The Relationship Between Occupational Characteristics and the Representation of Females in Occupations

Sabine Ebensperger and Andreas Damelang

Motivation

Empirical evidence shows that occupational characteristics are correlated to the sex composition of occupations (Bielby & Baron 1986; Busch 2013; Cha 2000; Charles 2000; Kaufman 2002; Lippa, Preston & Penner 2014)

Do occupational characteristics determine the representation of females in occupations?

Our contribution:
- Generating a unique occupational panel data set
- Including a wide variety of occupational characteristics
- Applying a longitudinal research design

Theoretical Mechanisms

H1a: Occupational characteristics and the share of females are related to each other
H1b: Changing occupational characteristics lead to variation of the share of females
H2: The share of females follows a self-enforcing cycle
R: A changing share of females leads to variation of occupational characteristics

Data and Design

Occupation panel dataset which aggregates individual data of the 1996 to 2011 waves of the German Microcensus

Estimation strategy:
- Dependent variable: Share of females (Log odds)
- Independent variables: Occupational characteristics
  - RE model
  - Static FE model: 3 year lagged occupational characteristics
  - Dynamic FE model: 3 year lagged occupational characteristics, 4 year lagged share of females

Occupational Characteristics

<table>
<thead>
<tr>
<th>Occupational characteristics</th>
<th>Operationalization</th>
<th>Expected effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work-life-balance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>More than standard working hours</td>
<td>Overwork</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Weekend work</td>
<td>-</td>
</tr>
<tr>
<td>Rigid arrangements</td>
<td>Shiftwork</td>
<td>-</td>
</tr>
<tr>
<td>Flexible arrangements</td>
<td>Homework</td>
<td>+</td>
</tr>
<tr>
<td></td>
<td>Extensive part-time work (15 to 34 h/week)</td>
<td>+</td>
</tr>
<tr>
<td></td>
<td>Marginal part-time work (1 to 14 h/week)</td>
<td>+</td>
</tr>
<tr>
<td>Extrinsic motivation</td>
<td>Fixed-term employment</td>
<td>-</td>
</tr>
<tr>
<td>Need for work</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Qualification requirements</td>
<td>Tertiary educated</td>
<td>-</td>
</tr>
<tr>
<td>Level of qualification</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Results

Random effects Static fixed effects Dynamic fixed effects

Overwork
Weekend work
Shiftwork
Homework
Extensive part-time
Marginal part-time
Fixed-term
Tertiary educated
L4.Females

H1a: Occupational characteristics and the share of females are related to each other
H1b: Changing occupational characteristics lead to variation of the share of females
H2: The share of females follows a self-enforcing cycle
R: A changing share of females leads to variation of occupational characteristics

Source: Research Data Centres of the Federal Statistical Office and the statistical offices of the Länder, Microcensuses 1996 - 2011, own calculations

Conclusion

Occupational characteristics determine the representation of females in occupations

Aspects of Work-life-balance are most important for the share of females
- More than standard working hours have a negative effect
- Flexible arrangements have a positive effect

Minor evidence for a self-enforcing cycle
No evidence for the opposite causal direction