

Online Supporting Materials for the article “Parental Education, Divorce and Children’s Educational Attainment: Evidence from a Comparative Analysis”

Descriptive statistics for macro-level indicators

Table S1. Crude divorce rates and university enrollment rates, by country and cohort, Europe

Country	Crude Divorce Rate				University Enrollment Rate			
	1960	1970	1980	1990	1960	1970	1980	1990
Armenia								
Austria	1.1	1.4	1.8	2.1	55	81	144	265
Belarus								
Belgium	0.5	0.7	1.5	2	56	77	199	276
Bosnia Herzegovina								
Bulgaria	0.9	1.2	1.5	1.3	54	117	119	218
Croatia	1.2	1.2	1.2	1.1				
Czech Republic	1.4	2.2	2.6	3.1				
Denmark	1.5	1.9	2.7	2.7	61	149	206	268
Estonia	2.1	3.2	4.1	3.7				
Finland	0.8	1.3	2	2.6	49	130	259	319
France	0.7	0.8	1.5	1.9	59	127	156	286
Georgia	1.3	1.3	1.3	1.4				
Germany	1	1.3	1.8	1.9				
Great Britain		1	2.6	2.7	41	97	147	215
Hungary	1.7	2.2	2.6	2.4	36	78	96	98
Iceland	0.7	1.2	1.9	1.9	57	98	175	196
Italy	0.3	0.3	0.2	0.5	38	128	183	246
Latvia	2.4	4.6	5	4				
Lithuania	0.9	2.2	3.2	3.4				
Luxembourg	0.5	0.6	1.6	2	0	0	54	104
Moldova								
Netherlands	0.5	0.8	1.8	1.9	50	178	197	311
Norway	0.7	0.9	1.6	2.4	27	128	100	315
Poland	0.5	1.1	1.1	1.1	53	101	129	140
Romania	2	0.4	1.5	1.4	39	75	86	138
Russian Federation	1.5	3	4.2	3.8				
Serbia								
Slovenia	1	1.1	1.2	0.9				
Spain				0.6	27	64	187	297
Sweden	1.2	1.6	2.4	2.3	50	154	254	222
Switzerland	0.9	1	1.7	2	39	66	136	192
Ukraine								

Source: Eurostat and Cross-National Time-Series (CNTS) Data Archive. For some countries where the indicators were not available (in bold), values come from Bernardi and Radl (2014), who relied on expert consultations.

Table S2. Crude divorce rates and university enrollment rates, by regions and cohort, US

US Census Bureau Divisions	Crude Divorce Rate				University Enrollment Rate			
	1960	1970	1960	1970	1960	1970	1960	1970
New England	1.2	2.2	4	3.4	227	473	620	620
Middle Atlantic	0.8	1.6	3.4	3.2	184	385	495	522
East North Central	2.1	3.3	5.1	4.3	195	401	521	580
West North Central	1.9	3	4.6	4.3	213	420	511	601
South Atlantic	2.1	3.5	5.6	5.2	159	349	466	487
East South Central	3.3	4	6	6.1	160	321	419	491
West South Central	3.9	4.9	6.5	6	192	375	462	506
Mountain	4.5	5.9	7.6	6.3	246	546	578	644
Pacific	3.1	5.5	5.9	5.6	269	606	735	584

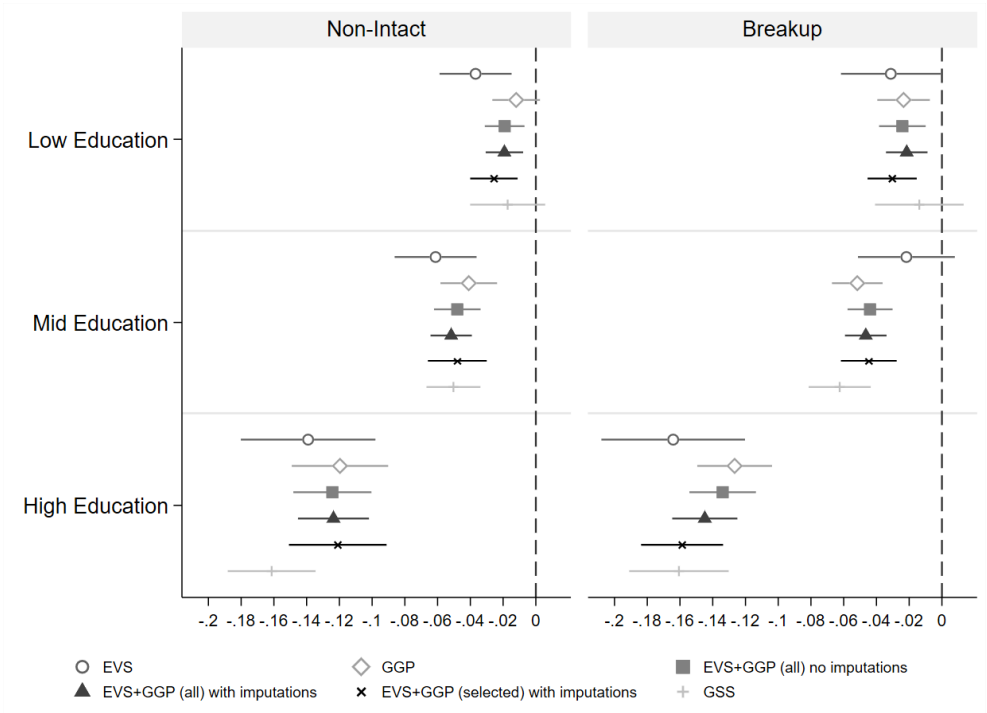
Source: Census Bureau Statistical Abstracts.

Robustness checks

Figure S1 shows a comparison between several models ensuring the robustness of the choices made in the operationalization of variables, the harmonization of datasets, and the selection of the analytical samples across models. In fact, our main micro-level results are neither sensitive to the pooling of the two European datasets, nor to the handling of missing values on our key independent variables, nor to the selection of countries used in the multilevel models. The different estimates in Figure S1 represent:

- i. divorce penalties in all EVS countries (white circles), without missing data handling.
- ii. divorce penalties in all GGP countries (white diamonds), without missing data handling.
- iii. divorce penalties in EVS and GGP pooled together (grey squares).
- iv. divorce penalties in EVS and GGP pooled together (black triangles), with missing data handling: information on the “non-intact” variable is used for the “breakup” variable, and vice versa.
- v. divorce penalties in EVS and GGP pooled together (black Xs), with missing data handling (see iv), only including countries with valid information on the two macro-level indicators (divorce rate and enrollment rate) in at least one country-cohort combination (e.g. Spain 1990). The remaining countries are Austria, Belgium, Bulgaria, Denmark, Finland, France, Great Britain, Hungary, Iceland, Italy, Luxembourg, Netherlands, Norway, Poland, Romania, Spain, Sweden, Switzerland.
- vi. divorce penalties in the American GGS (grey crosses)

Figure S1. Divorce penalties in the probability of tertiary education attainment, by parental education.



Note: 95% CI. Results from LPMs employing different datasets (EVS+GGP, GSS), selections of countries, specifications of parental divorce (non-intact, breakup), with and without missing data handling. Models for Europe (EVS+GGP) control for gender, dataset, birth cohort, and country; model for the US (GSS) controls for gender, race, survey year, birth cohort, and region.

Full models

Table S3. *LPMs predicting the probability of tertiary education attainment, for Europe (N=128,294) and US (N=26,202), and two definitions of divorce*

	Europe						US					
	Non-intact			Breakup			Non-intact			Breakup		
	Coef.		SE	Coef.		SE	Coef.		SE	Coef.		SE
Parental Divorce	-0.02	**	0.01	-0.02	***	0.01	-0.02		0.01	-0.01		0.01
Educational level parents: ref. Low Education												
Mid Education	0.16	***	0.00	0.16	***	0.00	0.14	***	0.01	0.14	***	0.01
High Education	0.48	***	0.00	0.49	***	0.00	0.48	***	0.01	0.47	***	0.01
Mid Education # Parental Divorce	-0.03	***	0.01	-0.03	**	0.01	-0.03	*	0.01	-0.05	**	0.02
High Education # Parental Divorce	-0.10	***	0.01	-0.12	***	0.01	-0.14	***	0.02	-0.15	***	0.02
Cohort: ref. 1945-1954												
1955-1964	0.00		0.00	0.00		0.00	-0.06	***	0.01	-0.06	***	0.01
1965-1974	0.00		0.00	0.00		0.00	-0.07	***	0.01	-0.06	***	0.01
1975-1984	0.01	***	0.00	0.02	***	0.00	-0.08	***	0.01	-0.08	***	0.01
Country: ref. Austria												
Armenia	0.07	***	0.02	0.07	***	0.02						
Belgium	0.22	***	0.01	0.22	***	0.01						
Bosnia Herzegovina	-0.01		0.01	-0.01		0.01						
Bulgaria	0.08	***	0.01	0.07	***	0.01						
Belarus	0.16	***	0.02	0.16	***	0.02						
Croatia	0.05	**	0.02	0.05	**	0.02						
Czech Republic	-0.05	***	0.01	-0.05	***	0.01						
Denmark	0.19	***	0.02	0.19	***	0.02						
Estonia	0.14	***	0.01	0.14	***	0.01						
Finland	0.42	***	0.02	0.42	***	0.02						
France	0.18	***	0.01	0.18	***	0.01						
Georgia	0.11	***	0.01	0.10	***	0.01						
Germany	0.02	**	0.01	0.02	**	0.01						
Hungary	0.01		0.01	0.01		0.01						
Iceland	0.20	***	0.02	0.20	***	0.02						
Italy	0.05	***	0.01	0.05	***	0.01						
Latvia	0.13	***	0.02	0.13	***	0.02						
Lithuania	0.14	***	0.01	0.13	***	0.01						

Table S3. (continued) LPMs predicting the probability of tertiary education attainment, for Europe (N=128,294) and US (N=26,202), and two definitions of divorce

	Europe						US					
	Non-intact			Breakup			Non-intact		Breakup			
	Coef.		SE	Coef.		SE	Coef.	SE	Coef.	SE		
Luxembourg	0.12	***	0.02	0.11	***	0.02						
Moldova	0.07	***	0.02	0.07	***	0.02						
Netherlands	0.22	***	0.01	0.22	***	0.01						
Norway	0.32	***	0.02	0.31	***	0.02						
Poland	0.06	***	0.01	0.06	***	0.01						
Romania	0.01		0.01	0.01		0.01						
Russian Federation	0.23	***	0.01	0.23	***	0.01						
Serbia	0.07	***	0.02	0.06	***	0.02						
Slovenia	0.12	***	0.02	0.11	***	0.02						
Spain	0.12	***	0.02	0.12	***	0.02						
Sweden	0.18	***	0.01	0.18	***	0.01						
Switzerland	0.03		0.02	0.03		0.02						
Ukraine	0.21	***	0.02	0.20	***	0.02						
Great Britain	0.20	***	0.02	0.20	***	0.02						
Region: ref. New England												
Middle Atlantic							0.03	*	0.01	0.03	*	0.01
East North Central							-0.03	*	0.01	-0.03	*	0.01
West North Central							-0.01		0.02	-0.01		0.02
South Atlantic							-0.05	***	0.01	-0.05	***	0.01
East South Central							-0.05	**	0.02	-0.05	**	0.02
West South Central							-0.04	**	0.01	-0.04	**	0.01
Mountain							-0.05	**	0.02	-0.04	**	0.02
Pacific							-0.06	***	0.01	-0.06	***	0.01
Sex: female vs male	0.04	***	0.00	0.04	***	0.00	0.00		0.01	0.00		0.01
Dataset: EVS vs GGP	-0.02	***	0.00	-0.02	***	0.00						
Race: ref. White												
Black							-0.07	***	0.01	-0.07	***	0.01
Other							-0.02		0.01	-0.02		0.01
Survey year							0.00	***	0.00	0.00	***	0.00
Constant	0.04	***	0.01	0.04	***	0.01	0.13	***	0.02	0.12	***	0.02

Note: For Europe, EVS (2008-2010) and GGP (2002-2011). For US, GSS (1972-2018). Full models referring to Figure 1. Ref = reference

*p< .05, **p< .01, ***p< .001

Table S4. *Multilevel LPMs predicting the probability of tertiary education attainment, for European countries, by contextual indicator (crude divorce rate N=122,119, university enrollment rate N=82,428), and two definitions of divorce*

	Non-intact				Breakup							
	Crude Divorce Rate		Enrollment Rate		Crude Divorce Rate		Enrollment Rate					
	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE				
Parental Divorce	-0.02	0.01	-0.01	0.01	-0.03	0.02	-0.01	0.02				
Educational level parents: ref. Low Education												
Mid Education	0.20	***	0.02	0.18	***	0.02	0.20	***	0.02	0.18	***	0.02
High Education	0.56	***	0.03	0.57	***	0.05	0.56	***	0.03	0.57	***	0.05
Contextual Indicator	0.03	*	0.01	0.00	***	0.00	0.02	*	0.01	0.00	***	0.00
Mid Education # Parental Divorce	0.01		0.02	-0.00		0.02	0.02		0.02	-0.03		0.02
High Education # Parental Divorce	-0.08	*	0.04	-0.00		0.05	-0.08		0.04	0.05		0.04
Parental Divorce # Contextual Indicator	-0.01		0.01	0.00		0.00	-0.00		0.01	0.00		0.00
Mid Education # Contextual Indicator	-0.02	***	0.01	0.00		0.00	-0.02	***	0.01	0.00		0.00
High Education # Contextual Indicator	-0.05	***	0.01	-0.00	*	0.00	-0.05	***	0.01	-0.00	*	0.00
Mid Education # Parental Divorce # Contextual Indicator	-0.01		0.01	0.00		0.00	-0.01		0.01	0.00		0.00
High Education # Parental Divorce # Contextual Indicator	0.00		0.01	0.00		0.00	-0.00		0.02	-0.00	***	0.00
Sex: female vs male	0.04	***	0.01	0.04	***	0.01	0.04	***	0.01	0.04	***	0.01
Dataset: EVS vs GGP	-0.02	*	0.01	-0.02	**	0.01	-0.02	*	0.01	-0.02	*	0.01
Constant	0.13	***	0.02	0.10	***	0.03	0.13	***	0.02	0.10	***	0.03
Random effect variance												
Random slope (Parental Divorce)	0.00	***	0.00	0.00	***	0.00	0.00	***	0.00	0.00	***	0.00
Random Intercept (country-cohort)	0.01	***	0.00	0.01	***	0.00	0.01	***	0.00	0.01	***	0.00
Residuals	0.16	***	0.01	0.15	***	0.01	0.16	***	0.01	0.15	***	0.01

Note: EVS (2008-2010) and GGP (2002-2011) pooled together. Full models referring to Figure 5. Ref = reference

*p< .05, **p< .01, ***p< .001

Table S5. Multilevel LPMs predicting the probability of tertiary education attainment, for US regions, by contextual indicator (crude divorce rate and university enrollment rate), and two definitions of divorce (N=26,202)

	Non-intact						Breakup					
	Crude Divorce Rate			Enrollment Rate			Crude Divorce Rate			Enrollment Rate		
	Coef.	SE		Coef.	SE		Coef.	SE		Coef.	SE	
Parental Divorce	-0.04	0.03		0.01	0.02		-0.03	0.02		0.02	0.02	0.03
Educational level parents: ref. Low Education												
Mid Education	0.15	***	0.02	0.18	***	0.02	0.15	***	0.02	0.18	***	0.02
High Education	0.50	***	0.04	0.54	***	0.04	0.50	***	0.04	0.54	***	0.04
Contextual Indicator	-0.02	**	0.01	-0.00		0.00	-0.02	***	0.01	-0.00		0.00
Mid Education # Parental Divorce	-0.01		0.04	-0.06		0.04	-0.05		0.03	-0.10	*	0.04
High Education # Parental Divorce	-0.12	**	0.04	-0.11	*	0.05	-0.17	*	0.07	-0.18	*	0.07
Parental Divorce # Contextual Indicator	0.00		0.01	-0.00		0.00	0.00		0.00	-0.00		0.00
Mid Education # Contextual Indicator	-0.00		0.00	-0.00	**	0.00	-0.00		0.00	-0.00	**	0.00
High Education # Contextual Indicator	-0.01		0.01	-0.00	*	0.00	-0.01		0.01	-0.00	*	0.00
Mid Education # Parental Divorce # Contextual Indicator	-0.01		0.01	0.00		0.00	-0.00		0.01	0.00		0.00
High Education # Parental Divorce # Contextual Indicator	-0.00		0.01	-0.00		0.00	0.01		0.01	0.00		0.00
Sex: female vs male	0.00		0.01	0.00		0.01	0.00		0.01	0.00		0.01
Race: ref. White												
Black	-0.07	***	0.01	-0.07	***	0.01	-0.07	***	0.01	-0.07	***	0.01
Other	-0.02		0.01	-0.02		0.01	-0.02		0.01	-0.03		0.01
Survey year	0.00	***	0.00	0.00	***	0.00	0.00	***	0.00	0.00	***	0.00
Constant	0.13	***	0.03	0.09	**	0.03	0.13	***	0.03	0.09	***	0.03
Random effect variance												
Random slope (Parental Divorce)	0.00	***	0.00	0.00	***	0.00	0.00		0.00	0.00		0.00
Random Intercept (region-cohort)	0.00	***	0.00	0.00	***	0.00	0.00	***	0.00	0.00	***	0.00
Residuals	0.18	***	0.00	0.18	***	0.00	0.18	***	0.00	0.18	***	0.00

Note: GSS (1972-2018). Full models referring to Figure 6. Ref = reference

*p< .05, **p< .01, ***p< .001