The Connection between Job Satisfaction and Relative Pay Revisited

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Motivation
- Easterlin Paradox: despite large gains in average income since the 1950s, there is no significant increase in happiness
- A large body of literature sees this as a result of social comparison: if individuals gain happiness in comparisons to peers, average income gains will amount to a zero-sum game in terms of happiness
- Empirical results support this notion (e.g. Kifle 2014 JoHS, Collischon forthcoming JoHS) using panel regression methods
- However, are these findings causal? We argue that time-constant individual factors such as motivation affect
  (i) levels of job satisfaction (which is accounted for using FE)
  (ii) individual trajectories of job satisfaction (which FE does not rule out)
  → Fixed Effects are not enough to obtain the causal link between relative pay and job satisfaction (Brüderl and Ludwig 2015); solution: Fixed Effects Individual Slopes (FEIS)

Data: Socio-Economic Panel Study (Germany)
- Pooled waves from 1984-2015; 96,113 observations for 9,884 individuals (with at least 4 participations)
- Dependent variable: Job satisfaction (self-assessed, 11-point scale)
- Measure for social comparison: rank of hourly wage within the reference group (based on survey year, industry and occupation)
  \[ \text{Rank}_i = \frac{(I - 1)}{(N - 1)} \]
  where \( I \) is the number of individuals with wages less than the respondent and \( N \) is the number of observations within the reference group
- Controls: children, married, full-time employment, tenure, working hours, labor market experience, age, occupation (2-digit ISCO), industry (NACE top groups)
- Sample restricted to observations with at least 10 respondents in the reference group, individuals aged 19 to 65

Results

<table>
<thead>
<tr>
<th></th>
<th>POLS</th>
<th>FE</th>
<th>FEIS</th>
<th>FD</th>
<th>FDIS</th>
</tr>
</thead>
<tbody>
<tr>
<td>( \beta )</td>
<td>0.204***</td>
<td>0.194***</td>
<td>0.067</td>
<td>0.124*</td>
<td>0.071</td>
</tr>
<tr>
<td></td>
<td>(0.062)</td>
<td>(0.051)</td>
<td>(0.060)</td>
<td>(0.068)</td>
<td>(0.075)</td>
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<tr>
<td>( \ln(\text{wage}) )</td>
<td>0.255***</td>
<td>0.204***</td>
<td>0.305***</td>
<td>0.225***</td>
<td>0.248***</td>
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<tr>
<td></td>
<td>(0.041)</td>
<td>(0.037)</td>
<td>(0.049)</td>
<td>(0.057)</td>
<td>(0.064)</td>
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</tbody>
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Significance levels: \( p < 0.10 \), \( * p < 0.05 \), \( ** p < 0.01 \), \( *** p < 0.001 \); \( N=96,113 \).

Method: Fixed Effects Individual Slopes (FEIS)
- FE accounts for selection on levels due to unobserved heterogeneity
- FE does not account for differences in individual trends due to unobserved, time-constant heterogeneity
- We assume that individuals who are on a relatively steep wage (and thus rank) trajectory over time also experience a slower decline in job satisfaction over time (e.g. through intrinsic motivation)
- We estimate the following regression model:
  \[ \text{Jobsat}_{it} = \alpha_i + \beta \text{Rank}_{it} + \gamma \ln(\text{wage})_{it} + \delta x_{it} + u_{it} \]
  where \( \alpha_i \) are individual-specific slopes (in our case: age, age squared and full-time experience) and the fixed effect, \( \beta \) is the effect of individual rank on job satisfaction, \( x_{it} \) is a set of controls and \( u_{it} \) is the time-varying error term
- We investigate differences between short- and long-term effects using first differencing

Is FEIS necessary?
- Impact dummies show an upward trend before the event of interest that disappears in FEIS

Conclusion
- Our results show no causal link between relative pay and job satisfaction; the estimation results are not driven by larger standard errors
- We show the importance of accounting for the effect of unobserved heterogeneity on individual wage trajectories
- Individual pay gains seem to increase job satisfaction, even when accounting for individual trends in job satisfaction
- To Do: replicate the results with the PASS-ADIAB to have more reliable information on wages

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