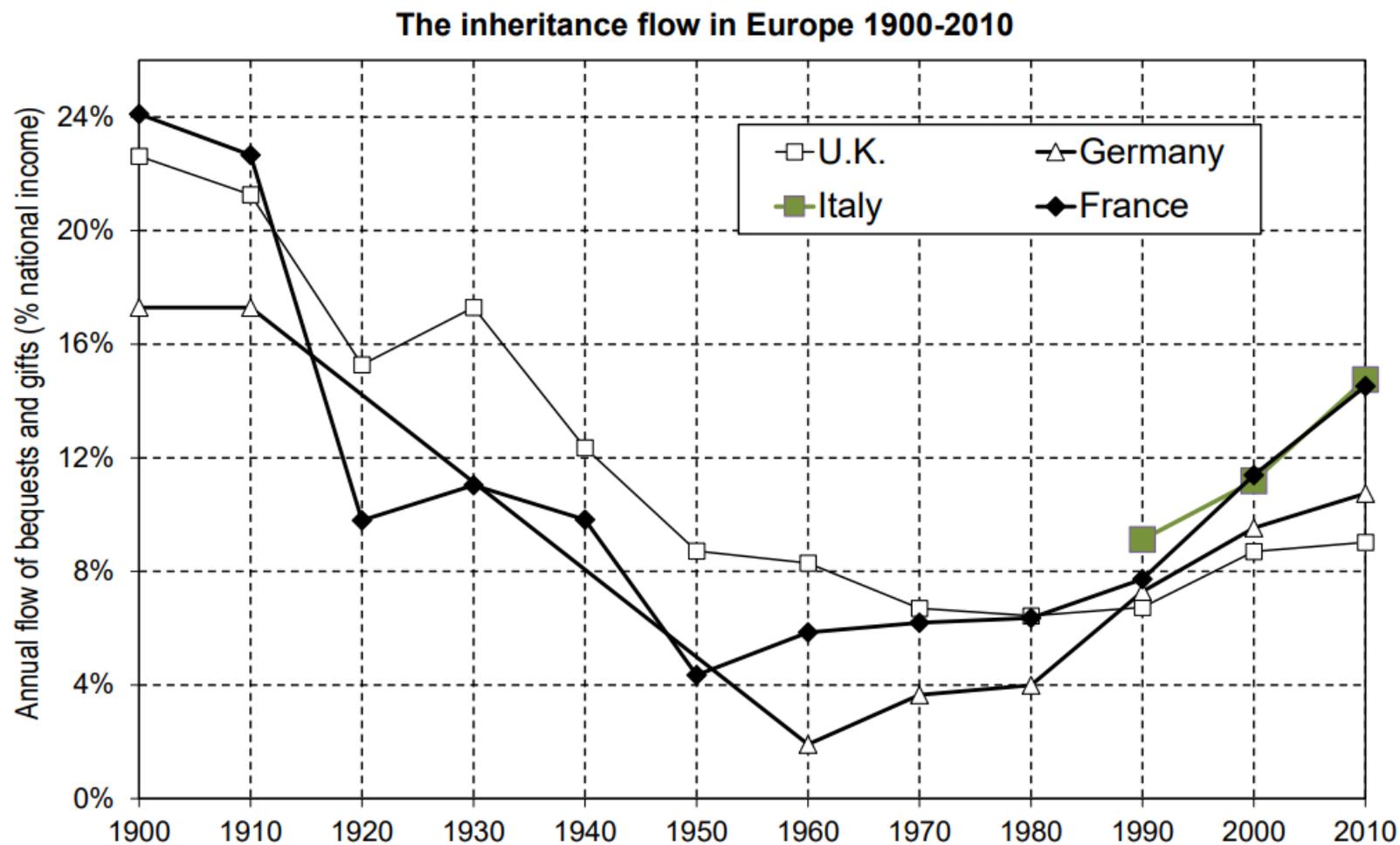


Intergenerational wealth transfers and wealth inequality

Salvatore Morelli, Brian Nolan, Juan C. Palomino, and
Philippe Van Kerm

The growing relevance of inheritance & gift flows



The role that intergenerational transfers of wealth play in the generation of wealth inequality is of long-standing interest (e.g. Kotlikoff and Summers, 1981, Kotlikoff, 1988, Modigliani, 1988, Davies and Shorrocks, 2000), reinforced by recent increases in the scale of those transfers.

Increasing role of bequests may restrict the space of opportunities

Source: Alvaredo, Garbinti, and Piketty (2017) and Acciari, Alvaredo, and Morelli (2021)

Question of interest

What is the role that intergenerational transfers of wealth play in the generation of wealth inequality ?

Compare the actual cross-section wealth inequality at any period t , $I(FW_t)$ to that if no wealth-transfers take place, $I^(FW_t^*)$*

A variety of possible approaches...

Existing literature : counterintuitive?

“...inheritances and gifts have vastly equalizing effect on inequality in household wealth”

(Bönke et al., 2017, using squared coefficient of variation for Eurozone countries)

Similar results: Wolff and Gittleman (2014), Wolff (2015) on US using squared coefficient of variation. Karagiannaki (2017) , Crawford and Hood (2016) on GB using CV and Gini

Mixed findings: Nolan et al. (2021) decomposed the Gini coefficient for Britain, France, Germany, Italy, Spain, and the US.

Administrative data (also within quasi experimental setting): Boserup et al (2016) for Denmark, Elinder et al (2018) for Sweden

The «ascription» approaches

- **First:** estimate wealth ascribed to inheritances and gifts (capitalizing values reported to incorporate some rate of return since receipt).
- **Second:** compare Inequality for wealth excluding 'transfer wealth' to that in total (net marketable) wealth. (note: inequality decomposition exercises are also done)

Conclusion → wealth transfers are equalising.

- **Explanation:** absolute gaps increase but relative gaps decrease
- **Limitations:** uncertainty about how much of current wealth can be satisfactorily attributed (ascribed) to past transfers (method does not allow for heterogenous returns or behavioural responses to wealth receipt). The counterfactual is not particularly helpful: a world in which no transfers are received but the accumulated wealth of the previous generation is unaffected.

Sharply conflicting estimates

- *Upon their receipt, inheritances reduce relative measures of wealth inequality, such as top shares or percentile ratios... Within a decade, however, the effect is reversed: inheritances increase wealth inequality since the different depletion rates widen the inequality in inherited wealth over time... Taken together, inheritances increase the wealth inequality in the long run. (Nekoei and Seim, 2021)*
- *... strongly suggestive that intergenerational wealth transmission plays an important role in helping to explain wealth concentration (Feiveson and Sabelhaus, 2018)*

Contribution of the paper:

- We offer a novel starting point to estimate how wealth transfers affect wealth distribution
- We propose to follow an ‘**association**’ approach focusing on assessment of the association between current wealth and the observed cumulative transfers received.
- This paper applies an analytic approach rarely used in this context, *recentered influence function (RIF)* regression methods (Firpo et al. 2009) which capture how marginal changes in the distribution of covariates impact on distributive statistics.
- We apply the approach to microdata from household wealth surveys for six major rich countries – France, Germany, Italy, Spain, Great Britain and the USA.

Information About Wealth Transfers in Surveys

Details Sought on:	Inheritances	Gifts
SCF	Each of 3 largest gifts/inheritances ever received, including whether inheritance or gift, plus total amount any other receipts	
HFCS	Each of 3 largest gifts/inheritances ever received including whether inheritance or gift	
WAS Wave 1	<p>Each of 3 largest inheritances received in previous five years</p> <p>Each of 3 largest inheritances received more than five years ago</p>	Largest gift received in previous two years
WAS Waves 2-	Each of 3 largest inheritances received in previous two years	Largest gift received in previous two years

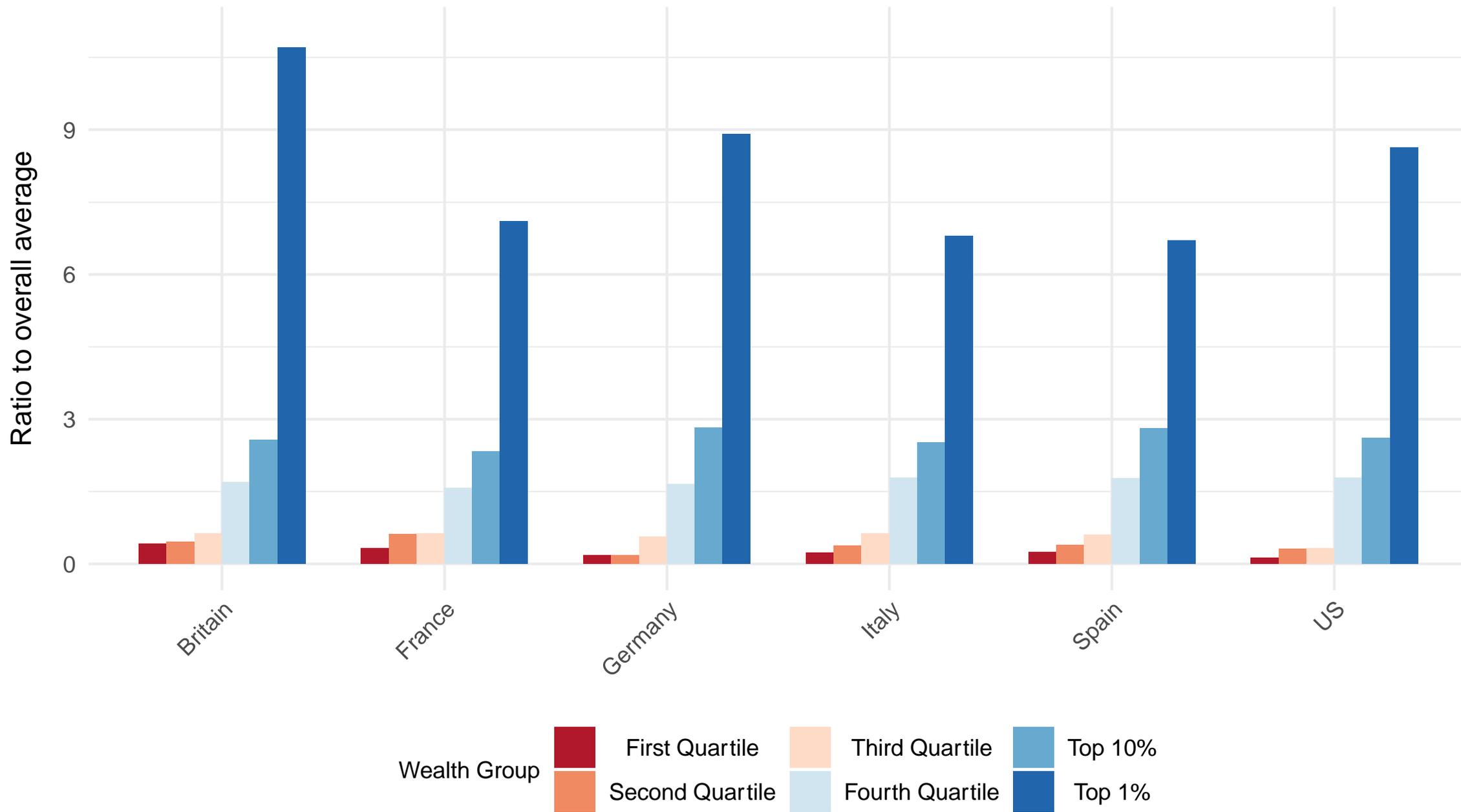
Data Issues addressed

- ▶ **Imputation:** Impute missing inheritance value for those who said they had received an inheritance but did not report any. (Different extent of ‘missingness’ ranging from 36% of recipient households in WAS to 5% in the SCF)
- ▶ **Net to Gross Values:** WAS asks for the value of inheritances received “after tax and other deductions”, while other countries ask for gross market value. We estimate before-tax values.
- ▶ **Small transfers:** In both SCF and HFCS, respondents asked about an inheritance or substantial gift, whereas in WAS threshold of £1,000 for inheritances and £500 for gifts is used. To bring the datasets into closer alignment, we apply a threshold set at 10% of median income (£3,000 in the UK). values)
- ▶ **Inheritances from Spouses:** excluded
- ▶ **Unit:** Responses on receipt of inheritances and gifts are at the individual level in WAS. We aggregate WAS data to (W3) household level
- ▶ **Uprating of Nominal Amounts:** Inheritances and gifts received at different points in time are reported in nominal terms. We convert into 2010 prices, using the CPI index.

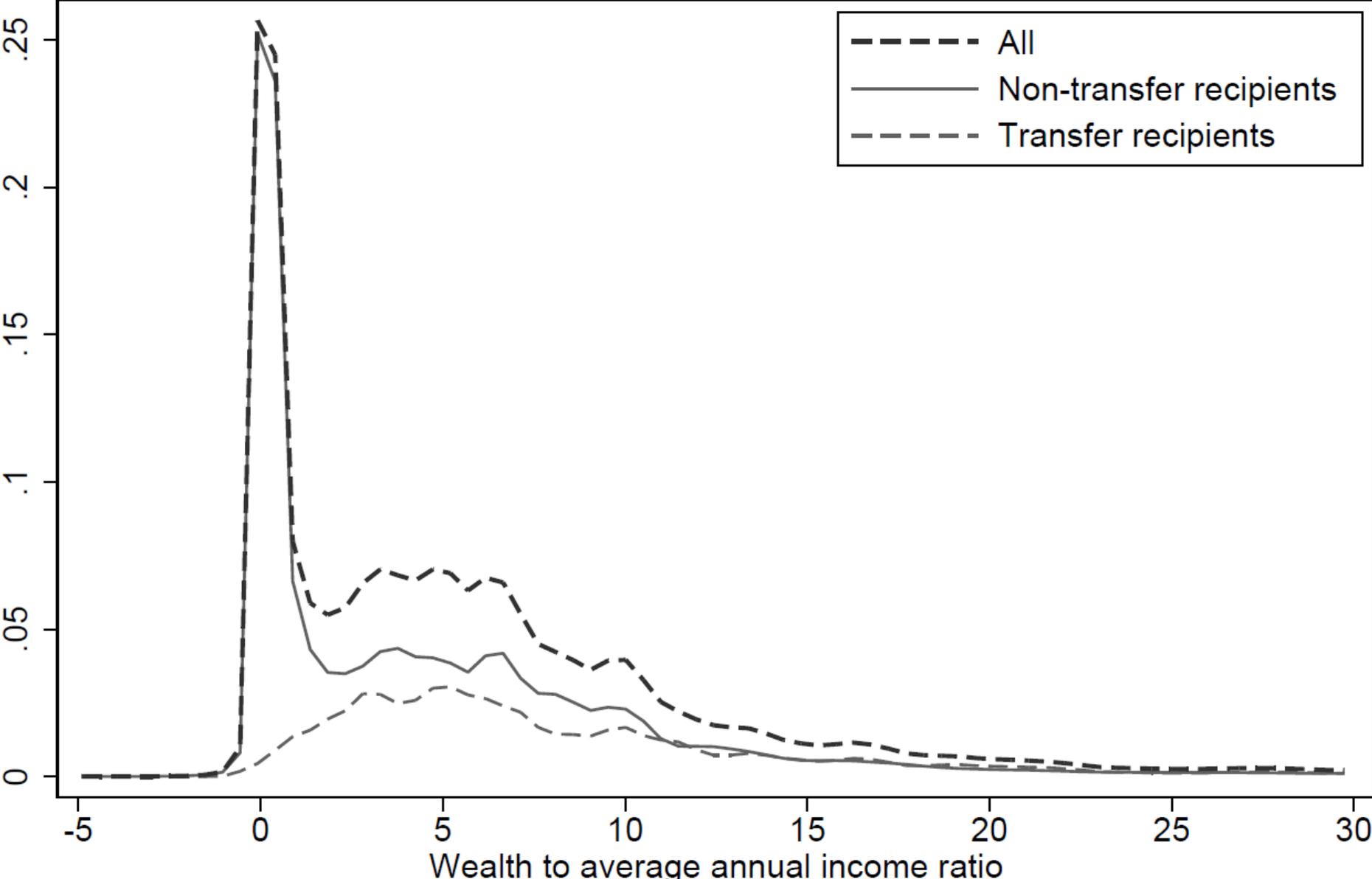
Description of wealth transfers patterns

Table 2: Intergenerational Transfers by Position in Wealth Distribution						
	Britain	France	Germany	Italy	Spain	US
	%	%	%	%	%	%
Bottom quartile	14.9	11.7	6.4	3.4	14.9	5.7
Second quartile	29.4	28.5	21.0	34.6	24.6	11.6
Third quartile	38.2	41.6	40.9	39.4	31.1	23.0
Top quartile	56.1	58.8	61.8	49.2	44.5	35.9
Top 10%	62.4	67.8	62.7	54.7	51.9	42.8
Top 1%	63.3	71.5	69.7	53.9	60.5	39.2
Total % receiving gifts or inheritances	34.8	36.1	32.5	31.6	28.8	19.1

Average relative transfer amount received by wealth group
Ratio to overall average in each country

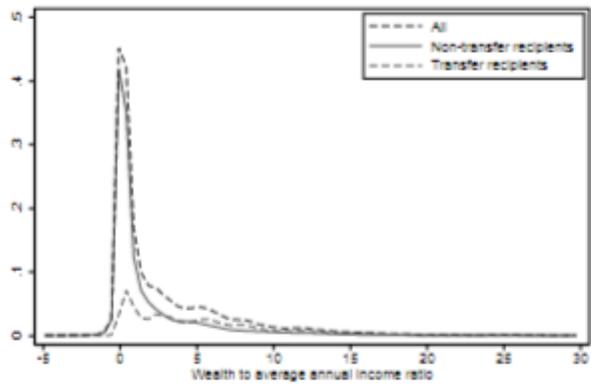


Recipients are wealthier on average: Italy

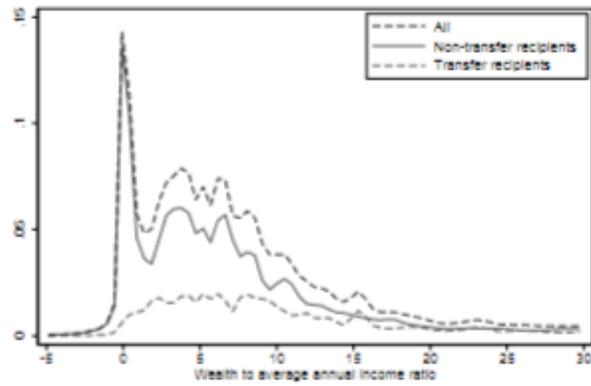


kernel density estimates of the net worth distributions, for the overall population and separately for households that declared some positive amount of transfer received and for the others.

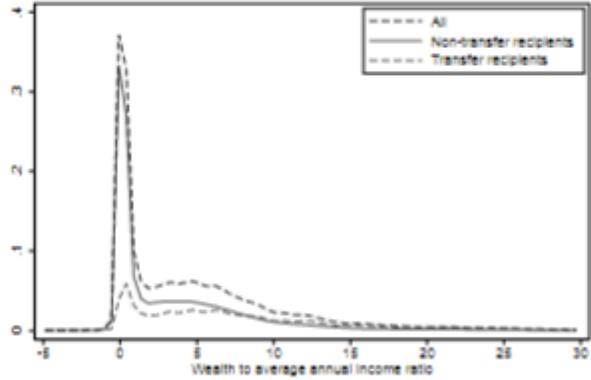
(a) Germany



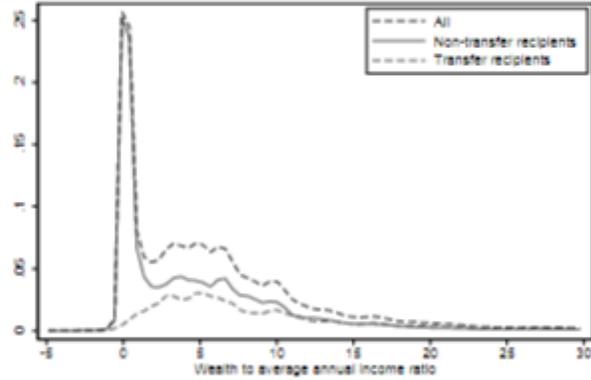
(b) Spain



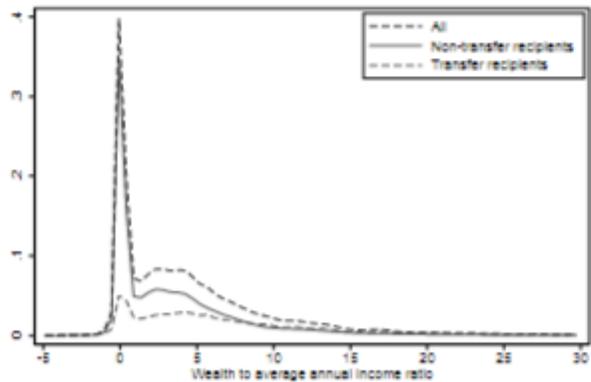
(c) France



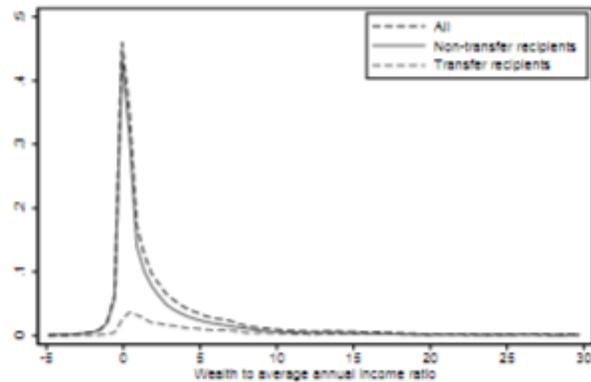
(d) Italy



(e) United Kingdom



(f) United States



For all countries

First step of the analysis: The influence function

Let $v(F^W)$ be a statistic of interest (a functional) calculated in distribution F^W (the mean, a percentile ratio, the Gini coefficient of inequality, etc.) The influence function of v , $IF(w; v, F^W)$, is a function of w and F^W and is defined as (Hampel, 1974)

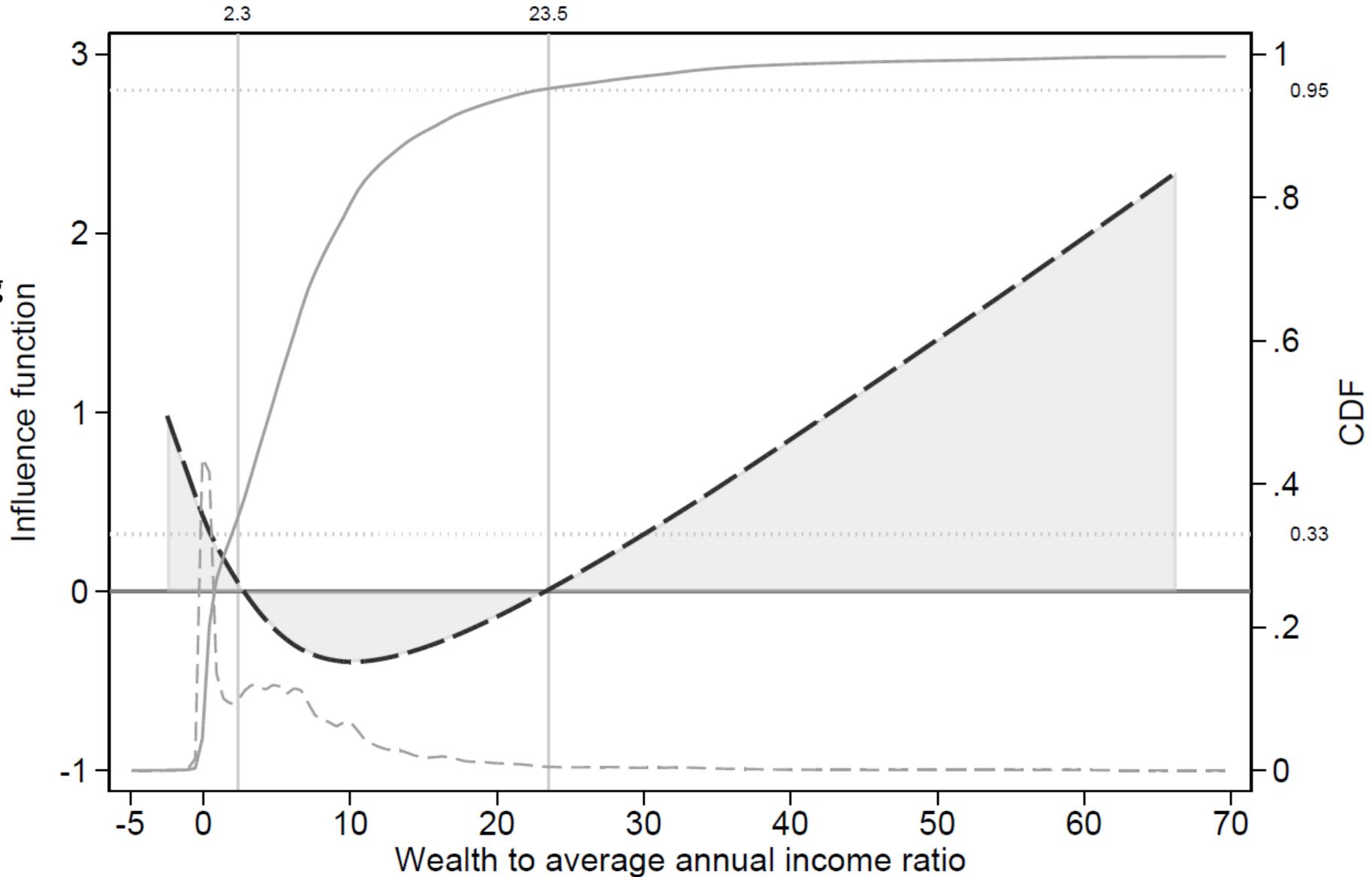
$$IF(w; v, F^W) = \lim_{\varepsilon \rightarrow 0} \frac{v((1-\varepsilon)F^W + \varepsilon\Delta_w) - v(F^W)}{\varepsilon}$$

The IF captures the effect on $v(F^W)$ of an infinitesimal marginal ‘contamination’ of F^W at point mass w . The IF allows visualising the ‘structure’ of a (possibly complex) index (we use Gini and Top5/Bottom95)

As the expected value of the IF is zero, a Re-centered IF could be defined as $RIF(w; v, F^W) = v(F^W) + IF(w; v, F^W)$

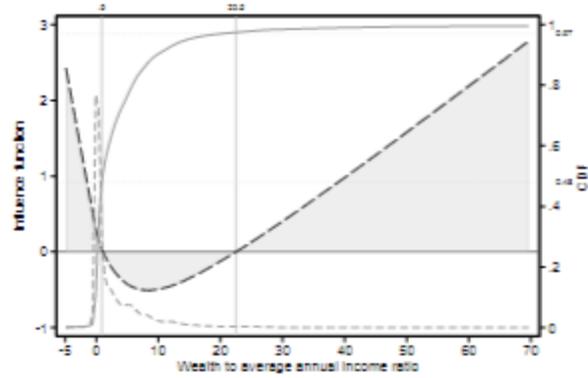
First step: The IF captures the contribution of different wealth groups to the Gini of wealth

Inequality'.
U-shaped form using
standard inequality
functionals

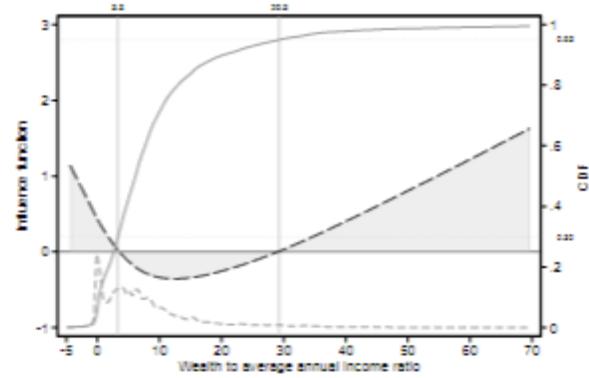


For all countries

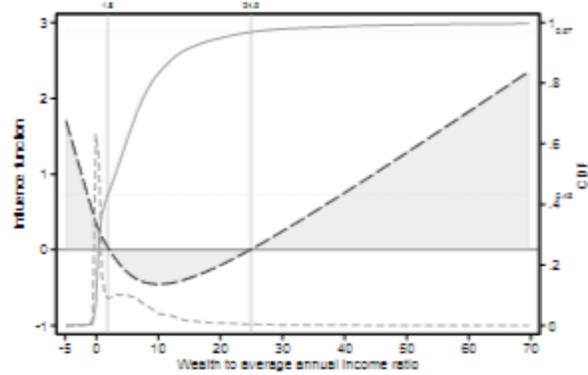
(a) Germany



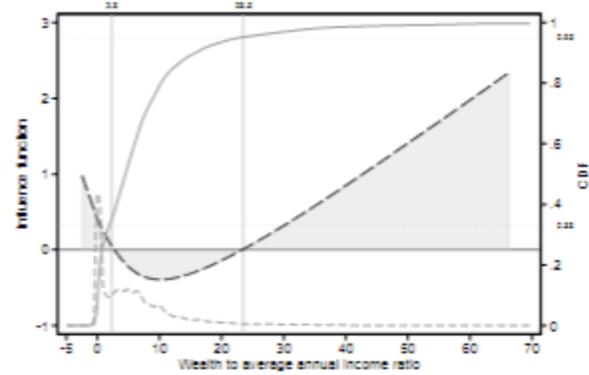
(b) Spain



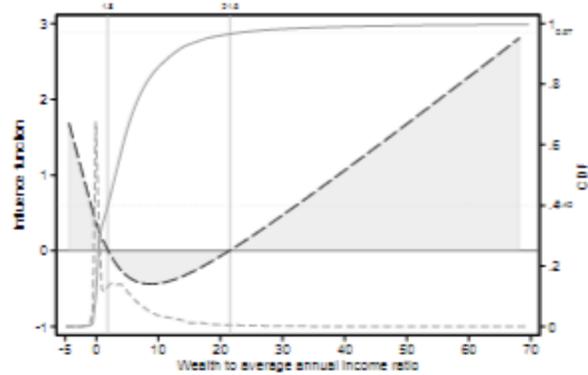
(c) France



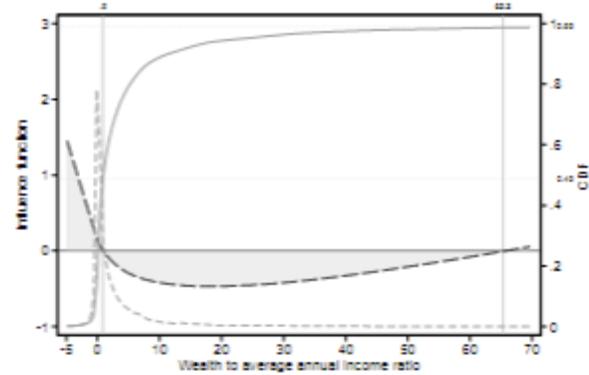
(d) Italy



(e) United Kingdom

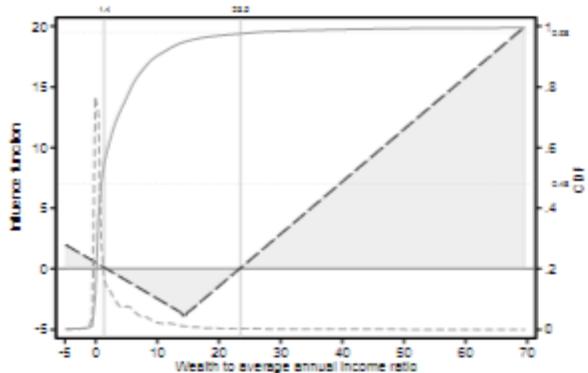


(f) United States

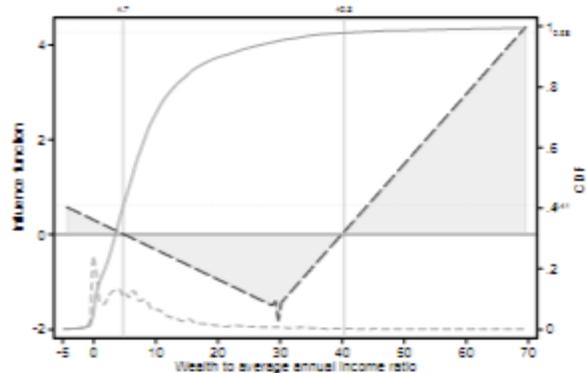


Top 5 / Bottom 95 ratio

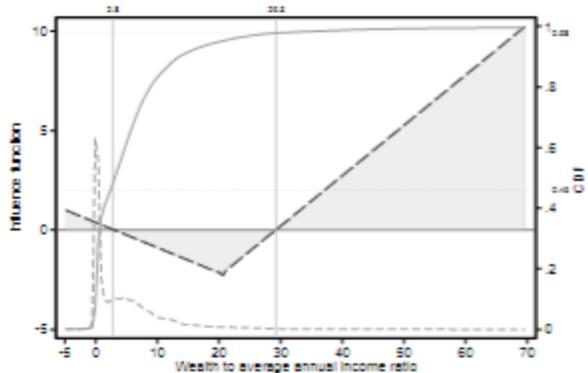
(a) Germany



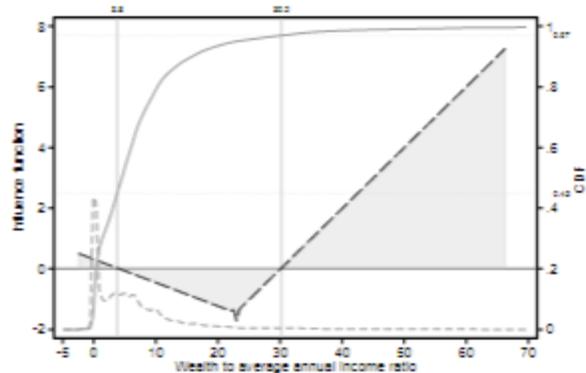
(b) Spain



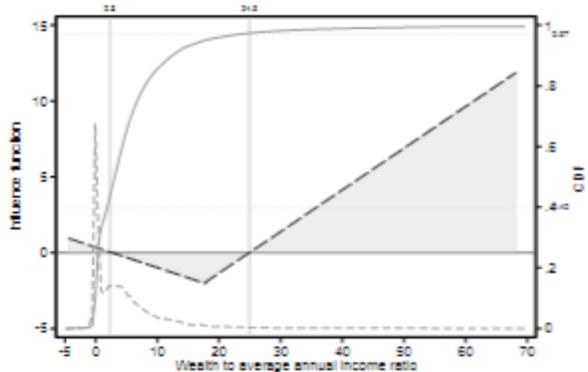
(c) France



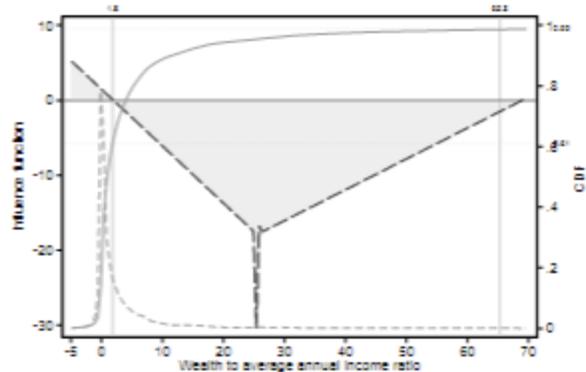
(d) Italy



(e) United Kingdom



(f) United States



Second step of the analysis: The Recentered Influence Function regression

We could then derive the effect of a marginal **increase** in the proportion of recipients of wealth transfers (effectively a marginal swap of non recipients of wealth transfers with recipients) on our distributional measure $v, (F^W)$?

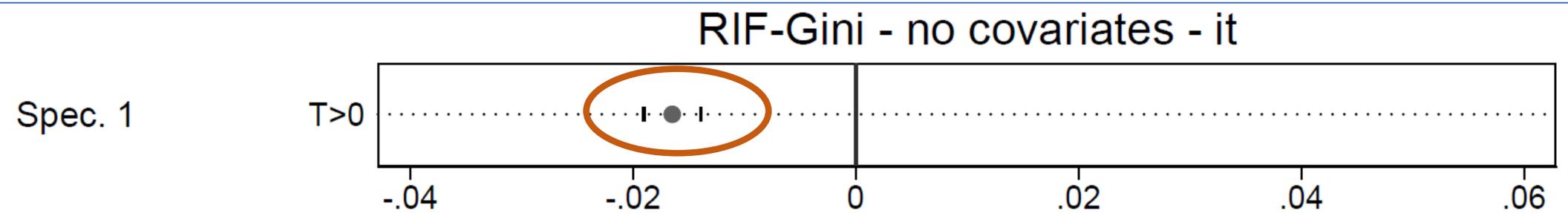
Such a measure is labelled an **'unconditional partial effect'**, a **'policy effect'** or a **'counterfactual effect'**

Following Firpo et al. (2009), such effect could be derived as the difference of the expected value of $RIF(w; v, F^W)$ among recipients and non recipients :

$$E[RIF(w; v, F^W)|T = 1] - E[RIF(w; v, F^W)|T = 0]$$

OLS Regression-based estimator, β in : $E[RIF(w; v, F^W)|T] = \alpha + T\beta$

Second step: RIF Regression: Italy Main results

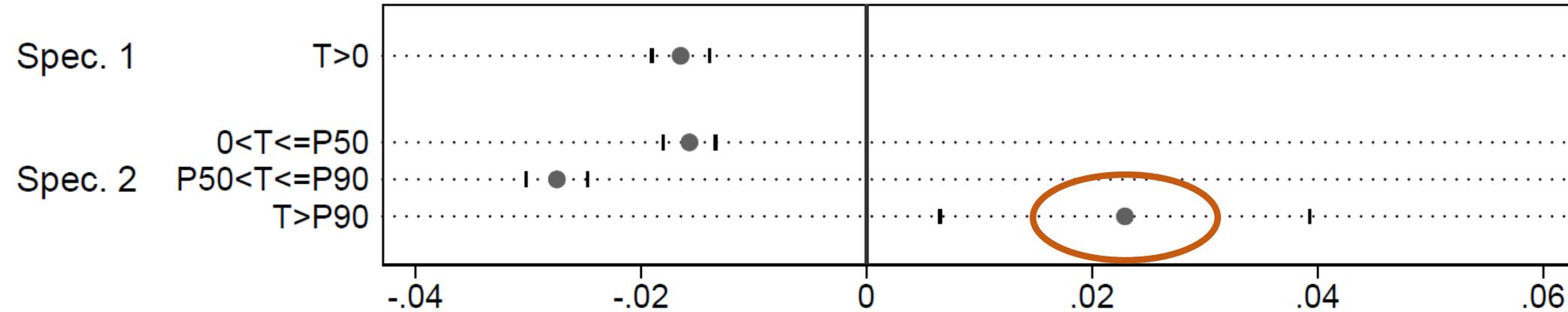


The first specification classifies transfers as positive or null (i.e. dichotomous distinction zero/positive).

The impact of having more recipients and fewer non-recipients would be to reduce the Gini - in all countries except Spain. What this reflects is the fact that transfer recipients are, on the whole, more frequently positioned around the middle of the overall wealth distribution than non-recipients. Increasing the proportion of transfer recipients serves to increase the number of households in the middle of the distribution, to which the Gini coefficients particularly (negatively) sensitive.

RIF Regression: Italy (transfers of different sizes)

RIF-Gini - no covariates - it

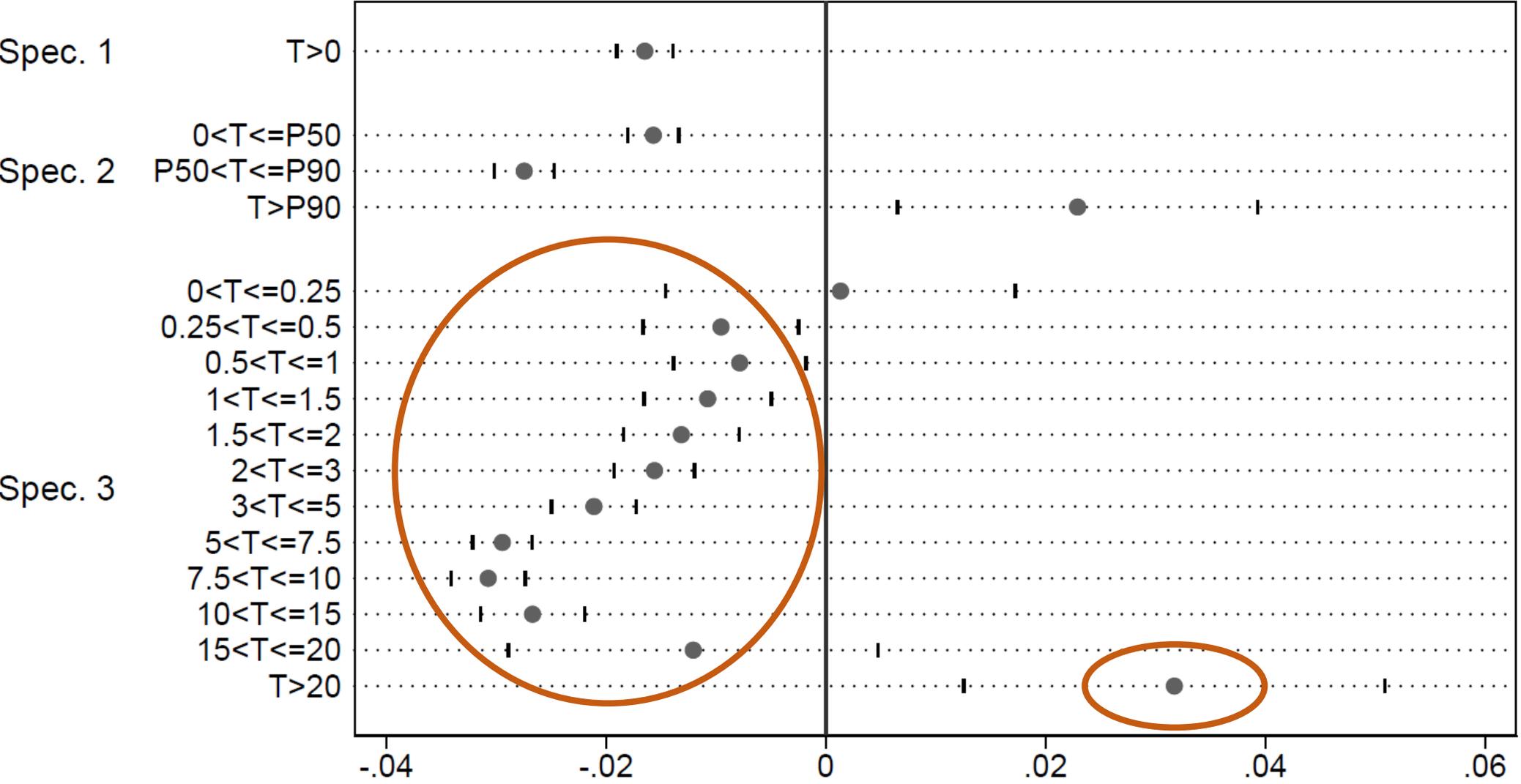


Second we define a small transfer as a transfer smaller than the median of the (positive) transfer distribution, a medium transfer as a transfer between the median and the 9th decile of the transfer distribution and a large transfer as a transfer larger than the 9th decile.

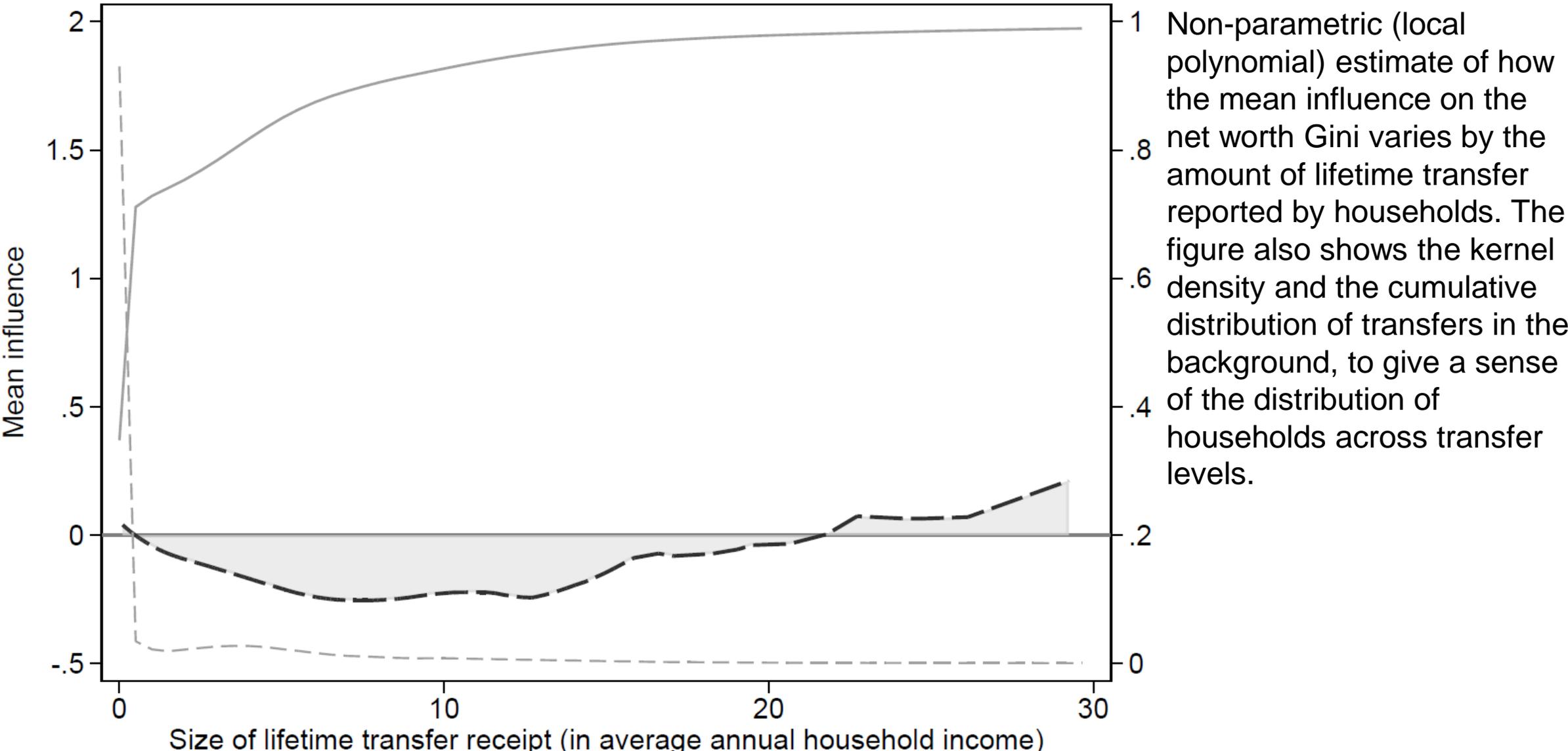
Since most recipients of small and medium transfers are in the central part of the distribution, increasing their share would again have an equalising effect. However, when we consider the receipt of large inheritances the influence on the Gini index is positive. What this reveals is that large transfers recipients tend to be found in the upper tail of the distribution.

RIF Regression: Italy (finer transfers thresholds as fractions of average annual income)

RIF-Gini - no covariates - it

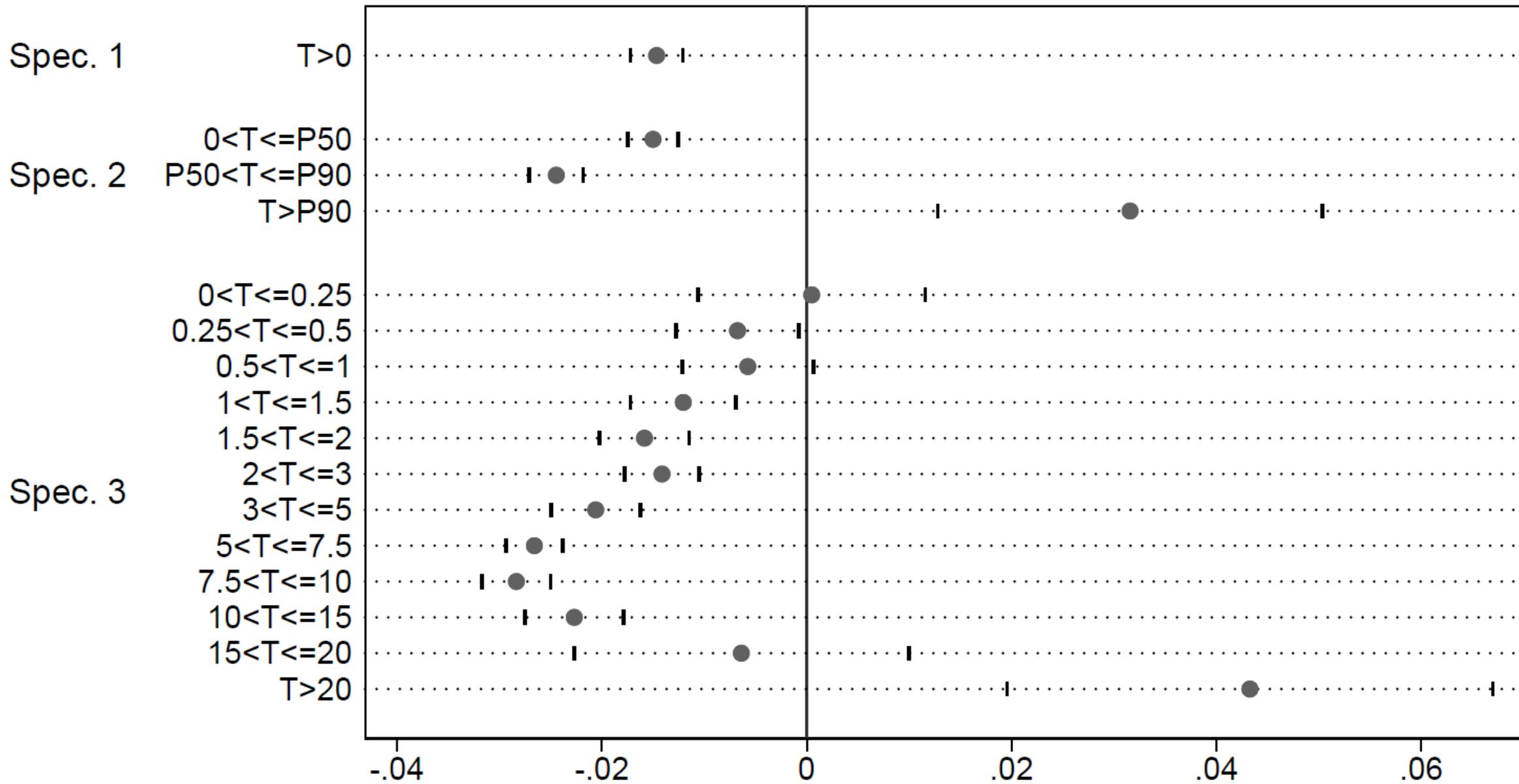


Non parametric estimates:Italy (mean IF on Gini by transfer size)

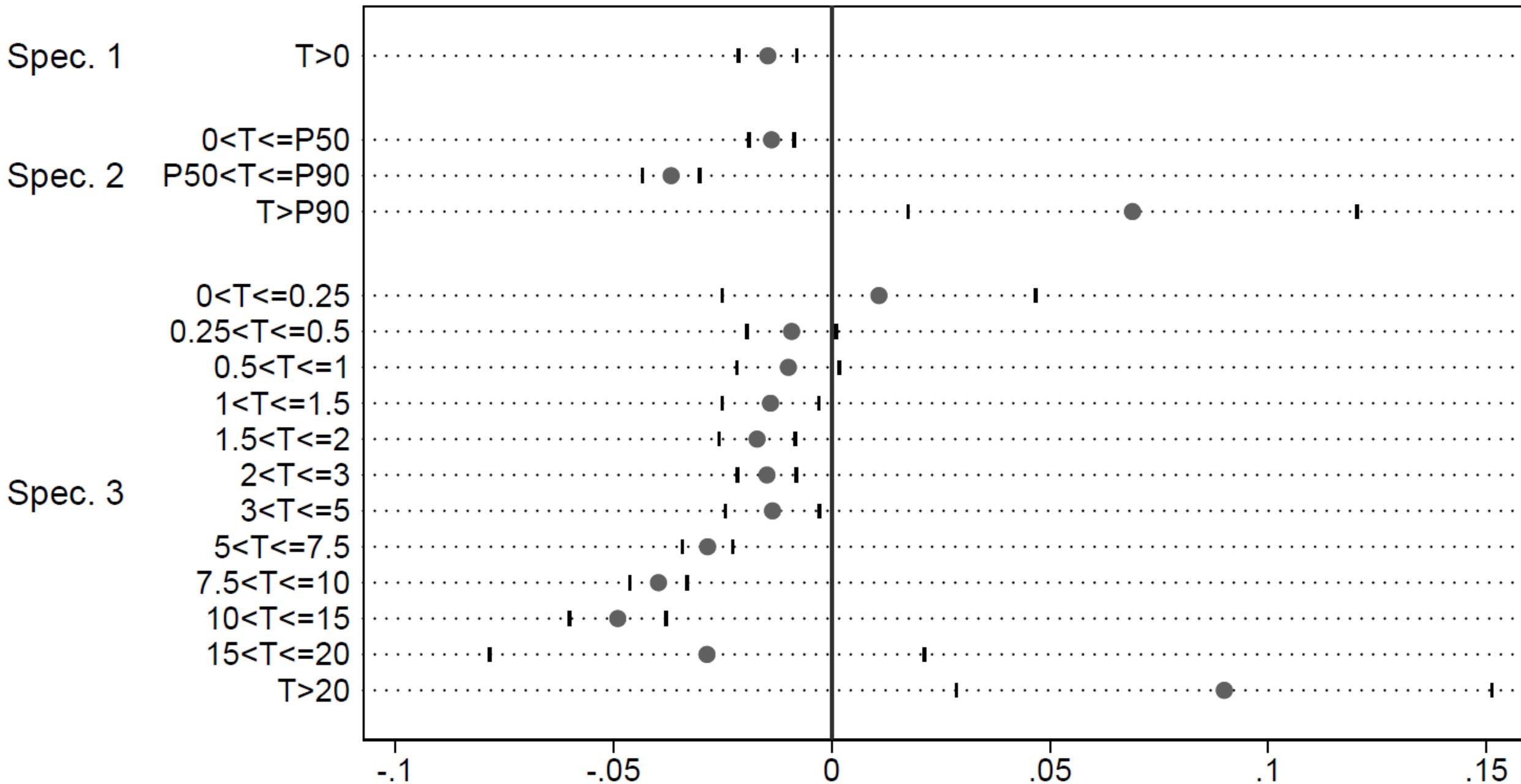


- **Advantages:** The first is that RIF regressions apply generally to any conventional statistic of interest (not only to specific decomposable measures such as the Gini coefficient). Second it allows us to assess the distributive impact of transfer receipt not only 'unconditionally' but also 'conditionally', that is, holding constant covariates that may have an effect on wealth such as age, gender, and income.
- **Limitations:** Like other approaches in this literature causal or general equilibrium impacts are not being identified, but this is less critical when focusing on marginal changes

RIF-Gini - age and income controls - it



RIF-top5 - no covariates - it



Concluding remarks

- Our findings reinforce the conclusion of some recent studies that the overall effect of wealth transfers is equalizing, but highlight **a crucial heterogeneity in impact by size of transfer that has not been previously recognised.**
- The results suggested that in most countries, having more transfer recipients and correspondingly fewer non-recipients, or more recipients of small or medium-sized transfers, would be expected to reduce wealth inequality modestly, reflecting the fact that those transfer recipients were more concentrated around the middle of the wealth distribution than non-recipients.
- In contrast, increasing the proportion of recipients of large transfers generally increases overall wealth inequality.

Interesting policy implications: The exercise identifies the thresholds above which transfers become disequalizing. **Results could better inform the design of inheritance tax policies.**

Additional slides

Missing Values in WAS

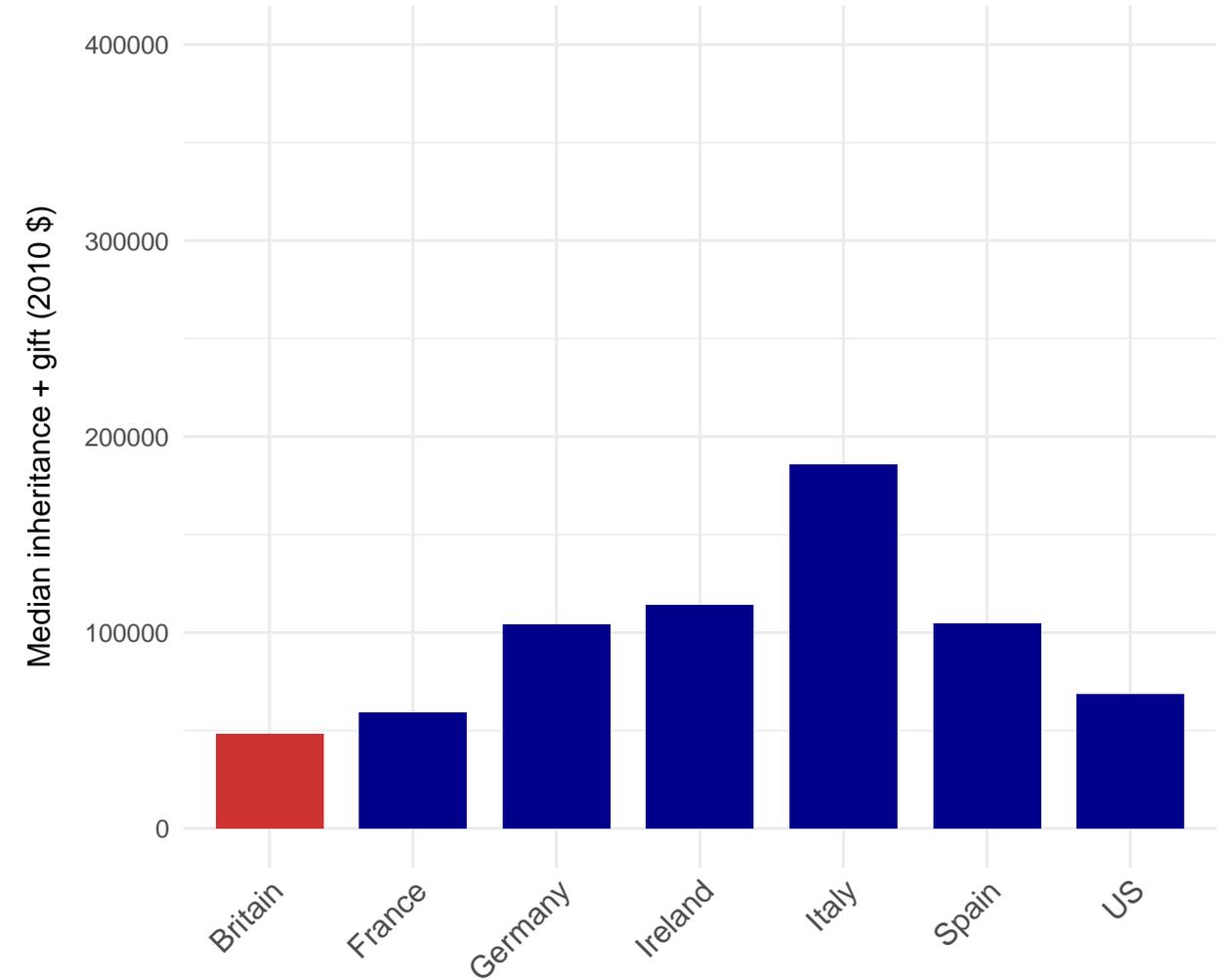
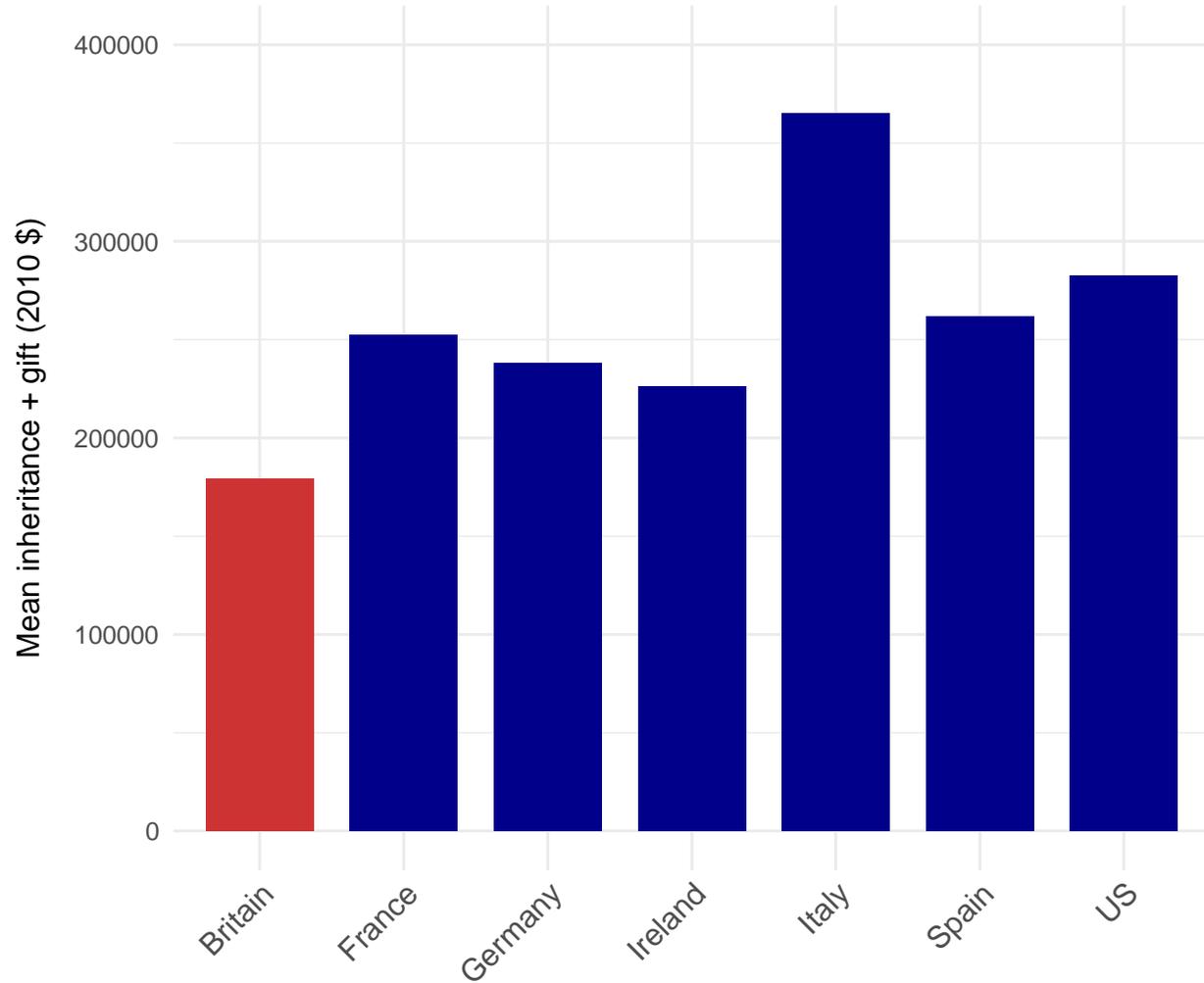
- 3.3 Major problems then arise with the extent of item non-response in Wave 1 about the values of transfers received. On the question about inheritances received more than 5 years ago, no information is recorded about its value for more than one-fifth of those reporting such a receipt (802 out of 3,598). The more serious information deficit though is for those saying they had received an inheritance in the previous 5 years: more than three-quarters of these (1,862 out of 2,384) have no value for the amount received. It appears that the latter reflects a problem in the administration of the first wave of the survey in terms of questionnaire design/routing - with only a minority of interviewers ignoring an incorrect instruction to bypass the detailed questions about amounts for those who reported receipt in the previous five years.

The paper in a broader perspective

Presentation based on a new paper stemmed from the results from project ‘The Intergenerational Transmission of family wealth’ funded by the Nuffield Foundation (B. Nolan (PI), E. Bukodi, S. Morelli, J. Palomino, P. Van Kerm)

- Nolan, Palomino, Van Kerm, and Morelli (2020), “The Wealth of Families: The Intergenerational Transmission of Wealth in Britain in Comparative Perspective”, *Final report*.
- Nolan, Palomino, Van Kerm, and Morelli (2021), “Intergenerational wealth transfers and wealth inequality in rich countries: What do we learn from Gini decomposition?”, *Economics Letters*.
- Morelli, Nolan, Palomino, and Van Kerm (2021), “Intergenerational Transfers and the Accumulation of Wealth for Low-Income Households in Rich Countries” *Journal of European Social Policy*.
- Nolan, Palomino, Van Kerm, and Morelli (2021), “ Intergenerational Wealth Transfers in Great Britain from the Wealth and Assets Survey in Comparative Perspective”, R&R *Fiscal Studies*

Description of wealth transfers patterns

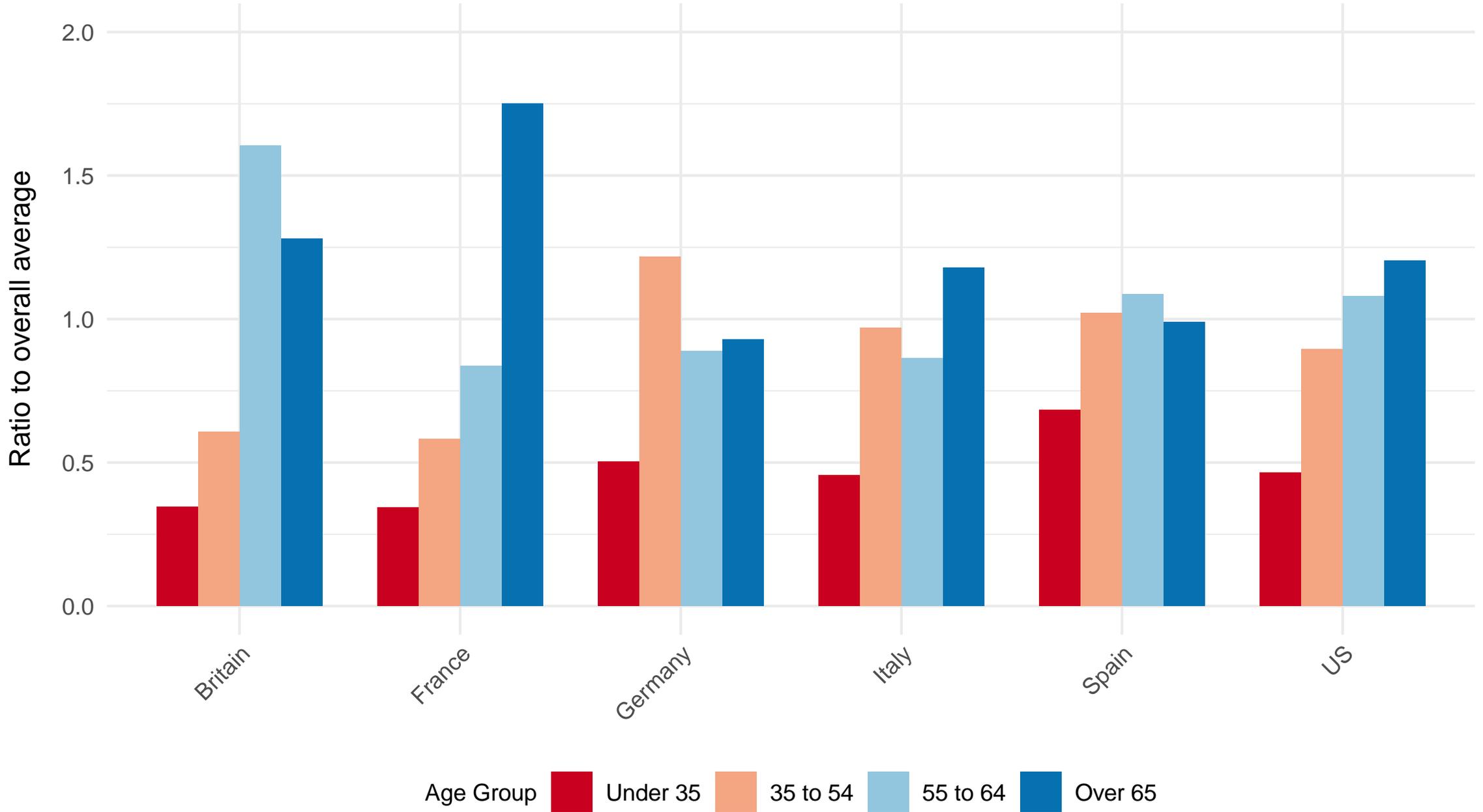


Mean and median amounts of lifetime transfers among recipient households in common currency

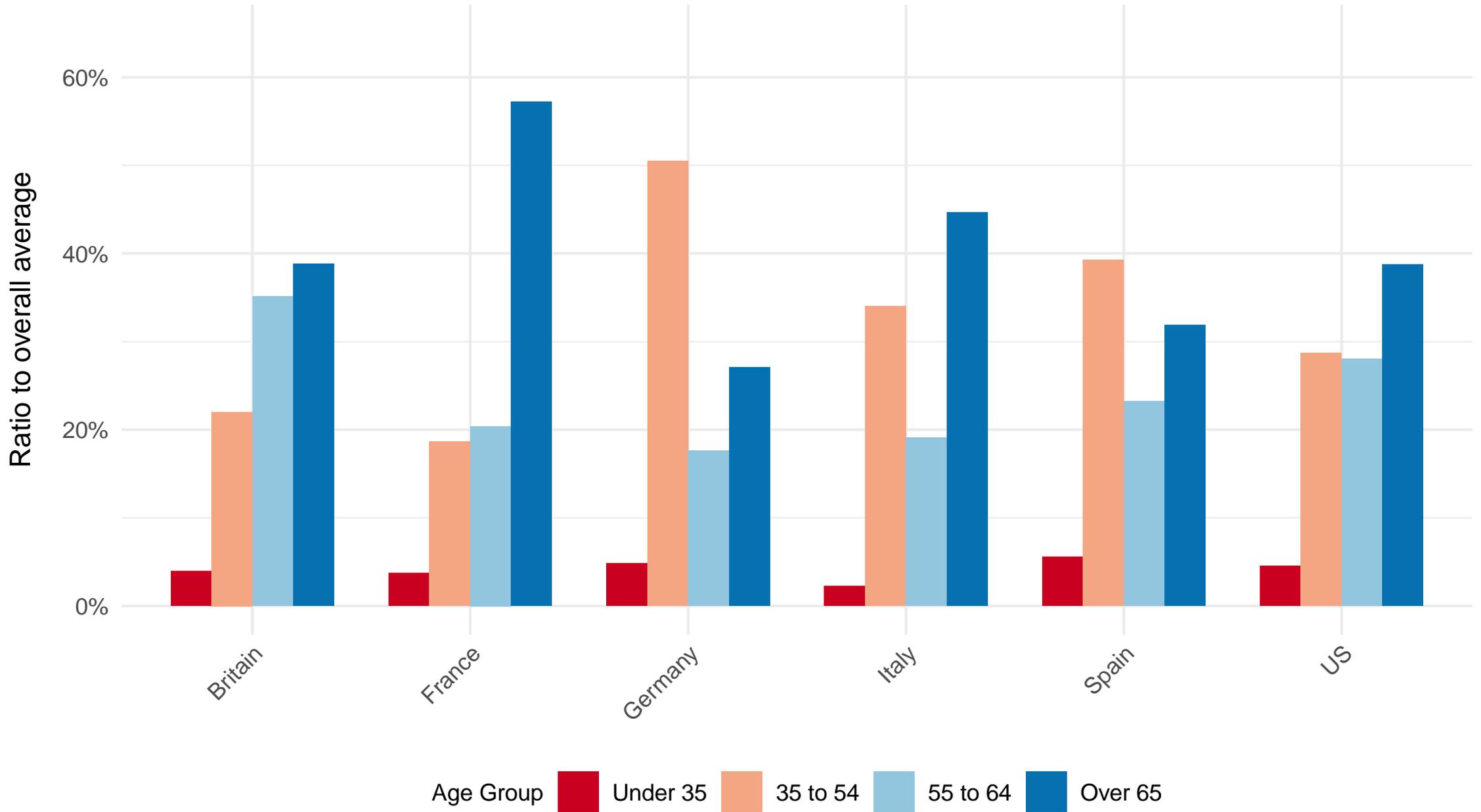
Wealth transfers by age

% receiving any	Britain	France	Germany	Italy	Spain	US
Inheritances	%	%	%	%	%	%
Under 35	19.0	6.7	5.1	11.2	13.1	6.5
35 to 54	24.6	15.1	20.0	20.3	23.4	13.2
55 to 64	40.0	34.3	35.7	33.4	37.3	26.6
Over 65	34.5	34.8	31.6	31.4	33.9	27.9
Gifts						
Under 35	19.7	14.7	12.3	8.1	3.1	2.0
35 to 54	11.6	20.5	18.3	9.8	4.6	2.9
55 to 64	6.0	19.1	11.5	7.3	3.0	2.9
Over 65	1.5	14.1	5.7	3.7	1.6	1.5
Inheritances or gifts						
Under 35	31.6	20.3	16.5	18.3	16.0	8.4
35 to 54	31.6	32.2	35.3	28.6	27.3	15.4
55 to 64	42.4	47.5	43.8	39.6	39.5	28.7
Over 65	35.0	44.9	34.2	34.2	34.9	29.1

Average relative transfer amount received by age group
Ratio to overall average in each country



Share of total transfer amount going to each age group
% of total transfers in each country

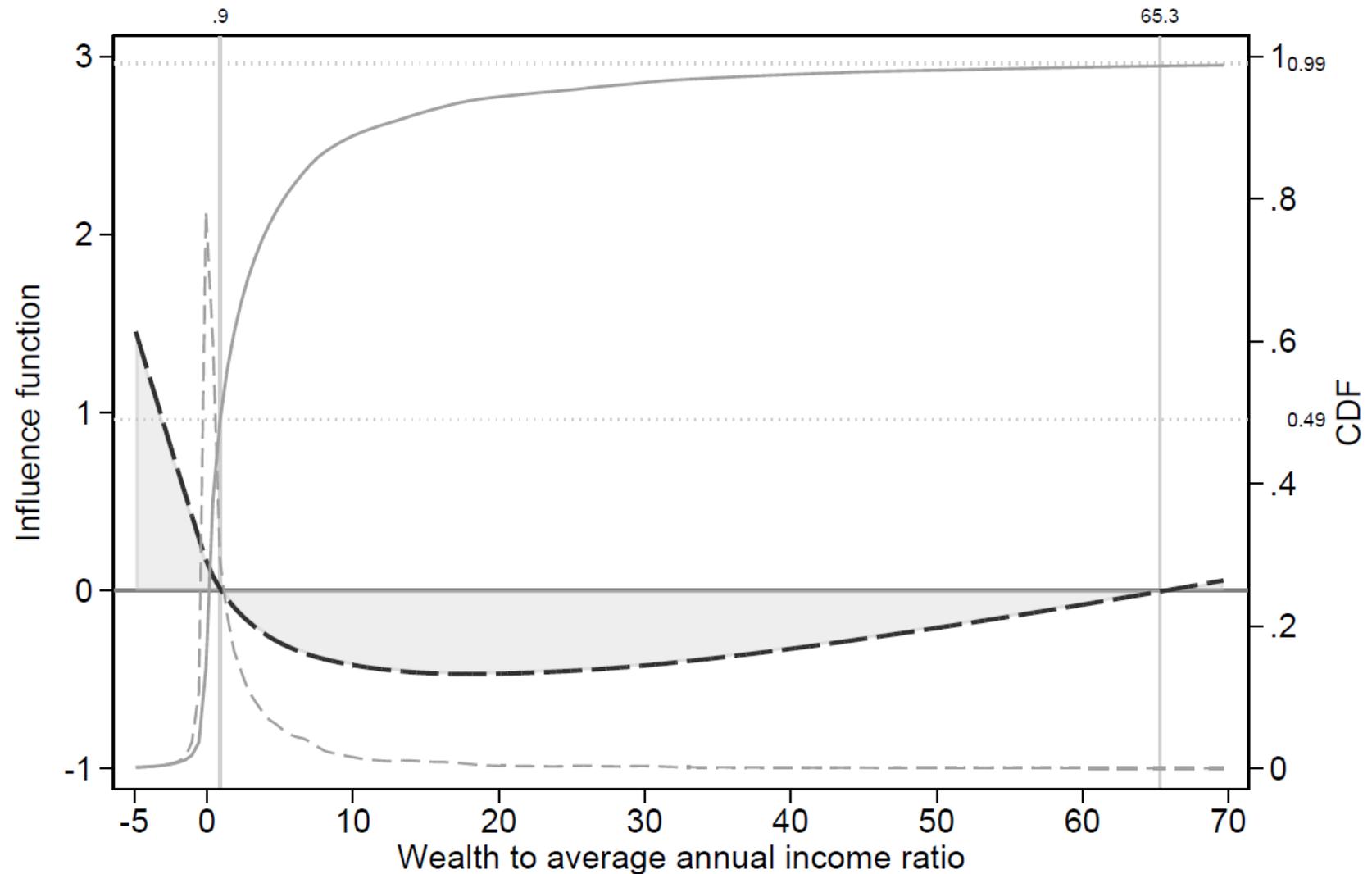


The shape of the influence function for the Gini coefficient: USA

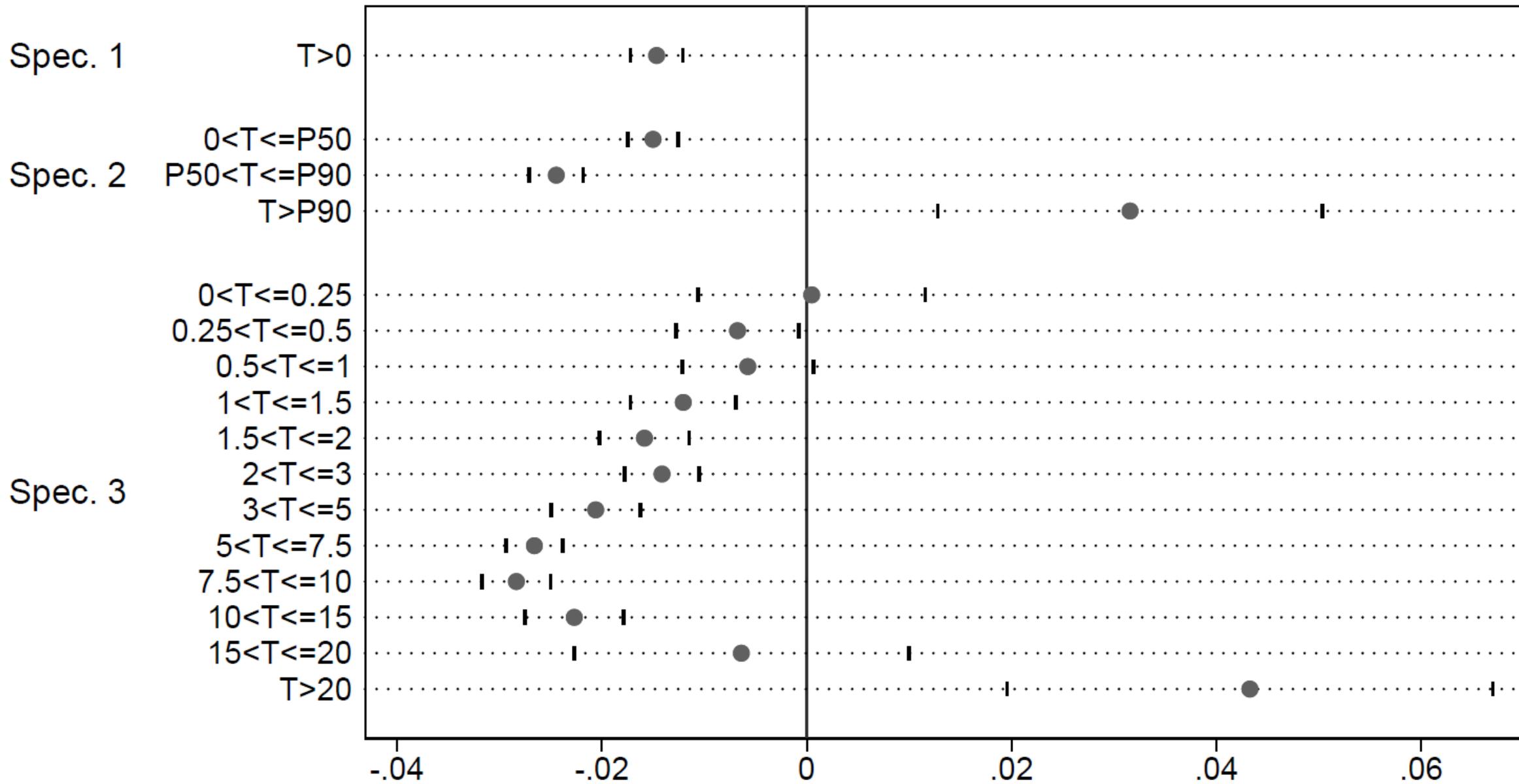
U-shaped form using standard inequality functionals:

both the upper and the lower tail contribute positively to inequality (more individuals at either end tends to increase the Gini coefficient) and the 'middle' contributes negatively.

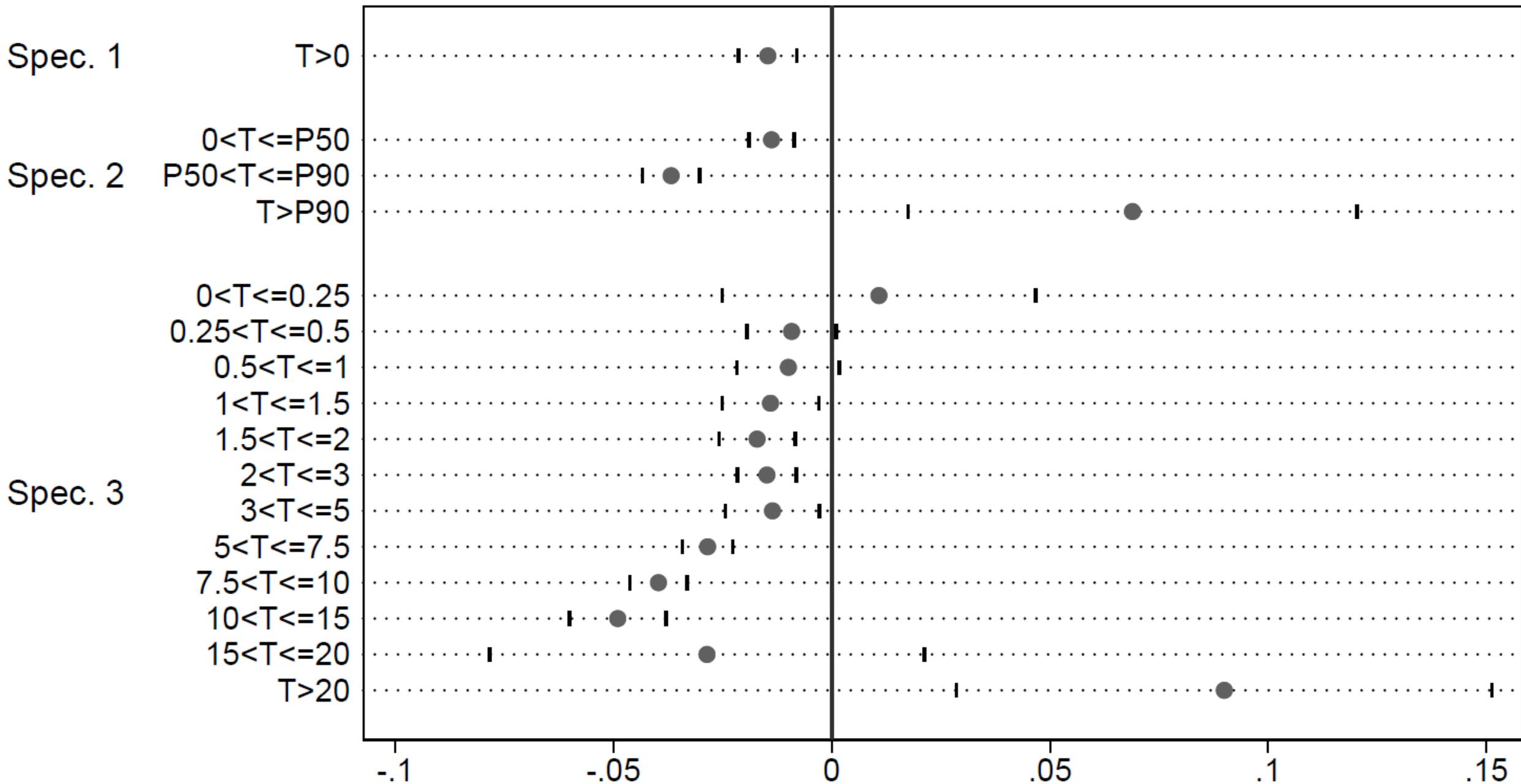
The expectation of $IF(w; \theta, F^W)$ is 0 by construction.



RIF-Gini - age and income controls - it

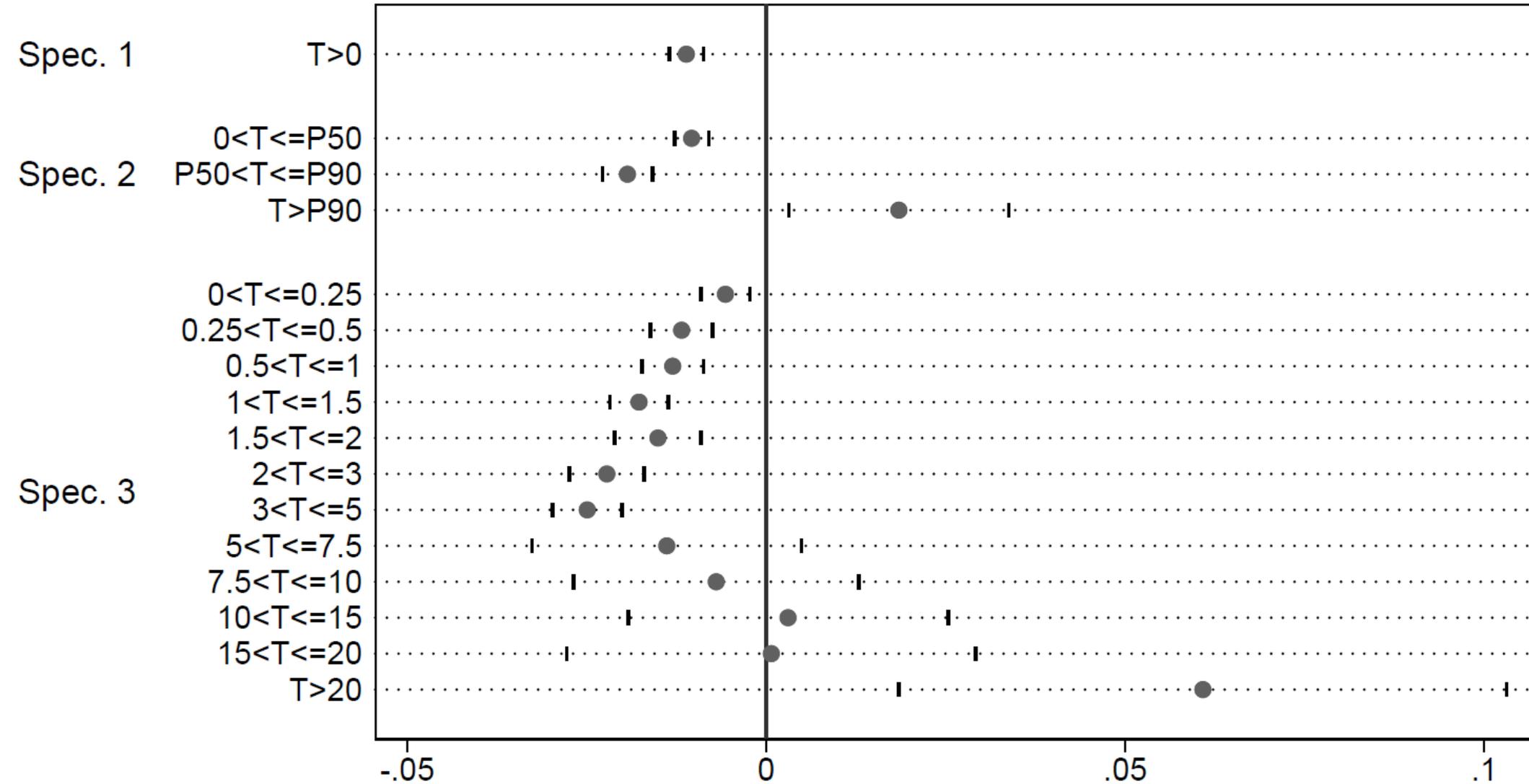


RIF-top5 - no covariates - it



Main results from the RIF Regression: USA

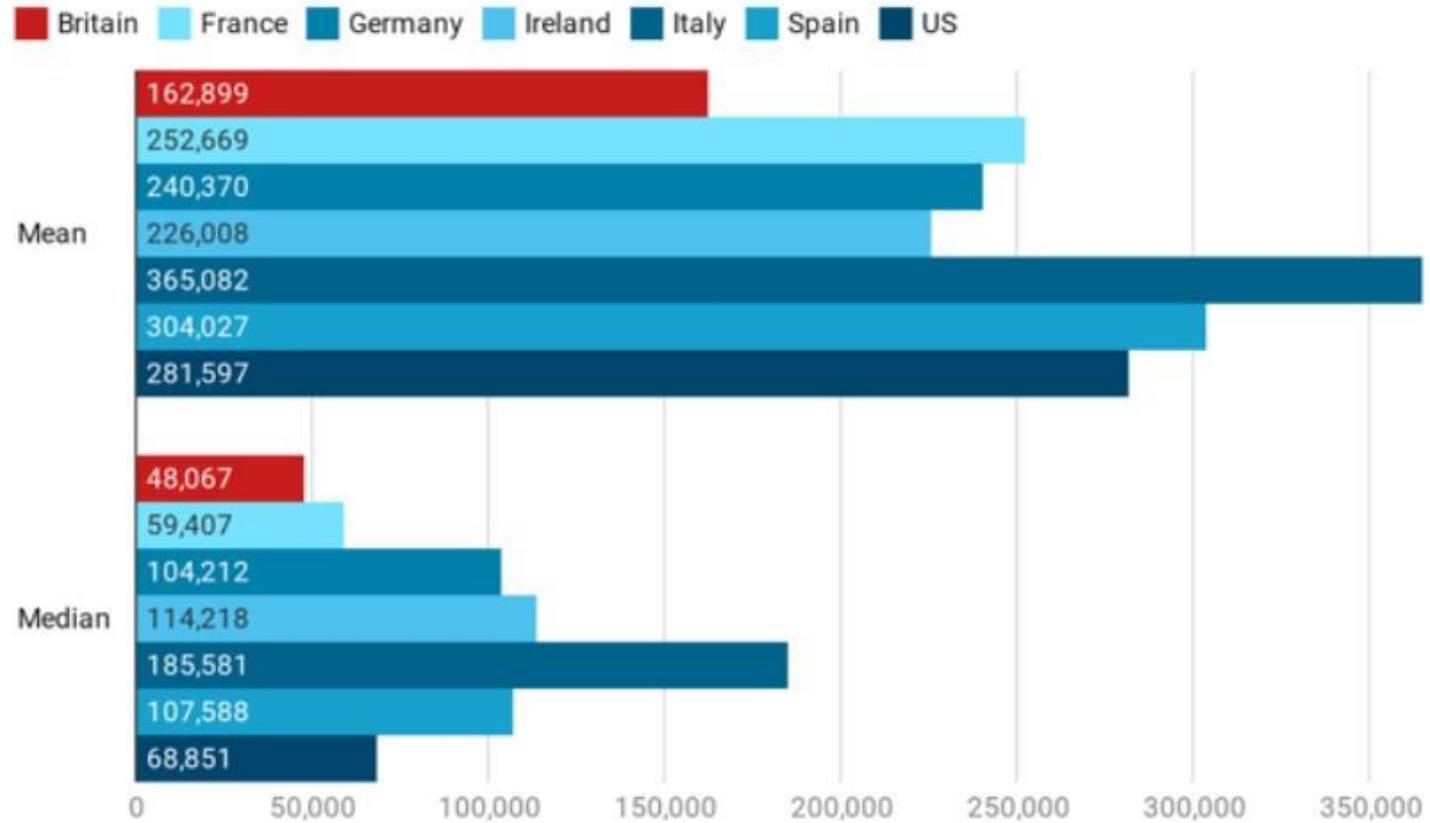
RIF-Gini - no covariates - us



Our second step:
 We derive the conditional expectation $E\{IF(w; \theta, F^W) | H = h\}$ to capture the impact on $Ineq(F^W)$ of agents with cumulative transfers $H = h$

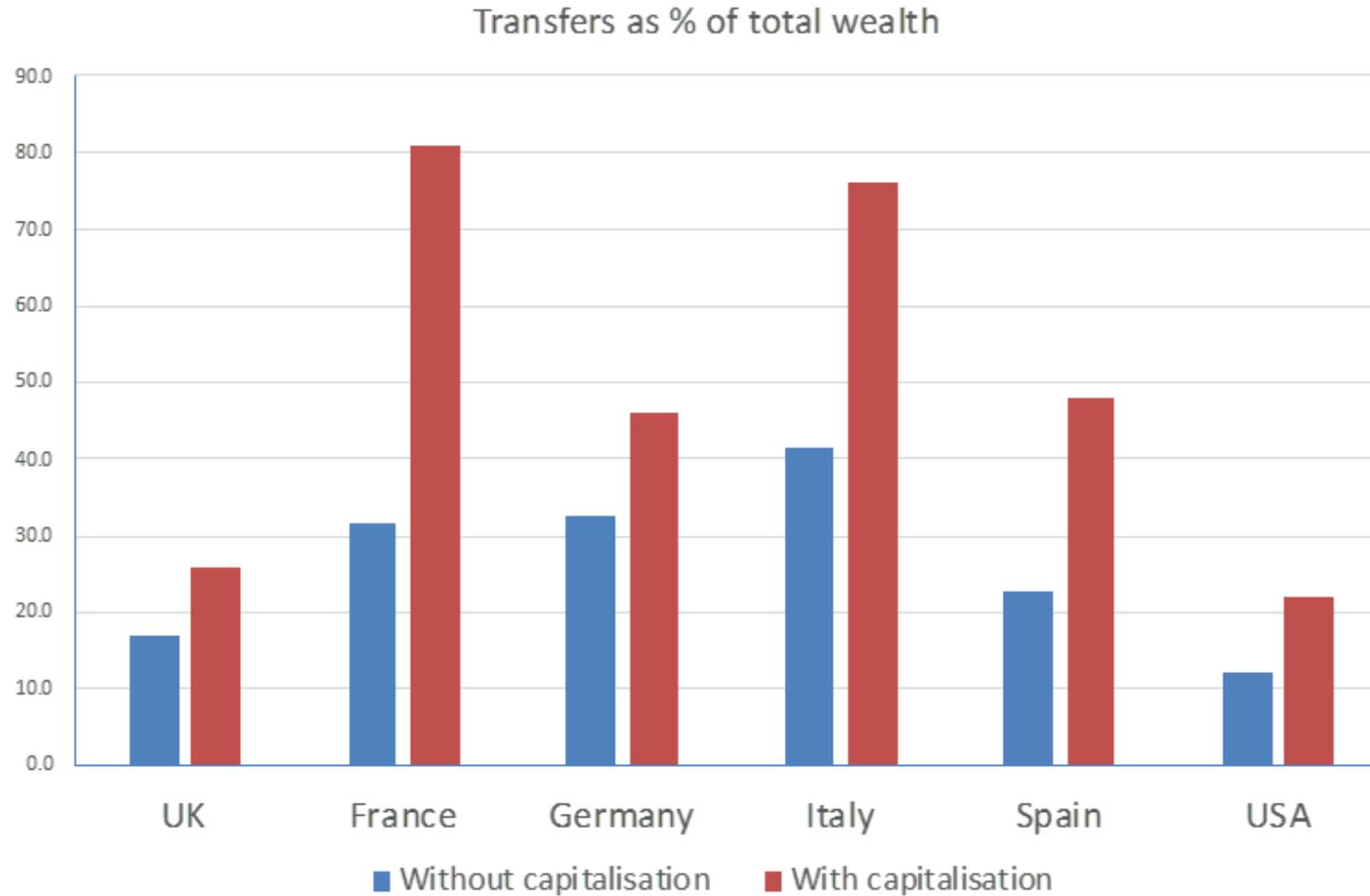
Key features

Inheritances and Gifts (\$)



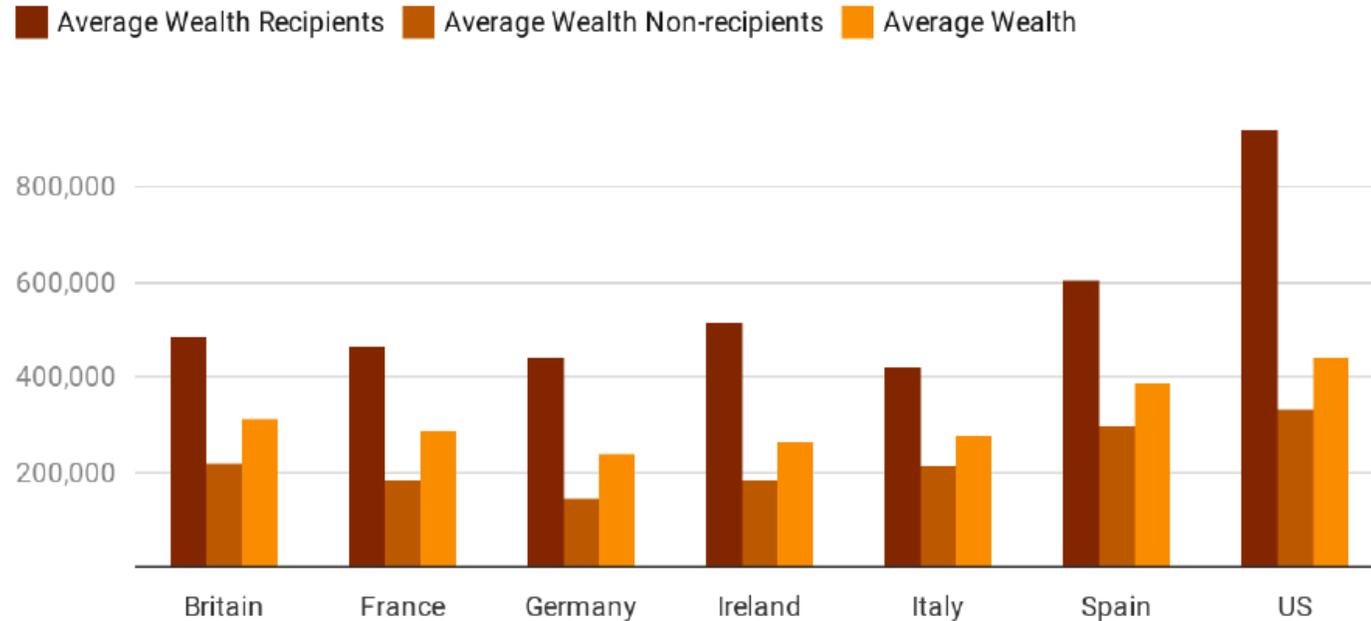
Amounts in 2010 USD

Wealth Transfers vs Aggregate Wealth



The average wealth of recipients and non recipients

Wealth for transfer recipients vs non-recipients

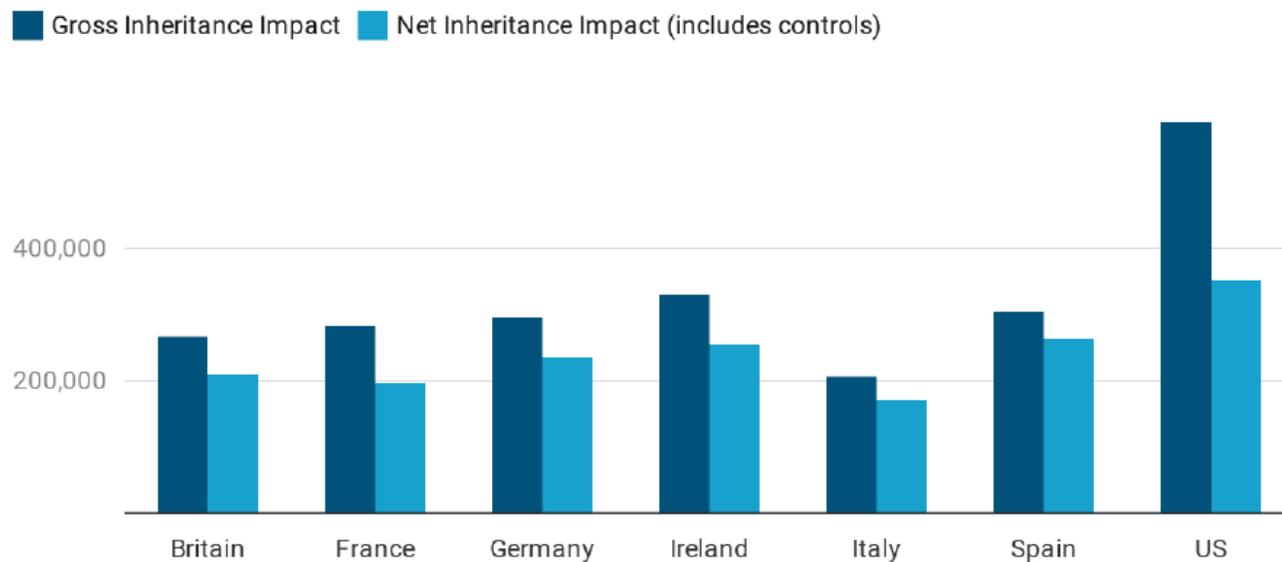


• Created with Datawrapper

Figure 19. Average household net wealth by type of household by inheritance receipt in 2010
US\$

The impact of transfers on the wealth of the recipients

Impact of transfer receipt on wealth



• Created with Datawrapper

Figure 20. Gross recipients minus non-recipients' household net wealth difference vs net impact of intergenerational transfers on total household net wealth in 2010 US\$.
(Controls include household size, age, gender and education of the household head)