The (Un)Importance of Inheritance[1]

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Abstract

Transfers from parents—either in the form of gifts or inheritances—have received much attention as a source of inequality. This paper uses a 19-year panel of administrative data for the population of Norway to examine the share of the Total Inflows available to an individual (defined as the capitalized sum of net labor income, government transfers, and gifts and inheritances received over the period) accounted for by capitalized gifts and inheritances. Perhaps surprisingly, we find that gifts and inheritances represent a small share of Total Inflows; this is true across the distribution of Total Inflows, as well as at all levels of net wealth at a point in time. Gifts and inheritances are only an important source of income flows among those who have very wealthy parents. Additionally, gifts and inheritances have very little effect on the distribution of Total Inflows – when we do a counterfactual Total Inflows distribution with zero gifts and inheritances, it is not much different from the actual distribution. Our findings suggest that inheritance taxes may do little to mitigate the extreme wealth inequality in society.

1. Introduction

There have been recent dramatic increases in wealth inequality in the United States and other countries-- the richest 1% in the US owned about 20% of the country's wealth in 1980, while today they own about 35%--and many fear that these inequities will persist into future generations.[2] Underlying this fear is the belief that the richest 1% will directly transmit their wealth to their heirs, who will then become the richest 1% of the next generation, thereby eliminating any hope of a functioning meritocratic society.[3] This paper aims at understanding whether this fear is well founded by examining where individuals get their resources: Do the richest echelon of society get their money mostly from inheritances and gifts, or do their resources predominantly come from work, without inheritances or inter-vivos gifts?

There is extensive work examining the distribution of inheritances and the ratio of inheritances received relative to wealth. Surprisingly, however, due to the paucity of high-quality panel data on inheritances, gifts, and labor income over extended periods of time, we know relatively little about what proportion of total resources come from inheritances and how this varies across individuals. This paper fills this void; using high-quality administrative data, we evaluate the importance of gifts and inheritances relative to labor income and government transfers across the lifetime for individuals throughout the income and wealth distribution.

To date, the literature has taken several approaches to analyze the importance of inheritances. One approach is to estimate the ratio of total aggregate national inheritances and gifts received to national income or aggregate lifetime resources (Piketty, 2011). This aggregate approach provides interesting comparisons across time and space but does not enable an assessment of how these patterns vary across the wealth and income distributions.[4]

Another approach uses microdata to examine the distribution of inheritances using information on inheritances relative to some measure of income or wealth. Piketty *et al.* (2014) use data from Paris records on every decedent who left an estate between 1872 and 1927 to

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calculate the ratio of capitalized inheritances to wealth at death, taking advantage of individual-level data to analyze how this ratio varies along the wealth distribution. They find that the ratio of total inheritance and gifts to wealth at death in this sample ranges from over 40% for the middle class to 70% for the middle rich and over 80% for the very rich.[5] However, a key limitation of this approach is that it overstates the importance of inheritances relative to other sources of wealth, which are not treated symmetrically. Because the denominator only includes the wealth that remains after consumption, inheritances will always tend to be a larger proportion of net wealth than of total lifetime resources. In a similar vein, other work uses U.S. survey data to calculate counterfactual measures of wealth inequality by reallocating capitalized measures of inheritances and gifts so that they are equally distributed across the population (Feiveson and Sabelhaus, 2018). Once again, this approach does not treat inheritances symmetrically to other sources of income.[6] When assessing the relative importance of inheritances and gifts, it seems more appropriate to compare inheritances and gifts to other sources of income (labor earnings and government transfers), abstracting from consumption and spending behavior. Because we merge administrative information on gifts and inheritances to individual earnings records, we can evaluate the relative importance of inheritances and gifts to other inflows and consider how this varies across individuals.[7]

There is also work that examines inheritances as a share of income. In contemporaneous work, Bauluz and Meyer (2021) use U.S. data from the U.S. Survey of Consumer Finances (SCF) to show that inheritances account for a small proportion of annual income. However, a limitation of this work is that, due to the unreliability of the self-reported information on gifts and inheritances in the SCF, they impute inheritances using the mortality multiplier approach, which involves computing the expected flow of inheritance based on each individual's

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[5] In related work using estate tax records, Acciari and Morelli (2020) find a concentration of bequests in Italy that is highly skewed towards those at the top of the wealth distribution.

[6] Because of the asymmetry in treatment of inheritances relative to other sources of income, this method can generate cases where wealth is lower than total gifts and inheritances received. In addition, conclusions are sensitive to assumptions about the interest rate used to capitalize inheritances received.

[7] There are several studies using Scandinavian register data that have used event-study designs to explore the effects of inheritances on wealth inequality. Using Swedish data, Nekoei and Seim (2019) find that inheritances reduce wealth inequality in the short run, but not in the long run (as poorer people are more likely to spend the inheritance). Druedahl and Martinello (2020) reach a similar conclusion using Danish data. In contrast, using Danish and Swedish data respectively, Boserup *et al.* (2016) and Elinder *et al.* (2018) show some evidence that bequests reduce wealth inequality even in the long run. However, these studies do not compare the importance of gifts and bequests to other inflows received; instead, their findings are largely determined by the amount of inequality in inheritances relative to the inequality in pre-inheritance wealth.

probability of dying in a given year. Unlike us, they do not focus on heterogeneity in the importance of inheritances across the population.[8]

We contribute to the literature by using register data that provide accurate measures of gifts and inheritances (GI) and other income sources at the individual level over a 19-year period for the entire population of Norway from 1995 to 2013. This allows us to see how the importance of gifts and inheritances relative to other income sources varies by age, by income, by wealth, and by parental wealth. We define Total Inflows as the capitalized sum of net labor income, government transfers, and gifts and inheritances received over the period. Importantly, we also study how the distribution of Total Inflows is influenced by variation in gifts and inheritances and, as a result, assess the role of gifts and inheritances in increasing inequality.

We find that gifts and inheritances constitute a small overall proportion of Total Inflows (about 2% to 5% depending on age); their contribution is dominated by that of labor income and government transfers. Gifts and inheritances are a somewhat larger share of Total Inflows for people who are in the top 1% of Total Inflows or net wealth, with ratios of gifts and inheritances to Total Inflows (GI ratios) of 6% to 10%, respectively. This suggests that inheritances and gifts are not the primary source of wealth, even among the very wealthy. In addition, the GI ratio is low on average at all points in the distribution of labor income, suggesting that labor income and inheritances are not substitutes. However, gifts and inheritances *do* constitute a large proportion of resources for a small number of people who have wealthy parents; the GI ratio is approximately 40% for individuals whose parents are in the top 0.1% of the net wealth distribution in 1994.

In terms of variation over the lifecycle, we find that, typically, gifts and inheritances arrive relatively late in life, peaking when people are in their 50s. Income from work is, therefore, particularly important for younger people. One exception is that we document a tendency for children from the wealthiest families to receive gifts and inheritances disproportionately at younger ages.

Importantly, gifts and inheritances have very little effect on the distribution of Total Inflows – when we remove actual gifts and inheritances, the distribution of Total Inflows is quite similar. Given that inheritances have little effect on the distribution of total lifetime resources or on summary inequality measures, policies relying on inheritance taxes to improve inequality are unlikely to be effective.

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[8] Feiveson and Sabelhaus (2019) also use the SCF to estimate changes in wealth accumulation by age, examining variation in savings rates, interfamily transfers, and capital gains. They show that amounts of inheritances and gifts received are generally quite small.

2. Data and Descriptive Statistics

We use several Norwegian administrative registers to construct our dataset. We begin with the population register, which includes demographics and detailed family information. We combine the population register with information from tax records--available from 1993 onwards--to construct various sources of income and wealth.[9]

For income and wealth, most reporting is by third parties--employers report employee earnings to the tax authorities, and bank and financial intermediaries report assets such as savings, stock values, and bonds--so usual measurement issues in survey data are greatly reduced.[10] Notably, the dataset encompasses the population of Norway, and there is no top coding. Because wealth is highly concentrated at the top, this is an important feature of our data. Another advantage of the Norwegian data is that our wealth measure includes private business wealth that entrepreneurs report to the tax authorities as the assessed value of their shares in a private business.[11]

Tax records on gifts and inheritances are only available from 1995 to 2013, so this period is the focus of our analysis. Our measures of Total Income flows over the 1995-2013 period are constructed from the following components:

Net Labor Income (L)

Net Labor Income (L) is gross labor income (from employment and self-employment) less taxes and deductions. The Norwegian registry data contain information on gross labor income and total income taxes paid during the calendar year. We use this information to distinguish between taxes paid on capital income and taxes paid on labor income and transfers, thereby

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[9] Norway has a wealth tax that is assessed annually and is based on net wealth including financial assets, housing wealth, cars, and bank deposits. Net wealth exceeding an exemption threshold is taxed at a flat rate of around 1% during our sample period. The exemption threshold has been increasing over time and was around NOK 1.5 million for a married couple (and half that for a single person) at the end of our sample period. Municipalities in Norway are also entitled to impose a tax on real estate property located in their jurisdiction. The tax is levied at the assessed value of the property, which is about 20% to 50% of the property's market value. Property tax rates range from 0.2% to 0.7%, depending on the municipality.

[10] One potential problem is wealth held in tax havens abroad and unreported to the Norwegian tax authorities (Alstadsæter *et al.*, 2019). Very few people hold wealth abroad, and a Norwegian tax amnesty in the early 2000s for holdings of assets abroad revealed that such behavior was concentrated among the very wealthy. Of those who disclosed holdings, half were among the 400 wealthiest, and very few hold wealth abroad (Zucman 2015).

[11] Unlike listed shares, which are more transparent, owners have incentive to under-report these shares to avoid taxes. However, the tax authorities have control routines to identify and check firms that may be underreporting. Importantly, Fagereng *et al.* (2019) examined whether reported values correspond to the book value of the firms, and found that they are highly correlated, with a correlation of 0.88. Firms with sales above 5 million NOK have to have a professional auditing firm audit their balance sheets.

imputing taxes paid on labor income.[12] To calculate Net Labor Income (L), we subtract taxes paid on labor income from gross labor income.

Net Transfer Income (G)

Net Transfer Income (G) is income from government transfers net of any taxes. We have separate information on taxable and non-taxable transfer income.[13] As described above, we estimate the amount of taxes paid on taxable transfers and subtract this amount from the sum of taxable and tax-free government transfers to define government transfers net of taxes.

Inheritances and Gifts Net of Taxes (I)

Prior to January 2014, both inheritances and gifts were subject to taxation in Norway and had to be reported to the tax authorities. Taxes were paid by the recipients on amounts received at inheritance and on all gifts received from living donors, and the tax rates varied depending on the relationship of the donor to the recipient. Transfers to spouses were exempt from this tax.[14]

Information on inheritances and gifts (I) is taken from administrative registers and is available from 1995 to 2013. For these years, we know whether individuals received inheritances or gifts as well as the amounts received. We also know the taxes they paid, when they received the inheritances or gifts, and who the giver was. We use the information on gross inheritances and gifts received and information on taxes paid to calculate the total amount of gifts and inheritances received, net of taxes. Inheritances are reported even if they are below

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[12] We do so by using the fact that there is a flat tax rate on capital income. To do this, we pull together all sources of taxable capital income (interest received from banks, dividends, net gains from the sale of assets, and other capital income) and we impute capital taxes by multiplying this sum by the flat tax rate. We then subtract total taxes paid on capital income and property taxes from total taxes paid by the individual to get a measure of taxes paid on labor income and on taxable transfers and then allocate the residual tax amount proportionately between labor income and taxable transfers. This approach is reasonable, as labor earnings and taxable transfers are treated the same way by the tax system.

[13] Taxable transfer income includes pensions (including old age, disability, and service pensions), unemployment benefits and sickness benefits. Non-taxable transfer income includes housing support, social assistance, scholarships, and child support benefits. Like other European countries, Norway has a strong welfare state that may mitigate the perceived need to accumulate wealth. Public primary, secondary, and post-secondary education are free, and university students are provided with government stipends and loans. When they retire, Norwegians typically receive pensions from a variety of sources. Each Norwegian is entitled to a basic pension that depends on years of residence in Norway but not on earnings history; there is an additional pension that depends on the number of years worked and the amount earned. Public sector workers also have occupational pensions, as do many workers in the private sector. Individual private pensions, akin to individual IRAs in the U.S., are not widely used and constitute a very small proportion of retirement wealth (Fagereng *et al.*, 2020).

[14] For the closest relatives (parents and children), the 2013 tax rate was 0% for the first 470,000 NOK, 6% from 470,000 NOK to 800,000 NOK and 10% for 800,000 NOK and above. For other relatives, the rates were 0%, 8% and 15%, respectively. The exemption thresholds refer to the total amount transferred even if it is transferred over many years. The tax rates and exemption thresholds have varied over the 1994-2013 period.

the tax thresholds.[15] Also, with minor exceptions, all gifts are reported and taxed. Both donor and recipient are legally required to report all gifts above a very low threshold.[16] About 55% of total gifts and inheritances come from inheritances and about 45% come from inter-vivos gifts, suggesting that people are in fact reporting gifts. In Section 4, we provide evidence that our inheritance and gifts data are of high quality and report several robustness checks for measurement error.

Calculation of Total Inflows

Ideally, we would observe individual income sources over the entire lifecycle. Instead, we have this information for a population panel over a 19-year period. Therefore, we report results for a range of ages, tracking each age over the previous 19-year period to calculate the proportion of Total Inflows that results from various sources—labor income, government transfers, and gifts and inheritances. An advantage of having panel data from 1995 to 2013 is that we can observe the entire distribution of income sources over the full 19-year period. This allows us to identify the importance of inheritance at all points in the distribution of Total Inflows.

Similar to Piketty (2014), we consider just the primary sources of income—net labor income, government transfers, and gifts and inheritances—and cumulate these over time, allowing them to grow at a specified interest rate. We capitalize using a yearly average interest rate calculated by dividing the sum of capital gains on real and financial assets and total capital income by total net wealth at the end of the previous year for the whole population of Norwegian residents; however, the conclusions are insensitive to the exact method of capitalization.[17]

We define Total Inflows as the cumulative sum of inflows from labor income, government transfer income, and gifts and inheritances, all capitalized to 2013:

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[15] Inheritance above 100,000 NOK are taxed during the tax periods 1993-1998, above 200,000 NOK during 1999-2002, 250,000 NOK for 2003-2008, and inheritance above 470,000 NOK are taxed during the tax periods 2009-2014. If a person receives two separate gifts from their parent, the tax paid depends on the total amount of the two gifts rather than on the amount of each individual gift. This is true even if the gifts are given in different years.

[16] Until January 1st, 2008, the exceptions were small gifts for birthdays, Christmas etc. From 2008 this rule changed to require reporting of gifts of above 30,000 NOK per annum (Inheritance law §4). In addition, for administrative reasons, gifts or inheritance amounts below 5000 NOK were not digitized.

[17] While we use the same interest rate for all individuals in our main specifications, we have experimented with allowing the rate of return to be higher for persons with greater resources, consistent with the findings in the literature (Fagereng *et al*., 2020). This has no effect on our conclusions.

$$Total\ Inflows_i = \sum_{t=1995}^{2012} L_{i,t} \times \prod_{k=t+1}^{2013} (1 + r_{i,k}) + L_{i,2013} + \sum_{t=1995}^{2012} G_{i,t} \times \prod_{k=t+1}^{2013} (1 + r_{i,k}) + G_{i,2013}$$

$$+ \sum_{t=1995}^{2012} I_{i,t} \times \prod_{k=t+1}^{2013} (1 + r_{i,k}) + I_{i,2013}$$

We begin our analysis when individuals are aged 21 in 1994. Prior to age 21, it is difficult to distinguish what should be counted as "gifts or inheritances" from standard investments parents make in their children while raising the child.[18] In addition, as noted below, very few individuals receive gifts or inheritances before age 21.

Sample and Descriptive Statistics

Our sample is a balanced panel of all individuals born between 1928 and 1993 and registered as Norwegian residents in each year between 1994 and 2013. We restrict our analysis to persons aged 21 to 66 in 1994 and 40 to 85 in 2013.

Table 1 shows descriptive statistics for our sample. Half the sample is female and 28% have a higher education degree. Particularly relevant to inheritances, 31% had their last surviving parent die within the 1995-2013 period that we study, while only 9% experienced the death of their last surviving parent prior to 1995.[19]

Table 2 shows how these characteristics differ according to the level of gifts and inheritances received by showing sample means by percentiles of the inheritance/gift distribution (calculated by age), where inheritances and gifts are the capitalized sum of the gifts and inheritances received in the 1995-2013 period for each individual in 2013. While age and gender are quite similar across the distribution, people with high gifts/inheritances are more likely to have a higher education degree, tend to have fewer siblings, and have parents with more wealth in 1994. Not surprisingly, they are also more likely to have experienced the death of the last surviving parent during the 1995-2013 period.[20] Interestingly, the other sources of inflows--labor income and government transfers--are relatively stable across the distribution.

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[18] Note that we do not include returns to initial wealth in 1994 in our definition of Total Inflows, as this wealth may have been accumulated using inflows from any of the income sources, so it is difficult to allocate the returns. In practice, given we track people from age 21 and individuals who are aged 21 in 1994 have very little net wealth (in 2020$, the mean is about $2,700, and the median is $130), this is not likely to be an important issue.

[19] To compute these proportions, we exclude individuals with missing parental information, which is about 25% of our sample.

[20] Appendix Figure A1 shows the fraction of individuals between 1995 and 2013 who receive gifts or inheritances at each age. What we see is that gifts and inheritances peak around age 55 with a distribution around that age. Overall, about 29% of individuals receive a gift or inheritance during the 1995-2013 period.

3. The Ratio of Gifts and Inheritances to Total Inflows

To understand the role of inheritances, we first examine the ratio of inheritances and gifts to Total Inflows throughout the lifetime.[21] As discussed earlier, once income is received, individuals have a variety of options as to how to use the money—they can consume, invest, or hold. Because of this, considering inheritance as a ratio of net wealth will reflect not only the importance of inheritance, but also consumption and investment behavior. By considering inheritance as a fraction of Total Inflows, we can distinguish the importance of inheritance abstracting from other spending and investment decisions.

We begin by calculating the ratio of capitalized gifts and inheritances received between 1995 and 2013 divided by the Total Inflows (capitalized) received over the same time period, by age in 2013. We start at age 21 in 1994, so people are aged 40 and over in 2013; the distribution of this ratio is presented in Figure 1. Henceforth, we refer to this as the GI (gifts and inheritance-to-income) ratio.[22]

When looking at the mean, we see that gifts and inheritances account for, on average, less than 5% of Total Inflows across all ages. While the literature has placed a lot of emphasis on the importance of gifts and inheritances, they are simply not a significant source of lifetime resources for most people. This is particularly true over the early lifecycle, when people are in their 20s, 30s, and 40s. Given these are years where resources may be especially important for family formation and investments in children, it is striking that gifts and inheritances account for only about 3% of Total Inflows on average during these years.

The average GI ratio is slightly higher for those aged between 60 and 70 in 2013 (who are most likely to have received inheritances over the previous 19 years) than for those younger or older. However, the lack of a more significant increase in the GI ratio reflects the fact that, while inheritances are most commonly received when aged 40-60, this is also a part of the lifecycle in which other sources of income tend to be high.

Despite the GI being relatively unimportant on average, there are many people for whom gifts and inheritances constitute an important source of income. This can be seen by looking at the other percentiles of the GI ratio in Figure 1; the 90th percentile of the GI ratio is

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[21] As noted above, we would ideally observe gifts, inheritance, and other income sources over the entire life cycle and calculate the ratio at different ages. Instead, we have this information for a population panel over a 19-year period.

[22] In most of our analyses, we calculate this ratio for each cell (in our main results a cell includes all individuals who are the same age and belong to the same selected percentiles of Total Inflows, total capitalized gifts and inheritance, total capitalized earnings, or net wealth in 2013) by dividing the sum of total gifts and inheritances for all cell members by the sum of Total Inflows for all cell members. However, when we study the percentiles of the GI ratio, we necessarily calculate the GI ratio by individual.

about 0.1 over much of the lifecycle, the 99th percentile is about one third, and the 99.9th percentile is about two thirds.[23]

By Level of Gifts and Inheritance

While the ratio is informative, a large GI ratio could be driven by large inheritances or small Total Inflows. To disentangle this, we next examine the GI ratio by selected percentiles of the inheritance and gifts distribution. (See Figure 2.) Unsurprisingly, those in the top have high GI ratios; individuals in the top 1% of inheritances and gifts have a GI ratio of 0.3 and those in the top 0.1% have a GI ratio of about 0.6. Thus, there is a relatively small group of people who receive large inheritances that constitute a sizeable proportion of their Total Inflows over the period. It is also interesting to note that the GI ratio is relatively constant across ages.

By Total Inflows and Labor Income

From another perspective, it is useful to consider whether the individuals with the most resources also have a higher proportion of their resources coming from gifts and inheritances, which is what we might worry about if we are concerned about the persistence of wealth inequality across generations. In particular, it is plausible that individuals with higher Total Inflows also receive a higher proportion of their Total Inflows from gifts and inheritances. Figure 3 shows average GI ratios by percentile of Total Inflows. The GI ratio does not vary much by percentile of Total Inflows, except for the top 0.1% of the Total Inflows distribution where the ratio is about 0.1 and is particularly large for younger persons (the percentile ranking is calculated by age).

However, this larger effect at the very top of the distribution may be mechanical – some people have very high Total Inflows simply because they received a large inheritance or gift.[24] Another way to examine the importance of inheritances is to look by position in the distribution of labor income. Recent work by Piketty (2014) suggests a shift in recent decades among the very wealthy, with inheritances and gifts being a complement for labor income instead of a

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[23] When we examine the characteristics of individuals with very high GI ratios, we find that they tend to have low labor income and high levels of gifts and inheritances, high parental net wealth in 1994, and are more likely to be female.

[24] This issue arises because we see only 19 years rather than the full lifecycle. Someone who receives a large inheritance in 2013 will have higher Total Inflows compared to an equivalent person who received the inheritance before or after our 1995-2013 period.

substitute as had been the case in earlier periods. Interestingly, when we examine the GI ratio by percentile of cumulative labor income, we see little variation (Figure 4).

By Net Wealth in 2013

It is widely perceived that the wealthy receive a large share of their resources from gifts and inheritances, but is that actually the case? Here we examine how the proportion of Total Inflows that comes from inheritances and gifts varies over the 2013 net wealth distribution. Figure 5 shows that people who were wealthier in 2013 received a higher proportion of their Total Inflows from gifts and inheritances; once again, however, the differences are not large except at the very top--even the top 1% of the wealth distribution receive less than 10% of Total Inflows from gifts and inheritances. However, it is notable that the top 0.1% of the wealth distribution have a GI ratio of about 0.2, suggesting a higher GI ratio is a feature of the very top of the wealth distribution.[25]

There is also substantial variation by age for the very wealthy—this is likely because large gifts and inheritances are making them wealthy at younger ages (when they have had less time to accumulate resources through labor income). Among individuals outside the top 1% of the wealth distribution, we see a different pattern, with a slight rise in the GI ratio in midlife (when most people receive inheritances from their parents).

While even the very wealthy do not receive a very large proportion of their Total Inflows from gifts and inheritances, this does not imply that they do not receive large sums from these sources. Indeed, the average value of capitalized gifts and inheritances ranges between about 2,000,000 NOK and about 12,000,000 NOK for the top 0.1% by net wealth when we look across the age distribution (Appendix Figure A2).

By Parental Net Wealth

While gifts and inheritances do not constitute a large proportion of Total Inflows even for people with high Total Inflows or high net wealth, we might expect these factors to be particularly important for people who come from wealthy families. We next study how the ratio varies by parental net wealth in 1994. We include only those individuals for whom we

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[25] As mentioned earlier, these analyses may exaggerate differences in the effect of inheritances/gifts for the rich compared to the poor as people will tend to have higher net wealth if they received an inheritance during the period rather than just before or after it. For example, someone who receives an inheritance in 2014 will appear poorer than someone who received one in 2013.

observe parental wealth in 1994; as a result, we exclude individuals whose parents had both died prior to that time.[26]

Figure 6 presents the GI ratio when we break the sample by parents' net wealth in 1994. We see that the GI ratio is high (0.15 to 0.4) for individuals whose parents had high wealth in 1994.[27] Unlike the rest of the distribution, the top 0.1% appear to have higher GI ratios at younger ages.[28] This may reflect the greater role of inter-vivos gifts for children of very wealthy parents combined with the limited capacity to accumulate labor inflows at young ages. The findings here are consistent with gifts and inheritances being of little importance to lifetime resources for most people but being of much greater relevance to a relatively small proportion who come from very wealthy families. The findings provide an interesting contrast with those we saw across the net wealth distribution (Figure 5). It appears that people who are wealthy generate lifetime Total Inflows primarily from sources other than gifts and inheritances; however, a large proportion of people with wealthy parents receive a substantial share of their resources from gifts and inheritances.

Effect of Gifts and Inheritances on the Distribution of Total Inflows

We have seen that gifts and inheritances are a very small proportion of Total Inflows for most people but are important for some, particularly those with wealthy parents. A natural question is the extent to which variation in inheritance and gift receipt increases overall inequality. There is no obvious way to answer this question for net wealth in 2013 but we can address it for Total Inflows over the 1995-2013 period by evaluating how the distribution of Total Inflows would change if no individual had received an inheritance or gift. Figure 7 shows the full distribution of actual Total Inflows (in purple) pooled over all ages (40-85 in 2013) overlaid with what the distribution would look like under the counterfactual that all individuals received no gifts or inheritances (in yellow).[29]

Consistent with our earlier findings, we see that gifts and inheritances have little impact on the distribution of Total Inflows – the actual and counterfactual distributions are very

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[26] There are some limitations to our net wealth measure; see further discussion in Black *et al.* (2021) and Fagereng *et al.* (2021).

[27] Given measurement error in 1994 wealth, these numbers likely understate the importance of gifts and inheritances for people who are from wealthy families.

[28] Appendix Figure A3 further shows that the GI ratios are even higher when we restrict our analysis to individuals who experienced the death of the last surviving parent during the 1995-2013 period; and Appendix Figure A4 shows that children of wealthy parents received larger sums as gifts and inheritances.

[29] Additionally, to make the pictures tractable, we winsorize the top 1% and bottom 0.1%, where these quantiles are defined based on Total Inflows rather than on counterfactual inflows.

similar. When we look at summary measures, we find that the Gini Coefficient is almost the same for both distributions (0.227 versus 0.226) and the rank correlation between the two distributions is almost 1 (0.98). Clearly, when all age groups are pooled, gifts and inheritances have a very small impact on inequality of Total Inflows.

We can get a sense of whether this finding varies by age by plotting the Gini coefficients by age and also plotting counterfactual Gini coefficients where (a) all persons receive no gifts or inheritances and (b) all persons receive the same (median) labor income.[30] (See Figure 8.) As we found in Figure 7, the Gini Coefficient is unaffected at any age by taking out inheritances and gifts; the lines are right on top of each other. In contrast, equalizing labor income leads to a huge reduction in the Gini Coefficient at all ages.

4. Robustness Checks

Mismeasurement of Gifts and Inheritances

A major threat to our conclusions is the possibility that we are seriously underestimating gifts and inheritances received as some individuals may try to evade taxes by not reporting inheritances and gifts to the tax authorities. There is likely some under-reporting; the question is whether the order of magnitude is large.

We start by considering inheritances. Inheritances are reported even if they are below the tax thresholds, and the wealth of the deceased is automatically assessed and recorded. While bequests may be undervalued, we believe there is limited scope for this, as the legal requirement is that all goods are reported at market value and expert valuations are required for non-cash items such as houses.[31] Overall, we believe it unlikely that there is significant under-reporting of inheritances in our data.

There is clearly more scope for non-reporting of gifts. However, both donor and recipient are legally required to report all gifts above the very low threshold. Until January 1, 2008, the exceptions were small gifts for birthdays, holidays, etc.; from that point on, individuals were required to report gifts of above NOK 30,000 per annum (Inheritance law §4).[32] As a result, if all people were legally compliant, we will observe annual gifts above NOK

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[30] We assign each individual the median value of capitalized labor income (which equals NOK10,500,000) rather than a value of zero to enable us to focus on the variation (as distinct from the location) of the distribution. Note that the median value of inheritances and gifts in our sample is equal to zero, so taking out individuals' capitalized inheritances and gifts is similar to equalizing this component across individuals to its median value.

[31] One exception is that non-listed stocks are reported at 30 percent of the market value. Non-listed stocks, however, constitute a very small percentage of gifts and inheritances (Thoresen, Fredriksen, and Pedersen, 2001).

[32] In addition, for administrative reasons, gifts or inheritance amounts below NOK 5000 were not digitized.

5000 up to 2007 and annual gifts above NOK 30,000 from 2008 to 2013. While some individuals may evade taxes by not reporting gifts to the tax authorities, we believe this is uncommon. The access of the tax authorities to bank account balances and details about other financial holdings for the purposes of the wealth tax makes it harder to successfully evade gift taxation. In addition, given that the tax rates are relatively low and non-reporting is illegal, the incentives to report are reasonably strong.

To examine the quality of our data on gifts and inheritances, we first assume wealth is well-reported and check the consistency of inheritances and gifts with wealth. Then, to deal with the possibility that wealth is under-reported, we match wealth, gifts, and inheritances to the national accounts.

Matching Gifts and Inheritance to Wealth

First, to evaluate whether underreporting of inheritances is likely to be a serious issue, we compare the wealth of the last surviving parent in the year before their death to bequests following their death and find that they match up very well (Figure 9).[33] On average, net wealth measured a year before death is calculated as 667,399 NOK while average inheritances equal 880,713 NOK.

To further evaluate whether underreporting of gifts and inheritances is likely to be a serious issue, we have plotted gross and net wealth growth around the timing of each individual's first inheritance or gift for all individuals in our sample who received their first observed inheritance or gift between 2001 and 2008 (Figure 10).[34] The year the gift or inheritance is received is denoted as time 0. We see that the average observed increases in net or gross wealth are very close to the average net inheritance or gift received, suggesting a very limited role for mismeasurement. Overall, we conclude that our data on gifts and inheritances are unlikely to suffer from serious error.

Matching to Aggregates from the National Accounts

We have seen that our inheritance amounts line up well with net wealth prior to death. However, due to legal tax exemptions and underreporting, our measure of net wealth may be

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[33] When making this comparison, the sample includes all individuals who died in Norway between 1995 and 2013 who did not have a living spouse at time of death and who left an inheritance. These individuals are not necessarily the parents of individuals in our sample.

[34] There are many complications in calculating wealth (particularly relating to valuing real assets). Therefore, there is likely to be substantial measurement error in the measures of net or gross wealth. However, this is unlikely to be a major problem when comparing wealth in adjacent years and averaging over many people.

underestimated. To account for this potential mismeasurement, as a robustness check, we adjust our measures to match aggregates from the National Accounts. To do so, we consider each of five components of individual net wealth (housing, other real assets, deposits, other financial wealth, and debt) and adjust them by year-specific ratios so that the aggregate value of each component matches aggregate series taken from the World Inequality Database (WID).[35]

We then use a similar procedure to account for possible underreporting of inheritances and gifts: for each year, we compute the total value of inheritances as recorded in our data, and the total net wealth of the deceased (after removing negative values and after adjusting wealth components to the World Inequality Database), excluding those with a living spouse at time of death. Then, we adjust inheritances so that the aggregate inheritances match aggregate wealth of the deceased in each year. We also adjust the value of gifts using the same yearly ratio. Because under-reporting is likely to be a bigger issue for gifts than for inheritances, this will not fully correct the problem, but it should get us close. The ratio required to match aggregate inheritances to adjusted aggregate wealth varies from a low of 1.19 in 2005 to 1.72 in 1996 (on average it equals 1.38).

Figure 11 shows the adjusted average GI ratio by age in 2013. The adjustment increases the ratio at age 60 from about 0.05 to 0.06 and also increases the ratio at other ages by about 0.01.[36] This is a non-negligible increase but does not change our basic conclusion that gifts and inheritances are a very small component of Total Inflows.[37] [38]

5. Generalizability and International Comparability

Our results are based on data on the population of Norway; a key issue is whether our findings are informative about other places. While all countries are different and Norway has

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[35] Our aggregate values of each component of wealth (housing, other real assets, deposits, other financial wealth, and debt) perfectly match aggregate household property accounts available through Statistics Norway from 2010 onward (https://www.ssb.no/en/statbank/table/10315/). WID aggregate values of each component of wealth tend to be higher than aggregate household property accounts of Statistics Norway, and they are available for a longer period. This is why we use this source of data to adjust our components and provide evidence that our results are robust to potential underreporting.

[36] Appendix Figure A5 shows variations in the adjusted GI ratio by percentiles of the Total Inflows distribution. This figure shows that adjustments for potential underreporting increase the GI ratio by a maximum of 0.1 for the highest percentiles.

[37] Note that labor incomes may also be underestimated due to underreporting of self-employment labor earnings for tax purposes.

[38] Appendix Figure A6 shows that our results are also robust to using gross rather than net inheritances and gifts; and Appendix Figure A7 shows that our results are not sensitive to allowing the rate of return used to capitalize the different components of Total Inflows vary across the wealth distribution. There is evidence of assortative matching by parental wealth (See Charles, Hurst, and Killewald, 2013); however, our findings are also robust to the choice of individual versus household level analysis; see Figure 12.

its own peculiarities, in this section we show that, in many relevant respects, Norway has much in common with many other countries.

It is difficult to compare wealth in Norway to other countries, as the administrative wealth tax-based register data from Norway are quite different from the survey data available in most countries. In terms of wealth levels and inequality, Appendix Table A1 shows deciles of the distribution of household net wealth in 2014, calculated for Norway using the register data and for other countries using Household Finance and Consumption Survey (HFCS) survey data. (Unfortunately, Norway is not included in the HFCS.) While Norway looks somewhat different at the very bottom and very top of the distribution—consistent with the fact that our administrative-based measures of net wealth are likely better than the HFCS survey data at the extremes of the distribution—the overall distributions look quite similar across countries.

Other measures of wealth inequality are the Gini coefficients for the household net wealth distribution and the share of total net wealth held by the top wealth holders. Based on the 2014 HFCS data, the Gini coefficients of net wealth for the Euro Area as a whole was 0.69. For Germany and Austria it was 0.76 and 0.73, respectively, and for France and Italy it was 0.68 and 0.60 respectively. Using the register data, the household net wealth Gini was 0.68 in Norway at that time.[39] Similarly, the fraction of wealth held by the top 10% of households was as follows: Euro Area, 42.4%; Germany 59.8%; Austria 55.5%; France 50.7%; and Italy 42.8%.[40] In our Norwegian administrative data, the fraction of wealth held by the top 10% of households was 51.4% in 2014.[41] Although there are issues with comparing register data to survey data, Norway appears to be similar to other European countries in terms of wealth inequality.[42]

The picture is slightly different when we compare Norway to other countries using data based on national accounts. The World Inequality Database, which is based on imputations

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[39] Wolff (2016) calculates the Gini coefficient for the U.S. to be 0.87 in 2013.

[40] Source: HFCS Statistical Tables, Table J4.

[41] The equivalent figure for the US is 78% (Balestra and Tonkin, 2018). See also Roine and Waldenstrøm (2015) for comparisons of wealth inequality across all Nordic countries, France, the UK, and the US.

[42] Despite having a similar distribution of net wealth to other European countries, Norway ranks among the countries with the most compressed distribution of labor income. Based on OECD data, the Gini Coefficient of income was 0.26 in 2018—one of the lowest within the OECD but similar to that in other Nordic countries and some central European countries like the Czech Republic (OECD, 2020). In contrast, the UK Gini Coefficient for income is over 0.3 and that for the US is about 0.4. In terms of home ownership rates, Norway is right at the mean of the Euro Area. In our data, 64.1% of households owned their main residence in 2014. The comparable number in the Euro area in the HFCS was 61.0%. The home ownership rate in 2014 was 44.3% in Germany, 47.7% in Austria, 58.7% in France, and 68.2% in Italy. Additionally, trends in Norway for house price appreciation and returns to risky financial assets were broadly similar over the 1994-2013 period to those in many other European countries (Jordá *et al.*, 2019).

from national accounts, showed average individual private net wealth in 2013 (in €2019) of €101,026 for Norway, €127,357 for Germany, €155,754 for France, €125,871 for Sweden, €91,573 for Finland, and €177,394 for Italy.[43] This suggests that Norway has a relatively low level of private wealth, similar to countries such as Sweden and Finland.

The World Inequality Database also uses national accounts to provide comparable estimates of private wealth to household income ratios across countries. For Norway, the ratio was 5.38 in 2013, similar to Finland (5.11), Germany (6.16), and the U.S. (5.66). However, the Norwegian ratio was lower than the UK (6.84), Denmark (7.59), Sweden (6.85), and especially France (8.15), and Italy (9.39). These ratios imply that the importance of inheritances relative to other income sources is likely to be lower in Norway than, say, in France, and provides a potential explanation for differences between our findings and the French results of Piketty (2014). [44]

As another way to compare Norway to other European countries, we build upon the work in Piketty (2011) and Alvaredo *et al.* (2017) and look at inheritances over national income as an economic flow. To be most comparable to Alvaredo *et al.*'s calculations for France, Germany, and Great Britain, we use aggregate data sources whenever possible and only use the administrative microdata when we do not have aggregate data available. To compute this annual flow, Alvaredo *et al.* use four parameters: the ratio of decedents' wealth to the wealth of the living; the gift to bequest ratio; the mortality rate; and the aggregate private wealth to national income ratio. We compute the first two parameters (the ratio between decedents wealth and the wealth of the living, and the gift to bequest ratio) using our own data; however, we rely on external sources for the other two parameters (the mortality rate, and the aggregate private wealth to national income ratio) to ensure that our final economic inheritance flows are as comparable to that of other countries as possible.[45] The economic inheritance flow series is obtained as the product of these four parameters. Figure 13 plots our economic inheritance flow

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[43] These data include pension wealth and are thus not directly comparable to our data. Using our administrative data, we find that average individual private net wealth in 2013 (in €2019) was €70,044.

[44] In France, the estimates vary greatly across time and by birth cohort -- Piketty (2014) finds that annual inheritance flows account for about 20% of aggregate disposable income on average over his time-period. However, it falls to below 8% in 1980 and is about 12% in 2010 (fig 11.1, p. 380). Also, the French estimates tend to be higher than those from other countries such as the UK.

[45] For the mortality rate, we use information from the Human Mortality Database, and for the aggregate private wealth to national income ratio we use information from the World Income Database. Note that we use the ratio of private wealth over the net secondary income of households instead of the ratio between private wealth and national income, as the national income in Norway is not comparable to that of other countries due to large government revenues from the petroleum industry.

series and compares it to similar series for France, Germany, and Great Britain available in Alvaredo *et al*. (2017).

We find that the economic inheritance flow is broadly similar in Norway to those in these other countries. While this is useful for establishing comparability, there are some important limitations to this measure. In particular, the economic inheritance flow imputations assume that the totality of decedents' wealth become bequests upon death, while, in reality, part of it is taxed and, in many countries (such as in Norway or in the U.S., for example), transfers between spouses upon death are not legally considered as bequests. In this context, the economic inheritance flow systematically overstates the importance of actual inheritances and gifts in Norway compared to national income.

6. Conclusions

We find that while gifts and inheritances constitute a small overall proportion of Total Inflows (about 3% to 6% depending on age); their contribution is dominated by labor income and government transfers. This is true even for those who have high wealth and those with high Total Inflows, although the ratio of gifts and inheritances to Total Inflows (the GI ratio) is larger for people who are in the top 1% of total wealth or income. The GI ratio is low on average at all points in the distribution of labor income. Importantly, our findings do not seem to be driven by mismeasurements of bequests in our data.

Our result that inheritances and gifts are not an important determinant of Total Inflows may appear surprising in view of recent work on the importance of bequests in the intergenerational transmission of wealth (See Adermon *et al.*, 2018; Black *et al.*, 2020; Fagereng *et al.*, 2021).[46] However, while bequests may be a substantial part of the correlation across generations, the intergenerational component itself is only a small part of individual wealth accumulation across the lifecycle. Importantly, while we find that inheritances are not a large component of Total Inflows, we do find that they play a much larger role for children of very wealthy parents. It appears that people who are rich accumulate most of their lifetime Total Inflows from sources other than gifts and inheritances; however, a large proportion of people with very wealthy parents receive substantial inheritances that constitute a significant proportion of Total Inflows.

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[46] Charles and Hurst (2003) provide an early and influential analysis of the intergenerational correlation in wealth. However, since they are using a dataset where parent/children pairs are alive, they cannot analyze the role of inheritance directly.

Importantly, gifts and inheritances have very little effect on the distribution of Total Inflows – the counterfactual Total Inflows distribution with zero gifts and inheritances is not much different from the actual distribution. Our findings therefore suggest that an inheritance tax may do little to mitigate the extreme wealth inequality in society. A qualification, however, is that consumption behavior may differ depending on the source of inflows (See Baker *et al.*, 2007; Di Maggio *et al.*, 2020; Arrondel, *et al.*, 2019) – people may be more likely to consume out of labor income than out of inheritances. Thus, we cannot rule out the possibility that inheritances play a bigger role in the accumulation of wealth than they do in Total Inflows. Despite this caveat, the fact that labor income is a primary driver of inequality in Total Inflows suggests that increasing equality of opportunity beginning in early childhood might play an important role in equalizing the distribution of wealth. Human capital—a key determinant of labor income—may be a critical factor for understanding the large wealth inequalities that exist in the modern world.

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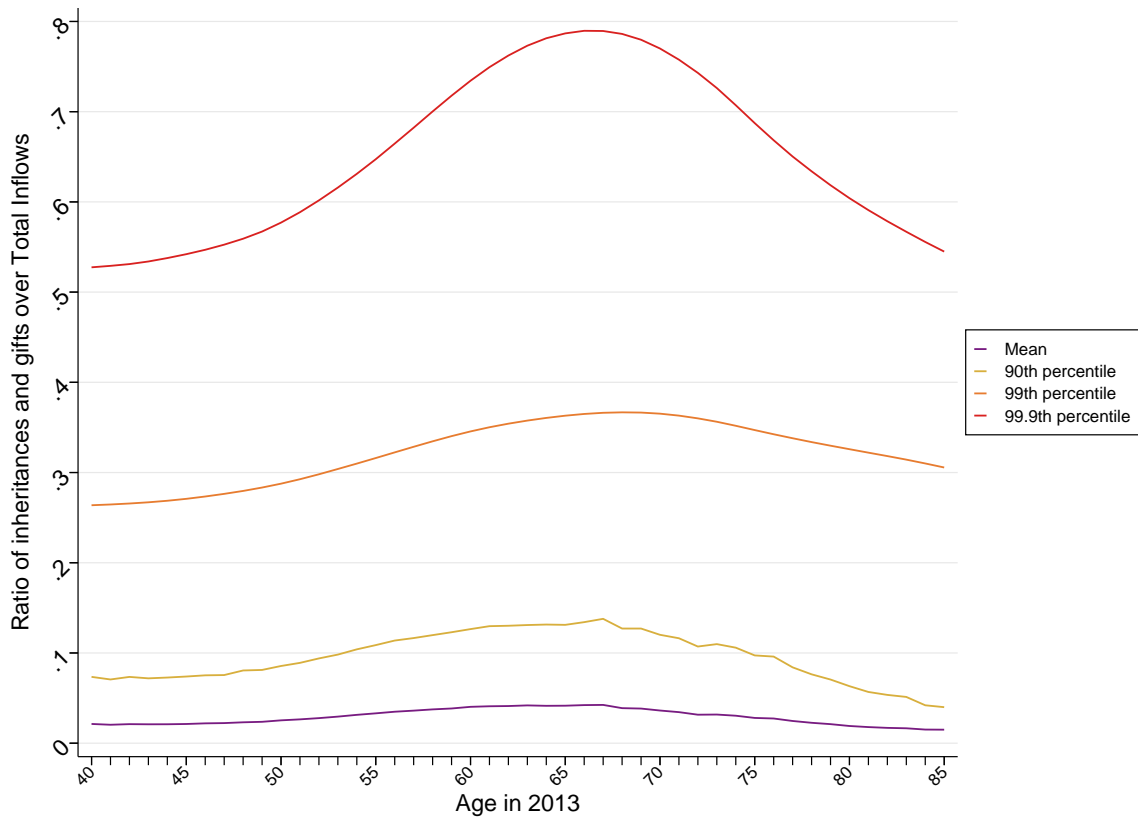Zucman, Gabriel.(2015). *The Hidden Wealth of Nations.* Chicago University Press.

Figure 1 – Average value and distribution of the gifts and inheritance-to-Total Inflows ratio by age

Notes: The figure uses a balanced panel of all individuals born between 1928 and 1973, and registered as Norwegian residents in each year between 1994 and 2013. For each individual, we compute the ratio between total capitalized gifts and inheritances received during 1995-2013, over Total Inflows. The figure shows the average value of this ratio for each age, as well as the value of the 90th percentile, the 99th percentile, and the 99.9[th] percentile.
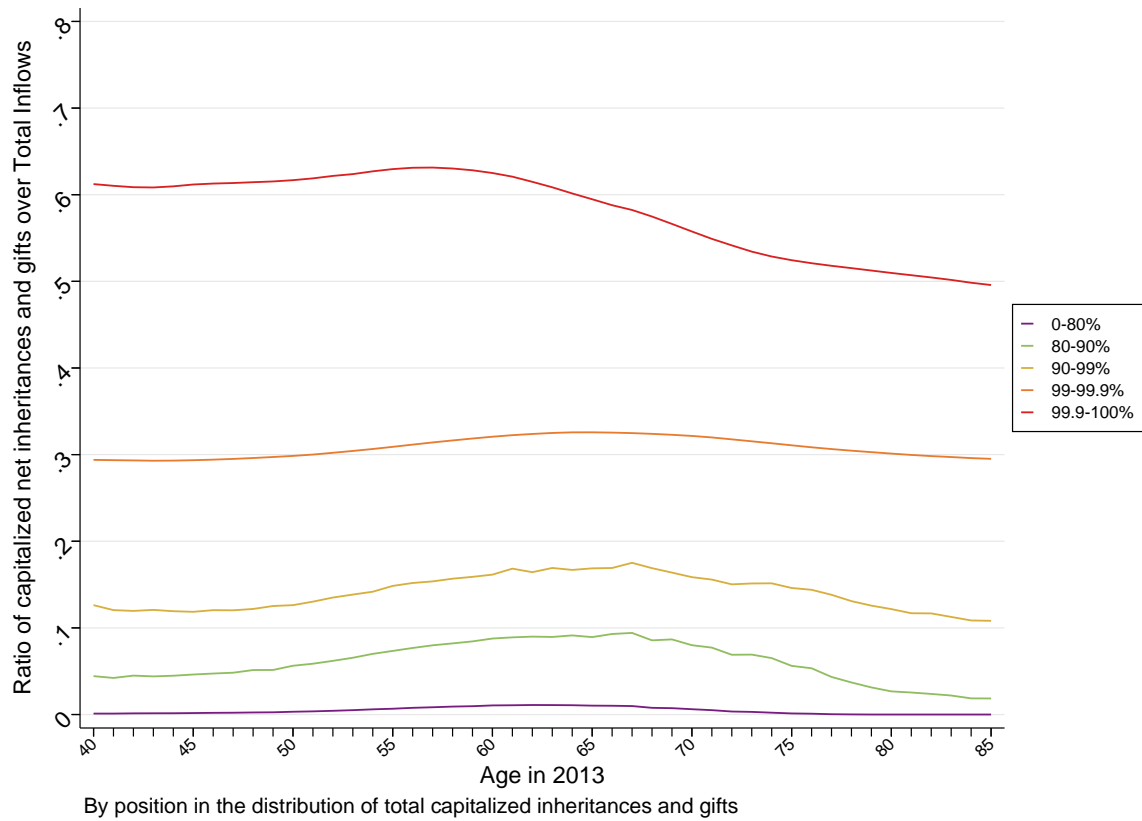
Figure 2 – Distribution of the gifts and inheritance-to-Total Inflows ratio by age and position in the distribution of total gifts and inheritance

Notes: The figure uses the same sample as Figure 1. For each age, we compute total capitalized gifts and inheritances received during 1995-2013, and the sum of Total Inflows for individuals located in the bottom 80%, 80% to 90%, 90% to 99%, 99% to 99.9%, or top 0.1% of the distribution of total capitalized gifts and inheritances (these percentiles are age-specific). For each age and each selected percentile, the figure plots the ratio between aggregated total capitalized gifts and inheritances, and aggregated Total Inflows.
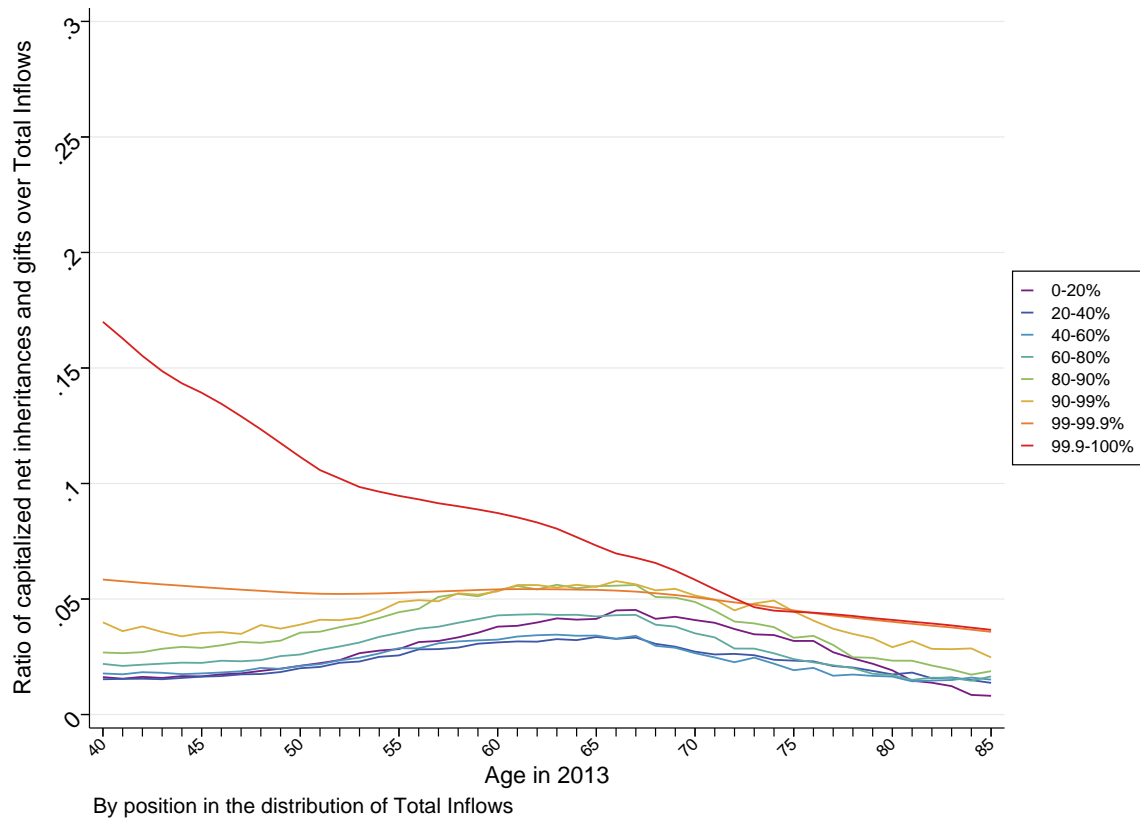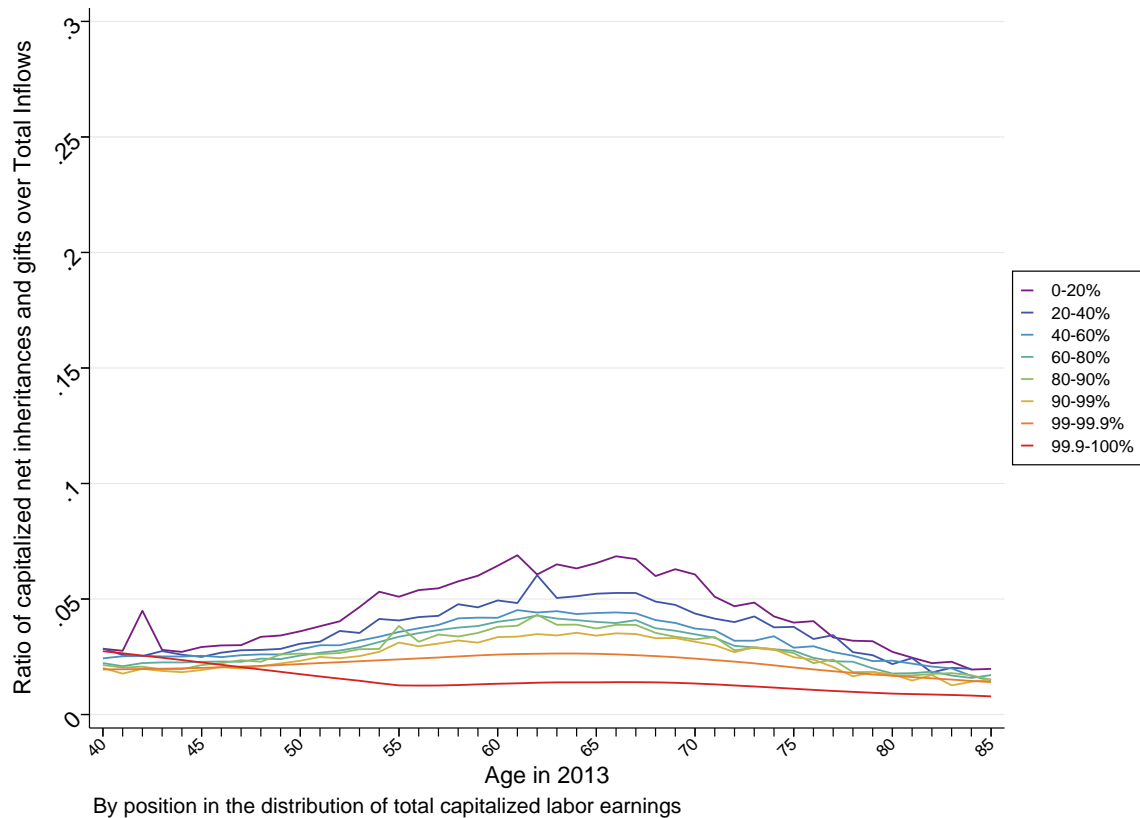
Figure 3 – Distribution of the gifts and inheritance-to-Total Inflows ratio by age and position in the distribution of Total Inflows

Notes: The figure uses the same sample as Figure 1. For each age, we compute total capitalized gifts and inheritances received during 1995-2013, and the sum of Total Inflows for individuals located in the bottom 20%, 20% to 40%, 40% to 60%, 60% to 80%, 80% to 90%, 90% to 99%, 99% to 99.9%, or top 0.1% of the distribution of Total Inflows (these percentiles are age-specific). For each age and each selected percentile, the figure plots the ratio between aggregated total capitalized gifts and inheritances, and aggregated Total Inflows.
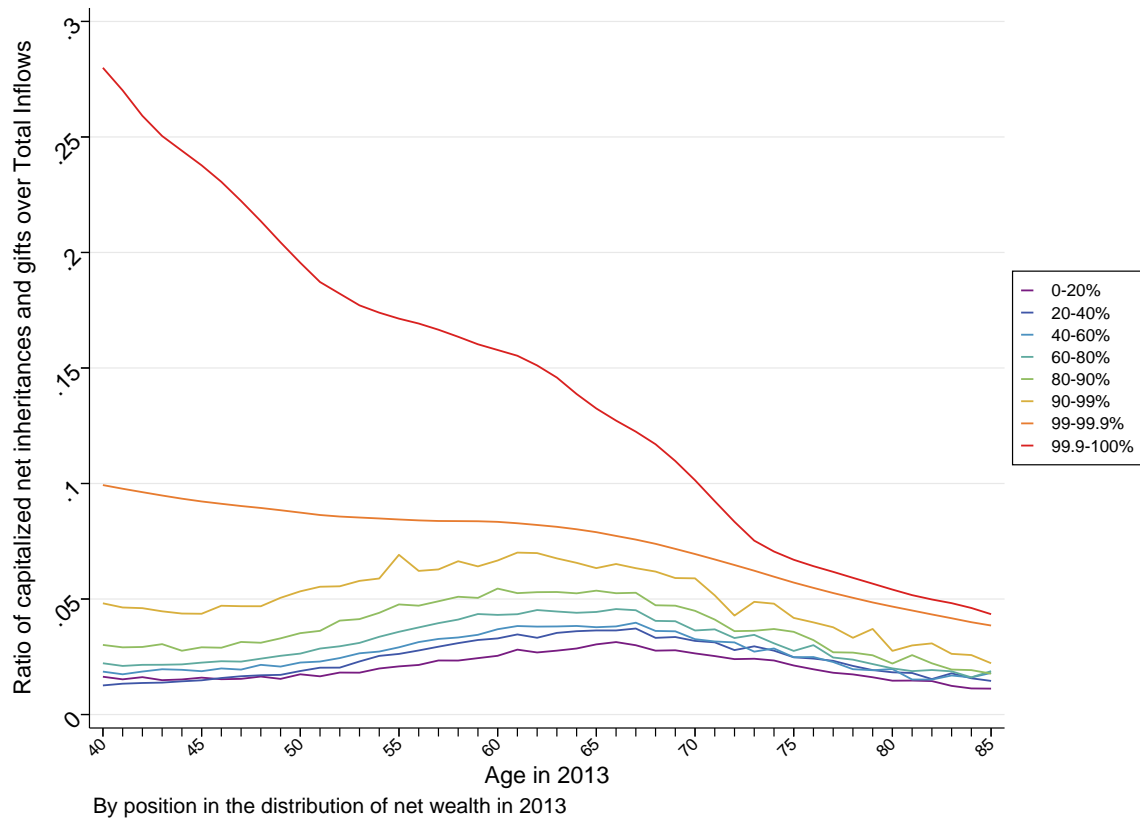
Figure 4 – Distribution of the gifts and inheritance-to-Total Inflows ratio by age and position in the distribution of total capitalized net earnings

Notes: The figure uses the same sample as Figure 1. For each age, we compute total capitalized gifts and inheritances received during 1995-2013, and the sum of Total Inflows for individuals located in the bottom 20%, 20% to 40%, 40% to 60%, 60% to 80%, 80% to 90%, 90% to 99%, 99% to 99.9%, or top 0.1% of the distribution of total capitalized net earnings (these percentiles are age-specific). For each age and each selected percentile, the figure plots the ratio between aggregated total capitalized gifts and inheritances, and aggregated Total Inflows.

Figure 5 – Distribution of the gifts and inheritance-to-Total Inflows ratio by age and position in the distribution of net wealth in 2013

Notes: The figure uses the same sample as Figure 1. For each age, we compute total capitalized gifts and inheritances received during 1995-2013, and the sum of Total Inflows for individuals located in the bottom 20%, 20% to 40%, 40% to 60%, 60% to 80%, 80% to 90%, 90% to 99%, 99% to 99.9%, or top 0.1% of the distribution of net wealth in 2013 (these percentiles are age-specific). For each age and each selected percentile, the figure plots the ratio between aggregated total capitalized gifts and inheritances, and aggregated Total Inflows.
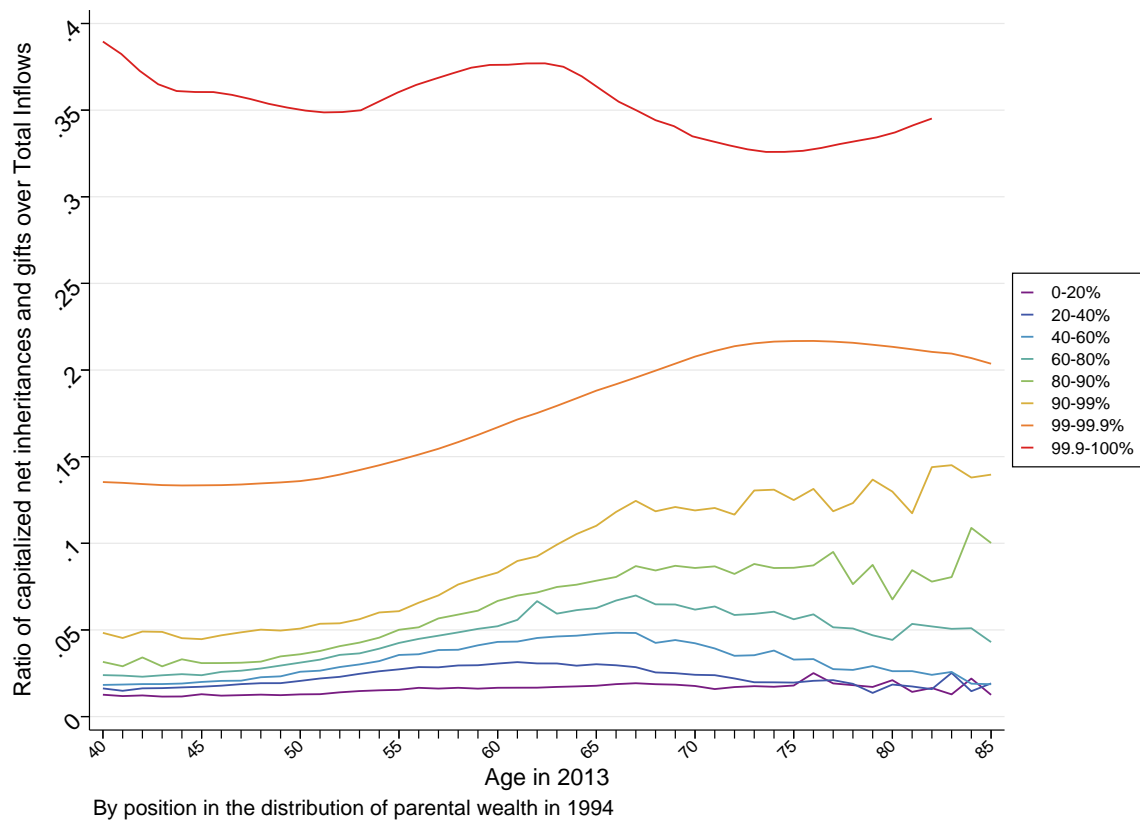
Figure 6 – Distribution of the gifts and inheritance-to-Total Inflows ratio by age and position in the parental net wealth in 1994

Notes: The figure uses the same sample as Figure 1, restricted to individuals with at least one parent alive and resident of Norway in 1994. For each age, we compute total capitalized gifts and inheritances received during 1995-2013, and the sum of Total Inflows for individuals located in the bottom 20%, 20% to 40%, 40% to 60%, 60% to 80%, 80% to 90%, 90% to 99%, 99% to 99.9%, or top 0.1% of the distribution of parental net wealth in 1994 (these percentiles are age-specific). For each age and each selected percentile, the figure plots the ratio between aggregated total capitalized gifts and inheritances, and aggregated Total Inflows.
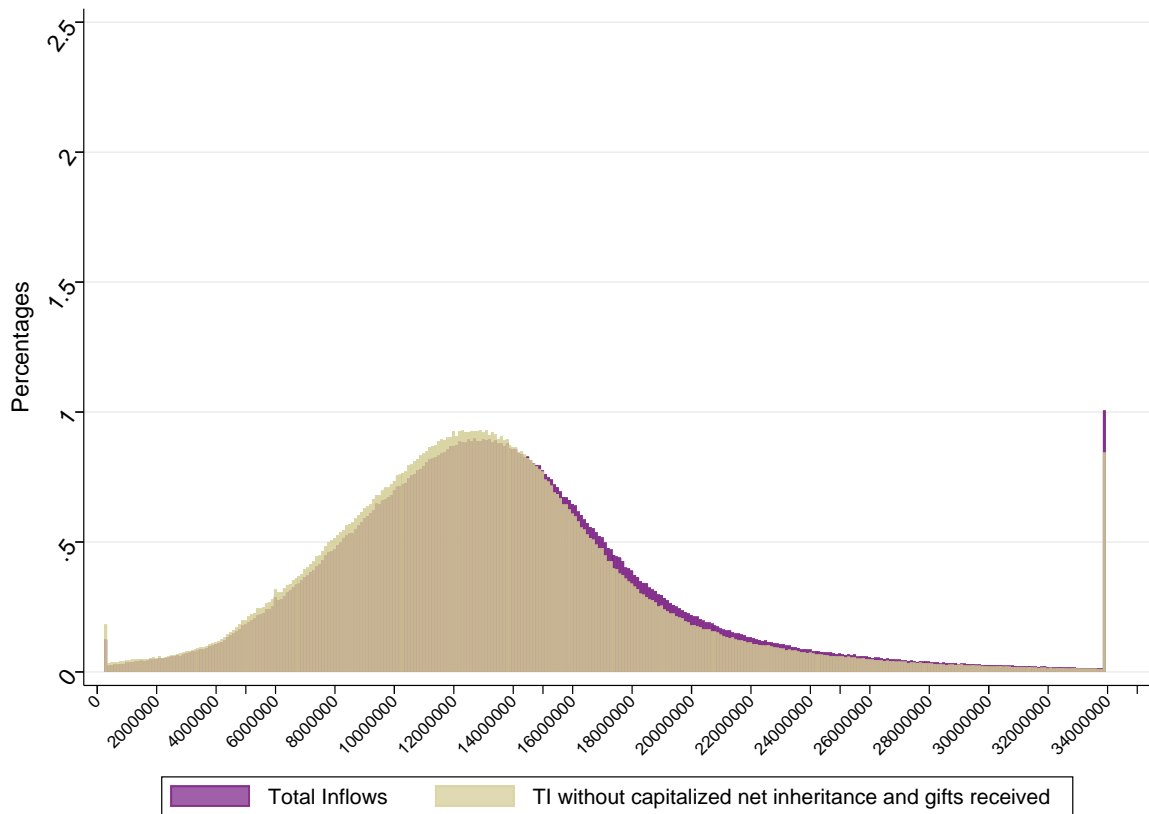
Figure 7 – Distribution of Total Inflows and its counterfactual in the absence of gifts and inheritance

Notes: The figure uses the same sample as Figure 1. The figure shows the distribution of Total Inflows, and its counterfactual distribution, replacing individuals' total capitalized gifts and inheritance by zero. The top and bottom values of Total Inflows and its counterfactual are winsorized, using as caps the top 1% and bottom 0.1% of Total Inflows.
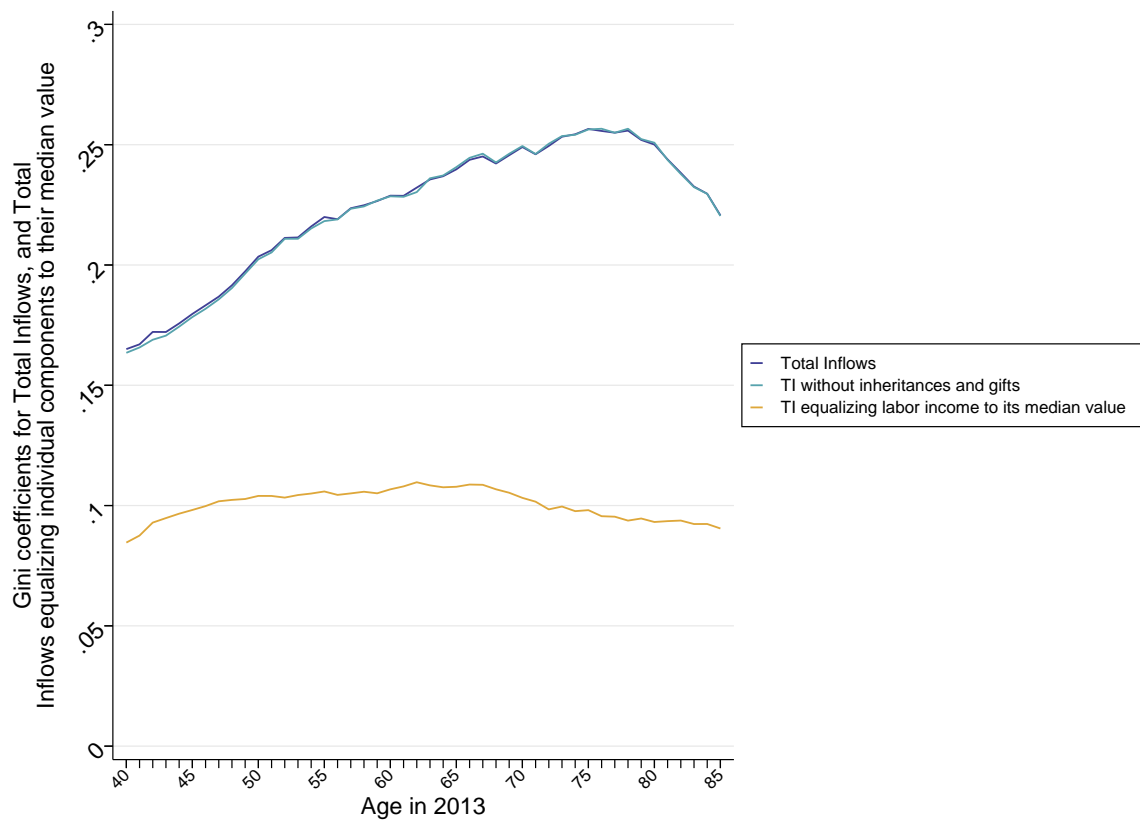
Figure 8 – Gini coefficients for Total Inflows and its counterfactual by age

<u>Notes</u>: The figure uses the same sample as Figure 1. For each age, the figure shows the Gini coefficient of Total Inflows and the Gini coefficients of its counterfactual distributions, replacing individuals' total capitalized gifts and inheritance by zero or total capitalized income by its median value in the sample.
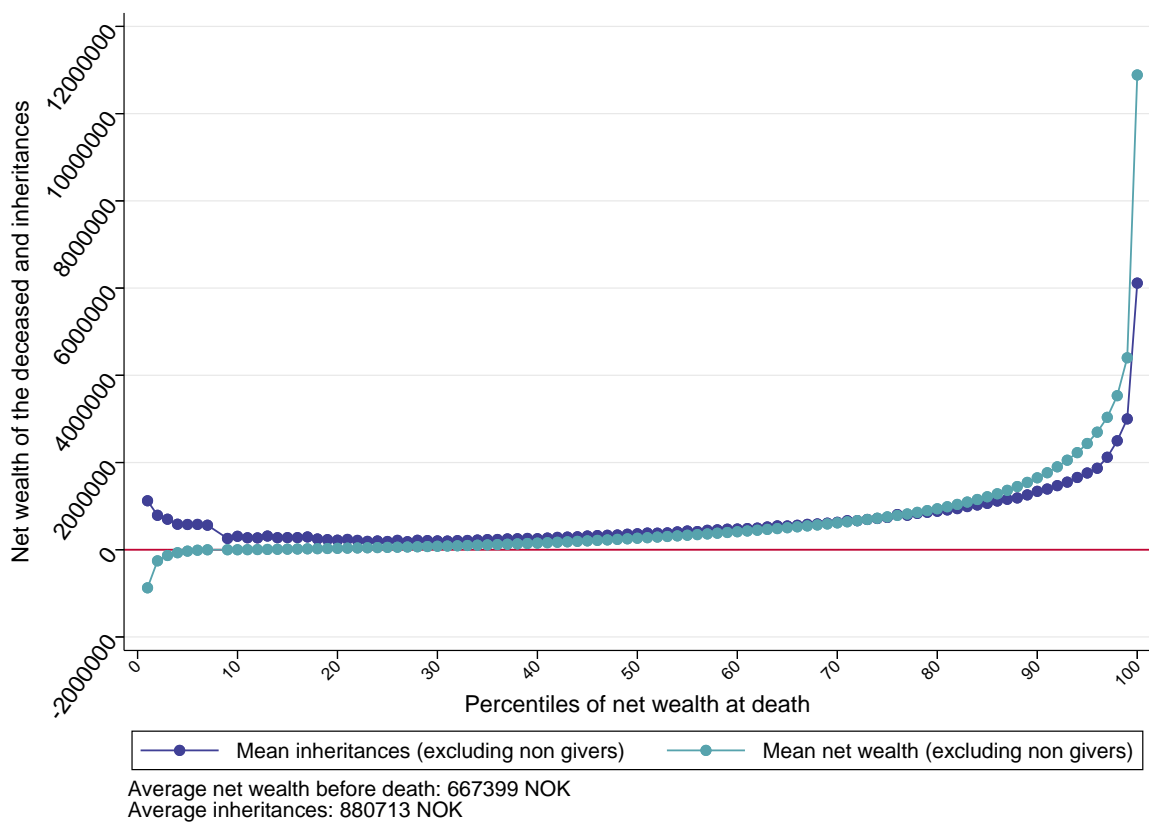
Figure 9 – Inheritance and net wealth of the deceased

<u>Notes</u>: The figure refers to all residents of Norway who died between 1995 and 2013 and transmitted an inheritance, excluding individuals with a living spouse at time of death. The figure plots the average net wealth (one year prior to death) in this sample, and the average inheritance they bequeathed.

Average net wealth growth in period 0: 305542 NOK
Average gross wealth growth in period 0: 366387 NOK
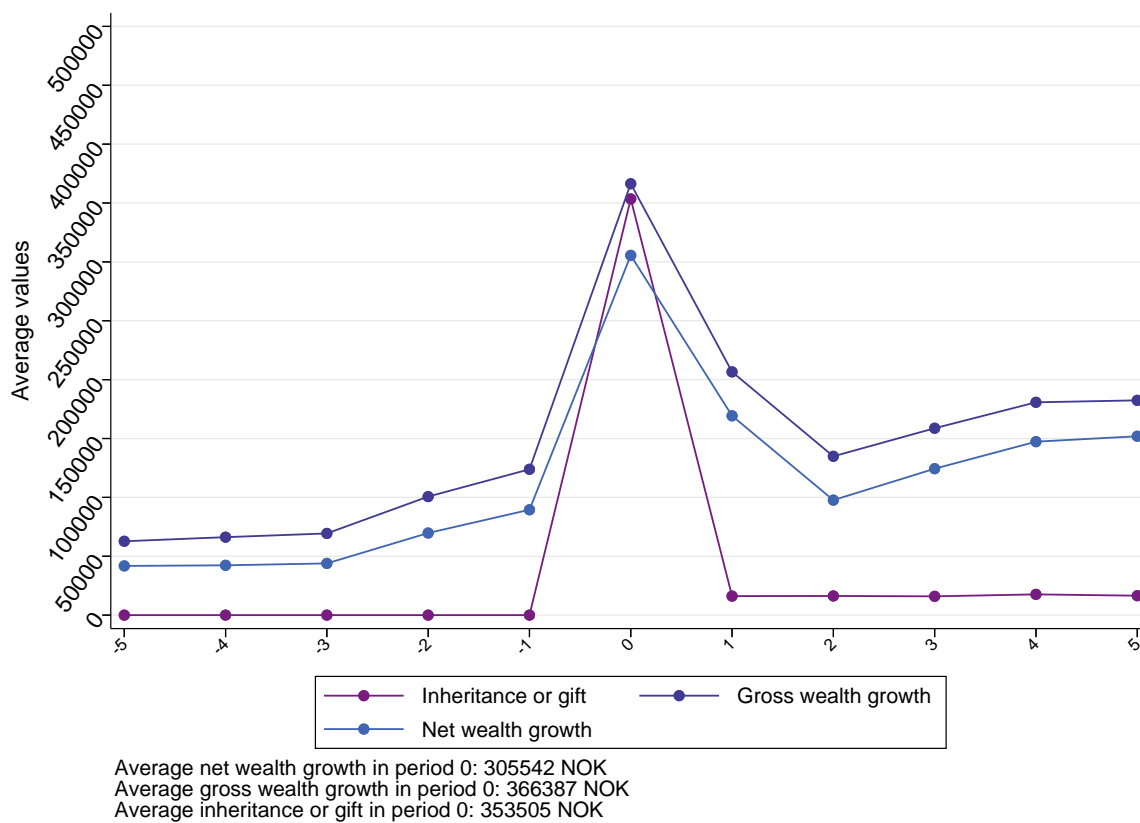Average inheritance or gift in period 0: 353505 NOK

Figure 10 – Evolution of net and gross wealth around the timing of the first inheritance or gift

Notes: The figure refers to the same sample as Figure 1, restricted to those who received a first inheritance or gift between 2001 and 2008. The figure plots the evolution of individuals' net and gross wealth around their first inheritance or gift.
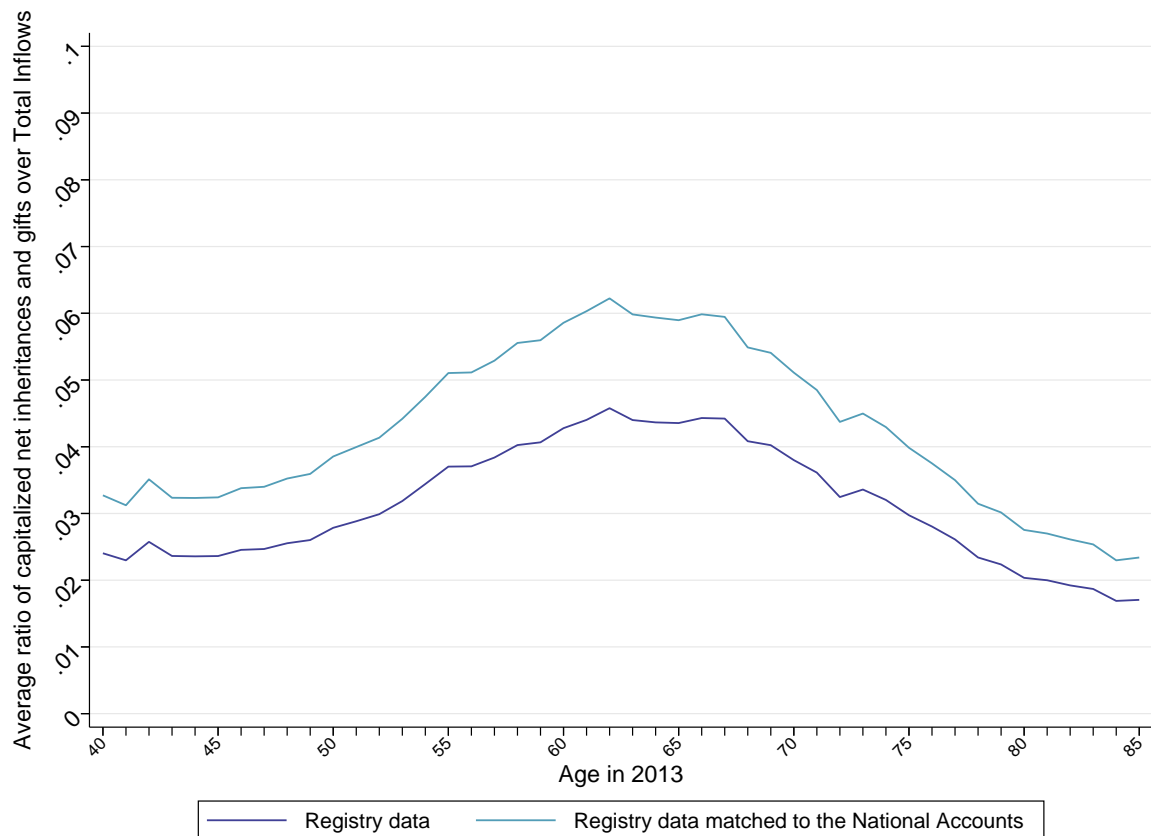
Figure 11 – Average value of the gifts and inheritance-to-Total Inflows ratio adjusted to match National Accounts

<u>Notes</u>: The figure refers to the same sample as Figure 1. This figure show similar results as Figure 1 when we adjust the components of net wealth to match National Accounts, and when we match inheritance and gifts to match the adjusted net wealth of the deceased.
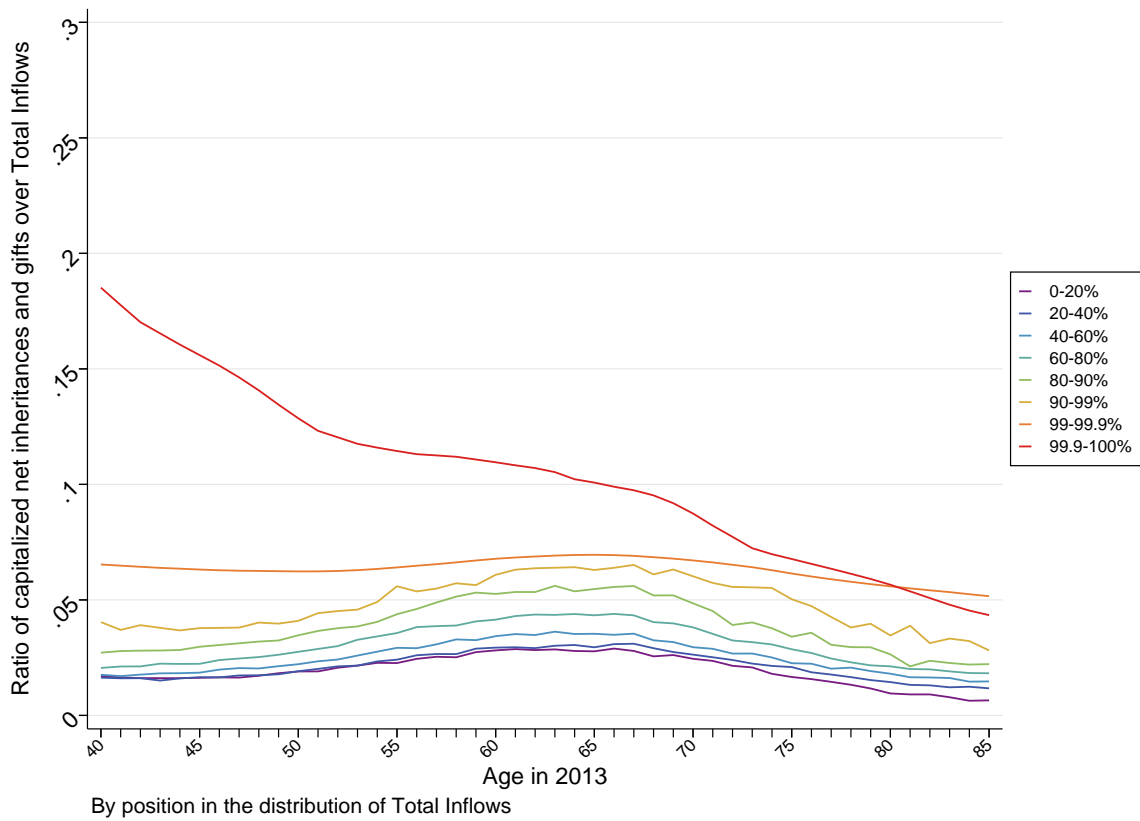
Figure 12 – Average value and distribution of the gifts and inheritance-to-Total Inflows ratio by age – Household level

Notes: The figure refers to the same sample as Figure 1. This figure show similar results as Figure 3 when we compute Total Inflows and its components at the household level and distribute each component equally across spouses.
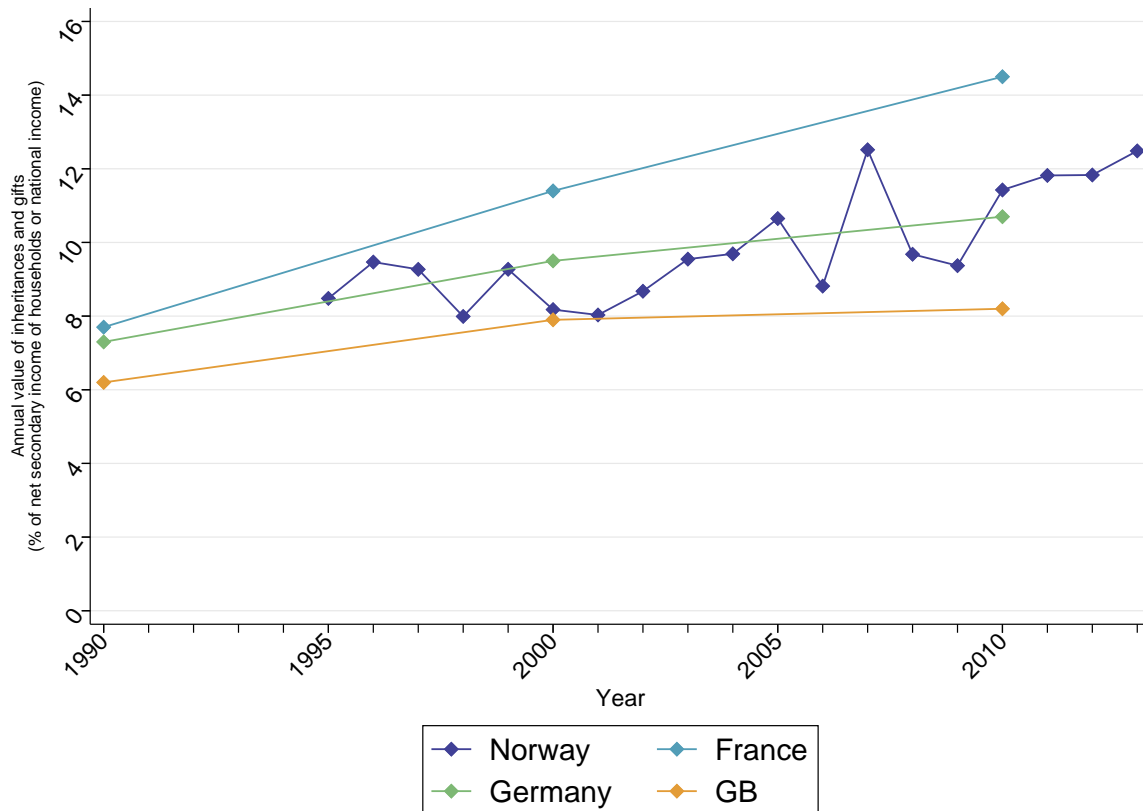
Figure 13 – Inheritance flow in Norway and other European countries

<u>Notes</u>: The inheritance flow for France, the UK, and Germany come from Alvaredo et al. (2017). We compute the inheritance flow for Norway following the same methodology: for each year we multiply the ratio of decedents wealth to the wealth of the living, the gift to bequest ratio, the mortality rate, and the aggregate private wealth to the net secondary income of households.

Table 1 – Descriptive Statistics

Variables	Mean	SD	Observations
Net wealth in 2013	1780326	7945238	2178678
Total Inflows	13672459	7302609	2178678
Capitalized net labor income	10532452	8030968	2178678
Capitalized government transfers net of taxes	2689346	2998345	2178678
Capitalized net inheritance and gifts received	450661	2007459	2178678
Parental wealth in 1994	919127	3870357	1552413
Age in 1994	39.4	11.9	2178678
Number of children	2.1	1.3	2178678
Women	0.51	0.50	2178678
Non Norwegian background	0.08	0.28	2178678
Higher education degree	0.28	0.45	2178678
Last surviving parent died before 1995	0.09	0.28	1627461
Last surviving parent died during 1995-2013	0.31	0.46	1627461
Last surviving parent died after 2013	0.60	0.49	1627461
Number of siblings	2.0	1.5	1756716

Notes: The table uses a balanced panel of all individuals born between 1928 and 1973, and registered as Norwegian residents in each year between 1994 and 2013. Each row corresponds to a specific variable. The first row corresponds to individuals' net wealth in 2013. The second row indicates individuals' Total Inflows. The following three rows report the components of individuals' Total Inflows, namely capitalized net labor income (row 3), capitalized government transfers net of taxes (row 4), and capitalized net inheritance and gifts (row 5). Row 6 reports parental net wealth in 1994 (for individuals who have at least one parent alive and resident of Norway in 1994). Rows 7 to 15 further describe individuals' characteristics, that is their age in 1994 (row 7), how many children they have (row 8), their gender (row 9), whether they have an immigrant background (row 10), whether they hold a higher education degree (row 11), information on the timing of the death of their last surviving parent (row 12 to 14), and how many siblings they have (row 15).

Table 2 – Characteristics of individuals with small/large inheritances and gifts

	0-80%	80-90%	90-99%	99-99.9%	99.9-100%
Net wealth in 2013	1561508	2041679	2777998	5723972	26514152
	[7447376]	[6483516]	[7229418]	[12404428]	[87401935]
Total Inflows	13099950	14739169	16495505	21748531	41425129
	[6747563]	[6555372]	[8538955]	[9946432]	[52315915]
Capitalized net labor income	10269152	11385283	11707657	12595236	13553173
	[7870529]	[7545465]	[9268864]	[10273600]	[16116658]
Capitalized government transfers net of taxes	2762078	2368280	2420119	2419073	2578764
	[3024201]	[2788245]	[2927124]	[3111221]	[3723378]
Capitalized net inheritance and gifts received	68720	985606	2367728	6734222	25293192
	[182841]	[421496]	[1003850]	[2068674]	[49392960]
Parental wealth in 1994	756383	1063517	1520221	3638007	16898796
	[2636578]	[2038668]	[5528680]	[16572917]	[47606390]
Last surviving parent died before 1995	0.103	0.029	0.023	0.021	0.016
	[0.303]	[0.167]	[0.151]	[0.145]	[0.124]
Last surviving parent died during 1995-2013	0.252	0.467	0.563	0.636	0.572
	[0.434]	[0.499]	[0.496]	[0.481]	[0.495]
Last surviving parent died after 2013	0.645	0.505	0.414	0.342	0.412
	[0.479]	[0.500]	[0.492]	[0.474]	[0.492]
Number of siblings	2.2	1.8	1.4	1.1	1.3
	[1.5]	[1.2]	[1.1]	[1.0]	[1.0]
Age in 1994	39.5	39.0	39.4	39.4	39.4
	[12.0]	[11.6]	[11.9]	[11.9]	[11.9]
Women	0.508	0.506	0.497	0.485	0.516
	[0.500]	[0.500]	[0.500]	[0.500]	[0.500]
Non Norwegian background	0.091	0.050	0.059	0.081	0.121
	[0.288]	[0.218]	[0.235]	[0.273]	[0.326]
Higher education degree	0.261	0.337	0.387	0.488	0.544
	[0.439]	[0.473]	[0.487]	[0.500]	[0.498]

Notes: The table refers to the same sample as Table 1. Individuals are divided into percentiles of the total capitalized gifts and inheritance distribution (bottom 80%, 80% to 90%, 90% to 99%, 99% to 99.9% and top 0.1%). The percentiles are age-specific. For each of the selected percentiles of the total capitalized gifts and inheritance distribution, the table reports individuals' net wealth in 2013 (row 1); individuals' Total Inflows (row 2); and the components of individuals' Total Inflows: capitalized net labor income (row 3), capitalized government transfers net of taxes (row 4), and capitalized net inheritance and gifts (row 5). Row 6 reports parental net wealth in 1994 (for individuals who have at least one parent alive and resident of Norway in 1994). Rows 7 to 9 provide information on the timing of the death of individuals' last surviving parent. Rows 10 to 14 reports additional information on individuals' characteristics, that is how many siblings they have (row 10); their age in 1994 (row 11); their gender (row 12); whether they have an immigrant background (row 13), and whether they hold a higher education degree (row 14).
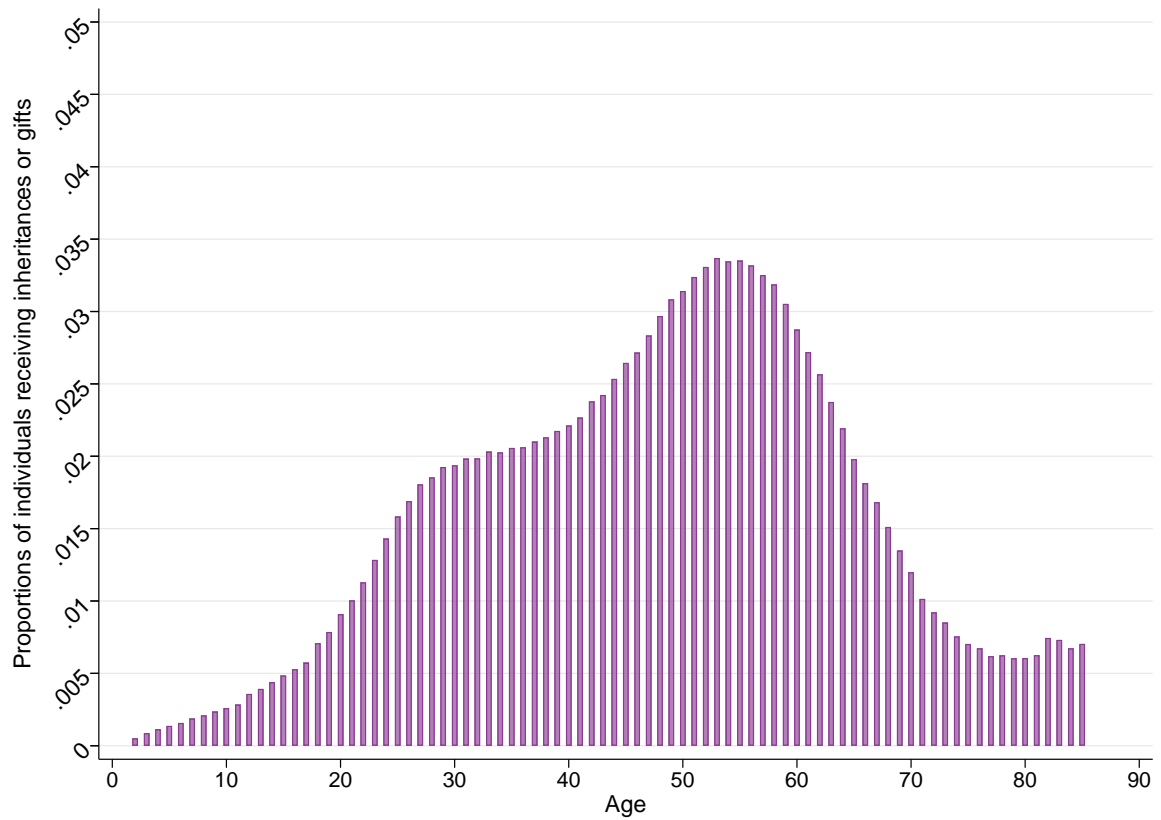
Appendix A

Figure A1

Notes: The figure uses a similar sample as Figure 1 extended to individuals born between 1993 and 1928. The figure plots the proportion of individuals by age receiving an inheritance or gift, considering all years between 1995 and 2013.
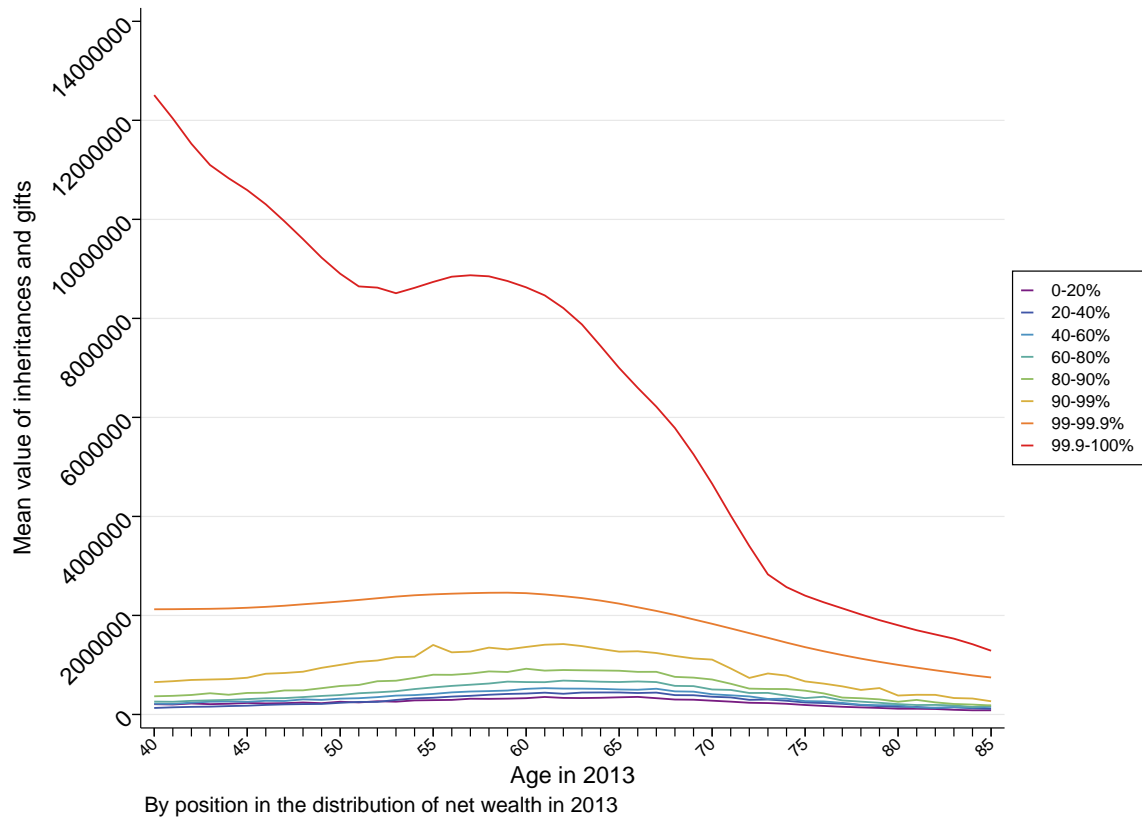
Figure A2 – Distribution of gifts and inheritance by age and position in the distribution of net wealth in 2013

Notes: The figure uses the same sample as Figure 1. For each age, the figure reports the average value of capitalized gifts and inheritances received during 1995-2013, for individuals located in the bottom 20%, 20% to 40%, 40% to 60%, 60% to 80%, 80% to 90%, 90% to 99%, 99% to 99.9%, or top 0.1% of the distribution of net wealth in 2013 (these percentiles are age-specific).
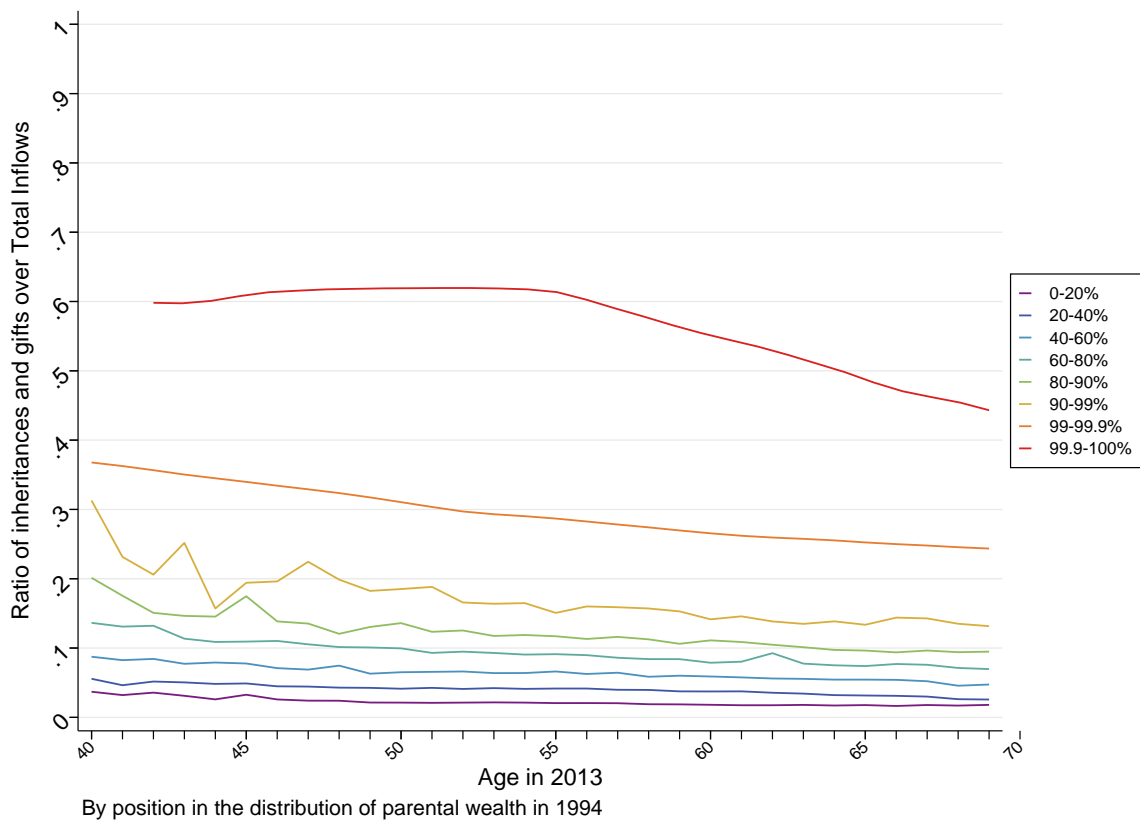
Figure A3 – Distribution of the gifts and inheritance-to-Total Inflows ratio by age and position in the parental net wealth in 1994 for individuals whose last surviving parent died during 1995-2013

Notes: The figure uses the same sample as Figure 6, restricted to individuals whose last surviving parent died during 1995-2013. The figure reports similar results as Figure 6.
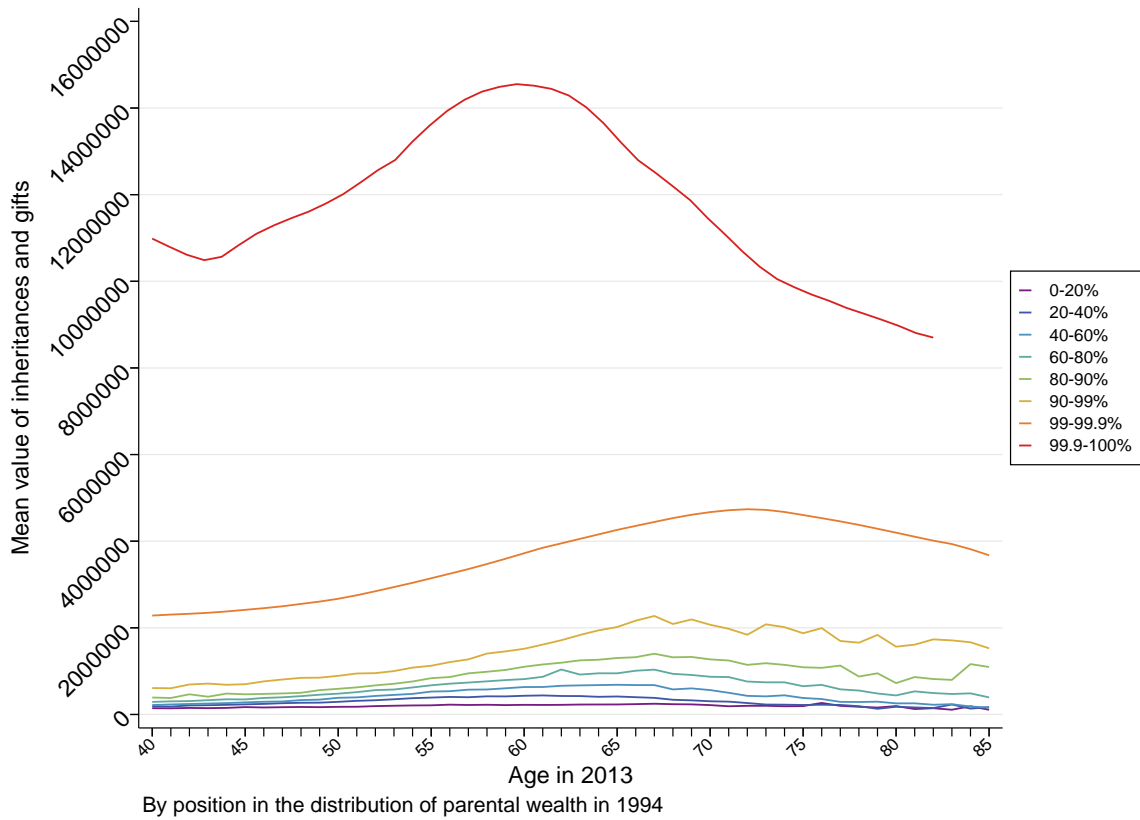
Figure A4 – Distribution of gifts and inheritance by age and position in the distribution of parental wealth in 1994

Notes: The figure uses the same sample as Figure 6. For each age, the figure reports the average value of capitalized gifts and inheritances received during 1995-2013, for individuals located in the bottom 20%, 20% to 40%, 40% to 60%, 60% to 80%, 80% to 90%, 90% to 99%, 99% to 99.9%, or top 0.1% of the distribution of parental wealth in 1994 (these percentiles are age-specific).
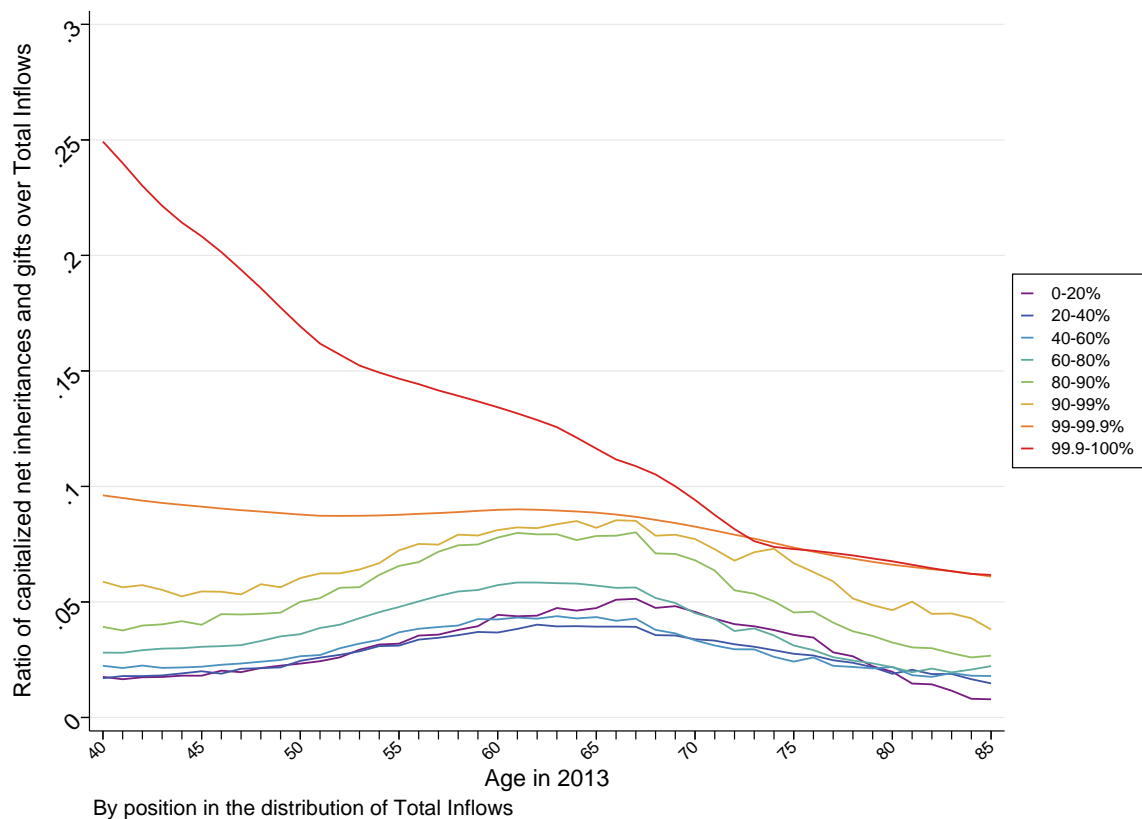
Figure A5 – Distribution of the National Accounts adjusted gifts and inheritance-to-Total Inflows ratio by age and position in the distribution of Total Inflows

<u>Notes</u>: The figure refers to the same sample as Figure 1. This figure show similar results as Figure 3 when we adjust the components of net wealth to match National Accounts, and when we match inheritance and gifts to match the adjusted net wealth of the deceased. Total Inflows are also computed using adjusted inheritance and gifts.
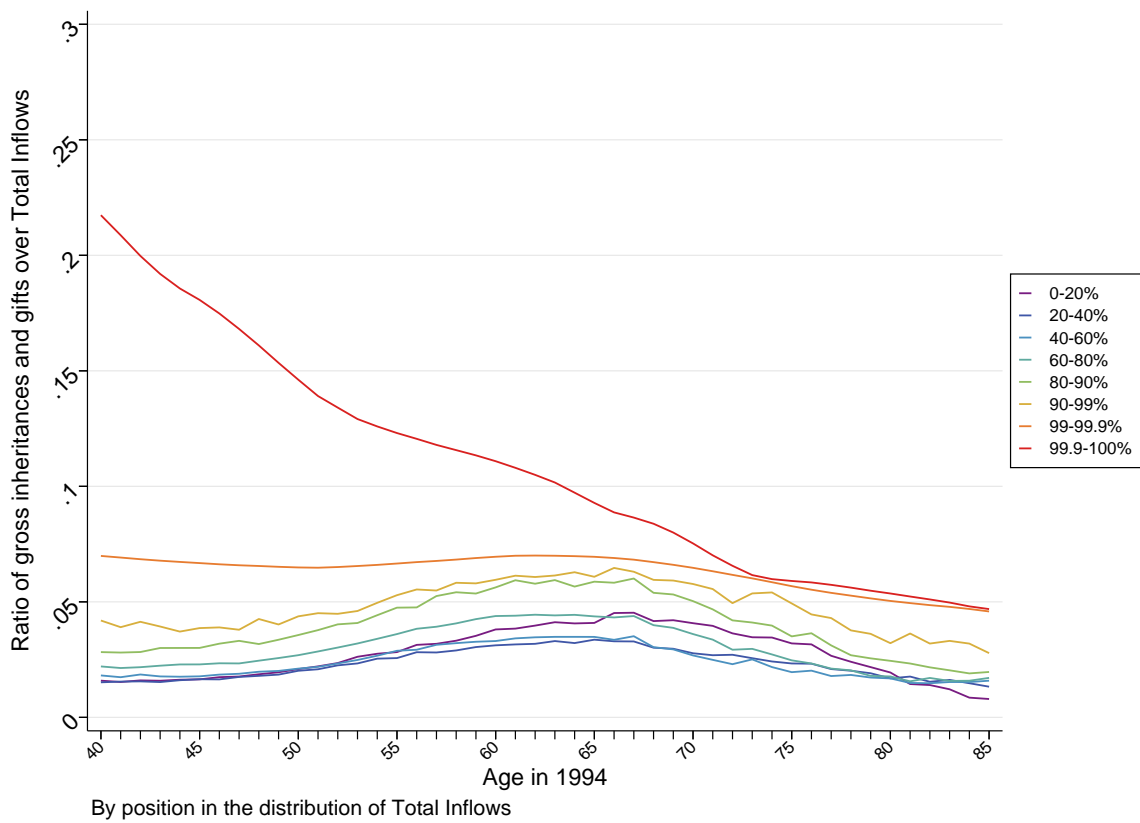
Figure A6 – Distribution of the gross gifts and inheritance-to-Total Inflows ratio by age and position in the distribution of Total Inflows

<u>Notes</u>: The figure refers to the same sample as Figure 1. This figure show similar results as Figure 3 when we use gross gifts and inheritance to compute total capitalized inheritance and gifts, and Total Inflows.
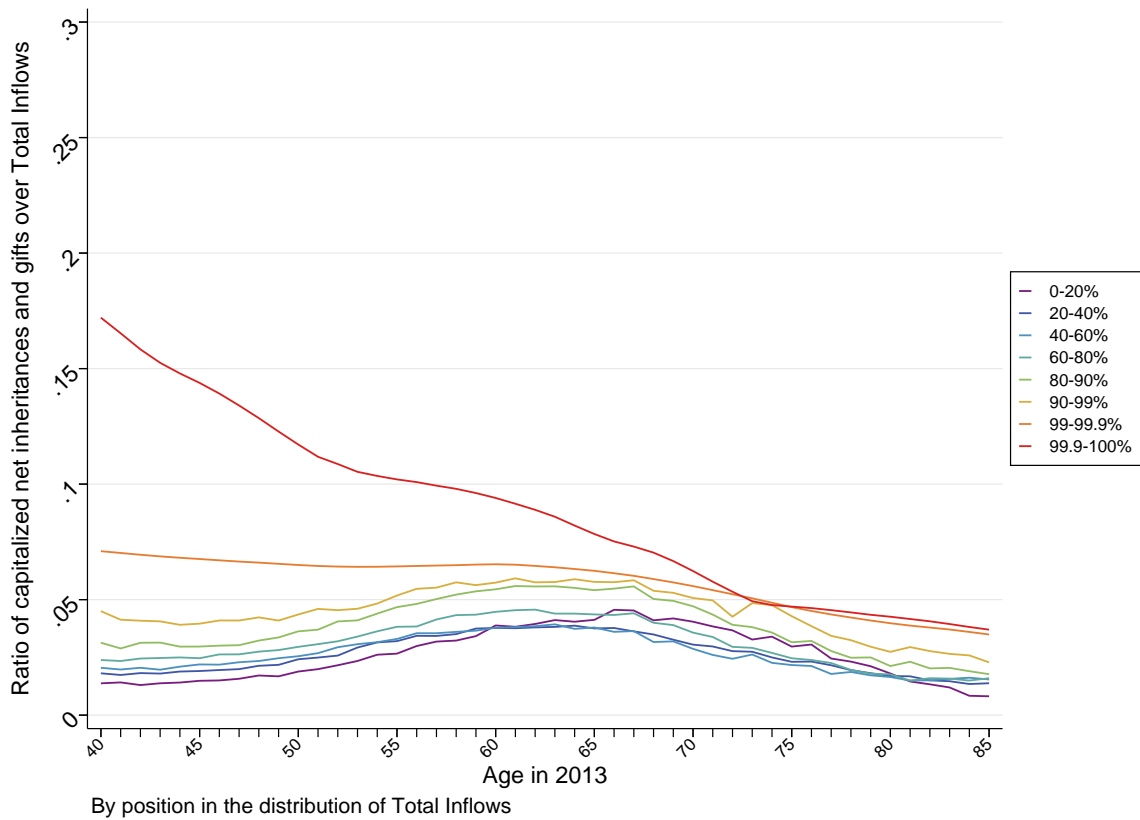
Figure A7 – Distribution of the gross gifts and inheritance-to-Total Inflows ratio by age and position in the distribution of Total Inflows using heterogeneous rates of return

Notes: The figure refers to the same sample as Figure 1. This figure show similar results as Figure 3 when we capitalize the components of Total Inflows using rates of return which depend on individuals' position in the distribution of net wealth.

Table A1 – Household's net wealth – distribution in 2014 (EUR thousands)

	EU	Germany	Italy	Norway	France	Austria
Mean	219.9	214.3	225.6	242.7	243.1	258.4
p10	0.8	0.0	2.5	-28.6	3.0	1.0
p20	6.9	2.5	10.6	-0.5	10.3	6.4
p30	23.4	10.6	44.1	10.6	27.6	15.8
p40	56.6	26.8	98.3	58.0	65.2	34.4
p50	96.4	60.8	147.0	122.3	113.3	85.9
p60	148.9	111.9	191.6	193.2	170.0	162.5
p70	211.8	174.8	246.0	275.9	235.7	252.5
p80	300.9	274.2	323.0	384.8	332.3	363.8
p90	487.0	468.8	506.9	580.9	536.1	518.1

Notes: The table reports the average household net wealth in 2014 (in thousands of euros) at each percentile of the distribution for 5 European countries and in the EU. For Norway, the table is based on our own calculations, including all individuals older than 16 in the household. For other countries, the data come from the HFCS Statistical Tables Wave 2014, Table J3.