Trust and Fertility Dynamics

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Background

- Fertility rates across OECD countries differ and have followed rather different tracks
  - Nordic
  - Anglo-Saxon
  - Mediterranean
  - East-European
Background

Several explanations on offer
- SDT (Van de Kaa & Lesthague)
- Gender perspective (MacDonald)
- Welfare provision and policy – based on welfare regime typologies (Esping-Andersen)
Background

Empirically

- Desired fertility constant over time and across countries
- Gender perspective still needs further empirical testing.
- TFR high in Anglo-Saxon and Scandinavian countries
Education trends in four countries
Fertility trends in four countries
Background

Empirically

- TFR and economic development might be following an U-shape – at very high levels of development – TFR appears to be picking up (Myrskylä et al 2009)
The Bongaarts-Watkins curve

FIGURE 2 Relationship between total fertility rate and development level (HDI) for 69 developing countries, 1960–65 to 1985–90
Advances in development reverse fertility declines

Mikko Myrskylä¹, Hans-Peter Kohler¹ & Francesco C. Billari²

During the twentieth century, the global population has gone through unprecedented increases in economic and social development that coincided with substantial declines in human fertility and population growth rates¹². The negative association of fertility with economic and social development has therefore become one of the most solidly established and generally accepted empirical regularities in the social sciences¹³. As a result of this close connection between development and fertility decline, more than half of the global population now lives in regions with below-replacement fertility (less than 2.1 children per woman)⁴. In many highly developed countries, the trend towards low fertility has also

Information). The TFR is shown for years 1975 and 2005 relative to the lowest TFR that was observed while a country’s HDI was within the window of 0.85–0.9. The reference year is the first year in which this lowest TFR is observed. A line is then used to connect the HDI–TFR
Reversal in the HDI – TFR relationship

2005 correlations for countries with HDI >= .9:

TFR – HDI rank correlation: +.55 (p < 0.01)
Transformed(TFR) – transformed(HDI) correlation: +.42 (p < 0.05)
Reversal in the HDI – TFR relationship

Figure S.2: Cross-sectional relationship between the total fertility rate (TFR), with and without adjustment for tempo effects, and the human development index (HDI) in 1975 and 2005
Emergence of the positive TFR – HDI association
Trust and fertility – why should it matter? The idea

- High trust matters for the extent in which individuals are willing to outsource traditional family activities to other people
  - Child care
  - Care for the elderly
- Trust as a persistent societal cultural trait
- Interaction of trust and educational expansion
Possible fertility scheme #1

Enrolment of women in higher education

TFR

A

B

C

Traditional

Low

Egalitarian

High
Possible fertility scheme #2

TFR

Traditional  Egalitarian

Low  High

Enrolment of women in higher education
Possible fertility scheme #3

Enrolment of women in higher education

TFR

Low

High

Traditional

Egalitarian
Generalized trust and fertility

Generalized Trust

Total Fertility Rate
Data and Methodology

- Sample: OECD + EU 27 - Total of 36 countries
- Years: From 1981 to 2010, every five years (approx.)
- World Values Survey and European Values Survey
- World Bank Indicators
- Two-fold empirical analysis:
  - Descriptive at the country level
  - Multilevel models
The typical trust question in surveys

- Generalized trust
  - “Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?”
Descriptive statistics

- Dependent variable: TFR
- Key independent variables:
  - Country-level average trust
  - GDP per ca.
  - Female enrolment in tertiary education
  - Female labour force participation
Descriptive statistics: U-shape
Prediction of TFR by expansion of education for different levels of generalized trust

Note: Panel random effect regression (A7-Model6)
Prediction of TFR by expansion of education for different levels of generalized trust

Panel random effect regression; A7-Model6

Trust and Education Interaction

Trust = 0.10  Trust = 0.35  Trust = 0.8

Female tertiary enrolment (%)
Multilevel analysis

- Sample: men and women above age 40
- Dependent variable: Total number of children
- Key independent variables:
  - Trust
  - Education
  - Education x trust

- Multilevel Poisson model
  - Three levels: individual, region and country
Multilevel results

<table>
<thead>
<tr>
<th>Dependent variable: Number of children (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generalized trust</td>
</tr>
<tr>
<td>Regional g. trust</td>
</tr>
<tr>
<td>National g. trust</td>
</tr>
<tr>
<td>Education</td>
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<tr>
<td>Regional female education</td>
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<td>National female education</td>
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<td>Regional FLP</td>
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<td>Income scale</td>
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<tr>
<td>Observations</td>
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</tbody>
</table>
## Multilevel results

<table>
<thead>
<tr>
<th>Dependent variable: Number of children</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generalized trust</td>
<td>0.960 (0.036)</td>
<td>0.976 (0.039)</td>
<td>0.992 (0.028)</td>
</tr>
<tr>
<td>Regional g. trust</td>
<td>1.007 (0.092)</td>
<td>1.008 (0.092)</td>
<td>1.008 (0.092)</td>
</tr>
<tr>
<td>National g. trust</td>
<td>0.996 (0.082)</td>
<td>0.997 (0.082)</td>
<td>0.996 (0.082)</td>
</tr>
<tr>
<td>Education</td>
<td>0.977 (0.001)**</td>
<td>0.977 (0.001)**</td>
<td>0.977 (0.001)**</td>
</tr>
<tr>
<td>Regional female education</td>
<td>0.940 (0.013)**</td>
<td>0.940 (0.013)**</td>
<td>0.940 (0.013)**</td>
</tr>
<tr>
<td>National female education</td>
<td>0.983 (0.007)*</td>
<td>0.983 (0.007)*</td>
<td>0.983 (0.007)*</td>
</tr>
<tr>
<td>Regional FLP</td>
<td>0.999 (0.001)</td>
<td>0.999 (0.001)</td>
<td>0.999 (0.001)</td>
</tr>
<tr>
<td>National FLP</td>
<td>0.999 (0.001)</td>
<td>0.999 (0.001)</td>
<td>0.999 (0.001)</td>
</tr>
<tr>
<td>Income scale</td>
<td>0.991 (0.002)**</td>
<td>0.991 (0.002)**</td>
<td>0.991 (0.002)**</td>
</tr>
<tr>
<td>Regional income scale</td>
<td>0.966 (0.013)*</td>
<td>0.966 (0.013)*</td>
<td>0.966 (0.013)*</td>
</tr>
<tr>
<td>National income scale</td>
<td>0.999 (0.005)</td>
<td>0.999 (0.005)</td>
<td>0.999 (0.005)</td>
</tr>
<tr>
<td>G.trust x National f.education</td>
<td>1.010 (0.005)+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>G.trust x National FLP</td>
<td></td>
<td>1.001 (0.001)</td>
<td></td>
</tr>
<tr>
<td>G.trust x National income scale</td>
<td></td>
<td></td>
<td>1.007 (0.005)</td>
</tr>
</tbody>
</table>

**Observations:**
- (2) 57945
- (3) 57945
- (4) 57945
Conclusions

- Our interpretation is that as women gain higher education (through expansion of education), they want to combine family life and work.

- This requires outsourcing of traditional family activities (caring for children and the elderly) to other individuals and institutions – trust facilitates this process.

- In other words, over time, trust is a catalyst that facilitates the process of outsourcing, through expansion of care infrastructure.

- Might explain why in low fertility countries we find high enrolment rate of women in higher education but low female labour force participation.