
CHILD-NUMBER AND CHILD-TIMING INTENTIONS: A MICRO-MACRO EUROPEAN FRAMEWORK

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Motivation

- ❑ Intergenerational transmission of fertility patterns: the actual childbearing experience of the (old) parents' generations does positively influence the personal ideal family size of the (young) children's generations **at the contextual level** (Testa and Grilli 2006)
- ❑ The hypothesis that changing fertility ideals lag behind the changes in the actual reproductive behaviours (Goldstein Lutz and Testa 2004) is supported and interpreted in a **micro-macro framework** where the social context plays a major role
- ❑ Recent rebound of fertility has been seen correlated to the **economic development** in the OECD countries (Luci and Thévenon 2010)

Aim of the study

1. Study the predictors of child-number and child-timing intentions in a micro-macro framework
2. Investigate the intergenerational transmission of fertility patterns looking at the relationship between:
 - a. intended family size of the children's generations and actual reproductive behaviour of the parents' generations;
 - b. intended timing of the first child of the children's generations and the age at the first child of the parent's generations
3. Examine the influence of the country economic situation on individual fertility preferences

Data and methods

Eurobarometer 2006. EU-27 plus Turkey and Croatia.

Target population: 5291 women and men aged 20 to 39 years who are childless or with one child.

Questionnaire's items on quantum and tempo of fertility:

(1) “How many children do you (still) intend to have?”

(2) “Do you intend to have a(nother) child in the next three years”
definitely yes, probably yes, probably not, definitely not

(a) selected data structure: countries

COUNTRIES	Number of regions	N. of respondents	Minimum	Maximum
Austria	6	226	14	63
Belgium	3	201	31	117
Bulgaria	1	179	179	179
Croatia	1	213	213	213
Cyprus	1	51	51	51
Czech Republic	3	228	54	118
Denmark	4	175	15	92
Estonia	3	142	34	91
Finland	5	149	5	95
France	5	189	25	78
Germany East	3	115	22	52
Germany West	5	161	13	63
Great Britain	4	171	12	82
Greece	3	280	67	137
Hungary	3	166	42	63
Ireland	2	146	16	130
Italy	5	276	45	70
Latvia	3	179	38	90
Lithuania	3	173	34	77
Luxembourg	2	60	24	36
Malta	1	60	60	60
Netherlands	4	124	12	61
North Ireland	1	54	54	54
Poland	3	185	38	78
Portugal	4	153	6	61
Romania	1	226	226	226
Slovak Republic	3	220	57	104
Slovenia	3	263	47	149
Spain	7	201	15	65
Sweden	6	106	3	24
Turkey	1	219	219	219
	99	5291	3	219

(b) Selected models:

Random intercept proportional odds models for

- (1) Total additionally intended family size
- (2) Intention to have a first (or a second) child within the next three years

$$Y_{ij} = \begin{cases} 1 & \text{if } INC_{ij} = 0 \\ 2 & \text{if } INC_{ij} = 1 \\ 3 & \text{if } INC_{ij} = 2 \\ 4 & \text{if } INC_{ij} \geq 3 \end{cases} \quad \gamma_{ij}^{(m)} = P(Y_{ij} \leq m | u_j)$$

$$\log\left(\frac{\gamma_{ij}^{(m)}}{1 - \gamma_{ij}^{(m)}}\right) = \tau^{(m)} - \alpha + \boldsymbol{\beta}' \mathbf{x}_{ij} + u_j \quad m = 1, \dots, M - 1 \quad \tau^{(1)} \leq \tau^{(2)} \dots \leq \tau^{(M-1)}$$

(c) Selected variables:

1. Response variables:

- Total intended family size: 0, 1, 2, 3+
- Intend a first child in the next three years: 1, 2, 3, 4 (def.not_def.yes)

2. Individual covariates:

Age, sex, school enrolment, level of education, marital status, employment status, household size, household situation, attendance of religious services, gender equity in childrearing roles, child-number intentions

3. Regional level covariates:

Mean actual number of children of parents' generations

Age at first child of parents' generations

4. Country level covariates:

Cohorts fertility of women born in 1960

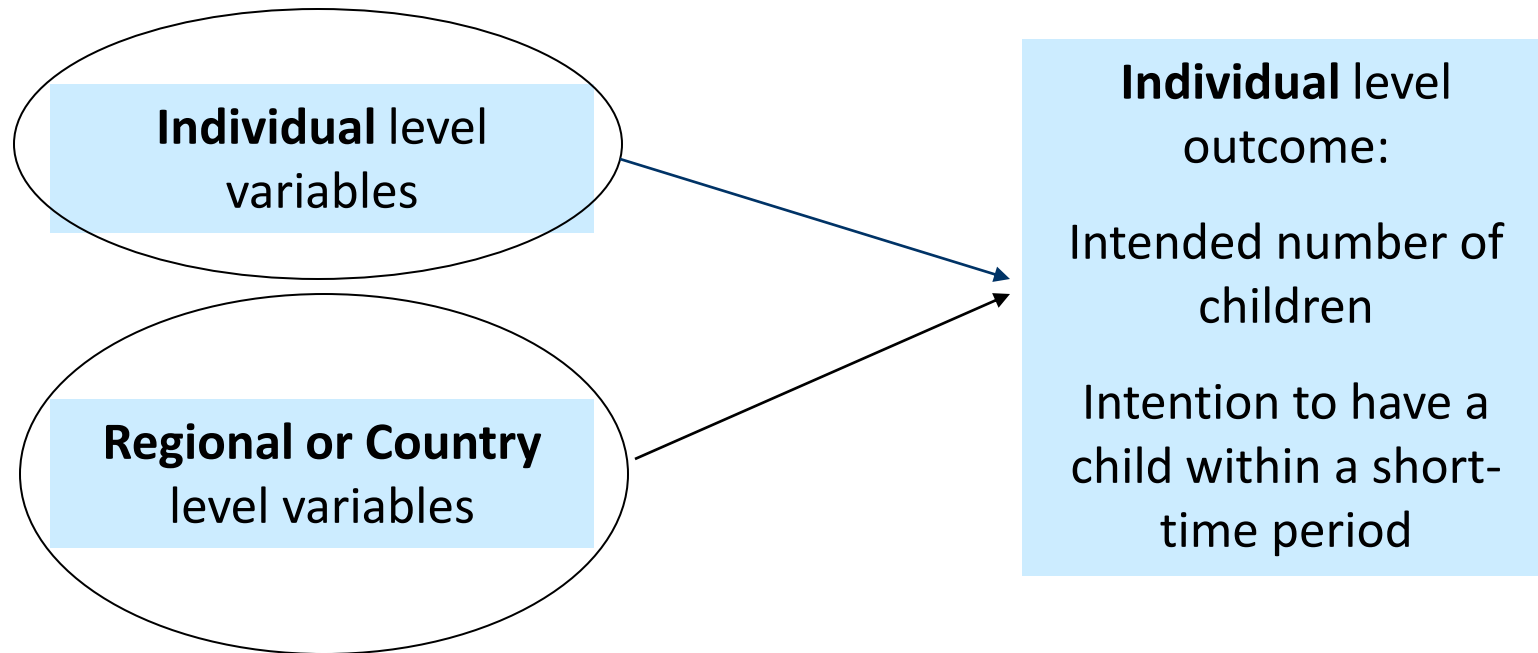
Mean age at first child of women born in 1960

Gross Domestic Product

(d) Selected multilevel framework:

INDEPENDENT VARIABLES

RESPONSE VARIABLES



We account for the **non-independence** of observations within regions and the clustering of individuals in regions is considered as a **phenomenon of interest** rather than a mere disturbance .

A. Random intercept proportional odds model for intended **quantum** of fertility:

<i>Individual-level covariates</i>	<u>Childless respondents</u>	<u>Respondents with one child</u>
<u>Marital status</u> (Ref. married)		
Single	-0.06	-0.25
Cohabiting	0.09	0.06
Separated or divorced	-0.38	-0.36
<u>School enrolment</u> (Ref. not enrolled)		
Enrolled	0.52	1.13 **
<u>Education</u> (Ref. low level)		
Medium level	0.28	-0.08
High level	0.61	0.43
<u>Employment status</u> (Ref. employed)		
Unemployed or inactive	0.08	0.06
<u>Household situation</u> (Ref. being able to make plans up to six months)		
Long-term perspective	0.22 **	0.65 ***
<u>Religiousness</u> (Ref. attending religious services less than once a month)		
Attending religious services at least once a month	0.51 ***	0.50 ***
<u>Gender role attitudes</u> (Ref. non equal)		
Equity in gender role	0.10	-0.06
<u>Age at first child</u> (Ref. 26 years or older)		
Before age 26	-	-0.66 ***
<i>Regional-level covariates</i>		
Mean actual number of children in the generation aged 40-59	0.91 *	0.95 *
Proportion of women becoming mothers before age 26 in the generation aged 40-59	1.18	0.10
Regional-level variance	0.19 **	0.17 **
<i>Country covariates</i>		
Completed fertility of women born in 1955	-0.22	0.07
Mean age at first child of women born in 1955	0.26 ***	0.15
Log-GDP per capita in 2006	-0.27	-0.32
Log-likelihood	-4021.8	-1722.2

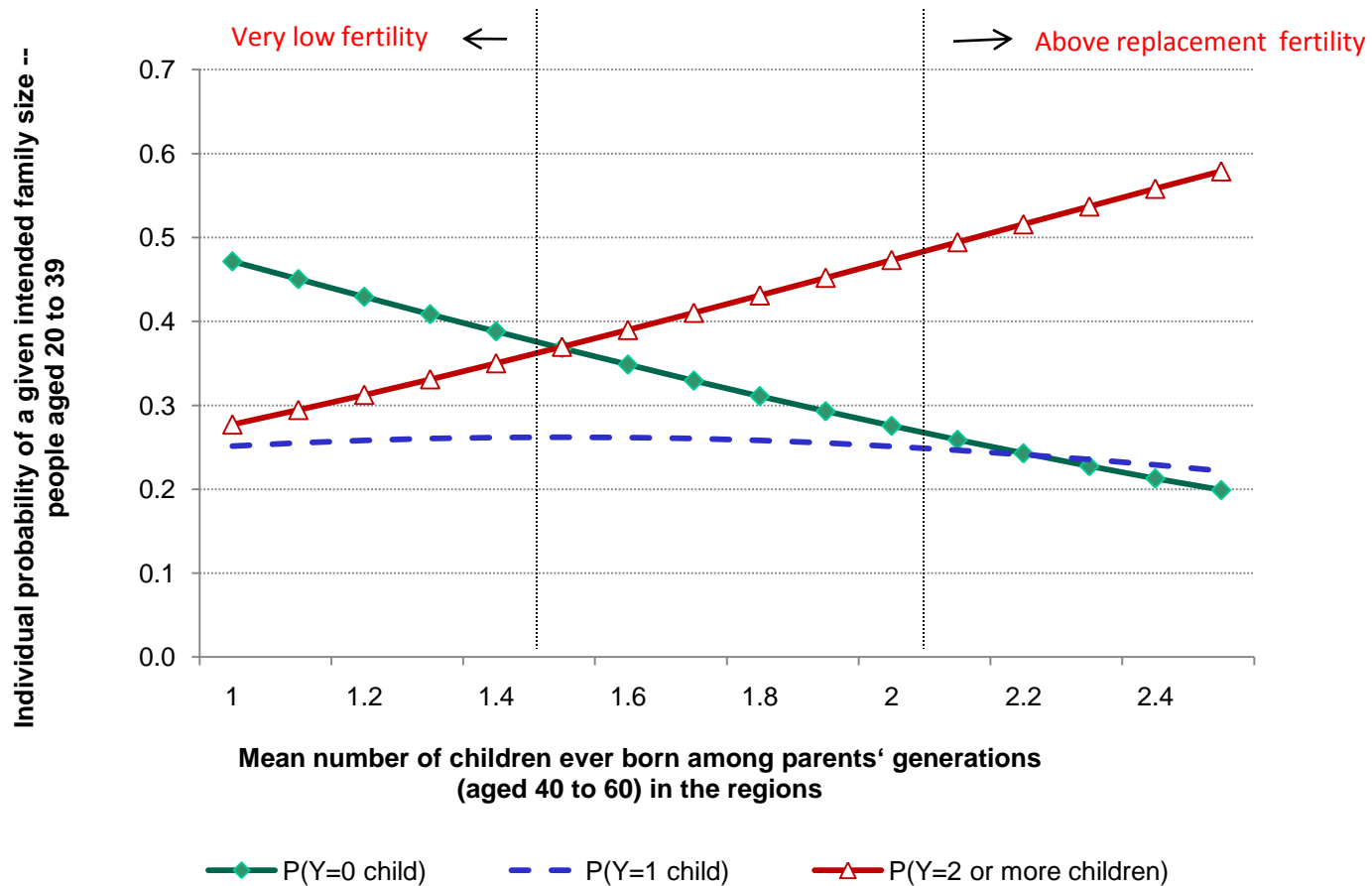
* p<0.05; ** p<0.01; *** p<0.001

B. Random intercept proportional odds model for intended **timing** of next child:

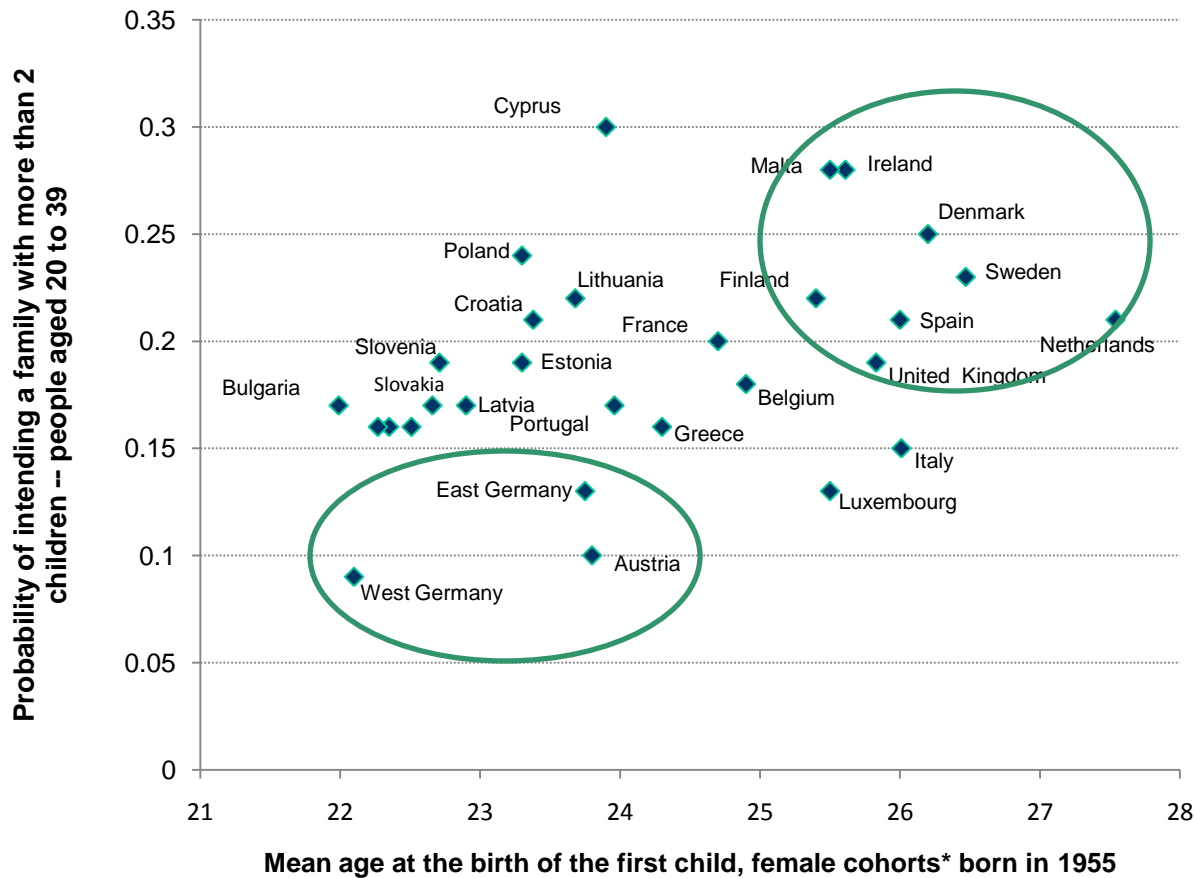
<i>Individual-level covariates</i>	Childless respondents	Respondents with one child
<u>Marital status</u> (Ref. married)		
Single	-1.63 ***	-1.41 ***
Cohabiting	-0.73 ***	-0.33
Separated or divorced	-0.63	-1.23 ***
<u>Enrolment in school</u> (Ref. not enrolled)		
Enrolled in the school	-0.93 ***	-1.30 **
<u>Education</u> (Ref. low level)		
Medium level	0.01	-0.42
High level	-0.08	-0.32
<u>Employment status</u> (Ref. employed)		
Unemployed or inactive	-0.08	0.13
<u>Household situation</u> (Ref. being able to make plans up to six months)		
Long-term perspective	0.28 ***	0.40 **
<u>Religiousness</u> (Ref. attending religious services less than once a month)		
Attending religious services at least once a month	0.12	0.21
<u>Gender role attitudes</u> (Ref. non equal)		
Equity in gender role	0.11	-0.09
<u>Intended number of children</u> (Ref. less than two children)		
Two or more children	0.51 ***	0.64 ***
<u>Age at first child</u> (Ref. 26 years or later)		
Before age 26	-	0.09
<i>Country-level covariates</i>		
Completed fertility of women born in 1955	-0.17	0.04
Mean age at first child of women born in 1955	-0.03	0.05
Log-GDP per capita in 2006	-0.68 **	0.86 **
Country-level variance	0.10 **	0.90 **
Log-likelihood	-4021.8	-1722.2

* p<0.05; ** p<0.01; *** p<0.001

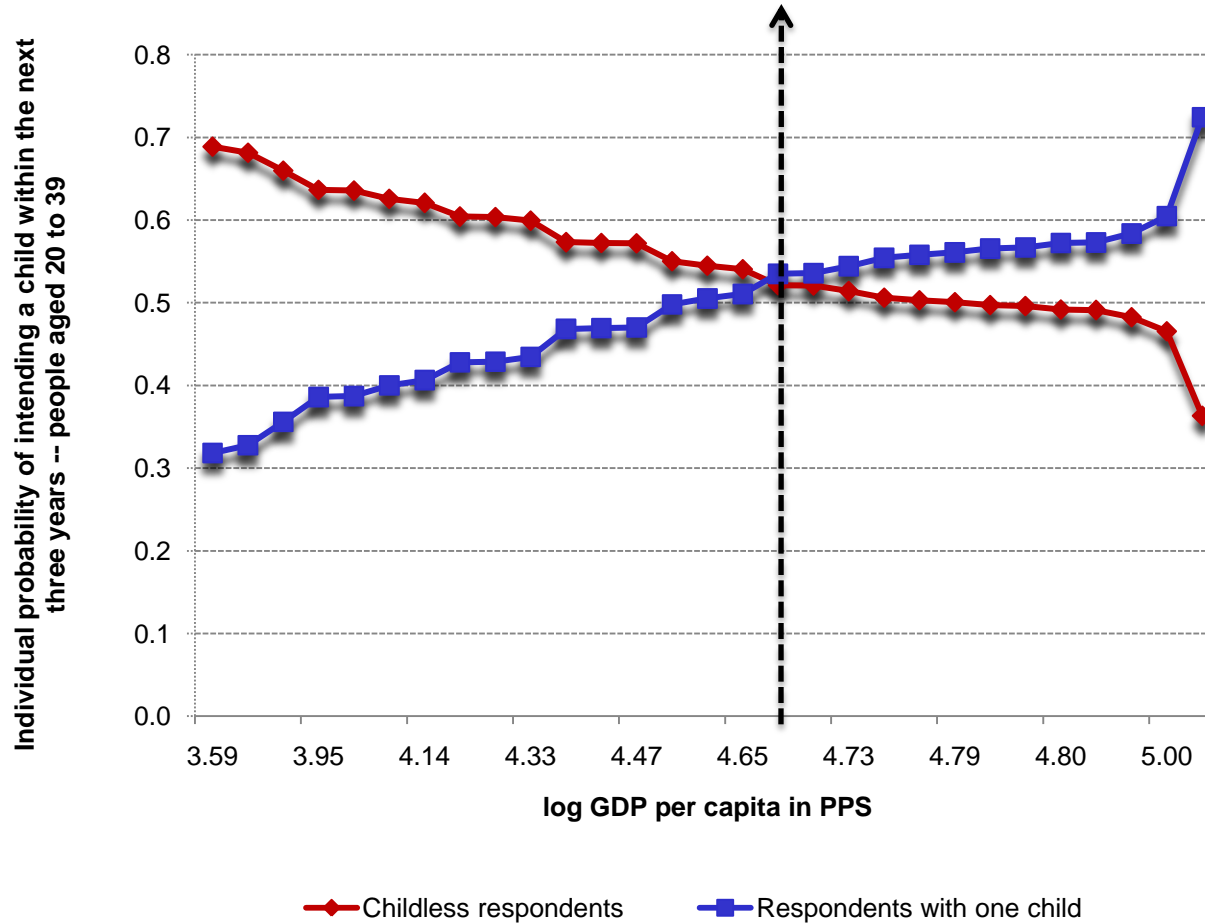
Effect of the mean number of children ever born among older generations on the younger generations' individual probability of a given intended family size.
Childless respondents. EU-27 plus Turkey and Croatia. Year 2006.



Effect of the mean age at the first child on the individual probability of intending a family with more than two children. **Childless respondents.**
 EU-27 plus Croatia and Turkey. Year 2006.



Effect of GDP on the individual probability of intending a child within the next three years. EU-27 plus Turkey and Croatia. Year 2006.



Results:

A. At the individual level

1. **Marital status** matters only for the timing of intended childbearing: being single, or cohabiting with a partner are reasons to postpone the birth of the first child, being single or divorced are reasons to postpone the birth of a second child
2. **Religiousness** matters only for the quantum of intended childbearing: Regular attendance of religious services is positively associated with the number of (additionally) intended children
3. **Household situation** has positive significant effects on both the timing and the number of the additionally intended children: knowing what the household situation will be in the next one or two years increases the number of intended children and it strengthens the intention to have a child within the next three years

Results:

B. At the regional level:

1. The parents' fertility behaviour positively influences the children's individual fertility intentions (intergenerational transmission of the quantum of fertility)

C. At the country level:

2. The age at first child of women born in 1960 (mothers' generation) is positively correlated with the intended number of children of the younger individuals (children's generations)
3. The GDP per capita does negatively affect the intention to have a first child in the next three years and positively influences the intention to have a second child in the next three years

Policy implications:

1. the implementation of family-friendly policies may become more of a challenge in the future if preferences of smaller family sizes spread over Europe as a result of persistently low fertility
2. the worsening of the economic performance of many countries may (temporarily) have negative repercussions on the fertility levels, especially in those countries characterised by a large prevalence of one-child families, by stimulating a substantial postponement of the decision to have a second child

Caveats:

- ❖ Only **one cross-section** is not sufficient in understanding the process of forming intended family size. Particularly, it does not allow us to estimate the effects of individual actual family size on the individual intended family size
- ❖ We cannot control for the **individual effect** of parents' fertility behaviour on children's fertility preferences
- ❖ The contextual effects may be the result of selective migration - **endogeneity problems**
- ❖ The limited national **sample sizes** do not allow us to go more in details in the analysis of each country

THANK YOU FOR YOUR ATTENTION!

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Item used for the definition of gender equity variable

Here is a list of statement relating to the **role of men and women** when it comes to **raising children**. Please tell me to what extent do you agree or disagree with each of them

	(READ OUT)	Totally agree	Tend to agree	Tend to disagree	Totally disagree	DK
1	A working mother can establish a just as warm and secure a relationship with her children as a mother who does not work	1	2	3	4	5
2	A pre-school child is more likely to suffer if his\her mother works	1	2	3	4	5
3	All in all family life suffers when the woman has a full time job	1	2	3	4	5
4	Both men and women should contribute to the household income	1	2	3	4	5
5	Ideally, the woman should stay at home to look after the children while the man goes out to work	1	2	3	4	5
6	Family life often suffers when men concentrate too much on their work	1	2	3	4	5

Item used for the definition of household situation

Which of the following statements best reflects your household situation?

READ OUT – ONE ANSWER ONLY

Your current situation does not allow you to make any plan for the future. You live day by day **1**

You know what you will be doing in the next six months **2**

You have a long-term perspective of what your household will be during in the next 1 or 2 years **3**

Other **4**

DK **5**