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
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
  - 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.
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?
→ Let's 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
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 .................................................

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.

<table>
<thead>
<tr>
<th>First Inheritance Endowment</th>
<th>Second Inheritance Endowment</th>
<th>Third Inheritance Endowment</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) What year was that? ......</td>
<td>......</td>
<td>......</td>
</tr>
<tr>
<td>b) Was it an ...</td>
<td>......</td>
<td>......</td>
</tr>
<tr>
<td>– inheritance?</td>
<td>......</td>
<td>......</td>
</tr>
<tr>
<td>– endowment or transfer of property?</td>
<td>......</td>
<td>......</td>
</tr>
<tr>
<td>c) What type of assets did it consist of?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Building and property ownership, owner-occupied housing</td>
<td>......</td>
<td>......</td>
</tr>
<tr>
<td>Securities (treasury bills, stocks, investment funds, etc.)</td>
<td>......</td>
<td>......</td>
</tr>
<tr>
<td>Cash, bank balances, etc.</td>
<td>......</td>
<td>......</td>
</tr>
<tr>
<td>Company ownership or partial ownership</td>
<td>......</td>
<td>......</td>
</tr>
<tr>
<td>Other assets or non-cash gifts</td>
<td>......</td>
<td>......</td>
</tr>
<tr>
<td>d) What was the value of the inheritance or endowment at that time?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>In the case of building and land ownership, please state the market value at that time! euros</td>
<td>......</td>
<td>......</td>
</tr>
<tr>
<td>Don’t know</td>
<td>......</td>
<td>......</td>
</tr>
</tbody>
</table>
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) $\sum \text{Transfers} / \text{Net wealth}$

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

<table>
<thead>
<tr>
<th></th>
<th>( \sum \text{ Transfers} / \text{ Net wealth} ) (1)</th>
<th>Net wealth Self-assessed (2)</th>
<th>(3)</th>
<th>(4)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1st Transfer 20-29</strong></td>
<td>0.052 ( (0.040) )</td>
<td>0.032 ( (0.039) )</td>
<td>0.120 ( (0.074) )</td>
<td>0.116 ( (0.074) )</td>
</tr>
<tr>
<td><strong>1st Transfer 30-39</strong></td>
<td>0.092(^{**}) ( (0.038) )</td>
<td>0.063(^{*}) ( (0.038) )</td>
<td>0.224(^{***}) ( (0.070) )</td>
<td>0.209(^{***}) ( (0.070) )</td>
</tr>
<tr>
<td><strong>1st Transfer 40-49</strong></td>
<td>0.139(^{***}) ( (0.039) )</td>
<td>0.117(^{***}) ( (0.038) )</td>
<td>0.225(^{***}) ( (0.072) )</td>
<td>0.204(^{***}) ( (0.071) )</td>
</tr>
<tr>
<td><strong>1st Transfer 50-59</strong></td>
<td>0.156(^{***}) ( (0.039) )</td>
<td>0.149(^{***}) ( (0.039) )</td>
<td>0.253(^{***}) ( (0.072) )</td>
<td>0.259(^{***}) ( (0.071) )</td>
</tr>
<tr>
<td><strong>1st Transfer 60-69</strong></td>
<td>0.136(^{***}) ( (0.043) )</td>
<td>0.131(^{***}) ( (0.043) )</td>
<td>0.248(^{***}) ( (0.080) )</td>
<td>0.246(^{***}) ( (0.080) )</td>
</tr>
<tr>
<td><strong>1st Transfer 70-79</strong></td>
<td>0.108 ( (0.071) )</td>
<td>0.116 ( (0.070) )</td>
<td>0.107 ( (0.155) )</td>
<td>0.137 ( (0.154) )</td>
</tr>
<tr>
<td><strong>Women</strong></td>
<td>-0.081(^{*}) ( (0.046) )</td>
<td>-0.072 ( (0.046) )</td>
<td>-0.045 ( (0.087) )</td>
<td>-0.014 ( (0.086) )</td>
</tr>
</tbody>
</table>

- \(^{*}\) p < 0.1
- \(^{**}\) p < 0.05
- \(^{***}\) p < 0.01

**Further Controls**

- R-squared: \(0.02\), \(0.04\), \(0.05\), \(0.07\) for columns (1), (2), (3), (4) respectively.
- 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.
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 $Q_\tau$ (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 \(\tau\)
2. Estimate OLS regressions with RIF as dependent variable: coefficients for explanatory variables at the \(\tau\)th quantile
3. Oaxaca-Blinder decomposition based on the RIF regressions for men and women at the \(\tau\)th quantile to decompose the unconditional gender wealth gap into an explained part and an unexplained part
Results: RIF Decomposition at selected quantiles

<table>
<thead>
<tr>
<th></th>
<th>50th</th>
<th>75th</th>
<th>90th</th>
<th>99th</th>
</tr>
</thead>
<tbody>
<tr>
<td>Women</td>
<td>10.868***</td>
<td>12.628***</td>
<td>13.440***</td>
<td>15.141***</td>
</tr>
<tr>
<td>Difference</td>
<td>0.865***</td>
<td>0.471***</td>
<td>0.678***</td>
<td>1.159***</td>
</tr>
<tr>
<td>Explained</td>
<td>1.187***</td>
<td>0.634***</td>
<td>0.679***</td>
<td>0.558***</td>
</tr>
<tr>
<td>Unexplained</td>
<td>-0.322***</td>
<td>-0.163***</td>
<td>-0.000</td>
<td>0.601***</td>
</tr>
</tbody>
</table>

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: 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 ↑ → role of education and labor market biography ↓
  but role of portfolios ↑
- 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 → gender wealth gap ↑
RIF decomposition

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

(1)

where \( RIF(w_i; Q_\tau) \) is the recentered influence function of individual \( i \)'s net wealth at quantile \( Q_\tau \); \( Q_\tau \) is the population \( \tau \)-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 \( \tau \)th quantile:

\[
\text{RIF}(w_i; Q_\tau) = \alpha_{0,\tau} + \sum_{k=1}^{K} \alpha_{k,\tau} x_{i,\tau}^k + \varepsilon_{i,\tau}
\]  \hspace{1cm} (2)

where \( \alpha_{k,\tau} \) captures the effect of explanatory variable \( x^k \) on the \( \tau \)th quantile of net wealth; \( \alpha_{0,\tau} \) denotes the intercept at the \( \tau \)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 $\tau$th quantile to decompose the unconditional gender wealth gap into an explained part and an unexplained part:

$$\Delta_{Q_{\tau}} = (\bar{X}^M - \bar{X}^F) \hat{\vartheta}^M_{Q_{\tau}} + \bar{X}^M (\hat{\vartheta}^M_{Q_{\tau}} - \hat{\vartheta}^F_{Q_{\tau}})$$

- $\Delta_{Q_{\tau}}$ Differences in quantile $\tau$.
- $\bar{X}^M$ and $\bar{X}^F$ average observed characteristics
- $\hat{\vartheta}^M,F_{Q_{\tau}}$ coefficients obtained from the regression of the RIF variables of quantile $Q_{\tau}$ on the set of variables for male and female
### Table 1: RIF regression: Explanatory factors for the gender wealth gap - Selected quantiles

<table>
<thead>
<tr>
<th></th>
<th>50th</th>
<th>75th</th>
<th>90th</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>explained</td>
<td>unexplained</td>
<td>explained</td>
</tr>
<tr>
<td>Married</td>
<td>0.036***</td>
<td>-0.558***</td>
<td>-0.007*</td>
</tr>
<tr>
<td>Divorced</td>
<td>0.026***</td>
<td>0.007</td>
<td>0.013**</td>
</tr>
<tr>
<td>Widow(er)</td>
<td>-0.021**</td>
<td>-0.012</td>
<td>-0.004</td>
</tr>
<tr>
<td>Age</td>
<td>0.146***</td>
<td>-0.631</td>
<td>0.052***</td>
</tr>
<tr>
<td>age2</td>
<td>-0.118***</td>
<td>-0.079</td>
<td>-0.036***</td>
</tr>
<tr>
<td>Secondary ed</td>
<td>-0.027*</td>
<td>-0.286*</td>
<td>0.012</td>
</tr>
<tr>
<td>Tertiary ed</td>
<td>0.129***</td>
<td>-0.124*</td>
<td>0.038***</td>
</tr>
<tr>
<td>East German 1989</td>
<td>0.010***</td>
<td>-0.054**</td>
<td>0.009***</td>
</tr>
<tr>
<td>Risk preference</td>
<td>0.025**</td>
<td>0.238***</td>
<td>0.032***</td>
</tr>
<tr>
<td>Monthly gross earnings (ln)</td>
<td>0.083***</td>
<td>-0.212***</td>
<td>0.027**</td>
</tr>
<tr>
<td>Years working full-time</td>
<td>0.473***</td>
<td>0.155**</td>
<td>0.130***</td>
</tr>
<tr>
<td>Years working part-time</td>
<td>0.110**</td>
<td>-0.385***</td>
<td>0.071**</td>
</tr>
<tr>
<td>Manager</td>
<td>0.076***</td>
<td>0.000</td>
<td>0.063***</td>
</tr>
<tr>
<td>Firm owner</td>
<td>0.114***</td>
<td>0.011</td>
<td>0.164***</td>
</tr>
<tr>
<td>Landlord</td>
<td>0.056***</td>
<td>-0.056***</td>
<td>0.057***</td>
</tr>
<tr>
<td>Transfers before age 60 (ln)</td>
<td>0.015**</td>
<td>-0.094***</td>
<td>0.008**</td>
</tr>
<tr>
<td>Transfers after age 60 (ln)</td>
<td>-0.001</td>
<td>-0.009</td>
<td>-0.001</td>
</tr>
</tbody>
</table>

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