

# Lifetime fertility intentions in Europe: the role of women's education

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Wittgenstein Centre

FOR DEMOGRAPHY AND  
GLOBAL HUMAN CAPITAL



# MOTIVATIONS:

Fertility intentions are the strongest predictors of reproductive behaviour

Contradictory findings on the relationship between education and fertility intentions

The role of contextual factors in the reproductive decision-making has been under-investigated

Building a linkage between macro- and micro-level in a cross-national comparative analysis remains a major challenge in demography

# RESEARCH QUESTION:

Under which conditions the relationship between women's level of education and lifetime fertility intentions is positive?

1. At the beginning of the reproductive career
2. In those countries in which availability of childcare services offset the higher opportunity costs paid by the highly qualified women
3. In those countries in which egalitarian gender roles in the family and in the market offset the higher price of time paid by highly educated women
4. In those countries with better economic conditions (i.e., higher levels of GDP per capita)

# DATA:

## EUROBAROMETER DATA FOR THE 27 EU COUNTRIES YEARS (2001), 2006 AND 2011

designed for  
**comparative analysis**  
among national  
populations

**equal probability**  
**samples** of about  
1,000 respondents  
(aged 15 or above) in  
each of the nations

small national sample  
sizes , but **allow**  
**comparisons**  
**between sub-groups**  
by sex, age, and  
education

single uniform  
questionnaire design  
with **equivalent**  
**question wording**  
across languages

questions on ideal,  
intended and actual  
family size have exactly  
the **same wording**  
across rounds (2001,  
2006 , 2011)

**selected sample:**  
women and men in  
reproductive ages  
20-45 (10,989  
respondents)

# MEASURES:

## Wording of the questions on family size. Eurobarometer survey 2011.

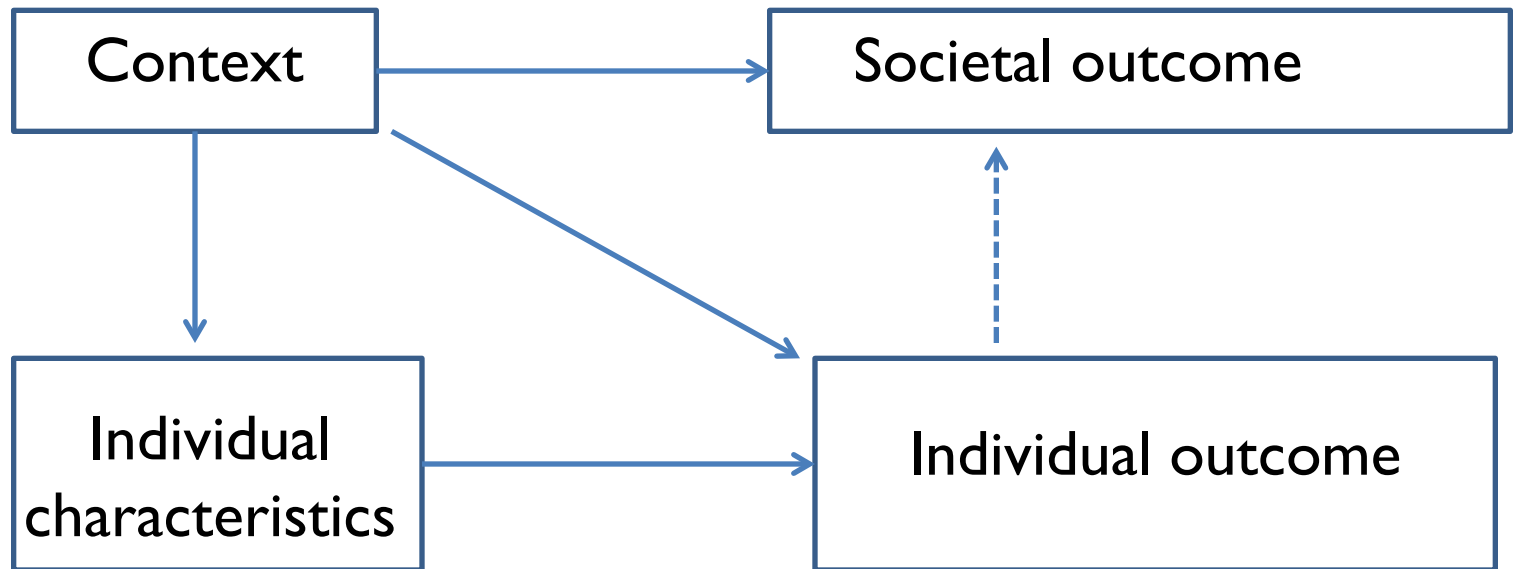
Order	Family sizes	Survey items:
1	General ideal	<i>Generally speaking, what do you think is the ideal number of children for a family?</i>
2	Personal ideal	<i>And for you personally, what would be the ideal number of children you would like to have or would have liked to have had?</i>
3	Actual	<i>How many children, if any, have you had?</i>
4	Intended	<i>How many (more) children do you intend to have?</i>
5		<i>Do you intend to have a(nother) child in the next three years?</i>

Note.

All the questions were placed in the same sequence as in the previous EB rounds

# METHODOLOGICAL APPROACH:

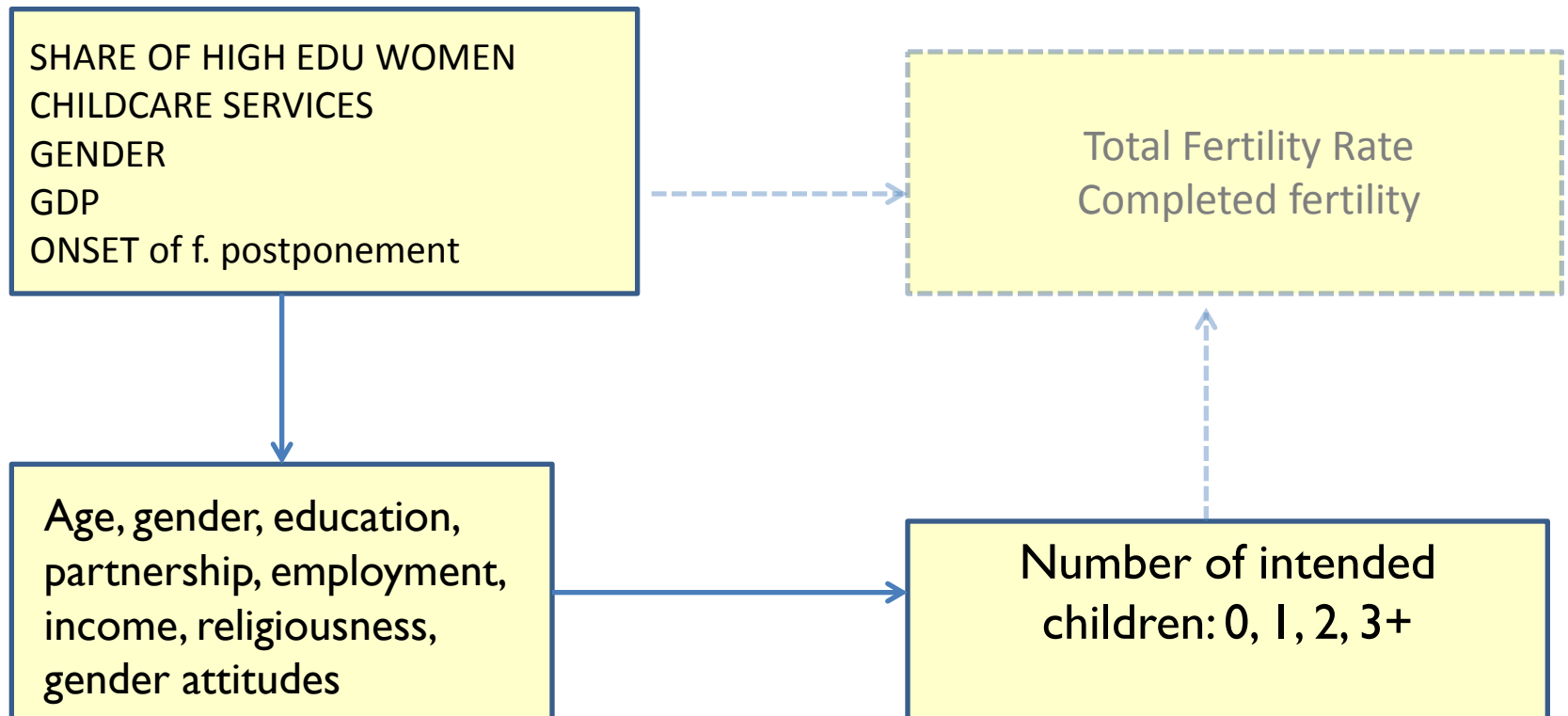
*Macro level*



*Micro level*

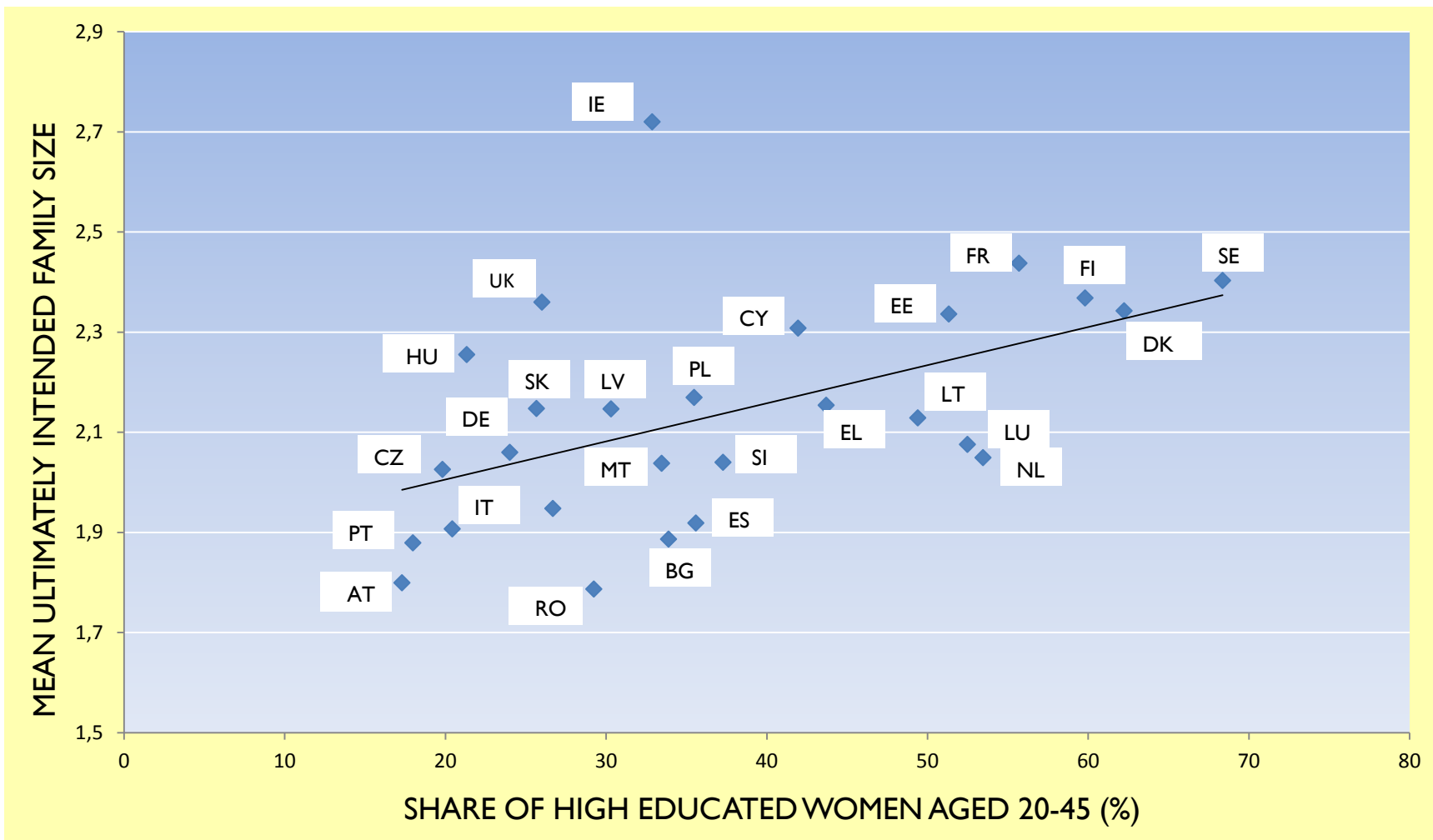
# Multilevel Ordinal Logistic Regression Models

## Macro level



## Micro level

# CROSS-COUNTRY CORRELATION BETWEEN THE SHARE OF HIGHLY EDUCATED WOMEN AND THE MEAN ULTIMATELY INTENDED FAMILY SIZE . EU-27. YEAR2011



Note. Pearson correlation coefficient equal to 0.52

Source: Eurobarometer 2011



# MULTIVARIATE SETTING:

- Additionally intended family size is regressed on level of education and a set of relevant demographic and socio-economic variables
- Regressions are performed by using the 2006 and 2011 EB data separately

# RANDOM INTERCEPT ORDINAL REGRESSION MODELS.YEAR 2006.

	MODELS					
	(1)	(2)	(3)	(4)	(5)	(6)
	Childless			Parents with one child		
Education						
Low	-	0.00	0.00	-	0.00	0.00
Medium	-	0.19	0.18	-	-0.08	-0.11
<b>High</b>	-	<b>0.46</b> **	<b>0.44</b> **	-	<b>0.36</b> +	<b>0.30</b>
<b>Country mean high edu</b>	-	-	<b>2.68</b> **	-	-	<b>2.85</b> *
LogGDP	-	-	-0.08	-	-	0.11
GEM	-	-	-0.61	-	-	-1.57
ONSET	-	-	-0.01	-	-	0.00
cutpoint1	-1.86 ***	-1.01 ***	-26.61	-0.81 ***	-0.82 **	3.40
cutpoint2	-0.92 ***	0.05	-25.54	1.40 ***	1.81 ***	5.99
cutpoint3	1.51 ***	2.71 ***	-22.88	3.47 ***	4.02 ***	8.26
Country-level variance	0.29 *	0.28 *	0.18 *	0.25 *	0.22 *	0.15 *

Source: EB2006

# RANDOM INTERCEPT ORDINAL REGRESSION MODELS.YEAR 2011

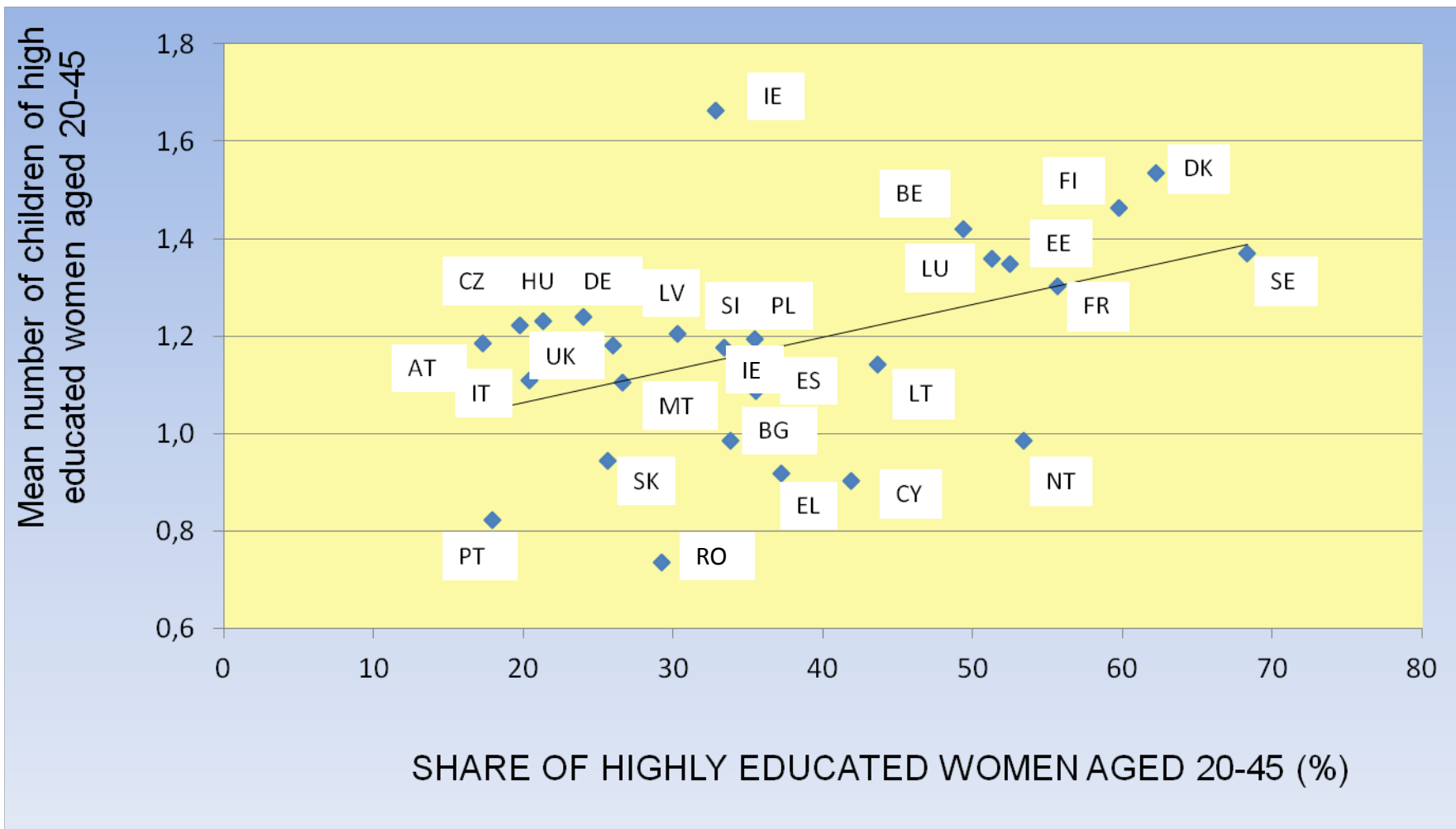
	MODELS											
	(1)		(2)		(3)		(4)		(5)		(6)	
	Childless				Parents with one child							
Education												
Low	-		0.00		0.00		-		0.00		0.00	
Medium	-		0.08		0.08		-		0.28		0.31	
<b>High</b>	-		<b>0.28</b>	+	<b>0.27</b>	+	-		<b>0.82</b>	***	<b>0.83</b>	***
<b>Country mean high edu</b>	-		-		<b>0.02</b>	**	-		-		<b>0.02</b>	*
LogGDP	-		-		-0.15		-		-		0.34	
GEM	-		-		-0.43		-		-		-0.74	
ONSET	-		-		0.02		-		-		0.01	
CHILDCARE	-		-		0.01	+					0.01	*
cutpoint1	-1.47	***	-1.06	***	30.42		-0.10		0.12		26.48	
cutpoint2	-0.67	***	-0.06		31.42		1.77	***	2.48	***	28.83	
cutpoint3	1.63	***	2.52	***	34.01		3.86	***	4.69	***	31.05	
Country-level variance	0.16	*	0.12	*	0.05	*	0.16	***	0.12	***	0.01	***

Source: EB2011

# EXPLANATION:

Countries in which family policies and institutional contexts allowed the (older) highly educated women to reach larger family size, (younger) highly educated women in reproductive ages are more prone to make big investments in both human capital and family size because these two choices are not perceived as conflicting alternatives

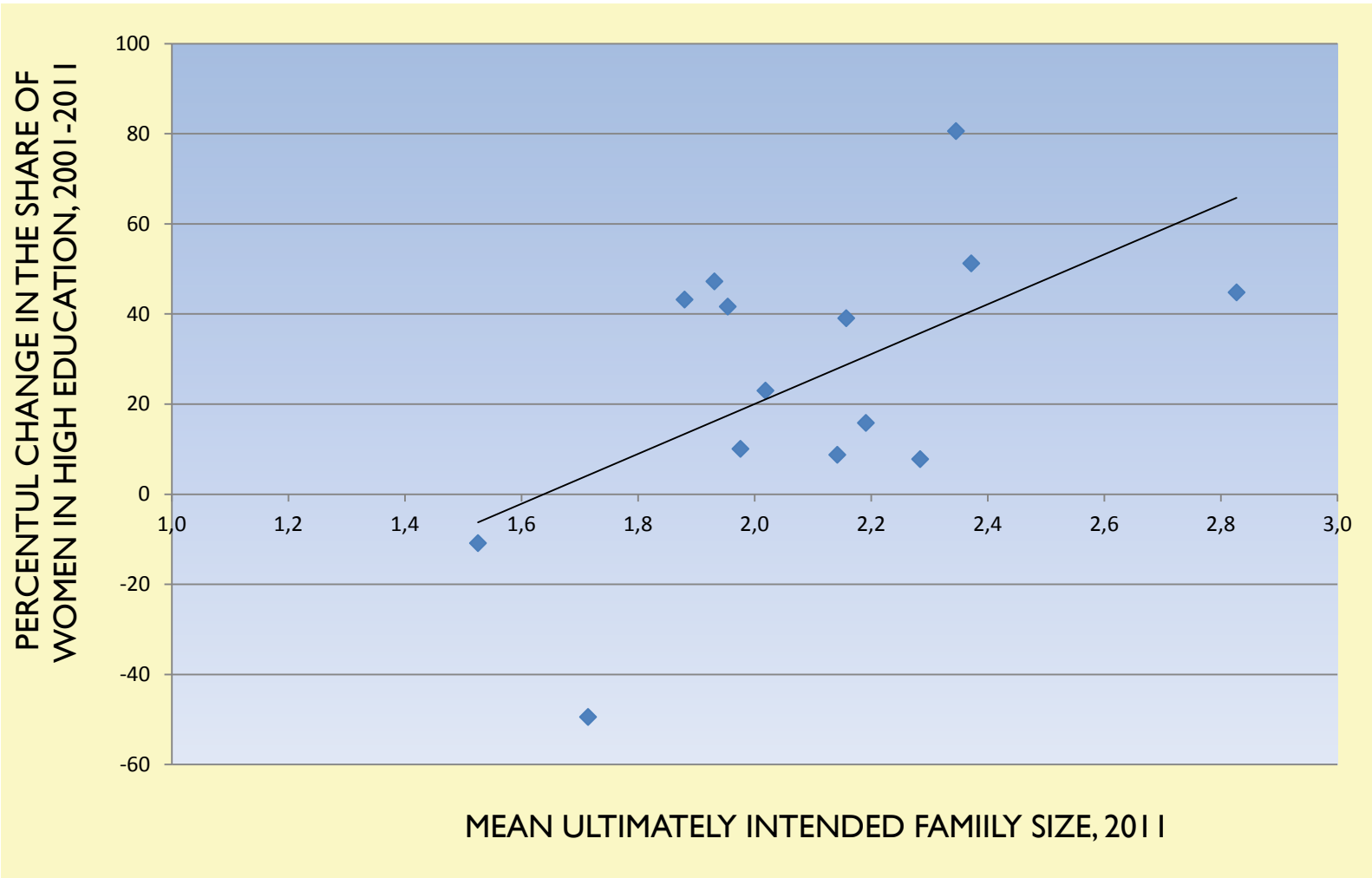
# CROSS-COUNTRY CORRELATION BETWEEN THE SHARE OF WOMEN WITH HIGH LEVEL OF EDUCATION AND THE HIGHLY EDUCATED WOMEN'S MEAN ACTUAL FAMILY SIZE. EU-27. YEAR 2011



Note. Pearson correlation coefficient equal to 0.45

Source: Eurobarometer 2011

# Cross-country correlation between the change in the share of highly educated women in 2001-2011 and the mean ultimately intended family size in 2011. EU-15

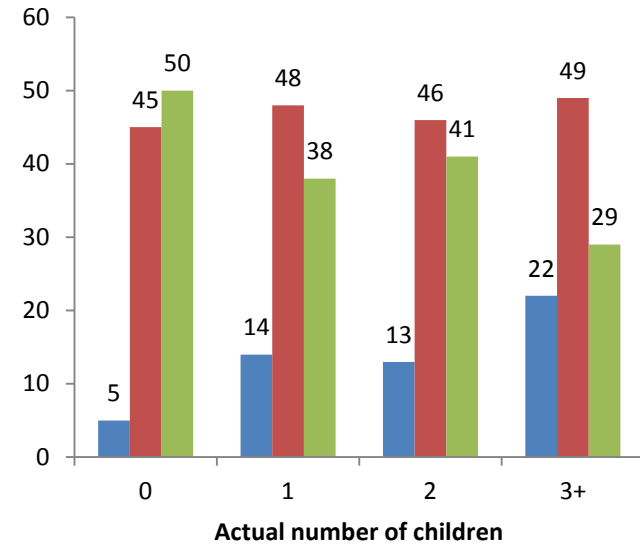
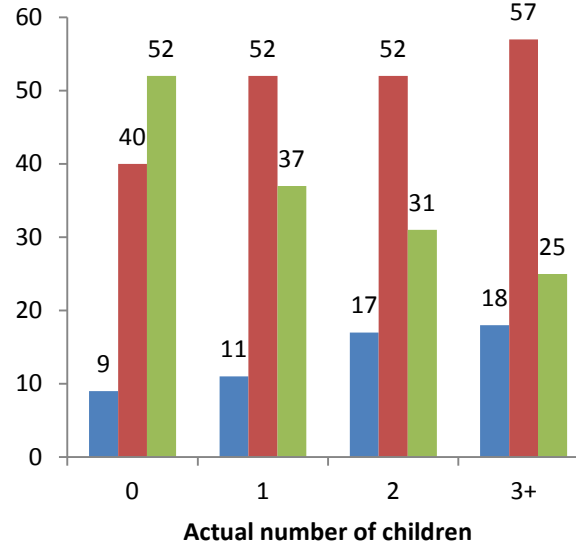
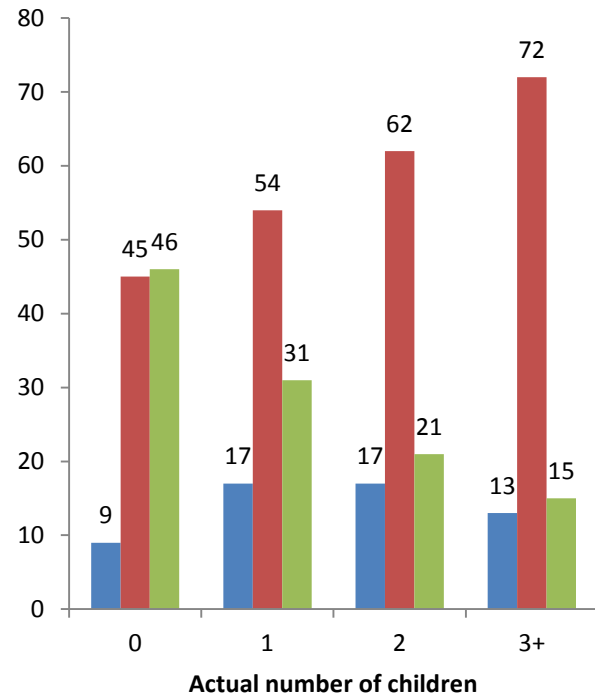


# Educational gradient at each parity. EU-15

YEAR 2001

YEAR 2006

YEAR 2011



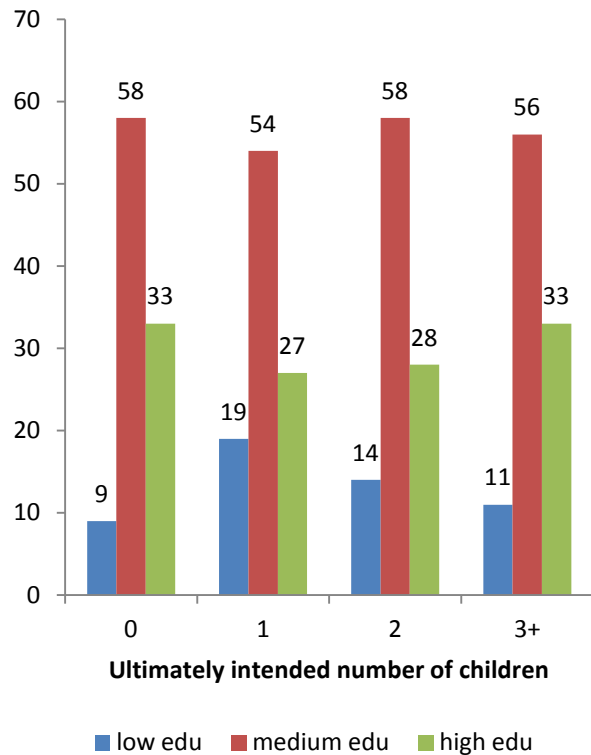
low edu medium edu high edu

low edu medium edu high edu

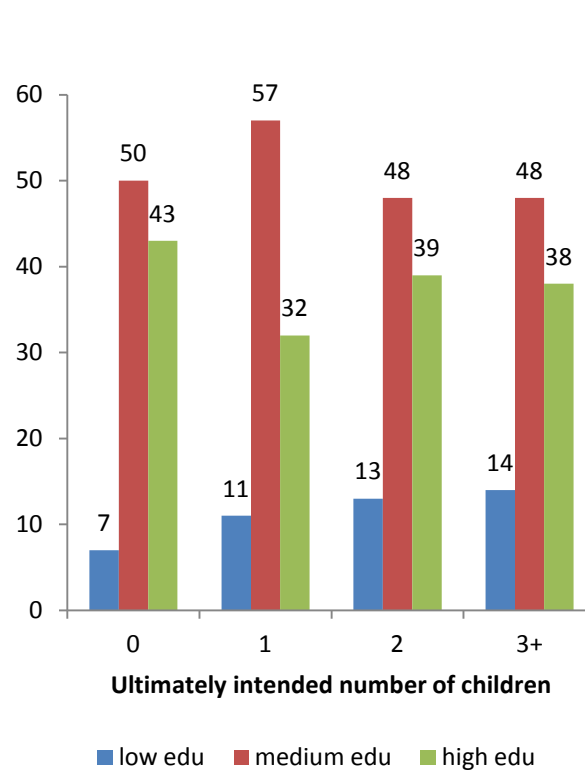
low edu medium edu high edu

# Educational gradient at each parity. EU-15

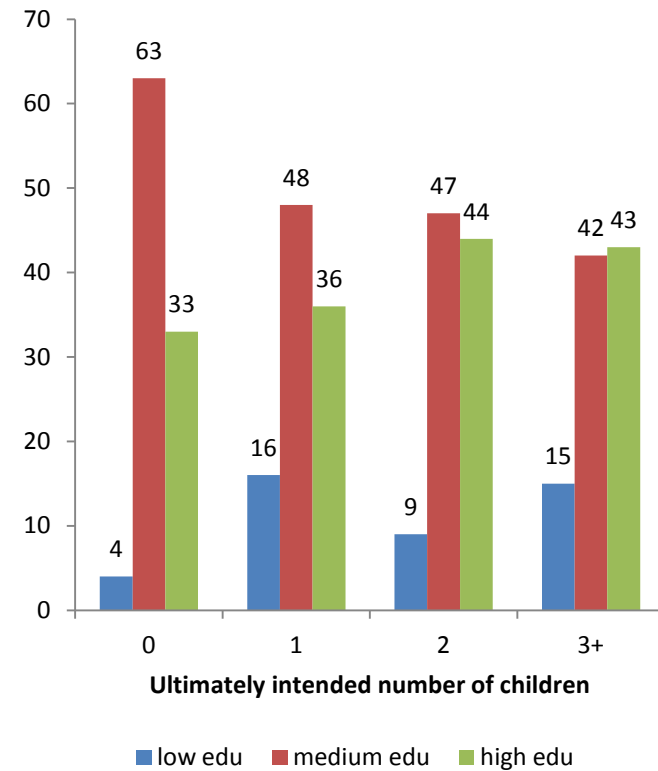
YEAR 2001



YEAR 2006



YEAR 2011





# SUMMARY:

- Additionally intended family size is positively associated with women's level of education, both at the individual and at the country level
- The effect of high education on childbearing intentions does not vary across countries
- The effect of education on childbearing intentions varies across times

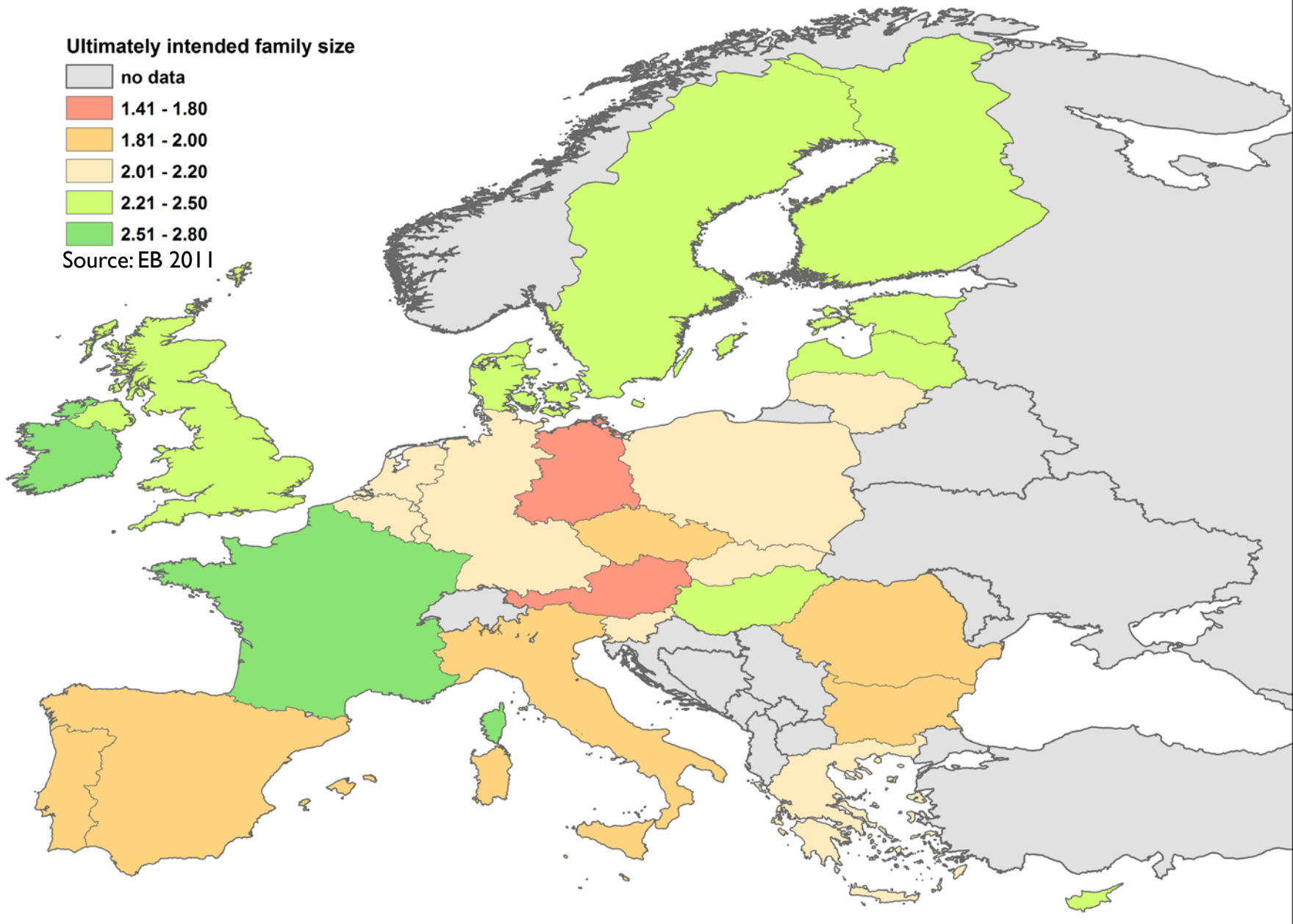
# IMPLICATION:

- High educated people show the highest gap between actual and intended family size
- High educated people as a very important target group for policy makers willing to help people to realise their reproductive wishes
- Reconciliation between work and family life for high educated women should be at the core of policy intervention

Ultimately intended family size

- no data
- 1.41 - 1.80
- 1.81 - 2.00
- 2.01 - 2.20
- 2.21 - 2.50
- 2.51 - 2.80

Source: EB 2011



	Ultimately intended family			Cohort fertility women born in 1979		Differences			
	women aged 25-39					<0.10	>0.10 and <0.20	>0.20	
	low	high	medium	(a)	(b)	(a-b)			
Austria	1.27	1.54	1.41	1.59	0.19		x		
Belgium	1.59	1.87	1.73	1.92	0.19		x		
Bulgaria	1.45	1.72	1.59	1.69	0.11		x		
Czech	1.50	1.76	1.63	1.75	0.13		x		
Denmark	1.72	2.08	1.90	1.98	0.08	x			
Estonia	1.78	2.16	1.97	1.91	-0.06	x			
Finland	1.78	2.12	1.95	1.91	-0.04	x			
France	1.91	2.31	2.11	2.08	-0.03	x			
e. Germany	1.22	1.47	1.35	1.57	0.23				x
w. Germany	1.46	1.76	1.61	1.57	-0.03	x			
Greece	1.37	1.77	1.57	1.64	0.07	x			
Hungary	1.76	2.07	1.92	1.58	-0.34				x
Ireland	1.99	2.42	2.21	2.16	-0.04	x			
Italy	1.12	1.54	1.33	1.47	0.15		x		
Lithuania	1.57	1.92	1.75	1.84	0.10		x		
Luxembourg	1.57	1.83	1.70	1.84	0.14		x		
Netherlands	1.31	1.69	1.50	1.84	0.34				x
Poland	1.48	1.77	1.63	1.57	-0.05	x			
Portugal	1.53	1.72	1.63	1.47	-0.16		x		
Romania	1.37	1.60	1.49	1.55	0.07	x			
Slovakia	1.47	1.79	1.63	1.63	0.00	x			
Slovenia	1.42	1.78	1.60	1.72	0.12		x		
Spain	1.28	1.61	1.45	1.4	-0.04	x			
Sweden	1.58	1.98	1.78	2.03	0.25				x
United Kingdom	1.65	2.01	1.83	2.02	0.19		x		
Tot. number						11	10		4