

# Wealth Transfers and Wealth Inequality in Rich Countries: What Do We Learn from Gini Decomposition?

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## *Abstract*

The role of intergenerational transfers of wealth via inheritance and gifts *inter vivos* in the accumulation of household wealth and the generation of wealth inequality has been hotly debated. This paper uses data from household wealth surveys for six rich countries – Britain, France, Germany, Italy, Spain and the US – to assess the contribution of intergenerational wealth transfers to wealth inequality using decomposition methods for the Gini coefficient. The results show that transfer wealth is consistently a good deal more unequally distributed than non-transfer wealth and total wealth. Transfer wealth accounts for only about one-tenth of overall wealth inequality for the US compared to one-third for Germany and Italy. This mirrors the importance of transfer wealth in total wealth in each country, with differences in inequality in transfer wealth and its correlation with total wealth having only a modest impact. We find that a marginal percentage increase in all transfers reduces total wealth inequality in Britain, Germany and the US, while it would increase total wealth inequality in France, Italy and Spain.

**Keywords:** Wealth; Inheritance; Intergenerational transmission

# 1 Introduction

The importance of inherited wealth versus life-cycle saving for wealth inequality has been hotly debated for many years, initially on the basis of modelling aggregate flows. More recent studies based on microdata have generally arrived at the, to many surprising, conclusion that inheritances are wealth-equalising. Boserup *et al* (2016) and Elinder *et al* (2018) find that inheritances reduce relative inequality measures such as the Gini coefficient and top shares, using data from tax records for Sweden and Denmark respectively. This is consistent with the findings of Wolff and Gittleman (2014) and Crawford and Hood (2016) based on analysis of household survey data for the US and Britain.

These studies have been for individual countries, reflecting the national specificity of tax-based data and the absence until recently of survey-based data that was comparable in terms of the information sought. Few studies have examined this topic comparatively.<sup>1</sup> Here we apply decomposition methods for the Gini coefficient to investigate the contribution of wealth transfers to wealth inequality in six rich countries, bringing together microdata from household wealth surveys for major Eurozone countries with Great Britain and the US.

The data sources and methods employed are described in Section 2; Section 3 presents the results from the decomposition analysis, and Section 4 discusses their interpretation and highlights the key conclusions.

## 2. Data and Methods

This paper exploits the recent availability of micro-data from specially-designed wealth surveys for large representative samples of households across rich countries. We bring together data from the US Survey of Consumer Finances (SCF), the Household Finance and Consumption Survey (HFCS) co-ordinated by the European Central Bank for France, Germany, Italy and Spain, and the Wealth and Assets Survey (WAS) for Great Britain. The SCF has been running since the early 1980s but the HFCS only began around 2010 and the

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<sup>1</sup> Fessler and Schürz (2018) use data for thirteen Euro-zone countries but focus on the impact of having received an inheritance on the household's rank in the wealth distribution rather than wealth inequality. Bönke *et al* (2017) use data from eight Eurozone countries to compare decompositions of the squared coefficient of variation with US results reported in Wolff (2015).

WAS in 2006. The SCF and HFCS are (primarily) cross-sectional surveys, whereas the WAS is longitudinal in design. Oversampling strategies are generally employed in order to improve the capture of the top of the wealth distribution, in a fashion that varied across countries. Each of the surveys seeks in-depth information from responding households about their assets and debts, allowing net wealth to be derived.<sup>2</sup>

The surveys also seek details on inheritances and gifts received by household members. In the SCF and HFCS this relates to receipts at any point in the past. We employ data from around 2010/11 from these sources (i.e. 2010 SCF and the first round of the HFCS). For Britain, we combine the first three waves of WAS to recover transfers over a comparable time span. (See Nolan et al., 2020, for a detailed description of the treatment of WAS in particular). The household is the unit of analysis, with reported transfer amounts inflated to 2010 values using national consumer price indices and inheritances and gifts aggregated.

We employ the decomposition of the Gini coefficient originally put forward by Lerman and Yitzhaki (1985) to assess the contribution of different income sources to income inequality. We adapt this by distinguishing wealth from intergenerational transfers from other ‘non-transfer’ wealth as distinct ‘sources’. Overall wealth inequality as measured by the Gini ( $G_W$ ) is decomposed as:

$$G_W = \underbrace{(S_T \cdot G_T \cdot R_T)}_{\text{Transfers Contribution} = C_T} + \underbrace{((1 - S_T) \cdot G_{NT} \cdot R_{NT})}_{\text{Non-Transfer Wealth Contribution} = C_{NT}}$$

The contribution of wealth from transfers to overall wealth inequality then depends on:

- the share of transfer  $S_T$  wealth in total household wealth;
- the Gini coefficient for inequality in the distribution of transfer  $G_T$  and non-transfer wealth  $G_{NT}$ , taken alone; and
- the (Gini) correlation of transfer  $R_T$  and non-transfer  $R_{NT}$  wealth with total wealth.<sup>3</sup>

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<sup>2</sup> The wealth concept here does not include the value of private occupational pensions or entitlements to public pensions, as these are very difficult to assess in a robust and comparable way and also may not be heritable (varying across schemes and countries).

<sup>3</sup> Gini correlations are Pearson correlations of transfer and non-transfer wealth with *ranks* in total wealth.

The decomposition can also be used to approximate the percentage change in inequality implied by an equi-proportionate one percent increase in all household transfers - a ‘Gini elasticity’ with respect to transfers (Stark *et al*, 1986).

Previous decompositions such as Bönke *et al*, (2017) have employed the squared coefficient of variation, which is extremely sensitive to the upper tail (Cowell and Flachaire, 2007; Van Kerm 2007) so estimation with survey data on wealth is highly imprecise. The Gini is much less sensitive to observations in the upper tail and therefore more robustly estimated and reliable.

### **3. The Impact of Intergenerational Transfers on Wealth Inequality**

Key to the decomposition analysis is the ascription of wealth to transfer and non-transfer sources. We do not know how much of the transfers received were consumed rather than saved, what rate of return was generated, or the impact on the behaviour of household members in terms of earning and other savings. We take the cumulative amounts received in transfers uprated to 2010 values to represent the current wealth generated by those transfers. ‘Transfer wealth’ calculated this way can however be larger than the household’s current stock of wealth as measured in the surveys, in which cases we cap transfer wealth at total current wealth. Piketty *et al* (2014) argue that such a procedure results in a more plausible estimation of transfer wealth, by better - although not perfectly - accounting for the coexistence of “savers” (who accumulate wealth over and above any transfers) and “rentiers” (who dissave and “consume” transfers). ‘Non-transfer wealth’ is total wealth minus transfer wealth.

The components of the decomposition are presented in Table 1. The Gini coefficient for transfer wealth is much higher than the Gini for total wealth, while the Gini for non-transfer wealth is much closer to the overall Gini though also above it. The Gini for transfer wealth is so much higher primarily because only a minority of households receive any. The Gini correlation of transfer wealth with total wealth varies from 0.66 for Spain up to about 0.85 for Germany and the US. The contribution of transfer wealth to overall wealth inequality is then seen to be much lower than the contribution of non-transfer wealth. Taken as a proportion of the total, transfers account for 12% in Britain, whereas that figure is rather higher in the other countries except for the US, where it is only 8%. The particularly low contribution of transfer wealth for Britain and the US reflects the low share of transfer wealth in total wealth there. A

marginal percentage increase in transfers would reduce total wealth inequality in Britain, Germany and the US and increase it in France, Italy and Spain, but these effects are mostly small.

Differences across the countries in inequality in transfer wealth and its correlation with total wealth are relatively modest and are dominated by the impact of the varying share of transfers in total wealth. The factors underlying that variation are multifaceted and not easy to tease out. They include differences in demographic structures (with Germany and Italy having particularly high proportions at older ages), in the evolution of wealth stocks and values over the lengthy period for which transfers are being reported, and in both reporting behaviours and the extent to which the surveys capture the largest transfer recipients versus top wealth holders.

**Table 1. Decomposition of Wealth Inequality by Transfer/Non-Transfer Wealth**

<i>Without Capitalisation</i>	<b>Britain</b>	<b>France</b>	<b>Germany</b>	<b>Italy</b>	<b>Spain</b>	<b>US</b>
Gini total wealth ( $G_W$ )	0.668	0.678	0.776	0.604	0.581	0.868
Gini transfer wealth ( $G_T$ )	0.891	0.887	0.892	0.848	0.891	0.952
Gini non-transfer wealth ( $G_{NT}$ )	0.688	0.705	0.818	0.687	0.615	0.881
Share of transfers in total wealth ( $S_T$ )	0.119	0.166	0.279	0.292	0.147	0.086
Correlation transfers with total wealth ( $R_T$ )	0.731	0.779	0.865	0.716	0.658	0.848
Correlation non-transfer wealth with total wealth ( $R_{NT}$ )	0.974	0.959	0.951	0.878	0.943	0.992
Contribution of transfer wealth to Gini total wealth ( $C_T$ )	0.077	0.115	0.215	0.177	0.086	0.070
Contribution of other wealth to Gini total wealth ( $C_{NT}$ )	0.591	0.563	0.560	0.427	0.495	0.799
Relative contribution of transfers to Gini total wealth ( $\frac{C_T}{G_W}$ )	0.116	0.169	0.278	0.293	0.148	0.080
Implied percentage change in Gini total wealth for one percent increase in transfer wealth (x 100) $100S_T(\frac{G_T R_T}{G_W} - 1)$	-0.297	0.318	-0.159	0.153	0.134	-0.601

Rather than assuming no real return was generated on transfer amounts received, we now instead apply a common 3% annual return often employed in the literature. Table 2 shows that the level of inequality in transfer wealth is very similar to without capitalisation, as is the correlation of transfer wealth with total wealth. The share of transfers in total wealth is however a good deal higher, and its contribution to overall wealth inequality is now over 30% in Germany and Italy, whereas for the US it still only accounts for 11%. The elasticity estimates remain small as contributions to the total Gini remain close to the share of transfers in total wealth.

**Table 2: Decomposition of Wealth Inequality by Transfer/Non-Transfer Wealth with Capitalisation**

<i>With capitalisation</i>	<b>Britain</b>	<b>France</b>	<b>Germany</b>	<b>Italy</b>	<b>Spain</b>	<b>US</b>
Gini total wealth ( $G_W$ )	0.668	0.678	0.776	0.604	0.581	0.868
Gini transfer wealth ( $G_T$ )	0.891	0.882	0.887	0.846	0.891	0.953
Gini non-transfer wealth ( $G_{NT}$ )	0.696	0.719	0.831	0.694	0.621	0.885
Share of transfers in total wealth ( $S_T$ )	0.147	0.219	0.324	0.317	0.183	0.113
Correlation transfers with total wealth ( $R_T$ )	0.745	0.792	0.872	0.729	0.690	0.860
Correlation non-transfer wealth with total wealth ( $R_{NT}$ )	0.961	0.935	0.934	0.862	0.923	0.988
Contribution of transfer wealth to Gini total wealth ( $C_T$ )	0.097	0.153	0.251	0.195	0.112	0.093
Contribution of other wealth to Gini total wealth ( $C_{NT}$ )	0.570	0.525	0.525	0.409	0.468	0.776
Relative contribution of transfers to Gini total wealth ( $\frac{C_T}{G_W}$ )	0.146	0.225	0.323	0.323	0.193	0.107
Implied percentage change in Gini of total wealth for one percent increase in transfer wealth (x 100)	-0.093	0.664	-0.106	0.668	1.064	-0.630
$100S_T(\frac{G_TR_T}{G_W} - 1)$						

We also examined varying assumptions about how much of transfers received were saved. The results for the share of transfer wealth and its contribution to overall wealth inequality lie between those in Tables 1 and 2 but closer to the latter.

## **4. Conclusions**

The findings from these decomposition exercises bring out first that transfer wealth (however measured) is a good deal more unequally distributed than non-transfer wealth and total wealth in each of the countries studied. They then suggest that the contribution of transfer wealth to overall inequality varied a good deal across these six countries, accounting for only about 8-10% for the US but up to 33% for Germany and Italy. Finally, this variation across the countries mirrored the importance of transfer wealth (as reported in the surveys) in total wealth, with differences across the countries in inequality in transfer wealth and its correlation with total wealth having only a modest impact. Alternative methodologies would provide a different perspective, incorporating different implicit counterfactuals, but the Gini decomposition approach employed here exploits the availability of comparative data in a particularly straightforward and illuminating way.

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