

Lekfuangfu, Warn N.; Olivera, Javier; Van Kerm, Philippe

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## Bequest division: The roles of parental motives and children's gender composition

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# Working Paper Research

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## Bequest Division: The Roles of Parental Motives and Children's Gender Composition

by Warn N. Lekfuangfu, Javier Olivera and Philippe Van Kerm



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## Abstract

Drawing on two data sources from across Europe, we show that both bequest motives of parents and children's gender composition shape unequal divisions of bequests. First, the Survey on Health, Ageing and Retirement in Europe reveals that *observed* bequests are divided unequally when children differ in sex, caregiving, or income, with bequest motives strongest among mixed-sex children. Second, in a vignette experiment featuring alternative bequest motive scenarios and randomised gender compositions for two fictitious children, *hypothetical* bequests are most unequally divided under the exchange motive while children's gender composition matters more under the altruistic motive. Fictitious parents favour daughters regardless of deservingness, granting the highest bequest share to a deserving daughter with a brother. In return, these patterns reinforce traditional gender norms.

Keywords: Bequest, Intergenerational transfers, Gender, Vignette Experiment, Deservingness, Altruism, Exchange, Europe, HFCS, SHARE

JEL-Codes: H24, D31, D63, E62, H53, E25, J23, O33.

### **Authors:**

Javier Olivera, National Bank of Belgium

E-mail: [javier.olivera@nbb.be](mailto:javier.olivera@nbb.be)

Warn N. Lekfuangfu, Universidad Carlos III de Madrid

E-mail: [nlekfu@eco.uc3m.es](mailto:nlekfu@eco.uc3m.es)

Philippe Van Kerm, University of Luxembourg

E-mail: [philippe.vankerm@uni.lu](mailto:philippe.vankerm@uni.lu)

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The views expressed in this paper are those of the authors and do not necessarily reflect those of the National Bank of Belgium, the Eurosystem, or any other institution with which the author is affiliated.

## Non-technical summary

This study examines how parents allocate their bequests among children, focusing on two key factors: bequest motives and children's gender. Drawing on two complementary datasets—one from the Survey of Health, Ageing, and Retirement in Europe (SHARE) and another from a vignette experiment with cross-border workers in Luxembourg—the research explores how parental decisions are influenced by fairness, need, and meritocratic considerations. The SHARE data provide insights into actual bequest patterns across several European countries, while the vignette experiment offers a controlled setting to investigate how gender interacts with parental motives in bequest decisions.

The analysis reveals that both the motives behind bequests and the gender of children play a significant role in how parents divide their estates. Parents are more likely to allocate bequests unequally when children differ in their caregiving contributions (exchange motive), financial situations (altruistic motive), or achievements (meritocratic motive). However, gender further complicates these decisions. Specifically, daughters tend to receive larger bequests, particularly when they are perceived as more deserving or when they have brothers.

The vignette experiment supports these findings, demonstrating that parents are more inclined to allocate higher bequests to deserving daughters, especially when they are paired with brothers. This reflects a “protective paternalistic” behaviour, where daughters are favoured for performing traditional caregiving roles or facing financial difficulties. In contrast, gender has minimal influence under the meritocratic motive, where bequests are determined primarily by children's effort and achievements.

These findings highlight how social norms and gender expectations shape financial transfers between generations, potentially reinforcing gender biases.

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# 1 Introduction

Understanding the division of bequests and inheritance among heirs is important for several reasons. Inheritance practices significantly influence wealth distribution across generations, affecting economic inequality and social mobility (Piketty 2011, Adermon et al. 2018, Black et al. 2020, Black et al. 2024). Examining how parents allocate their estates among their children provides insight into familial relationships, cultural norms, and societal values. Furthermore, deeper understanding of the motives behind parental bequest decisions – whether driven by altruism, exchange, or meritocratic fairness – can offer insights into the factors that shape inheritance patterns.

How to divide a bequest among heirs is an economic decision. According to economic theory, dividing bequests equally is unlikely to be optimal. For altruistic parents who consider their children’s utility in decision-making, the optimal bequest division equalises children’s marginal utilities (Becker, 1974). Unless children have identical economic situations, equal transfers are unlikely to achieve this. Instead, theory suggests providing larger transfers to the poorest child. An alternative argument is the exchange motive, where parents offer incentives for children to provide care in their later years. The optimal division of bequests then reflects differences in the level of care provided (Bernheim et al. 1985). The concept of meritocratic fairness offers another economic justification for unequal bequest division, suggesting that parents base their decisions on each child’s perceived merit and effort, rewarding those with the highest perceived merit to encourage *desirable* behaviour (Bowles and Gintis 2002, Alesina et al. 2018, Lekfuangfu et al. 2023).

However, such economic considerations are also heavily constrained by non-economic factors, such as social norms, personal values, and psychology. Competing forces towards equal or unequal divisions of bequests are closely tied to the dynamics of familial relationships and societal values. Social norms can dictate that parents should love their children equally and bequests are often seen as ultimate monetary expressions of *parental love*. Intestate legislation, which regulates transfers in the absence of a will, almost universally enforces this equal division norm. While the complexity of bequest division decisions is well appreciated (see, e.g., Drake and Lawrence, 2000), not all its social determinants are fully understood.

In particular, the division of bequests may also be influenced by gendered expectations regarding the roles and responsibilities of children. Although daughters are traditionally expected to assume caregiving responsibilities, parents may express greater appreciation when sons provide care, given its deviation from societal norms. Similarly, parents with traditional attitudes may be more inclined to offer financial assistance to daughters facing economic difficulties than to sons in equivalent situations. Given the finding by Black et al. (2022) that women rely more heavily on gifts and inheritances than men, parental gender biases in bequest motives can exacerbate gender gaps in income and wealth. In turn, such

biases in parental bequest motives may perpetuate and reinforce traditional gender role stereotypes over time.

This study therefore examines the intersectional influence of two factors: (i) bequest motives, which dictate the perception of deservingness of recipients, and (ii) gender biases in bequest decisions. Our aim is to provide deeper insights into addressing both economic and gender disparities in inheritance practices and the intergenerational transmission of wealth. Specifically, to capture parents' gendered perceptions when evaluating the degree of deservingness of a child according to each motive, our study varies not only the gender of the *deserving* child but also the gender composition of the children. This design accounts for the possibility that gender bias may stem not only from the gender of the bequest recipient, but also from the gender of their siblings who are *competing* for parental resources.

We exploit two different but complementary approaches and data sources: observational, pan-European data on actual bequests, and a smaller-scale vignette experiment conducted with residents of Belgium, France, and Germany. The first approach exploits the Survey of Health, Ageing and Retirement in Europe (SHARE) in which we observe the *actual* bequest decision of deceased survey participants. With SHARE, we can examine the likelihood of unequal bequests in the case of different gender composition of the children (e.g., mixed or same-sex). We can test the hypotheses of different bequest motives in different types of families. The results of SHARE confirm the role of the exchange motive in driving an unequal division of bequests, whereby families with inequality in care provision among children are more likely to divide bequest unequally. Although the influence of the exchange motive is larger among families with mixed-sex children than with same-sex ones, parental altruism does not appear to be influenced by the children's gender composition.

To better pin down the causal interpretation of our analysis, we then turn to a vignette experiment, in which we design a context of bequest decision to correspond specifically to each bequest motive and, additionally, randomise the variation of children's gender composition and their relative *deservingness*. The vignette experiment was conducted as part of a representative survey of Luxembourg's cross-border workers living in Belgium, France, and Germany.<sup>1</sup> The participants act as an impartial spectator of alternative hypothetical situations in which an elderly father must divide an estate between two children. Aside the gains in identification from an experimental design, we can observe the bequests allocated to each specific child.<sup>2</sup> Therefore, we identify not only the extensive

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<sup>1</sup>This survey is explicitly designed to allow comparisons with the Luxembourg version of the Household, Finance and Consumption Survey (HFCS), which collects similar information among households resident in Luxembourg on wealth portfolios, income, and various demographics. The HFCS is a well established nationally representative survey collected in all countries in the Eurozone under the guidance of the European Central Bank

<sup>2</sup>We are unable to observe this variation in SHARE data.



margin of bequest (unequal or not), but also the intensive margin (the additional bequest allocated to the deserving child).

First, this vignette experiment confirms the role of bequest motives. Comparing among three motives in our design, the additional share of total bequests allocated to the deserving child is the highest under an exchange motive. Second, children’s gender matters – both the gender mix (same or mixed sex) as well as the gender of the deserving child. We observe the largest effect of children’s gender composition under an altruistic motive. Our fictitious parents allocate bequests in favour of daughters both when they are the more-deserving and the less-deserving child. Therefore, a deserving daughter with a brother receives the highest bequest. We do not detect any meaningful effect of gender or gender composition under the meritocratic motive. Our respondents are unresponsive to the role of effort and maintain equal bequest division under this scenario. In sum, our findings highlight the fact that parents tend to reward with bequests daughters who perform the typical care responsibilities or do worse economically. Such patterns match the actions of a *protective* paternalistic type of parents. On the one hand, such patterns of bequest allocation can help to narrow gender disparity in economic conditions. On the other hand, as sons are not rewarded for undertaking such traditional female roles, such protective paternalistic bequest behaviours adversely reinforce the traditional gender roles of the next generations.

The paper is outlined as follows. Section 2 discusses related literature, and Section 3 outlines hypotheses related to bequest division patterns. Section 4 presents our analysis with the SHARE data and Section 5 presents the results of the vignette experiment. Section 6 concludes.

## 2 Related Literature

**Unequal Bequest Division** Our work speaks to the growing literature that studies the household decisions surrounding bequest and inheritance. Past research has long established that a majority of parents divide – or intend to divide – their estates equally among their children (e.g., [Menchik 1980](#), [Wilhelm 1996](#), [McGarry 1999](#), [Cox and Stark 2005](#), [Behrman and Rosenzweig 2004](#)). However, recent research presents supporting evidence for an unequal division of bequest (e.g., [Light and McGarry 2004](#), [Ho 2022](#), [Erixson and Ohlsson 2019](#), [Groneck 2017](#)). More specifically, [Francesconi et al. \(2023\)](#) find that more than one-third of parents with wills in their US sample planned to distribute their estates unequally.<sup>3</sup> They also show that unequal intended bequests become less

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<sup>3</sup>[Francesconi et al. \(2023\)](#) documents that the share of parents with unequal bequest intentions in the US increased from under 30 percent in 1995 to almost 40 percent in 2014. In comparison, our calculation with SHARE data finds that the proportion of unequal bequest division ranges from 4 to 23 percent across European countries. See Appendix Table B.1 for the incidence of unequal bequests in SHARE.

common when there are more intensive contacts between parents and children.

**Bequest Motives and Deservingness** Unequal bequest division can be accounted for by a variety of motives. Firstly, parents may transfer assets to their children as a form of reciprocity for the care and support they received during their lifetime (Becker, 1974). This *exchange* or *strategic* motive is based on the expectation that children will reciprocate by providing financial and care-giving support to their parents in old age (Cox, 1987). Empirical studies have shown that parents often favour children who have provided more care or assistance during their lifetime when distributing bequests (e.g., Bernheim et al. 1985, Groneck 2017, Erixson and Ohlsson 2019, Ho 2022). Supporting evidence for the role of the exchange motive can also be found in vignette experiments. Using a German sample, Kusa (2019) confirms the hypothesis under the exchange motive.

Secondly, unequal bequest division could also be driven by an *altruistic* motive whereby parent’s transfers are motivated by the wish to support their offspring with no expectation of compensation. The main hypothesis is that lower-income children will receive higher transfers as parents try to equalise incomes – or marginal utilities – of their offspring by unequal transfers (e.g., Barro 1974, Becker and Tomes 1979). Empirical evidence here is somewhat mixed. Some studies observed that parents do allocate bequests based on altruistic concerns, aiming to equalise the economic opportunities and outcomes among their children (Drake and Lawrence 2000, Cox 2003). Other studies point to the lack of evidence supporting the altruistic motive (Ho 2022, Horioka 2014, Erixson and Ohlsson 2014, Hamaaki et al. 2019).

Thirdly, recent findings on fairness preferences have also put forward the role of the *meritocratic fairness* motive in shaping individual’s distributive decisions. Individuals who work hard and exert high efforts are seen as *deserving* of rewards. In contrast, those who do not work hard are seen as *undeserving* and may not be compensated. In the context of redistribution, people with meritocratic fairness preferences are willing to distribute equally income obtained from pure luck whilst they are less so of income earned from effort (e.g., Cappelen et al. 2007, Mollerstrom et al. 2015, Lefgren et al. 2016; Almås et al. 2020). Fisman et al. (2020) and Stantcheva (2021) document the role of the meritocratic motive in the context of intergenerational transfers. Recent work by Lekfuangfu et al. (2023), Bastani and Waldenström (2021), and Freyer and Günther (2022) provide further experimental evidence on the role of meritocratic preference in inheritance distribution decisions.

**Traditional Gender Roles and Bequest Division** Aside from what we have discussed so far, perceptions of distributive justice principles may be gendered (Major 1993, Tisch and Gutfleisch 2023). Drake and Lawrence (2000) examined the role of gender on the basis of a vignette experiment with a group of elderly participants. The study tested

the role of *deservingness* on fictitious bequest division and how gender considerations played a role. The design had four vignettes, which vary along the gender mix of two offspring and bequest motives (termed as *reciprocity* and *need* due to poor health). Fictitious parents divided bequest more unequally under the altruistic motive than under the exchange motive. Moreover, the division became more unequal when the children were both female than when both were male. Under the exchange motive, bequest division became most unequal when children were mixed-sex.

Distributive decisions and attitudes on intergenerational transfers may therefore be shaped by individuals' perception of traditional gender norms. Specifically, bequest division may be influenced by not only the parent's expectation of specific roles performed by their sons and daughters, but also the parent's views of their own responsibilities towards their children of each gender. An example is *protective paternalism*. This is a form of benevolent gender discrimination or gender bias – referring to the belief that men should protect, take care of, cherish, and provide for the women on whom they depend (Glick and Fiske, 1981; Sarlet et al., 2012; Glick and Fiske, 2001). The concept is closely related to gender differentiation paternalism which is the belief that women are the better gender, but only in ways that suit conventional gender roles (Glick and Fiske, 2001). With respect to bequest division, Bernheim et al. (1985) coins the term *unequal concern* while Davies and Zhang (1995) uses *preferences* to refer to pure sex preference or taste-based preference of parents.<sup>4</sup>

The influence of gender norms could arise from traditional views regarding the labour market. On the one hand, if market opportunities or returns are believed to be higher for males, investing more in sons represents an efficient allocation of intrahousehold resources (Rosenzweig and Schultz 1982). On the other hand, if parents have a strong aversion to inequality among children, they might prefer to invest more in daughters in this situation when they believe that daughters' labour market opportunities are not as equal (Behrman et al. 1982).

Parent's expectations of care duties performed by their children remain strongly shaped by traditional gender norms. Cultural norms determine whether sons or daughters are expected to bear the primary responsibilities of parents. While sons are traditionally seen as the primary caregivers in some Asian countries, elderly parents in several European countries expect more old-age care from their daughters. The literature on the gender division of family responsibilities points out that daughters are generally more likely than sons to provide care for elderly parents (e.g., Bittman et al. 2003, Grigoryeva 2017). This imbalance has ambiguous implications for inheritance arrangements. On the one hand, a daughter who provides care might be seen as deserving of a reward for fulfilling her filial

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<sup>4</sup>These authors, however, do not explicitly distinguish parental sex preference explained by differential returns due to social and cultural factors from sex preference originating from beliefs and attitudes toward gender.

duties. On the other hand, because such assistance is often stereotypically expected, it may go unappreciated. Consequently, transfers from one gender can be perceived as more valuable than those from the other, even if their actual financial value is the same.

### 3 Main Hypotheses on Bequest Division

The literature just reviewed leads us to formulate the following simplified hypotheses or expectations about potential bequest division patterns under alternative motives and heirs gender composition.

**Bequest motives:** Leaving aside for the time being traditional family roles and gender norms, we can summarise possible parental bequest division decisions as follows:

*Equality hypothesis:* Parents divide the bequest equally among all children, regardless of their status, interactions, or gender.

*Exchange motive hypothesis:* Parents divide the bequest unequally, favouring the child – of any gender – who provides more parental care.

*Altruistic motive hypothesis:* Parents divide the bequest unequally, favouring the child – of any gender – who is in greater need.

*Meritocratic motive hypothesis:* Parents divide the bequest unequally, favouring the child – of any gender – who exerts more effort in their work.

**Gendered distribution of bequest:** Next, gender, particularly, children’s gender, can influence parental bequest decisions in two ways. First, gender may play a direct role, with parents (or societal norms) exhibiting a bias towards one sex regardless of circumstances or actions.<sup>5</sup> Second, gender can exert an indirect influence through bequest motives, as parents assign different levels of *deservingness* to sons and daughters. Moreover, parents’ distributive decisions depend not only on the gender of the *deserving* child but also on that of their sibling, to whom parents may consider reallocating bequest as a form of compensation.

To compare bequest divisions across families with different gender compositions, we first establish a stylised framework with two children per household, each differing in their relative deservingness as prescribed by a given bequest motive. The decision process follows three sequential steps:

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<sup>5</sup>For example, in patrilineal inheritance systems, estates are traditionally passed from fathers to sons, often excluding daughters. While largely abandoned legally, such practices have been widespread and may still shape behaviour.

Step 1. *Bequest Motive and Child's Deservingness*: Without considering their children's gender, parents evaluate deservingness to determine which child deserves a larger share of the bequest. Following the motives described earlier, the deserving child receives a larger portion of the total bequest. In this initial step, the bequest is divided unequally when parents perceive differences in deservingness. If parents' sense of distributive justice is not gendered, the allocation is finalised here. However, if the decision is gendered, it continues to Steps 2 and 3.

Step 2. *Gendered Deservingness*: If parents hold a gendered view of deservingness, they may allocate additional bequest to the deserving child of their preferred gender. Female-biased parents would give a larger share to a deserving daughter ( $F^*$ ) than to an equivalently deserving son ( $M^*$ ), making the bequest division more unequal. This causes the bequest division *more* unequal. In contrast, male-biased parents would favour a deserving son. This decision step does not consider the gender of the less-deserving sibling.

Step 3. *Gendered Compensation*: Once the bequest motive and the gender of the deserving child are considered, gender-biased parents may compensate the *less-deserving* child based on their gender. Thus, a higher re-distribution of bequest may occur for the less-deserving sister ( $F$ ) if parents are female-biased, or for the less-deserving brother ( $M$ ) if parents are male-biased, making the final bequest division *less* unequal. As a result, families with the same gender of the deserving child may exhibit different patterns of bequest division, depending on whether the less-deserving child is a son or daughter.

As stylised households differ along two dimensions of relative deservingness and gender of the children, overall, we obtain four family types:  $(M^*, M)$ ,  $(M^*, F)$ ,  $(F^*, M)$ , and  $(F^*, F)$ . Attitudes towards gender in bequest division are represented by varying probabilities of observing unequal bequest division across these configurations. Table 1 compares the probabilities of unequal bequest division between each pair of family types under four alternative types of gender attitudes.

Table 1: Hypotheses with gendered frameworks

	(1) Reinforce	(2) Protective	(3) Progressive	(4) Pro-Male
A:	Reward F*	Reward F*	Reward M*	Reward M*
i.	$(F^*, M) > (M^*, M)$	$(F^*, M) > (M^*, M)$	$(F^*, M) < (M^*, M)$	$(F^*, M) < (M^*, M)$
ii.	$(F^*, M) > (M^*, F)$	$(F^*, M) > (M^*, F)$	$(F^*, M) < (M^*, F)$	$(F^*, M) < (M^*, F)$
iii.	$(F^*, F) > (M^*, M)$	$(F^*, F) > (M^*, M)$	$(F^*, F) < (M^*, M)$	$(F^*, F) < (M^*, M)$
iv.	$(F^*, F) > (M^*, F)$	$(F^*, F) > (M^*, F)$	$(F^*, F) < (M^*, F)$	$(F^*, F) < (M^*, F)$
B:	Compensate M	Compensate F	Compensate F	Compensate M
v.	$(F^*, M) < (F^*, F)$	$(F^*, M) > (F^*, F)$	$(F^*, M) > (F^*, F)$	$(F^*, M) < (F^*, F)$
vi.	$(M^*, M) < (M^*, F)$	$(M^*, M) > (M^*, F)$	$(M^*, M) > (M^*, F)$	$(M^*, M) < (M^*, F)$

Notes:  $(\cdot, \cdot)$  is the probability of unequal bequest division for a given pair of sex-specific children;  $M^*$  and  $F^*$  denote deserving son or daughter;  $M$  and  $F$  denote less deserving brother or sister, respectively.

Table 1’s panel (A) begins by illustrating the pairwise comparison of the probability of unequal bequest at Step 2 (at which parents prefer to reward the deserving child of a certain gender). Columns 1 and 2 represent parents who reward some additional bequests to  $F^*$  whilst columns 3 and 4 they prefer to reward  $M^*$ . Subsequently, panel (B) shows the pairwise comparison at Step 3 when parents take into consideration the gender of the less deserving sibling, conditional on the gender of the deserving child. Columns 1 and 4 outline the hypotheses when parents prefer to compensate  $M$ ; columns 2 and 3 present the opposite case when parents favour  $F$  over  $M$ .

This stylised framework predicts four types of parents with regard to how they take the gender of each child into account when deciding on the division of total bequests. We can refer to parents who reward  $F^*$  while compensate  $M$  as *reinforcing* traditional gender roles. Those who reward  $F^*$  and compensate  $F$ , are referred to as *protective paternalistic*.<sup>6</sup> Parents who reward  $M^*$  and compensate  $F$  are referred to as *progressive*. Lastly, parents are termed *pro-male* when they reward  $M^*$  and also compensate  $M$ .

For each gendered view, we can also infer the ordinal ranking of the likelihood of unequal bequest division among four types of children’s gender composition as the following: For the *reinforcing* view, the ranking is  $(M^*, M) < (M^*, F) < (F^*, M) < (F^*, F)$ . For the *protective* view, the ranking is  $(M^*, F) < (M^*, M) < (F^*, F) < (F^*, M)$ . Also, under *progressive* view, the ranking is  $(F^*, F) < (F^*, M) < (M^*, F) < (M^*, M)$ ; while under the *pro-male* view, the ranking is  $(F^*, M) < (M^*, M) < (F^*, F) < (M^*, F)$ .

As we show below, we can formally check what type of parents is more prevalent among our vignette experiment’s respondents on this basis. That is, we can perform a one-tailed t-test to check for the directional difference between bequest decisions among each pair of the treatment assignments (as defined by the gender of the deserving child, and of the less-deserving child). Analogously, we can run post-estimation tests on the estimated coefficients from the regression in Equation 2, which will be described later in

<sup>6</sup>This term is borrowed from Glick and Fiske (1981), Sarlet et al. (2012), Glick and Fiske (2001).

## 4 Evidence from the Survey on Health Ageing and Retirement in Europe

### 4.1 The Survey of Health, Ageing and Retirement in Europe

The Survey of Health, Ageing and Retirement in Europe (SHARE) is a national representative longitudinal survey of the population aged 50 and over that collects detailed information bi-annually on key variables, such as income, wealth, employment, health, and retirement. The survey is implemented in all countries of the European Union, Switzerland, and Israel. Since wave 2 (2004–2005), the survey has included the *End of Life* module, which collects information on deceased participants. The information is provided by a surviving family member, in most cases the partner or child of the deceased. The module includes questions on whether the deceased person left any inheritance and how this was distributed among their children. Given the longitudinal nature of SHARE, we can trace back other relevant information about the deceased to when they were interviewed in previous waves.<sup>7</sup>

The data collected in the *End of Life* module give insight into how actual bequests get distributed to children and to construct our main outcome variable on whether deceased parents in SHARE allocate bequests *unequally* among their children.<sup>8</sup> To do so, we exploit all available SHARE waves (release 9.0.0) and build a database of deceased survey participants who left any positive amount of bequest to their children. Note that, because of the design of our analysis, we focus primarily on the sample of deceased participants who have *at least* two children.

With SHARE data, we can empirically examine the role of two bequest motives – namely, exchange motive, and altruistic motives. For the exchange motive, we construct a variable to gauge the degree of exchange between parent and the children from a question on the frequency of contact between parent and children from the last wave in which such interactions are reported.<sup>9</sup> Subsequently, we calculate the contact difference among

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<sup>7</sup>SHARE also contains variables on the intention to bequest in some waves. Stark and Nicinska (2015) exploits this information to address the question whether experience of inheriting as well as the expectation of future inheritance enhances the intention to bequeath, independently of the positive impact of wealth.

<sup>8</sup>The SHARE survey records the distribution of a deceased parent’s estate among their children through the question: “How would you say the total estate was divided among the children of ?” This information is typically reported by a surviving spouse or child and is only collected if the deceased had at least two children. Bequests are classified as equally divided if the respondent indicated that the estate was distributed exactly or approximately equally among all children, and as unequally divided if some children received more than others. For further details on the construction of the bequest division variable, see Appendix A.3.

<sup>9</sup>We use the question “During the past twelve months, how often did you have contact with ‘First-



children as the difference between the minimum and maximum values of parent-child contact days observed for all siblings.

For the altruistic motive, we use income difference among children as a proxy for the disparity in their economic situations. While basic demographic variables are available for the children of our deceased parents, there is no information about their incomes in SHARE. To overcome this, we impute income of each child based on regressions implemented on external data for corresponding countries and years. Details of the imputation can be found in Appendix A. The variables used in the imputation were also retrieved from the year corresponding to the wave where we observe the most recent parent-child interaction. The difference in income among children is calculated following the same method as the contact difference described above.

As initial sample, we have 4,218 deceased individuals who left bequests and had at least two children in 18 countries over the period 2004–2020. These are participants for whom we can observe information about whether the bequests were equally or unequally distributed, children demographics (including income) and parent-child contact days. The sample size for the regression analysis is down to 3,517 observations due to missing values in some covariates. For each family, we have an indicator whether the family (of the deceased parent) have same-sex or mixed-sex children. The construction of the database and other variables are described in more detail in the Appendix A.

## 4.2 Bequest Division Patterns

We begin by presenting some statistics on bequest patterns and parent-children interactions. We calculate the average of our measures for each country by pooling the data related to unique deceased parents from all SHARE waves. An initial finding confirms that most European parents do divide their bequests equally among their children (see Appendix Table B.1). Yet, there are countries where unequal bequest division is more frequent.<sup>10</sup> Figure 1 illustrates some noteworthy patterns regarding the distribution of bequests in Europe. First, Figure 1a plots the percentage of parents who divided their bequests unequally along two dimensions: (i) the distribution of the differences in child-parent contact days between siblings, and (ii) the distribution of the differences in income between siblings. These within-family differences are calculated as the ratio between their corresponding minimum and maximum values observed between siblings, on which

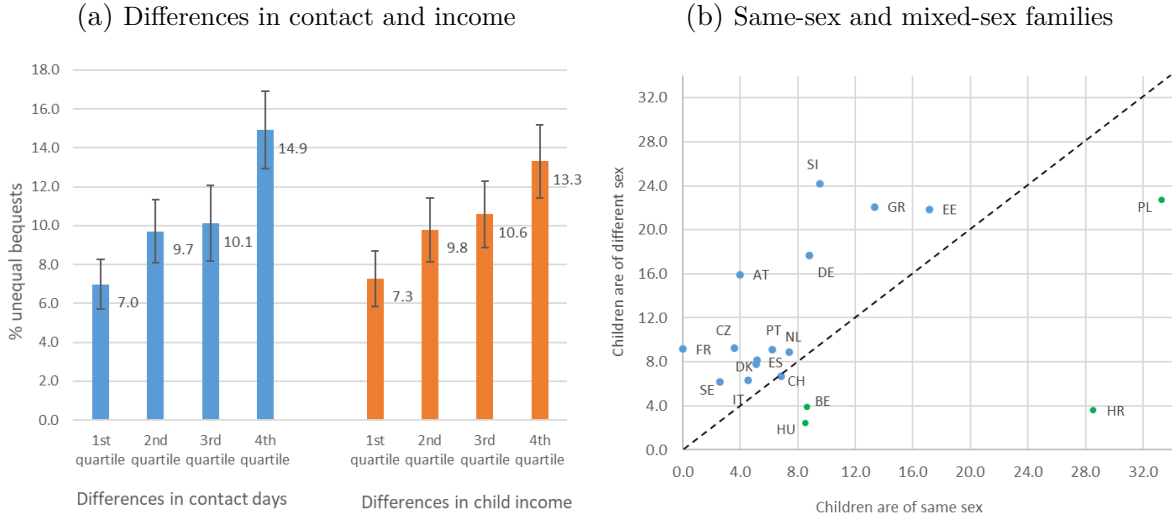
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NameOfChild’, either in person, by phone, mail, email or any other electronic means?” This question has seven categories: daily, several times a week, about once a week, about every two weeks, about once a month, less than once a month, and never. For most parent-children pairs, it is the survey wave just before the wave of the *End of Life* module, specifically to each deceased participant. However, it may be necessary to go back to other previous waves to obtain the most recent data on child-parent interactions, as the questions used to generate these data are not asked in all waves. See Appendix A for details.

<sup>10</sup>They are the cases of Poland (25.4%), Estonia (19.7%), Greece (18.8%), Slovenia (18.1%), and Germany (14.7%). Countries with low incidence of unequal bequests are Sweden (5.1%), Belgium (5.2%), Hungary (5.2%), and Italy (5.8%).



Figure 1: Unequal bequests, child-parent contact, child incomes, and child sex composition in EU countries



*Notes:* Figure (a) shows the prevalence (%) of unequal bequest splitting across the distribution of the differences in (i) child-parent contact days between siblings and (ii) child incomes between siblings. The variables in question are calculated as the ratio between their corresponding minimum and maximum values observed between siblings, on which the quartile groups are based. The confidence intervals correspond to 90% significance level. Figure (b) shows the percentage of unequally divided bequests observed in families of same-sex (y-axis) or mixed-sex children (x-axis). The dotted line is a 45 degree line, which indicates an equality of the bequest behaviour between two family structures.

we compute quartile groups. We observe that greater differences in the services provided by the children is associated with higher likelihood of unequal bequest division. This result is consistent with the exchange motive regime whereby parents tend to allocate larger transfers to children who provide more services. Figure 1a also shows a positive relationship between the share of parents who divided their bequests unequally and the within-family differences in child income, which suggest the existence of parental altruistic motives.

To examine the relationship between children's gender composition and the pattern of bequest division, Figure 1b plots, by country, the share of unequal bequests observed among two family structures, namely: (i) those with same-sex children, and (ii) those with mixed-sex children. The 45 degree dotted line indicates whether, in a given country, the incidence of unequal bequests for families with mixed-sex children is higher (top-left) or lower (bottom-right) than for those of same-sex children. For most countries, the incidence of unequal bequests is higher among families with mixed-sex children than among those with same-sex children. These results suggest that the gender composition of children may play a role in how bequests are distributed.

To further explore some gender-specific patterns, Table 2 presents averages of parental care duties undertaken by sons and daughters of deceased participants across various family type (son-only; daughter-only, mixed-sex). Sons who have sisters (i.e., in a mixed-sex family) provide less parental cares than sons with only brothers (i.e., in a same-sex family). On the contrary, there is no statistically difference in parental care provisions

between daughters with brothers and those with sisters. The largest difference in parental care duties is found among families with mixed-sex children (with sons and daughters). Overall, similar to the findings in Grigoryeva (2017) who analyses the division of parental care duties from the US Health and Retirement Survey (HRS), daughters provide more hours of parental care duties than sons. However, we do not find large differences in daughter’s care provisions between those with sisters and with brothers. The last column presents the average prevalence of unequal bequest across family types and suggests that children from mixed-sex families are more likely to experience unequal bequest division (at 11.3%) than same-sex families (at 7.5%-8.8%).

Table 2: Means of contact days by child gender and family type

Family type	Mean of differences in contact	Mean contact by gender		Unequal bequest
		Sons	Daughters	
(A) Son-only family	119.5 [110.5,128.5]	182.3 [174.4,190.3]	-	8.8%
(B) Daughter-only family	118.4 [109.7,127.1]	-	196.1 [188.4 , 203.9]	7.5%
(C) Son-and-daughter family	155.6 [151.2,160.1]	161.7 [157.2,166.2]	192.1 [187.6,196.7]	11.3%

*Notes:* The table shows the means of the differences in contact days and the mean contact days by child sex within each family type. The table uses data from the analytical sample. 90% confidence intervals are reported in brackets.

Additional descriptives in Appendix B.1 are worth mentioning. Among the families with unequal bequest division, Table B.2 documents the reasons for this decision.<sup>11</sup> The prevalence of specific reasons is larger for same-sex child families than for different-sex child families, with the prevalence of the reason *to make up for previous gifts* being significantly different between these two types of families. This suggests that the gender composition of children may play a role on the reasons and motives behind the division of bequests. Table B.3 focuses on families with two children and distinguishes the prevalence of unequal bequest division across the leading motives of exchange and altruism. In families with children of different sexes and where the exchange motive may be in operation, the prevalence of unequal bequests is higher when the son is the deserving child (13.7%) than when the deserving child is the daughter (10.2%). The opposite occurs under the altruistic motive. When the son is the deserving child (i.e. he is poorer), the prevalence of unequal bequests is 7.1%, while this is 10.5% when the daughter is the poorer one. Hence, it lends suggestive evidence that the interplay between the gender composition of children with bequest motives may have an impact on the distribution of bequests.

<sup>11</sup>More precisely, it is derived from the response reported by the surviving family member who answered the *End of Life* module. The results must be interpreted with caution due to the limited sample size (n=360).

### 4.3 Determinants of Unequal Bequests

To examine the role of children’s gender and bequest motives at a more granular level in determining the likelihood of unequal bequest, we now turn to the parent-level information of SHARE. Equation 1 outlines the estimation of the likelihood that a deceased parent  $k$  leaves unequal bequests to their children ( $unequal_k$ ). Three main determinants are: whether there is inequality among the children in parent-child contact days ( $Dcontact_k$ ) (1 if it is unequal, and 0 otherwise); whether the income of each child is unequal ( $Dincome_k$ ) (1 if unequal, and 0 otherwise); and whether the children are of the same sex ( $samesex_k$ ) (1 if they are the same, and 0 otherwise). We estimate Equation 1 at the parent-level using a linear probability regression with country fixed-effects.<sup>12</sup> Additional controls are a set of parental characteristics (age at death, gender, marital status, number of children, number of grandchildren, income), whether they had a will, and an indicator for whether the parent had adopted children. Standard errors are clustered at the country level.

$$unequal_k = \gamma_0 + \gamma_1 samesex_k + \gamma_2 Dcontact_k + \gamma_3 Dincome_k + \omega_k \quad (1)$$

As presented in Table 3, we begin by separately estimating the effect of each key determinant. First, column 1 relates children’s gender composition (same-sex or not) on the likelihood of unequal bequest. On its own, having same-sex children reduces the likelihood of unequal bequest by 2.8 pp. In other words, deceased parents with same-sex children are more likely to allocate equal bequests. Next, we analyse the relationship between parental bequest allocation and deservingness perception that corresponds to each bequest motive. Column 2 shows the estimated coefficient of the measure of inequality among children of parent-child contact days as a proxy for parental exchange motive. Within-family inequality in parent-child care duties is positively related to higher likelihood of unequal bequest (by 3.7 pp). Similarly, column 3, which uses children’s income inequality as a proxy for parental altruism, also points that unequal bequest division is more likely when children’s income is unequal.

Subsequently, we estimate these three factors simultaneously (in column 4). The size of the coefficient of gender composition remains negative (at 1.8 pp) but it is no longer

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<sup>12</sup>The country fixed effects are to capture legal institutions surrounding inheritance, at the national level, that are relatively stable in each country during the period of the analysis. In addition, in a robustness check, we construct proxies for country-specific gender norms to explicitly control for them in our estimations. Following the epidemiological approach (Fernández 2007, Fernández and Fogli 2009, Hauge et al. 2023), we assume that individuals adopt cultural values, in particular, gender norms, from their ancestry. Unfortunately, the sample size is substantially reduced (to 222 observations, 13% of the sample) when restricting the analysis to individuals born in the survey country with at least one foreign-born parent, as prescribed by the epidemiological approach. Additionally, SHARE does not record parental country of birth prior to Wave 5. To address this limitation, we broaden our analysis to include other dimensions of “ancestry” gender norms, specifically for the individual’s own country of birth as well as the countries of birth of their father and mother. The measure of gender norms is constructed using various external sources. For more details, refer to Appendix B.3.

statistically significant at conventional levels. Nonetheless, the role of the exchange motive and of altruism on the likelihood of unequal bequest remain robust, with a positive sign – suggesting that the disparity in children’s situations contributes significantly to the incidence of unequal bequest division of their parents.

Next, we split the sample into deceased parents with mixed-sex children (column 5), and with same-sex children (column 6). This allows for estimating heterogeneous effects of each bequest motive on bequest division. We observe that the size of the exchange motive is larger (and statistically significant) among families with mixed-sex (at 4.3 pp) than those with same-sex children (2.3 pp). There is no difference in the effect size of the altruistic motive between these two family types.

Results from columns 5 and 6 therefore provide evidence that the role of bequest motives may differ by children’s gender composition. Having said that, we note that it is not possible in SHARE data to identify which of the children actually receive higher bequest. We can only speculate that it is the deserving one. Consequently, with SHARE, we are unable to investigate if the gender of the deserving child or the type of gender composition may also play its part. Above all, we cannot draw any causal interpretation from the current estimations with SHARE data, even if bequest decisions that we observed in SHARE are actual decisions, and arguably may have taken place after children’s care duties or their income are determined.

Table 3: Linear probability regressions for the probability of leaving unequal bequests

	(1)	(2)	(3)	(4)	Mixed-sex (5)	Same-sex (6)
Same gender	-0.028** (0.013)			-0.018 (0.013)		
Unequal contact days		0.037*** (0.011)		0.035*** (0.011)	0.043** (0.017)	0.023 (0.014)
Unequal income			0.051*** (0.014)	0.041*** (0.014)	0.051 (0.031)	0.045** (0.019)
<i>Parental characteristics</i>						
Male	-0.001 (0.010)	0.001 (0.010)	-0.001 (0.010)	-0.000 (0.010)	-0.005 (0.010)	0.008 (0.019)
Married	-0.028** (0.011)	-0.027** (0.010)	-0.028** (0.011)	-0.028** (0.010)	-0.018 (0.013)	-0.044** (0.020)
Age	0.000 (0.001)	-0.000 (0.001)	0.000 (0.001)	-0.000 (0.001)	-0.001 (0.001)	0.002 (0.001)
Top income quintile	-0.024* (0.012)	-0.024* (0.012)	-0.024* (0.012)	-0.023* (0.012)	-0.040** (0.014)	0.014 (0.021)
No. children	0.015** (0.007)	0.015* (0.008)	0.016** (0.007)	0.012 (0.007)	0.013* (0.007)	0.002 (0.022)
No. grandchildren	-0.002 (0.002)	-0.002 (0.002)	-0.001 (0.002)	-0.002 (0.002)	-0.001 (0.003)	-0.005 (0.006)
Had adopted children	0.047 (0.030)	0.046 (0.031)	0.049 (0.031)	0.046 (0.031)	0.028 (0.030)	0.081* (0.047)
Had a will	0.109*** (0.024)	0.109*** (0.024)	0.109*** (0.024)	0.109*** (0.024)	0.111*** (0.026)	0.099*** (0.030)
Constant	0.048 (0.045)	0.023 (0.046)	-0.013 (0.049)	0.001 (0.046)	0.040 (0.087)	-0.106 (0.086)
Observations	3,517	3,517	3,517	3,517	2,372	1,145
Adj R-squared	0.072	0.073	0.072	0.076	0.079	0.102
Test: Both contact and incomes are different ( $\gamma_2 + \gamma_3$ )					0.093** (0.035)	0.072** (0.027)

*Notes:* The table shows the estimated coefficients of the linear probability of leaving unequal bequests. The last two columns show results on sub-samples of deceased whose children were of different sex or all of the same sex. All regressions include country fixed effects. The standard errors are clustered at the country level and are shown in parenthesis. \* $p < 0.10$ , \*\* $p < 0.05$ , and \*\*\* $p < 0.01$  indicate statistically significance levels.

Having a will increases the likelihood of unequal bequest division. This is to be expected since the will may have been used to establish specific bequests that differ from statutory allocations.<sup>13</sup> Moreover, the civil status, income, and number of children of the deceased are also determining factors in explaining the probability of unequal bequests. The likelihood of unequal bequest division is smaller when the surviving spouse is present at the time. Richer parents are less likely to divide bequests unequally.<sup>14</sup> Furthermore, more children is positively correlated with a higher probability of unequal bequests (Light

<sup>13</sup>SHARE does not provide detailed information about the will. We only observe in SHARE whether the decedent left a will or not.

<sup>14</sup>Under the conventional altruism regime, parents allocate different transfers to their children, giving larger amounts to the poorer children (they equalise child marginal utilities). But if parents also consider other reasons to stick to an egalitarian division (e.g., a 50-50 social norm), then a wealthier parent may be in a better position to bear the loss of utility associated with equal division (Olivera 2017).

and McGarry 2004, Erixson and Ohlsson 2019) – potentially driven by greater diversity of circumstances, needs, and care duties among the children.

The main results observed in Table 3 hold across a series of different robustness checks included in Appendix B.2.<sup>15</sup> Additionally, Appendix Tables B.8 to B.11 report the same regressions for specific sub-samples of deceased parents. We notice that the main results found in Table 3 hold for the group of deceased mothers, but not for the deceased fathers (Table B.8). For mothers who had mixed-sex children (column 5), both the coefficients associated with exchange and altruistic motives are positive and statistically significant. In contrast, for mothers who had same-sex children (column 6), only the coefficient associated with altruistic motives is positive and statistically significant. The estimates of Table B.9 point that our main results hold for decedents who were not married (single, divorced or widowed) at the time of death, particularly mothers who were the last surviving parent. Among decedents that left a will, there are significant results for the exchange and altruistic motives, but not for gender composition (Table B.10’s column 1). In contrast, among decedents who did not leave a will, we only find evidence of the exchange motive (Table B.10’s column 4).<sup>16</sup> The influence of the exchange motive is sustained among the subsample of decedents with no wills and mixed-sex children.

Overall, the results of the analysis of SHARE data indicate that the division of bequests is driven by both altruistic and exchange motives. Furthermore, the way the gender of the heirs affects the distribution of bequests depends on the bequest motive. Particularly, under the exchange motive, parents with mixed-sex children divide the bequest more unequally than those with same-sex children. On the contrary, when the altruistic motive is at play, bequests are divided more unequally among parents with same-sex children. The distinct significance of these motives in unequal bequest divisions across gender compositions of the children may provide some evidence of gendered norms, where daughters and sons are rewarded differently for their care-giving roles and economic positions.

## 5 Vignette Experiment

A limitation of SHARE is that the amount of bequests allocated to each child is not observed, thus preventing the estimation of this dissimilar *reward*. We address this limi-

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<sup>15</sup>Specifically, the results are maintained when parental covariates are removed (Table B.4), when contact and income variables are used in their original continuous form, rather than in the form of dummy variables (Table B.5), when using the coefficient of variations for child contact and income instead of dummy variables (Table B.6), and when using the distance to parental home instead of parental contact as a proxy for child services (Table B.7).

<sup>16</sup>Furthermore, to check what factors may drive the likelihood of having a will, we run the same model regressions and covariates on a dummy variable indicating whether the decedent left a will. The only significant coefficients (and positive) were those for age and adopted children. By contrast, we find no statistical significant effects of unequal care duties, unequal income, and gender composition of children on the existing of a will – ensuring that these three main factors that drive unequal bequest division are not indirectly influenced by the deceased parent having a will at all.

tation by analysing an online vignette experiment of bequest division in Belgium, France, and Germany. The experimental design also strengthens causal interpretations of our analysis by *randomising away* potential confounders related to any particular family circumstances. Arguably, hypothetical scenarios capture attitudes towards bequest division that are unconstrained by potential actual intestate legislation.

In our vignette experiment, we directly set up hypothetical scenarios of each bequest motive that subsequently defines a degree of *deservingness* among beneficiary children. We focus on three bequest motives: exchange, altruistic, and meritocratic motives. We also randomise the gender of the more *deserving* child and the gender of their siblings. The design allows us to observe the level of bequest being allocated by study participants to each individual child in various scenarios.

## 5.1 Experimental Design and Sample

**Study participants** Our vignette experiment is embedded in the third round of the Household, Finance, and Consumption Survey run by the Central Bank of Luxembourg in 2018 among cross-border workers who work in Luxembourg but who reside in Belgium, France or Germany (HFCS-XB 2018).<sup>17</sup> The HFCS-XB 2018 data collected information on wealth portfolios, income, and various demographics of cross-border workers. These workers represent about 50% of the labour force in Luxembourg.<sup>18</sup> In total, 2,360 cross-border workers living in Germany (n=578), Belgium (n=740), and France (n=1,042) participated in the survey and approximately 2,250 subjects answered to our vignette module which was included in the HFCS-XB questionnaire.

**Vignette experiment on bequest division** The uni-factorial vignette survey experiment embedded in the HFCS-XB intends to elicit how a fictitious parent would allocate a total sum of divisible, financial bequest between two children under three hypothetical scenarios. Each respondent was presented a fictitious pair of children, along with three vignettes which describes their personal situations and actions – each is associated with a bequest motive. Based on each bequest motive, one child is portrayed to be relatively more *deserving* than their sibling. Subsequently, survey respondents were asked to allocate the fictitious father’s financial bequest between the children. The decisions are hypothetical and non-incentivised.<sup>19</sup>

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<sup>17</sup>This survey was designed to allow comparisons with the Luxembourg Household Finance and Consumption Survey (LU-HFCS), which collects similar information among households resident in Luxembourg. This survey is part of the Euro-zone’s Household Finance and Consumption Survey (HFCS), which is implemented in all 19 Euro-zone and 4 invited countries. The survey includes detailed information on wealth portfolios, income, and various demographics. For more details of LU-HFCS and its survey of cross-border workers, see <https://www.bcl.lu/en/Research/enquetes/hfcs/index.html>.

<sup>18</sup>For more details of the characteristics of cross-border commuters, see [Chen et al. \(2021\)](#).

<sup>19</sup>It is, however, important to note that we did not specify the timing of the bequest therefore the bequests could be allocated either as inter-vivos or intra-vivos. Respondents were told to acknowledge



The bequest motives and their corresponding situation are: the exchange motive (provision of parental care duties), the altruistic motive (economic situations), and the meritocratic motive (work efforts). The description of each vignette is the following:

- *Vignette A (exchange motive)*: Both children have similar economic situations. However, one child undertakes more care of their father (more time helping with some chores, taking him to the doctor, spending together many evenings and some holidays) than the other child.
- *Vignette B (altruistic motive)*: One child is in very good economic position (with a very good standard of living) than another child (living on a very tight budget, enough to make ends meet).
- *Vignette C (meritocratic motive)*: Both children received family investments. One child is doing better economically because the child works hard. In contrast, another child does not do as well due to the lack of effort.

Under the exchange motive (Vignette A), one child is described to undertake more parental care duties than their sibling. Following the altruistic motive, Vignette B outlines one child to be economically worse-off than the other. To address the meritocratic motive, Vignette C depicts one child to be more hard-working and asserts higher effort at work (and, hence, economically better-off) whilst the sibling is not.

We add the gender dimension to the relative deservingness of the children to better understand bequest division decisions. The design varies based on (i) the gender of the more *deserving* child (son or daughter) and (ii) the gender of the sibling (same or opposite gender) in the bequest division, resulting in four additional variations of the vignette in terms of children’s gender composition at the across-subject level. We randomly assigned one variation of gender composition to each survey respondent. To avoid placing excess salience on the gender of the children in the vignette, gender information was provided by naming the hypothetical heirs using four common, gender-specific first names in our treatment variations.<sup>20</sup>

**Outcome variables** From the specific amount of bequest allocated to each child, we calculate the corresponding share in total bequest (in percentage). Subsequently, the

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that other characteristics or factors that are not mentioned in the description should be treated as common between the children. Note also that our description was silent on the birth order of the children. All respondents made decision for all vignette’s variations, which were presented to them in the same order.

<sup>20</sup>This design is preferred over a method that simply indicates whether the father has sons and/or daughters. Our approach aims to minimize the experimental demand effect. Additionally, the chosen names are common across the three primary countries of residence of our participants. The names used in the four variations, representing more deserving (former) and less deserving (latter) children, are as follows: Daniel and Patrick (a deserving son with a brother); Marie and Sophie (a deserving daughter with a sister); Daniel and Marie (a deserving son with a sister); and Marie and Daniel (a deserving daughter with a brother).



*deservingness premium* is measured by subtracting the share of the more deserving child by that of their sibling. We also created an indicator whether or not the bequest was equally split. Additional variables include respondent’s own characteristics, their attitudes towards inheritance and fairness, and their expectations of own inheritance.<sup>21</sup>

## 5.2 Baseline findings

We observe the allocation decisions for all three vignette scenarios of 2,035 participants.<sup>22</sup> The characteristics of our participants are well balanced across all four treatment groups (i.e., four variations of children’s names).<sup>23</sup> For ease of interpretation, *son* and *daughter* refer to the deserving male ( $M^*$ ) and female ( $F^*$ ) child, respectively. The less *deserving* child is referred to as *brother* ( $M$ ), and as *sister* ( $F$ ).<sup>24</sup> Recall that the child who is more deserving is the one who does more care duties (exchange motive), economically worse off (altruistic motive), and asserts more effort in their work (meritocratic motive).

Figure 2 shows the additional share of total bequest the deserving child receives (in percentage points). We term it as the *deservingness premium*. Each bar shows the premium for a given gender composition of children, namely (i) deserving daughter with a brother; (ii) deserving daughter with a sister; (iii) deserving son with a brother; (iv) deserving son with a sister. Each panel displays the results under the exchange motive (panel A); the altruistic motive (panel B); and the meritocratic motive (panel C).<sup>25</sup>

Overall, bequests are divided more unequally under the exchange motive. On average, the deserving child who undertakes more care duties receive approximately 12 pp of the additional bequest share. In comparison, under the altruistic motive, the poorer child receives approximately 5 pp of the additional bequest share. On the contrary, the bequest

<sup>21</sup>These variables are: self-reported total value of inheritance or intergenerational gifts that the respondent has received to date; whether the respondent is expecting to receive some inheritance from their parents or/and parent-in-laws; expectation regarding the division of bequest by own parents between respondents and their siblings; expected value of total inheritance in the next 10 years; non-incentivised attitudes towards redistribution. Respondents stated the level of their agreement with the following statements: (i) “large differences in people’s incomes are acceptable to properly reward differences in talents and efforts” (5 levels); (ii) “inheritances provide an unfair source of economic advantage” (5 levels); (iii) “Inheritances that exceed a certain threshold should be taxed” (5 levels); and (iv) “Some people think it is important to leave a bequest to their surviving heirs, while others don’t. Which is closer to your feelings?” (3 levels).

<sup>22</sup>The full but unbalanced sample has 2,363 participants.

<sup>23</sup>Appendix Table D.1 presents the estimation when we regress each observable on the treatment group assignment indicators. One exception is that participants with mothers with college education are more likely to be assigned to the group with more deserving daughter who has a brother and the group with more deserving daughter who has a sister. Nonetheless, our participants are similar in terms of their preferences regarding inequality, inheritance, inheritance tax, and their own experience with inheritance.

<sup>24</sup>Four variations of children can be referred to as son/brother ( $M^*, M$ ); son/sister ( $M^*, F$ ); daughter/brother ( $F^*, M$ ); and daughter/sister ( $F^*, F$ ).

<sup>25</sup>In addition, Appendix Figure D.1 displays the proportion of unequal bequest for a given composition of children composition under each particular motive. Notice that, unlike Figure 2, the incidence of unequal bequest is rather comparable across the gender composition of children. However, as in Figure 2, the likelihood of unequal bequest is the highest in the exchange motive whilst is the lowest in the meritocratic motive.

division between the child with high effort and with low effort is the least unequal (at around 2 pp).

Once we combine the effects of children’s gender composition and bequest motives together, the following patterns emerge. First, on average, the deserving daughters get a higher deservingness premium than the deserving sons – suggesting that parents reward a female child more than a male when they perform more care duties, or when they are poorer than their sibling. Second, the highest premium corresponds to the case of a deserving daughter with a less-deserving brother (the far-left bar). This is a common pattern found across all bequest motives. The gender of the sibling dictates how much *more* bequest gets allocated to the deserving daughter: she receives smaller bequests when she has a sister than when she has a brother. This pattern persists in the case of a deserving son – particularly under the exchange and altruistic motives. All else being equal, the less deserving sister receives higher compensation from the parents – hence more bequest – than the equivalent son when she does less care duties or she is richer. Consequently, a deserving son with a sister gets the smallest deservingness premium.

Pairwise comparisons of unequal bequest patterns between family types shown in Figure 2 – particularly under the exchange and the altruistic motive – confirm the hypotheses outlined under the *protective paternalistic* parents (see Table 1). These parents allocate more bequest to favour the deserving daughter (compared to the deserving son) while providing compensatory bequests to the less-deserving daughter (rather than the less-deserving son). Most importantly, our descriptive findings provide supporting evidence for the predicted ordinal ranking of the likelihood of unequal bequest incidence under the *protective paternalistic* framework, which is:  $M^*F < M^*M < F^*F < F^*M$ .<sup>26</sup>

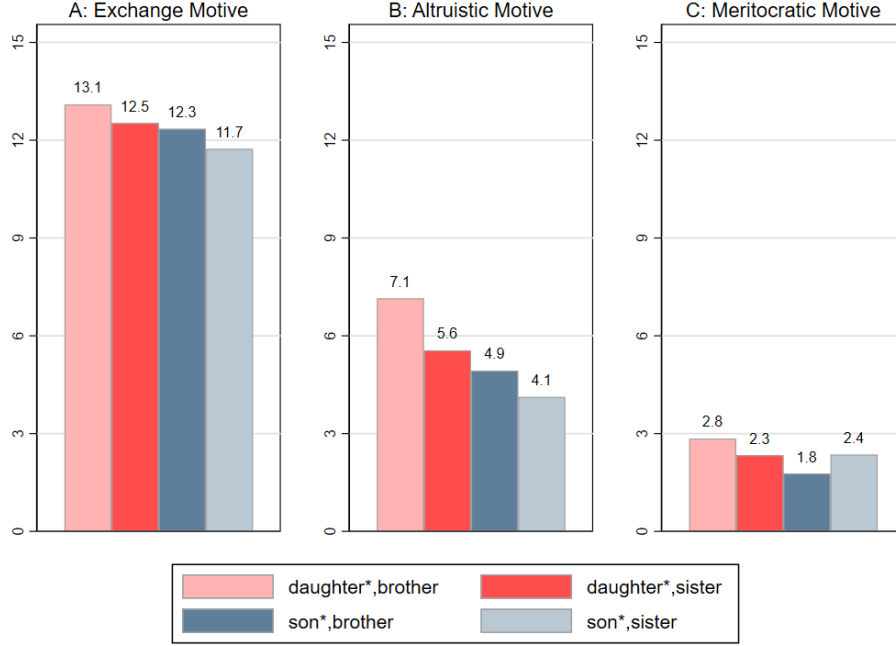
### 5.3 The effect of children’s gender composition on bequest division decisions: regression analysis

**Specification** We use regression analysis to formally test the effect of children’s gender composition on bequest division. This allows us to check the extent of gender effects

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<sup>26</sup>For more supporting evidence for the presence of the protective paternalistic type among our survey respondents, we run additional pairwise-comparison regressions to statistically test if bequest division patterns support the hypotheses outlined under the *protective* parents framework. Appendix Table D.2 shows the conditional t-test between each pair of children’s gender composition (total of 6 pairs). The regressions focus on two outcomes: the additional share of bequest that the deserving child receives (columns 2-3); and the likelihood of unequal bequest division (columns 4-5). Column 1 outlines six hypotheses deriving from the *protective* parents framework whereby the likelihood of unequal bequests of the LHS family type is predicted to be higher than that of the RHS family type. For the exchange and the altruistic bequest motives (panels A and B), The estimated coefficients are mostly positive and significant, supporting the ordinal ranking of the likelihood of unequal bequest division of the *protective* parents framework. On the contrary, we find little differences of bequest decisions along the gender line under the meritocratic motive. Another supporting result can be found in Appendix Table D.4.

Figure 2: Deservingness premium of bequest share under each motive



*Notes:* The bar graphs report the additional bequest that respondents allocated to the child who is more deserving in each scenario: doing more care duties (exchange motive), economically worse off (altruistic motive), and asserts more effort in their work (meritocratic motive). Each bar reports the average value within each group who were presented with each variation of the gender composition of the children and whether the son or the daughter is portrayed as the more deserving child than their sibling (denoted with \*). The sample size is 2,035.

on unequal bequest division as well as to gauge how much gender effects varies under alternative bequest motives. We estimate the following regression equation:

$$bequest_i^{vig} = \beta_0 + \beta_1 son_i + \beta_2 samesex_i + \beta_3 son_i samesex_i + \epsilon_i \quad (2)$$

where  $bequest_i^{vig}$  is our outcome of interest, which measures the *additional* bequest being allocated by respondent  $i$  to the *more deserving* child in a given vignette scenario ( $vig$ ).<sup>27</sup> There are three treatment variables:  $son_i$  is 1 when the deserving child is randomly assigned as male, and 0 otherwise;  $samesex_i$  is 1 when the gender composition of two children is the same, and 0 otherwise; and the interaction of  $son_i$  and  $samesex_i$ . Given the specification, the reference group is the family with a deserving daughter and a brother. Additional controls are the total value of hypothetical bequest, country of resident (Belgium, Germany, France),<sup>28</sup> household gross income (in log), stated preferences, gender, age, inheritance experience. Standard errors are clustered at the randomisation

<sup>27</sup>Specifically, this is calculated from the difference in the share of bequest that  $i$  allocates to the more deserving child and the share allocated to the less deserving child.

<sup>28</sup>Similar to our analysis with SHARE data, in the robustness check, we alternatively include an index of gender norms (measured either at own country of birth, father's country of birth, or mother's country of birth) as an additional control. Our main findings do not change much as a result and are available upon request.

group level.

We recover from regression parameters a set of estimated means of the difference in the share of total bequest between the sibling pair as follows:  $\beta_0$  gives the difference between the deserving daughter and her less deserving brother;  $\beta_0 + \beta_2$  is the difference between the deserving daughter and her sister;  $\beta_0 + \beta_1$  is the difference between the deserving son and his sister; and the difference between the deserving son and his brother is  $\beta_0 + \beta_1 + \beta_2 + \beta_3$ .<sup>29</sup> So,  $\beta_0$  is the conditional estimation of the average value of the bequest outcomes among the respondents who were assigned a deserving daughter with a less-deserving brother (F\*M).  $\beta_0 + \beta_1 + \beta_2 + \beta_3$  is of those who had a deserving son with a less-deserving brother (M\*M); whilst  $\beta_0 + \beta_2$  is the average of those with a deserving daughter and a less-deserving sister (F\*F). Lastly,  $\beta_0 + \beta_1$  indicates the average of those who were assigned a deserving son with a less-deserving sister (M\*F).

**Results** Table 4's columns 1 and 2 display the effect of the gender of the deserving child and the gender composition of children on bequest division under the exchange motive scenario. On average, the bequest disparity between the deserving daughter and her brother is 20.59 pp (in the full model).  $\beta_1$  has a negative sign: among mixed-sex children, the daughter who does more care duties receive higher bequests than the equivalent son by 1.7 pp. Under the exchange motive, when the deserving child is a daughter, the share of her bequest is smaller when she has a sister than when she has a brother (at 1.21 pp). When both children are of the same sex, the deserving son (with a brother) receives 1.83 pp more bequest than the deserving daughter (with a sister).

Under the altruistic scenario (columns 3 and 4), the average bequest disparity between the more deserving (i.e., poorer) daughter and her richer brother is 6.53 pp (column 4) – whereby the deserving child is the one who is economically worse-off. While both gender composition and the gender of the deserving child have positive effects on bequest divisions, the effect size appears larger under the altruistic motive. Among mixed-sex siblings, the poorer son receives less bequest than the poorer daughter (at 3.32 pp). The poorer daughter also gets 2.33 pp higher bequest when she has a brother than when she has a sister. For same-sex children, the deserving son receives 4.05 pp higher than the deserving daughter. When the deserving daughter has a richer brother, our male respondents allocate 1.61 pp more bequest than the female respondents to the daughter.

On the contrary, when we analyse bequest division decisions under the meritocratic motive (whereby the deserving child is the one who asserts high effort), our estimations do not detect much statistically significant effects of gender composition, and the gender

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<sup>29</sup>Moreover,  $\beta_2$  is the same-sex premium of bequest share when the daughter is the deserving child. Analogously,  $\beta_2 + \beta_3$  is the same-sex premium when a son is deserving. Hence, among families with same-sex children,  $\beta_3$  reflects the male premium of bequest division. Similarly,  $\beta_1$  is the additional male premium of the deserving child when the families have mixed-sex children whilst  $\beta_1 + \beta_3$  is the male premium for families with same-sex children. Therefore, provided that the deserving child is male,  $\beta_3$  is also interpreted as the same-sex premium.

of the deserving child on the bequest division. Moreover, the disparity of bequest between any two children appears to be the smallest when compare across all three bequest motive scenarios.

In sum, bequests get allocated in favour of the deserving daughter (more than the deserving son), but only when her condition is compared to the sibling of the opposite sex. Similarly, the deserving son gains more bequest only under the situation when he has a brother. These patterns are documented under the exchange and the altruistic motives, but it is not the case for the meritocratic motive. When we compare the empirical findings of Table 4 to the set of hypotheses under various gendered frameworks (see Table 1), in so far, the results reveal supportive evidence for overall protective paternalistic attitudes.

Table 4: Bequest division estimation under vignette experiment

	A. Exchange Caring care		B. Altruistic Poorer child		C. Meritocratic High effort	
	(1)	(2)	(3)	(4)	(5)	(6)
Son=deserving	-1.526** (0.586)	-1.700*** (0.456)	-3.097*** (0.295)	-3.321*** (0.259)	-0.433 (0.476)	-0.533 (0.440)
Samesex	-1.206*** (0.322)	-1.215*** (0.289)	-2.234*** (0.360)	-2.333*** (0.392)	-0.227 (0.566)	-0.338 (0.519)
Samesex x Son=deserving	1.728** (0.626)	1.825*** (0.465)	3.773*** (0.404)	4.053*** (0.470)	-0.386 (0.624)	-0.235 (0.593)
Male respondent		-0.093 (0.601)		1.608** (0.537)		-0.64 (0.359)
Constant	19.737*** (1.264)	20.598* (9.899)	8.796*** (0.860)	6.532 (6.176)	3.412*** (0.940)	1.451 (12.029)
Observations	2035	2035	2035	2035	2035	2035
Adj R-squared	0.051	0.071	0.007	0.018	0.001	0.006
<i>Additional controls</i>						
Size of bequest	x	x	x	x	x	x
Country fixed effects	x	x	x	x	x	x
Other covariates		x		x		x

*Notes:* The dependent variable is the additional bequest allocated by respondents to the more deserving child in a given pair. All are measured in the percentage point. Columns 1-2 are the amount under the exchange motive, columns 3-4 are the amount under the altruistic motive; and columns 5-6 are the amount under the meritocratic motive. All regressions include country-of-residence fixed effects. Additional controls are the total value of hypothetical bequest, household gross income (in log), stated preferences, gender, age, and inheritance experience. The standard errors are clustered at the treatment group level are in parentheses. \* $p < 0.10$ , \*\* $p < 0.05$ , and \*\*\* $p < 0.01$  indicate statistically significance levels.

To formally check for the prevalence of paternalistic protective type among our respondents, we run a series of post-estimation analysis to test for one-sided inequality, using the estimated coefficients obtained in Table 4 (the additional bequest share to the deserving child).

Recall that a series of linear combinations of the estimated coefficients can be derived to represent the estimated average value of the bequest division outcomes among each assignment of children's gender composition.<sup>30</sup> Henceforth, we derive the inequality test

<sup>30</sup>That is,  $\beta_0$ ;  $\beta_0 + \beta_1 + \beta_2 + \beta_3$ ;  $\beta_0 + \beta_2$ ; and  $\beta_0 + \beta_1$  are the estimated average value of the bequest division outcomes among respondents assigned to F\*M, M\*M, F\*F, and M\*F, respectively.

for each hypothesis as presented in Table 5's column 1. For each bequest motive, we run six tests as follows. The first four tests (rows 1-4 in each panel) are to collectively verify whether our hypothetical parents favour the deserving daughter to the son. The statistical significance of the tests should indicate the bias of the deservingness premium in favour of daughters. Subsequently, the final two tests (rows 5–6) are to confirm if the parents prefer to compensate the less-deserving daughter or to the son (thus, in this case, smaller bequest premium to the deserving child). Likewise, the statistical significance of the final two tests are supporting evidence for a gendered decision with regard to the compensation to the less-deserving child.

Overall, the empirical tests confirm the prevalence of the *protective* type under the exchange, and the altruistic motives among our respondents. While parents are more likely to divide bequest to favour daughters who do care duties and are not as economically successful, they also protectively compensate daughters even if they are less deserving. Nonetheless, such paternalistic patterns of bequest divisions are observed only in the scenario where females are traditionally expect to attain (doing care duties and being less successful in the labour market) whilst it is not the case in the meritocratic setting.<sup>31</sup>

Table 5: One-sided inequality tests

Hypotheses	Test	Motives		
		Exchange	Altruism	Merit
<b>Deserving: Tests if <math>F^* \succ M^*</math></b>				
1. $F^*M > M^*M$	$0 > \beta_1 + \beta_2 + \beta_3$	-0.024** (0.012)	-0.027*** (0.008)	-0.016 (0.01)
2. $F^*M > M^*F$	$0 > \beta_1$	-0.027** (0.012)	-0.086*** (0.007)	-0.025** (0.011)
3. $F^*F > M^*M$	$0 > \beta_1 + \beta_3$	-0.03*** (0.009)	0.019 (0.009)	-0.005 (0.01)
4. $F^*F > M^*F$	$0 > \beta_1 - \beta_2$	-0.032*** (0.008)	-0.04*** (0.007)	-0.015 (0.01)
<b>Compensating: Tests if <math>F \succ M</math></b>				
5. $F^*M > F^*F$	$0 > \beta_2$	0.005 (0.012)	-0.047*** (0.007)	-0.011** (0.005)
6. $M^*M > M^*F$	$0 > -\beta_2 - \beta_3$	-0.003 (0.008)	-0.059*** (0.008)	-0.01 (0.014)

*Notes:* The dependent variables are the additional bequest allocated by respondents to the more deserving child. The table reports a series of one-sided, inequality test, as described in column 1, to test the set of hypotheses, for the regressions that include country-of-residence fixed effects, total value of hypothetical bequest, household gross income (in log), stated preferences, gender, age, and inheritance experience. It shows the linear combination of the RHS of the inequality and its corresponding standard errors are in parentheses. \* $p < 0.10$ , \*\* $p < 0.05$ , and \*\*\* $p < 0.01$  indicate statistically significance levels. Each column shows the estimations under the exchange motive, the altruistic motive, and the meritocratic motive, respectively.

<sup>31</sup>Supplementary results of the inequality test on the specification that uses the probability of unequal bequest are presented in Appendix Table D.4.

## 5.4 Heterogeneity in bequest division decisions

We finally investigate potential heterogeneity in bequest division decisions of respondents from different backgrounds.

**Gender** First, we examine the extent to which the gender of the survey participants matters to how they allocation bequests among children.<sup>32</sup> Table 6 shows the estimates of Equation 2 for female and male respondents – with noticeable gender differences in the bequest allocations across each vignette scenario. For the exchange motive, the effects of gender composition and the gender of the deserving child appears to be driven primarily by male respondents (see Table 6’s columns 1 and 2). Male respondents allocate higher bequests to the caring daughter (compared to the caring son) when the sibling is of the opposite sex. They also give more bequests to the caring daughter when she has a brother than when she has a sister. Similar to the full sample, male respondents allocate more bequest to the deserving son only when he has a brother.

By contrast, we do not observe any statistically significant difference in bequest division among the female respondents – with one exception. Female participants allocate *smaller* bequest to the deserving son with a brother than to the deserving son who has a sister. For the altruistic motive (columns 3–4), results are comparable between female and male respondents, and with similar effects to the full sample. Nonetheless, it appears that the bequest decision of male respondents are more sensitive to the gender variation in the hypothetical children than their female counterparts.

Overall, our sub-samples by respondents’ gender do not detect much statistical significant effects of the children’s gender composition on bequest division under the meritocratic motive. One exception is that male respondents seem to allocate higher bequest to high-effort daughters than to high-effort sons when their sibling is from the opposite sex (column 6; 0.66 pp and statistically significant at 5%). Additionally, when we run a set of inequality tests (as described above in Section 5.3), we find that our male respondents appear to behave according to the *protective* type, particularly under the altruistic motive. We find much less evidence of the *protective* type among our female respondents (see Table D.5).

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<sup>32</sup>Appendix Figure D.2 shows the additional fraction of total bequest allocated to the deserving child (in pp) among male (panel A) and female survey respondents (panel B) for each bequest motive.



Table 6: Bequest division by gender of respondents

	<b>A. Exchange</b>		<b>B. Altruistic</b>		<b>C. Meritocratic</b>	
	Female	Male	Female	Male	Female	Male
	(1)	(2)	(3)	(4)	(5)	(6)
Son= deserving	-0.861 (0.520)	-1.937*** (0.389)	-1.411*** (0.261)	-4.176*** (0.306)	-0.081 (0.945)	-0.660** (0.213)
Same-sex	0.364 (0.640)	-1.598*** (0.275)	-2.858*** (0.280)	-2.232*** (0.532)	-0.781 (1.283)	-0.295 (0.175)
Same-sex x Son=deserving	-2.327** (0.716)	2.922*** (0.410)	2.389*** (0.248)	4.910*** (0.602)	-0.299 (1.320)	-0.311 (0.337)
Constant	15.124 (17.366)	21.83 (13.645)	13.131 (14.750)	4.751 (6.678)	-4.08 (18.103)	3.239 (13.544)
Observations	592	1443	592	1443	592	1443
Adjusted R-squared	0.081	0.072	0.004	0.016	0.005	0.002
<i>Additional controls</i>						
Size of bequest	x	x	x	x	x	x
Country fixed effects	x	x	x	x	x	x
Other covariates	x	x	x	x	x	x

*Notes:* The dependent variable is the additional bequest allocated by respondents to the more deserving child in a given pair. All are measured in the percentage point. Columns 1-2 are the amount under the exchange motive, columns 3-4 are the amount under the altruistic motive; and columns 5-6 are the amount under the meritocratic motive. All regressions include country-of-residence fixed effects. Additional controls are the total value of hypothetical bequest, household gross income (in log), stated preferences, gender, age, and inheritance experience. The standard errors are clustered at the treatment group level and are in parentheses. \* $p < 0.10$ , \*\* $p < 0.05$ , and \*\*\* $p < 0.01$  indicate statistical significance levels.

**Age** Respondents from different age groups may not react commonly to bequest motives and gender composition of the fictitious siblings. Appendix Figure D.3 plots the deservingness premium along the gender composition between three working-age groups of the respondents: below 40, 40-50, and above 50 years old.<sup>33</sup> As in the full sample, for all age groups, the size of the additional bequest to a deserving child is the largest in the exchange motive whilst the smallest in the meritocratic motive. As for the influence of children's gender composition, the patterns of bequest divisions among the bottom age group (below 40 years old) largely mimics those of the full sample. A fictitious father rewards the deserving daughter with a brother the highest while he allocates the smallest surplus of bequests to the deserving son who has a sister. To some extent, the patterns of bequest division continue for the middle age group, in particular, for the altruistic motive. In contrast, older respondents behave rather differently from the others.

More formally, Table D.6 presents the supplementary regression results, based on Equation 2. As suspected, for the exchange and the altruistic motives, the effect of children's gender is no longer detected among the older-age group. Interestingly, under the meritocratic motive, the effect of gender becomes statistically significant, but with the opposite sign from our hypothesis. That is, a deserving son receives a higher deservingness premium than a daughter. Nevertheless, bequest division remains more equal when the

<sup>33</sup>Recall that our sample is the cross-border workers. We have approximately equal number of sample in each age group.



children are of the same sex – confirming the standard hypothesis. Lastly, when we run a set of inequality tests, we find the *protective* type is more apparent among the young respondents but only under the exchange motive. On the other hand, only under the altruistic motive that older respondents (aged 40 or older) follows the behaviour prescribed to the *protective* type (see Table D.7).

**Meritocratic fairness views** We ran the main estimation separately for respondents reporting different views on meritocratic fairness (see Table D.9). In the case of the exchange motive, those with high inequality aversion are the main drivers of the results. Their bequest division also reacts more under the altruistic motive. Nonetheless, we do not observe any statistically significant effect of children’s gender on bequest division under the meritocratic motive. In terms of their bequest division decisions, people who positively view the role of effort did not behave much differently from those who do not.

## 6 Conclusion

Bequest decisions can play a crucial role in the perpetuation of wealth disparities and economic standing across generations. A better understanding of how parents allocate their estates among their children provides insight into the broader dynamics of wealth distribution within families and society at large. Furthermore, gendered norms and expectations held by parents – often reflecting and reinforcing societal biases - can also influence how household wealth is distributed among sons and daughters

Our study focused on the role of gender and gender norms in influencing bequest division and examined whether gender considerations mediate the effect of altruistic, exchange, and meritocratic fairness views on bequest decisions. Observational evidence from SHARE confirms that both sex differences and differences in care-giving and income among heirs can lead parents across Europe to bequeath unequally. Furthermore, these two dimensions interact, such that differences in care-giving and in income are more likely to lead to unequal bequests among mixed-sex heirs. Nonetheless, our observational data have some limitations. First, we cannot ascertain who is the *advantaged* gender in SHARE. Second, these associations can be confounded by unobserved, specific familial circumstances. Therefore, it is key that these results are also confirmed in our vignette experiment. Faced with hypothetical scenarios, our participants, as fictitious parents, report preference for unequal bequests under exchange and altruistic motives. Moreover, their decisions are more responsive to these motives when their fictitious children are of mixed sex. Overall, they are more likely to divide bequest in a way that is consistent with traditional gender norms - by systematically rewarding deserving daughters who do more care duties, or who are economically less successful. Such a dominant influence of traditional gender norms potentially exacerbates gender-based disparities in wealth

and economic opportunities. These findings provide further supportive evidence that gender norms can still lead to differential treatment in bequests despite secular trends in the elimination of gender-based discrimination in intestate legislation around the world. They underscore the importance of addressing gender biases and promoting equity in care-giving roles to reduce disparities in inheritance practices.

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# Appendix

## A Construction of dataset of deceased participants and their children in SHARE

### A.1 SHARE data

We use all available waves (1 to 9) of the Survey of Health, Ageing and Retirement in Europe (SHARE). This is a representative longitudinal survey of the population aged 50 and over that collects detailed information bi-annually on income, wealth, employment, health, retirement, etc. The survey is implemented in all countries of the European Union, Switzerland, and Israel. The data we use correspond to the 9.0.0 release of 28 March 2024 and are publicly available at <https://share-eric.eu/>. Since wave 2 (2004-2005), the survey has included the *End of Life* module, which collects information on deceased participants. The information is provided by a surviving family member, in most cases the partner or child of the deceased. The module includes questions on whether the deceased person left any inheritance and how this was distributed among their children. Given the longitudinal nature of SHARE, we can trace other relevant information about the deceased back to when they were interviewed in previous waves.

After a series of selections, which we describe in more detail below, we are able to construct a database containing information on 4,218 deceased individuals who left bequests and had at least two children in 18 countries over the period 2004-2020. The dataset also includes information on the socio-economic characteristics of the deceased’s children and on parental support and contact.

### A.2 Data selection

We start by selecting individuals with information in the *End of Life* module, who left any bequests and who had at least two children at the time of death. Israel has been excluded from the SHARE dataset as our focus is on Europe. In addition, other countries with very few observations have been omitted.

As we are interested in information on the frequency of contact and help provided by children to their parents during their lifetime, we first identify the last wave in which such interactions are reported. We then match the information from the *End of Life* module with the corresponding wave of data on child-parent interactions. By construction, the last period with reported data on child-parent interactions is the wave just before the wave in which the *End of Life* module is included. However, it may be necessary to go back to other waves to obtain the most recent data on child-parent interactions, as the

questions used to generate these data are not asked in all waves.<sup>34</sup>

A total of 4,995 observations of deceased parents with parent-child interaction data were identified. The following cases were excluded: A total of 62 observations were excluded due to the parents experiencing the death of at least one child during the SHARE study. Additionally, 149 observations were removed due to the parents reporting fewer than two children at one of the waves. Furthermore, 60 observations were excluded due to inconsistent data on the sex or year of birth of the children across waves. Finally, 30 observations were excluded due to inconsistent information on the year of death of the parents. These exclusions resulted in a final sample size of 4,694 observations. This number is further reduced to 4,619 after the exclusion of 75 observations from countries with a limited number of observations: Finland (1), Malta (3), Luxembourg (16), Romania (8), Cyprus (4), Bulgaria (10), Ireland (12), Latvia (9) and Lithuania (12). Additionally, 401 observations were excluded where the temporal lag between the death of the parent and the most recent available information on child-parent interactions was deemed to be excessive. This is conducted by deleting observations where the year recorded for the child-parent contact information is more than six years before the year of the parent's death. The final sample consists of 4,218 observations of parents for whom we also have information on their children. Due to missing information on some covariates, the sample size for the regressions consists of 3,539 observations.

### A.3 Construction of some key variables

#### Bequest division

The *End of Life* module of SHARE includes a question that records how a deceased parent's estate was distributed among their children. The question asks: "How would you say the total estate was divided among the children of [name of the deceased]?" This information is reported by a respondent, typically a surviving spouse or child. The question is only posed if the deceased had at least two children. Respondents can select one of four options: (i) Some children received more than others; (ii) The estate was divided about equally among all children; (iii) The estate was distributed exactly equally among the children; and (iv) The children have not received anything.

For analytical purposes, we classify bequests as equally divided if the respondent selected either option (ii) or (iii) and as unequally divided if they selected option (i). The dataset does not provide information on the exact amounts received by each child, only whether the distribution was equal or unequal. Additionally, the *End of Life* module contains questions regarding the ownership and value of the deceased's assets. However, due to substantial missing data, it is challenging to derive a reliable estimate of the total

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<sup>34</sup>This is the case, for example, if the country implements the retrospective wave in which the questions focus on participants' past experiences.



estate value.

### **Child-parent contact**

For each child of our parents' sample, we compute a variable for child-parent contact using the question "During the past twelve months, how often did you have contact with 'FirstNameOfChild', either in person, by phone, mail, email or any other electronic means?" this questions has seven categories: daily, several times a week, about once a week, about every two weeks, about once a month, less than once a month, and never. These categories are transformed into days per year by assigning the following values: 365, 182, 52, 26, 12, 6, and 0, respectively.

To measure the contact difference among children, we compute the difference between the minimum and maximum values of parent-child contact days observed for siblings. We observe in our sample for regressions that 49% of parents have two children, 29% have three children, 12% have four children, and 10% have five or more children.

### **Child income**

Although some basic demographic variables are available for the children of our deceased parents, there is no information about their incomes. However, income is imputed for each child based on regressions implemented on EU-SILC data for corresponding countries and years. Firstly, we select the child socio-demographic variables that are available in both SILC and SHARE, and then we regress these variables on the logarithm of labour income in the EU-SILC dataset. Secondly, we apply the estimated coefficients to the child covariates of the SHARE dataset in order to compute child income. The child variables employed in these regressions are sex, age, age squared, levels of education, and marital status. Note that the values of these variables were retrieved from the year in which occurred the most recent parent-child interaction. Thirdly, in order to facilitate comparisons across countries and years, the estimated income values are standardised using the EU purchasing power parity prices of 2020. Although the estimated incomes are somewhat "smoothed", we can interpret these values as being close to permanent incomes. Other studies have also routinely used some forms of imputed incomes for parents or children if one these variables are not available in the same dataset. Some examples are [Cox \(1987\)](#); [Cox and Rank \(1992\)](#); [Cox and Jakubson \(1995\)](#); [McGarry \(1999, 2016\)](#); [Alessie et al. \(2014\)](#); [Hochguertel and Ohlsson \(2009\)](#) and [Olivera \(2017\)](#).

The difference in child income is calculated by subtracting the minimum value from the maximum value of observed incomes for siblings. In order to calculate a dummy variable indicating whether child incomes are equal or unequal, we consider a buffer of  $\pm 5\%$  for the value of the income difference. Accordingly, a parent is deemed to have children with equal incomes if the income differences of their children do not exceed 5%.

### **Parent-child residential distance**

Another potential proxy for child-parent contact and the provision of services is the

distance between the residence of the parent and the residence of the child. The survey question includes the following categories: in the same household, in the same building, less than 1 kilometre away, between 1 and 5 kilometres away, between 5 and 25 kilometres away, between 25 and 100 kilometres away, between 100 and 500 kilometres away, more than 500 kilometres away, and more than 500 kilometres away in another country. The aforementioned categories are subsequently converted into kilometres by applying the following values: The values assigned to these categories are as follows: 0, 0, 0.5, 3, 15, 62.5, 300, 500, and 500, respectively.

## B Additional results from SHARE

### B.1 Descriptive statistics

Table B.1: SHARE's percentage of parents leaving unequal bequests to children

Country	%	N
Sweden	5.1	374
Belgium	5.2	289
Hungary	5.2	77
Italy	5.8	224
France	6.6	198
Switzerland	6.7	134
Spain	7.1	296
Czech Republic	7.1	295
Denmark	7.2	306
Portugal	8.2	49
Netherlands	8.5	106
Croatia	8.6	35
Austria	12.8	188
Germany	14.7	102
Slovenia	18.1	204
Greece	18.8	277
Estonia	19.7	233
Poland	25.4	130
Total	10.2	3,517

*Notes:* The table reports the deceased participants of SHARE who left bequests among their surviving children between 2004 and 2020. The sample is conditional on participants who had at least two surviving children and left any amount of bequests. This is the analytical sample used in the regression analysis. The data come from the End-of-Life module and other modules of the SHARE survey. For further details, refer to the section that describes the construction of the sample.

Table B.2: SHARE's reasons provided for unequal distribution of bequests (in %)

Would you say that some children received more than others...	Overall	Sex composition of children		
		Same sex	Different sex	diff.
to make up for previous gifts	27.8	35.5	25.1	10.4*
to give them financial support	25.0	28.0	24.0	4.0
because they helped or cared for the deceased towards the end	44.4	47.3	43.4	3.9
because of other reasons	38.6	36.6	39.3	-2.8

*Notes:* The table reports on the reasons (in percentage) why some children received more bequests than others. The information was provided by the surviving family member who responded to the End-of-Life module of SHARE. There could be more than one reported reason by participant. The sample is conditional on participants who had at least two children and divided their bequests unequally (N=360) and were part of the analytical sample used in the regression analysis. For further details, refer to the section that describes the construction of the analytical sample. \* $p < 0.10$ , \*\* $p < 0.05$ , and \*\*\* $p < 0.01$  indicate statistically significance levels.

Table B.3: SHARE's unequal division of bequests by family type and motive (in %) (only two-child families)

Family type	Exchange (*child does more care)	Altruistic (*child is poorer)
Son*/brother	10.6	9.4
Son*/sister	13.7	7.1
Daughter*/brother	10.2	10.5
Daughter*/sister	7.4	8.2

*Notes:* The table reports the percentage of parents that divided their bequests unequally, conditional on having only two children and were part of the analytical sample used in the regression analysis.

## B.2 Additional regression results from SHARE

Table B.4: Estimates for leaving unequal bequests (without parental covariates)

	(1)	(2)	(3)	(4)	Mixed-sex (5)	Same-sex (6)
Same gender	-0.039** (0.014)			-0.025* (0.013)		
Unequal contact days		0.048*** (0.011)		0.042*** (0.011)	0.054*** (0.017)	0.022 (0.014)
Unequal income			0.062*** (0.016)	0.044*** (0.014)	0.044 (0.027)	0.047** (0.019)
Constant	0.115*** (0.004)	0.069*** (0.008)	0.046*** (0.014)	0.041** (0.019)	0.030 (0.029)	0.031 (0.019)
Observations	3,517	3,517	3,517	3,517	2,372	1,145
Adjusted R-squared	0.042	0.044	0.042	0.048	0.052	0.063

*Notes:* The table shows the estimated coefficients of the linear probability of leaving unequal bequests when parental covariates are not included. The last two columns show results on subsamples of decedents whose children were of different sex or all of the same sex. All regressions include country fixed effects. The standard errors are clustered at the country level and are shown in parenthesis. \* $p < 0.10$ , \*\* $p < 0.05$ , and \*\*\* $p < 0.01$  indicate statistical significance levels.

Table B.5: Estimates for leaving unequal bequests (using contact and income variables in continuous form)

	(1)	(2)	(3)	(4)	Mixed-sex (5)	Same-sex (6)
Same gender	-0.028** (0.012)			-0.015 (0.013)		
Differences in contact days/100		0.015*** (0.003)		0.014*** (0.003)	0.016*** (0.004)	0.010 (0.007)
Differences in income/100			0.003*** (0.001)	0.002** (0.001)	0.002** (0.001)	0.003 (0.002)
Constant	0.059 (0.045)	0.043 (0.046)	0.042 (0.045)	0.054 (0.045)	0.099 (0.075)	-0.040 (0.073)
Observations	3,517	3,517	3,517	3,517	2,372	1,145
Adjusted R-squared	0.072	0.074	0.073	0.077	0.081	0.099

*Notes:* The table shows the estimated coefficients of the linear probability of leaving unequal bequests when the child contact and income variables are used in continuous form. This is the difference in contact days (or income) between the maximum and minimum values observed between siblings. The last two columns show results on subsamples of decedents whose children were of different sex or all of the same sex. All regressions include country fixed effects and the same control variables used in the main regression reported in Table 3. The standard errors are clustered at the country level and are shown in parenthesis. \* $p < 0.10$ , \*\* $p < 0.05$ , and \*\*\* $p < 0.01$  indicate statistical significance levels.

Table B.6: Estimates for leaving unequal bequests (using coefficient of variation for child contact and income)

	(1)	(2)	(3)	(4)	Mixed-sex (5)	Same-sex (6)
Same gender	-0.028** (0.012)			-0.009 (0.014)		
Coeff of Var in contact days		0.048*** (0.012)		0.045*** (0.012)	0.050*** (0.014)	0.034 (0.021)
Coeff of Var in income			0.128*** (0.030)	0.113*** (0.033)	0.114** (0.046)	0.118 (0.072)
Constant	0.059 (0.045)	0.038 (0.045)	0.004 (0.044)	0.012 (0.044)	0.051 (0.072)	-0.066 (0.082)
Observations	3,517	3,517	3,517	3,517	2,372	1,145
Adjusted R-squared	0.072	0.076	0.076	0.081	0.085	0.102

*Notes:* The table shows the estimated coefficients of the linear probability of leaving unequal bequests when the coefficient of variance of the child contact and income variables are used. The last two columns show results on subsamples of decedents whose children were of different sex or all of the same sex. All regressions include country fixed effects and the same control variables used in the main regression reported in Table 3. The standard errors are clustered at the country level and are shown in parenthesis. \* $p < 0.10$ , \*\* $p < 0.05$ , and \*\*\* $p < 0.01$  indicate statistically significance levels.

Table B.7: Estimates of leaving unequal bequests (using distance to parental home)

	(1)	(2)	(3)	(4)	Mixed-sex (5)	Same-sex (6)
Same gender	-0.028** (0.012)			-0.019 (0.012)		
Unequal distance to parent home		0.036*** (0.012)		0.034** (0.012)	0.043** (0.018)	0.020 (0.016)
Unequal income			0.052*** (0.014)	0.042*** (0.014)	0.048 (0.032)	0.049** (0.019)
Constant	0.059 (0.045)	0.025 (0.046)	-0.004 (0.048)	0.003 (0.046)	0.034 (0.085)	-0.082 (0.082)
Observations	3,517	3,508	3,517	3,508	2,365	1,143
Adjusted R-squared	0.072	0.073	0.072	0.075	0.078	0.100

*Notes:* The table shows the estimated coefficients of the linear probability of leaving unequal bequests when the distance to parental home is used instead of child contact. Similar to the variable “Contact days are different”, “Distance to parent home is different” is also an indicator variable (0/1). The last two columns show results on subsamples of decedents whose children were of different sex or all of the same sex. All regressions include country fixed effects and the same control variables used in the main regression reported in Table 3. The standard errors are clustered at the country level and are shown in parenthesis. \* $p < 0.10$ , \*\* $p < 0.05$ , and \*\*\* $p < 0.01$  indicate statistically significance levels.

Table B.8: Estimates of unequal bequests (for deceased fathers or mothers)

	Fathers			Mothers		
	All (1)	Mixed-sex (2)	Same-sex (3)	All (4)	Mixed-sex (5)	Same-sex (6)
Same gender	-0.015 (0.014)			-0.018 (0.018)		
Contact days are different	0.030 (0.021)	0.026 (0.023)	0.030 (0.021)	0.042*** (0.009)	0.061*** (0.018)	0.023 (0.025)
Incomes are different	0.015 (0.026)	0.026 (0.078)	0.024 (0.032)	0.060** (0.022)	0.071** (0.028)	0.060* (0.032)
Constant	0.057 (0.085)	0.118 (0.120)	-0.084 (0.155)	-0.027 (0.074)	-0.027 (0.098)	-0.069 (0.071)
N	1,616	1,104	512	1,901	1,268	633
r <sup>2</sup>	0.082	0.088	0.126	0.081	0.081	0.137

*Notes:* The table shows the estimated coefficients of the linear probability of leaving unequal bequests for subsamples of deceased fathers or mothers. Columns 2-3 and 5-6 show results on subsamples of parents whose children were of different sex or all of the same sex. All regressions include country fixed effects and the same control variables used in the main regression reported in Table 3. The standard errors are clustered at the country level and are shown in parenthesis. \* $p < 0.10$ , \*\* $p < 0.05$ , and \*\*\* $p < 0.01$  indicate statistically significance levels.

Table B.9: Estimates of unequal bequests by marital status of the deceased at time of death

	Married			No married		
	All (1)	Mixed-sex (2)	Same-sex (3)	All (4)	Mixed-sex (5)	Same-sex (6)
Same gender	-0.040* (0.020)			-0.005 (0.014)		
Contact days are different	0.027 (0.018)	0.030 (0.020)	0.028 (0.022)	0.036** (0.014)	0.046** (0.022)	0.021 (0.018)
Incomes are different	0.000 (0.026)	-0.024 (0.086)	0.003 (0.022)	0.064*** (0.019)	0.082** (0.029)	0.069** (0.026)
Constant	-0.001 (0.060)	0.082 (0.082)	-0.171 (0.130)	0.028 (0.069)	0.042 (0.113)	-0.024 (0.077)
N	1,321	898	423	2,196	1,474	722
r <sup>2</sup>	0.077	0.085	0.117	0.082	0.083	0.116

*Notes:* The table shows the estimated coefficients of the linear probability of leaving unequal bequests for subsamples of parents who were married or not married (i.e. single, divorced or widowed) at the time of death. Columns 2-3 and 5-6 show results on subsamples of parents whose children were of different sex or all of the same sex. All regressions include country fixed effects and the same control variables used in the main regression reported in Table 3. The standard errors are clustered at the country level and are shown in parenthesis. \* $p < 0.10$ , \*\* $p < 0.05$ , and \*\*\* $p < 0.01$  indicate statistically significance levels.

Table B.10: Estimates of unequal bequests (with and without a will)

	There is a will			No will		
	All (1)	Mixed-sex (2)	Same-sex (3)	All (4)	Mixed-sex (5)	Same-sex (6)
Same gender	-0.015 (0.022)			-0.021 (0.014)		
Contact days are different	0.066*** (0.022)	0.065* (0.032)	0.081* (0.043)	0.020* (0.010)	0.033** (0.014)	-0.001 (0.013)
Incomes are different	0.107*** (0.026)	0.124** (0.044)	0.108*** (0.029)	0.013 (0.013)	0.007 (0.040)	0.025 (0.019)
Constant	-0.082 (0.113)	-0.106 (0.125)	-0.085 (0.258)	0.082 (0.059)	0.150 (0.087)	-0.056 (0.108)
N	1,004	683	321	2,513	1,689	824
r <sup>2</sup>	0.105	0.106	0.162	0.047	0.053	0.083

*Notes:* The table shows the estimated coefficients of the linear probability of leaving unequal bequests for subsamples of parents who left or not a will. Columns 2-3 and 5-6 show results on subsamples of parents whose children were of different sex or all of the same sex. All regressions include country fixed effects and the same control variables used in the main regression reported in Table 3. The standard errors are clustered at the country level and are shown in parenthesis. \* $p < 0.10$ , \*\* $p < 0.05$ , and \*\*\* $p < 0.01$  indicate statistical significance levels.

Table B.11: Estimates of unequal bequests by informant type (surviving partner vs. child)

	Surviving partner			Surviving child		
	All (1)	Mixed-sex (2)	Same-sex (3)	All (4)	Mixed-sex (5)	Same-sex (6)
Same gender	-0.040* (0.022)			-0.001 (0.013)		
Contact days are different	0.047** (0.019)	0.059** (0.024)	0.023 (0.019)	0.036** (0.013)	0.046** (0.017)	0.021 (0.017)
Incomes are different	-0.002 (0.036)	0.017 (0.102)	-0.018 (0.040)	0.057** (0.020)	0.104*** (0.031)	0.063* (0.031)
Constant	0.031 (0.104)	0.036 (0.156)	-0.017 (0.150)	0.025 (0.072)	0.019 (0.104)	-0.033 (0.110)
N	925	625	300	1,922	1,317	605
r <sup>2</sup>	0.088	0.106	0.125	0.080	0.089	0.126

*Notes:* The table shows the estimated coefficients of the linear probability of leaving unequal bequests for subsamples of parents whose surviving partner or surviving child was the individual who informed the interviewer about the division of bequests. Columns 2-3 and 5-6 show results on subsamples of parents whose children were of different sex or all of the same sex. All regressions include country fixed effects and the same control variables used in the main regression reported in Table 3. The standard errors are clustered at the country level and are shown in parenthesis. \* $p < 0.10$ , \*\* $p < 0.05$ , and \*\*\* $p < 0.01$  indicate statistical significance levels.



### B.3 Results with country gender norm proxies

This sub-section assesses the SHARE survey results when proxies for country-specific gender norms are included in the analysis. The epidemiological approach used in studies such as [Fernández \(2007\)](#), [Fernández and Fogli \(2009\)](#), and [Hauge et al. \(2023\)](#) leverages variation in cultural norms among immigrant groups to understand how these norms influence individual behaviours in a variety of outcomes (notably, on labour supply). This methodology assumes that individuals inherit cultural values, such as gender norms, from their ancestry, which may persist across generations despite exposure to the host country’s norms.

A key distinction between our study and previous research employing the epidemiological approach lies in the age profile of the sample. Our participants are significantly older than those analysed in prior studies, with an average age of 82 at the time of bequeathing. This underscores the advanced age of our cohort and provides a unique perspective on later-life bequest behaviours.

The ancestry of individuals in our sample is defined based on the parental country of birth, referred to here as the “ancestry country”. In the SHARE dataset, information on parental country of birth is available only from Wave 5 onward, limiting this data to approximately half of our sample. This constraint introduces a critical limitation: only 13% (N=222) of the participants were born in the survey country and had at least one parent born in another country. While the textbook epidemiological approach would typically focus on analysing this subgroup, its small size prevents the generation of statistically robust results.

To address this limitation and investigate the role of gender norms in bequest behaviour, we extend our analysis by including proxies for gender norms observed in the country of birth of the individual. These proxies allow us to explore potential influences of gender norms on bequest behaviour while retaining a larger sample for analysis. To measure gender norms, we incorporate data from various external sources, each providing a unique perspective on gender equality:

1. Pay Gender Equality Index: Sourced from the World Bank’s Women, Business and the Law database, we use the 1970 index—the earliest available observation—which varies by year and country. (from <https://wbl.worldbank.org/en/wbl>)
2. Gender Gap Index: Extracted from the World Economic Forum’s Global Gender Gap Report 2006, we use the inaugural index for its comprehensive assessment of gender disparities. (from <https://www.weforum.org/publications/global-gender-gap-report-2006/>)
3. Gender Attitudes Index: We exploit the World Values Survey (WVS) and the European Values Survey (EVS) to compute a composite index based on principal com-

ponent analysis (PCA). We combine responses to three attitudinal questions about gender roles, utilizing data from the earliest possible waves (1990–2009). The used questions are: i) Men should have more right to a job than women; ii) Being a housewife is just as fulfilling as working for pay; iii) Husband and wife should NOT both contribute to income.

The indices are calculated for each country and normalized to range between 0 and 1, with higher values representing more egalitarian gender norms. These indices are positively correlated. For each deceased individual in the SHARE dataset, we assign the gender norm index corresponding to their country of birth. The following Table B.12 presents the main regression results, incorporating these indices. In the first column, dummy variables for the country of birth are included, while columns 2 to 4 incorporate the estimated indices individually. Column 5 introduces a composite measure that summarizes all indices, derived from the country-level data used to calculate the individual indices. This overall gender norm index is also normalized to range between 0 and 1.

We have also replicated Table B.12 and considered the gender norm index of the country of birth of the father and mother of the deceased person. No conclusive patterns are observed when we use parental gender norm indices, which could be partially explained by small sample issues. These tables are available upon request.

Table B.12: Estimates of leaving unequal bequests (including gender norm proxies for the country of birth of the deceased)

	(1)	(2)	(3)	(4)	(5)
Same gender	-0.016 (0.012)	-0.017 (0.013)	-0.018 (0.013)	-0.017 (0.013)	-0.018 (0.013)
Contact days are different	0.037*** (0.011)	0.037*** (0.012)	0.036*** (0.012)	0.037*** (0.011)	0.036*** (0.012)
Incomes are different	0.043** (0.015)	0.041** (0.014)	0.039** (0.014)	0.041** (0.014)	0.038** (0.014)
WBL Pay gender equality		-0.153** (0.070)			
Gender gap index			-1.017** (0.392)		
WVS Gender attitudes index				-0.170 (0.423)	
Overall WBL-GGI-WVS index					-0.249 (0.143)
N	3,503	3,478	3,458	3,475	3,455
r2	0.093	0.077	0.077	0.076	0.077
<b>Decedents whose children are of different sex</b>					
Contact days are different	0.045** (0.017)	0.047** (0.018)	0.044** (0.017)	0.046** (0.018)	0.044** (0.017)
Incomes are different	0.049 (0.031)	0.052 (0.031)	0.048 (0.032)	0.050 (0.032)	0.048 (0.031)
WBL Pay gender equality		-0.188* (0.104)			
Gender gap index			-0.969** (0.439)		
WVS Gender attitudes index				-0.122 (0.424)	
Overall WBL-GGI-WVS index					-0.285* (0.147)
N	2,360	2,342	2,326	2,339	2,323
r2	0.101	0.081	0.081	0.080	0.081
<b>Decedents whose children are of the same sex</b>					
Contact days are different	0.029* (0.015)	0.023 (0.015)	0.025* (0.014)	0.023 (0.015)	0.025* (0.014)
Incomes are different	0.047** (0.021)	0.045** (0.019)	0.043** (0.020)	0.045** (0.019)	0.044** (0.020)
WBL Pay gender equality		-0.077 (0.104)			
Gender gap index			-0.966 (0.712)		
WVS Gender attitudes index				-0.372 (0.500)	
Overall WBL-GGI-WVS index					-0.119 (0.236)
N	1,143	1,136	1,132	1,136	1,132
r2	0.126	0.103	0.103	0.103	0.102

*Notes:* The table shows the estimated coefficients of the linear probability of leaving unequal bequests, including proxies for gender norms of the birth country of the deceased person. The second and third panel show results on subsamples of decedents whose children were of different sex or all of the same sex. Column 1 includes dummies for the country of birth of the deceased. All regressions include country fixed effects and the same control variables used in the main regression reported in Table 3. The standard errors are clustered at the country level and are shown in parenthesis. \* $p < 0.10$ , \*\* $p < 0.05$ , and \*\*\* $p < 0.01$  indicate statistically significance levels.

## C Detailed information in the vignette experiment

**The Cross-border Household Finance and Consumption Survey:** The Central Bank of Luxembourg conducts two separate surveys in this context: (i) the Luxembourg Household Finance and Consumption Survey (LU-HFCS) among resident households in Luxembourg, and (ii) the Cross-border Household Finance and Consumption Survey (XB-HFCS) among cross-border households where at least one household member exerts their professional activity in Luxembourg. For both surveys, households are randomly selected and invited to participate via personal and web-based interviews. Both surveys have in common that the fieldwork is conducted by the Luxembourg Institute of Socio-Economic Research (LISER). So far, there are four waves of the LU-HFCS, namely, 2010/11, 2014, 2018, and 2021.

**Vignette Experiment in the 2018 XB-HFCS:** The module with the non-incentivised vignette experiment was included in the 2018 of the XB-HFCS (cross-border workers subsample).

The actual wording in the vignette experiment for each scenario is the following (for those who were randomly assigned the son-son setting):

- **Situation A.** Daniel and Patrick have a pretty similar economic position, but Daniel has taken more care of his father Louis, he has spent much more time helping with some chores, taking him to the doctor, spending together many evenings and some holidays. What percentage of the bequest should Louis give to Daniel and Patrick? Recall that both percentages should sum to 100%
- **Situation B.** In this new situation, Daniel has a very good economic position; he can afford a very good standard of living. In contrast, Patrick lives on a very tight budget, just enough to make ends meet.
- **Situation C.** In this new situation, both brothers have received exactly the same opportunities from their family, for instance the same quality of education and financial support during their childhood and youth. Daniel has always worked very hard and has made the most out of the opportunities he received and has been successful in achieving a very good standard of life. In contrast, Patrick lives on a very tight budget because he has been irresponsible and has wasted all the opportunities he received.

## D Additional results from the vignette experiment

Table D.1: Characteristics of respondents by assigned children's gender composition

	Mean	(M*,F)		(F*,M)		(F*,F)	
		coeff	(se)	coeff	(se)	coeff	(se)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
<i>Dependent variable (in each row)</i>							
Male respondent	0.728	-0.026	(0.027)	-0.028	(0.027)	-0.007	(0.026)
Age	45.072	-0.954*	(0.538)	-0.453	(0.541)	0.262	(0.531)
Father with college degree	0.243	0.018	(0.025)	0.025	(0.026)	0.016	(0.025)
Mother with college degree	0.155	0.046*	(0.024)	0.082***	(0.024)	0.067***	(0.023)
Cohabit	0.235	0.028	(0.025)	0.016	(0.025)	-0.01	(0.025)
Have a child	0.756	-0.021	(0.025)	-0.006	(0.026)	0.022	(0.025)
Log (net hh income)	10.986	-0.013	(0.029)	-0.019	(0.030)	0.005	(0.029)
Homeowner	0.866	-0.03	(0.021)	-0.035*	(0.021)	-0.017	(0.020)
Log (inheritance)	10.792	-0.276	(0.246)	-0.325	(0.247)	-0.2	(0.242)
Meritocratic fairness acceptance	0.594	0.027	(0.029)	-0.031	(0.029)	0.038	(0.028)
Inheritance causes inequality	0.176	0.029	(0.023)	0.021	(0.023)	0.014	(0.023)
Inheritance tax acceptance	0.323	0.008	(0.027)	0.023	(0.027)	0.008	(0.027)
Importance of inheritance	0.306	-0.03	(0.027)	-0.016	(0.027)	0.003	(0.026)
Expected value of bequest	0.58	0.011	(0.030)	-0.033	(0.030)	-0.02	(0.029)
Life satisfaction	7.683	0.043	(0.080)	0.072	(0.080)	0.023	(0.079)
Country: Germany	0.245	-0.008	(0.025)	-0.005	(0.025)	0.03	(0.025)
Country: Belgium	0.324	-0.011	(0.027)	-0.009	(0.027)	-0.021	(0.027)
Country: France	0.431	0.018	(0.029)	0.014	(0.029)	-0.008	(0.029)

*Notes:* Each row represents an estimation of each given characteristic on the group assignment. That is, we regress each characteristic on a set of indicators for each specific gender composition of the children on (as indicated in the header of each column). Column 1 shows the means of these characteristics for participants assigned to the group of a more deserving son who has a brother. The robust, standard errors are in parentheses. \* $p < 0.10$ , \*\* $p < 0.05$ , and \*\*\* $p < 0.01$  indicate statistically significance levels.

Table D.2: Pairwise T-Test

Hypotheses	Extra bequest share to deserving child		Probability of unequal bequest		Obs
	Coeff (1)	(se) (2)	Coeff (3)	(se) (4)	
<i>Panel A: Exchange Motive</i>					
1. F*M > M*M	0.490**	(0.115)	0.009	(0.006)	998
2. F*M > M*F	0.601**	(0.164)	0.010**	(0.002)	987
3. F*F > M*M	-0.121	(0.224)	0.030***	(0.001)	1048
4. F*F > M*F	0.224	(0.145)	0.015*	(0.006)	1037
5. F*M > F*F	1.097***	(0.184)	-0.008	(0.017)	1012
6. M*M > M*F	0.511	(0.405)	0.001	(0.008)	1023
<i>Panel B: Altruistic Motive</i>					
1. F*M > M*M	1.032**	(0.212)	0.047***	(0.008)	998
2. F*M > M*F	1.143***	(0.104)	0.028***	(0.001)	987
3. F*F > M*M	0.806	(0.487)	0.020*	(0.007)	1048
4. F*F > M*F	1.685***	(0.142)	0.027*	(0.010)	1037
5. F*M > F*F	0.876***	(0.090)	0.030**	(0.006)	1012
6. M*M > M*F	1.215**	(0.247)	0.024**	(0.006)	1023
<i>Panel C: Meritocratic Motive</i>					
1. F*M > M*M	0.533	(0.269)	0	(0.003)	998
2. F*M > M*F	0.213*	(0.072)	0	(0.004)	987
3. F*F > M*M	0.856***	(0.120)	0.004	(0.012)	1048
4. F*F > M*F	0.093	(0.230)	0.006	(0.003)	1037
5. F*M > F*F	0.406	(0.537)	0	(0.005)	1012
6. M*M > M*F	-0.721	(0.404)	0.008	(0.017)	1023

*Notes:* The dependent variables are the additional bequest allocated by respondents to the more deserving child in a given pair (columns 2-3); and the incidence of unequal bequest division (columns 4-5). All are measured in the percentage point. Each row shows the estimations of the sub-sample of those who were assigned the gender composition of the fictitious children according to the LHS and the RHS groups. The table reports the estimated coefficient of an indicator equals to 1 if the observations are assigned the gender composition of children of the LHS. All regressions include country-of-residence fixed effects, total value of hypothetical bequest, household gross income (in log), stated preferences, gender, age, and inheritance experience. The standard errors are clustered at the treatment group level are in parentheses. \* $p < 0.10$ , \*\* $p < 0.05$ , and \*\*\* $p < 0.01$  indicate statistically significance levels. Panel A, B, and C show the estimations under the exchange motive, the altruistic motive, and the meritocratic motive, respectively.

Table D.3: Probability of unequal bequest division

	Exchange (1)	Altruistic (2)	Meritocratic (3)
Son=deserving	-0.027* (0.012)	-0.086*** (0.008)	-0.025* (0.012)
Samesex	0.005 (0.012)	-0.046*** (0.007)	-0.010* (0.005)
Samesex x Son=deserving	-0.003 (0.016)	0.105*** (0.012)	0.02 (0.015)
Constant	0.982** (0.346)	0.238 (0.143)	0.391 (0.232)
Observations	2035	2035	2035
Adjusted R-squared	0.056	0.015	0.006
<i>Additional controls</i>			
Size of bequest	x	x	x
Country fixed effects	x	x	x
Other covariates	x	x	x

*Notes:* The dependent variable is the likelihood that the bequest division is unequal among the children. Columns 1, 2, and 3 are the amount under the exchange motive, the altruistic motive; and the meritocratic motive, respectively. All regressions include country-of-residence fixed effects. Additional controls are the total value of hypothetical bequest, household gross income (in log), gender, age, and inheritance experience. The standard errors are clustered at the treatment group level are in parentheses. \* $p < 0.10$ , \*\* $p < 0.05$ , and \*\*\* $p < 0.01$  indicate statistically significance levels.

Table D.4: One-sided inequality tests of the model with probability of unequal bequest as dependent variable (full sample)

Hypotheses	Test	Motives		
		Exchange	Altruism	Merit
<b>Deserving: Tests if <math>F^* \succ M^*</math></b>				
1. $F^*M > M^*M$	$0 > \beta_1 + \beta_2 + \beta_3$	-0.024** (0.012)	-0.027*** (0.008)	-0.016 (0.01)
2. $F^*M > M^*F$	$0 > \beta_1$	-0.027** (0.012)	-0.086*** (0.007)	-0.025** (0.011)
3. $F^*F > M^*M$	$0 > \beta_1 + \beta_3$	-0.03*** (0.009)	0.019 (0.009)	-0.005 (0.01)
4. $F^*F > M^*F$	$0 > \beta_1 - \beta_2$	-0.032*** (0.008)	-0.04*** (0.007)	-0.015 (0.01)
<b>Compensating: Tests if <math>F \succ M</math></b>				
5. $F^*M > F^*F$	$0 > \beta_2$	0.005 (0.012)	-0.047*** (0.007)	-0.011** (0.005)
6. $M^*M > M^*F$	$0 > -\beta_2 - \beta_3$	-0.003 (0.008)	-0.059*** (0.008)	-0.01 (0.014)

*Notes:* The dependent variable is the likelihood that the bequest division is unequal among the children. The table reports a series of one-sided, inequality test, as described in column 1, to test the set of hypotheses, for the regressions that include gender, country-of-residence fixed effects, total value of hypothetical bequest, household gross income (in log), stated preferences, age, and inheritance experience. It shows the linear combination of the RHS of the inequality and its corresponding standard errors are in parentheses. \* $p < 0.10$ , \*\* $p < 0.05$ , and \*\*\* $p < 0.01$  indicate statistically significance levels. Each column shows the estimations under the exchange motive, the altruistic motive, and the meritocratic motive, respectively.

Table D.5: One-sided inequality tests by gender of respondents

Hypotheses	Test	Male		Female	
		Est. value	(se)	Est. value	(se)
	(1)	(2)	(3)	(4)	(5)
<i>Panel A: Exchange Motive</i>					
1. $F^*M > M^*M$	$0 > \beta_1 + \beta_2 + \beta_3$	-0.614	(0.453)	-2.825***	(0.576)
2. $F^*M > M^*F$	$0 > \beta_1$	-1.937***	(0.389)	-0.861*	(0.52)
3. $F^*F > M^*M$	$0 > \beta_1 + \beta_3$	0.985	(0.302)	-3.189***	(0.397)
4. $F^*F > M^*F$	$0 > \beta_1 - \beta_2$	-0.339	(0.39)	-1.225*	(0.651)
5. $F^*M > F^*F$	$0 > \beta_2$	-1.599***	(0.275)	0.364	(0.639)
6. $M^*M > M^*F$	$0 > -\beta_2 - \beta_3$	-1.324**	(0.455)	1.963	(0.656)
<i>Panel B: Altruistic Motive</i>					
1. $F^*M > M^*M$	$0 > \beta_1 + \beta_2 + \beta_3$	-1.498***	(0.399)	-1.881***	(0.242)
2. $F^*M > M^*F$	$0 > \beta_1$	-4.176***	(0.306)	-1.412***	(0.26)
3. $F^*F > M^*M$	$0 > \beta_1 + \beta_3$	0.734	(0.52)	0.977	(0.187)
4. $F^*F > M^*F$	$0 > \beta_1 - \beta_2$	-1.944***	(0.483)	1.446	(0.295)
5. $F^*M > F^*F$	$0 > \beta_2$	-2.233***	(0.532)	-2.858***	(0.28)
6. $M^*M > M^*F$	$0 > -\beta_2 - \beta_3$	-2.678***	(0.329)	0.469	(0.161)
<i>Panel C: Meritocratic Motive</i>					
1. $F^*M > M^*M$	$0 > \beta_1 + \beta_2 + \beta_3$	-1.266***	(0.242)	-1.162	(1.014)
2. $F^*M > M^*F$	$0 > \beta_1$	-0.66***	(0.212)	-0.081	(0.945)
3. $F^*F > M^*M$	$0 > \beta_1 + \beta_3$	-0.971***	(0.244)	-0.38	(0.881)
4. $F^*F > M^*F$	$0 > \beta_1 - \beta_2$	-0.366*	(0.236)	0.7	(0.822)
5. $F^*M > F^*F$	$0 > \beta_2$	-0.295*	(0.175)	-0.782	(1.283)
6. $M^*M > M^*F$	$0 > -\beta_2 - \beta_3$	0.605	(0.303)	1.08	(0.36)

*Notes:* The dependent variable is the additional bequest allocated by respondents to the more deserving child in a given pair. Separately for the male and female respondents, the table reports a series of one-sided, inequality test, as described in column 1, to test the set of hypotheses, for the regressions that include country-of-residence fixed effects, total value of hypothetical bequest, household gross income (in log), stated preferences, age, and inheritance experience. Columns 2 and 4 show the linear combination of the RHS of the inequality and its corresponding standard errors are in parentheses (in columns 3 and 5). \* $p < 0.10$ , \*\* $p < 0.05$ , and \*\*\* $p < 0.01$  indicate statistically significance levels. Panel A, B, and C show the estimations under the exchange motive, the altruistic motive, and the meritocratic motive, respectively.



Table D.6: Bequest division by age of respondents

	Under 40 (1)	40-50 (2)	Over 50 (3)
<i>(A) Exchange Motive</i>			
Son=deserving	-4.280** (0.782)	-2.255* (0.991)	-0.073 (0.356)
Samesex	-2.853** (0.896)	-1.444** (0.556)	0.384 (0.658)
Samesex x Son=deserving	2.825*** (0.801)	2.935** (1.182)	-1.347 (0.847)
Observations	707	707	707
Adjusted R-squared	0.067	0.011	0.000
<i>(B) Altruistic Motive</i>			
Son=deserving	-1.079 (0.573)	-4.154*** (1.141)	-2.667 (1.453)
Samesex	-0.087 (0.640)	-2.140** (0.803)	-1.131 (1.488)
Samesex x Son=deserving	2.475** (0.735)	5.092*** (1.416)	1.261 (1.813)
Observations	795	795	795
Adjusted R-squared	0.079	0.016	0.016
<i>(C) Meritocratic Motive</i>			
Son=deserving	1.676** (0.411)	-3.699** (1.560)	1.547** (0.495)
Samesex	-0.309 (0.881)	-3.777** (1.189)	-0.443* (0.192)
Samesex x Son=deserving	-1.588 (1.096)	3.939* (1.785)	-1.122* (0.567)
Observations	533	533	533
Adjusted R-squared	0.064	0.024	0.014

*Notes:* The dependent variable is the additional bequest allocated by respondents to the more deserving child in a given pair. All are measured in the percentage point. Panel A, B, and C report the estimations under the exchange motive, the altruistic motive, the meritocratic motive, respectively. All regressions include country-of-residence fixed effects. Additional controls are the total value of hypothetical bequest, household gross income (in log), gender, age, and inheritance experience. The standard errors are clustered at the treatment group level are in parentheses. \* $p < 0.10$ , \*\* $p < 0.05$ , and \*\*\* $p < 0.01$  indicate statistically significance levels.

Table D.7: One-sided inequality tests by age of respondents

Hypotheses	Test	Under 40		40-50		Above 50	
		Est. value	(se)	Est. value	(se)	Est. value	(se)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
<i>Panel A: Exchange Motive</i>							
1. F*M > M*M	$0 > \beta_1 + \beta_2 + \beta_3$	-4.309***	(1.019)	1.307	(0.36)	-0.221	(0.801)
2. F*M > M*F	$0 > \beta_1$	-4.281***	(0.782)	-1.08*	(0.573)	1.675	(0.41)
3. F*F > M*M	$0 > \beta_1 + \beta_3$	-1.456***	(0.48)	1.395	(0.573)	0.087	(1.047)
4. F*F > M*F	$0 > \beta_1 - \beta_2$	-1.428***	(0.319)	-0.992	(0.82)	1.984	(0.829)
5. F*M > F*F	$0 > \beta_2$	-2.853***	(0.895)	-0.088	(0.639)	-0.309	(0.881)
6. M*M > M*F	$0 > -\beta_2 - \beta_3$	0.028	(0.373)	-2.388***	(0.525)	1.896	(0.7)
<i>Panel B: Altruistic Motive</i>							
1. F*M > M*M	$0 > \beta_1 + \beta_2 + \beta_3$	-0.764	(0.884)	-1.202**	(0.405)	-3.537***	(0.96)
2. F*M > M*F	$0 > \beta_1$	-2.256**	(0.99)	-4.154***	(1.14)	-3.7**	(1.56)
3. F*F > M*M	$0 > \beta_1 + \beta_3$	0.679	(0.916)	0.938	(0.791)	0.239	(0.476)
4. F*F > M*F	$0 > \beta_1 - \beta_2$	-0.812	(1.203)	-2.014*	(1.271)	0.077	(1.091)
5. F*M > F*F	$0 > \beta_2$	-1.444**	(0.556)	-2.141**	(0.802)	-3.777***	(1.188)
6. M*M > M*F	$0 > -\beta_2 - \beta_3$	-1.492	(1.223)	-2.952**	(1.102)	-0.163	(1.106)
<i>Panel C: Meritocratic Motive</i>							
1. F*M > M*M	$0 > \beta_1 + \beta_2 + \beta_3$	-1.036**	(0.514)	-2.538	(1.83)	-0.019	(0.27)
2. F*M > M*F	$0 > \beta_1$	-0.073	(0.355)	-2.668*	(1.452)	1.547	(0.495)
3. F*F > M*M	$0 > \beta_1 + \beta_3$	-1.42*	(0.872)	-1.407	(1.081)	0.424	(0.244)
4. F*F > M*F	$0 > \beta_1 - \beta_2$	-0.457	(0.767)	-1.537***	(0.289)	1.99	(0.509)
5. F*M > F*F	$0 > \beta_2$	0.384	(0.658)	-1.131	(1.487)	-0.444**	(0.191)
6. M*M > M*F	$0 > -\beta_2 - \beta_3$	0.963	(0.5)	-0.131	(1.108)	1.565	(0.559)

*Notes:* The dependent variable is the additional bequest allocated by respondents to the more deserving child in a given pair. Separately for each age group of the respondents, the table reports a series of one-sided, inequality test, as described in column 1, to test the set of hypotheses, for the regressions that include country-of-residence fixed effects, total value of hypothetical bequest, household gross income (in log), stated preferences, age, and inheritance experience. Columns 2, 4, and 6 show the linear combination of the RHS of the inequality and its corresponding standard errors are in parentheses (in columns 3, 5, 7). \* $p < 0.10$ , \*\* $p < 0.05$ , and \*\*\* $p < 0.01$  indicate statistically significance levels. Panel A, B, and C show the estimations under the exchange motive, the altruistic motive, and the meritocratic motive, respectively.

Table D.8: Bequest division by inequality aversion of respondents

	A. Exchange		B. Altruistic		C. Meritocratic	
	low	high	low	high	low	high
	(1)	(2)	(3)	(4)	(5)	(6)
Son=deserving	-0.631 (0.779)	-3.022*** (0.437)	-3.854*** (0.211)	-3.839*** (0.229)	0.447 (0.309)	-1.278 (1.267)
Same-sex	1.869*** (0.334)	-4.565*** (0.622)	-1.759*** (0.303)	-3.772*** (0.379)	1.487*** (0.232)	-2.515 (1.702)
Same-sex x Son=deserving	-0.615 (0.927)	4.110*** (0.624)	3.512*** (0.288)	5.067*** (0.410)	-0.44 (0.408)	-0.265 (1.743)
Male respondent	-0.548 (0.754)	0.413 (1.147)	1.519* (0.724)	1.684 (1.127)	-0.881 (0.767)	0.089 (0.410)
Constant	12.271* (5.836)	23.954 (17.146)	4.958 (3.353)	1.519 (12.018)	-0.742 (9.737)	0.849 (19.623)
Observations	1,019	854	1,019	854	1,019	854
Adj R-squared	0.038	0.083	0.019	0.008	0	0.02
<i>Additional controls</i>						
Size of hypothetical bequest	x	x	x	x	x	x
Country fixed effects	x	x	x	x	x	x
Other covariates	x	x	x	x	x	x

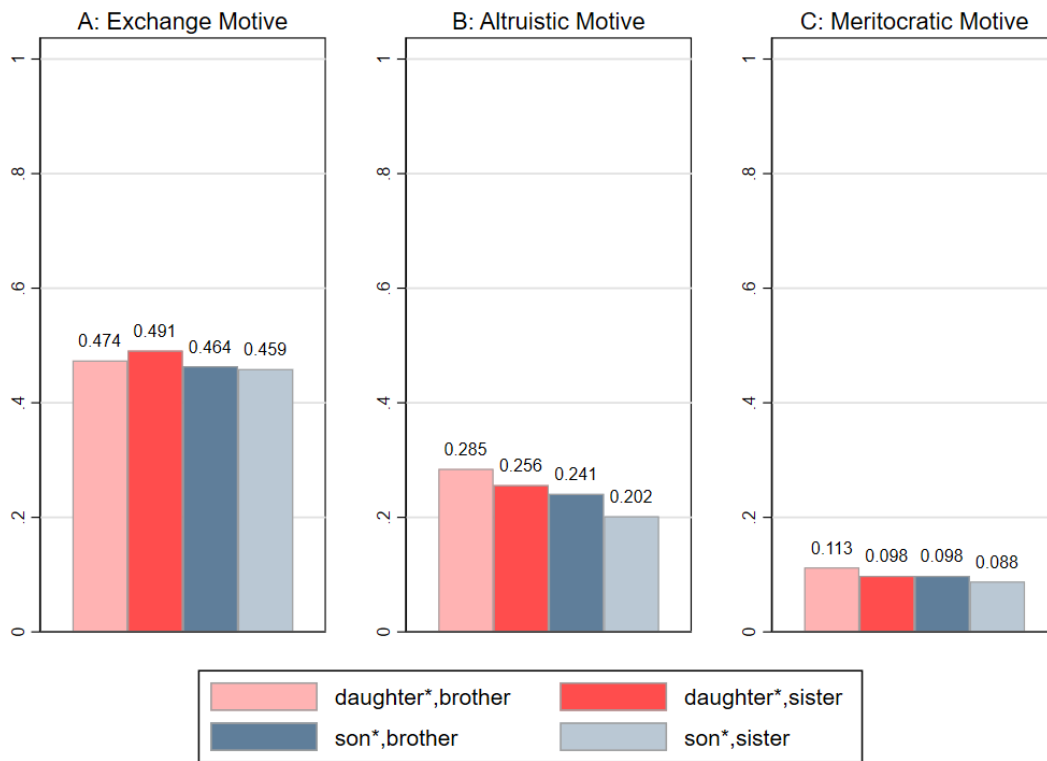
*Notes:* The dependent variable is the additional bequest allocated by respondents to the more deserving child in a given pair. All are measured in the percentage point. We group the survey respondents by their stated preferences regarding inequality. We used their answers to 4 related questions on their views on inequality and applied a factor analysis to reduce the dimension to only one index (standardised value). *High* inequality-aversion respondents are those with the inequality aversion index scores higher than the median (at 0); otherwise they are classified as *Low*. Columns 1-2 are the amount under the exchange motive, columns 3-4 are the amount under the altruistic motive; and columns 5-6 are the amount under the meritocratic motive. All regressions include country-of-residence fixed effects. Additional controls are the total value of hypothetical bequest, household gross income (in log), gender, age, and inheritance experience. The standard errors are clustered at the treatment group level and are in parentheses. \* $p < 0.10$ , \*\* $p < 0.05$ , and \*\*\* $p < 0.01$  indicate statistical significance levels.

Table D.9: Bequest division by respondents' meritocratic view on fairness

	A. Exchange		B. Altruistic		C. Meritocratic	
	low	high	low	high	low	high
	(1)	(2)	(3)	(4)	(5)	(6)
Son=deserving	-2.28 (1.348)	-1.492*** (0.197)	-2.047* (1.003)	-4.027*** (0.444)	-0.965 (0.539)	-0.418 (1.048)
Same-sex	-1.097 (0.750)	-1.319*** (0.256)	-2.424*** (0.637)	-2.249** (0.644)	-1.151 (0.838)	-0.014 (1.309)
Same-sex x Son=deserving	2.113 (1.474)	1.785*** (0.410)	2.956** (0.880)	4.511*** (0.900)	2.048* (0.906)	-1.544 (1.343)
Male respondent	-0.156 (0.781)	0.134 (0.733)	1.224 (0.821)	1.918* (0.831)	-0.754 (0.666)	-0.458 (0.501)
Belgium	-8.801*** (2.491)	-9.383*** (1.337)	-2.466 (2.334)	-0.923 (0.872)	-0.743 (1.534)	-0.827 (0.949)
France	-8.073** (2.325)	-7.393*** (1.183)	-1.738 (0.948)	-1.048 (0.714)	-1.441 (1.175)	-0.382 (0.951)
Constant	42.931** (16.883)	13.507 (7.393)	5.97 (14.895)	6.825 (10.301)	-0.068 (12.154)	4.517 (14.229)
Observations	801	1,234	801	1,234	801	1,234
Adj R-squared	0.067	0.053	0.006	0.013	-0.01	0.003
<i>Additional controls</i>						
Size of hypothetical bequest	x	x	x	x	x	x
Country fixed effects	x	x	x	x	x	x
Other covariates	x	x	x	x	x	x

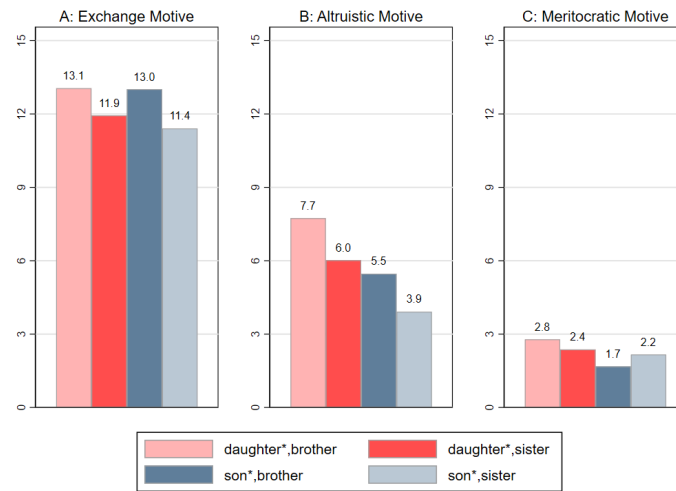
*Notes:* The dependent variable is the additional bequest allocated by respondents to the more deserving child in a given pair. All are measured in the percentage point. We group the survey respondents by their stated preferences regarding their view on meritocratic fairness (1 is totally disagree and 5 is totally agree). *High* are respondents answered 4 and 5; otherwise they are classified as *Low*. Columns 1-2 are the amount under the exchange motive, columns 3-4 are the amount under the altruistic motive; and columns 5-6 are the amount under the meritocratic motive. All regressions include country-of-residence fixed effects. Additional controls are the total value of hypothetical bequest, household gross income (in log), gender, age, and inheritance experience. The standard errors are clustered at the treatment group level are in parentheses. \* $p < 0.10$ , \*\* $p < 0.05$ , and \*\*\* $p < 0.01$  indicate statistical significance levels.

Figure D.1: Proposition of unequal bequest division under each motive

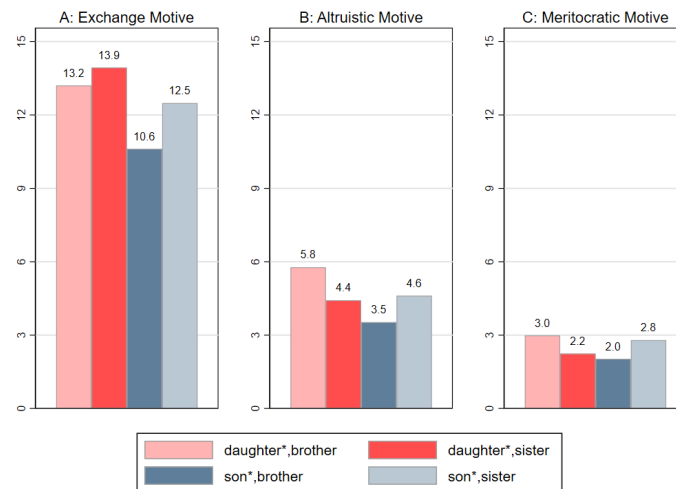


*Notes:* The bar graphs report the share of unequal bequest division among the respondents of the vignette experiment in each scenario: doing more care duties (exchange motive), economically worse off (altruistic motive), and asserts more effort at work (meritocratic motive). Each bar reports the results for a given gender composition of children where the son or the daughter is portrayed as the more deserving child than their sibling (denoted with \*). The sample size is 2,035.

Figure D.2: Additional bequest share allocated to deserving child by gender of respondents



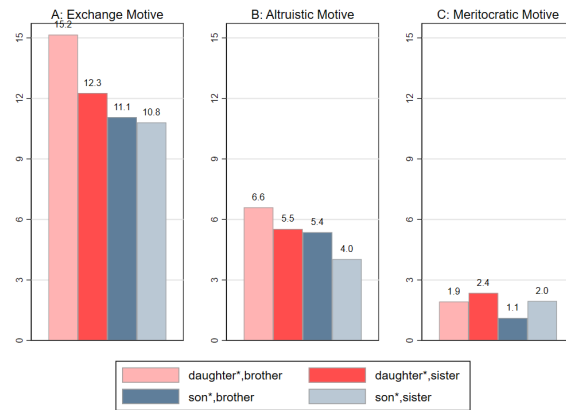
(a) Male respondents



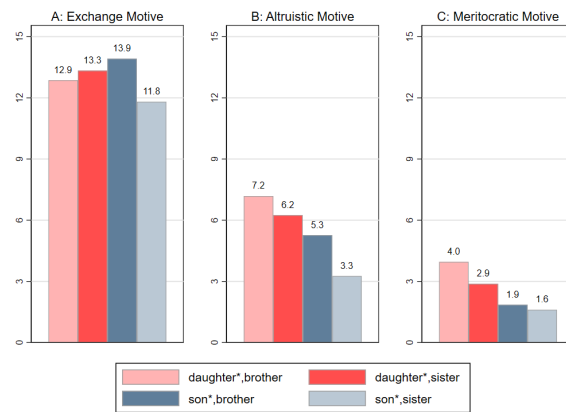
(b) Female respondents

*Notes:* The bar graphs report the share of unequal bequest division among the respondents of the vignette experiment in each scenario: doing more care duties (exchange motive), economically worse off (altruistic motive), and asserts more effort at work (meritocratic motive). Each bar reports the results for a given gender composition of children where the son or the daughter is portrayed as the more deserving child than their sibling (denoted with \*).

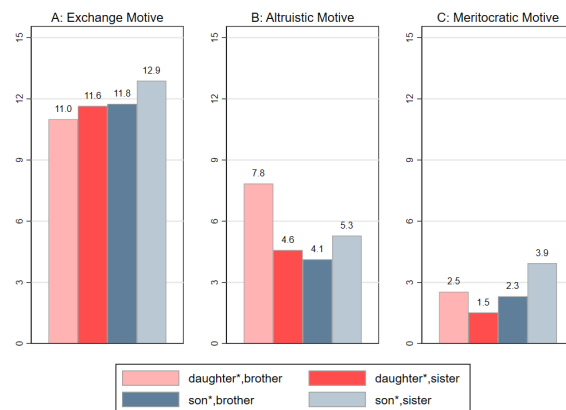
Figure D.3: Additional bequest share allocated to deserving child by age of respondents



(a) Ages under 40



(b) Ages 40-50



(c) Ages over 50

*Notes:* The bar graphs report the share of unequal bequest division among the respondents of the vignette experiment in each scenario: doing more care duties (exchange motive), economically worse off (altruistic motive), and asserts more effort at work (meritocratic motive). Each bar reports the results for a given gender composition of children where the son or the daughter is portrayed as the more deserving child than their sibling (denoted with \*).

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**Pierre Wunsch**  
Governor of the National Bank of Belgium

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