Regional Provenance as a Cause for unequal Capabilities in Germany?

The Distribution of Capabilities between Males and Females in East and West Germany

Kerstin Becker
Christian Könnecke
Svenja Tietze

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INTRODUCTION AND RESEARCH INTEREST
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1. Are there differences in the perceived capabilities between East and West Germany?

2. To what extent can existing (gender) differences between East/West Germany be attributed to structural disadvantages and/or socialization-based mechanisms?
RELEVANCE OF UNEQUALLY DISTRIBUTED CAPABILITIES
There are still several regional and gender-related disparities in achieved functionings in Germany.

Only on the basis of fundamentally equal distributed Capability differences in the outcome (achieved functionings) can be seen as legitimate.

These differences then appear to be grounded on individual choice.
THEORETICAL BACKGROUND AND HYPOTHESES
THEORETICAL BACKGROUND

- Two possible theoretical explanations:
  - Different socialization in East and West Germany
  - Social economic structure in East and West Germany varies
    - Additional information on regional level necessary (Macro data: INKAR)
THEORETICAL BACKGROUND

Socialization vs. structural differences

**East-socialization**
- Familial socialization
- Authoritarian regime + state-directed economy
- Internalisation of norms + values in the GDR
- Δ Capabilities
- East-habitus

**West-socialization**
- Familial socialization
- Democratic society + social market economy
- Internalisation of norms + values of the FRG
- Δ Capabilities
- West-habitus
Socialization vs. structural differences (?)
HYPOTHESES

H1: East Germans perceive their Overall-Capabilities to be significantly lower than West Germans.

H2: West German males perceive their Capabilities to be significantly higher than East German males.

H3: West German females perceive their Capabilities to be significantly lower than East German females.
Abbildung 2: Erwartete Verteilung der Capabilities aufgrund von Struktur und Sozialisation, Quelle: eigene Darstellung.
METHODS AND RESEARCH DESIGN
METHODS: OPERATIONALISATION OF CAPABILITIES

Investigated Capability dimensions on the basis of GeNECA questionnaire

1. Income
2. Family and social contacts
3. Education
4. Secure neighborhood
5. Health
6. Eco sensitive behavior
7. Free exercise of religious belief
8. Pleasant working climate
9. Appropriate housing conditions

Creation of an additive index

Comparison with Overall-Capabilities

Purpose: validation of measurement models
**Social context:**
- Social institutions
- Social and legal norms
- Other people’s behavior and characteristics
- Environmental factors (and many, many more…)

**Means to achieve (capability inputs):**
- Non-market production
- Market production
- Net income
- Transfers-in-kind

**Goods and services**

**Individual conversion factors**

**Preference formation mechanisms**

**Capability set**
- Capabilities (i.e. opportunity set of achievable functionings)
- Freedom to achieve

**Personal history and psychology**

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Schematic figure of Capability-Set and contextual factors (revised presentation), Source: Robeyns (2005b: 98)
RESULTS OF DESCRIPTIVE DATA ANALYSIS
RESULTS OF DESCRIPTIVE DATA ANALYSIS

Boxplot of Capability-Sumindex depending on regional provenance and gender (residence previous to 1989)

Capability-Sumindex

3 4 5 6 7

East-woman  East-man  West-woman  West-man
RESULTS OF DESCRIPTIVE DATA ANALYSIS

Boxplot of Overall-Capabilities depending on regional provenance and gender (residence previous to 1989)
RESULTS OF MULTI-LEVEL-ANALYSIS
MODEL STRUCTURE

- Central dependent variables
  - Capability sumindex
  - Overall-Capabilities
- Central independent variables
- Control variables
MODEL STRUCTURE

The following variables have been embedded in the models:

- Regional provenance
- Gender
- Age, Age$^2$, East cohort
- Equivalence household income
- Migration background (also inner-German migration after 1989)
- Education
- Form of employment
- Marital status
- Monthly rent
- Subjective state of health
- Constraints (index) as well as preferences in 3 realms
Furthermore the following aspects have been tested with additional macro data (INKAR):

- Regional economic strength
- Structure of the regional labor market
- Supply by public institutions in the field of health and childcare
### RESULTS

#### Multi-Level-Models

<table>
<thead>
<tr>
<th>Factor</th>
<th>DV: Overall-Capabilities</th>
<th>DV: Capability-Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>East German</td>
<td>-0.548**</td>
<td>-0.534***</td>
</tr>
<tr>
<td>(Ref.: West German before 1989)</td>
<td>(0.302)</td>
<td>(0.173)</td>
</tr>
<tr>
<td>Male</td>
<td>0.100</td>
<td>-0.0428</td>
</tr>
<tr>
<td>(Ref.: Female)</td>
<td>(0.108)</td>
<td>(0.0655)</td>
</tr>
<tr>
<td>East German Male</td>
<td>-0.217</td>
<td>0.0238</td>
</tr>
<tr>
<td>(Interaction)</td>
<td>(0.184)</td>
<td>(0.0953)</td>
</tr>
<tr>
<td><strong>Equivalised Income</strong></td>
<td><strong>0.367</strong>*</td>
<td><strong>0.244</strong>*</td>
</tr>
<tr>
<td>(logarithmised, centred)</td>
<td>(0.105)</td>
<td>(0.0513)</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No Certificate</td>
<td>0.272</td>
<td>0.0854</td>
</tr>
<tr>
<td>(Ref.: Hauptschule)</td>
<td>(0.207)</td>
<td>(0.147)</td>
</tr>
<tr>
<td>Realschule</td>
<td>0.217**</td>
<td>0.0373</td>
</tr>
<tr>
<td>(Ref.: Hauptschule)</td>
<td>(0.101)</td>
<td>(0.0653)</td>
</tr>
<tr>
<td>Abitur</td>
<td>0.238**</td>
<td>0.000786</td>
</tr>
<tr>
<td>(Ref.: Hauptschule)</td>
<td>(0.120)</td>
<td>(0.0650)</td>
</tr>
<tr>
<td>Other Certificate</td>
<td>0.827**</td>
<td>0.821</td>
</tr>
<tr>
<td>(Ref.: Hauptschule)</td>
<td>(0.345)</td>
<td>(0.541)</td>
</tr>
<tr>
<td><strong>temp. employed Male</strong></td>
<td><strong>-0.184</strong></td>
<td><strong>-0.530</strong></td>
</tr>
<tr>
<td>(Interaction)</td>
<td>(0.200)</td>
<td>(0.214)</td>
</tr>
<tr>
<td><strong>Duration of Unemployment</strong></td>
<td><strong>-0.0250</strong></td>
<td><strong>-0.0412</strong></td>
</tr>
<tr>
<td>(in years, centred)</td>
<td>(0.0401)</td>
<td>(0.0248)</td>
</tr>
<tr>
<td><strong>Constraints</strong></td>
<td><strong>-0.670</strong>*</td>
<td><strong>-0.495</strong></td>
</tr>
<tr>
<td>(Index, centred)</td>
<td>(0.0852)</td>
<td>(0.0588)</td>
</tr>
<tr>
<td><strong>Preferences</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Importance: Employment</td>
<td>0.0428**</td>
<td>0.0229**</td>
</tr>
<tr>
<td>(0.0195)</td>
<td>(0.003994)</td>
<td></td>
</tr>
<tr>
<td>Importance: Income</td>
<td>0.0169</td>
<td>0.0884***</td>
</tr>
<tr>
<td>(0.0364)</td>
<td>(0.0227)</td>
<td></td>
</tr>
<tr>
<td>Importance: Housing</td>
<td>0.0944***</td>
<td>0.106***</td>
</tr>
<tr>
<td>(0.0345)</td>
<td>(0.0254)</td>
<td></td>
</tr>
<tr>
<td><strong>Context Variables (district level)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployment Rate</td>
<td>0.0506***</td>
<td>0.0431***</td>
</tr>
<tr>
<td>(0.0174)</td>
<td>(0.0115)</td>
<td></td>
</tr>
<tr>
<td>Residents per doctor</td>
<td>0.000921***</td>
<td>0.000381**</td>
</tr>
<tr>
<td>(0.000275)</td>
<td>(0.000189)</td>
<td></td>
</tr>
</tbody>
</table>

**N**: 829

Number of districts: 102

Intra-Class-Correlation: 0.00

Robust Standard Errors in parentheses, significance levels: ***(1%)**, ***(5%)**, *(10%)*
RESULTS: REGIONAL PROVENANCE AND GENDER

- Significant effect of regional provenance under control of regional context variables and (socialization-based) social preferences
- No gender specific differences between and within regional sub-groups
RESULTS: COMPARISON OF DEPENDENT VARIABLES

- Some effect differences:
  - Educational level only influences Overall-Capabilities
  - Labour market related individual characteristics only affect aggregated Capabilities
  - Income (and constraints) are the most important predictors, but have a stronger effect on Overall-Capabilities

- How to explain these differences?
RESULTS: TWO DISTINCT MEASUREMENT MODELS?

Explorative Factor Analysis of Capability Dimensions

<table>
<thead>
<tr>
<th>Items</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Cummunality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cap. Environment</td>
<td>0.821</td>
<td></td>
<td>0.542</td>
</tr>
<tr>
<td>Cap. religious Faith</td>
<td>0.632</td>
<td></td>
<td>0.316</td>
</tr>
<tr>
<td>Cap. Health</td>
<td>0.599</td>
<td></td>
<td>0.505</td>
</tr>
<tr>
<td>Cap. Security</td>
<td>0.590</td>
<td></td>
<td>0.458</td>
</tr>
<tr>
<td>Cap. social Contacts</td>
<td>0.448</td>
<td></td>
<td>0.351</td>
</tr>
<tr>
<td>Cap. Housing</td>
<td>0.446</td>
<td></td>
<td>0.347</td>
</tr>
<tr>
<td>Cap. Work Environment</td>
<td>0.351</td>
<td>0.270</td>
<td>0.317</td>
</tr>
<tr>
<td>Cap. Income</td>
<td></td>
<td>0.872</td>
<td>0.639</td>
</tr>
<tr>
<td><strong>Overall-Capabilities</strong></td>
<td></td>
<td>0.672</td>
<td>0.447</td>
</tr>
<tr>
<td>Cap. Education</td>
<td></td>
<td>0.604</td>
<td>0.524</td>
</tr>
</tbody>
</table>

Proportion of common variance: 0.758, 0.685
Proportion of total variance: 0.337, 0.305

Iterated Principal Factor Analysis; Promax-Rotation
N=1132; r_{F1F2}=0.636
Factor loadings <0.2 are not reported
CONCLUSION AND DISCUSSION
CONCLUSION AND DISCUSSION

- Socialization can not sufficiently explain differences between East and West Germans
  - Cohort effects for East Germans are insignificant under control of age. This points to lifecycle effects in contrast to socialization

- Structural differences cannot explain different capabilities in East and West Germany

- Question of other theoretical explanations: e.g. lifecycle effects or adaptive preferences
OPEN QUESTIONS

• What is measured by the dependent variables?
  ◦ Capability Index of different dimensions shows other results than Overall-Capabilities
  ◦ Results of regression model with Overall-Capabilities are mainly consistent with the theoretical assumptions and hypothesis
• Contra-intuitive effects for various variables, e.g. positive effect of regional unemployment rate \( \rightarrow \) points to adaptive preferences
• After (step-wise) controlling for all individual characteristics there is no significant effect of regional provenance, but it occurs again, when regional unemployment rate is added to the multi-level-models(?)
Thank you for your attention!