

# Economic Uncertainty and Fertility during the Economic Recession: EU Countries

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# Aims and Research Objectives I

## Aim 1

Using individual longitudinal data of **EU-SILC (2005-2013)**, I estimate the short-run effects of **employment activity status interacted with an economic measure of uncertainty** on **childbearing** for both partners (Matysiak and Vignoli 2008) during the years of economic crisis.

I focus on **extensive** and **intensive margins** of childbirth and I also distinguish between six different European **welfare regimes**

## Aim 2

I account for **unobserved effects** and the possible presence of **endogeneity** (Brown- ing 1992) and I try to rule out them by a **first differences linear probability model** (Angrist and Pischke 2009) with **instrumental variables** under *sequential moment restriction* (Wooldridge 2010)

# Literature Review I

As argued by McDonald (2002), under economic uncertainty assumptions, the theoretical literature suggests *two alternative strategies*:

- **Risk aversion** (New Home Economics; Ranjan 1999; Sommer 2016): people decide whether to have an additional child according to an opportunity-cost analysis and their risk aversion.

It implies investments in economic security:

- education
  - attachment to the labour market
  - savings
- **Theory of uncertainty reduction** (Friedman et al.1994): childbearing may be seen as an alternative life goal for people who are most affected by uncertainty consequences of the globalization process

McDonald (2002), Esping-Andersen (2009), and Thévenon (2013) also highlight the fundamental **role of welfare regimes** in dealing with market instabilities and in providing welfare to family

# Literature Review II

Recent **empirical studies** focus on this issue in **three different approaches**:

- **subjective measures of economic uncertainty** (e.g. Kreyenfeld 2010; Schmitt 2012)
- **measures of economic insecurity** (e.g. Prifti and Vuri 2013; Modena et al. 2014)
- **job instability** (e.g. De La Rica and Iza 2005; Vignoli et al. 2012; Modena and Sabatini 2012; Auer et al. 2013; Del Bono et al. 2012, 2015; Greulich et al. 2016; Hofmann et al. 2017)

In a **comparative framework** empirical studies at the micro level are still very scarce:

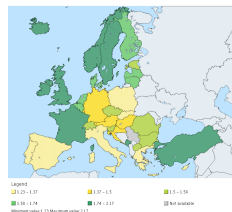
- **Adserà (2005)** shows a strong negative correlation between fertility and country-specific aggregated unemployment rate across OECD countries
- **Santarelli (2011)** finds that European single-earner couples have their first child earlier than dual-earner couples but the type of contract does not seem to matter much (ECHP, 1994-2001)
- **Greulich et al. (2016)** find that, on European average, women in stable employment have a significantly higher probability of the second childbirth than inactive, unemployed, or instable workers with heterogeneous results across countries

# Dataset and Sample I

Using longitudinal data of **EU-SILC 2005-2013 I** I select **18 countries** according to **six welfare regimes** (Esping-Andersen 1999; European Commission 2006; Thévenon 2011) and disposable data of **Consumer Confidence Index (CCI)** by OECD (2018):

- **Continental** (Austria, Belgium, France, and Luxembourg)
- **Southern** (Spain, Italy, Greece, and Portugal)
- **Nordic** (Sweden, Finland, and Denmark)
- **Anglo-Saxon** (United Kingdom)
- **Eastern** (Czech Republic, Poland, and Hungary)
- **Baltic** (Estonia and Latvia)

**Figure 1:** TOTAL FERTILITY RATE, 2013 - EU COUNTRIES



*Source: Own elaboration from Eurostat data*

# Dataset and Sample I

To build my sample:

- I match **all the women** with their own **partners** (co-living) and with their own children
- In order to investigate the short-run effect of employment activity status interacted with an economic measure of uncertainty on childbearing, I draw **all women** aged **15-45 years**, living **with the partner**, and **both actives** in the labour market
- I can control jointly for the **both partners' socio-economic characteristics** to avoid an overestimation of the negative effects of women's employment outcomes on fertility (Matysiak and Vignoli 2008)
- I draw at least **3 years** followed units

Table 1: SAMPLE'S COMPOSITION IN WELFARE REGIMES

Welfare Regime	N. of observations	Percentage value
Continental	4,851	29.51
Eastern	4,623	28.12
Nordic	174	1.06
Baltic	2,186	13.30
Southern	4,258	25.90
Anglo-saxon	346	2.10
N <sup>o</sup> of observations	16,438	100.00

*Source:* Own calculation from longitudinal EU-SILC (2005-2013) dataset

Table 2: ECONOMIC ACTIVITY STATUS

Variable	Percentage values	Std. Dev.
<i>Women's economic activity status (t - 1):</i>		
Permanent contract	82.152	37.662
Temporary contract	12.314	32.763
Unemployed	5.534	21.473
<i>Partners' economic activity status (t - 1):</i>		
Permanent contract	83.278	36.676
Temporary contract	8.785	28.227
Unemployed	8.047	25.882
<i>Women's economic activity status (t - 2):</i>		
Permanent contract	79.973	39.672
Temporary contract	13.571	34.197
Unemployed	6.456	23.743
<i>Partners' economic activity status (t - 2):</i>		
Permanent contract	83.871	36.413
Temporary contract	8.91	28.435
Unemployed	7.219	25.077
<i>N<sup>o</sup></i> of observations	16,438	

Source: Own calculation from longitudinal EU-SILC (2005-2013) dataset



# Summary Statistics II

Table 3: SUMMARY STATISTICS

Variable	Mean	Std. Dev.
Fertility	0.26	0.439
CCI	99.183	1.937
Marital status:		
- Married couples	0.827	0.378
- More uxorio couples	0.173	0.378
$N^o$ Child(ren)	1.930	1.433
Child(ren) under 5 years old	0.303	0.460
Age	37.335	5.457
Partner's Age	41.821	8.932
Household Net Disposable Income/1000	22.984	19.332
Housing Tenure $_{t-1}$ :		
- Owner	0.779	0.415
- Tenant at market price	0.100	0.300
- Tenant at a reduced price	0.050	0.217
- Free of charge	0.071	0.257
Health Status $_{t-2}$ :		
- Good	0.839	0.368
- Fair	0.144	0.350
- Bad	0.016	0.126
Partner's Health Status $_{t-1}$ :		
- Good	0.839	0.370
- Fair	0.144	0.352
- Bad	0.017	0.128
Education:		
- Intermediate Secondary	0.151	0.358
- Higher Secondary	0.490	0.500

# Summary Statistics III

- University or more	0.359	0.480
Partner's Education:		
- Intermediate Secondary	0.213	0.409
- Higher Secondary	0.529	0.499
- University or more	0.258	0.438
Job Skill <sub>t-1</sub> :		
- High Skilled White Collar	0.401	0.490
- Low Skilled White Collar	0.341	0.474
- High Skilled Blue Collar	0.047	0.212
- Low Skilled Blue Collar	0.161	0.368
- Unemployed	0.049	0.217
Partner's Job Skill <sub>t-1</sub> :		
- High Skilled White Collar	0.346	0.476
- Low Skilled White Collar	0.162	0.368
- High Skilled Blue Collar	0.206	0.404
- Low Skilled Blue Collar	0.212	0.409
- Unemployed	0.074	0.261
<hr/>		
<i>N</i> <sup>o</sup> of observations	16,438	
<hr/>		
<i>Source:</i> Own calculation from longitudinal EU-SILC (2005-2013) dataset		

# Model Specification I

I model **chidbearing** as a **binary choice** with the value 1 is whether the women had one more (the first and the second) child in the last year and 0 otherwise

$$y_{it} = C(w)'_{it-1}\beta_1 + C(p)'_{it-1}\beta_2 + X'_{it-1}\delta + Z'_i\gamma + c_i + \varepsilon_{it}, \quad (1)$$

- $C(\cdot)'_{it-1}$  indicates my **two interest variables**, vectors  $3 \times 1$  concerning dummy variables related to the **three possible economic activity status** in labour market interacted with Consumer Confidence Index (CCI) by OECD (2018)
- $X_{it-1}$  is a vector of **time-varying control variables** of the woman and her partner, such as job-skill levels, disposable income at net of woman's earning, health status, age cohorts, and housing tenure
- $Z_i$  corresponds to **time-invariant control variables** of the woman and her partner, such as education levels, countries, marital status, and number of children
- $c_i$  is **unobserved heterogeneity**
- $\varepsilon_{it}$  is an **idiosyncratic error term**

## Model Specification II

To solve the **unobserved heterogeneity problem** I take the **first difference** of both sides of Equation (1), so I get rid of the fixed effects  $c_i$  (and  $Z_i$ ), as following:

$$\Delta y_{it} = \Delta C(w)'_{it-1} \beta_1 + \Delta C(p)'_{it-1} \beta_2 + \Delta X'_{it-1} \delta + \Delta \varepsilon_{it}. \quad (2)$$

Under **sequential moment restriction**, I use the **Two Stage Least Square (2SLS) estimator** with  $C(\cdot)_{it-2}$  as instrument for  $\Delta C(\cdot)_{it-1}$  to consistently estimate Equation (2) in possible presence of **endogeneity** due to **feedback effects** and **reverse causality** (Wooldridge 2010)

# Main Results I

Table 4: ESTIMATION RESULTS OF THE LINEAR PROBABILITY MODEL IN FIRST DIFFERENCES

	First-difference OLS		First-difference 2SLS, instruments $c_{it-2}$		
	Coeff.	Robust S.E.	Coeff.		Robust S.E.
<b>Fertility: one more child</b>					
Woman's economic activity status - Reference: Permanent contract $\times$ CCI					
<i>Temporary contract</i> $\times$ CCI	0.009	0.011	0.070	***	0.026
<i>Unemployed</i> $\times$ CCI	-0.006	0.013	0.056	**	0.026
Partner's economic activity status - Reference: Permanent contract $\times$ CCI					
<i>Temporary contract</i> $\times$ CCI	0.013	0.011	0.017		0.020
<i>Unemployed</i> $\times$ CCI	0.010	0.012	-0.041	*	0.020
<b>Fertility: 1st child</b>					
Woman's economic activity status - Reference: Permanent contract $\times$ CCI					
<i>Temporary contract</i> $\times$ CCI	0.024	0.024	0.123	**	0.053
<i>Unemployed</i> $\times$ CCI	0.073	**	0.032	**	0.060
Partner's economic activity status - Reference: Permanent contract $\times$ CCI					
<i>Temporary contract</i> $\times$ CCI	0.007	0.024	-0.007		0.048
<i>Unemployed</i> $\times$ CCI	-0.018	0.027	-0.053		0.047
<b>Fertility: 2nd child</b>					
Woman's economic activity status - Reference: Permanent contract $\times$ CCI					
<i>Temporary contract</i> $\times$ CCI	0.026	0.020	0.066		0.046
<i>Unemployed</i> $\times$ CCI	-0.001	0.023	0.036		0.048
Partner's economic activity status - Reference: Permanent contract $\times$ CCI					
<i>Temporary contract</i> $\times$ CCI	-0.005	0.019	-0.028		0.038
<i>Unemployed</i> $\times$ CCI	0.013	0.020	-0.045		0.038

# Main Results II

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<b>Model: one more child</b>		
# of observations NT (N)	16,438 (12,247)	16,438 (12,247)
R2	0.125	–
Hausman Test of endogeneity	–	F(4, 12,246) = 4.98
	–	p-value = 0.001
Weak identification test (cluster robust):		
Kleibergen-Paap Wald rk F statistic	–	468.595
<hr/>		
<b>Model: 1st child</b>		
# of observations NT (N)	3,703 (2,720)	3,703 (2,719)
R2	0.068	–
Hausman Test of endogeneity	–	F(4, 2,179) = 1.44
	–	p-value = 0.217
Weak identification test (cluster robust):		
Kleibergen-Paap Wald rk F statistic	–	119.03
<hr/>		
<b>Model: 2nd child</b>		
# of observations NT (N)	6,269 (4,675)	6,269 (4,675)
R2	0.068	–
Hausman Test of endogeneity	–	F(4, 4,674) = 1.12
	–	p-value = 0.344
Weak identification test (cluster robust):		
Kleibergen-Paap Wald rk F statistic	–	181.61

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# Main Results III

<b>Fertility: one more child</b>						
Country - Reference: France						
<i>Austria</i>	-0.014		0.028	-0.016		0.028
<i>Belgium</i>	-0.113	***	0.022	-0.114	***	0.022
<i>Czech Republic</i>	0.134	***	0.025	0.134	***	0.025
<i>Denmark</i>	-0.212		0.133	-0.214		0.133
<i>Estonia</i>	-0.393	***	0.016	-0.393	***	0.016
<i>Spain</i>	-0.142	***	0.019	-0.140	***	0.019
<i>Finland</i>	-0.184	***	0.052	-0.185	***	0.051
<i>Greece</i>	0.123	***	0.058	0.122	***	0.058
<i>Hungary</i>	-0.346	***	0.015	-0.346	***	0.015
<i>Italy</i>	-0.226	***	0.016	-0.225	***	0.016
<i>Luxembourg</i>	-0.103	***	0.019	-0.104	***	0.019
<i>Latvia</i>	-0.284	***	0.018	-0.286	***	0.018
<i>Netherland</i>	-0.280	***	0.078	-0.282	***	0.077
<i>Poland</i>	-0.197	***	0.018	-0.197	***	0.018
<i>Portugal</i>	-0.122	***	0.031	-0.120	***	0.031
<i>Sweden</i>	-0.033		0.064	-0.032		0.064
<i>United Kingdom</i>	0.002		0.031	0.001		0.031
Year's dummies - Reference: 2008						
<i>2009</i>	-0.078	***	0.011	-0.076	***	0.011
<i>2010</i>	-0.078	***	0.011	-0.078	***	0.012
<i>2011</i>	-0.096	***	0.012	-0.096	***	0.012
<i>2012</i>	-0.117	****	0.012	-0.117	***	0.012
<i>2013</i>	-0.116	**	0.011	-0.117	***	0.012
<i>temp-contr</i>	0.007		0.008	0.007		0.0084
<i>Δtemp-contr</i>	-0.003		0.006	-0.003		0.006
<i>fur</i>	-0.096	*	0.049	-0.100	*	0.049
<i>Δfur</i>	0.098		0.045	0.098		0.045

# Heterogeneous Effects I

Table 5: ESTIMATION RESULTS OF THE LINEAR PROBABILITY MODELS IN FIRST DIFFERENCES - WELFARE REGIMES

	First-difference OLS		First-difference 2SLS, instruments $c_{it-2}$		
	Coeff.	Robust S.E.	Coeff.		Robust S.E.
<b>Group of Countries: Continental</b>					
<b>Fertility: one more child</b>					
Woman's economic activity status - Reference: Permanent contract $\times$ CCI					
<i>Temporary contract</i> $\times$ CCI	-0.022	0.026	-0.320	***	0.070
<i>Unemployed</i> $\times$ CCI	-0.035	0.033	-0.297	***	0.072
Partner's economic activity status - Reference: Permanent contract $\times$ CCI					
<i>Temporary contract</i> $\times$ CCI	0.020	0.022	-0.197	***	0.047
<i>Unemployed</i> $\times$ CCI	0.011	0.024	-0.280	***	0.048
<b>Fertility: 1st child</b>					
Woman's economic activity status - Reference: Permanent contract $\times$ CCI					
<i>Temporary contract</i> $\times$ CCI	-0.011	0.043	-0.091		0.099
<i>Unemployed</i> $\times$ CCI	0.046	0.058	-0.011		0.113
Partner's economic activity status - Reference: Permanent contract $\times$ CCI					
<i>Temporary contract</i> $\times$ CCI	0.005	0.042	-0.195	**	0.088
<i>Unemployed</i> $\times$ CCI	-0.058	0.045	-0.278	***	0.086
<b>Fertility: 2nd child</b>					
Woman's economic activity status - Reference: Permanent contract $\times$ CCI					
<i>Temporary contract</i> $\times$ CCI	-0.032	0.043	-0.394	***	0.106
<i>Unemployed</i> $\times$ CCI	-0.025	0.054	-0.333	***	0.106
Partner's economic activity status - Reference: Permanent contract $\times$ CCI					
<i>Temporary contract</i> $\times$ CCI	-0.003	0.038	-0.281	***	0.079
<i>Unemployed</i> $\times$ CCI	0.025	0.038	-0.235	***	0.074



# Heterogeneous Effects II

<b>Group of Countries: Eastern</b>					
<b>Fertility: one more child</b>					
Woman's economic activity status - Reference: Permanent contract $\times$ CCI					
<i>Temporary contract</i> $\times$ CCI	0.015	0.017	0.069		0.042
<i>Unemployed</i> $\times$ CCI	0.009	0.021	0.097	**	0.043
Partner's economic activity status - Reference: Permanent contract $\times$ CCI					
<i>Temporary contract</i> $\times$ CCI	-0.007	0.017	0.036		0.033
<i>Unemployed</i> $\times$ CCI	-0.003	0.024	-0.028		0.045
<b>Fertility: 1st child</b>					
Woman's economic activity status - Reference: Permanent contract $\times$ CCI					
<i>Temporary contract</i> $\times$ CCI	0.091	*	0.049	0.195	0.124
<i>Unemployed</i> $\times$ CCI	0.069		0.058	0.135	0.118
Partner's economic activity status - Reference: Permanent contract $\times$ CCI					
<i>Temporary contract</i> $\times$ CCI	-0.004	0.047	0.007		0.104
<i>Unemployed</i> $\times$ CCI	-0.008	0.057	0.042		0.099
<b>Fertility: 2nd child</b>					
Woman's economic activity status - Reference: Permanent contract $\times$ CCI					
<i>Temporary contract</i> $\times$ CCI	0.063	*	0.031	0.233	***
<i>Unemployed</i> $\times$ CCI	-0.001		0.037	0.161	**
Partner's economic activity status - Reference: Permanent contract $\times$ CCI					
<i>Temporary contract</i> $\times$ CCI	-0.011	0.031	-0.002		0.065
<i>Unemployed</i> $\times$ CCI	0.003	0.040	0.062		0.083

# Heterogeneous Effects III

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<b>Group of Countries: Baltic</b>						
<b>Fertility: one more child</b>						
Woman's economic activity status - Reference: Permanent contract $\times$ CCI						
<i>Temporary contract</i> $\times$ CCI	0.079	**	0.039	0.310	***	0.055
<i>Unemployed</i> $\times$ CCI	0.063	***	0.021	0.286	***	0.041
Partner's economic activity status - Reference: Permanent contract $\times$ CCI						
<i>Temporary contract</i> $\times$ CCI	-0.005		0.033	0.125	*	0.070
<i>Unemployed</i> $\times$ CCI	0.018		0.020	0.251	***	0.052
<hr/>						
<b>Fertility: 1st child</b>						
Woman's economic activity status - Reference: Permanent contract $\times$ CCI						
<i>Temporary contract</i> $\times$ CCI	-0.022		0.134	0.236		0.193
<i>Unemployed</i> $\times$ CCI	0.085		0.087	0.404	**	0.169
Partner's economic activity status - Reference: Permanent contract $\times$ CCI						
<i>Temporary contract</i> $\times$ CCI	0.097		0.125	-0.131		0.215
<i>Unemployed</i> $\times$ CCI	-0.006		0.088	-0.052		0.208
<hr/>						
<b>Fertility: 2nd child</b>						
Woman's economic activity status - Reference: Permanent contract $\times$ CCI						
<i>Temporary contract</i> $\times$ CCI	0.100		0.065	0.258	***	0.065
<i>Unemployed</i> $\times$ CCI	0.037		0.043	0.211	**	0.101
Partner's economic activity status - Reference: Permanent contract $\times$ CCI						
<i>Temporary contract</i> $\times$ CCI	0.021		0.054	0.097		0.130
<i>Unemployed</i> $\times$ CCI	0.013		0.039	0.155		0.123

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# Heterogeneous Effects IV

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<b>Group of Countries: Nordic</b>					
<b>Fertility: one more child</b>					
Woman's economic activity status - Reference: Permanent contract $\times$ CCI					
<i>Temporary contract</i> $\times$ CCI	0.003		0.114	-0.032	0.233
<i>Unemployed</i> $\times$ CCI	-0.377	**	0.152	-0.356	0.248
Partner's economic activity status - Reference: Permanent contract $\times$ CCI					
<i>Temporary contract</i> $\times$ CCI	0.015		0.085	0.020	0.264
<i>Unemployed</i> $\times$ CCI	0.015		0.107	0.098	0.309
<hr/>					
<b>Fertility: 1st child</b>					
Woman's economic activity status - Reference: Permanent contract $\times$ CCI					
<i>Temporary contract</i> $\times$ CCI	-0.001		0.160	0.200	0.464
<i>Unemployed</i> $\times$ CCI	-0.232		0.149	0.376	0.926
Partner's economic activity status - Reference: Permanent contract $\times$ CCI					
<i>Temporary contract</i> $\times$ CCI	0.490	***	0.112	0.520	0.359
<i>Unemployed</i> $\times$ CCI	0.204		0.277	1.608	1.499
<hr/>					
<b>Fertility: 2nd child</b>					
Woman's economic activity status - Reference: Permanent contract $\times$ CCI					
<i>Temporary contract</i> $\times$ CCI	0.041		0.181	0.133	0.406
<i>Unemployed</i> $\times$ CCI	-0.536	***	0.157	-5.187	5.629
Partner's economic activity status - Reference: Permanent contract $\times$ CCI					
<i>Temporary contract</i> $\times$ CCI	0.165		0.156	-0.947	1.215
<i>Unemployed</i> $\times$ CCI	0.029		0.248	-2.080	1.585

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# Heterogeneous Effects V

<b>Group of Countries: Southern</b>					
<b>Fertility: one more child</b>					
Woman's economic activity status - Reference: Permanent contract $\times$ CCI					
<i>Temporary contract</i> $\times$ CCI	0.001	0.023	0.114	**	0.051
<i>Unemployed</i> $\times$ CCI	-0.007	0.033	0.092		0.067
Partner's economic activity status - Reference: Permanent contract $\times$ CCI					
<i>Temporary contract</i> $\times$ CCI	0.052	*	0.023	0.065	0.043
<i>Unemployed</i> $\times$ CCI	0.027		0.026	0.003	0.054
<b>Fertility: 1st child</b>					
Woman's economic activity status - Reference: Permanent contract $\times$ CCI					
<i>Temporary contract</i> $\times$ CCI	0.026	0.041	0.123		0.087
<i>Unemployed</i> $\times$ CCI	0.121	*	0.066	0.193	0.117
Partner's economic activity status - Reference: Permanent contract $\times$ CCI					
<i>Temporary contract</i> $\times$ CCI	0.008	0.044	0.074		0.085
<i>Unemployed</i> $\times$ CCI	0.014	0.056	0.059		0.100
<b>Fertility: 2nd child</b>					
Woman's economic activity status - Reference: Permanent contract $\times$ CCI					
<i>Temporary contract</i> $\times$ CCI	0.010	0.039	0.049		0.091
<i>Unemployed</i> $\times$ CCI	0.008	0.054	0.096		0.113
Partner's economic activity status - Reference: Permanent contract $\times$ CCI					
<i>Temporary contract</i> $\times$ CCI	0.016	0.040	0.059		0.088
<i>Unemployed</i> $\times$ CCI	0.004	0.046	-0.056		0.082

# Heterogeneous Effects VI

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<b>Group of Countries: Anglo-saxon</b>					
<b>Fertility: one more child</b>					
Woman's economic activity status - Reference: Permanent contract $\times$ CCI					
<i>Temporary contract</i> $\times$ CCI	0.016	0.093	0.047		0.188
<i>Unemployed</i> $\times$ CCI	0.083	0.224	-0.126		0.290
Partner's economic activity status - Reference: Permanent contract $\times$ CCI					
<i>Temporary contract</i> $\times$ CCI	0.002	0.097	-0.210		0.162
<i>Unemployed</i> $\times$ CCI	0.003	0.095	-0.357	*	0.195
<hr/>					
<b>Fertility: 1st child</b>					
Woman's economic activity status - Reference: Permanent contract $\times$ CCI					
<i>Temporary contract</i> $\times$ CCI	0.104	0.148	0.177		0.193
<i>Unemployed</i> $\times$ CCI	0.537	***	0.121	0.854	* 0.462
Partner's economic activity status - Reference: Permanent contract $\times$ CCI					
<i>Temporary contract</i> $\times$ CCI	-0.056	0.214	-0.181		0.298
<i>Unemployed</i> $\times$ CCI	0.139	0.143	-0.078		0.333
<hr/>					
<b>Fertility: 2nd child</b>					
Woman's economic activity status - Reference: Permanent contract $\times$ CCI					
<i>Temporary contract</i> $\times$ CCI	0.010	0.178	0.011		0.430
<i>Unemployed</i> $\times$ CCI	0.310	0.230	0.003		0.468
Partner's economic activity status - Reference: Permanent contract $\times$ CCI					
<i>Temporary contract</i> $\times$ CCI	0.027	0.162	0.103		0.243
<i>Unemployed</i> $\times$ CCI	-0.165	0.147	-0.385		0.331

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# Heterogeneous Effects VII

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<b>Model: one more child</b>		
# of observations NT (N)	16,438 (12,247)	16,438 (12,247)
R2	0.048	–
Hausman Test of endogeneity	–	F(4, 12,246) = 5.60 p-value = 0.000
Weak identification test (cluster robust):		
Kleibergen-Paap Wald rk F statistic	–	81.501
<hr/>		
<b>Model: 1st child</b>		
# of observations NT (N)	3,703 (2,720)	3,703 (2,719)
R2	0.035	–
Hausman Test of endogeneity	–	F(4, 2,179) = 1.91 p-value = 0.005
Weak identification test (cluster robust):		
Kleibergen-Paap Wald rk F statistic	–	16.557
<hr/>		
<b>Model: 2nd child</b>		
# of observations NT (N)	6,269 (4,675)	6,269 (4,675)
R2	0.056	–
Hausman Test of endogeneity	–	F(4, 4,674) = 2.56 p-value = 0.000
Weak identification test (cluster robust):		
Kleibergen-Paap Wald rk F statistic	–	11.675

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# Final Remarks and Policy Proposals I

The **cross-country average effect of economic uncertainty** on couple's fertility decisions is not relevant because of the huge country-specific fixed effects

**Six different welfare regimes** may capture more information about the couples' fertility choices, such as how much the institutional structure weights in the family behaviour, especially during the year of high economic uncertainty

In welfare regimes of the **lowest-low fertility countries** the impact of parents' successful labour market integration might be ambiguous (Greulich et al. 2016) and not relevant. It could be interesting and appropriate a **country-specific analysis**

Thank you for your attention!