

Supplementary online materials for the article

How socio-cultural factors and opportunity costs shape the transition to a third child

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Table A1: Time periods by wave and country

	Wave 1	Wave 2
Austria	2008-10 – 2009-02	2012-09 – 2013-03
Bulgaria	2004-10 – 2004-12	2007-04 – 2007-06
France	2005-09 – 2005-12	2008-10 – 2008-10
Georgia	2006-03 – 2006-07	2009-04 – 2009-07
Hungary	2004-11 – 2005-01	2008-10 – 2009-02
Poland	2010-10 – 2011-02	2014-09 – 2015-02
Russia	2004-06 – 2004-08	2007-04 – 2007-09

Table A2: Factor loadings of norms and attitudes towards the intention to have a child within the next three years

	Factor 1: Opportunity costs	Factor 2: Affect and social esteem	Factor 3: Perceived social pressure
<i>'If you were to have a child during the next three years, would this be better or worse for ...'</i>			
... the possibility to do what you want?	0.6688	0.1725	0.1635
... your employment opportunities?	0.6149	0.1523	0.1177
... your financial situation?	0.6263	0.1448	0.1519
... your sexual life?	0.2934	0.3804	0.0731
... what people around think of you?	0.1596	0.5540	0.1860
... the joy and satisfaction you get from life?	0.3233	0.5735	0.1904
... the closeness between you and your partner?	0.2064	0.6425	0.1977
... the care and security you may have in old age?	0.0636	0.5563	0.1370
... the closeness between you and your parents?	0.0826	0.5838	0.1733
<i>'To what extent do you agree or disagree with the statements about what other people think about you having a child during the next three years?'</i>			
Most of your friends think that you should have a child.	0.0870	0.0918	0.8522
Your parents think that you should have a child.	0.0785	0.1146	0.8900
Most of your relatives think that you should have a child.	0.0787	0.0992	0.9255

Remark: Loadings highlighted in bold indicate the factor on which the item was placed.

Source: GGS, wave one. n=6,606.

Table A3: Items included in the factor “opportunity costs”

If you were to have another child during the next three years, would it be better or worse for ...	Women							Men						
	Much better	Better	Neither better nor worse	Worse	Much worse	Missing	Total	Much better	Better	Neither better nor worse	Worse	Much worse	Missing	Total
.... the possibility to do what you want	0%	2%	29%	49%	20%	0%	100%	0%	3%	44%	39%	13%	1%	100%
... your employment opportunities	0%	1%	26%	45%	24%	3%	100%	0%	2%	71%	18%	6%	3%	100%
... your financial situation	0%	1%	23%	52%	23%	0%	100%	0%	2%	29%	52%	17%	0%	100%

Source: GGS, wave one. Unweighted numbers.

Table A4: Items included in the factor “affect and social esteem”

If you were to have another child during the next three years, would it be better or worse for	Women							Men						
	Much better	Better	Neither better nor worse	Worse	Much worse	Missing	Total	Much better	Better	Neither better nor worse	Worse	Much worse	Missing	Total
... your sexual life	0%	2%	80%	12%	3%	2%	100%	0%	3%	80%	11%	3%	2%	100%
... what people around you think of you	0%	9%	78%	7%	2%	4%	100%	1%	10%	80%	5%	1%	3%	100%
... the joy and satisfaction you get from life	3%	23%	53%	15%	4%	1%	100%	4%	27%	54%	12%	2%	1%	100%
... the closeness between you and your partner/spouse	2%	15%	70%	9%	2%	1%	100%	3%	18%	69%	7%	2%	1%	100%
... the closeness between you and your parents	1%	11%	77%	3%	1%	7%	100%	2%	12%	75%	2%	1%	8%	100%
... the care and security you may get in old age	2%	32%	57%	4%	2%	3%	100%	3%	34%	54%	5%	2%	3%	100%

Source: GGS, wave one. Unweighted numbers.

Table A5: Items included in the factor “perceived social pressure”

	Strong-ly agree	Agree	Neither agree	Dis-agree	Strong-ly dis-agree	Missing	Total	Strong-ly agree	Agree	Neither agree	Dis-agree	Strong-ly dis-agree	Missing	Total

nor dis- agree								nor dis- agree							
Women								Men							
Most friends think R should have a/another child	3%	7%	17%	32%	43%	1%	100%	2%	7%	18%	29%	42%	2%	100%	
Parents think R should have a/another child	2%	6%	13%	30%	42%	7%	100%	3%	7%	14%	28%	41%	8%	100%	
Most relatives think R should have a/another child	2%	6%	16%	31%	44%	1%	100%	2%	6%	17%	30%	43%	1%	100%	

Source: GGS, wave one. Unweighted numbers.

Table A6: Number of missing items, by factor

	Opportunity costs	Affect and esteem	Perceived social pressure	Opportunity costs, affect and esteem and social pressure	
	abs.	abs.	abs.	abs.	rel.
0 items	6,355	5,777	6,040	5,480	82.6%
1 item	230	617	503	561	8.5%
2 items	21	125	63	416	6.3%
3 items		50		96	1.4%
4 items		21		44	0.7%
5 items		16		23	0.3%
6 items				10	0.2%
7 items				2	0.0%
Total	6,606	6,606	6,606	6,606	100%

Source: GGS, wave one. Unweighted numbers.

Table A7: Distribution of opportunity costs and socio-cultural factors

Women							Men					
	Much better	Better	Neither better nor worse	Worse	Much worse	Total	Much better	Better	Neither better nor worse	Worse	Much worse	Total
Opportunity costs	0%	1%	25%	58%	17%	100%	0%	2%	47%	44%	7%	100%
Socio-cultural factors												
Affect and social esteem	0%	9%	82%	8%	1%	100%	0%	11%	83%	5%	1%	100%
	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Total	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Total
Perceived social pressure	42%	33%	16%	6%	1%	100%	43%	31%	17%	7%	2%	100%
	None	One	Two	Three and more	Total		None	One	Two	Three and more	Total	
Number of siblings	8%	37%	27%	27%	100%		9%	40%	26%	25%	100%	

Source: GGS, wave one. Weighted numbers.

Table A8: Transition to a third child (average marginal effects), using Likert-scales

	Women	Men
Opportunity costs (ref.=Neither better nor worse)		
(Much) better	-0.01	0.04
Worse	-0.03***	-0.03**
Much worse	-0.04**	-0.01
Affect and social esteem (ref.=Neither better nor worse)		
(Much) worse	0.01	0.06*
Better	0.03***	0.05***
Much better	—	0.10**
Perceived social pressure (ref.= Neither agree nor disagree)		
Strongly disagree	-0.06***	-0.06***
Disagree	-0.02*	-0.01
Agree	0.01	0.01
Strongly agree	0.01	-0.07*
Number of siblings (ref.=One)		
None	0.03+	0.01
Two	-0.00	0.03*
Three and more	0.01	0.03**
Age at first birth (ref.=First tercile)		
Second tercile	-0.01	-0.00
Third tercile	-0.03**	-0.02
Age of youngest child (ref.=0-2 years)		
3-5 years	-0.04***	-0.03*
6-10 years	-0.06***	-0.06***
11-15 years	-0.13***	-0.10***
16 years and more	-0.21***	-0.16**
Missing age	-0.11**	0.01
Sex composition of children (ref.=One boy, one girl)		
Two boys	0.00	-0.02
Two girls	0.03*	0.02
Twins (ref.=No twins)		
Twins	-0.06	-0.05
Migration background (ref.=Born in country of interview)		
Born abroad	0.00	-0.02
Education of couple (ref.=Both low education)		
At least one medium level	-0.03+	0.02
At least one highly educated	-0.02	0.03
Missing education	—	0.19**
Employment status of man (ref.=(Self-)employed)		
Unemployed	-0.01	0.03+
Other	-0.00	0.04
Employment status of woman (ref.=(Self-)employed)		
Looking after home/family	0.01	0.03*
Unemployed	0.01	-0.00
Other	0.01	0.01
Making ends meet (ref.=Fairly easily)		
With (great) difficulties	0.05***	0.01
With some difficulties	0.02	0.01
(Very) easily	0.02	0.06***
Missing	—	—
Thinking of breaking up (ref.=Not thinking of breaking up)		
Thinking of breaking up	0.03**	-0.10
Partner present at interview	0.02	0.00
No answer	-0.05+	0.03
Existence of pre-union children (ref.=No)		
Yes	-0.00	0.05**
Time elapsed between the two interviews (in months)	-0.00	-0.00

Table A8 (cont.): Transition to a third child (average marginal effects), using Likert-scales

	Women	Men
Country (ref.=Austria)		
Bulgaria	-0.08	-0.03
France	0.01	0.02
Georgia	-0.03	-0.02
Hungary	0.04*	0.06**
Poland	0.00	0.03
Russia	-0.11*	-0.07
Cragg Uhler R ²	0.2843	0.2366
N	4,037	2,521

Significance levels: + p<0.10; * p<0.05; ** p<0.01; *** p<0.001.

Source: GGS, waves one and two.

Remark: For opportunity costs the categories “Much better” and “better” were merged, as the group “much better” would have been dropped otherwise due to perfect prediction. The same holds for the categories “Much worse” and “worse” for affect and social esteem. Some groups (e.g., “missing” for age of youngest child in the female sample) predict transition perfectly. STATA dropped these observations, resulting in a lower number of observations. These groups have are indicated via “-“.

Table A9: Transition to a third child, average marginal effect of single items

	Women	Men
‘If you were to have a child during the next three years, would this be better or worse for ...’¹		
... the possibility to do what you want?	-0.02***	-0.03***
... your employment opportunities?	-0.02***	-0.01
... your financial situation?	-0.03***	-0.03**
... your sexual life?	-0.01+	-0.03+
... what people around think of you?	-0.01	-0.01
... the joy and satisfaction you get from life?	-0.04***	-0.04***
... the closeness between you and your partner?	-0.03***	-0.03***
... the care and security you may have in old age?	-0.01+	-0.01
... the closeness between you and your parents?	-0.01	-0.03*
‘To what extent do you agree or disagree with the statements about what other people think about you having a child during the next three years?’²		
Most of your friends think that you should have a child.	-0.02***	-0.02***
Your parents think that you should have a child.	-0.02***	-0.02***
Most of your relatives think that you should have a child.	-0.02***	-0.02***

Significance levels: + p<0.10; * p<0.05; ** p<0.01; *** p<0.001.

Remark: The answers for the missing values for the single variables were excluded. Accordingly, numbers ranged between 3,766 and 4,033 in the female and between 2,325 and 2,497 in the male sample.

Note: Controlling for age at first birth, age of youngest child, sex composition of children, twins, migration background, education of couple, employment status of man and woman, making ends meet, thinking of breaking up, existence of pre-union children, time elapsed between the two interviews, and country.

Source: GGS, wave one and wave two.

¹ Answers were coded from 1 (much better) to 5 (much worse).

² Answers were coded from 1 (strongly agree) to 5 (strongly disagree).

Table A10: Transition to a third child, including specific items instead of factors, average marginal effects

	Women	Men
'If you were to have a child during the next three years, would this be better or worse for ...'		
... the possibility to do what you want?	-0.01	-0.02*
... your employment opportunities?	-0.00	0.02+
... your financial situation?	-0.01	-0.02+
... your sexual life?	0.01	-0.01
... what people around think of you?	0.01	0.03+
... the joy and satisfaction you get from life?	-0.03***	-0.03***
... the closeness between you and your partner?	-0.01	-0.00
... the care and security you may have in old age?	0.01	0.02*
... the closeness between you and your parents?	0.01	-0.01
'To what extent do you agree or disagree with the statements about what other people think about you having a child during the next three years?'		
Most of your friends think that you should have a child.	-0.01	-0.01
Your parents think that you should have a child.	-0.00	-0.01
Most of your relatives think that you should have a child.	-0.01	-0.00
Number of siblings (ref.=One)		
None	0.03	0.02
Two	-0.00	0.02
Three and more	0.01	0.04**
Age at first birth (ref.=First tercile)		
Second tercile	-0.02+	0.00
Third tercile	-0.03*	-0.02
Age of youngest child (ref.=0-2 years)		
3-5 years	-0.04***	-0.04**
6-10 years	-0.06***	-0.05***
11-15 years	-0.14***	-0.11***
16 years and more	-0.19***	-0.14*
Missing age	-0.11*	0.03
Sex composition of children (ref.=One boy, one girl)		
Two boys	0.01	-0.01
Two girls	0.03**	0.03+
Twins (ref.=no twins)		
Twins	-0.07	-0.03
Migration background (ref.=Born in country of interview)		
Born abroad	-0.02	-0.02
Education of couple (ref.=Both low education)		
At least one medium level	-0.04*	0.04
At least one highly educated	-0.04*	0.04
Missing education	—	0.19**
Employment status of man (ref.=(Self-)employed)		
Unemployed	-0.01	0.04*
Other	-0.04	0.03
Employment status of woman (ref.=(Self-)employed)		
Looking after home/family	0.01	0.03+
Unemployed	0.01	-0.01
Other	0.02	0.02
Making ends meet (ref.=Fairly easily)		
With (great) difficulties	0.04**	0.02
With some difficulties	0.01	0.02
(Very) easily	0.02	0.05**
Missing	—	0.00

Table A10 (cont.): Transition to a third child, including specific items instead of factors, average marginal effects

	Women	Men
Thinking of breaking up (ref.=Not thinking of breaking up)		
Thinking of breaking up	0.04**	-0.09
Partner present at interview	0.02	0.03
No answer	-0.04	0.02
Existence of pre-union children (ref.=No)		
Yes	-0.01	0.05**
Time elapsed between the two interviews (in months)	-0.00	-0.00
Country (ref.=Austria)		
Bulgaria	-0.05	-0.07
France	0.00	-0.05
Georgia	-0.01	-0.03
Hungary	0.03+	0.04*
Poland	0.01	0.03
Russia	-0.12*	-0.007
Cragg Uhler R ²	0.2984	0.2441
N	3,341	2,072

Significance levels: + p<0.10; * p<0.05; ** p<0.01; *** p<0.001.

Remark: Models exclude respondents with at least one missing value for the twelve items referring to opportunity costs or affect and social esteem.

Source: GGS, wave one and wave two.

Table A11: Transition to a third child (average marginal effects) – country effect

	Women			Men		
	Women1	Women2	Women	Men1	Men2	Men
Country (ref.=Austria)						
Bulgaria	-0.08***	-0.06**	-0.08	-0.07**	-0.04+	-0.03
France	0.02	0.03*	0.01	0.02	0.02	0.01
Georgia	0.00	-0.02	-0.03	0.01	-0.02	-0.02
Hungary	-0.00	0.02	0.03+	0.01	0.03+	0.05*
Poland	0.00	0.01	0.01	0.01	0.02	0.04+
Russia	-0.10***	-0.09***	-0.11**	-0.06*	-0.05+	-0.06
Opportunity costs		0.03***	-0.02***		0.03*	-0.02+
Socio-cultural factors						
Affect and social esteem		0.03*	0.02*		0.04*	0.03+
Perceived social pressure		0.03***	0.02***		0.02***	0.02***
Number of siblings (ref.=One)						
None		0.01	0.03+		0.01	0.01
Two		-0.01	-0.01		0.03*	0.03*
Three and more		-0.00	0.01		0.03*	0.03*
Control variables	no	no	yes	no	no	yes
Cragg Uhler R ²	0.0447	0.1324	0.2739	0.0246	0.0885	0.2045
N	4,073	4,073	4,047	2,533	2,533	2,521

Significance levels: + p<0.10; * p<0.05; ** p<0.01; *** p<0.001.

Source: GGS, waves one and two.

Remark: Models “Women” and “Men” are those presented in Table 3.

Table A12: Transition to a third child, excluding couples with pre-union children, average marginal effects

	Women	Men
Opportunity costs	-0.02**	-0.02+
Socio-cultural factors		
Affect and social esteem	0.02*	0.03
Perceived social pressure	0.02***	0.02***
Number of siblings (ref.=One)		
None	0.03+	0.02
Two	-0.01	0.03*
Three and more	0.01	0.03*
Age at first birth (ref.=First tercile)		
Second tercile	-0.02+	-0.00
Third tercile	-0.03**	-0.01
Age of youngest child (ref.=0-2 years)		
3-5 years	-0.04***	-0.04*
6-10 years	-0.06***	-0.06***
11-15 years	-0.17***	-0.11***
16 years and more	-0.20***	—
Missing age	—	0.02
Sex composition of children (ref.=One boy, one girl)		
Two boys	0.01	-0.02
Two girls	0.03**	0.01
Twins		
No twins (ref.)	0	0
Twins	-0.05	-0.04
Migration background (ref.=Born in country of interview)		
Born abroad	0.01	-0.00
Education of couple (ref.=Both low education)		
At least one medium level	-0.04*	0.01
At least one highly educated	-0.03+	0.00
Missing education	—	0.17**
Employment status of man (ref.=(Self-)employed)		
Unemployed	-0.02	0.04*
Other	-0.03	0.04
Employment status of woman (ref.=(Self-)employed)		
Looking after home/family	0.01	0.03*
Unemployed	0.00	0.01
Other	-0.02	-0.02
Making ends meet (ref.=Fairly easily)		
With (great) difficulties	0.05***	0.00
With some difficulties	0.02	0.01
(Very) easily	0.01	0.05**
Missing	—	—
Thinking of breaking up (ref.=Not thinking of breaking up)		
Thinking of breaking up	0.04**	-0.08
Partner present at interview	0.01	0.02
No answer	-0.04	0.03
Time elapsed between the two interviews (in months)	-0.00	-0.00

Table A12 (cont.): Transition to a third child (average marginal effects)

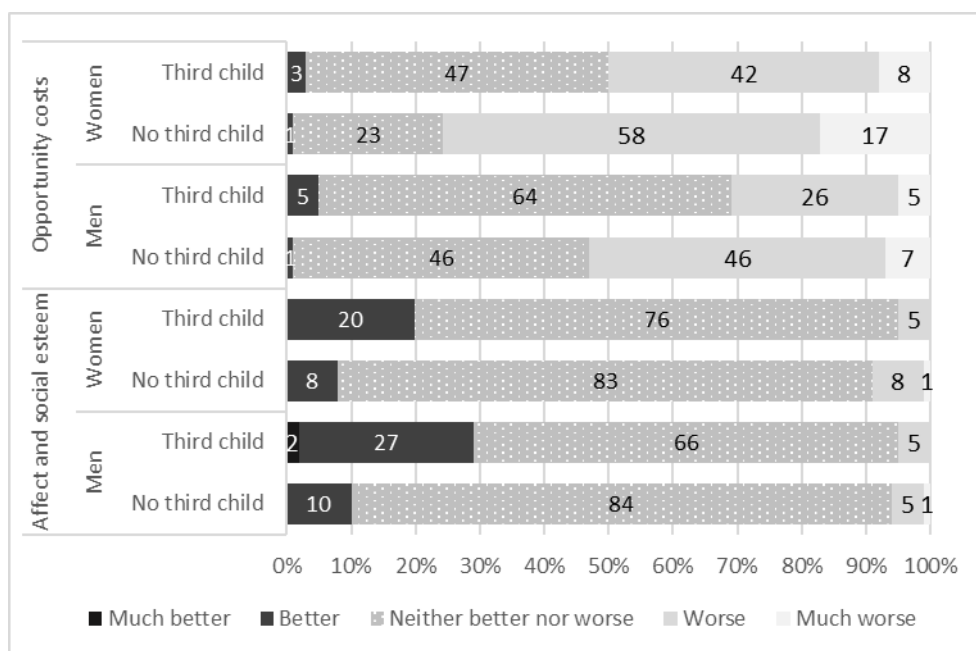
	Women	Men
Country (ref.=Austria)		
Bulgaria	-0.08	-0.05
France	0.02	0.00
Georgia	-0.03	-0.03
Hungary	0.03+	0.06**
Poland	0.01	0.04+
Russia	-0.16***	-0.08
Cragg Uhler R ²	0.2919	0.1772
N	3,656	2,129

Significance levels: + p<0.10; * p<0.05; ** p<0.01; *** p<0.001.

Source: GGS, waves one and two.

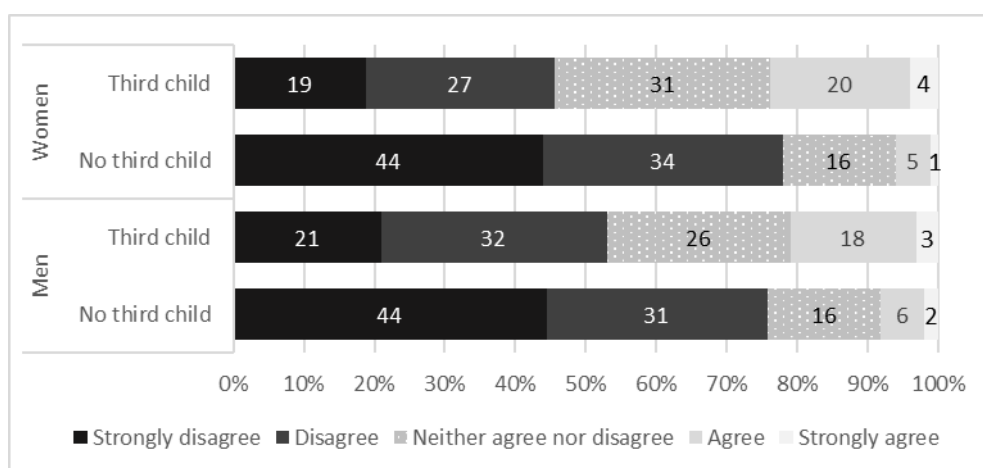
Remark: Some groups (e.g., “missing” for age of youngest child in the female sample) predict transition perfectly. STATA dropped these observations, resulting in a lower number of observations. These groups are indicated via “_”.

Figure A1: Opportunity costs and affect and esteem among persons with two children by transition to a third child, distribution by categories



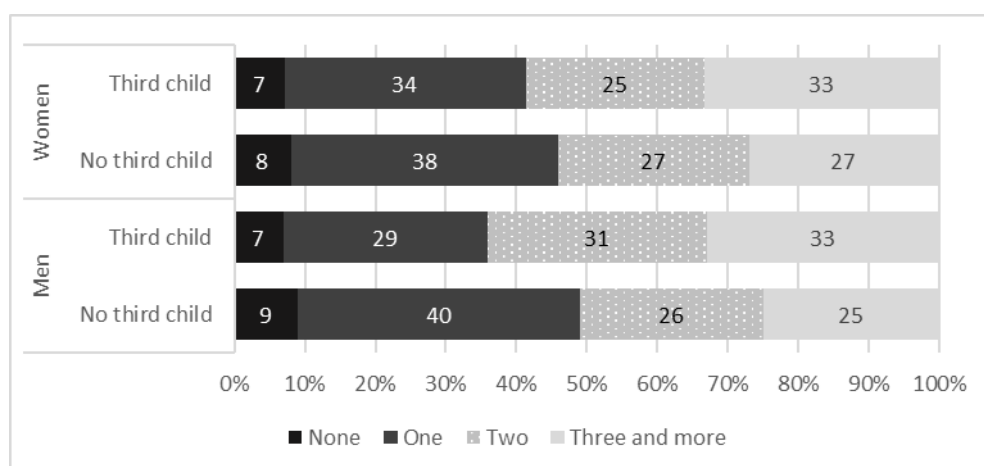
Source: GGS, waves one and two. Weighted numbers.

Figure A2: Perceived social pressure among persons with two children by transition to a third child, distribution by categories



Source: GGS, waves one and two. Weighted numbers.

Figure A3: Number of siblings among persons with two children by transition to a third child



Source: GGS, waves one and two. Weighted numbers.