

## Online Appendix

### Parental Educational Homogamy and Children's Tertiary Education in Europe

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#### Model M3 equation:

$$\text{logit}[P(Y_{ij} = 1)] = \beta_0 + \beta_1 x_{1ij} + \dots + \beta_8 x_{8ij} + \mu_{0j} \quad (1)$$

$$+ \beta_9 x_{1ij} x_{2ij} + \beta_{10} x_{1ij} x_{3ij} \quad (2)$$

$$+ \mu_1 x_{2ij} + \mu_2 x_{3ij} \quad (3)$$

where:

row (1): level-1 covariates:  $x_{1ij}$  = educational origin (ISLED standardised),  $x_{2ij}$  = parental educational pairing (hypogamy),  $x_{3ij}$  = parental educational pairing (hypergamy),  $x_{4ij}$  = gender (woman),  $x_{5ij}$  = cohort (1964-1978),  $x_{6ij}$  = cohort (1979-1993),  $x_{7ij}$  = parental social class (technical/craft occupations), and  $x_{8ij}$  = parental social class (professionals/administrators) with estimated intercept  $\beta_0$  and parameters  $\beta_1 \dots \beta_8$  and random intercepts  $\mu_{0j}$  varying over countries;

row (2): two-way interactions: parental educational pairing (hypogamy) by educational origin ( $x_{1ij} x_{2ij}$ ), and parental educational pairing (hypergamy) by educational origin ( $x_{1ij} x_{3ij}$ ) with estimated parameters  $\beta_9, \beta_{10}$ ;

row (3): random slopes for parental educational pairing (hypogamy)  $\mu_1 x_{2ij}$  and for parental educational pairing (hypergamy)  $\mu_2 x_{3ij}$  varying across countries.

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\* This Online Appendix contains additional information regarding the article:  
<https://www.comparativepopulationstudies.de/index.php/CPoS/article/view/600/414>.

**Tab. A1:** Likelihood-ratio chi-squared tests by differences between years 2016 and 2018 in educational categories (tertiary and non-tertiary) by countries (aged 25-69)

Country type	Country	L2	p
Western European	Austria	0.111	0.739
	Belgium	0.417	0.519
	France	2.126	0.145
	Germany	0.502	0.479
	Netherlands	8.084	0.004
	Switzerland	0.101	0.750
Eastern European	Czechia	2.148	0.143
	Estonia	1.498	0.221
	Hungary	0.261	0.609
	Lithuania	0.310	0.578
	Poland	0.648	0.421
	Slovenia	0.875	0.350
Mediterranean	Italy	3.007	0.083
	Portugal	0.092	0.762
	Spain	3.001	0.083
Scandinavian	Finland	1.522	0.217
	Norway	0.467	0.494
	Sweden	8.922	0.000
Anglo-Saxon	Ireland	0.187	0.666
	United Kingdom	1.739	0.187

Source: ESS data. L2 is the likelihood-ratio statistic, p is P-value.

**Tab. A2:** Number of respondents in ESS data by years and countries (aged 25-69)

Country type	Country	Code	Year		Total N
			2016 N	2018 N	
Western European	Austria	AT	1,536	1,819	3,355
	Belgium	BE	1,257	1,263	2,520
	France	FR	1,476	1,404	2,880
	Germany	DE	2,051	1,678	3,729
	Netherlands	NL	1,204	1,177	2,381
	Switzerland	CH	1,089	1,091	2,180
Eastern European	Czechia	CZ	1,839	1,800	3,639
	Estonia	EE	1,471	1,348	2,819
	Hungary	HU	1,157	1,197	2,354
	Lithuania	LT	1,533	1,270	2,803
	Poland	PL	1,271	1,083	2,354
	Slovenia	SI	956	945	1,901
Mediterranean	Italy	IT	1,850	1,845	3,695
	Portugal	PT	919	730	1,649
	Spain	ES	1,435	1,200	2,635
Scandinavian	Finland	FI	1,387	1,216	2,603
	Norway	NO	1,116	999	2,115
	Sweden	SE	1,090	1,040	2,130
Anglo-Saxon	Ireland	IE	2,049	1,599	3,648
	United Kingdom	UK	1,400	1,589	2,989
<i>Total</i>			28,086	26,293	54,379

Source: ESS data.

**Tab. A3:** Proportion of ESS respondents with and without tertiary education attainment by countries (aged 25-69)

Country type	Country	Tertiary education transition		Total N
		No	Yes	
Western European	Austria	84.7%	15.3%	3,181
	Belgium	53.4%	46.6%	2,184
	France	74.0%	26.0%	2,258
	Germany	67.7%	32.3%	3,204
	Netherlands	59.8%	40.2%	2,009
	Switzerland	73.4%	26.6%	2,014
Eastern European	Czechia	83.0%	17.1%	3,402
	Estonia	64.0%	36.0%	2,530
	Hungary	83.3%	16.7%	2,121
	Lithuania	67.3%	32.7%	2,358
	Poland	71.4%	28.6%	2,088
	Slovenia	74.5%	25.5%	1,787
Mediterranean	Italy	83.4%	16.6%	3,453
	Portugal	68.5%	31.5%	1,468
	Spain	71.6%	28.4%	2,425
Scandinavian	Finland	60.8%	39.2%	2,462
	Norway	49.8%	50.2%	1,981
	Sweden	62.5%	37.5%	1,888
Anglo-Saxon	Ireland	68.1%	31.9%	3,237
	United Kingdom	62.5%	37.5%	2,191
<i>Total</i>		70.2%	29.8%	48,241

Source: ESS data.

**Tab. A4:** Educational origin (ISLED) of ESS respondents by countries (aged 25-69)

Country type	Country	Tertiary education transition		Total N
		Mean	Std. Dev.	
Western European	Austria	42.2	14.1	3,181
	Belgium	46.9	22.9	2,184
	France	38.8	20.8	2,258
	Germany	49.9	17.4	3,204
	Netherlands	44.0	21.6	2,009
	Switzerland	44.7	18.2	2,014
Eastern European	Czechia	47.0	15.7	3,402
	Estonia	51.8	20.6	2,530
	Hungary	40.6	14.1	2,121
	Lithuania	41.9	19.0	2,358
	Poland	38.1	17.0	2,088
	Slovenia	41.6	15.7	1,787
Mediterranean	Italy	31.5	15.8	3,453
	Portugal	30.6	18.7	1,468
	Spain	31.1	20.8	2,425
Scandinavian	Finland	45.5	22.2	2,462
	Norway	52.2	21.6	1,981
	Sweden	45.7	22.8	1,888
Anglo-Saxon	Ireland	39.2	20.7	3,237
	United Kingdom	42.9	23.9	2,191
<i>Total</i>		42.4	20.1	48,241

Source: ESS data.

**Tab. A5:** Proportion of ESS respondents by gender and countries (aged 25-69)

Country type	Country	Gender		Total N
		Man	Woman	
Western European	Austria	46.0%	54.0%	3,181
	Belgium	50.4%	49.6%	2,184
	France	47.0%	53.0%	2,258
	Germany	52.3%	47.7%	3,204
	Netherlands	47.0%	53.0%	2,009
	Switzerland	50.6%	49.4%	2,014
Eastern European	Czechia	46.7%	53.4%	3,402
	Estonia	46.6%	53.4%	2,530
	Hungary	43.8%	56.3%	2,121
	Lithuania	36.8%	63.2%	2,358
	Poland	48.2%	51.8%	2,088
	Slovenia	46.7%	53.3%	1,787
Mediterranean	Italy	49.0%	51.0%	3,453
	Portugal	42.1%	57.9%	1,468
	Spain	50.9%	49.1%	2,425
Scandinavian	Finland	50.5%	49.5%	2,462
	Norway	55.3%	44.7%	1,981
	Sweden	49.7%	50.3%	1,888
Anglo-Saxon	Ireland	47.0%	53.0%	3,237
	United Kingdom	44.9%	55.1%	2,191
<i>Total</i>		47.7%	52.3%	48,241

Source: ESS data.

**Tab. A6:** Proportion of ESS respondents by birth cohorts (aged 25-69)

Country type	Country	Birth cohort			Total N
		1949-1963	1964-1978	1979-1993	
Western European	Austria	35.1%	35.6%	29.4%	3,181
	Belgium	32.2%	35.4%	32.4%	2,184
	France	38.5%	32.4%	29.1%	2,258
	Germany	36.6%	35.2%	28.3%	3,204
	Netherlands	36.8%	35.2%	28.0%	2,009
	Switzerland	32.4%	36.2%	31.5%	2,014
Eastern European	Czechia	34.6%	34.6%	30.8%	3,402
	Estonia	34.8%	33.8%	31.4%	2,530
	Hungary	36.8%	34.7%	28.5%	2,121
	Lithuania	43.9%	32.6%	23.6%	2,358
	Poland	34.9%	30.6%	34.6%	2,088
	Slovenia	35.0%	36.1%	28.9%	1,787
Mediterranean	Italy	34.0%	39.0%	27.0%	3,453
	Portugal	36.9%	35.8%	27.4%	1,468
	Spain	32.8%	40.0%	27.2%	2,425
Scandinavian	Finland	38.1%	32.4%	29.5%	2,462
	Norway	31.4%	37.1%	31.6%	1,981
	Sweden	38.5%	33.9%	27.7%	1,888
Anglo-Saxon	Ireland	35.2%	35.1%	29.8%	3,237
	United Kingdom	37.2%	31.4%	31.5%	2,191
<i>Total</i>		35.7%	34.9%	29.4%	48,241

Source: ESS data.

**Tab. A7:** Proportion of ESS respondents by occupational origin and countries (aged 25-69)

Country type	Country	Occupational origin			Total N
		routine and semi-routine manual and service occupations	technical, craft occupations and farmers	professionals, clerical and intermediate occupations, managers and administrators	
Western European	Austria	26.0%	66.2%	7.8%	3,181
	Belgium	34.6%	52.9%	12.5%	2,184
	France	33.7%	51.3%	15.0%	2,258
	Germany	22.0%	65.9%	12.1%	3,204
	Netherlands	26.1%	57.6%	16.3%	2,009
	Switzerland	22.2%	61.4%	16.4%	2,014
Eastern European	Czechia	35.0%	56.6%	8.4%	3,402
	Estonia	36.8%	49.1%	14.2%	2,530
	Hungary	67.5%	27.8%	4.7%	2,121
	Lithuania	50.3%	43.2%	6.5%	2,358
	Poland	30.6%	65.0%	4.5%	2,088
	Slovenia	43.0%	49.3%	7.7%	1,787
Mediterranean	Italy	41.8%	53.0%	5.3%	3,453
	Portugal	37.6%	55.2%	7.2%	1,468
	Spain	36.9%	55.0%	8.1%	2,425
Scandinavian	Finland	36.9%	54.8%	8.3%	2,462
	Norway	29.8%	53.0%	17.2%	1,981
	Sweden	30.5%	52.9%	16.6%	1,888
Anglo-Saxon	Ireland	35.9%	53.5%	10.6%	3,237
	United Kingdom	38.0%	44.4%	17.6%	2,191
<i>Total</i>		35.5%	53.9%	10.6%	48,241

Source: ESS data.



**Tab. A8:** Contrasts between parental educational pairing categories in probability of tertiary education attainment by educational origin (ISLED std.) and gender

Parental educational pairing categories		ISLED std.	Gender	Contrast	Str. err.	z	P>z
homogamy	vs hypogamy	SD -1.0	man	0.052	0.012	4.430	0.000
homogamy	vs hypergamy	SD -1.0	man	0.001	0.009	0.120	0.901
hypogamy	vs hypergamy	SD -1.0	man	-0.051	0.013	-3.930	0.000
homogamy	vs hypogamy	SD -0.5	man	0.029	0.012	2.440	0.015
homogamy	vs hypergamy	SD -0.5	man	-0.015	0.011	-1.370	0.172
hypogamy	vs hypergamy	SD -0.5	man	-0.043	0.013	-3.470	0.001
homogamy	vs hypogamy	SD 0.0	man	-0.005	0.013	-0.370	0.708
homogamy	vs hypergamy	SD 0.0	man	-0.036	0.012	-3.010	0.003
hypogamy	vs hypergamy	SD 0.0	man	-0.032	0.012	-2.590	0.009
homogamy	vs hypogamy	SD 0.5	man	-0.047	0.014	-3.350	0.001
homogamy	vs hypergamy	SD 0.5	man	-0.063	0.014	-4.630	0.000
hypogamy	vs hypergamy	SD 0.5	man	-0.016	0.013	-1.250	0.213
homogamy	vs hypogamy	SD 1.0	man	-0.093	0.016	-5.930	0.000
homogamy	vs hypergamy	SD 1.0	man	-0.090	0.015	-6.080	0.000
hypogamy	vs hypergamy	SD 1.0	man	0.004	0.014	0.270	0.785
homogamy	vs hypogamy	SD 1.5	man	-0.139	0.018	-7.860	0.000
homogamy	vs hypergamy	SD 1.5	man	-0.113	0.016	-7.200	0.000
hypogamy	vs hypergamy	SD 1.5	man	0.025	0.016	1.550	0.122
homogamy	vs hypogamy	SD 2.0	man	-0.176	0.020	-9.030	0.000
homogamy	vs hypergamy	SD 2.0	man	-0.129	0.016	-7.880	0.000
hypogamy	vs hypergamy	SD 2.0	man	0.047	0.019	2.430	0.015
homogamy	vs hypogamy	SD -1.0	woman	0.056	0.013	4.480	0.000
homogamy	vs hypergamy	SD -1.0	woman	0.001	0.010	0.150	0.884
hypogamy	vs hypergamy	SD -1.0	woman	-0.055	0.014	-3.950	0.000
homogamy	vs hypogamy	SD -0.5	woman	0.031	0.013	2.470	0.013
homogamy	vs hypergamy	SD -0.5	woman	-0.015	0.011	-1.350	0.178
hypogamy	vs hypergamy	SD -0.5	woman	-0.046	0.013	-3.490	0.000
homogamy	vs hypogamy	SD 0.0	woman	-0.004	0.013	-0.340	0.733
homogamy	vs hypergamy	SD 0.0	woman	-0.038	0.013	-3.000	0.003
hypogamy	vs hypergamy	SD 0.0	woman	-0.033	0.013	-2.610	0.009
homogamy	vs hypogamy	SD 0.5	woman	-0.048	0.014	-3.340	0.001
homogamy	vs hypergamy	SD 0.5	woman	-0.064	0.014	-4.660	0.000
hypogamy	vs hypergamy	SD 0.5	woman	-0.016	0.013	-1.250	0.211
homogamy	vs hypogamy	SD 1.0	woman	-0.094	0.016	-5.950	0.000
homogamy	vs hypergamy	SD 1.0	woman	-0.090	0.015	-6.120	0.000
hypogamy	vs hypergamy	SD 1.0	woman	0.004	0.014	0.270	0.786
homogamy	vs hypogamy	SD 1.5	woman	-0.137	0.017	-7.870	0.000
homogamy	vs hypergamy	SD 1.5	woman	-0.111	0.015	-7.220	0.000
hypogamy	vs hypergamy	SD 1.5	woman	0.026	0.017	1.550	0.122
homogamy	vs hypogamy	SD 2.0	woman	-0.172	0.019	-8.960	0.000
homogamy	vs hypergamy	SD 2.0	woman	-0.125	0.016	-7.860	0.000
hypogamy	vs hypergamy	SD 2.0	woman	0.046	0.019	2.430	0.015

Note: SD is standard deviation. SD 0.0 is standardised average of ISLED.

Source: ESS data.

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