Childlessness and education: the case of Finland and Italy

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Education and reproduction in low-fertility settings (EDUREP)  
Vienna, December 2-4, 2015
The decision to focus on Italy and Finland originates from the results obtained whilst studying micro-level determinants of childlessness in Europe, in the FamiliesAndSocieties European Project framework.
Similar level of childlessness, but very different dynamic in the diffusion of childlessness across social classes. Why?

Clear education gradient in Italy: higher childlessness levels among highly educated women. But, childlessness increases among low educated women are also registered among the youngest birth cohorts.

Reversed education gradient, even increasing, in Finland.
Italy and Finland in numbers

<table>
<thead>
<tr>
<th></th>
<th>Finland</th>
<th>Italy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proportion of birth out of wedlock</td>
<td>41.5</td>
<td>28</td>
</tr>
<tr>
<td>Divorce rate</td>
<td>2.4</td>
<td>0.9</td>
</tr>
<tr>
<td>Cohabiting rate</td>
<td>24.51</td>
<td>8.92</td>
</tr>
<tr>
<td>Female employment</td>
<td>80.37</td>
<td>58.9</td>
</tr>
<tr>
<td>Maternal employment</td>
<td>78.1</td>
<td>58</td>
</tr>
<tr>
<td>Public spending family benefits (GDP%)</td>
<td>3.2</td>
<td>1.58</td>
</tr>
</tbody>
</table>

OECD Family Database - 2011

In Italy family structures are slowly changing, but traditional family arrangements are still widely spread.

Finland public welfare system is able to guarantee work-life balance for women.
Objectives

- Investigating on the role of education as a micro-level determinant of childlessness in Finland and Italy using multivariate methods, in order to go in depth with the analysis of the education gradient differences between the two countries.

- Understanding if confounding factors can bias the educational gradient in childlessness
Education and childlessness

Both cultural and economic theories of childlessness have referred to increasing education as an important factor childlessness growth.

Motherhood postponement: reaching high education and skills requires longer periods in education and training.

Highly educated women are more likely to pursue careers thus postponing or forgoing marriage and birth (accumulation of human capital).

Changes in knowledge and values accompanying the educational process: both as a source of contraceptive knowledge and of equality in gender roles and post-materialistic values.

Opportunity cost of children, role incompatibility, wage penalties, earning power.

Women who receive more education may come from a background which emphasizes values leading to childlessness (countries with low intergenerational social mobility).
Data and methods

Data used for the analysis come from:

- **Population register** (descriptive statistics) and **Finnish Late Fertility survey** (2015) (multivariate analysis) for Finland
- **Multipurpose Family and Social Subjects** (2009) for Italy

- Limitation in the number of variables (only the common ones are used)
- No information on exposure to sexual intercourse, use of contraception, infertility

A common **logit model** with pooled data with an interaction term between country and education level in order to investigate on the differences among the two countries.

The focus is on **30-49 years old women**
<table>
<thead>
<tr>
<th>Variables</th>
<th>Odds ratio</th>
<th>P-value</th>
<th>Odds ratio</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>0.336</td>
<td>&lt;.0001</td>
<td>0.096</td>
<td>&lt;.0001</td>
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<tr>
<td>Union Status (Ref. Married)</td>
<td>Never married not in couple</td>
<td>34.201</td>
<td>&lt;.0001</td>
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<tr>
<td>Union Status (Ref. Married)</td>
<td>Divorced/Separated</td>
<td>2.05</td>
<td>&lt;.0001</td>
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<td>Union Status (Ref. Married)</td>
<td>Never married in couple</td>
<td>5.706</td>
<td>&lt;.0001</td>
<td></td>
</tr>
<tr>
<td>Education (Ref. Medium)</td>
<td>Low</td>
<td>0.703</td>
<td>&lt;.0001</td>
<td></td>
</tr>
<tr>
<td>Education (Ref. Medium)</td>
<td>High</td>
<td>1.699</td>
<td>&lt;.0001</td>
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<tr>
<td>Health</td>
<td>Chronical disease</td>
<td>1.334</td>
<td>0.0009</td>
<td></td>
</tr>
<tr>
<td>Siblings (Ref. No siblings)</td>
<td>Yes</td>
<td>0.59</td>
<td>&lt;.0001</td>
<td></td>
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<tr>
<td>Country (Ref. Italy)</td>
<td>Finland</td>
<td>1.745</td>
<td>&lt;.0001</td>
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<tr>
<td>Age (Ref. 40-49)</td>
<td>30-39</td>
<td>2.282</td>
<td>&lt;.0001</td>
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<tr>
<td>Education*Country (Ref. Medium Italy)</td>
<td>Low - Finland</td>
<td>1.845</td>
<td>0.0512</td>
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<tr>
<td>Education*Country (Ref. Medium Italy)</td>
<td>High - Finland</td>
<td>0.719</td>
<td>0.0279</td>
<td></td>
</tr>
</tbody>
</table>
Odd ratio. Education by country, and interaction term

- **Negative education gradient in childlessness, but not statistically significant**
  - Finland
    - High vs medium
    - Low vs High
    - Low vs Medium
  - Italy
    - High vs medium
    - Low vs High
    - Low vs Medium

- **Positive, significant education gradient**
  - Finland vs Italy
  - High
  - Medium
  - Low

Generally, **Finnish women have higher childlessness risk. Women with low education levels are the most likely to be childless, with respect to their Italian counterparts**.
Conclusions

The relation between higher education and fertility is strongly associated with the institutional context (e.g., child care provision).

Italy and Finland are going in very different directions regarding the association between education and childlessness (although the increase in childlessness was highest among the less educated women in Italy in the recent cohort).

Differences among the two countries, with respect to the effect of education on childlessness emerge, and educational gradients are confirmed, only in models not controlling for union status.

Selection effect. Would it be reasonable to hypothesize the existence of a latent variable (e.g. something like FAMILY LIFE PROPENSITY) making reproductive choices and union status covary?

Bivariate Probit models for identifying correlations among the errors of both childlessness and union status, used as dependent variables of two different models, simultaneously estimated, and accounting for direct and indirect effect of education on childlessness, through union status.