Parental socio-economic status and first union formation:

Can European variation be explained by the Second

Demographic Transition theory?

Supplementary materials

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This document contains the Supplementary Materials referred to in the main text and includes a range of materials that are relevant to our study, but could not be accommodated in our main text. We have split the material into six sections.

Content

1. An overview of the literature reviewed for this paper
2. Meta-analytic results censored at age 45 for the total effect of parental SES on first union for men and women
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1. An overview of the literature reviewed for this paper

Online Appendix Table A1 presents a literature review of existing studies that have examined the link between parental socio-economic status and the timing of the formation of the first union.

Table A1. Overview of previous studies of the effect of parental SES on the timing of formation of union (cohabitation and/or marriage)

Authors	Year	Cntry	N	Operationalization parental SES	M / F[1]	Dependent variable	Method	Effect [2]	Extra information
Michael & Tuma	1985	US	9439	Father's + mother's education and if father and mother were employed when respondent was age 14	M+F	First marriage	Proportional hazard model	N[3]	Stronger effect of parental education is found for women than for men.
Bernhardt & Hoem	1985	SE		Socio-economic group of main breadwinner in parental home: workers, salaried employees and farmers + self-employed	F	First cohabitation + marriage	Multiplicative intensity hazard models	N[3]	
Goldscheider & Waite	1986	US	20616[4]	Parental education & occupation + family income	M+F	First marriage	Discrete time logistic model	N	Stronger effect of parental education and income is found for women than for men. Stronger effect of occupation is found for men than for women.
Blossfeld & Huinink	1991	DE	2171	Father's social class	F	First marriage	Hazard rate models	N[3]	The effect of father's social class disappeared when individual educational attainment and enrolment were included in the model.
Axinn & Thornton	1992	US	12381[4]	Family income, family's total assets + sum of mothers and father's years of education reported by the mother	M+F	First marriage	Discrete time hazard rate analysis	N[3]	A stronger effect of parental SES is found for men than for women.
South	2001	US	6570	Family income-to-needs ratio, years of school completed by mother when respondent was age 14	M+F	First marriage	Discrete time event history analysis	N	
Sweeney	2002	US	8551	Father employed in a managerial or professional occupation + mother's educational attainment	M+F	First marriage	Discrete time logistic model	N	
Mulder, Clark & Wagner	2006	US, NL, DE-W	6177	Fathers education, income/socio-economic status	F	First marriage + first union	Discrete time logistic model	N	Parental status is found to matter more to formation of first union that takes place from the parental home than from independence. Differences between countries in the impact of parental status are found

Table A1 (continued) Overview of previous studies of the effect of parental SES on the timing of formation of union (cohabitation and/or marriage)

Authors	Year	Cntry	N	Operationalization parental SES	M / F[1]	Dependent variable	Method	Effect [2]	Extra information
Winkler-Dworak & Toulemon	2007	FR	240000	Father's occupation	M+F	First union	Piecewise constant hazard model	P	The positive effect is only found for men.
Uecker & Stokes	2008	US	14165	Ordinal measure of family income, binary variable for parents' education (college degree, yes/no)	M+F	(early) Marriage	Discrete-time proportional hazard model	N	A stronger effect of parental education is found for women than for men.
Hoem & Kostova	2008	BU	5610	Mother's and father's educational attainment (high, middle, low)	F	First cohabitation + first marriage	Multiplicative intensity hazard model	N	
Wiik	2009	NO	6317	Father's and mother's highest level of education + perceived economic well-being during childhood	M+F	First cohabitation + marriage	Discrete time multinomial logistic model	N	The effect of parental education is only found for first cohabitation, not for marriage. Persons reporting a good economic family background, on the other hand, defer entry into first marriage.
Sassler, Addo & Hartmann	2010	US	1095	Mother's educational attainment	M+F	First cohabitation vs marriage	Logistic regression	N[3]	
Cavanagh	2011	US	7523	Highest number of years of schooling completed by most educated parent	F	Cohabitation + marriage	Bivariate Cox proportional hazard model	N	
Mooyaart & Liefbroer	2016	NL	39777	Father's & Mother's level of educational attainment	M+F	First union + first marriage	Discrete-time hazard models	N	

[1] M = Male, F= Female
[2] N = Negative effect, P = Positive effect
[3] In this model the educational level of the child/young adult is not included
[4] Number of person periods instead of respondents

2. Meta-analytic results censored at age 45 for the total effect of parental SES on first union for men and women

In this study, we restrict our analysis to ages 15 to 35, but we checked whether the results would change if we censored at age 45 instead of 35. In this section of the Online Appendix, we present the total effect of parental SES on the timing of first union for men and women, but then censored at age 45. The results are almost identical to the results shown in Figure 1a and 1b in the main text.

Figure A1a. TOTAL effect of parental SES on the timing of first union for WOMEN in 25 European countries. Meta-analysis of estimates from discrete-time logistic models censored at age 45. (Total number of observations = 219,755)
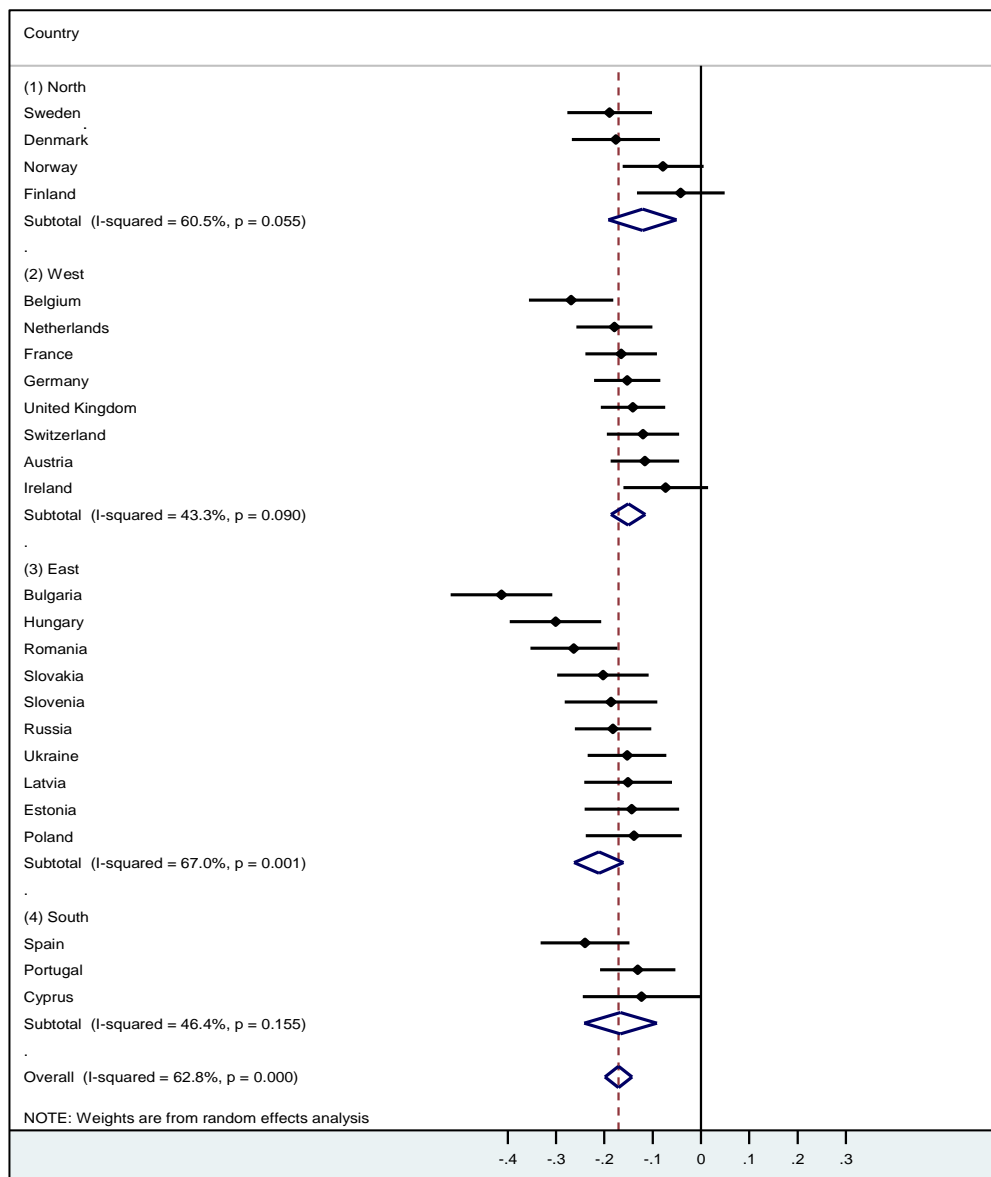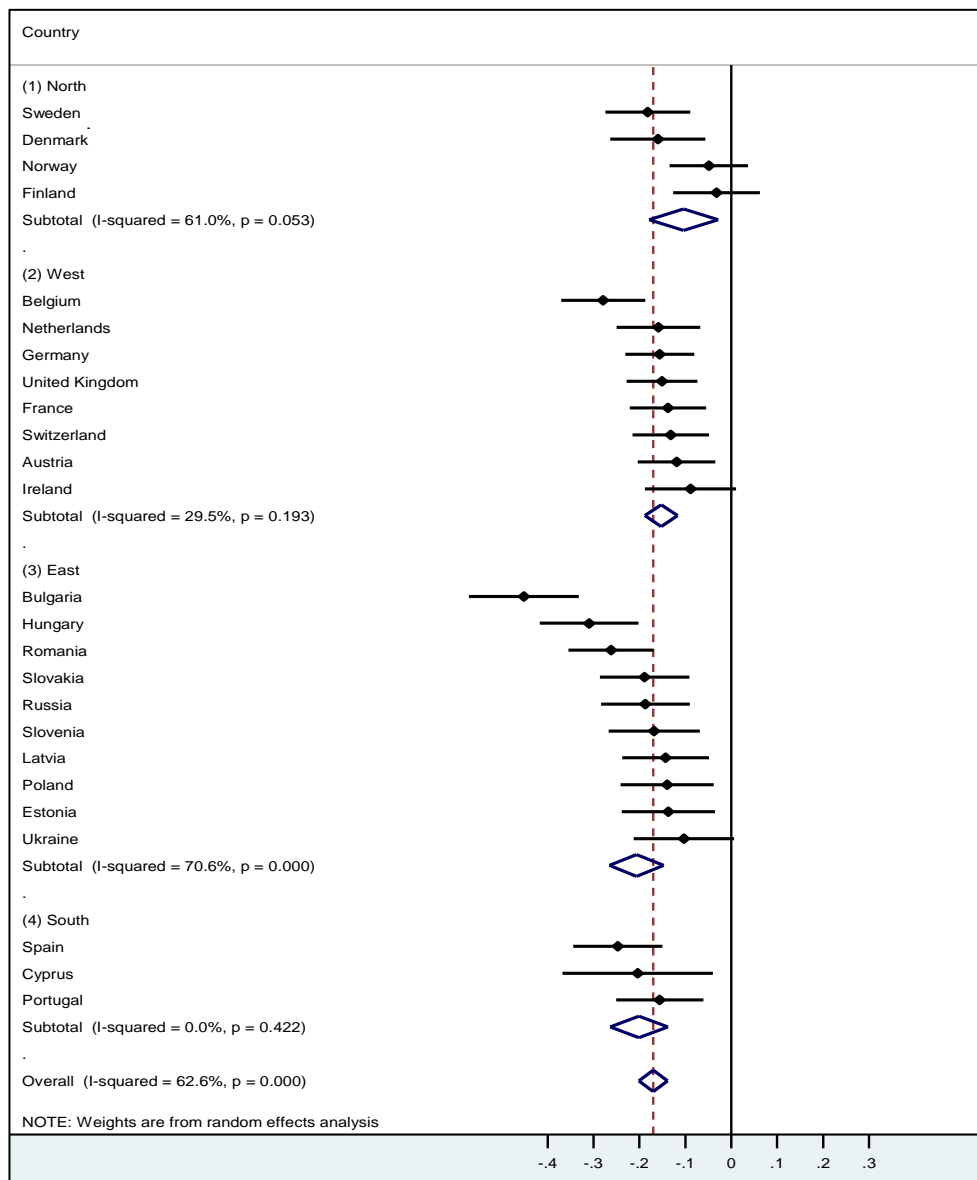
Figure A1b. TOTAL effect of parental SES on the timing of first union for MEN in 25 European countries. Meta-analysis of estimates from discrete-time logistic models censored at age 45. (Total number of observations = 221,328)
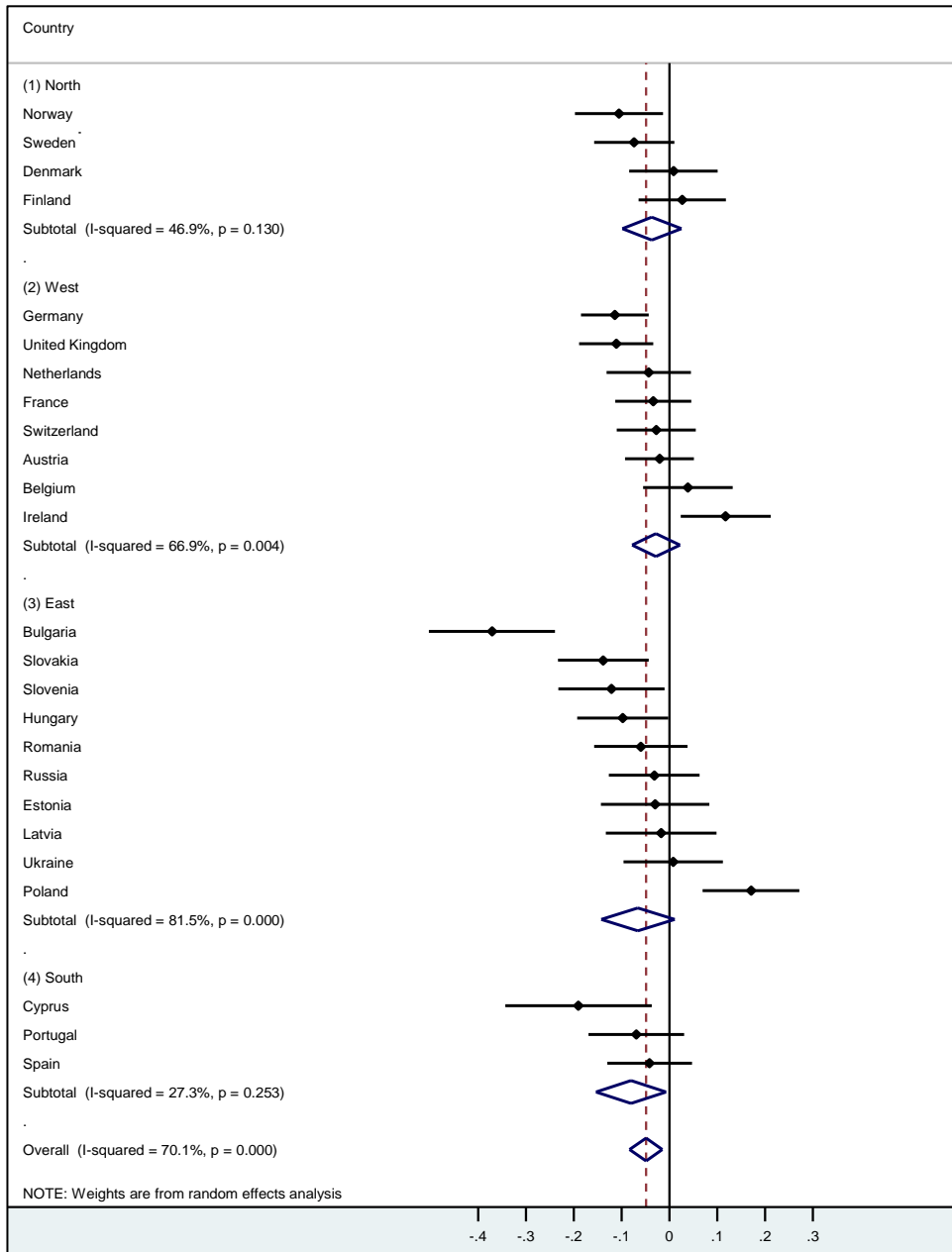
3. Meta-analytic results with weights for the total effect of parental SES on first union for men and women

We did not use weights, since the analyses with weights are almost identical and weights were not available for all countries (not available for Latvia and Romania). In this section of the Online Appendix, we present the total effect of parental SES on the timing of first union for men and women, but then with post-stratification weights included in the model. The results are almost identical to the results shown in Figure 1a and 1b in the main text.

Figure A2a. TOTAL effect of parental SES on the timing of first union for WOMEN in 25 European countries. Meta-analysis of estimates from discrete-time logistic models with post-stratification weights.
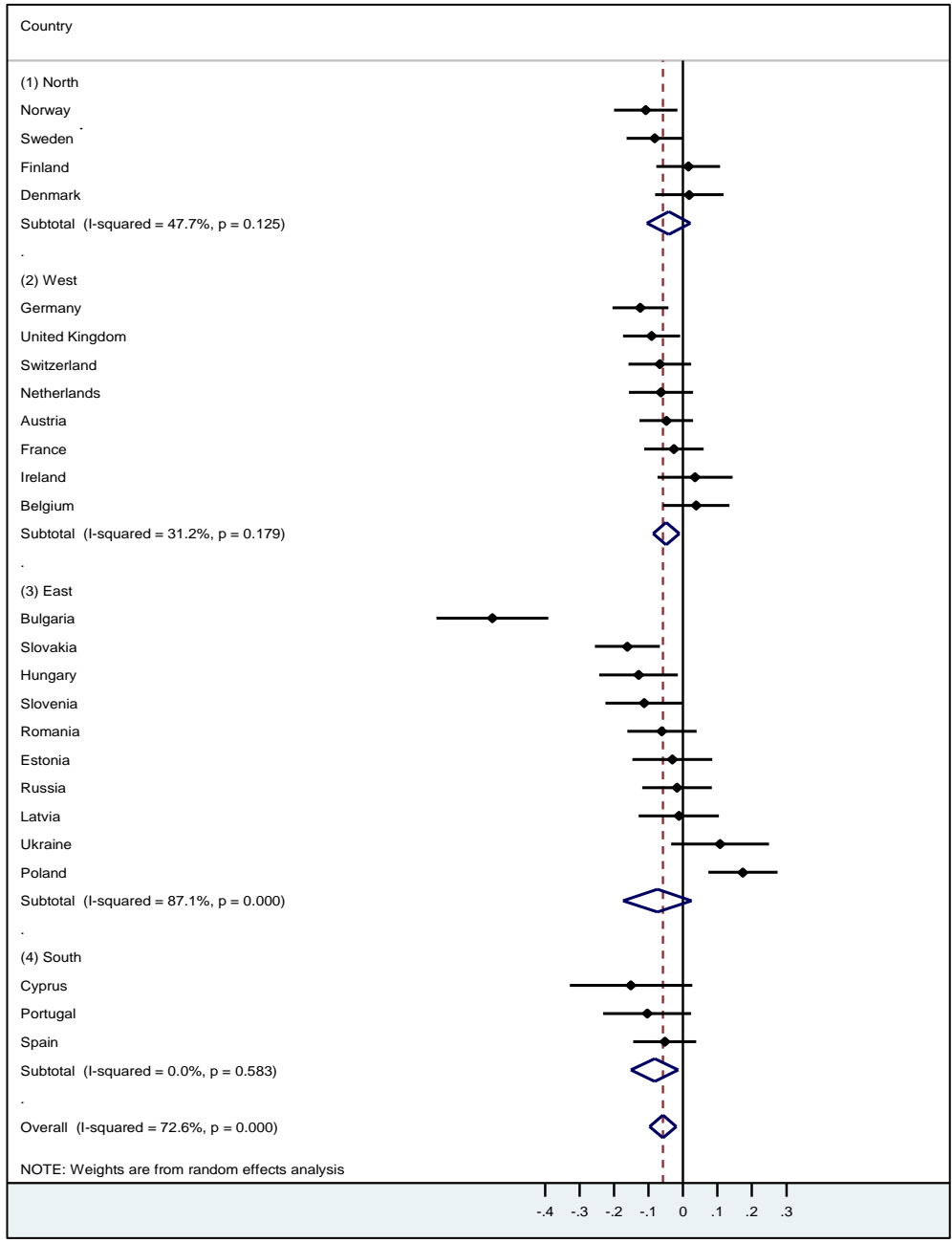
Figure A2b. TOTAL effect of parental SES on the timing of first union for MEN in 25 European countries.

Meta-analysis of estimates from discrete-time logistic models with post-stratification weights.

4. Additional meta-analytic results for men and women

In the main body of the text, we only show a subset of the results of our meta-analyses. In this section of the Online Appendix, we present the additional meta-analytical results for men and women.

Figure A1a and A1b show the total effect of parental SES on the timing of cohabitation and marriage as first union for men. The results for men show the same pattern as for women, but it is somewhat weaker.

Figures A2a and A2b show the effect of parental SES on cohabitation and marriage as first union for women, controlled for individuals' own education. After including individuals' own education as a mediator between parental SES and timing of first union, almost all cross-national variation disappears.

Figures A3a, A3b and A3c show the net effect of parental SES for first union, first cohabitation, and first marriage for men. These Figures indicate that for men the effect of parental SES on formation of first union becomes insignificant after controlling for individuals' own education as a mediator. Moreover, as shown by the results for women in the main text, after including individuals' own education the cross-national variation almost disappeared.

Figure A3a. TOTAL effect of parental SES on the timing of COHABITATION as first union for MEN in 25 European countries. Meta-analysis of estimates from discrete-time logistic models.
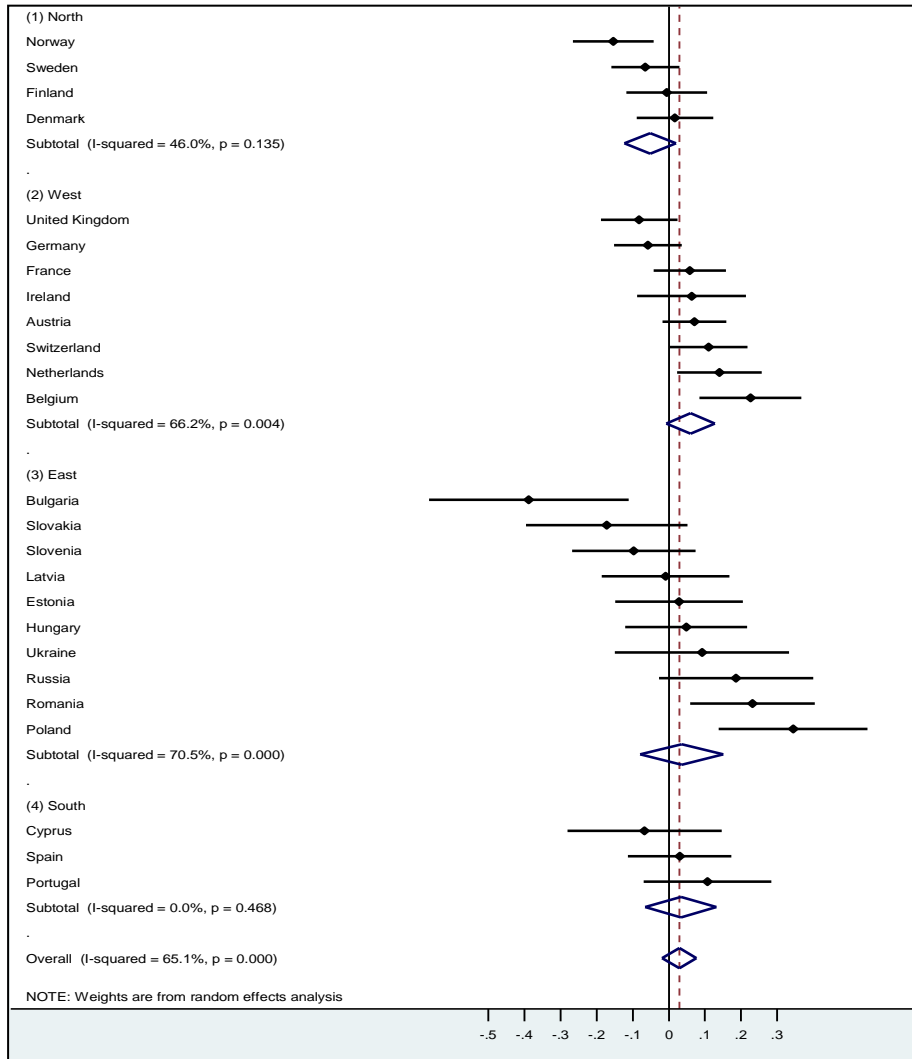
Figure A3b. TOTAL effect of parental SES on the timing of MARRIAGE as first union for MEN in 25 European countries. Meta-analysis of estimates from discrete-time logistic models.
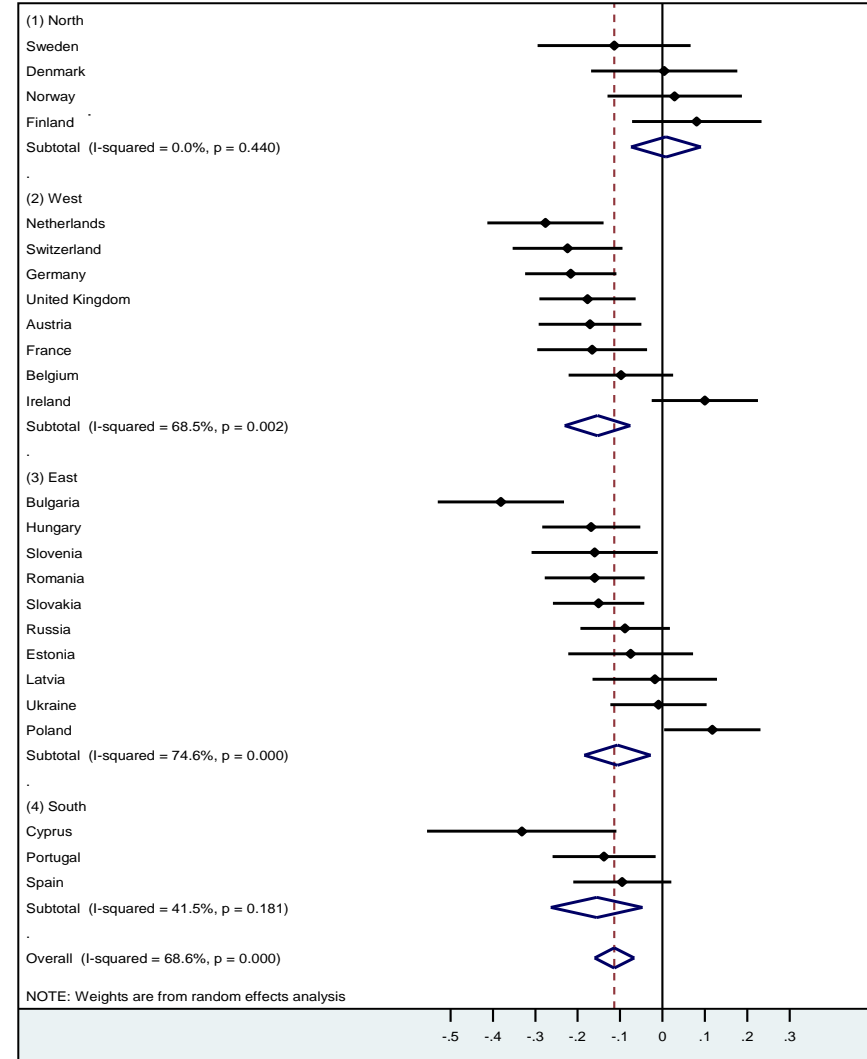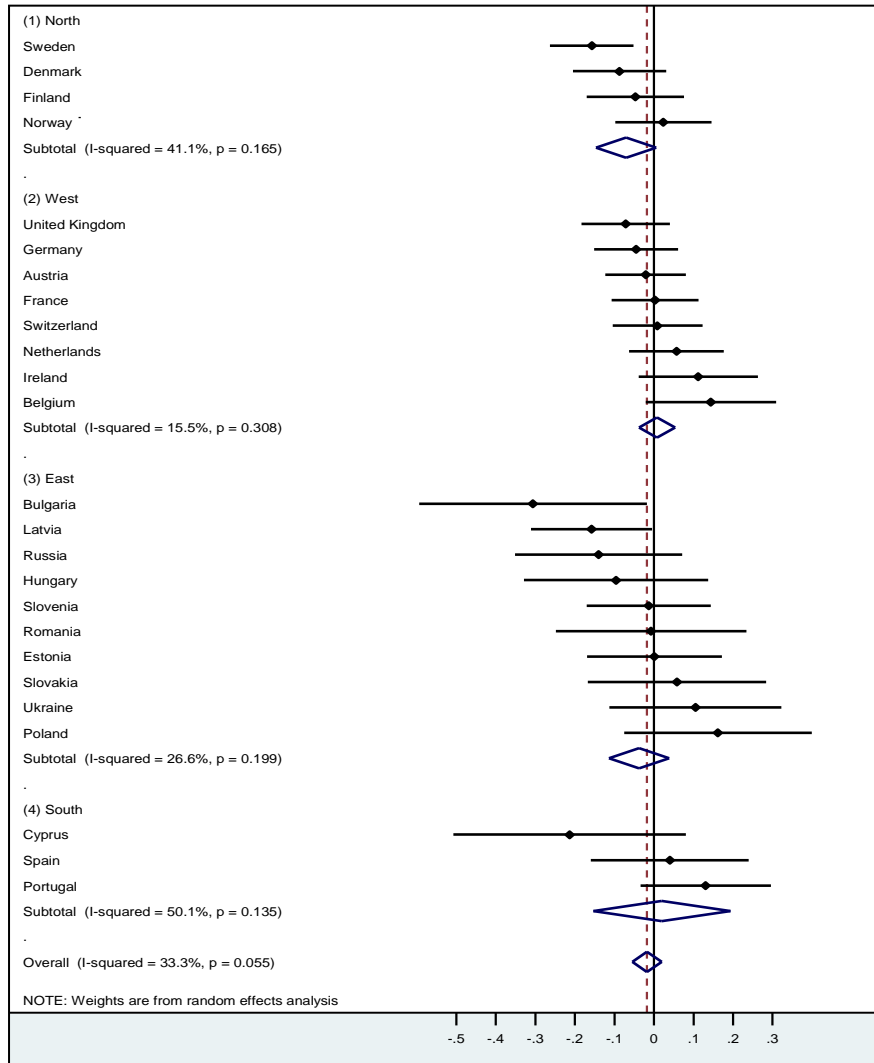
Figure A4a. NET effect of parental SES on the timing of COHABITATION as first union for WOMEN in 25 European countries. Meta-analysis of estimates from discrete-time logistic models.

Figure A4b. NET effect of parental SES on the timing of MARRIAGE as first union for WOMEN in 25 European countries. Meta-analysis of estimates from discrete-time logistic models.
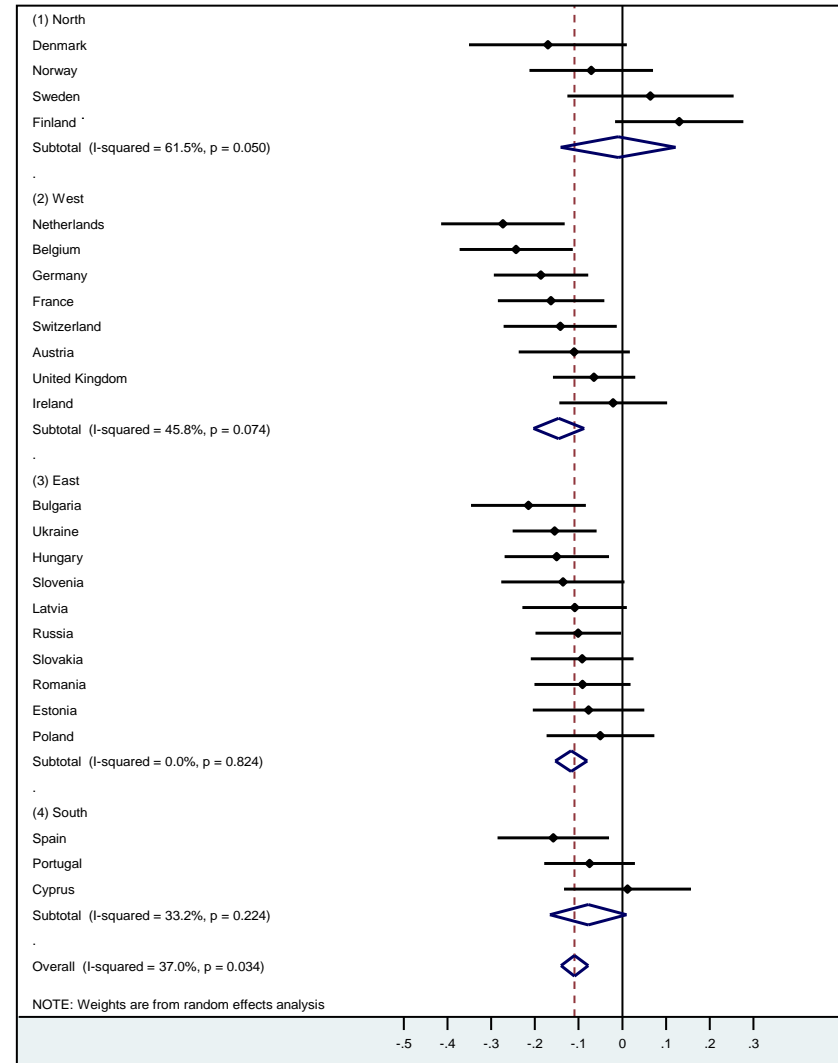
Figure A5a. NET effect of parental SES on the timing of first union for MEN in 25 European countries. Meta-analysis of estimates from discrete-time logistic models.
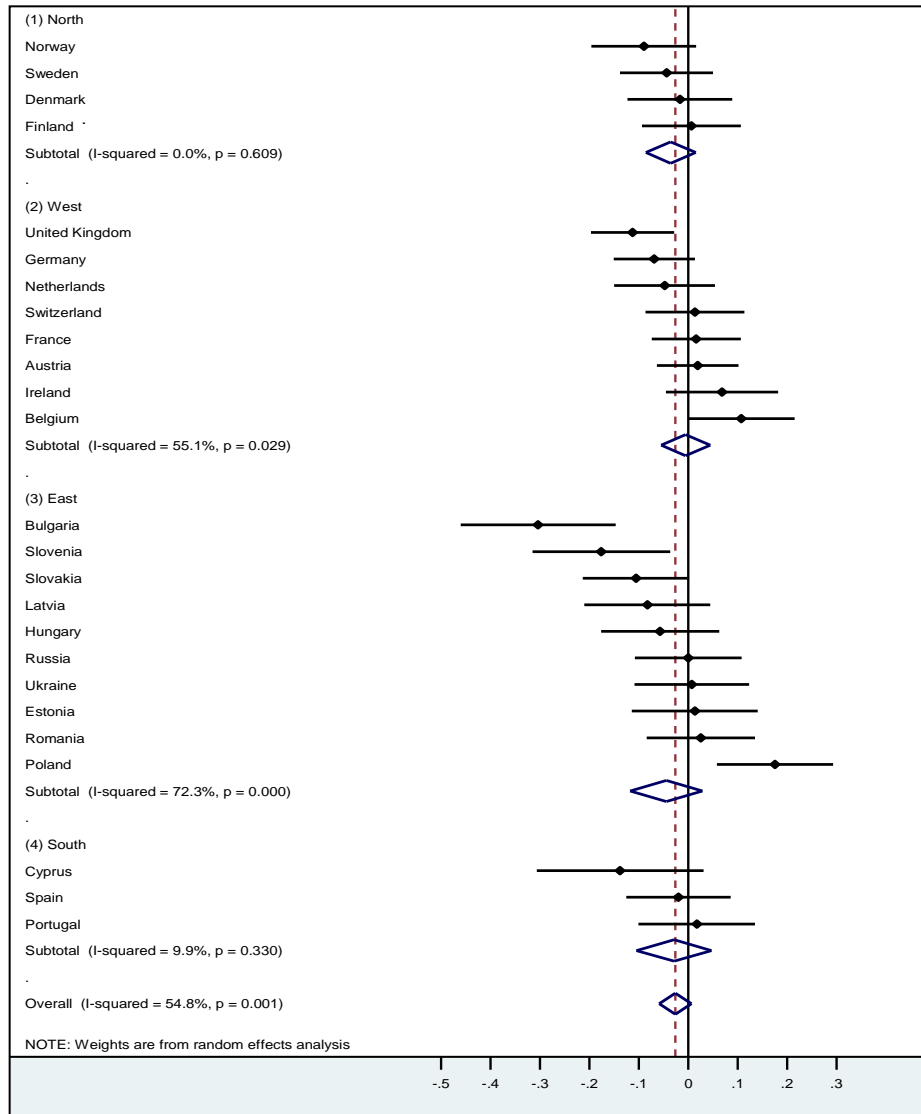

Figure A5b. NET effect of parental SES on the timing of COHABITATION as first union for MEN in 25 European countries. Meta-analysis of estimates from discrete-time logistic models.
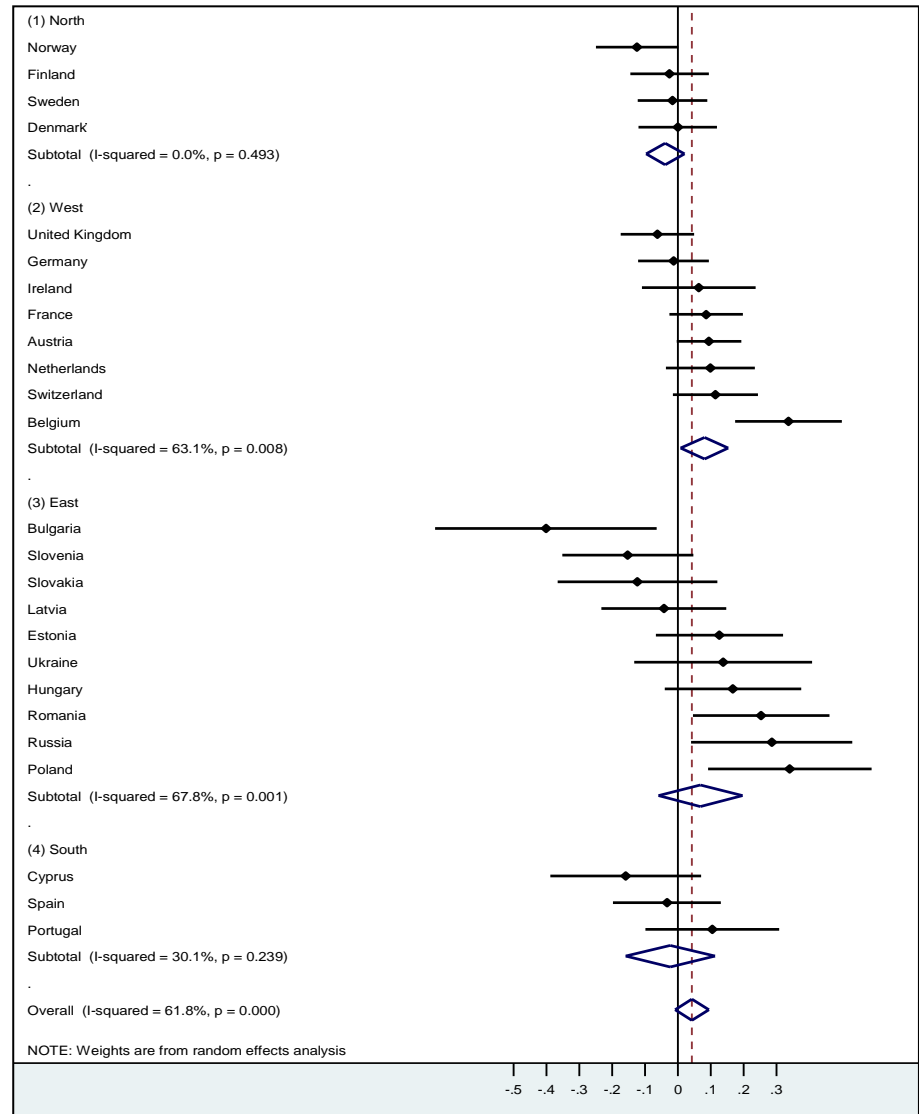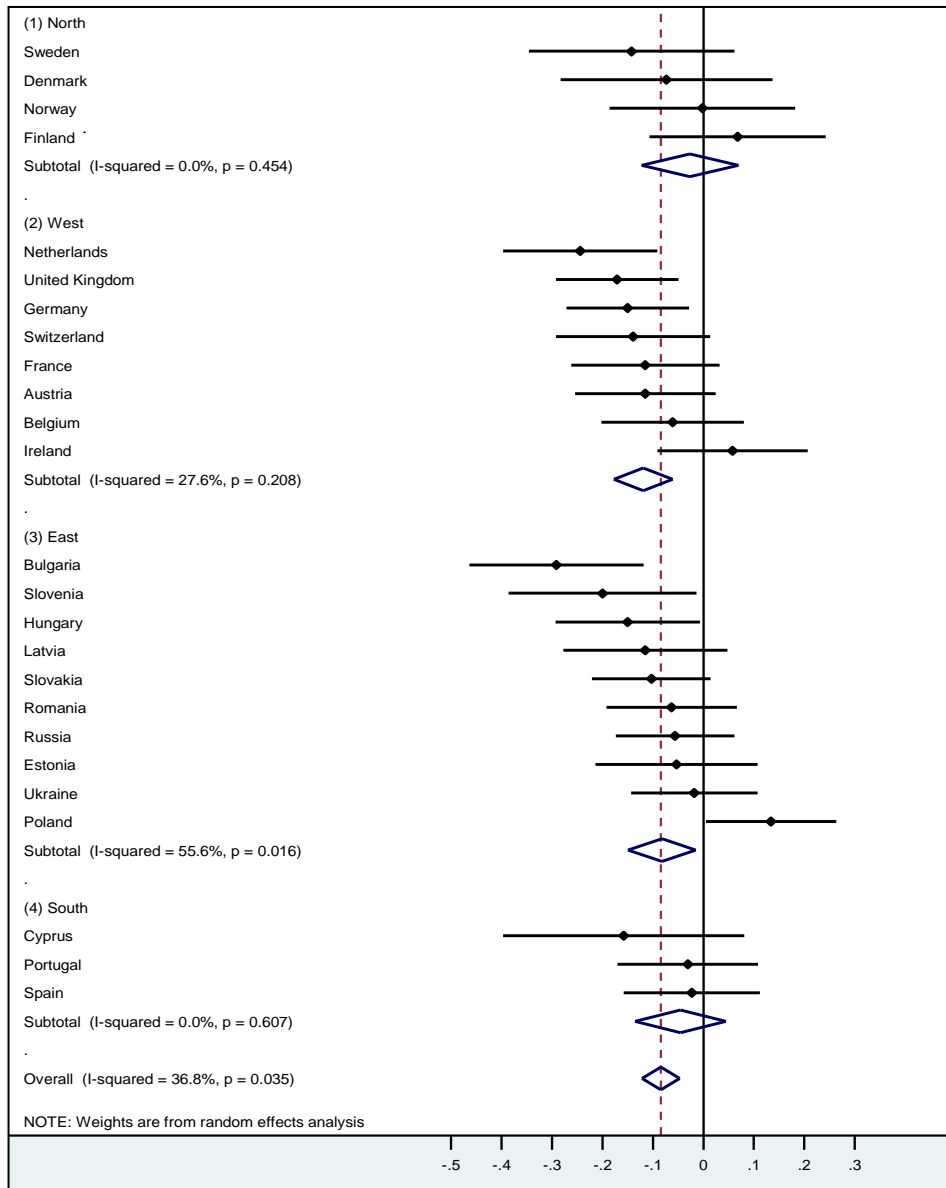
Figure A5c. NET effect of parental SES on the timing of MARRIAGE as first union for MEN in 25 European countries. Meta-analysis of estimates from discrete-time logistic models.

5. Additional meta-regression results

To accompany the meta-regression results presented in Figures 2a and 2b in the main body of the paper, all regression coefficients for the interaction between parental SES and SDT country-level indicators are presented in Table A2.

Table A2. Regression coefficients of the interaction between total and net effect of parental SES and SDT progression indicators with meta regression

Women	Total effect parental SES			Net effect parental SES		
	First union b (SE)	First cohabitation b (SE)	First marriage b (SE)	First union b (SE)	First cohabitation b (SE)	First marriage b (SE)
Age-norm	-.150 (.089)	.026 (.119)	-.086 (.135)	.006 (.066)	.104 (.117)	.019 (.107)
Percentage cohabiters	.178 (.080)*	-.047 (.112)	.099 (.127)	.041 (.060)	-.201 (.105)#	.063 (.100)
Religiosity	.006 (.016)	.039 (.021)#	.010 (.023)	.021 (.011)#	.050 (.020)*	.021 (.017)

Men	Total effect parental SES			Net effect parental SES		
	First union b (SE)	First cohabitation b (SE)	First marriage b (SE)	First union b (SE)	First cohabitation b (SE)	First marriage b (SE)
Age-norm	-.145 (.117)	.051 (.162)	-.192 (.150)	-.060 (.108)	.015 (.181)	-.042 (.125)
Percentage cohabiters	.071 (.112)	-.194 (.147)	.050 (.144)	-.017 (.100)	-.206 (.165)	-.107 (.113)
Religiosity	.019 (.101)	.060 (.026)*	.007 (.026)	.029 (.018)	.038 (.031)	.037 (.019)#

*: $p < .05$ #: $p < .10$ (two-tailed test)

6. Meta-regression results with alternative SDT indicators

Finally, in addition to the three country level indicators examined in the paper, we also tested, as a robustness check, whether there is also an association between the two SDT indexes (behavioural index, SDT1 and value index, SDT2), developed by Sobotka (2008) and the effect of parental SES on the timing of first union for women. Unfortunately, these SDT indexes were not available for all ESS countries. We only have this information for 21 countries. The conclusion from these additional analyses is that there is an association between the behavioural SDT index (SDT1) and the effect of parental SES, so the more advanced a country is in the SDT, the weaker the impact of parental SES on the timing of first union (see Figure A6a; b = .015, p = .043 (one-tailed)). This result is in line with the results of the behavioural country level indicator used in our study (the percentage of cohabiters in a country). For the value SDT index (SDT2, see Figure A6b), we found no association with parental SES (b = .009, p = ns), which is also in line with the two other country level indicators used in our study (age norm of leaving home and religiosity).

Figure A6a. Association between the total effect of parental SES on the timing of first union for WOMEN and SDT index 1 (Sobotka, 2008).
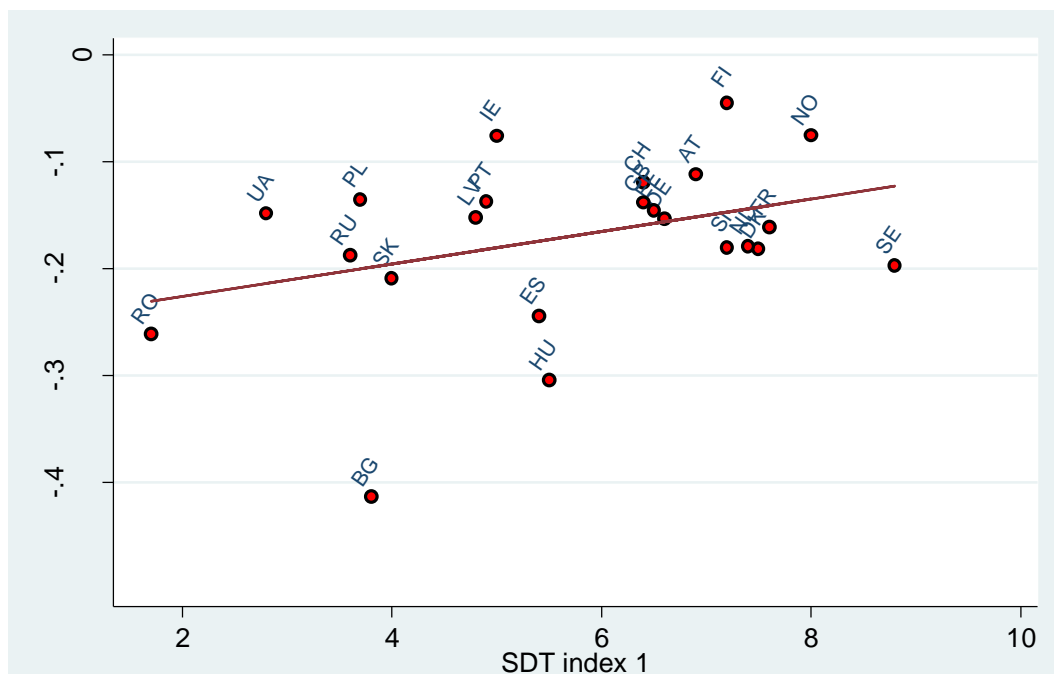
Figure A6b. Association between the total effect of parental SES on the timing of first union for WOMEN and SDT index 2 (Sobotka, 2008).