Intergenerational Consequences of Wealth Inequality

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Inequality in Wealth → Inequality in Opportunity

“From a recent report we learn that two thirds of the population do not own anything. Hence, equality of opportunity already seems to be accomplished for the great majority of people.”

Eulenspiegel (German Satirical Newspaper), December 19 2007
Wealth Inequality Across the Distribution

Outline

1. The transmission of wealth inequality across generations
2. Wealth gaps in education
3. The insurance function of wealth
Data and Measures

- **Data**
  - Panel Study of Income Dynamics (PSID)
  - National Longitudinal Study of Youth 1979 (NLSY)
  - German Socio-Economic Panel (SOEP)
  - Swedish register data (tax registers)

- **Wealth Measures**
  - Family Net Worth = sum of all assets minus debts
  - Averaged across two years to reduce measurement error
  - Different specifications to reduce skew and assess non-linearities
    - ranks, quintiles, logs, inverse hyperbolic sine transformation, etc.
Transmission of Wealth Inequality Across Generations

1. How much?
2. How?
Intergenerational Correlations in Economic Status

- Large literatures on intergenerational correlations in
  - Occupational status / class (sociology)
  - Income (economics)

- One study on wealth correlations in the U.S. (Charles/Hurst 2013)
  - Wealth assessed for parents and their children – 15 years later

- More recent data allow addressing life-cycle bias
  - Parental wealth in 1984 ⇔ Children’s wealth in 2011
  - On average, observed at the same age & into late adulthood
Intergenerational Correlations in Wealth

Intergenerational percentile rank correlation

\[ W_c^P = \alpha + \beta_1 W_p^P + \beta_2 \text{Age}_c + \beta_3 \text{Age}_c^2 + \beta_3 \text{Age}_p + \beta_4 \text{Age}_p^2 + \epsilon \]

- Includes zero & negative wealth
- Margin-insensitive
# Intergenerational Correlations in Wealth

<table>
<thead>
<tr>
<th></th>
<th>Rank Slope</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Overall</strong></td>
<td>0.370***</td>
<td>(0.014)</td>
</tr>
<tr>
<td><strong>By Sex</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>0.378***</td>
<td>(0.021)</td>
</tr>
<tr>
<td>Female</td>
<td>0.363***</td>
<td>(0.018)</td>
</tr>
<tr>
<td><strong>By Year</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre-Recession (2005-2007)</td>
<td>0.356***</td>
<td>(0.014)</td>
</tr>
<tr>
<td>Post-Recession (2009-2011)</td>
<td>0.370***</td>
<td>(0.014)</td>
</tr>
<tr>
<td><strong>By Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age 25-44</td>
<td>0.334***</td>
<td>(0.020)</td>
</tr>
<tr>
<td>Age 45-64</td>
<td>0.416***</td>
<td>(0.020)</td>
</tr>
</tbody>
</table>

Source: Pfeffer/Killewald (2015), Working Paper
# Intergenerational Correlations in Wealth

<table>
<thead>
<tr>
<th>Parental Wealth</th>
<th>QN1 (lowest)</th>
<th>QN2</th>
<th>QN3</th>
<th>QN4</th>
<th>QN5</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>QN1 (lowest)</td>
<td>25.7</td>
<td>27.5</td>
<td>21.2</td>
<td>15.0</td>
<td>10.7</td>
<td>100.0</td>
</tr>
<tr>
<td>QN2</td>
<td>16.8</td>
<td>19.1</td>
<td>27.4</td>
<td>16.8</td>
<td>20.0</td>
<td>100.0</td>
</tr>
<tr>
<td>QN3</td>
<td>14.4</td>
<td>18.8</td>
<td>21.9</td>
<td>26.7</td>
<td>18.2</td>
<td>100.0</td>
</tr>
<tr>
<td>QN4</td>
<td>7.4</td>
<td>9.6</td>
<td>19.0</td>
<td>31.7</td>
<td>32.3</td>
<td>100.0</td>
</tr>
<tr>
<td>QN5 (highest)</td>
<td>5.2</td>
<td>4.0</td>
<td>9.9</td>
<td>24.4</td>
<td>56.5</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: Pfeffer/Killewald (2015), Working Paper
## Channels of Intergenerational Wealth Transmission

<table>
<thead>
<tr>
<th>Channel</th>
<th>% of correlation explained</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inheritance/Gift</td>
<td>12.3%</td>
</tr>
<tr>
<td>Education</td>
<td>23.7%</td>
</tr>
<tr>
<td>Marriage</td>
<td>6.0%</td>
</tr>
<tr>
<td>Home Ownership</td>
<td>11.7%</td>
</tr>
<tr>
<td>Jointly</td>
<td>43.9%</td>
</tr>
</tbody>
</table>
Wealth Gaps in Education
The Wealth Gap in Education


- Increasing concern about growing socio-economic inequality in educational outcomes focused on parental income (Reardon 2011, Bailey/Dynarski 2011)

- Here: Following children born in 1970s and 1980s
  - Parental wealth in childhood (age 10-14)
  - HS attainment & College access by age 20
  - College graduation by age 25
The Wealth Gap in Education

Source: Pfeffer (2015), Working Paper
## The Wealth Gap in Education

<table>
<thead>
<tr>
<th>Wealth Quintile</th>
<th>Unconditional</th>
<th>Conditional</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High School Graduation</td>
<td></td>
</tr>
<tr>
<td>2nd</td>
<td>0.1064 (0.0204) ***</td>
<td>0.0141 (0.0193)</td>
</tr>
<tr>
<td>3rd</td>
<td>0.2043 (0.0191) ***</td>
<td>0.0820 (0.0208) ***</td>
</tr>
<tr>
<td>4th</td>
<td>0.2301 (0.0191) ***</td>
<td>0.0758 (0.0252) **</td>
</tr>
<tr>
<td>Highest</td>
<td>0.2651 (0.0184) ***</td>
<td>0.1034 (0.0277) ***</td>
</tr>
<tr>
<td></td>
<td>College Graduation</td>
<td></td>
</tr>
<tr>
<td>2nd</td>
<td>0.0328 (0.0154) *</td>
<td>-0.0142 (0.0228)</td>
</tr>
<tr>
<td>3rd</td>
<td>0.1293 (0.0188) ***</td>
<td>0.0276 (0.0239) **</td>
</tr>
<tr>
<td>4th</td>
<td>0.2883 (0.0232) ***</td>
<td>0.0832 (0.0276) **</td>
</tr>
<tr>
<td>Highest</td>
<td>0.3950 (0.0251) ***</td>
<td>0.0941 (0.0300) **</td>
</tr>
</tbody>
</table>

Conditional associations are Average Marginal Effects (AME) + p<.10, * p<.05, ** p<.01, *** p<.001

Source: Pfeffer (2015), Working Paper
The **Growing** Wealth Gap in Education

**College Graduation**

Discrete Change

Lowest  2nd  3rd  4th  Highest

Net Worth Quintiles

Cohort born 1980–1984 vs. 1970–1974 (with 95% CI)

Source: Pfeffer (2015), Working Paper
The **Growing** Wealth Gap in Education

Source: College Board (2011); Average published tuition and fees in 2011 dollars, enrollment-weighted

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Intergenerational Consequences of Wealth Inequality
The **Growing** Wealth Gap in Education

Potential sources of growing gap
- increasing importance of parental wealth (effect)
- increasing distance in wealth available to different students (distribution)

Findings
- Effect has remained stable
- Increasing wealth inequality accounts for ~half of growing gap

What does that imply for the future?
The **Growing** Wealth Gap in Education

![Graph showing the growing wealth gap in education over time](source: Pfeffer et al. (2013, 2014))
The Growing Wealth Gap in Education

- Interpolating the wealth gap in college graduation (top vs. bottom wealth quintile)
  - Children growing up in 1970s: 40 percentage points
  - Children growing up today: 70 percentage points
The Insurance Function of Wealth

- Theoretical framework
- Evidence from cross-national comparisons
- Within-country evidence
Why parental wealth should matter

**Purchasing Function**
- Advantageous neighborhoods & schools
- Alleviation of credit constraints for PSE

**Insurance Function**
- Educational decision-making
- Labor market transitions

**Unobserved Heterogeneity**
- Time preferences, risk aversion, etc.
The insurance function of parental wealth

**Definition**  Potential to buffer the socio-economic and socio-psychological consequences of negative outcomes in offspring’s attainment process

**See also**  “real and psychological safety nets” (Shapiro 2004)
“income feeds stomachs, assets change heads” (Sherraden 2001)

**Challenge**  No actual transfer needed for effects to emerge
Analyses & Other Research

- Adding credibility to the purchasing function in the U.S.
  - Direct measures of transfers (PSID 2013)
  - Identification of credit constraints for college access: Higher Education Act of 1992 (also: Lovenheim 2011)
  - Mediating role of neighborhood quality

- Adding credibility to the insurance function
  - Cross-national comparison (US, GER, SWE)
  - Choice of field of study (SWE)
  - Choice of safe-haven educational pathway (GER)
  - Mediating role of educational aspirations (US)

- Reducing worries about unobserved bias
  - Conceptual defense
  - Econometric approaches: Future Treatments
  - Quasi-natural experiments
Cross-national Comparison
### Institutional context

<table>
<thead>
<tr>
<th></th>
<th>United States</th>
<th>Germany</th>
<th>Sweden</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secondary education</td>
<td>comprehensive</td>
<td>differentiated</td>
<td>no dead-ends standardized</td>
</tr>
<tr>
<td></td>
<td>local funding</td>
<td>vocational</td>
<td></td>
</tr>
<tr>
<td>Post-secondary</td>
<td>costly</td>
<td>mostly free</td>
<td>free</td>
</tr>
<tr>
<td>Inequality &amp; segregation</td>
<td>high</td>
<td>low</td>
<td>lowest</td>
</tr>
<tr>
<td>Social insurance (labor market)</td>
<td>low</td>
<td>strong</td>
<td>strongest</td>
</tr>
<tr>
<td>Wealth Inequality</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Gini Coefficient</td>
<td>0.84</td>
<td>0.81</td>
<td>0.89</td>
</tr>
<tr>
<td>- Share of top 10%</td>
<td>64%</td>
<td>55%</td>
<td>58%</td>
</tr>
</tbody>
</table>
Why parental wealth should matter ... differently

Purchasing Function
- Advantageous neighborhoods & schools
- Alleviation of credit constraints for PSE

Insurance Function
- Educational decision-making
- Labor market transitions

US  GER  SWE
The insurance function of wealth ...

- ... for (later) labor market careers: Context-dependent

- ... for education: Universal
  - Educational decision-making is inherently risky (e.g. Breen/Goldthorpe 1997)
    - Risk = failure to graduate (sunk opportunity costs, stigma)
    - No existing institutional arrangements provide insurance
  - Risk may be even higher in European context
    - SWE&GER: High opportunity costs of university attendance (higher foregone earnings due to longer time to degree & lower income returns compared to vocational route)
    - GER: Higher uncertainty of success (since decision points at earlier ages)
Status Attainment Model: U.S.

$Chi^2 = 25.9, df = 17, p = .076, RMSEA = .018, BIC = -100$
Status Attainment Model: U.S.

$\chi^2 = 50.6$, $df = 28$, $p = .0055$, $RSMEA = .022$, $BIC = -157$
Status Attainment Model: Germany

$Chi^2 = 18.0, df = 18, p = .454, RSMEA = .001, BIC = -101$
Status Attainment Model: Germany

$\text{Chi}^2 = 33.4, \ df = 24, \ p = .097, \ RSMEA = .023, \ BIC = -125$
Status Attainment Model: Sweden

![Diagram of the Status Attainment Model]

- **FamEdu**
- **FamOcc**
- **FamInc**
- **Edu**
- **Occ**

- Path coefficients and relationships between variables.

**Chi-squared** $\chi^2 = 18.0$, df = 18, $p = 0.454$, RMSEA = 0.001, BIC = 101
Status Attainment Model: Sweden

Status Attainment Model: Sweden

FamEdu

Edu

Occ

FamInc

FamWealth

Chi$^2$ = 33.4, df = 24, p = .097, RSMEA = .023, BIC = 125

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Intergenerational Consequences of Wealth Inequality
Summary

- Wealth effects independent of other background effects in all three countries
  - Less important than parental education
  - At least as important as parental occupation
  - More important than family income
  - Chiefly operate through structuring educational opportunities

- Further results (not shown)
  - Wealth impacts outcomes across most levels of education
  - Wealth shields against intergenerational downward mobility
Within-Country Evidence
The insurance function & choice of field of study

Choice of a field of study with high expected earnings and high earnings variance (uncertainty)

- Choice among 162 unique degrees in Sweden (676 when combined with university choice)
- Currently: Actual choice
- Forthcoming: Stated preferences (application registers)

Parental wealth strongly predicts choice of fields with high earnings uncertainty

- More so than other background characteristics
The insurance function & choice of educational safe-haven

- “Gap year apprenticeships” in Germany
  - Apprenticeships designed for those graduating from lower tracks of secondary education (Hauptschule & Realschule)
  - Increasing demand by those graduating from the highest track (Gymnasium) before going on to University

- Educational choice to reduce uncertainty
  - Conservative estimates (already positively selected)
  - Analyses ongoing
The insurance function & educational aspirations

- Educational aspirations as outcome of educational decision-making
  - Educational aspirations as causal pathways of intergenerational effects (Sewell/Haller/Portes 1969, Morgan 2005)
  - Relevance for wealth effects (Williams-Shanks/Destin 2009, Destin/Oysterman 2009)

- Mediating role of educational aspirations in the United States
  - Strong for HS attainment, particularly financial wealth (half of the effect mediated)
  - Even stronger for BA attainment, particularly financial wealth (nearly 3/4 of the effect mediated)
Summary - I

- **High and rising wealth inequality across the distribution**
  - Particularly pronounced changes since the Great Recession

- **Strong intergenerational transmission of inequality**
  - Comes to full blossom during older adulthood
  - High rigidity at the top
  - Much of it transmitted early in life (esp. through education)

- **Large wealth gaps in education**
  - Independent associations with wealth at all levels
    (in particular, college persistence)
  - Increasing wealth gaps in college attainment (& bleak future)
Summary - II

- **Mechanisms behind intergenerational wealth effects**
  - Purchasing function AND insurance function

- **Insurance function as explanation of**
  - *Intergenerational wealth effects in other institutional contexts*
  - Choice of college majors with large variance in earnings
  - Choice of safe-haven educational pathways
  - Mediating role of aspirations
Thank you