

Wealth creators or inheritors? Unpacking the gender wealth gap from bottom to top and young to old

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Why should we care about a gender wealth gap?

Private assets increasingly important for retirement income

- ▶ Women live longer than men, but have lower pensions
→ wealth more important for women to smooth consumption in old age
- ▶ Marriage rates ↓ and single-headed female households ↑
→ women who can rely on husband's wealth/pensions ↓

Systematic differences between men and women with respect to

- ▶ labour market attachment Warren et al. 2001
- ▶ occupations Goldin 2014
- ▶ wages Blau & Kahn 2000
- ▶ saving behavior, risk preferences and returns Fisher 2010

→ studies documenting gender wealth gap, mostly comparing single men and women e.g. Yamokoski, Keister 2006; Ruel, Hauser 2013; Ravazzini, Chesters 2018

This paper

Do women and men accumulate wealth differently?

- ▶ Women expected to accumulate less wealth because of gender gaps in earnings and investment choices (previous slide)
- ▶ Rich women tend to inherit their wealth (=inheritor), whereas rich men build wealth themselves (=wealth creator) (Edlund and Kopczuk, 2009)
- ▶ ↔ New quantitative and qualitative evidence that women inherit less than men (*The Gender of Capital* by Bessiere/Gollac (2023) and Tisch (2023))

We show that **men are more likely to receive large inheritances or gifts during working life**, which is associated with a higher likelihood to classify as **wealth creator**

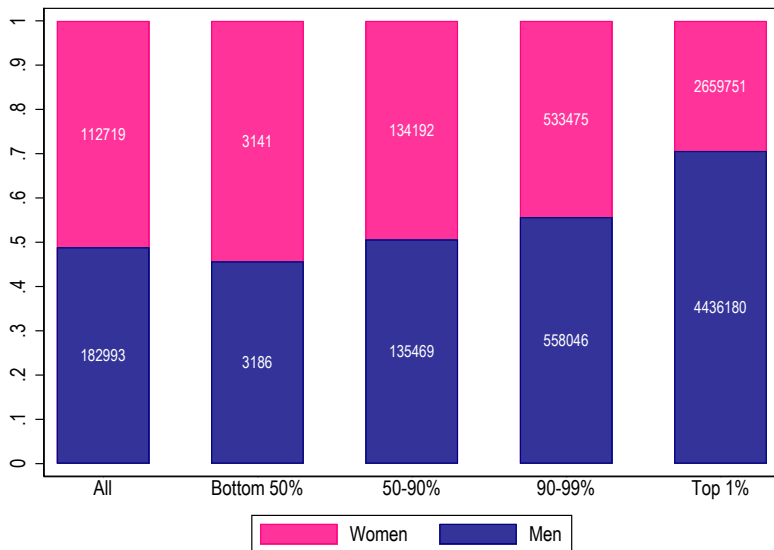
Our dataset: Individual wealth data in SOEP 2019

- ▶ **Socio-Economic Panel (SOEP)**
 - ▶ Representative survey of German households
 - ▶ Ind. and HH wealth in 2002, 2007, 2012, 2017 and 2019
 - ▶ Inheritances and gifts in 2001, 2017, and 2019
- ▶ **New subsample of top wealthholders (SOEP-P) in 2019**
 - ▶ Top-wealth individuals located using company registers on shareholding (ORBIS)
 - ▶ Same interviewing method and questionnaire as SOEP
- ▶ ⇒ We use the **full SOEP-sample incl. SOEP-P**

The gender wealth gap from bottom to top

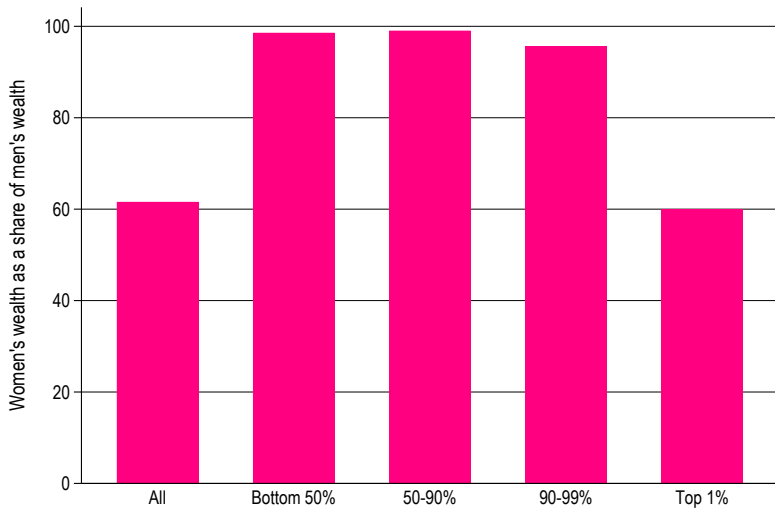
- ▶ Lets start by looking at the gender wealth gap
- ▶ Does the gender wealth gap vary across the individual wealth distribution, ranking men and women jointly?

Absolute gender wealth gap across wealth groups



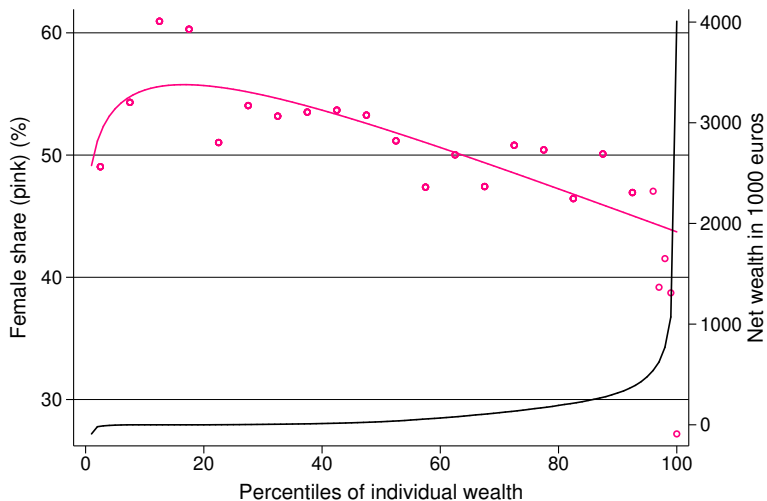
Notes: SOEP v36. Averages in 1,000 Euros. Joint distribution of individual net wealth.

Relative gender wealth gap across wealth groups



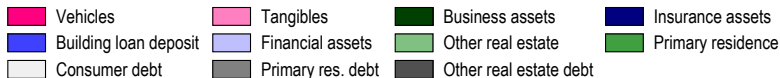
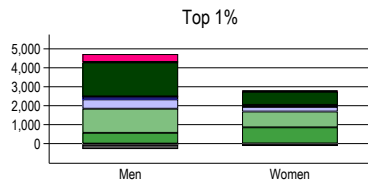
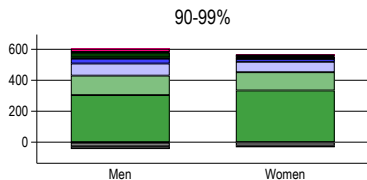
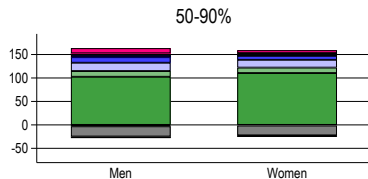
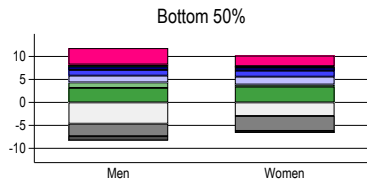
Notes: SOEP v36. Joint distribution of individual net wealth.

Joint net wealth distribution and female share



Notes: SOEP v36. Joint distribution of individual net wealth.

Portfolios of women and men



Notes: SOEP v36. Averages in 1,000 Euros.

Summary: gender wealth gap from bottom to top

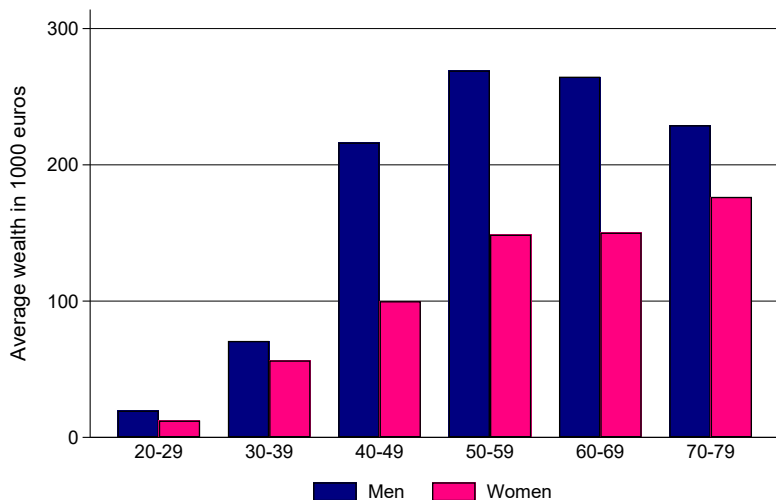
- ▶ The average gender wealth gap of about 40% is due to
 1. an underrepresentation of women at the top 1% of the wealth distribution (overrepresentation at the bottom 50%)
 2. much lower average wealth of women who make it into the top 1%.
- ▶ The gender wealth gap at the top is mainly driven by men's higher investments in business assets and other real estate.
- ▶ Women hold more wealth in primary residences,
- ▶ Primary residence does not generate a return to capital (although appreciates in value), while investment in other real estate does (if it is rented out).

The gender wealth gap from young to old

- ▶ If men and women accumulate wealth differently, we might see differences emerging or disappearing over the life-cycle
- ▶ Does the gender wealth gap vary across age groups?

→ Lets investigate the gender transfer gap and its relation to classifying as either wealth creator or inheritor

Average wealth by gender and age



Notes: SOEP v36. Averages in 1,000 Euros. Sum of capitalized inheritances and gifts ever received by the individual as recorded in the SOEP questionnaires in 2001, 2017 and 2019; capitalized with real bond rates to the year 2019.

Wealth creator or inheritor?

- ▶ Is the gender wealth gap the result of cumulative inequalities in transfers (inheritances and inter-vivos gifts) received by men and women over the course of their lives?
- ▶ Even though German inheritance law requires equal division of inheritances among siblings, we might expect unequal division when large business or real estate (requiring management) are transferred:
 - ▶ Single controlling heir alleviates credit constraints (Ellul et al., 2010)
 - ▶ Single heir mitigates free-riding problem (Botticini/Siow, 2003)
- ▶ At the same time: wives often inherit their husband's wealth, as men tend to die earlier

Questionnaire on inheritances and gifts

155. Have you personally received an inheritance or larger endowment in the last 15 years?

We are referring mainly to transfers of home or property ownership, securities, participating interests, and other assets or larger sums of money.

Yes.....

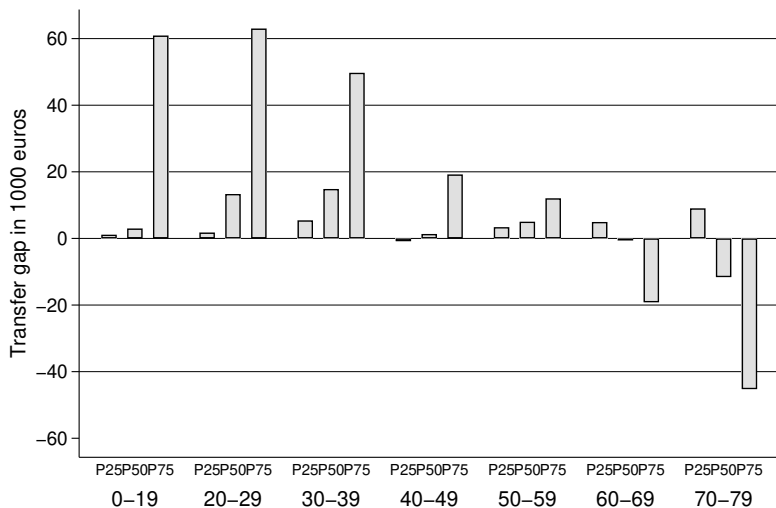
No → Question 157!

156. Please answer questions a) to d) with regard to the inheritance or endowment.

☞ If you have received more than one inheritance or endowment, please give your answers about these in the columns for the second and third inheritance or endowment..

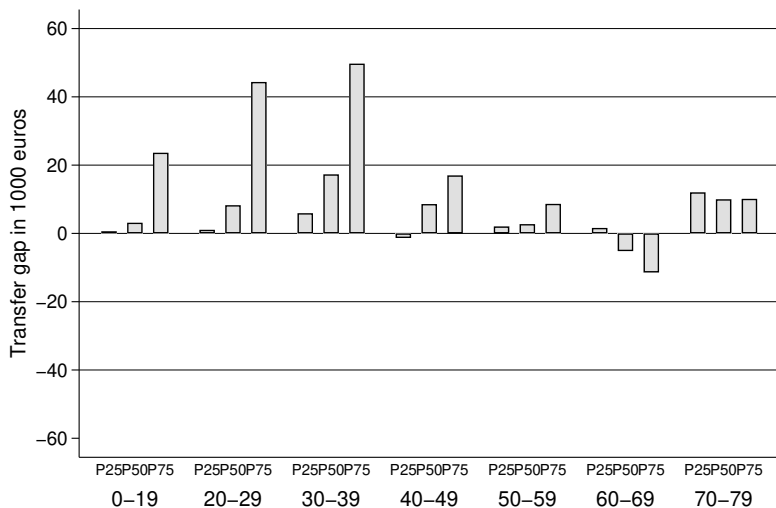
	First Inheritance Endowment	Second Inheritance Endowment	Third Inheritance Endowment
a) What year was that?	_ _ _	_ _ _	_ _ _
b) Was it an ...			
– inheritance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
– endowment or transfer of property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) What type of assets did it consist of?			
☞ Please state all that apply.			
Building and property ownership, owner-occupied housing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Securities (treasury bills, stocks, investment funds, etc.)...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cash, bank balances, etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Company ownership or partial ownership	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other assets or non-cash gifts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) What was the value of the inheritance or endowment at that time?			
☞ In the case of building and land ownership, please state the <u>market value</u> at that time! euros...	_ _ _ _	_ _ _ _	_ _ _ _
Don't know ...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Gender transfer gap by age and transfer percentile



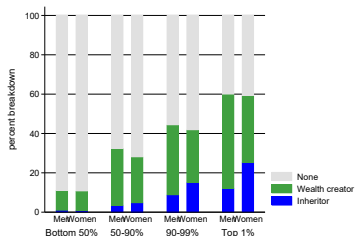
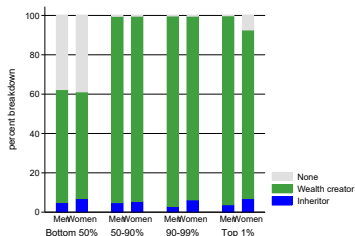
Notes: Total transfers ever received by the individual as recorded in the SOEP questionnaires, grouped by age of first transfer receipt. P75 denotes the gender gap between transfers at the 75th percentile of the transfer distribution of men and women in the respective age group.

Gender transfer gap by age, excluding widows



Notes: Total transfers ever received by the individual as recorded in the SOEP questionnaires, grouped by age of first transfer receipt. P75 denotes the gender gap between transfers at the 75th percentile of the transfer distribution of men and women in the respective age group.

Wealth creator vs. inheritor by gender and wealth group



(b) \sum Transfers / Net wealth

(a) Self-assessed

Notes: Individuals classified as None include individuals with zero or negative net wealth and individuals who state to have received an inheritance/gift, but did not record the value of the inheritance/gift.

Wealth creator and age of first transfer

	Σ Transfers /	Net wealth	Self-assessed	
	(1)	(2)	(3)	(4)
1st Transfer 20-29	0.052 (0.040)	0.032 (0.039)	0.120 (0.074)	0.116 (0.074)
1st Transfer 30-39	0.092** (0.038)	0.063* (0.038)	0.224*** (0.070)	0.209*** (0.070)
1st Transfer 40-49	0.139*** (0.039)	0.117*** (0.038)	0.225*** (0.072)	0.204*** (0.071)
1st Transfer 50-59	0.156*** (0.039)	0.149*** (0.039)	0.253*** (0.072)	0.259*** (0.071)
1st Transfer 60-69	0.136*** (0.043)	0.131*** (0.043)	0.248*** (0.080)	0.246*** (0.080)
1st Transfer 70-79	0.108 (0.071)	0.116 (0.070)	0.107 (0.155)	0.137 (0.154)
Women	-0.081* (0.046)	-0.072 (0.046)	-0.045 (0.087)	-0.014 (0.086)
Further Controls		✓		✓
R-squared	0.02	0.04	0.05	0.07
Observations	5912	5904	2148	2147

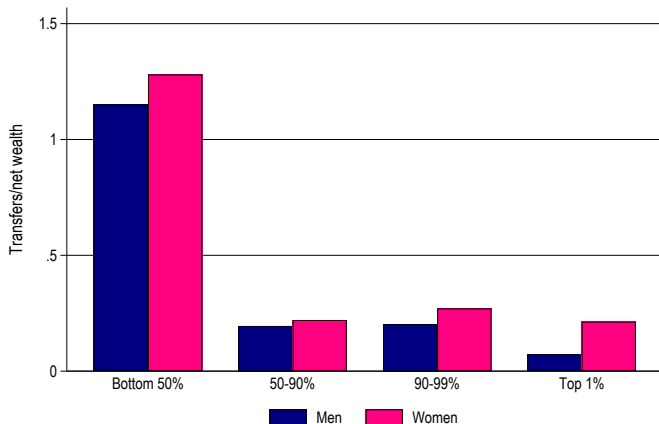
Conclusion

- ▶ The average gender wealth gap of about 40% is due to
 1. an underrepresentation of women at the top 1% of the wealth distribution (overrepresentation at the bottom 50%)
 2. much lower average wealth of women who make it into the top 1%.
- ▶ Men's stronger investments in **firms and tenant-occupied housing** create top 1% wealth gap
- ▶ Men and women accumulate wealth differently!
 - ▶ Gender wealth gap widens during working age and closes after retirement age
 - ▶ Men receive **higher transfers during working age**
 - ▶ Women **inherit large sums from their husbands** after age 60.
- ▶ → Men are more likely classify as wealth creator

Thank you !
Comments or questions?

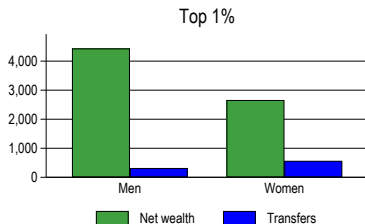
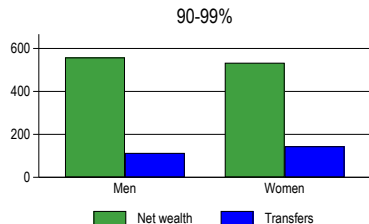
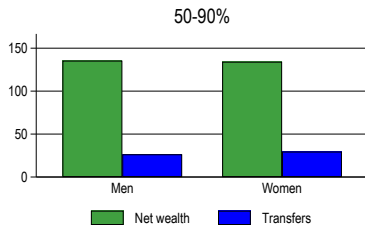
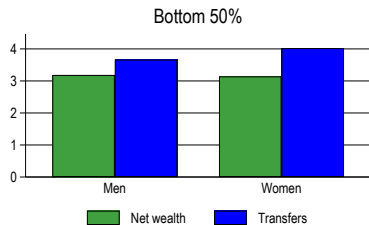
Drop me an email: eva.sierminska@liser.lu

Share of transfers by gender and ind wealth group



Notes: SOEP v36. Averages in 1,000 Euros. Sum of capitalized inheritances and gifts ever received by the individual as recorded in the SOEP questionnaires in 2001, 2017 and 2019; capitalized with real bond rates to the year 2019.

Transfers by gender and wealth group



Notes: SOEP v36. Averages in 1,000 Euros.

Unpacking the gender wealth gap across wealth groups

RIF decomposition following Firpo/Fortin/Lemieux (FFL) 2009

- ▶ the *unconditional* quantile regression allows us to interpret the estimated coefficient as the effect of increasing the mean value of X on the unconditional quantile Q_τ (Fortin et al. 2011, p.9) (unlike the *conditional* quantile regression).
- ▶ the regression coefficients can have different effects across the distribution (like with conditional quantile regressions).
- ▶ the *unconditional* quantile regression allows a path-independent decomposition (Fortin et al. 2011, p.81) (unlike the *inverse propensity reweighting* method developed by DiNardo et al. 1996)).

RIF decomposition

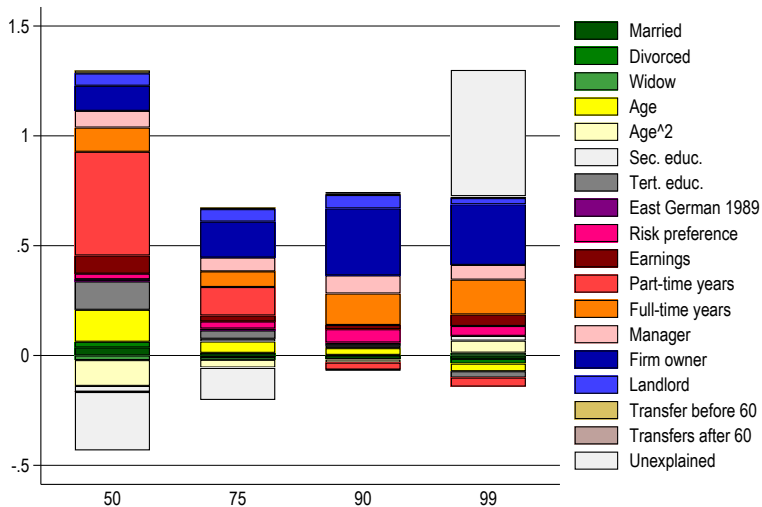
1. Replace ind. net wealth (w_i) with the recentered influence function $RIF(w_i; Q_\tau)$ of statistic of interest, i.e., quantile τ
2. Estimate OLS regressions with RIF as dependent variable: coefficients for explanatory variables at the τ th quantile
3. Oaxaca-Blinder decomposition based on the RIF regressions for men and women at the τ th quantile to decompose the unconditional gender wealth gap into an explained part and an unexplained part

Results: RIF Decomposition at selected quantiles

	50th	75th	90th	99th
Men	11.734***	13.099***	14.118***	16.299***
Women	10.868***	12.628***	13.440***	15.141***
Difference	0.865***	0.471***	0.678***	1.159***
Explained	1.187***	0.634***	0.679***	0.558***
Unexplained	-0.322***	-0.163***	-0.000	0.601***

Notes: SOEP. Including individuals above age 20. Robust standard errors. Explained component: differences in characteristics; Unexplained component: can be interpreted as differences in returns to characteristics

RIF decomposition: Explained vs. unexplained



RIF Decomposition: Interpretation

Gender wealth gap *explained* by differences in

- ▶ Education
- ▶ Labor market biographies (years working full time, monthly gross earnings, manager position)
- ▶ Portfolios (landlord, firm owner)
- ▶ Wealth \uparrow \rightarrow role of education and labor market biography \downarrow but role of portfolios \uparrow
- ▶ Transfers before age 60 explain the gap throughout the distribution

Differences in returns (*unexplained*)

- ▶ Most returns reduce the gender wealth gap
- ▶ Returns to monthly gross earnings \rightarrow gender wealth gap \uparrow

RIF decomposition I

$$RIF(w_i; Q_\tau) = Q_\tau + \frac{\tau - 1\{w_i \leq Q_\tau\}}{f_W(Q_\tau)} \quad (1)$$

where $RIF(w_i; Q_\tau)$ is the recentered influence function of individual i 's net wealth at quantile Q_τ ; Q_τ is the population τ -quantile of the unconditional distribution of W ; $1\{\cdot\}$ is an indicator function and $f_W(\cdot)$ is the density of the marginal distribution of W .

RIF decomposition II

Estimate OLS regressions using RIF as a dependent variable to get the effect of explanatory variables on the τ th quantile:

$$RIF(w_i; Q_\tau) = \alpha_{0,\tau} + \sum_{k=1}^K \alpha_{k,\tau} x_{i,\tau}^k + \varepsilon_{i,\tau} \quad (2)$$

where $\alpha_{k,\tau}$ captures the effect of explanatory variable x^k on the τ th quantile of net wealth; $\alpha_{0,\tau}$ denotes the intercept at the τ th quantile of net wealth and $\varepsilon_{i,\tau}$ is the error term.

RIF Decomposition III

Use the Oaxaca-Blinder decomposition based on the RIF regressions for men and women at the τ th quantile to decompose the unconditional gender wealth gap into an explained part and an unexplained part:

RIF Decomposition

$$\Delta_{Q_\tau} = (\bar{X}^M - \bar{X}^F) \hat{v}_{Q_\tau}^M + \bar{X}^M (\hat{v}_{Q_\tau}^M - \hat{v}_{Q_\tau}^F) \quad (3)$$

- ▶ Δ_{Q_τ} Differences in quantile τ .
- ▶ \bar{X}^M and \bar{X}^F average observed characteristics
- ▶ $\hat{v}_{Q_\tau}^{M,F}$ coefficients obtained from the regression of the RIF variables of quantile Q_τ on the set of variables for male and female

Results: RIF Decomposition at selected quantiles

Table 1: RIF regression: Explanatory factors for the gender wealth gap - Selected

	50th (1)		75th (2)		90th (3)	
	explained	unexplained	explained	unexplained	explained	unexplained
Married	0.036***	-0.558***	-0.007*	-0.273***	-0.016***	-0.161***
Divorced	0.026***	0.007	0.012***	0.004	0.003	-0.000
Widow(er)	-0.021**	-0.012	-0.013**	-0.004	-0.002	-0.020
Age	0.146***	-0.631	0.052***	-1.546***	0.031**	-0.620
age2	-0.118***	-0.079	-0.036***	0.614**	-0.015	0.478
Secondary education	-0.027*	-0.286*	0.012	-0.158*	0.011	-0.035
Tertiary education	0.129***	-0.124*	0.038***	-0.079*	0.010	-0.050
East German 1989	0.010***	-0.054**	0.009***	0.031**	0.005**	0.040**
Risk preference	0.025**	0.238***	0.032***	0.142***	0.060***	0.250***
Monthly gross earnings (ln)	0.083***	-0.212***	0.027***	-0.004	0.019**	0.080
Years working full-time	0.473***	0.155**	0.130***	0.072	-0.032	-0.066
Years working part-time	0.110**	-0.385***	0.071**	-0.158***	0.144***	-0.189***
Manager	0.076***	0.000	0.063***	0.021*	0.082***	0.045***
Firm owner	0.114***	0.011	0.164***	0.025***	0.305***	0.059***
Landlord	0.056***	-0.056***	0.057***	-0.003	0.061***	0.005
Transfers before age 60 (ln)	0.015**	-0.094***	0.008**	-0.064***	0.007**	-0.052***
Transfers after age 60 (ln)	-0.001	-0.009	-0.001	-0.002	-0.001	-0.007

Notes: Including individuals above age 20. Net wealth transformed to inverse hyperbolic sine. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$