The Relationship between Educational Pathways and Occupational Outcomes at the Intersection of Gender and Social Origin

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Introduction

In various outcomes (e.g., educational attainment, occupational status, income, ...), differences by gender and social origin have been documented (Becker & Müller 2011, Blau & Kahn 2017, Mood 2017).

When do they appear in the life course? Do they intersect (Crenshaw 1991; McCall 2005)?

TREE-Data are especially suited to explore the emergence of such differences in the long term (age ~16-30)
Research Questions

1. Are there differences in student performance by parental status and gender?

2. Are there differences in educational pathways by parental status and gender, overall and net of performance (primary and secondary effects of social origin (Bourdieu and Passeron 1971; Boudon 1974))? 

3. Do these differences lead to unequal outcomes in young adults’ early working life, namely occupational status and income?
Data & Research Design I

> Analytic model

1. Performance
2. Educational Trajectory
3. Occupational Status and Salary

Gender

Parental Status

> Data
— PISA 2000
— TREE 1, Waves 1-9 (2001-2014)
Data & Research Design II

> Methods

— Linear regressions (for effects on skills, social status and salary)
— Sequence- & cluster-analyses (for educational trajectories)
— Multinomial logistic regressions
  (for probabilities of belonging to a certain cluster)

— Example of an individual sequence

A  A  A  B  B  B  C  B  B  A

— A = Education  B = Employment  C = Unemployed
Results Step 1: Skills

**Reading Skills**

**Math & Science Skills**

**PISA Estimates**

Parent's Highest Social Status (ISEI)

- female
- male
Results Step 2: Educational Trajectories

Proportion

Year

Vocational
Voc. & Tertiary
Specialized Sec. & Tertiary
Academic Mixed
Academic

Parent's Highest Social Status (ISEI)

Vocational
Voc. & Tertiary
Specialized Sec. & Tertiary
Academic Mixed
Academic

Parent's Highest Social Status (ISEI)

Predicted Probability

female
male

Predicted Probability

female
male
Results Step 3 (I): Own Social Status (ISEI)

- **Total Effect**
  - Graph showing the relationship between parent's highest social status (ISEI) and own social status (ISEI) with lines for female (blue) and male (black).

- **Direct Effect, Net of Clusters**
  - Graph showing the same relationship as the total effect, but with lines indicating the net effect after adjusting for clusters.
Results Step 3 (II): Salary

Total Effect

Direct Effect, Net of Clusters

Predicted salary in CHF

Parent's Highest Social Status (ISEI)

female  male
Conclusions

> Differences in reading and mathematical skills by parental status and gender.

> Men overrepresented in vocational and women in specialized and academic secondary tracks.

> Differences in own status and salary by parental status and gender.

> Interaction effect by social origin and gender in step 3 (salary).
Literature


Acknowledgments

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Robustness Checks (I)
Robustness Checks (II)

<table>
<thead>
<tr>
<th></th>
<th>Log std. monthly gross salary</th>
<th>Exclusion of the lowest and highest 1%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>End of education at least 2 years ago</td>
<td></td>
</tr>
<tr>
<td>Women</td>
<td>-0.362*** (0.0856)</td>
<td>-0.350*** (0.0778)</td>
</tr>
<tr>
<td>Highest parental ISEI</td>
<td>0.00151 (0.00121)</td>
<td>-0.000286 (0.00106)</td>
</tr>
<tr>
<td>Women*Highest parental ISEI</td>
<td>0.00496** (0.00163)</td>
<td>0.00458** (0.00146)</td>
</tr>
<tr>
<td>Self-employed</td>
<td>-0.0800 (0.0888)</td>
<td>-0.0618 (0.0896)</td>
</tr>
<tr>
<td>Voc. &amp; Tertiary</td>
<td>0.176*** (0.0254)</td>
<td>0.170*** (0.0236)</td>
</tr>
<tr>
<td>Specialized Sec. &amp; Tertiary</td>
<td>0.0656* (0.0310)</td>
<td>0.0786* (0.0316)</td>
</tr>
<tr>
<td>Academic Mixed</td>
<td>0.150*** (0.0339)</td>
<td></td>
</tr>
<tr>
<td>Academic</td>
<td>0.202*** (0.0299)</td>
<td>0.143*** (0.0307)</td>
</tr>
<tr>
<td>Constant</td>
<td>8.744*** (0.0689)</td>
<td>8.762*** (0.0609)</td>
</tr>
<tr>
<td>Observations</td>
<td>1591</td>
<td>1591</td>
</tr>
</tbody>
</table>

Standard errors in parentheses
* p < 0.05, ** p < 0.01, *** p < 0.001
Theory I

> Inequalities by social origin and gender

— Primary and secondary effects of social origin (Bourdieu and Passeron 1971; Boudon 1974)

— Intersectionality (Crenshaw 1991; McCall 2005)
Theory II

> Intersectionality

— Origin: Black Feminism in the USA about 1990
— But: Idea already present in German educational research of the 1960ies with the artificial character of the «catholic working class girl from the countryside» (Dahrendorf, 1965)

— Considers multiple dimensions of inequality
— Not necessarily additive
Intersectionality in educational research

> Educational expansion is gender specific (Becker & Müller 2011)

> Reading skills: Gender more important than SES or migration
> Maths skills: SES more important (Gottburgsen & Gross 2012)

> Among low SES students white British achieve lower scores than ethnic minorities
> No interactions between gender and SES (Strand 2014)
Results Step 2 (II)

- **Vocational**: 61% male, 50% female
- **Voc. & Tertiary**: 15% male, 6% female
- **Specialized Sec. & Tertiary**: 1% male, 12% female
- **Academic Mixed**: 10% male, 6% female
- **Academic**: 18% male, 22% female
Results Step 3 (III)

- Vocational
  - Predicted ISEI: Female 47, Male 46
  - Predicted salary: Female 5385, Male 6298

- Voc. & Tertiary
  - Predicted ISEI: Female 66, Male 70
  - Predicted salary: Female 6540, Male 8017

- Specialized Sec. & Tertiary
  - Predicted ISEI: Female 66, Male 66
  - Predicted salary: Female 6026, Male 8017

- Academic Mixed
  - Predicted ISEI: Female 68, Male 69
  - Predicted salary: Female 6525, Male 7286

- Academic
  - Predicted ISEI: Female 68, Male 72
  - Predicted salary: Female 7376, Male 6695

Legend:
- Female
- Male