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ABSTRACT

Gifts that Bind*

We study whether receiving a monetary gift from parents increases the intensity of parent-child social contact. We use unique longitudinal data that follows adult children and their older parents for more than a decade (between 2004 and 2015) across various European countries. We first document that bequests, being more visible and subject to legal restrictions on their division, tend to be equalized among children, whereas gifts are less conspicuous and often unevenly distributed. Leveraging the exogenous variation induced by fiscal incentives resulting from inheritance tax legislation reforms, we use an instrumental variable (IV) and an endogenous treatment strategy to investigate the effect of gift-giving on parent-child social contact. Our findings suggest that financial transfers from parents to children lead to an increase in the intensity of parent-child interactions. We estimate that the receipt of a gift gives rise to a 12% increase in social contact.

JEL Classification: J14, H29

Keywords: gift giving, inter-vivos transfers, upstream social contact, inheritance tax-reforms, inheritance tax, gifts, bequests Europe

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1. INTRODUCTION

Interactions with adult children provide older parents with meaningful social engagement, fostering both material and emotional support (Fingerman et al, 2020 Rossi and Rossi, 2018).[1] Such engagement can ultimately improve parents' subjective well-being (Mancini and Blieszner, 1989, Heylen, 2010, de Jong Gierveld and Tesh-Romer, 2012), and alleviate feelings of loneliness (Litwin, 2001)[2]. However, our understanding of the factors that drive children to engage more frequently with their parents remains limited.

Early theoretical explanations emphasized that these relationships are not only motivated by pure altruism but also by exchange motives, particularly financial incentives (Becker, 1981, Brown, 2006, Arrondel and Masson, 2006). Building on this proposition, the hypothesis of a 'strategic bequest motive' (Bernheim et al., 1985) suggested that the promise of a bequest can incentivize children to engage with their parents (Horioka et al., 2018). However, bequests motives play a weaker role in Europe for at least two key reasons. First, bequests are typically equally distributed among children due to strong cultural norms, and second because legal restrictions (statutory allowances) protect the rights of all children, limiting parents' ability to use bequests to favour children who maintain closer contact (Angelini, 2007). In contrast, financial gifts constitute an important share of children's net worth (Villanueva, 2005, Gale and Scholz, 1994).

Financial gifts can influence children's contact with parents either as financial incentives (Becker, 1974, Cox 1987, Cox and Rank, 1992), or particularly in a European context, as a 'caring signal' that strengthens family bonds. Furthermore, legal restrictions on

[1] However, the intensity of such family contact is not independent of the costs of such social engagements either due to technology improvement (e.g., extension of mobile phones, introduction of cost-free calls such as skype ad WhatsApp), alongside their time and income related opportunity costs above and beyond their effect (e.g., emotional contact) on individuals wellbeing.

[2] Parents estranged from their children exhibit a higher mental health burden (Arranz et al, 2022).

gifts are typically less stringent than those on bequests, and smaller gifts up to a certain amount are often exempt from inheritance taxation. Unlike bequests, gifts are always a deliberate choice by parents and are more likely to be unequal, as they can be given discreetly without other children's knowledge. Additionally, gifts are more likely to respond to adult children's behaviour because they can be recurrent and adaptable to changing family circumstances (Halvorsen and Thoresen, 2011). Consistently, evidence suggests large inequalities across siblings in the distribution of parental gifts (Hochguertel and Ohlsson, 2009).[3]

This paper studies the effect of gift giving as an incentive for adult children's social contact with their parents, namely the extent to which gifts influence the frequency of children's contact with their parents. We draw on longitudinal data from the Survey of Health, Ageing and Retirement in Europe (SHARE) covering many European countries for the years from 2004 to 2015. The survey provides us with information on financial and time transfers between adult children (up to four) and their older parents. Our analysis begins by documenting evidence of the extent of heterogeneity of gifts and bequests in Europe. We then show that, while bequests are largely evenly distributed within households, gifts are not. Then, we draw on such variation in gift giving across and within households to examine whether it exerts an influence on child-parent social contacts controlling for household and child fixed effects.

Given that the effect of gift-giving on social contact is potentially biased by the presence of confounders and reverse causality, we exploit the exogenous variation in gift-giving resulting from legislative reforms in inheritance tax across European countries. To this end, we construct a unique dataset that documents all the changes in inheritance and gift tax regulations in Europe during the period 2004-2015, and we employ these reforms as an instrument for parental gift giving to their offspring. Because changes in inheritance tax

[3] See Ho (2022) which documents bequests intentions to correlate with children frequently confiding with whom they have more emotional ties. Similarly, some recent studies examine the correlation between help and gift or inter-vivos transfers to adult children (Nivakoski, 2019).

legislation exhibit large cross-country heterogeneity and vary over time, we identify a change by considering changes in either the tax base or tax rate, including instances where the tax is completely abolished or reintroduced. We classify these changes based on whether they become more generous or stringent toward individuals.

The rationale behind using an inheritance tax reform as an instrument aligns with the existing evidence (e.g., Joulfaian, 2005), suggesting that changes in tax legislation affect the trade-off between bequeathing assets and making inter vivos transfers, independently of the parent-offspring relationship. When inheritance taxes increase, parents who want to minimize their tax burden or that of their surviving children will opt for smaller gifts falling below the tax exemption threshold for gift-giving. While gifts are typically subject to taxation just like inheritances, smaller gifts often remain tax-free as they fall below the exemption threshold. In our data, this is the case for 99.4% of gifts. Thus, a decrease (or increase) in either the inheritance tax rate or the tax base induces exogenous variation in parental decisions regarding gifts to their children. Recent evidence from Italy suggests that family ties provide opportunities for tax avoidance, with Italians frequently using inter vivos transfers for tax evasion purposes (Di Porto 2021).

One potential threat to the validity of our instrument is that changes in inheritance taxes might affect social contact directly, rather than solely through gift giving behaviour, by altering individuals' expectations of bequests. Since the SHARE dataset lacks longitudinal information on bequest expectations, we address this concern using data from the 2010 and 2015 waves of the Household Finance and Consumption Survey (HFCS). We apply a difference-in-differences design to estimate the effect of tax reforms on *inheritance expectations*, using Germany as the treatment group - where an inheritance tax reform occurred between the two waves, and Belgium as the control group, which experienced no tax policy changes. Our results

show no significant effect of changes in inheritance taxes on bequest expectations, supporting the validity of our instrument.

We find evidence of a causal effect of financial transfers from parents to children on the intensity of parent-child social contact. We show that this effect varies depending on family dynamics, specifically when there are multiple siblings compared to a single child, who would not face competition for such gifts. Additionally, the presence of grandchildren and caregiving duties also influences this effect. Caregiving duties, in particular, might already provide children with a sense of fulfilment in their family responsibilities, reducing the need for gifts as a further signal of appreciation for social contact. Furthermore, we test whether these effects differ when parents are healthy and still married. Consistently, we find slightly lower effects in these cases, suggesting that unhealthy parents, as well as parents who are not married, may be more generous, likely because older, unmarried parents or those in poor health may rely more heavily on their children for social interactions.

We make two important contributions to the literature. First, we are the first to examine the causal effect of gift-giving on social contact with parents in the European context, which offers distinct advantages. Unlike the U.S., where much of the previous literature has been focused, bequests in Europe are predominantly equally distributed among children. This is due to both cultural norms and legislation that safeguards the rights of all children. In nearly all European countries, children typically inherit a significant portion of the estate as a statutory share, regardless of the deceased's preferences. In this context, gifts hold particular importance as they allow for differentiation among children and play a crucial role in shaping family dynamics.

Moreover, Europe exhibits substantial cross-country heterogeneity in the taxation of bequests and gifts. Drawing on cross-national data from several countries, such variation

creates exogenous differences in financial incentives for gift-giving versus bequeathing, which we exploit in our empirical analysis.

Second, while previous studies are largely descriptive, we provide causal evidence that financial gifts significantly influence the frequency of children's contact with their parents. These findings also suggest that changes in tax legislation for bequests, by affecting financial incentives for gift-giving, can have unintended consequences on individual behaviour and family dynamics.

The paper proceeds as follows. The next section reports a summary of the main insights of the related literature on intergenerational gifts giving and bequests, alongside the evidence of the motivation for family social contact. Section three reports the data and empirical strategy. Section four contains the main results, and a final section concludes.

2. INTERGENERATIONAL GIFTS AND BEQUESTS

In this section, we provide the main insights into the influences of gift giving (also known as inter-vivos transfers) and bequests as an alternative to gift giving, alongside intergenerational social contact that we will analyse in our empirical analysis.

The Motivation of Gift Giving. Gift giving (also known as downstream inter-vivos transfers) offers some advantages with respect to bequests to reward children's contact with older parents, including the fact that they are recurrent and adjustable to new circumstances, and can be interpreted as signals to express gratitude.[4] However, whilst such gifts are more common among younger parents, they only improve the likelihood of contact when gifts are provided by older parents (Attias-Donfut et al. 2005).

[4] In contrast, gifts or upstream inter-vivos transfer from adult children to their parents are less common (McGarry and Schoeni, 1995).

An important feature of gifts compared to bequests in some settings is that they are more likely to be unequally distributed, especially when examined over longer periods of time (McGarry, 1999, McGarry, 2016). One explanation might be that financial constraints may prevent parents from making exact gifts to all children when there are a larger number of children. Hence, parental liquidity constraints might further induce children to behave strategically and non-cooperatively in seeking transfers from their parents (Chang, 2009).

Following exchange approaches in the literature (Becker, 1981) gifts might be interpreted as a reward for the time children devote to their parents. However, Altonji et al. (2000) find weak evidence of the exchange of time for financial gifts. Alternatively, gifts might be the result of children's altruism especially when parents have low incomes (Cai *et a*l, 2006). Consistently with the idea of 'caring signals' as driving gifts, Ioannides and Khan (2000) find evidence of two-sided altruism, even though such motivation might be limited by resource constraints.

Other explanations for differences across children include life events such as divorce (McGarry, 2016), as well as differences in children's financial or health needs (Sloan et al., 2002). Consistently, Hurd et al. (2011) document that parental transfers respond to the onset of a disability and economic resources for both singles and couples. Free home sharing might depress gift giving living rent-free might be in itself a form of reward (Ermish and Di Salvo, 1987). Similarly, Norton and van Houtven (2006) document that gifts are larger for children who provide informal care, and that the expectation of future transfers motivates the supply of such informal care (Norton et al, 2013). Finally, another explanation for a lower use of gift giving is that parents provide time, rather than financial gifts, to some of the children, for example by offering care to grandchildren[5].

[5] Consistently, some evidence suggests that parents anticipate the presence of such childcare needs as parental retirement increases the probability of children's fertility in Germany (Eibich and Siedler, 2020).

Nonetheless, an explanation for gift-giving that has received less attention is the attempts by families to reduce the tax burden on children inheriting wealth (Bernheim et al, 2001, 2004, Page 2003, Suari-Andreu et al., 2024). Consistent with the importance of the tax motives, evidence shows that individuals might postpone their death around periods of tax changes to minimise taxes for their heirs (Slemrod and Kopczuk, 2001). This paper will focus on this source of variation. However, much of the evidence from previous studies does not stem from an exogenous source of variation in gift giving/receiving, which limits the generalisability of findings (Horioka et al, 1998). In this paper we draw on one such source of variation, namely the changes in inheritance taxes.

Bequests motives. The expectation of a bequest is a common explanation for financial incentive explaining family contact (Bernheim et al, 1985; Kotlikoff and Summers 1981). If this were the case, one would see wealth decrease less steeply among those families where there is more social contact[6]. However, evidence suggests that parental consumption (and hence savings and wealth) does not really vary between children and childless families (Hurd 1987, 1989) casting doubt about the role of parental wealth on family behaviour. However, more recent evidence employing strategic surveys documents some evidence of bequest motives among middle-class individuals in the US who exhibit some aversion to relying on Medicaid if they do not receive intergenerational support (Ameriks et al, 2007).

Structural approaches show that bequests motives do not seem to drive major savings behavioural patterns (DeNardi et al, 2006).[7] That said, it appears important to understand the underlying mechanisms motivating such evidence. For instance, Li (2014) finds evidence of exchange as opposed to altruism in explaining family transfers in China, which regulate the so-

[6] The seminal paper of Kotlikoff and Summers (1981) finds some evidence consistent with the idea of bequest motives driving savings behaviour.

[7] One of the main problems notes by Dynan, Skinner and Zeldes (2002) is that it is often complex to disentangle bequest and precautionary motives.

called ‘filial piety’. Francesconi et al. (2015) show that 35% of American families excluded some children from bequests in 2010, and Ho (2022) documents an association between the intention to bequeath and intergenerational emotional ties in Singapore. However, much of this evidence is not causal and culturally specific, and in European countries, as we find in this paper, there is a culture of equal bequests, hence the rest of the paper will focus on gift giving.

Heterogeneity. The effect of gifts might not be the same across all families. More specifically, one can expect healthier parents to gift less to keep some precautionary savings, whilst sicker parents might wish to reduce the tax burden on inheritance taxation on their children. Similarly, the presence of grandchildren, when they entail caregiving responsibilities for grandparents might represent a time gift to their children in terms of child care which might reduce the need on the margin to use gifts as signals (Wu and Li, 2014). Family dissolution or widowhood might reduce the opportunities for parents to socialise, and increase their dependency on children for social contact. Finally, co-residing children might exhibit different gift motives as it might involve time gifts and implicit financial transfer from subsidies rent.

3. DATA

3.1. Datasets

We draw on data from SHARE (Survey of Health, Ageing and Retirement in Europe) for Wave 1 (2004), Wave 2 (2007), Wave 4 (2011), Wave 5 (2013) and Wave 6 (2016)[8]. SHARE is the European equivalent of the Health and Retirement Survey (HRS) in the US, a panel dataset that collects extensive information on health, socioeconomic status such as income and wealth, and family interactions of individuals aged 50+ in many European countries, including Austria, Germany, Sweden, Netherlands, Spain, Italy, France, Denmark, Greece, Switzerland, Belgium,

[8] Unfortunately, wave 3 could not be included as it is not comparable with other waves.

the Czech Republic, Poland, Ireland and additionally Israel. While sample sizes vary between countries, the pooled dataset exceeds 100,000 individuals, from which only 20% exhibit some form of dependency (defined as some ADL or IADL they cannot perform). This is uniquely suited data for this study because it collects and provides information on (older) parents and their (adult) children separately.

Additionally, in our analyses where we investigate whether expectations of bequests respond to the inheritance taxes, we use data from the 2010 and 2015 waves of the Household Finance and Consumption Survey (HFCS). The Household Finance and Consumption Survey (HFCS), coordinated by the ECB, collects detailed data on household finances and wealth in the euro area. The 2010 wave covered 62,000 households in 15 countries, while the 2015 wave expanded to 84,000 households across 18 countries. Both waves collected comprehensive information on household assets, liabilities, and wealth, and data on inheritances and intergenerational transfers, including expectations for future bequests, which is useful for our analyses (See section 4.5). Finally, we construct a unique database including reforms on inheritance taxes across European countries between 2004 and 2015 (see Table 2b), which allows us to exploit the exogenous variation in tax policy changes to assess the effect of gift giving on social contact.

3.2. Sample

Our analysis exploits individual longitudinal data from countries for which we have at least two waves of observations.[9] Since our focus is on intergenerational transfers and social contact, we restrict our sample to respondents with children. In each household, the family respondent, who is randomly selected in SHARE, provides basic data on all living children (gender, age

[9] This means that our analyses did not include data from Greece, Israel, Ireland and the Czech Republic.

and proximity), whereas more detailed information relevant to this study (frequency of contact between the child and the parent) is asked for up to four (adult) children.[10] Then, we reshaped the data to set it up at the child level, where the unit of observation is the child. This restriction resulted in our sample sizes varying approximately between 1800 and 4700 adult children coming from approximately between 680 and 1800 households, across the 11 countries in the first wave (see sample sizes in Table 3, last column). The children in our sample are on average 38.5 years old, with 49% being women.

We measure social contacts both as the frequency of contacts on a scale from 1 (never) to 7 (daily) and as translated into number of contacts (see Bernheim, 1985) as follows: never - 0, less than once a month - 3, about once a month - 12, about every two weeks - 26, about once a week - 52, several times a week - 156, daily - 312. The variable is then normalised to be equal to 1 if the child provides the maximum number of contacts possible (daily contacts). The survey also collects data on related variables such as cohabitation. However, when it comes to cohabitation, we cannot distinguish between intentional and unintentional social contact. Hence, we exploit the variation of a precise measure of social contact between parents and their non-cohabiting children spanning more than a decade.

4. EMPIRICAL STRATEGY

In this section, we outline our empirical strategy to investigate the effects of gift-giving on social contact between parents and children. First, in Section 4.1, we specify our model, where gifts are instrumented using changes in inheritance tax policies. In Section 4.2, we discuss our identification strategy and provide justification for the validity of our exclusion restriction.

[10] When there are more than four children, the program sorts them in ascending order by minor, proximity and birth year, where minor is defined as 0 for all children aged 18 and over, and 1 for others, then selects the first four.

Finally, in Section 4.3, we explain the challenges of applying linear 2SLS estimation due to the binary nature of gift receipt and describe how we address them by estimating the endogenous treatment effect regression with the control function approach, which better adjusts for this nonlinearity.

4.1 Model Specification

Our starting point is that differences in the likelihood of children within a family receiving bequests and gifts are essential for testing the hypothesis of strategic bequest and gift motives. Evidence from the end-of-life interviews reveals that, unlike in the US, where bequests are equally distributed among children in only 60% of cases (Groneck, 2017); in Europe this occurs in 95% of cases. This near-universal practice already suggests a lack of a generalised bequest motive in Europe. However, in section 4.1, we show the extent of unequal distribution of gifts within families. Such empirical observation can be attributed to the legal restrictions requiring a substantial portion of inheritance to go to children or partners (*the statutory share*), independently of the deceased's will. Consequently, parents are incentivized to favor unequal gift giving over unequal bequeathing. Therefore, in our analysis, we focus on the impact of inter-vivos gifts on family interactions.

Given the potential endogeneity between gift-giving and social contact, we exploit exogenous variation in gift-giving behaviour arising from legislative reforms in inheritance tax across European countries between 2004 and 2015. We employ these reforms as an instrument for parental decisions regarding gifts to their offspring. We assume that individuals face the choice between gifting while alive and/or bequeathing upon death, and we propose that this choice will be affected by our instrument. Specifically, changes in inheritance taxes at the country level alter the value of future bequeathable wealth, thereby impacting the decision between gift-giving and bequeathing. Higher inheritance taxes reduce the net worth passed down to children, thus decreasing the potential value of bequests. In response, parents may opt

to increase their gift-giving during their lifetime. Gift-giving is less directly impacted by taxes because transfers can often be divided into smaller, tax-exempt amounts. For instance, by keeping transfers small and less traceable, or by opting for gifts in kind, individuals can strategically stay below the taxable limit. In fact, Table 1 illustrates that 99.4% of gifts in our data fall below the taxable threshold, underscoring the relevance of our instrument. In other words, our claim is that individuals adjust their gift-giving behaviour in response to changes in inheritance taxes, to avoid tax burdens upon their death by modifying the frequency and magnitude of gifts.

[Insert Table 1 about here]

We use child-level data to examine whether gifts influence children's social contact with parents. We estimate versions of the baseline two-stage least square (2SLS) specification where gifts are instrumented by changes in inheritance taxes, as follows:

$$Gift_{ijct} = \alpha_1 + \boldsymbol{x'_{ijct}\beta_1} + \gamma Inheritance\ Tax\ Change_{ct} + \mu_c + \lambda_t + \theta_j + \varepsilon_{ijct} \quad (1)$$

$$Social\ Contact_{ijct} = \alpha_2 + \boldsymbol{x'_{ijct}\beta_2} + \delta\widehat{Gift}_{ijct} + \mu_c + \lambda_t + \theta_j + u_{ijct} \quad (2)$$

$Social\ Contact_{ijct}$ refers to the frequency of contact between child *i* and her parents in household *j*, in country *c* and interview year *t*.

$Gift_{ijct}$ is a dummy equal to 1 if child *i* of household *j* living in country *c* in year *t* reported to *receive a gift* from her parents in year *t* and $\boldsymbol{x_{ijct}}$ is a vector including both the characteristics of the child and of the responding parent (gender and a full set of age dummies). We focus on the extensive rather than the intensive margin of gift giving as the amount of the gift is only recorded in the first two waves of the survey and is measured quite imprecisely. Moreover, financial incentives serve as signals, highlighting the importance of the act of giving

rather than the monetary value of the gift. Therefore, we focus on the role of gifts as 'caring signals' that create expectations.

$Inheritance\ Tax\ Change_{ct}$ is a dummy variable equal to 1 if in country c the inheritance tax system is more generous in period t than in the previous observation period, and equal to 0 if there has been no change. An increase in tax generosity might mean either that inheritance taxes have been abolished, that the exemption threshold has increased or that the tax rate has decreased. To have a cleaner control group, we exclude from our sample those countries and years in which the inheritance tax system became more stringent (which in our sample period happened for Italy, France and Germany). As a result, our sample consists of all countries and years for which there was either no change or an increase in generosity. Finally, μ_c, θ_j and λ_t represent, respectively, country-, household- and interview year- fixed effects. In alternative specifications, we replace household fixed effects with individual fixed effects. Given our data is at the child level, the decision to incorporate household or individual fixed effects is *not* trivial.

Incorporating household fixed effects allows for the control of unobserved household-level characteristics, such as parental wealth, cultural norms, or shared family dynamics, that might simultaneously influence gift-giving and social contact. By focusing on variation between *adult siblings* within the same household, this approach isolates the effect of gift-giving while controlling for these potential confounders. Since SHARE pools data from many countries, household fixed effects not only account for broad cultural differences across countries (which are partially addressed by country fixed effects) but also capture regional or subnational differences in parental preferences and norms that may vary significantly within the same country.

Individual fixed effects, on the other hand, address unobserved, time-invariant individual traits, such as personality, relationship quality, or gender differences, which might

affect both gift-giving and social contact. This is particularly valuable in our case as changes over time are a crucial source of variation, allowing us to examine how children respond to shifts in inheritance tax policies. By focusing on within-individual changes, individual fixed effects help us assess how dynamic policy changes, such as changes in inheritance tax legislation, influence both gift-giving and social contact, while also minimizing bias from static individual characteristics. Ultimately, while sibling-level differences within culturally heterogeneous households favour household fixed effects, the importance of temporal variation and responses to inheritance taxes makes individual fixed effects a compelling choice. Thus, we report specifications with both types of fixed effects.

4.2. Identification

Our exclusion restriction is that gifts are affected by inheritance tax changes, and they only affect social contact through gift giving. A key assumption of our approach is that the instrument - inheritance tax changes - only affects gift-giving behaviour for individuals who have the financial capacity to give gifts. For the part of the distribution who cannot give gifts, we assume that the instrument will not affect them. This distinction is important because individuals unable to provide monetary gifts might instead compensate with non-monetary contributions, such as time donations, potentially inflating their reported levels of social contact. However, this is less of a concern because we use an IV that is not affecting this subsample. In our framework, the compliers are those who can afford to give gifts. That is, changes in inheritance taxes do not affect individuals provided they do not have financial wealth to distribute. The summary statistics (see Table 2a) also show that those who give gifts on average are reporting higher levels of social contact, which is reassuring as this suggests that there is no substitution between time and money transfers.

For the exclusion restriction to be valid in our analysis, we need inheritance taxes to affect social contact only through inter vivos gifts. A potential violation of this assumption

could occur if changes in inheritance tax influence children's expectations of receiving an inheritance in the future, and it is this expectation - rather than the gift itself - that drives social contact. This would violate the exclusion restriction, as the change in tax policy would influence social contact through inheritance expectations, rather than solely through inter vivos. Since SHARE does not include longitudinal data on expectations, we address this concern using data from the 2010 and 2015 waves of the Household Finance and Consumption Survey (HFCS). Hence, we exploit a difference-in-differences design to estimate the effect of tax reforms on inheritance expectations, using Germany as the treatment group, which underwent an inheritance tax reform between the two waves, and Belgium as the control group, which experienced no tax policy changes.

The results of this analysis are shown in Table 2. While in the first two columns, we look at the full sample, in columns 3 and 4 we focus on individuals whose current wealth exceeds €205,000, which was the inheritance tax threshold in Germany in 2004. This threshold helps identify those directly affected by changes in tax policy. However, we also acknowledge that current wealth may not represent the wealth parents will have at the time of their death. To mitigate this, we conduct the analysis both on the full sample and on the subsample of individuals with wealth above €205,000, under the assumption that children may expect current wealth to remain stable at the time of inheritance. Column 1 reports the baseline estimates without controls, and Column 2 adds controls for age, marital status, education, gender, household income, and wealth. In both cases, the interaction term is not statistically significant. In columns 3 and 4, we limit the sample to households with wealth above the €205,000 threshold, with Column 3 showing estimates without controls and Column 4 showing estimates with controls. In all specifications, the interaction term remains statistically insignificant, suggesting that the inheritance tax reforms did not alter individuals' expectations of future

inheritances. This suggests that the tax reforms did not alter individuals' expectations of bequest, and thus, there is no effect on social contact through such channel.

[Insert Table 2 about here]

Overall, our estimates meet the expected conditions for a valid instrumental variable strategy, namely theoretical validity and statistical test that suggest the instrument is not weak, more specifically, the F-tests are well above the cut-off value and the instrument is significant as we show below. We are confident that our estimates provide a local average treatment effect (LATE) estimate of the effect of gifts on social contact.

4.3 Estimation

One notable challenge with the linear IV specification discussed earlier arises from the binary nature of the first-stage equation (i.e., whether a gift was received or not). Ignoring the nonlinearity inherent in this setup and applying a standard 2SLS estimation introduces a specific complication of inflated coefficient magnitudes and reduced precision compared to conventional IV regression techniques (Angrist and Pischke, 2009; Huntington-Klein, 2021).

To address this issue, there are two widely recognized strategies. The first involves an established method for integrating binary treatment variables into the 2SLS framework, championed by Wooldridge (2010; 2015). This approach employs a generalized control function (CF) technique with a probit link, which effectively accounts for the nonlinear nature of the endogenous explanatory variables (Wooldridge, 2010; 2015). In this framework, the first stage is estimated through a probit model that regresses the endogenous variable on the instrument and all controls. The residuals from this probit model are then incorporated into the second stage, avoiding the pitfalls of directly using predicted values—a practice Hausman terms "forbidden regression." Wooldridge demonstrates that this method not only corrects the bias introduced by nonlinearity but also enhances the precision of estimates and produces more reasonable coefficient sizes (Huntington-Klein, 2021).

The second strategy, which generates results consistent with the first in our context, involves the endogenous treatment effect regression. This approach entirely bypasses the 2SLS framework and instead directly models the binary nature of the endogenous variable using maximum likelihood estimation (Huntington-Klein, 2021). By combining elements of IV estimation and selection models, this method *jointly* estimates the treatment assignment and outcome equations. It does so by simultaneously modeling the probit first stage and the linear second stage, accounting for potential correlations between their error terms. This joint estimation ensures greater efficiency while preserving the instrumental variable's role in influencing the endogenous variable. If the second-stage outcome were binary, this method could be adapted into the well-established bivariate probit regression framework (Huntington-Klein, 2021).

We favour the endogenous treatment effect regression approach as it facilitates direct estimation of the "average treatment effect" of receiving gifts on social contact. For implementation, we utilize Stata's **etregress** command with the control function option, ensuring robust and efficient results.

5. RESULTS

5.1. Bequests are Equal, Gifts are Not

We start by showing evidence that while bequests are equal among children, gifts are not in all of the 11 countries in our data. In Table 3 we first show how unequally distributed gifts are across children within a family using the first two waves of SHARE where we can observe both the probability of gift-giving, alongside its magnitude. and discuss evidence of strategic gift-giving. We find evidence of significant heterogeneity which is consistent with evidence from Villanueva (2005) who shows that gifts from living parents to adult children account for at least 11% of aggregate net worth.

[Insert Table 3 about here]

Table 3 also shows the median values of the gift amount by country among those who give gifts. The difference between the median and mean values of the gift amount shows that there is substantial skewness in the gift amount distribution. The average gift amount can be 2 to 5 times larger than the median gift amount depending on the country. Keep in mind that in our empirical strategy, we do not exploit variation in gift amount but instead use the extensive margin measure of whether to give gifts or not. Thus, this skewness has no implications for our findings. This needs to be taken together with the finding in Figure 1, where we show that the binary variable indicates a large variation in wealth.

Figure 1 below shows the distribution of wealth by gift-giving. Those who declare to have given gifts are on average wealthier, although there is a large amount of variation within each group. This indicates that gift givers can be located anywhere in the wealth distribution and financial wealth does not necessarily pattern our findings.

[Insert Figure 1 about here]

Table 1a suggests evidence of a positive association between gift-giving and the frequency of social contact in our data. Our data also show evidence of a negative association between gift-giving and co-residence (See Appendix Fig A1) which indicates that, given that co-residence provides a gift in kind, alternative gifts in cash tend to be negatively associated with co-residence. Although this is in line with our expectations, in the remaining part of the paper, we do not use co-residence as one of the outcomes, since gift-giving between co-residing family members is difficult to measure. However, we still provide additional sensitivity analyses on co-residence in Appendix (See Table A3) as the levels of co-residence vary across countries. We will return to the implications of excluding co-residence as an outcome and co-

residing family members in the discussion section. Finally, Table A2 reports the reforms that took place in inheritance tax legislation and our coding in 10 EU countries.

5.2 Baseline Results

5.2.1 Household or Individual Fixed Effects

In Table 4 we analyse the relationship between gift giving and intergenerational social contact.[11] The specifications include country fixed effects, year fixed effects, cohort fixed effects for both the parent and the child and gender of both the parent and the child. The first three columns of Table 4 report the least squares (OLS) estimate to provide a benchmark comparison, while in columns (4) and (5) we estimate IV regressions in which we use an increase in the generosity of the inheritance tax system as an instrument for gift giving. The OLS estimates and our IV estimates are reported with individual fixed effects and/or household fixed effects.

Estimates for both measures of social contact for both OLS and IV show the same sign and support the presence of a strategic gift giving motive: children who receive financial gifts from their parents are more likely to contact them. When using the number of contacts normalized to 1 as the dependent variable, the OLS effect translates approximately into one additional contact per month. Given that our instrument is binary, and our dependent variable is not, our IV estimated coefficients are inflated (Angrist and Pischke 2009), although we can still interpret their sign and statistical significance. Therefore, in the last column, we report the estimates using control function and bootstrapping the standard errors: gift giving increases the frequency of contact by 0.732 on a scale from 1 to 7. While CF estimates address the inflated

[11] We exclude from the analysis children who co-reside with their parents as for them contacts are hard to measure as the data is at the child level, we only exclude the co-residing child and not the entire family. However, our results are robust when we include co-residing children, and we assume that they are in contact with their parents every day.

coefficient issue (Wooldridge 2015), they are also limited in the sense that we cannot apply individual or household fixed effects specifications. However, consistency in the signs of coefficients across these specifications reassures us that our findings are robust to the variations of the model specifications and estimation method.

[Insert Table 4 about here]

5.3. Heterogeneity by subgroups

5.3.1 Presence of Grandchildren and Gender Differences

One potential threat to the identification is that family social contact may be driven by the presence of grandchildren, meaning that gifts could be given to grandchildren as opposed to their children. Additionally, social contact may be enhanced if childcare is provided by the grandparents, which could be viewed as a form of "in-kind gift". To address this issue, Table 5 reports the effect of our baseline estimates in different subsamples based on the presence of grandchildren and the provision of childcare, as both measures are available in our data (using the same specifications reported in columns 4 and 5 of Table 5). Our estimates are statistically significant and consistent with the baseline estimates, irrespective of the sample considered. However, in line with our expectation, the effect size is larger when there are no grandchildren in the family. This suggests that our estimates are consistent with strategic gift-giving to children, rather than to grandchildren, and that the results are not driven by the presence of grandchildren.

[Insert Table 5 about here]

Next, we analyse whether there are any gender differences in adult children's social contact behaviour as a result of receiving gifts. It is plausible that women might be more inclined to maintain social contact with parents regardless of gift receipt than men. Table A4 in the Appendix shows that the effects are the same when we distinguish individual respondents

by gender. We do not find any significant gender differences in any of the estimated coefficients.

5.3.2. Multiple Children (Sibling Availability) and Parental Health.

Table 6 examines the relationship between gift-giving and social contact across specific parent subsamples using both Instrumental Variable (IV) and Control Function (CF) approaches. First, we start with investigating whether having multiple siblings induces different levels of contact than having no siblings. We anticipate that an only child may feel more obliged to maintain frequent social contact with their older parents than adult children who can rely on siblings. Columns (1) and (2) focus on families with multiple children, where the IV estimate (6.73, significant at 5%) suggests a strong causal effect, though likely overestimated, while the CF estimate (0.99, significant at 1%) is smaller and more precise and in the same direction.

Another potential explanation is that strategic gift giving is driven by parental health as children react more to unhealthy parents . Therefore, in columns (3) and (4) of Table 6 we report the estimate of gifts on social contact for healthy parents. However, w*e find that the effect size is larger when parents are healthy*. Columns (3) and (4) restrict the sample to parents with no Instrumental Activities of Daily Living (IADL) limitations, which measure difficulties in performing daily tasks such as managing finances, preparing meals, or shopping, commonly used as an indicator of functional health. Here, the IV estimate (5.88, significant at 5%) is larger than the CF estimate (0.85, significant at 1%).

Finally, columns (5) and (6) analyze married parents, showing consistent results where the IV estimate (5.51, significant at 1%) is larger than the CF estimate (0.81, significant at 1%) but both are statistically significant and pointing in the same direction. The analysis focuses on married parents because the sample of single parents is relatively small, which could lead to

imprecise estimates if analyzed separately. Instead, the regression is run exclusively on the sample of married parents, allowing for a more reliable comparison to the results obtained with the full sample. This comparison reveals that the effect of gift-giving on social contact is even stronger in families with multiple children and in parents who are currently married, as opposed to a sample that mixes married and single parents.

Across all subsamples, the CF approach consistently produces smaller, more precise coefficients compared to IV, suggesting that the CF estimates are better calibrated for the binary nature of gift-giving. These results robustly indicate a positive relationship between gift-giving and social contact, though the magnitude of the effect varies depending on the estimation approach and the characteristics of the subsample analyzed.

[Insert Table 6 about here]

5.4. Robustness Checks

5.4.1 Stringency of tax reforms

Finally, as a robustness check, we re-run the analyses with an alternative instrument: rather than using generosity, we use reforms that became more "stringent" as an instrument, using countries that did not implement any reforms as the control group. Table 7 shows the same model specifications as in Table 4, Given that fewer countries implemented reforms classified as stringent, the sample size—and variation—is smaller. We find that all estimates are in the same direction: OLS and Control Function (CF) estimates are statistically significant, while the IV estimates, though in the same direction, are imprecise and not statistically significant. Overall, these results are consistent with our earlier findings that gift-giving induced by changes in inheritance taxes leads to changes in social contact with children.

[Insert Table 7 about here]

5.4.2. Co-residing Children

In our main analysis, we exclude co-residing children due to the challenges in accurately measuring both financial gifts and social contact. For financial transfers, reporting may not be representative, as many transfers between co-residents, for example groceries or other household expenses, may not be perceived as gifts. Additionally, social contact is not directly asked in the survey for co-residing children as difficult to measure. However, we conduct robustness checks in which we include co-residing children (those living in the same house or building) and assume that social contact with them occurs daily. The results presented in Table A3 are qualitatively the same across all specifications, confirming the robustness of our findings.

5.4.3. Step and Adopted Children

To ensure robustness, we run the same analyses separately for biological children, stepchildren, and adopted children (See Appendix Table A1). This distinction is important for two reasons. First, Francesconi et al. (2023) provide evidence that parents tend to favour their biological children. This might lead non-biological children to receive fewer monetary gifts but respond even more strongly to such gifts when they are given. Second, inheritance legislation typically treats stepchildren differently from biological and adopted children, which may raise concerns about the strength of the tax reform instrument for this subsample.

The first stage results for the stepparents are not statistically significant indicating that they do not react to inheritance tax legislation, as expected. For adopted children, the small sample size and weak first stage limit our ability to detect an effect. However, our overall results hold when adopted and stepchildren are excluded from the analysis, and we find that biological children drive overall findings.

6. CONCLUSIONS

We study whether gifts from parents to children foster family interactions between children and their parents in Europe, where, unlike in the United States, bequests are typically equally distributed, whilst gifts are unequally allocated among children.

To estimate the impact of financial gifts on child-parent interactions, we draw on unique longitudinal data that links older parents and their adult children across various European countries from 2004 to 2015. Leveraging the exogenous variation from shifts in inheritance tax legislation which influence parents' decision to provide *inter vivos* financial gifts, we find that gifts are a significant driver of increased social contact between children and their parents. Our results provide causal evidence that gifts—regardless of their size—serve as "caring signals" from parents to children. The effect is particularly pronounced among healthy individuals and in households without grandchildren, where the absence of childcare responsibilities heightens the impact of gifts, as childcare itself can represent a form of time exchange within the family. These findings suggest that small, often tax-exempt gifts can play a crucial role in enhancing family capital and strengthening intergenerational bonds.

Our results have important implications for tax policy. Changes in the taxation of financial transfers and bequests could inadvertently alter the frequency of social contact between children and parents. This, in turn, not only affects family social ties but also has broader implications for the mental well-being of older individuals, including their sense of loneliness.

References

Angelini, V. (2007). The strategic bequest motive: Evidence from SHARE. *Dipartimento di Scienze Economiche "Marco Fanno" Working Paper* (No. 62).

Ameriks, J., Caplin, A., Laufer, S., & Van Nieuwerburgh, S. (2007). The joy of giving or assisted living? Using strategic surveys to separate bequest and precautionary saving motives. *National Bureau of Economic Research Working Paper* (No. 13105).

Arranz Becker, O., & Hank, K. (2022). Adult children's estrangement from parents in Germany. *Journal of Marriage and Family, 84*(1), 347–360.

Arrondel, L., & Masson, A. (2006). Altruism, exchange or indirect reciprocity: What do the data on family transfers show? In S.-C. Kolm & J. Mercier Ythier (Eds.), *Handbook of the economics of giving, altruism and reciprocity* (Vol. 2, pp. 971–1053). Elsevier.

Attias-Donfut, C., Ogg, J., & Wolff, F. C. (2005). European patterns of intergenerational financial and time transfers. *European Journal of Ageing, 2*(3), 161–173.

Becker, G. S. (1974). A theory of social interactions. *Journal of Political Economy, 82*, 1063–1093.

Becker, G. S. (1981). Altruism in the family and selfishness in the marketplace. *Economica, 48*(189), 1–15.

Börsch-Supan, A., Brandt, M., Hunkler, C., Kneip, T., Korbmacher, J., Malter, F., Schaan, B., Stuck, S., & Zuber, S. (2013). Data resource profile: The Survey of Health, Ageing and Retirement in Europe (SHARE). *International Journal of Epidemiology, 42*(4), 992–1001.

Brown, M. (2006). Informal care and the division of end-of-life transfers. *Journal of Human Resources, 41*(1), 1991–219.

Cai, F., Giles, J., & Meng, X. (2006). How well do children insure parents against low-income retirement? An analysis using survey data from China. *Journal of Public Economics, 90*, 2229–2255.

Chang, Y.-M. (2009). Strategic altruistic transfers and rent-seeking within the family. *Journal of Population Economics, 22*(4), 1081–1098.

Cox, D. (1987). Motives for private income transfers. *Journal of Political Economy, 95*(3), 508–546.

Cox, D., & Rank, M. R. (1992). Inter-vivos transfers and intergenerational exchange. *The Review of Economics and Statistics*, 305–314.

de Jong Gierveld, J., & Tesch-Römer, C. (2012). Loneliness in old age in Eastern and Western European societies: Theoretical perspectives. *European Journal of Ageing, 9*(4), 285–295.

Eibich, P., & Siedler, T. (2020). Retirement, intergenerational time transfers, and fertility. *European Economic Review, 124*, 103392.

Fingerman, K. L., Huo, M., & Birditt, K. S. (2020). A decade of research on intergenerational ties: Technological, economic, political, and demographic changes. *Journal of Marriage and Family, 82*, 383–403.

Francesconi, M., Pollak, R. A., & Tabasso, D. (2023). Unequal bequests. *European Economic Review, 157*, 104513.

Gale, W. G., & Scholz, J. K. (1994). Intergenerational transfers and the accumulation of wealth. *Journal of Economic Perspectives, 8*(4), 145–160.

Halvorsen, E., & Thoresen, T. O. (2011). Parents' desire to make equal inter vivos transfers. *CESifo Economic Studies, 57*, 121–155.

Heylen, L. (2010). The older, the lonelier? Risk factors for social loneliness in old age. *Ageing & Society, 30*(7), 1177–1196.

Ho, C. (2022). Strategic parent meets detached child? Parental intended bequest division and support from children. *Demography, 59*(4), 1353–1376.

Hochguertel, S., & Ohlsson, H. (2009). Compensatory inter vivos gifts. *Journal of Applied Econometrics, 24*(6), 993–1023.

Horioka, C. Y., Gahramanov, E., Hayat, A., & Tang, X. (2018). Why do children take care of their elderly parents? Are the Japanese any different? *International Economic Review, 59*, 113–136.

Hurd, M. D. (1987). Savings of the elderly and desired bequests. *The American Economic Review*, 298–312.

Hurd, M. D. (1989). Mortality risk and bequests. *Econometrica: Journal of the Econometric Society*, 779–813.

Hurd, M., Smith, J. P., & Zissimopolous, J. (2011). Inter-vivos giving over the lifecycle. *RAND Working Paper*.

Joulfaian, D. (2005). Choosing between gifts and bequests: How taxes affect the timing of wealth transfers. *Journal of Public Economics, 89*(11–12), 2069–2091.

Litwin, H. (2001). Social network type and morale in old age. *The Gerontologist, 41*(4), 516–524.

Mancini, J. A., & Blieszner, R. (1989). Aging parents and adult children: Research themes in intergenerational relations. *Journal of Marriage and the Family*, 275–290.

McGarry, K. (1999). Inter vivos transfers and intended bequests. *Journal of Public Economics, 73*(3), 321–351.

McGarry, K. (2016). Dynamic aspects of family transfers. *Journal of Public Economics, 137*, 1–13.

McGarry, K., & Schoeni, R. F. (1995). Transfer behavior in the health and retirement study. *Journal of Human Resources, 30*, S184–S226.

Mudrazija, S. (2014). The balance of intergenerational family transfers: A life-cycle perspective. *European Journal of Ageing, 11*, 249–259.

Nivakoski, S. (2019). Does the exchange motive influence intergenerational transfers? Evidence from Ireland. *Review of Economics of the Household, 17*(3), 1049–1079.

Norton, E. C., Nicholas, L. H., & Huang, A. S. (2013). Informal care and inter-vivos transfers: Results from the National Longitudinal Survey of Mature Women. *BE Journal of Economic Analysis and Policy, 14*(2), 377–400.

Norton, E. C., & Van Houtven, C. H. (2006). Inter-vivos transfers and exchange. *Southern Economic Journal*, 157–172.

Rossi, A. S., & Rossi, P. H. (2018). *Of human bonding: Parent-child relations across the life course*. Routledge.

SHARE-ERIC (2024). Survey of Health, Ageing and Retirement in Europe (SHARE) Wave 1. Release version: 9.0.0. SHARE-ERIC. Data set. DOI: 10.6103/SHARE.w1.900.

SHARE-ERIC (2024). Survey of Health, Ageing and Retirement in Europe (SHARE) Wave 2. Release version: 9.0.0. SHARE-ERIC. Data set. DOI: 10.6103/SHARE.w2.900.

SHARE-ERIC (2024). Survey of Health, Ageing and Retirement in Europe (SHARE) Wave 3 – SHARELIFE. Release version: 9.0.0. SHARE-ERIC. Data set. DOI: 10.6103/SHARE.w3.900.

SHARE-ERIC (2024). Survey of Health, Ageing and Retirement in Europe (SHARE) Wave 4. Release version: 9.0.0. SHARE-ERIC. Data set. DOI: 10.6103/SHARE.w4.900.

SHARE-ERIC (2024). Survey of Health, Ageing and Retirement in Europe (SHARE) Wave 5. Release version: 9.0.0. SHARE-ERIC. Data set. DOI: 10.6103/SHARE.w5.900.

SHARE-ERIC (2024). Survey of Health, Ageing and Retirement in Europe (SHARE) Wave 6. Release version: 9.0.0. SHARE-ERIC. Data set. DOI: 10.6103/SHARE.w6.900.

Sloan, F., Zhang, H. H., & Wang, J. (2002). Upstream intergenerational transfers. *Southern Economic Journal, 69*(2), 363–380.

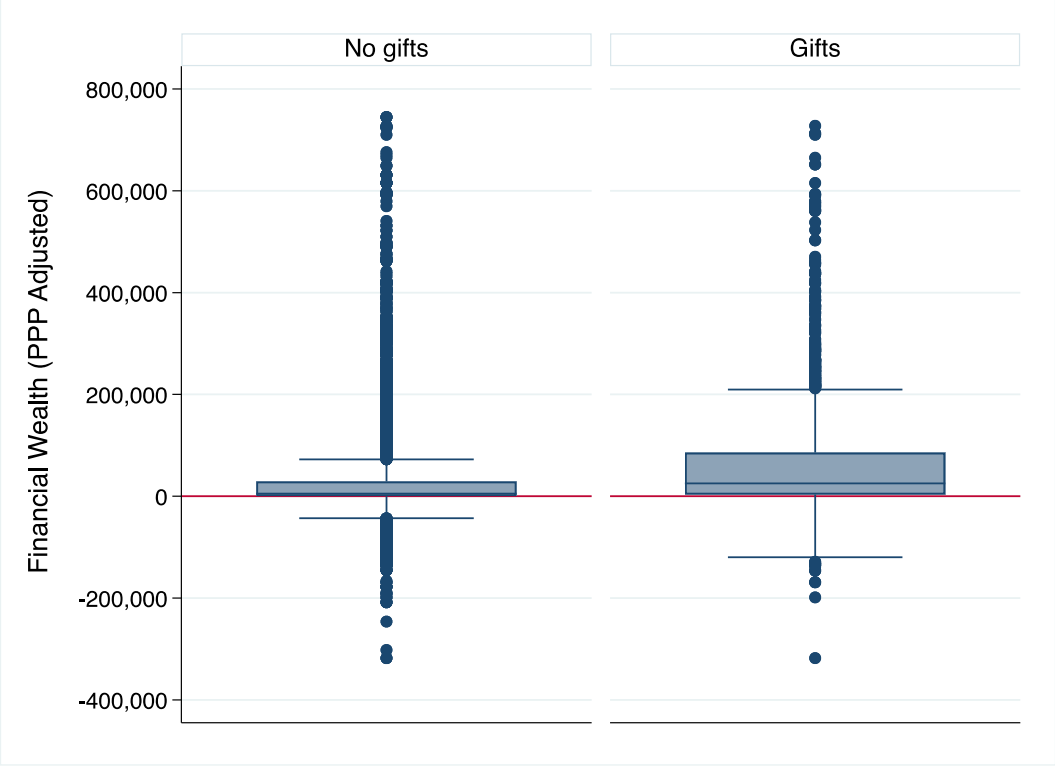
Suari-Andreu, E., Alessie, R. J. M., Angelini, V., & van Ooijen, R. (2024). Giving with a warm hand: Evidence on estate planning and inter-vivos transfers. *Economic Policy, 39*, 655–700.

Villanueva, E. (2005). Inter vivos transfers and bequests in three OECD countries. *Economic Policy, 20*(43), 506–565.

Wu, X., & Li, L. (2014). The motives of intergenerational transfer to the elderly parents in China: Consequences of high medical expenditure. *Health Economics, 23*, 631–652.

Figures and Tables

1. Financial wealth distribution by gift giving.



Note: First box plot shows the financial wealth distribution of those who do not give any gifts and the second is that of gift givers. Estimates based on SHARE data waves 1 and 2 for all countries. Household financial wealth adjusted for PPPs. Mean (median) financial wealth of gift givers is 59500 Euros (25229 Euros) while those who don't give gift 26944 Euros (5039 Euros). We exclude 4 outlier observations above 2 million Euros wealth.

Table 1. Percentage of gifts which are above the taxation threshold.

Country	Taxable Gift Givers	%	Exempt from Tax	Total N
Austria	0	0.0%	1,756	1,756
Germany	0	0.0%	3,811	3,811
Sweden	0	0.0%	4,694	4,694
Netherlands	132	3.0%	4,261	4,393
Spain	0	0.0%	3,351	3,351
Italy	0	0.0%	3,712	3,712
France	3	0.1%	4,339	4,342
Denmark	101	2.7%	3,577	3,678
Switzerland	0	0.0%	2,050	2,050
Belgium	0	0.0%	4,274	4,274
Poland	18	0.6%	3,232	3,250
Total	254	0.6%	39,057	39,311

Note: Estimations based on Data from SHARE using all waves and country specific tax reports from several sources. Five countries have either no gift tax or children are fully exempt from it (Belgium, Spain, Sweden, Austria and Switzerland - except Zurich-). Italy and Germany have very high exemption base, 400,000 and 1,000,000 Euros respectively, where we have no observation in the data reporting to have given that large amount of a gift.

Table 1a: Summary Statistics of Dependent Variables by Gift

	No Gift		Gift			
	Mean	**St Err**	**Mean**	**St Err**	**Difference**	**Sig.**
Social Contact	5.656	0.006	5.871	0.003	0.216	***
Social Contact (Bernheim)	0.565	0.002	0.547	0.001	0.018	***
N (Child x years)	321,942		39,438			

Note: Data uses all SHARE waves. We measure social contacts as the frequency of contacts on a scale from 1 (never) to 7 (daily) and as translated into number of contacts (see Bernheim, 1985) as follows: never - 0, less than once a month - 3, about once a month - 12, about every two weeks - 26, about once a week - 52, several times a week - 156, daily - 312. The variable is then normalised to be equal to 1 if the child provides the maximum amount of contacts possible (daily contacts).

Table 2. Effects of changes in inheritance taxes on inheritance expectations - Belgium is the control country

	Inheritance expectations			
VARIABLES	(1)	(2)	(3)	(4)
Germany	0.144***	0.125***	0.157***	0.143***
	(0.007)	(0.008)	(0.0102)	(0.011)
Year 2015	0.039***	0.033***	0.024**	0.012
	(0.009)	(0.009)	(0.012)	(0.012)
Germany#Year 2015	-0.013	-0.000	-0.001	0.012
	(0.010)	(0.011)	(0.014)	(0.014)
Constant	0.698***	1.191***	0.665***	1.205***
	(0.006)	(0.040)	(0.008)	(0.077)
Controls	No	Yes	No	Yes
Sample	Full	Full	>205K	>205K
Observations	28,773	23,344	15,612	13,647
R-squared	0.030	0.097	0.035	0.108

Note: Columns (2) and (4) control for age, marital status, education, gender, household income and wealth. The data is Household Finance and Consumption Survey (HFCS), 2010 and 2015 surveys. The sample in columns (3) and (4) only includes households with wealth above €205,000.

Table 3. Gifts are distributed unequally between children within a family across country.

	Gift Amount (intensive maergin)			Gift Amount (Average)			Gift Giving (Extensive margin)			Number of obs	
Country	**Mean**	**Median**	**N (Children)**	**Mean**	**Between**	**Within**	**Mean**	**Between**	**Within**	**Children**	**HH**
Austria	3375.00	1000	388	745.73	3905.71	*3816.34*	0.24	0.38	*0.22*	1,756	688
Germany	3299.51	1000	824	713.41	2918.94	*1808.04*	0.23	0.38	*0.21*	3,811	1,535
Sweden	2832.25	1085.78	1384	835.07	3684.60	*1908.85*	0.47	0.42	*0.22*	4,694	1,806
Netherlands	4185.48	1500	796	758.40	4307.76	*3923.87*	0.21	0.37	*0.37*	4,393	1,728
Spain	3413.28	1800	143	145.66	1039.19	*638.14*	0.06	0.20	*0.15*	3,351	1,266
Italy	5273.05	1000	599	850.90	7143.27	*5916.66*	0.18	0.35	*0.18*	3,712	1,504
France	6663.55	1850	654	1003.68	6692.75	*2757.28*	0.19	0.35	*0.20*	4,342	1,660
Denmark	3826.70	1611.95	856	890.61	2971.22	*1989.82*	0.25	0.40	*0.21*	3,678	1,433
Switzerland	10158.96	3259.03	344	1704.72	13263.17	*4853.67*	0.18	0.34	*0.20*	2,050	803
Belgium	10300.65	2000	681	1641.26	11000.25	*6894.76*	0.21	0.37	*0.20*	4,274	1,640
Poland	2353.71	259.94	294	212.92	7371.74	*6452.29*	0.10	0.25	*0.18*	3,250	1,244
Overall	**4848.70**	**1233.81**	**6963**	**858.83**	**6543.46**	***4184.25***	**0.20**	**0.36**	***0.20***	**39,311**	**15,307**

Note: Share 2004. Gift amount is expressed in 2004 Euros (the first wave). Gift amount is only available for the first two waves. The distributions of gift giving within family and between families in the other waves are comparable to 2004 (not reported). [There are missing values for the gift amounts among those who report to have given gifts therefore the mean values of gift giving (column 4) does not match with the mean gift giving values times the number of all children.

Table 4. Different Specifications with Social Contact and Gift Giving

VARIABLES	(1) OLS	(2) OLS	(3) OLS	(4) IV	(5) IV	(6) CF
Gift	0.295***	0.0978***	0.178***	7.754**	8.301***	0.732***
	(0.0106)	(0.0101)	(0.0107)	(3.013)	(1.980)	(0.067)
Constant	6.825***	7.333**	4.528	5.724	3.377	5.749
	(0.0784)	(3.088)	(3.238)	(88.81)	(10.841)	(0.0359)
Country FE	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES
Household FE			YES		YES	
Individual FE		YES		YES		
Observations	206,596	206,596	206,596	206,596	206,596	206,596
Number of children		103,098		103,098		
Number of households	48,744	48,744	48,744	48,744	48,744	48,744
First stage F-stat				7.18	21.44	
R-squared	0.087	0.032				

Note: Columns report the specifications in the following order: 1) OLS 2) OLS fixed effects at the individual level. 3) OLS fixed effects at the household level 4) IV with individual fixed. 5) IV with household fixed effects 6) Control function with clustered standard errors at the household level. In all specifications we control for age and gender of the parent and the child, flexibly. Standard errors in parentheses are clustered at the household level in all specifications (except columns 3 and 5 which use household fixed effect specifications). *** p<0.01, ** p<0.05, * p<0.1

Table 5. Heterogeneity by presence of grandchildren.

VARIABLES	with Grandchildren		with Grandchildren but no childcare		No Grandchildren	
	IV	CF	IV	CF	IV	CF
Gift	13.70**	0.759***	12.96***	0.626 ***	41.88	1.012***
	(5.583)	(0.093)	(4.885)	(0.105)	(160.3)	(0.092)
Constant	-10.40	5.933***	-8.676	5.903***	-5.497	5.570
	(12.98)	(0.041)	(11.75)	(0.042)	(63.68)	(0.076)
Country FE	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES
Household FE	YES		YES		YES	
Observations	151,574	151,574	143,766	143,766	55,022	55,022
# of Households	40,570	40,570	39,833	39,833	25,131	25,131

Note: The specification is the same as Table 4, columns 5 and 6 respectively. Standard errors in parentheses are clustered at the household level in all specifications. *** p<0.01, ** p<0.05, * p<0.1

Table 6. Social contact and gift giving for very healthy parents

VARIABLES	(1) Siblings - IV	(2) Siblings - CF	(3) Healthy - IV	(4) Healthy - CF	(5) Married – IV	(6) Married – CF
Gift	6.732**	0.986***	5.876**	0.850***	5.512***	0.814***
	(3.090)	(0.0720)	(2.891)	(0.0753)	(2.046)	(0.0723)
Constant	4.761	5.857***	2.639	5.957***	-2.416	6.251***
	(5,798)	(0.0396)	(6,317)	(0.0433)	(9.215)	(0.0436)
Observations	159,920	159,920	145,183	145,183	128,995	128,995
Country FE	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES
Household FE	YES		YES		YES	
Number of households	31,120		33,608		28,855	

Note: The sample in columns (1) and (2) only includes families with more than one child, the sample in columns (3) and (4) only includes parents with no IADL limitations and the sample in columns (5) and (6) only includes married parents. The specification is the same as Table 4, columns 5 and 6 respectively. Standard errors in parentheses are clustered at the household level in all specifications. *** p<0.01, ** p<0.05, * p<0.1

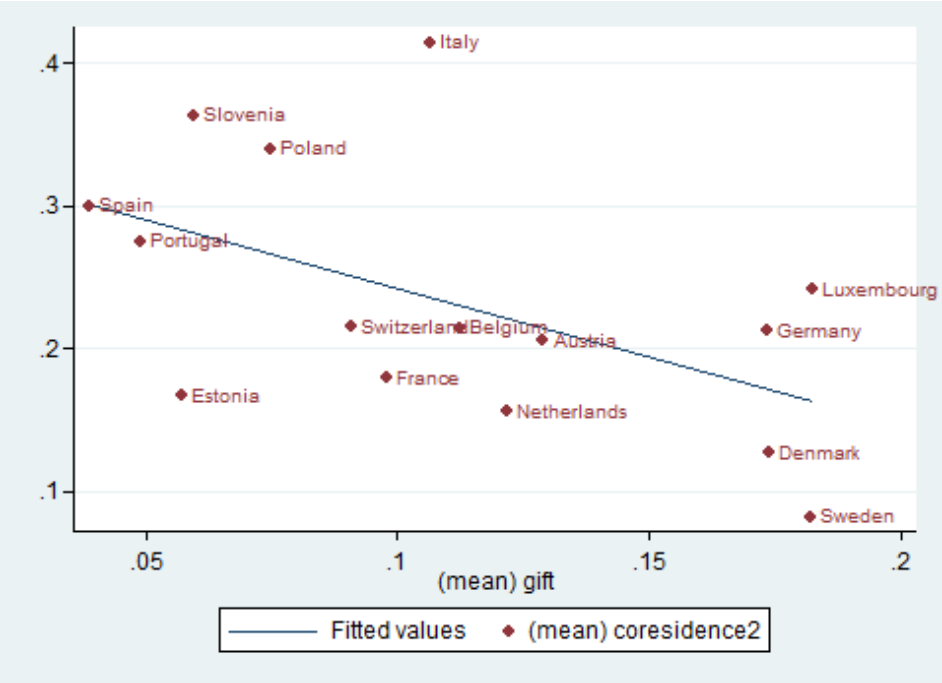
Table 7. Model specifications with Social Contact and Gift Giving: "Tax stringent" as instrument

VARIABLES	(1) OLS	(2) OLS	(3) OLS	(4) IV	(5) IV	(6) CF
Gift	0.256***	0.0956***	0.0956***	14.63	16.57	1.181***
	(0.0151)	(0.0146)	(0.0148)	(12.30)	(10.45)	(0.090)
Constant	2.689***	8.069*	2.646	-42.34	-46.51	6.440***
	(0.0934)	(4.626)	(7.107)	(45.72)	(46.65)	(0.0401)
Country FE	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES
Household FE			YES	YES		
Individual FE		YES			YES	
Observations	90,205	90,205	90,205	90,205	90,205	90,205
Number of children		42,934		42,934		
Number of households	20,305	20,305	20,305	20,305	20,305	20,305
First stage F-stat				2.62	2.40	
R-squared	0.169	0.024	0.024			

Note: Columns report the specifications in the following order: 1) OLS 2) OLS fixed effects at the individual level. 3) OLS fixed effects at the household level 4) IV with individual fixed. 5) IV with household fixed effects 6) Control function with clustered standard errors at the household level. In all specifications we control for age and gender of the parent and the child, flexibly. Standard errors in parentheses are clustered at the household level in all specifications (except columns 3 and 5 which use household fixed effect specifications). *** $p<0.01$, ** $p<0.05$, * $p<0.1$

Appendix

Figure A1. Co-residence and Gift Giving



Note: SHARE data waves 1-6

Table A1: Step-Children, Adopted Children and Biological Children

VARIABLES	(1) Step-child	(2) Adopted	(3) Biological (IV)	(3) Biological (CF)
Gift	-42.73	0.220	8.838***	0.696***
	(146.6)	(1.251)	(2.499)	(0.067)
Constant	10.09*	5.590***	6.226***	5.734***
	(5.152)	(0.730)	(0.433)	(0.036)
F-stat	0.008	7.128	12.96	
Observations	6,769	840	198,990	198,990
Country FE	YES	YES	YES	YES
Year FE	YES	YES	YES	YES

Note: The specification is the same as Table 4, columns 5 (IV). Standard errors in parentheses are clustered at the household level in all specifications. *** p<0.01, ** p<0.05, * p<0.1. First stage results show that instrument is not significant for the sample of step-children as expected since step-parents should not react inheritance tax changes.

Table A2 Country reform of inheritance tax legislations and coding

	Country	Reform	Year	Explanation of the Reform	Gift Tax?	How it is coded? (*)
1	Austria	Tax abolished	2008	Tax abolished on July 31, 2008	Same rate	Increase in Generosity
2	Italy	Tax rate increases, exemption decreases	2006	Allowance decreased to 714,0000		Increase in Stringency
3	Sweden	Tax abolished	2005	Abolished altogether in 2005		Increase in Generosity
4	Spain	Tax base decrease	2004	Regions increased the allowance	Same rate	No change
5	Belgium	Tax base decrease	2005	Allowance increased	Same rate	Increase in Generosity
6	Denmark	No change	-	Only regular inflation adjustment		No change
7	Germany	Tax base decrease	2009	Allowance decreased from 400.00 but no change in rate		Increase in Generosity
		Tax base increase	2015	Allowance increased		Increase in Stringency
8	Netherlands	Tax base decrease	2010	-	Same rate	Increase in Generosity
9	France	Tax base decrease	2011	Allowance increased	Same rate	Increase in Generosity
		Tax rate increases	2015	Tax rate increase	Same rate	Increase in Stringency
10	Switzerland*	No change	-	-	Same rate	No change

Source: EY (2006, 2008, 2010, 2012, 2014). Worldwide Estate and Inheritance Tax Guide. European Commission (2014). Cross-country Review of Taxes on Wealth and Transfers of Wealth. Revised Final Report. Eurostat (2015). Data for the EU Member States, Iceland and Norway from 2015 edition Taxation trends in the European Union. European Commission Directorate General Taxation and Customs Union (2011). Study on inheritance taxes in EU member states and possible mechanisms to resolve problems of double inheritance taxation in the EU. * Switzerland is coded as no change because in major cantons there were never inheritance taxes and a few cantons may have experienced minor changes. The information is not consistent.

Table A3. Sensitivity to inclusion of co-residence in the same household or building

VARIABLES	(1) Social contacts	(2) Social contacts – Same building	(3) Social contacts	(4) Social contacts – Same building	(5) Social contacts CF	(6) Same building CF
Gift	4.337***	7.721***	4.252***	7.503**	0.827***	0.784***
	(0.817)	(1.850)	(1.108)	(2.935)	(0.065)	(0.067)
Constant	9.057***	7.226	12.79***	7.21	6.308***	5.76***
	(2.760)	(16,903)	(2.532)	(0.00)	(0.032)	(0.035)
Observations	230,559	210,619	230,559	230,559	230,559	230,559
Country FE	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES
Household FE	YES	YES				
Individual FE			YES	YES		
# of children			112,126	112,126		
# of household	51,507	49,142				

Table A4. Analyses of OLS estimations separately by Gender.

	Women			Men		
VARIABLES	(1) Social contacts	(2) Social contacts - Bernheim	(3) Distance25	(4) Social contacts	(5) Social contacts - Bernheim	(6) Distance25
Gift	0.147***	0.0316***	-0.0271***	0.143***	0.0274***	-0.0249***
	(0.0141)	(0.00381)	(0.00498)	(0.0151)	(0.00379)	(0.00516)
Constant	3.877	0.0180	7.366***	12.25**	2.287	4.045
	(5.461)	(1.397)	(2.640)	(5.873)	(1.481)	(3.034)
Observations	86,489	86,489	93,197	87,480	87,480	93,111
R-squared	0.032	0.030	0.305	0.034	0.033	0.298
Number of Obs	27,889	27,889	28,545	27,915	27,915	28,493
Country FE	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES

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