Economic Uncertainty and Fertility in Europe

EU-FER

Daniele Vignoli
Università degli Studi di Firenze
The Great Recession in Europe

Total Fertility Rate 2000-2013

Source: Eurostat data
Gaps in Knowledge and Objective

The economic uncertainty–fertility nexus is far from being understood

- theoretical premises weak
- empirical findings contradictory
- most of our empirical knowledge reflects the pre-crisis era

**EU-FER AIM:** To generate new knowledge on if, how, and under what circumstances economic uncertainty matters for fertility in Europe, adopting a cross-country comparative approach
<table>
<thead>
<tr>
<th>Methodology</th>
<th>Validity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meta-Analysis of European Research Findings</td>
<td>High external</td>
</tr>
<tr>
<td>Cross-Country Controlled Laboratory Experimentation</td>
<td>High internal</td>
</tr>
<tr>
<td>Micro-Level Longitudinal Research</td>
<td>High external</td>
</tr>
</tbody>
</table>
Meta-Analysis of Previous Research

• **Quantitative assessment** of the effect of interest across several research works

• A **meta-analysis** on the topic will allow us to evaluate:
  - how much previous findings depend on the **definition and measurement of uncertainty**
  - whether the link between economic uncertainty and fertility **varies across space and has changed over time**
Laboratory Experimentation

Group 1: Manipulation of conditions of uncertainty (e.g., mock newspaper stories and media clips)

Group 2: Control

Random assignment

Outcome variable: Fertility intentions

Colors symbolize any differentiating attribute among the individuals (e.g., person-specific risk aversion)
Preliminary agreements have been established with fully functioning labs in:

- Italy
- France
- Germany
- Poland
- Sweden
- UK
Micro-Level Longitudinal Research

- **The nature:** Which uncertainty matters?
- **The time:** “Uncertainty” or “persistent uncertainty”?
- **The couple:** Are there gender-specific effects of uncertainty on fertility?
- **The macro-micro interaction:** What is the impact of the Great Recession on fertility?

**Methods and data:** application of appropriate statistical methods to very recent data sources (e.g., GGP; EU-SILC; long panels such as G-SOEP or Understanding Societies)
Project Impact

• **New theoretical and empirical insights** about how economic uncertainty affects fertility derived from both *observationally and experimentally based evidence*.

• **To set the stage for a new development in family demography** by demonstrating the potential of a laboratory experimentation study.
Sample of Publications

On economic uncertainty and family dynamics:

On meta-analysis in family demography:

On fertility intentions and fertility intention/realization nexus:

On modelling fertility and labour market careers:

* Names listed in alphabetical order
The proportion of research articles employing experimental design in top-ranked journals in economics, political science, and sociology (three-year moving average). Abbreviations: AER, American Economic Review; ECON, Econometrica; AJPS, American Journal of Political Science; APSR, American Political Science Review; AJS, American Journal of Sociology; ASR, American Sociological Review.

Source: Jackson and Cox 2013
### Advisory Board

<table>
<thead>
<tr>
<th>Name</th>
<th>Affiliation</th>
<th>Discipline</th>
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</thead>
<tbody>
<tr>
<td>Dr. Prof. Hans-Peter Blossfeld</td>
<td>European University Institute</td>
<td>Sociologist</td>
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<tr>
<td>Dr. Prof. Fabrizia Mealli</td>
<td>University of Florence</td>
<td>Econometrician and Statistician</td>
</tr>
<tr>
<td>Dr. Prof. Sven Steinmo</td>
<td>European University Institute</td>
<td>Experimental Political Economist</td>
</tr>
</tbody>
</table>

**Interdisciplinarity:** Research team needs to draw on insights from **demography, sociology, social psychology, economics, statistics**
Theory of Planned Behaviours

**EU-FER Team**

- **Post-doc 1:** he/she will work on the realization of lab experiments *(i.e. production of the experimental protocol, conduction of experiments, experimental data analysis, journal articles)*  
  **Background:** Social Psychology (experimental method)

- **Post-doc 2:** he/she will be in charge of micro-level research *(i.e. data harmonization and management, statistical modelling, journal articles)*  
  **Background:** Sociology or Family Demography

- **Post-doc 3:** he/she will be mainly responsible of carrying out the meta-analysis. Then, he/she will collaborate with the other two post-docs on the statistical and econometric techniques.  
  **Background:** Statistics or Econometrics
Experimental Situations

- Two different possibilities:
  - real situation experiments (based on manipulating the framing of the real situation as a crisis)
  - vignette experiments (completely hypothetical situations)
• In a **vignette study** all participants will respond to the question on childbearing intentions being in the same identical (hypothetical) situation but the treatment of interest

  Example: *Imagine to be a 30-years old men, living in a cohabiting couple, …*

• Demographic and socio-economic **characteristics of respondents** can be controlled for in the statistical analyses
Risk aversion is the reluctance of a person to prefer an option with an uncertain payoff rather than another option with a more certain, but possibly lower, expected payoff.

“Would you describe yourself as someone who tries to avoid risks or someone who is willing to take risks?”
The question allows a single answer on a scale from 0 to 10.

Clearly the use of lotteries represents a much more powerful method to control for person-specific risk aversion compared to a single question.
How Risk Aversion Measured in the Lab

• **Holt & Laury (2002 – AER):** Individuals are generally asked to decide between two options, one “risky” and one “safe”

• The total number of safe options taken is a measure of the *individual risk aversion*

• Generally individuals are classified as “Risk averse”, “Risk Neutral”, and “Risk prone”

• The fact that participants will be paid off according to how much they win ensures the credibility of results
Play Games!!!
Earn Cash!!!

Participate in an Experiment!!!
Average Earnings = 30-35 Euros!!!
Takes Half Hour or Less!!!

Wednesday, September 4th, 4:30
Thursday, September 5th, 4:30
Monday, September 9th, 4:30
Tuesday, September 10th, 9:30
More Times Available

Sign up at:
www.disia.unifi.it/experiments
Female Employment as a Cause of Low Fertility?

• “...I believe that the growth in the earning power of women during the last hundred years in developed countries is a major cause of both the large increase in labor force participation of married women and the decline in fertility” (Becker 1974).

• “I shall try to show that the motivations underlying the ‘second transition’ are clearly different from those supporting the first transition, with individual autonomy and female emancipation more central to the second than to the first” (Lesthaeghe 1995: 18).
• How economic uncertainties relate to fertility depends on the life course stage a person is in and on the expectations (s)he has with respect to the future career

• Women with limited labor market prospects might also respond to an unfavorable labor market situation by having children

“For this group, nothing is lost by having children because they have no opportunity to succeed in the mainstream economy.”
McDonald 2000: 10

“Therefore those in subgroups with the poorest prospects of successful careers are more likely to seek parenthood.”
Friedman et al. 1994: 385
The Historical View

Thomas Malthus
(1766-1834)

Hajnal Line

Source: Szoltysek (2009)

Gary Becker

TFR and GDP/per capita, Sweden 1890-1930

Source: Swedish Statistica Office

Dirk van de Kaa

TFR in European countries 1960-2000

Source: Council of Europe

Ron Lesthaeghe

TFR in European countries 1960-2000

Source: Council of Europe
The Historical View

Total Fertility Rate 1900-2000

Sweden

France

Germany

Source: INSEE, Swedish Statistical Office, German Statistical Office, BiB
Note: only West Germany after 1945
Economic Uncertainty and Low Fertility

- **Economic uncertainty, unemployment, labor market restructuring and the fertility decline in Eastern Europe**
e.g. Eberstadt 1994; Witte and Wagner 1995; Ranjan 1999; Kharkarova and Andreev 2000; Kohler and Kohler 2001; Kohler et al 2002; Perelli-Harris 2008

- **Youth unemployment, difficulties to enter the labor market, and delayed parenthood in Southern Europe**
e.g. Adsera 2004; McDonald 2000; De la Rica and Iza 2005; Gonzalez and Jurado-Guerro 2006

- **Globalization as a characteristic of contemporary societies – the class of „precariat“ – and driving force of low fertility in Europe**
e.g. Mills 2003; Blossfeld et. al. 2006, 2007; Standing 2011
The “Great Recession” in Europe

Total Fertility Rate 2000-2014

Source: Eurostat data
Birth Timing: Accelerated Postponement?

Changes in age-specific fertility three years before (2005-8) and three years into the recession (2008-11)

Source: Own computations based on Eurostat 2013 & national statistical offices
1) Individuals differ in the extent to which they feel, tolerate, and react to, uncertainty

2) Studies mainly relied exclusively on unemployment as an operational definition of economic uncertainty

3) It may be the persistence in an unstable condition which have the most severe consequences on fertility decisions

4) Gender- and context-specific explanations have often been overlooked

5) A failure to control for unobserved individual characteristics leads to a selection bias of the estimated effects
## EU-FER Work Plan

<table>
<thead>
<tr>
<th>Component</th>
<th>1st year</th>
<th>2nd year</th>
<th>3rd year</th>
<th>4th year</th>
<th>5th year</th>
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<tbody>
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<td><strong>PREPARATORY WORK</strong></td>
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<td>Development of detailed project time-schedule</td>
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<td>Recruitment of research team</td>
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<td>Preparation of the protocol of lab experiments, set up, and participants’ recruitment</td>
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<td>Acquisition of papers for meta-analysis and construction of meta-sample</td>
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<td>Acquisition of data sets and preliminary data management</td>
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<tr>
<td><strong>META-ANALYSIS, LAB EXPERIMENTS AND MICRO-LEVEL RESEARCH</strong></td>
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<td>Conduction of meta-analysis</td>
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<td>Conduction of the lab experiments</td>
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<td>Data management for the preparation micro-level quantitative analyses</td>
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<td>Descriptive analyses</td>
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<td>Analysis of laboratory experiments’ results</td>
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<td>Micro-level research: index construction, model implementation and estimation</td>
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<td><strong>DISSEMINATION AND PUBLICATION</strong></td>
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<td>Development of working papers</td>
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<td>Dissemination of findings through international conferences</td>
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<td>Production and dissemination of policy briefs</td>
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<td>Finalization of research articles and submission of scientific papers to journals</td>
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<td>Final scientific book</td>
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<td><strong>MEETINGS AND WORKSHOPS</strong></td>
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<tr>
<td>Meetings with international collaborators and the Advisory Board</td>
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<tr>
<td>1) on: protocol and set up of the lab experiments</td>
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<td>2) on: discussion of the experiment’s results and prospects of the project</td>
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<td>Open workshops</td>
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<tr>
<td>1) on: state-of-the-art and descriptive findings</td>
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<td>2) on: persistency, causality issues, gender, socio-economic and contextual differentials</td>
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<td>Final project workshop</td>
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## EU-FER Budget

<table>
<thead>
<tr>
<th>Cost Category</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
<th>Total (Y1-Y5)</th>
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<tbody>
<tr>
<td><strong>Personnel</strong></td>
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<tr>
<td>PI</td>
<td>39,238</td>
<td>40,415</td>
<td>41,628</td>
<td>42,877</td>
<td>44,163</td>
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<td>Senior Staff</td>
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<td>Post docs</td>
<td>120,000</td>
<td>123,600</td>
<td>127,308</td>
<td>131,127</td>
<td>135,061</td>
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<tr>
<td>Students</td>
<td>152,000</td>
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<td>Other</td>
<td>152,000</td>
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<tr>
<td><strong>i. Total Direct Costs for Personnel</strong></td>
<td>169,238</td>
<td>174,015</td>
<td>178,936</td>
<td>184,004</td>
<td>189,224</td>
<td>895,417</td>
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<td>Travel</td>
<td>15,000</td>
<td>25,000</td>
<td>20,000</td>
<td>20,000</td>
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<td>Equipment</td>
<td>5000</td>
<td>3000</td>
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<td>Consumables</td>
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<td>Publications (incl. Open Access fees)</td>
<td>5,000</td>
<td>9,000</td>
<td>11,000</td>
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<tr>
<td>Laboratory experiments</td>
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<td>270,000</td>
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<tr>
<td>Other (data and software, meeting costs)</td>
<td>7,000</td>
<td>7,000</td>
<td>3,000</td>
<td>3,000</td>
<td>5,000</td>
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<tr>
<td><strong>ii. Total Other Direct Costs</strong></td>
<td>27,000</td>
<td>305,000</td>
<td>28,000</td>
<td>32,000</td>
<td>36,000</td>
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<tr>
<td><strong>A - Total Direct Costs (i + ii)</strong></td>
<td>196,238</td>
<td>479,015</td>
<td>206,936</td>
<td>216,004</td>
<td>225,224</td>
<td>1,323,417</td>
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<tr>
<td><strong>B - Indirect Costs (overheads) 25% of Direct Costs</strong></td>
<td>49,060</td>
<td>119,754</td>
<td>51,734</td>
<td>54,001</td>
<td>56,306</td>
<td>330,854</td>
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<td><strong>C1 - Subcontracting Costs (No overheads)</strong></td>
<td>13,000</td>
<td>7,000</td>
<td>5,000</td>
<td>2,000</td>
<td>8,000</td>
<td>35,000</td>
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<td><strong>C2 - Other direct costs with no overheads</strong></td>
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<tr>
<td><strong>Total Costs of project (A + B+ C)</strong></td>
<td>258,298</td>
<td>605,769</td>
<td>263,670</td>
<td>272,005</td>
<td>289,530</td>
<td>1,689,272</td>
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<tr>
<td><strong>Total Requested EU Contribution</strong></td>
<td>258,298</td>
<td>605,769</td>
<td>263,670</td>
<td>272,005</td>
<td>289,530</td>
<td>1,689,272</td>
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