050 (0.050)	0.075 (0.050)	0.065 (0.049)	0.022 (0.045)	1.280 (4.509)	0.048 (0.030)	0.042 (0.044)
Number of children of the child	0.006 (0.016)	0.003 (0.015)	0.002 (0.014)	0.000 (0.013)	0.046 (0.044)	0.819 (10.641)	0.008 (0.011)	0.005 (0.005)
Co-residence	0.625*** (0.065)	0.430*** (0.023)	0.578*** (0.071)	0.400*** (0.026)			0.572*** (0.071)	0.608*** (0.628)
Nordic country	-0.185*** (0.052)	-0.193*** (0.046)	-0.170*** (0.048)	-0.180*** (0.044)			-0.189*** (0.038)	-0.183*** (0.189)
Central country	-0.243*** (0.042)	-0.253*** (0.040)	-0.282*** (0.041)	-0.289*** (0.038)			-0.266*** (0.033)	-0.248*** (0.256)
Constant	1.682** (0.807)		1.692** (0.789)		0.177 (1.556)		1.650** (0.684)	1.035 (1.068)
Observations	734	734	734	734	1468	232	1468	1468
Adjusted R <sup>2</sup>	0.204		0.223					
chi2		146.642		144.183	.	7.336	205.503	205.503

Robust standard errors in parentheses, \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$   
Cross-sectional logit models and panel logit, re model present individual marginal effects.  
SHARE 2004, 2006

**Table 6: Contact behavior regression for the couple sample with only children**

	OLS 2004	Logit 2004	OLS 2006	Logit 2006	Panel OLS, FE	Panel Logit, FE	Panel OLS, RE	Panel Logit, RE
Financial assets in million per child	0.005** (0.002)	0.009* (0.005)	-0.316* (0.175)	-0.299* (0.158)	0.001 (0.052)	1.884 (3.298)	0.002 (0.066)	0.001 (0.003)
Real assets in million per child	-0.001 (0.003)	-0.001 (0.003)	0.008 (0.006)	0.016 (0.021)	-0.006 (0.006)	-0.032 (0.125)	-0.002 (0.004)	0.000 (0.001)
Present value of public annuity wealth in million euros	-0.001 (0.003)	-0.001 (0.002)	-0.035 (0.022)	-0.028 (0.022)	-0.000 (0.001)	-0.005 (0.121)	-0.000 (0.002)	0.000 (0.000)
Present value of private annuity wealth in million euros	-0.015 (0.026)	-0.015 (0.023)	0.027 (0.019)	0.025 (0.026)	-0.010 (0.016)	-0.273 (0.659)	-0.006 (0.020)	-0.002 (0.004)
Inter-vivo transfer to the child in thousand euros	0.001 (0.002)	0.000 (0.001)	0.002 (0.001)	0.002* (0.001)	0.002 (0.001)	0.031 (0.039)	0.002* (0.001)	0.000 (0.001)
Parent is female	0.013 (0.020)	0.012 (0.019)	0.017 (0.020)	0.018 (0.019)			0.015 (0.015)	-0.004*** (0.008)
Parent's age	-0.038** (0.017)	-0.044** (0.019)	-0.016 (0.018)	-0.023 (0.020)	-0.037 (0.040)	-0.325 (0.420)	-0.030** (0.015)	-0.009*** (0.019)
Parent's age squared	0.000** (0.000)	0.000** (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.001 (0.003)	0.000** (0.000)	0.000*** (0.000)
Retired	-0.004 (0.024)	-0.004 (0.023)	0.023 (0.024)	0.028 (0.023)	-0.014 (0.027)	-0.147 (0.229)	0.002 (0.014)	0.001 (0.002)
Self-employed	-0.018 (0.043)	-0.014 (0.046)	0.024 (0.047)	0.029 (0.047)	-0.081 (0.072)	-0.704 (3.341)	-0.020 (0.043)	-0.003 (0.006)
Number of ADL help needed	0.087 (0.145)	0.140 (0.196)	0.511*** (0.145)	0.550*** (0.181)	0.262* (0.153)	2.897 (2.275)	0.341*** (0.127)	0.096*** (0.208)
Number of IADL help needed	0.298* (0.162)	0.336* (0.192)	-0.286*** (0.111)	-0.288** (0.117)	-0.127 (0.141)	-1.802 (2.016)	-0.102 (0.106)	-0.028 (0.062)
ADL help needed by age	-0.001 (0.002)	-0.002 (0.003)	-0.007*** (0.002)	-0.008*** (0.002)	-0.004* (0.002)	-0.038 (0.031)	-0.005** (0.002)	-0.001*** (0.003)
IADL help needed by age	-0.004* (0.002)	-0.004 (0.003)	0.004*** (0.002)	0.004** (0.002)	0.002 (0.002)	0.023 (0.027)	0.001 (0.001)	0.000 (0.001)
Number of children	-0.050*** (0.009)	-0.047*** (0.009)	-0.049*** (0.009)	-0.046*** (0.009)			-0.048*** (0.007)	-0.010*** (0.022)
Child is female	0.102*** (0.028)	0.113*** (0.028)	0.147*** (0.030)	0.152*** (0.030)			0.108*** (0.020)	0.027*** (0.060)
Child's age	0.003 (0.011)	0.002 (0.012)	-0.005 (0.011)	-0.006 (0.013)			0.002 (0.010)	0.001 (0.001)

Child's age squared	-0.000 (0.000)	0.000 (0.000)	-0.000 (0.000)	0.000 (0.000)			-0.000 (0.000)	0.000* (0.000)
Child is married	-0.006 (0.027)	0.003 (0.026)	-0.025 (0.027)	-0.018 (0.026)	-0.033 (0.038)	-0.230 (0.305)	-0.020 (0.022)	-0.003 (0.007)
Daughter is married & working	0.005 (0.034)	-0.008 (0.034)	-0.018 (0.036)	-0.022 (0.036)	0.083* (0.045)	0.773* (0.435)	0.016 (0.025)	0.003 (0.006)
Up to 5 km away	0.409*** (0.037)	0.373*** (0.029)	0.393*** (0.036)	0.361*** (0.031)	0.202*** (0.073)	1.695 (3.009)	0.387*** (0.026)	0.086*** (0.188)
Between 5 and 25 km away	0.270*** (0.039)	0.245*** (0.035)	0.278*** (0.038)	0.256*** (0.036)	0.117 (0.072)	0.919 (3.004)	0.265*** (0.025)	0.057*** (0.124)
Between 25 and 100 km away	0.188** (0.042)	0.171*** (0.037)	0.181*** (0.041)	0.164*** (0.037)	0.066 (0.068)	0.592 (3.018)	0.178** (0.027)	0.039*** (0.086)
Between 100 and 500 km away	0.043 (0.042)	0.044 (0.037)	0.076* (0.042)	0.073** (0.037)	-0.028 (0.069)	-0.140 (2.409)	0.051* (0.030)	0.013 (0.028)
Child is working	-0.045 (0.030)	-0.045 (0.029)	0.013 (0.034)	0.010 (0.034)	-0.095** (0.040)	-0.954** (0.446)	-0.040* (0.023)	-0.010* (0.023)
Number of children of the child	0.009 (0.011)	0.009 (0.011)	0.011 (0.009)	0.012 (0.009)	0.006 (0.031)	0.004 (0.209)	0.009 (0.008)	0.002 (0.005)
Co-residence	0.450*** (0.042)	0.360*** (0.015)	0.440*** (0.043)	0.381*** (0.019)	0.000 (0.000)		0.433*** (0.033)	0.149*** (0.325)
Nordic country	-0.181*** (0.021)	-0.198*** (0.022)	-0.241*** (0.022)	-0.250*** (0.022)			-0.215*** (0.018)	-0.057*** (0.124)
Central country	-0.268*** (0.023)	-0.288*** (0.024)	-0.276*** (0.023)	-0.290*** (0.023)			-0.280*** (0.020)	-0.070*** (0.153)
Constant	1.926*** (0.487)		1.276** (0.523)		2.307* (1.343)		1.717*** (0.417)	0.344*** (0.749)
Observations	2404	2404	2404	2404	4808	1000	4808	4808
Adjusted R <sup>2</sup>	0.220		0.214					
chi2		417.108		409.526	.	52.241	2230.437	763.476

Robust standard errors in parentheses, \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Cross-sectional logit models and panel logit, re model present individual marginal effects.

SHARE 2004, 2006

**Table 7: Contact behavior regression for the single sample with at least two children**

	OLS 2004	Logit 2004	OLS 2006	Logit 2006	Panel OLS, FE	Panel Logit, FE	Panel OLS, RE	Panel Logit, RE
Financial assets in million per child	2.572** (1.016)	2.553** (1.189)	-0.477 (1.546)	-0.368 (1.408)	1.767 (1.375)	34.376 (76.311)	1.778** (0.891)	1.334* (1.429)
Real assets in million per child	-0.348 (0.308)	-0.211 (0.370)	-0.202** (0.089)	-0.190 (0.116)	0.067 (0.180)	-6.778 (29.766)	-0.101 (0.171)	-0.114 (0.122)
Present value of public annuity wealth in million euros	-0.009 (0.022)	-0.007 (0.019)	0.028*** (0.010)	0.084 (0.067)	0.030** (0.014)	1.025 (3.287)	0.018* (0.011)	0.018* (0.019)
Present value of private annuity wealth in million euros	-0.313*** (0.043)		-0.297 (0.410)	-0.418 (0.543)	-0.280* (0.156)	-27.882 (125.902)	-0.302*** (0.080)	-0.620 (0.664)
Inter-vivo transfer to the child in thousand euros	0.006*** (0.002)	0.008 (0.006)	0.009 (0.007)	0.003 (0.009)	-0.002 (0.005)	-0.499 (1.217)	0.003 (0.004)	0.003 (0.003)
Parent is female	0.084* (0.048)	0.087 (0.047)	0.157*** (0.049)	0.155*** (0.048)			0.114** (0.045)	0.094** (0.101)
Parent's age	-0.050* (0.028)	-0.056* (0.031)	-0.060** (0.027)	-0.066** (0.030)	0.002 (0.054)	-0.365 (2.522)	-0.054*** (0.020)	-0.047 (0.050)
Parent's age squared	0.000* (0.000)	0.000 (0.000)	0.000** (0.000)	0.000** (0.000)	0.000 (0.000)	0.005 (0.018)	0.000*** (0.000)	0.000* (0.000)
Retired	-0.036 (0.044)	-0.045* (0.043)	0.023 (0.044)	0.021 (0.043)	-0.065 (0.061)	-0.412 (1.486)	-0.029 (0.037)	-0.021 (0.023)
Self-employed	0.052 (0.098)	0.040 (0.116)	0.226 (0.190)	0.287 (0.167)	0.025 (0.026)		0.064 (0.064)	0.073 (0.078)
Number of ADL help needed	-0.041 (0.271)	-0.035 (0.258)	-0.401* (0.206)	-0.420** (0.186)	-0.131 (0.186)	-5.555 (970.248)	-0.133 (0.167)	-0.115 (0.123)
Number of IADL help needed	-0.167 (0.269)	-0.145 (0.246)	0.539** (0.249)	0.601** (0.265)	-0.122 (0.279)	-7.464 (591.366)	-0.040 (0.211)	-0.022 (0.023)
ADL help needed by age	0.001 (0.004)	0.000 (0.003)	0.005** (0.003)	0.006** (0.002)	0.001 (0.002)	0.062 (12.647)	0.002 (0.002)	0.001 (0.002)
IADL help needed by age	0.002 (0.004)	0.001 (0.003)	-0.007** (0.003)	-0.008** (0.003)	0.002 (0.003)	0.103 (8.772)	0.000 (0.003)	0.000 (0.000)
Number of children	-0.014 (0.020)	-0.015 (0.019)	-0.016 (0.019)	-0.020 (0.018)			-0.012 (0.017)	-0.015 (0.016)
Child is female	0.207*** (0.052)	0.207*** (0.049)	0.146*** (0.053)	0.146*** (0.049)			0.150*** (0.043)	0.132*** (0.141)
Child's age	0.012 (0.013)	0.014 (0.015)	0.018 (0.014)	0.019 (0.014)			0.020* (0.011)	0.018 (0.019)

Child's age squared	-0.000 (0.000)	0.000 (0.000)	-0.000* (0.000)	0.000* (0.000)			-0.000** (0.000)	0.000 (0.000)
Child is married	0.052 (0.052)	0.057 (0.052)	0.019 (0.051)	0.022 (0.048)	-0.013 (0.068)	-0.165 (1.794)	0.019 (0.039)	0.016 (0.017)
Daughter is married & working	-0.102 (0.070)	-0.100 (0.068)	-0.030 (0.070)	-0.029 (0.068)	0.006 (0.091)	-0.244 (15.697)	-0.040 (0.054)	-0.041 (0.044)
Up to 5 km away	0.460*** (0.064)	0.404*** (0.053)	0.476*** (0.066)	0.422*** (0.050)	0.101 (0.140)	1.534 (46.298)	0.410*** (0.057)	0.336*** (0.359)
Between 5 and 25 km away	0.261*** (0.068)	0.232*** (0.062)	0.287*** (0.072)	0.259*** (0.062)	0.032 (0.133)	0.614 (39.946)	0.243*** (0.062)	0.198*** (0.212)
Between 25 and 100 km away	0.196*** (0.072)	0.166*** (0.063)	0.152** (0.077)	0.137** (0.066)	0.066 (0.136)	1.422 (42.004)	0.166*** (0.059)	0.143** (0.153)
Between 100 and 500 km away	0.195** (0.081)	0.167** (0.068)	0.129 (0.081)	0.118* (0.067)	0.047 (0.096)	1.949 (52.292)	0.137* (0.071)	0.124** (0.133)
Child is working	0.068 (0.056)	0.061 (0.056)	0.041 (0.056)	0.023 (0.056)	-0.025 (0.040)	0.283 (21.461)	0.023 (0.029)	0.018 (0.019)
Number of children of the child	0.007 (0.017)	0.005 (0.016)	0.002 (0.016)	-0.002 (0.015)	0.038 (0.038)	0.956 (19.732)	0.010 (0.012)	0.007 (0.007)
Co-residence	0.604*** (0.070)	0.433*** (0.027)	0.559*** (0.076)	0.389*** (0.030)			0.548*** (0.063)	0.549* (0.588)
Nordic country	-0.163*** (0.057)	-0.172*** (0.053)	-0.135** (0.053)	-0.152*** (0.050)			-0.156*** (0.048)	-0.147*** (0.158)
Central country	-0.244*** (0.048)	-0.252*** (0.046)	-0.270*** (0.046)	-0.280*** (0.042)			-0.259*** (0.038)	-0.229*** (0.246)
Constant	1.748** (0.885)	2.553 (1.189)	1.933** (0.861)	0.368* (1.408)	-0.138 (2.058)		1.784*** (0.661)	1.128 (1.209)
Observations	618	611	618	618	1236	190	1236	1236
Adjusted R <sup>2</sup>	0.196		0.210					
chi2		113.308		126.193	.	3.693	584.489	122.518

Robust standard errors in parentheses, \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Cross-sectional logit models and panel logit, re model present individual marginal effects.

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**Table 8: Contact behavior regression for the couple sample with at least two children**

	OLS 2004	Logit 2004	OLS 2006	Logit 2006	Panel OLS, FE	Panel Logit, FE	Panel OLS, RE	Panel Logit, RE
Financial assets in million per child	0.005** (0.002)	0.008* (0.005)	-0.333* (0.198)	-0.325* (0.181)	0.001 (0.057)	1.956 (4.517)	0.002 (0.088)	0.002 (0.003)
Real assets in million per child	-0.000 (0.003)	0.000 (0.003)	0.008 (0.007)	0.019 (0.027)	-0.006 (0.007)	-0.031 (0.257)	-0.002 (0.004)	-0.001 (0.001)
Present value of public annuity wealth in million euros	-0.001 (0.003)	-0.001 (0.002)	-0.024 (0.023)	-0.018 (0.021)	0.000 (0.002)	0.085 (0.118)	-0.000 (0.002)	0.000 (0.000)
Present value of private annuity wealth in million euros	-0.010 (0.027)	-0.010 (0.024)	0.025 (0.019)	0.022 (0.026)	-0.004 (0.014)	-0.164 (1.276)	-0.001 (0.020)	-0.001 (0.002)
Inter-vivo transfer to the child in thousand euros	0.001 (0.001)	0.001 (0.001)	0.002* (0.001)	0.003* (0.001)	0.002 (0.001)	0.059 (0.044)	0.002* (0.001)	0.001* (0.001)
Parent is female	-0.000 (0.021)	-0.001 (0.020)	0.010 (0.021)	0.012 (0.020)			0.005 (0.015)	0.001 (0.003)
Parent's age	-0.032* (0.018)	-0.034* (0.020)	-0.016 (0.019)	-0.021 (0.020)	-0.030 (0.037)	-0.258 (0.422)	-0.029** (0.014)	-0.010** (0.018)
Parent's age squared	0.000** (0.000)	0.000* (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.001 (0.003)	0.000** (0.000)	0.000** (0.000)
Retired	-0.008 (0.025)	-0.009 (0.024)	0.013 (0.025)	0.018 (0.024)	-0.015 (0.029)	-0.151 (0.284)	-0.004 (0.020)	-0.001 (0.001)
Self-employed	-0.019 (0.045)	-0.009 (0.050)	0.021 (0.048)	0.033 (0.051)	-0.088 (0.065)	-0.670 (0.779)	-0.023 (0.034)	-0.003 (0.005)
Number of ADL help needed	0.010 (0.154)	-0.049 (0.194)	0.511*** (0.163)	0.556*** (0.210)	0.244 (0.213)	2.593 (2.278)	0.304** (0.128)	0.104*** (0.196)
Number of IADL help needed	0.350** (0.165)	0.400** (0.197)	-0.284** (0.125)	-0.287** (0.127)	-0.136 (0.179)	-1.338 (2.000)	-0.081 (0.113)	-0.027 (0.051)
ADL help needed by age	0.000 (0.002)	0.000 (0.003)	-0.007*** (0.002)	-0.008*** (0.003)	-0.003 (0.003)	-0.034 (0.031)	-0.004** (0.002)	-0.001** (0.003)
IADL help needed by age	-0.004* (0.002)	-0.005* (0.003)	0.004** (0.002)	0.004** (0.002)	0.002 (0.003)	0.018 (0.027)	0.001 (0.002)	0.000 (0.001)
Number of children	-0.051*** (0.010)	-0.047*** (0.010)	-0.051*** (0.010)	-0.047*** (0.010)			-0.049*** (0.008)	-0.012*** (0.023)
Child is female	0.111*** (0.030)	0.122*** (0.029)	0.150*** (0.032)	0.156*** (0.031)			0.111*** (0.025)	0.034*** (0.065)
Child's age	-0.008 (0.011)	-0.012 (0.012)	-0.010 (0.011)	-0.014 (0.013)			-0.004 (0.009)	-0.002 (0.003)

Child's age squared	-0.000 (0.000)	0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)			-0.000 (0.000)	0.000 (0.000)
Child is married	-0.001 (0.028)	0.006 (0.028)	-0.030 (0.029)	-0.023 (0.027)	-0.036 (0.043)	-0.276 (0.375)	-0.020 (0.024)	-0.005 (0.009)
Daughter is married & working	-0.006 (0.036)	-0.019 (0.036)	-0.023 (0.038)	-0.029 (0.038)	0.097** (0.044)	0.857* (0.505)	0.014 (0.030)	0.003 (0.005)
Up to 5 km away	0.428*** (0.038)	0.392*** (0.031)	0.401*** (0.037)	0.370*** (0.033)	0.260*** (0.087)	2.247 (3.011)	0.405*** (0.029)	0.112*** (0.212)
Between 5 and 25 km away	0.278*** (0.040)	0.254*** (0.037)	0.288*** (0.039)	0.266*** (0.038)	0.181** (0.081)	1.499 (3.037)	0.281*** (0.030)	0.076*** (0.143)
Between 25 and 100 km away	0.191*** (0.044)	0.175*** (0.039)	0.187*** (0.043)	0.170*** (0.039)	0.115 (0.089)	1.024 (3.050)	0.187*** (0.033)	0.052*** (0.099)
Between 100 and 500 km away	0.048 (0.044)	0.048 (0.039)	0.083* (0.043)	0.079** (0.039)	0.057 (0.079)	0.553 (3.064)	0.068* (0.035)	0.021* (0.039)
Child is working	-0.043 (0.032)	-0.042 (0.032)	0.010 (0.036)	0.010 (0.037)	-0.106*** (0.038)	-1.059** (0.430)	-0.043 (0.028)	-0.013* (0.025)
Number of children of the child	0.011 (0.011)	0.011 (0.012)	0.012 (0.010)	0.013 (0.009)	-0.002 (0.034)	-0.042 (0.144)	0.009 (0.009)	0.003 (0.005)
Co-residence	0.472*** (0.044)	0.369*** (0.017)	0.466*** (0.044)	0.397*** (0.018)			0.463*** (0.037)	0.193 (0.365)
Nordic country	-0.183*** (0.023)	-0.198*** (0.023)	-0.247*** (0.023)	-0.255*** (0.022)			0.219*** (0.018)	-0.072*** (0.135)
Central country	-0.270*** (0.024)	-0.289*** (0.025)	-0.283*** (0.024)	-0.296*** (0.024)			0.285*** (0.022)	-0.089*** (0.168)
Constant	1.961*** (0.519)		1.410** (0.550)		2.009 (1.307)	-1.059** (0.430)	1.777*** (0.430)	0.428*** (0.808)
Observations	2189	2189	2189	2189	4378	912	4378	4378
Adjusted R <sup>2</sup>	0.223		0.216					
chi2		391.288		377.970	.	38.877	4009.098	839.809

Robust standard errors in parentheses, \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Cross-sectional logit models and panel logit, re model present individual marginal effects.

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