Summary of Synthetic Variables Estimation

EES 2019 Voter Study (Czech, Finnish, Greek, Hungarian, Lithuanian, Slovakian, Polish, Swedish Samples)

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1 Czech Republic

Synthetic variables have been estimated for the full set of Czech parties available in the original 2019 EES Czech Republic voter study selected according to the criteria stated in the EES 2019 SDM codebook (for the criteria see Sect. XXX; for the relevant parties see Table 1.1).

Table 1.1: Czech Republic relevant parties

Dep. Var.	Party	Party name (eng)
stack_601	601	Christian and Democratic Union / Czechoslovak People's Party
$stack_603$	603	Czech Social Democratic Party
$stack_604$	604	Civic Democratic Party
$stack_605$	605	Communist Party of Bohemia and Moravia
$stack_606$	606	ANO 2011
$stack_607$	607	Czech Pirate Party
$stack_608$	608	Freedom and Direct Democracy Tomio Okamura
$stack_602$	602	Tradition, Responsibility, Prosperity 09 (TOP 09)

Full OLS models converge and coefficients do not show any particular issue (see Table 1.8). In terms of model fit, the adjusted coefficient of determination (R^2) values vary between a minimum value of 0.022 for party 608 (Freedom and Direct Democracy Tomio Okamura) and a maximum of 0.197 for party 601 (Christian and Democratic Union / Czechoslovak People's Party). Moreover, the difference between Akaike Information Criterion (AIC) values for full OLS models and null models shows that the full models perform better in all cases (see Table 1.2).

Table 1.2: Akaike Information Criterion values for OLS full and null models

Dep. Var.	Party	Full Mod.	Null Mod.	Diff. (Full-Null)
$stack_601$	601	58.949	237.851	-178.903
$stack_603$	603	160.644	169.927	-9.283
$stack_604$	604	393.140	459.680	-66.540
$stack_605$	605	393.498	411.747	-18.249
$stack_606$	606	744.963	803.107	-58.144
$stack_607$	607	525.748	633.168	-107.419
$stack_608$	608	460.064	468.756	-8.692
$stack_602$	602	141.419	241.723	-100.304

On the contrary, five out of eight logistic regression models (see Table 6.9) show inflated standard errors for some of the coefficients of interest, in particular:

- Model 9: D6_une
- Model 10a: EDU_rec (both categories), D7_rec (second category), D6_une
- Model 11: D6_une
- Model 15: D6 une
- Model 16: D6 une

However, for models 9, 11, 15 and 16 the constant terms and other regressors are not affected by the inflated standard errors. Model 10a appears more problematic.

The inflated standard errors in Model 10a are due to separation issues. In short, no respondents who are unemployed or of high subjective social status did vote for party 603. Only one respondent with low education voted for party 603. (See tables 1.5, 1.6, 1.7)

As a consequence, a constrained version of model 10 (namely, Model 10b) without said variables was estimated and contrasted with the original (Model 10a), full model. Likelihood-ratio test results show that H_0 (namely, that the constrained model fits better than the full model) cannot be rejected (see Table 1.3). Consequently, synthetic variables for respondents' vote choice for party 603 have been predicted relying on the constrained model (Model 10b).

Table 1.3: Likelihood-ratio Test between Model 10a (Unconstrained) and Model 10b (Constrained)

Model	Resid. Df	Resid. Dev	Df	Deviance	Pr(>Chi)
Constrained	849	163.9202			
Unconstrained	844	154.0839	5	9.83628	0.0800093

In terms of model fit, adjusted McFadden's pseudo R^2 values for the logistic full models vary between a minimum value of -0.067 for party 603 (Czech Social Democratic Party) and a maximum of 0.142 for party 601 (Christian and Democratic Union / Czechoslovak People's Party). Moreover, the difference between Akaike Information Criterion (AIC) values for logistic full models and null models shows that in four cases out of eight null models perform better than full ones. According to AIC values the related null model appears to have a better fit than Model 11b (see Table 8.3).

Table 1.4: Akaike Information Criterion values for logistic full and null models

Dep. Var.	Party	Full Mod.	Null Mod.	Diff. (Full-Null)
stack_601	601	217.3010	255.3350	-38.034000
$stack_602$	602	268.9980	275.1270	-6.129000
$stack_603$	603	178.0840	168.9080	9.176000
$stack_603*$	603	177.9202	168.9081	9.012099
$stack_604$	604	473.8460	462.0590	11.787000
$stack_605$	605	331.1420	331.1770	-0.035000
$stack_606$	606	723.3500	774.4330	-51.083000
$stack_607$	607	529.1280	528.9600	0.168000
stack_608	608	395.5950	394.0820	1.513000

^{*} AIC value refers to Model 11b (constrained).

Table 1.5: Cross tabulation between vote choice for party 603 and respondents' education

stack_603/EDU_rec	1	2	3	NA	Total
0	71	542	343	7	963
1	1	14	4	0	19
NA	3	7	7	1	18
Total	75	563	354	8	1000

Table 1.6: Cross tabulation between vote choice for party 603 and respondents' subjective social class

$stack_603/D7_rec$	0	1	2	NA	Total
0	366	467	118	12	963
1	8	11	0	0	19
NA	8	9	0	1	18
Total	382	487	118	13	1000

Table 1.7: Cross tabulation between vote choice for party 603 and respondents' employment status

stack_603/D6_une	0	1	Total
0	945	18	963
1	19	0	19
NA	17	1	18
Total	981	19	1000

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Table 1.8: Propensity to vote for a relevant party according to respondents' socio-demographic characteristics (OLS regression models)

	601	603	604	605	606	607	608	602
	Model 1	Model 2	Model 3	Model 4	$\bf Model~5$	Model 6	Model 7	Model 8
D3_rec2	0.004	-0.022	0.017	-0.002	-0.025	0.026	-0.024	0.040*
	(0.017)	(0.018)	(0.021)	(0.021)	(0.026)	(0.023)	(0.022)	(0.018)
$D8_rec1$	0.027	0.008	0.0004	-0.010	0.012	0.003	0.009	-0.014
	(0.019)	(0.021)	(0.024)	(0.024)	(0.029)	(0.026)	(0.025)	(0.021)
$D5$ _rec1	-0.017	-0.030	-0.021	-0.053^{*}	0.036	-0.050^{*}	0.003	-0.041^*
	(0.018)	(0.019)	(0.022)	(0.022)	(0.026)	(0.023)	(0.022)	(0.019)
EDU_rec2	-0.010	-0.021	0.001	-0.015	-0.023	0.013	0.058	-0.009
	(0.035)	(0.038)	(0.043)	(0.043)	(0.053)	(0.046)	(0.045)	(0.038)
EDU_rec3	0.023	-0.031	0.020	-0.043	-0.076	0.037	-0.0002	0.021
	(0.036)	(0.038)	(0.044)	(0.044)	(0.054)	(0.047)	(0.046)	(0.038)
D1_rec1	0.040	0.122^{***}	0.047	0.077^{**}	0.078*	-0.024	0.083**	0.005
	(0.024)	(0.025)	(0.029)	(0.029)	(0.035)	(0.031)	(0.030)	(0.025)
$D7_rec1$	0.026	0.013	0.038	-0.017	0.031	-0.012	-0.056^{*}	0.038
	(0.019)	(0.020)	(0.023)	(0.023)	(0.028)	(0.025)	(0.024)	(0.020)
$D7_rec2$	-0.017	0.040	0.095**	-0.018	0.033	0.056	-0.052	0.042
	(0.029)	(0.030)	(0.035)	(0.035)	(0.043)	(0.038)	(0.036)	(0.030)
D6_une1	-0.011	0.009	-0.100	0.143	-0.077	0.043	0.096	-0.073
	(0.070)	(0.074)	(0.085)	(0.085)	(0.104)	(0.092)	(0.088)	(0.077)
D4_age	-0.003***	-0.0001	-0.005***	0.003***	0.006***	-0.008***	0.001	-0.005***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
$D10_rec$	0.067^{***}	0.002	0.018**	-0.014*	-0.014	-0.0004	-0.009	0.022^{***}
	(0.005)	(0.005)	(0.006)	(0.006)	(0.008)	(0.007)	(0.006)	(0.005)
Constant	0.290^{***}	0.300***	0.476^{***}	0.184***	0.134^{*}	0.724***	0.237^{***}	0.457^{***}
	(0.044)	(0.046)	(0.053)	(0.053)	(0.065)	(0.057)	(0.055)	(0.046)
N	863	864	864	864	865	863	864	841
R-squared	0.208	0.036	0.097	0.046	0.088	0.139	0.035	0.135
Adj. R-squared	0.197	0.023	0.086	0.033	0.077	0.128	0.022	0.124

^{***}p < .001; **p < .01; *p < .05

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Table 1.9: Vote choice for a relevant party according to respondents' socio-demographic characteristics (Logistic regression models)

	601	603	603	604	605	606	607	608	602
	Model 9	Model 10a	Model 10b	Model 11	Model 12	Model 13	Model 14	Model 15	Model 16
D3_rec2	0.098	0.122	0.163	-0.035	-0.362	-0.406*	-0.030	-0.084	0.012
	(0.419)	(0.502)	(0.495)	(0.265)	(0.339)	(0.199)	(0.244)	(0.295)	(0.376)
$D8_rec1$	0.232	0.544	0.444	-0.055	0.011	-0.001	0.108	0.512	-1.165**
	(0.485)	(0.652)	(0.645)	(0.299)	(0.383)	(0.227)	(0.283)	(0.383)	(0.379)
$D5_rec1$	-0.051	-0.282	-0.219	-0.229	-0.340	0.553**	0.035	0.848*	-0.341
	(0.438)	(0.514)	(0.505)	(0.269)	(0.332)	(0.213)	(0.253)	(0.354)	(0.382)
EDU_rec2	-1.196	17.188	, ,	0.017	-0.502	-0.026	0.302	$0.949^{'}$	-0.561
	(0.693)	(2205.393)		(0.539)	(0.656)	(0.484)	(0.532)	(1.041)	(0.685)
EDU_rec3	-0.844	16.536		0.054	-0.441	-0.314	0.702	1.141	0.252
	(0.694)	(2205.393)		(0.549)	(0.688)	(0.500)	(0.530)	(1.046)	(0.664)
D1_rec1	0.029	0.819	0.845	0.178	0.678	0.525^{*}	-0.171	0.247	-0.113
	(0.534)	(0.556)	(0.551)	(0.344)	(0.404)	(0.253)	(0.347)	(0.376)	(0.526)
$D7_rec1$	0.731	-0.133	, ,	0.218	-0.338	0.551^{*}	-0.520	-0.591	1.010
	(0.477)	(0.508)		(0.307)	(0.350)	(0.217)	(0.271)	(0.329)	(0.520)
$D7_rec2$	-1.356	-16.786		0.806*	-0.693	0.616	-0.039	0.225	1.199
	(1.133)	(1630.831)		(0.393)	(0.660)	(0.334)	(0.360)	(0.423)	(0.626)
D6_une1	-13.334	-16.376		-14.127	0.958	-0.304	0.288	-13.878	-14.376
	(1086.259)	(4695.013)		(681.190)	(1.105)	(1.097)	(0.803)	(673.219)	(1087.655)
D4_age	0.004	-0.014	-0.001	-0.004	0.038***	0.048***	-0.025**	0.011	-0.025
	(0.013)	(0.016)	(0.015)	(0.008)	(0.011)	(0.007)	(0.008)	(0.010)	(0.013)
$D10_rec$	0.547***	0.026	0.006	0.089	-0.156	-0.012	-0.162	-0.065	0.035
	(0.077)	(0.146)	(0.143)	(0.068)	(0.128)	(0.058)	(0.095)	(0.097)	(0.100)
Constant	-4.133****	-20.396	-4.349***	-2.459***	-4.010***	-4.559***	-1.298*	-5.009***	-1.823^*
	(0.951)	(2205.393)	(1.016)	(0.657)	(0.937)	(0.631)	(0.630)	(1.186)	(0.863)
N	856	856	856	856	856	856	856	856	856
Log Likelihood	-96.650	-77.042	-81.960	-224.923	-153.571	-349.675	-252.564	-185.797	-122.499
AIC	217.301	178.084	177.920	473.846	331.142	723.350	529.128	395.595	268.998

^{***}p < .001; **p < .01; *p < .05

2 Finland

Synthetic variables have been estimated for the full set of Finnish parties available in the original 2019 EES Finland voter study selected according to the criteria stated in the EES 2019 SDM codebook (for the criteria see Sect. XXX; for the relevant parties see Table 2.1).

Table 2.1: Finland relevant parties

Dep. Var.	Party	Party name (eng)
stack_1001	1001	Finnish Social Democrats
$stack_1002$	1002	True Finns
$stack_1003$	1003	National Coalition
$\rm stack_1004$	1004	Finnish Centre
$\rm stack_1005$	1005	Green Union
$stack_1006$	1006	Left Wing Alliance
$stack_1007$	1007	Swedish People's Party

Full OLS models converge and coefficients do not show any particular issue (see Table 2.4). In terms of model fit, the adjusted coefficient of determination (R^2) values vary between a minimum value of 0.037 for party 1001 (Finnish Social Democrats) and a maximum of 0.136 for party 1003 (National Coalition). Moreover, the difference between Akaike Information Criterion (AIC) values for full OLS models and null models shows that the full models perform better in all cases (see Table 2.2).

Table 2.2: Akaike Information Criterion values for OLS full and null models

Dep. Var.	Party	Full Mod.	Null Mod.	Diff. (Full-Null)
stack_1001	1001	503.719	524.434	-20.715
$stack_1002$	1002	760.678	793.350	-32.673
$stack_1003$	1003	454.559	567.635	-113.076
$stack_1004$	1004	212.187	257.058	-44.871
$stack_1005$	1005	579.984	634.977	-54.993
$stack_1006$	1006	542.244	575.824	-33.580
$stack_1007$	1007	187.642	217.272	-29.630

Similarly, only one out of the seven logistic regression models (see Table 2.5) shows inflated standard errors for one of the coefficients of interest, in particular:

• Model 11: D6_une

However, the constant term and the other regressors seem not to be affected by the inflated standard errors for model 11. Thus, no further adjustments are made and model 11 is kept as is.

In terms of model fit, adjusted McFadden's pseudo R^2 values for the logistic full models vary between a minimum value of -0.078 for party 1007 (Swedish People's Party) and a maximum of 0.077 for party 1003 (National Coalition). Moreover, the difference between Akaike Information Criterion (AIC) values for logistic full models and null models shows that in two cases out of seven null models perform better than full ones.

Table 2.3: Akaike Information Criterion values for logistic full and null models

Dep. Var.	Party	Full Mod.	Null Mod.	Diff. (Full-Null)
stack_1001	1001	490.506	497.038	-6.532
$stack_1002$	1002	645.695	659.969	-14.274
$stack_1003$	1003	478.136	520.112	-41.976
$stack_1004$	1004	254.450	260.410	-5.960
$stack_1005$	1005	540.407	546.870	-6.463
$\rm stack_1006$	1006	364.792	363.652	1.140
stack_1007	1007	195.420	183.272	12.148

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Table 2.4: Propensity to vote for a relevant party according to respondents' socio-demographic characteristics (OLS regression models)

	1001	1002	1003	1004	1005	1006	1007
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
$D3_rec2$	0.046*	-0.143***	-0.042	-0.011	0.157***	0.062**	-0.002
	(0.022)	(0.026)	(0.022)	(0.019)	(0.023)	(0.023)	(0.019)
$D8_rec1$	0.109***	-0.069^*	0.045	-0.015	0.070*	0.058*	0.013
	(0.029)	(0.033)	(0.028)	(0.024)	(0.030)	(0.030)	(0.024)
$D5_rec1$	-0.047^*	0.032	0.006	-0.018	-0.055^*	-0.028	-0.050**
	(0.023)	(0.027)	(0.022)	(0.019)	(0.024)	(0.023)	(0.019)
EDU_rec2	-0.026	0.110*	-0.002	0.018	-0.037	-0.027	0.028
	(0.045)	(0.051)	(0.043)	(0.037)	(0.047)	(0.045)	(0.037)
EDU_rec3	0.009	0.021	-0.016	0.006	0.013	0.006	0.031
	(0.042)	(0.049)	(0.041)	(0.035)	(0.044)	(0.043)	(0.035)
D1_rec1	0.074**	-0.016	-0.038	-0.005	0.038	0.064**	0.025
	(0.023)	(0.027)	(0.023)	(0.020)	(0.024)	(0.024)	(0.019)
$D7_rec1$	0.005	0.023	0.158***	0.083***	0.031	-0.057^*	0.067**
	(0.026)	(0.030)	(0.025)	(0.022)	(0.027)	(0.026)	(0.021)
$D7_rec2$	-0.100**	0.006	0.299***	0.055	-0.021	-0.194***	0.102***
	(0.035)	(0.040)	(0.034)	(0.029)	(0.036)	(0.035)	(0.029)
D6_une1	-0.032	0.025	-0.028	-0.001	-0.013	-0.001	-0.001
	(0.037)	(0.042)	(0.036)	(0.031)	(0.038)	(0.037)	(0.030)
D4_age	0.001	-0.002**	-0.001	-0.002**	-0.003***	-0.001	-0.001
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
$D10_rec$	0.011	0.003	0.029***	0.041***	0.003	0.004	0.028***
	(0.008)	(0.009)	(0.007)	(0.006)	(0.008)	(0.008)	(0.006)
Constant	0.283***	0.593***	0.322***	0.332***	0.417***	0.370***	0.174***
	(0.060)	(0.069)	(0.058)	(0.050)	(0.062)	(0.061)	(0.049)
N	843	851	847	845	845	846	844
R-squared	0.049	0.062	0.147	0.076	0.087	0.064	0.059
Adj. R-squared	0.037	0.050	0.136	0.064	0.075	0.051	0.047

^{***}p < .001; **p < .01; *p < .05

Table 2.5: Vote choice for a relevant party according to respondents' socio-demographic characteristics (Logistic regression models)

	1001	1002	1003	1004	1005	1006	1007
	Model 8	Model 9	Model 10	Model 11	Model 12	Model 13	Model 14
D3_rec2	0.018	-0.712**	-0.148	-0.020	0.871***	-0.048	-0.716
	(0.252)	(0.219)	(0.255)	(0.384)	(0.245)	(0.307)	(0.506)
$D8_rec1$	0.418	-0.830****	1.049*	-0.571	0.239	0.268	-0.522
	(0.349)	(0.242)	(0.428)	(0.424)	(0.317)	(0.428)	(0.547)
$D5_rec1$	0.025	0.019	0.016	0.269	-0.583^{*}	-0.401	0.098
	(0.258)	(0.216)	(0.259)	(0.401)	(0.245)	(0.312)	(0.489)
EDU_rec2	0.359	0.982	0.442	-0.171	-0.544	0.379	0.091
	(0.656)	(0.525)	(0.668)	(0.860)	(0.411)	(0.793)	(1.200)
EDU_rec3	0.653	0.880	0.605	0.040	-0.502	0.867	0.842
	(0.622)	(0.508)	(0.629)	(0.787)	(0.379)	(0.751)	(1.096)
D1_rec1	0.648^{*}	0.135	-0.003	-0.377	0.168	0.523	-0.057
	(0.274)	(0.219)	(0.259)	(0.394)	(0.247)	(0.333)	(0.487)
D7_rec1	-0.139	-0.380	0.900**	1.066*	0.638^{*}	-0.466	0.636
	(0.285)	(0.252)	(0.315)	(0.448)	(0.264)	(0.342)	(0.565)
$D7_rec2$	-0.468	0.579*	1.536***	0.275	0.016	-1.582*	0.837
	(0.410)	(0.292)	(0.342)	(0.650)	(0.392)	(0.748)	(0.651)
D6_une1	-0.239	-0.795^*	0.454	-15.891	0.360	-1.181	0.101
	(0.494)	(0.402)	(0.413)	(1056.071)	(0.365)	(0.747)	(0.798)
D4_age	0.033***	-0.008	0.021**	0.015	0.0004	0.005	-0.010
	(0.009)	(0.007)	(0.008)	(0.012)	(0.007)	(0.010)	(0.015)
$D10_rec$	0.067	-0.078	0.243***	0.254^{*}	0.064	-0.196	0.163
	(0.081)	(0.073)	(0.072)	(0.104)	(0.079)	(0.135)	(0.131)
Constant	-5.247***	-1.350^*	-5.756***	-4.301***	-2.602***	-3.526***	-3.864**
	(0.873)	(0.612)	(0.854)	(1.067)	(0.601)	(0.995)	(1.339)
N	834	834	834	834	834	834	834
Log Likelihood	-233.253	-310.847	-227.068	-115.225	-258.204	-170.396	-85.710
AIC	490.506	645.695	478.136	254.450	540.407	364.792	195.420

^{***}p < .001; **p < .01; *p < .05

3 Greece

Synthetic variables have been estimated for the full set of Greek parties available in the original 2019 EES Greece voter study selected according to the criteria stated in the EES 2019 SDM codebook (for the criteria see Sect. XXX; for the relevant parties see Table 3.1).

Table 3.1: Greece relevant parties

Dep. Var.	Party	Party name (eng)
stack_1201	1201	Coalition of the Radical Left
$stack_1202$	1202	New Democracy
$stack_1203$	1203	Golden Dawn
$stack_1204$	1204	Panhellenic Socialist Movement/ Movement for Change
$stack_1205$	1205	Communist Party of Greece

Full OLS models converge and coefficients do not show any particular issue (see Table 3.7). In terms of model fit, the adjusted coefficient of determination (R^2) values vary between a minimum value of 0.016 for party 1204 (Panhellenic Socialist Movement/ Movement for Change) and a maximum of 0.083 for party 1202 (New Democracy). Moreover, the difference between Akaike Information Criterion (AIC) values for full OLS models and null models shows that the full models perform better in all cases (see Table 3.2).

Table 3.2: Akaike Information Criterion values for OLS full and null models

Dep. Var.	Party	Full Mod.	Null Mod.	Diff. (Full-Null)
stack_1201	1201	821.486	839.980	-18.495
$stack_1202$	1202	763.863	831.163	-67.301
$stack_1203$	1203	132.265	163.404	-31.139
$stack_1204$	1204	205.841	208.918	-3.077
$stack_1205$	1205	235.149	258.529	-23.380

On the contrary, two out of five logistic regression models (see Table 3.8) show inflated standard errors for some of the coefficients of interest, in particular:

- Model 8a: EDU rec (both categories), D1 rec
- Model 9: D7_rec (second category)

However, for model 9 the constant term and other regressors are not affected by the inflated standard errors. Model 8a appears more problematic.

The inflated standard errors in Model 8a are potentially due to separation issues. In short, no respondents with low education did vote for party 1203. Only two respondents who were union members voted for party 1203. (See tables 3.5, 3.6)

As a consequence, a constrained version of model 8 (namely, Model 8b) without said variables was estimated and contrasted with the original (Model 8a), full model. Likelihood-ratio test results show that H_0 (namely, that the constrained model fits better than the full model) can be rejected (see Table 3.3). Consequently, synthetic variables for respondents' vote choice for party 1203 have been predicted relying on the unconstrained model (Model 8a).

Table 3.3: Likelihood-ratio Test between Model 8a (Unconstrained) and Model 8b (Constrained)

Model	Resid. Df	Resid. Dev	Df	Deviance	Pr(>Chi)
Constrained	851	281.9099			
Unconstrained	848	270.2080	3	11.70184	0.0084776

In terms of model fit, adjusted McFadden's pseudo R^2 values for the logistic full models vary between a minimum value of -0.035 for party 1205 (Communist Party of Greece) and a maximum of 0.078 for party 1204 (Panhellenic Socialist Movement/ Movement for Change). Moreover, the difference between Akaike Information Criterion (AIC) values for logistic full models and null models shows that in one case out of five the null model performs better than the full ones. According to AIC values the related null model appears to have a better fit than Model 8b (see Table ??).

Table 3.4: Akaike Information Criterion values for logistic full and null models

Dep. Var.	Party	Full Mod.	Null Mod.	Diff. (Full-Null)
stack_1201	1201	824.0760	828.3560	-4.279000
$stack_1202$	1202	931.2300	944.2880	-13.058000
$stack_1203$	1203	294.2080	294.6670	-0.459000
$stack_1203*$	1203	299.9099	294.6668	5.243114
$stack_1204$	1204	309.2970	337.5330	-28.236000
$stack_1205$	1205	302.8550	294.6670	8.188000

^{*} AIC value refers to Model 8b (constrained).

Table 3.5: Cross tabulation between vote choice for party 1203 and respondents' education level

stack_1203/EDU_rec	1	2	3	NA	Total
0	46	199	626	38	909
1	0	12	27	0	39
NA	2	12	36	7	57
Total	48	223	689	45	1005

Table 3.6: Cross tabulation between vote choice for party 1203 and respondents' trade union membership status

stack_1203/D1_rec	0	1	Total
0	820	89	909
1	37	2	39
NA	55	2	57
Total	912	93	1005

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Table 3.7: Propensity to vote for a relevant party according to respondents' socio-demographic characteristics (OLS regression models)

	1201	1202	1203	1204	1205
	Model 1	Model 2	Model 3	Model 4	Model 5
$D3_rec2$	0.089***	-0.039	-0.031	-0.019	0.057**
	(0.026)	(0.025)	(0.018)	(0.019)	(0.019)
$D8_rec1$	-0.026	0.083	0.004	-0.010	-0.040
	(0.046)	(0.044)	(0.031)	(0.033)	(0.033)
$D5_rec1$	0.027	0.037	-0.015	0.031	0.013
	(0.029)	(0.028)	(0.020)	(0.021)	(0.021)
EDU_rec2	-0.116	-0.092	0.132**	-0.066	-0.070
	(0.068)	(0.065)	(0.046)	(0.048)	(0.049)
EDU_rec3	-0.099	-0.105	0.075	-0.056	-0.021
	(0.065)	(0.063)	(0.045)	(0.046)	(0.047)
D1_rec1	0.030	-0.029	-0.036	0.104**	0.049
	(0.044)	(0.043)	(0.030)	(0.032)	(0.032)
$D7_rec1$	-0.053	0.112***	-0.041^*	0.033	-0.059**
	(0.027)	(0.026)	(0.019)	(0.019)	(0.020)
$D7_rec2$	-0.119*	0.209***	0.023	-0.017	-0.082^*
	(0.052)	(0.051)	(0.036)	(0.037)	(0.038)
D6_une1	-0.061	0.028	0.004	-0.005	-0.065*
	(0.039)	(0.038)	(0.026)	(0.028)	(0.028)
D4_age	0.0004	-0.001	-0.002**	0.001	-0.0001
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
$D10_rec$	-0.028***	0.043***	0.020***	0.004	-0.018***
	(0.007)	(0.006)	(0.004)	(0.005)	(0.005)
Constant	0.524***	0.241**	0.116*	0.179**	0.315***
	(0.079)	(0.076)	(0.054)	(0.056)	(0.057)
N	898	900	899	886	896
R-squared	0.044	0.094	0.057	0.028	0.049
Adj. R-squared	0.032	0.083	0.046	0.016	0.038

 $^{^{***}}p < .001; ^{**}p < .01; ^{*}p < .05$

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Table 3.8: Vote choice for a relevant party according to respondents' socio-demographic characteristics (Logistic regression models)

	1201	1202	1203	1203	1204	1205
	Model 6	Model 7	Model 8a	Model 8b	Model 9	Model 10
$D3_rec2$	0.135	0.001	-0.447	-0.381	-0.243	-0.055
	(0.185)	(0.171)	(0.372)	(0.371)	(0.354)	(0.369)
$D8_rec1$	-0.016	0.391	0.135	0.148	-0.717	-0.619
	(0.331)	(0.328)	(0.630)	(0.627)	(0.528)	(0.516)
$D5_rec1$	0.233	0.068	-0.123	-0.082	0.513	0.411
	(0.210)	(0.192)	(0.407)	(0.408)	(0.442)	(0.424)
EDU_rec2	-0.506	-0.504	16.498	, ,	0.034	-0.483
	(0.442)	(0.408)	(1569.420)		(1.158)	(0.893)
EDU_rec3	-0.596	-0.458	16.220		0.027	-0.411
	(0.424)	(0.389)	(1569.420)		(1.124)	(0.850)
D1_rec1	0.234	-0.203	-16.579		1.512***	$0.452^{'}$
	(0.296)	(0.286)	(1152.673)		(0.388)	(0.560)
D7_rec1	-0.055	0.418^{*}	-0.687	-0.731^*	1.416**	-0.516
	(0.190)	(0.181)	(0.369)	(0.364)	(0.440)	(0.371)
$D7_rec2$	-0.644	0.676*	-1.327	-1.493	-14.897	-0.480
	(0.411)	(0.314)	(1.047)	(1.040)	(774.130)	(0.773)
D6_une1	-0.831^*	0.183	-0.555	-0.393	0.239	$0.611^{'}$
	(0.342)	(0.255)	(0.631)	(0.630)	(0.533)	(0.467)
D4_age	0.014	-0.002	0.004	0.008	0.033^{*}	-0.0004
	(0.007)	(0.007)	(0.015)	(0.014)	(0.014)	(0.015)
$D10_rec$	-0.156****	0.203***	$0.169^{'}$	0.158	0.144	-0.236**
	(0.046)	(0.044)	(0.090)	(0.090)	(0.089)	(0.090)
Constant	-1.169^{*}	-1.987^{***}	-19.410	-3.479^{***}	-5.774****	-1.719
	(0.528)	(0.513)	(1569.420)	(0.927)	(1.303)	(0.969)
N	860	860	860	860	860	860
Log Likelihood	-400.038	-453.615	-135.104	-140.955	-142.648	-139.428
AIC	824.076	931.230	294.208	299.910	309.297	302.855

^{***}p < .001; **p < .01; *p < .05

4 Hungary

Synthetic variables have been estimated for the full set of Hungarian parties available in the original 2019 EES Hungary voter study selected according to the criteria stated in the EES 2019 SDM codebook (for the criteria see Sect. XXX; for the relevant parties see Table 4.1).

Table 4.1: Hungary relevant parties

Dep. Var.	Party	Party name (eng)
stack_1301	1301	Democratic Coalition
$stack_1302$	1302	FIDESZ-KDNP Alliance
$stack_1303$	1303	Jobbik
$\rm stack_1304$	1304	Politics Can Be Different
$stack_1306$	1306	Hungarian Socialist Party
$stack_1307$	1307	Our Homeland Movement
$stack_1308$	1308	Momentum Movement

Full OLS models converge and coefficients do not show any particular issue (see Table 4.4). In terms of model fit, the adjusted coefficient of determination (R^2) values vary between a minimum value of 0.022 for party 1308 (Momentum Movement) and a maximum of 0.112 for party 1302 (FIDESZ-KDNP Alliance). Moreover, the difference between Akaike Information Criterion (AIC) values for full OLS models and null models shows that the full models perform better in all cases (see Table 4.2).

Table 4.2: Akaike Information Criterion values for OLS full and null models

Dep. Var.	Party	Full Mod.	Null Mod.	Diff. (Full-Null)
stack_1301	1301	694.097	736.686	-42.589
$\rm stack_1302$	1302	816.070	914.037	-97.967
$stack_1303$	1303	461.680	543.950	-82.270
$\rm stack_1304$	1304	134.898	146.605	-11.706
$stack_1306$	1306	295.659	314.278	-18.619
$stack_1307$	1307	135.446	160.468	-25.022
$stack_1308$	1308	599.902	608.757	-8.855

On the contrary, three out of sevem logistic regression models (see Table 4.5) show inflated standard errors for some of the coefficients of interest, in particular:

- Model 11: D7_rec (second category)
- Model 12: D6_une
- Model 13: D7_rec (second category), D6_une

However, for these models the constant terms and other regressors are not affected by the inflated standard errors. Thus, no additional adjustments are made and models 11, 12 and 13 are not modified.

In terms of model fit, adjusted McFadden's pseudo R^2 values for the logistic full models vary between a minimum value of -0.07 for party 1304 (Politics Can Be Different) and a maximum of 0.082 for party 1302 (FIDESZ-KDNP Alliance). Moreover, the difference between Akaike Information Criterion (AIC) values for

logistic full models and null models shows that in three cases out of seven null models perform better than full ones.

Table 4.3: Akaike Information Criterion values for logistic full and null models

Dep. Var.	Party	Full Mod.	Null Mod.	Diff. (Full-Null)
stack_1301	1301	710.883	766.824	-55.941
$stack_1302$	1302	869.063	949.018	-79.955
$stack_1303$	1303	457.685	455.166	2.519
$stack_1304$	1304	125.608	119.342	6.266
$stack_1306$	1306	287.596	293.324	-5.729
$stack_1307$	1307	221.242	227.216	-5.974
$\rm stack_1308$	1308	514.296	508.228	6.067

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Table 4.4: Propensity to vote for a relevant party according to respondents' socio-demographic characteristics (OLS regression models)

	1301	1302	1303	1304	1306	1307	1308
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
$D3_rec2$	0.012	-0.004	-0.032	0.027	0.012	-0.043^{*}	0.004
	(0.024)	(0.025)	(0.021)	(0.017)	(0.019)	(0.018)	(0.023)
$D8_rec1$	0.004	-0.019	-0.091****	-0.014	-0.005	0.019	0.072**
	(0.029)	(0.031)	(0.025)	(0.021)	(0.023)	(0.021)	(0.028)
$D5_rec1$	-0.002	0.067^{*}	-0.031	-0.027	-0.002	0.011	-0.030
	(0.025)	(0.026)	(0.022)	(0.018)	(0.020)	(0.018)	(0.023)
EDU_rec2	-0.005	0.003	0.015	-0.001	-0.020	-0.050	-0.042
	(0.042)	(0.045)	(0.037)	(0.031)	(0.034)	(0.032)	(0.040)
EDU_rec3	-0.043	0.014	0.023	0.013	-0.009	-0.015	-0.035
	(0.043)	(0.045)	(0.037)	(0.031)	(0.034)	(0.032)	(0.040)
D1_rec1	0.053	-0.013	0.076*	0.057^{*}	0.081**	0.093***	0.033
	(0.036)	(0.039)	(0.032)	(0.027)	(0.029)	(0.027)	(0.035)
$D7_rec1$	-0.019	0.072**	-0.060**	-0.020	-0.018	-0.028	-0.031
	(0.025)	(0.026)	(0.022)	(0.018)	(0.020)	(0.019)	(0.024)
$D7_rec2$	0.010	0.119*	0.0001	-0.050	0.025	-0.034	0.014
	(0.056)	(0.060)	(0.049)	(0.042)	(0.045)	(0.042)	(0.054)
D6_une1	-0.061	-0.018	-0.053	-0.019	-0.045	-0.035	-0.125*
	(0.063)	(0.066)	(0.054)	(0.046)	(0.050)	(0.046)	(0.059)
D4_age	0.005***	-0.0001	-0.005***	-0.002***	0.002***	-0.002***	-0.0001
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
$D10_rec$	-0.026***	0.066***	-0.009	-0.009	-0.020***	-0.003	-0.022***
	(0.006)	(0.007)	(0.006)	(0.005)	(0.005)	(0.005)	(0.006)
Constant	0.198***	0.176**	0.653***	0.371***	0.168***	0.333***	0.399***
	(0.054)	(0.057)	(0.047)	(0.039)	(0.043)	(0.040)	(0.051)
N	911	916	918	910	915	880	906
R-squared	0.068	0.123	0.107	0.036	0.043	0.052	0.033
Adj. R-squared	0.057	0.112	0.097	0.025	0.032	0.040	0.022

^{***}p < .001; **p < .01; *p < .05

Table 4.5: Vote choice for a relevant party according to respondents' socio-demographic characteristics (Logistic regression models)

	1301	1302	1303	1304	1306	1307	1308
	Model 8	Model 9	Model 10	Model 11	Model 12	Model 13	Model 14
D3_rec2	-0.120	-0.190	-0.438	1.182	-0.081	-1.414**	-0.063
	(0.199)	(0.173)	(0.270)	(0.693)	(0.363)	(0.511)	(0.248)
$D8_rec1$	0.114	-0.022	-0.804**	0.901	0.963	-0.360	0.793^{*}
	(0.250)	(0.211)	(0.284)	(1.072)	(0.619)	(0.500)	(0.389)
$D5_rec1$	-0.160	0.338	-0.184	0.487	0.858^{*}	0.270	-0.054
	(0.203)	(0.184)	(0.275)	(0.700)	(0.427)	(0.476)	(0.255)
EDU_rec2	-0.012	0.051	0.669	-1.492	-0.630	-0.128	0.417
	(0.377)	(0.330)	(0.530)	(1.455)	(0.680)	(0.892)	(0.514)
EDU_rec3	-0.242	0.139	0.704	0.668	-0.256	0.820	0.350
	(0.387)	(0.329)	(0.528)	(1.117)	(0.673)	(0.823)	(0.514)
D1_rec1	0.469	-0.030	-0.334	0.325	-0.831	0.628	-0.322
	(0.286)	(0.256)	(0.450)	(0.815)	(0.747)	(0.535)	(0.419)
D7_rec1	-0.069	0.266	-0.385	0.736	-0.722	-0.041	0.296
	(0.209)	(0.181)	(0.292)	(0.673)	(0.410)	(0.425)	(0.262)
$D7_rec2$	-0.068	0.686	-0.334	-15.078	0.011	-16.360	0.935*
	(0.489)	(0.371)	(0.634)	(1515.898)	(0.775)	(1540.344)	(0.462)
D6_une1	-0.071	-0.284	-0.178	1.458	-15.488	-16.512	0.217
	(0.566)	(0.561)	(0.657)	(1.160)	(1105.684)	(1807.276)	(0.637)
D4_age	0.048***	0.014**	-0.017^*	-0.005	0.030^*	-0.022	0.001
	(0.007)	(0.005)	(0.008)	(0.019)	(0.012)	(0.014)	(0.007)
$D10_rec$	-0.212***	0.370***	-0.040	0.008	-0.195	-0.248	-0.157
	(0.064)	(0.043)	(0.077)	(0.171)	(0.125)	(0.153)	(0.080)
Constant	-3.671^{***}	-2.671^{***}	-1.221^*	-6.465****	-5.115****	-2.055^{*}	-3.338^{***}
	(0.534)	(0.417)	(0.594)	(1.731)	(1.071)	(0.931)	(0.658)
N	844	844	844	844	844	844	844
Log Likelihood	-343.442	-422.531	-216.842	-50.804	-131.798	-98.621	-245.148
AIC	710.883	869.063	457.685	125.608	287.596	221.242	514.296

^{***}p < .001; **p < .01; *p < .05

5 Lithuania

Synthetic variables have been estimated for the full set of Lithuanian parties available in the original 2019 EES Lithuania voter study selected according to the criteria stated in the EES 2019 SDM codebook (for the criteria see Sect. XXX; for the relevant parties see Table 5.1).

Table 5.1: Lithuania relevant parties

Dep. Var.	Party	Party name (eng)
stack_1701	1701	Homeland Union - Lithuanian Christian Democrats
$stack_1703$	1703	Lithuanian Social Democratic Party
$stack_1706$	1706	Liberal Movement
$stack_1705$	1705	Labour Party
$stack_1704$	1704	Order and Justice
$stack_1707$	1707	Election Action of Lithuania's Poles
$stack_1702$	1702	Lithuanian Peasant and Greens Union

Full OLS models converge and coefficients do not show any particular issue (see Table 5.12). In terms of model fit, the adjusted coefficient of determination (R^2) values vary between a minimum value of 0.004 for party 1703 (Lithuanian Social Democratic Party) and a maximum of 0.057 for party 1701 (Homeland Union - Lithuanian Christian Democrats). Moreover, the difference between Akaike Information Criterion (AIC) values for full OLS models and null models shows that the full models perform better in six out of seven cases (see Table 5.2).

Table 5.2: Akaike Information Criterion values for OLS full and null models

Dep. Var.	Party	Full Mod.	Null Mod.	Diff. (Full-Null)
stack_1701	1701	595.850	636.971	-41.120
$stack_1703$	1703	474.217	466.964	7.253
$stack_1706$	1706	263.612	290.702	-27.090
$\rm stack_1705$	1705	260.747	299.923	-39.177
$stack_1704$	1704	58.757	92.687	-33.930
$\rm stack_1707$	1707	-195.660	-158.090	-37.570
stack_1702	1702	502.180	515.036	-12.855

On the contrary, four out of seven logistic regression models (see Table 5.13) show inflated standard errors for some of the coefficients of interest, in particular:

- Model 9: D6 une
- Model 10a: EDU_rec (both categories), D7_rec (second category), D6_une
- Model 11: D6_une
- Model 15: D6 une
- Model 16: D6 une

However, for models 9, 11, 15 and 16 the constant terms and other regressors are not affected by the inflated standard errors. Model 10a appears more problematic.

The inflated standard errors in Model 10a are due to separation issues. In short, no respondents who are

unemployed or of high subjective social status did vote for party 603. Only one respondent with low education voted for party 603. (See tables 1.5, 1.6, 1.7)

As a consequence, a constrained version of model 10 (namely, Model 10b) without said variables was estimated and contrasted with the original (Model 10a), full model. Likelihood-ratio test results show that H_0 (namely, that the constrained model fits better than the full model) cannot be rejected (see Table 1.3). Consequently, synthetic variables for respondents' vote choice for party 603 have been predicted relying on the constrained model (Model 10b).

Table 5.3: Likelihood-ratio Test between Model 10a (Unconstrained) and Model 10b (Constrained)

Model	Resid. Df	Resid. Dev	Df	Deviance	Pr(>Chi)
Constrained	803	269.6011			
Unconstrained	801	263.9373	2	5.663756	0.0589021

Table 5.4: Likelihood-ratio Test between Model 13a (Unconstrained) and Model 13b (Constrained)

Model	Resid. Df	Resid. Dev	Df	Deviance	Pr(>Chi)
Constrained	806	80.57055			
Unconstrained	801	72.02173	5	8.548816	0.1284711

Table 5.5: Likelihood-ratio Test between Model 14a (Unconstrained) and Model 14b (Constrained)

Model	Resid. Df	Resid. Dev	Df	Deviance	Pr(>Chi)
Constrained	803	472.3105			
Unconstrained	801	469.1299	2	3.18063	0.2038614

In terms of model fit, adjusted McFadden's pseudo R^2 values for the logistic full models vary between a minimum value of -0.043 for party 1705 (Labour Party) and a maximum of 0.057 for party 1701 (Homeland Union - Lithuanian Christian Democrats). Moreover, the difference between Akaike Information Criterion (AIC) values for logistic full models and null models shows that in four cases out of eight null models perform better than full ones. According to AIC values the related null model appears to have a better fit than Model 11b (see Table 8.3).

Table 5.6: Akaike Information Criterion values for logistic full and null models

Dep. Var.	Party	Full Mod.	Null Mod.	Diff. (Full-Null)
stack_1701	1701	716.17000	761.3430	-45.174000
$stack_1702$	1702	493.13000	506.9030	-13.773000
$stack_1702*$	1702	492.31053	506.9028	-14.592235
$stack_1703$	1703	686.87500	682.5230	4.352000
$stack_1704$	1704	166.46100	167.1380	-0.676000
$\rm stack_1705$	1705	313.74400	302.9360	10.808000
$stack_1706$	1706	287.93700	290.6480	-2.711000
$stack_1706*$	1706	289.60107	290.6479	-1.046876
$stack_1707$	1707	96.02200	100.9630	-4.941000
$stack_1707*$	1707	94.57055	100.9631	-6.392566

^{*} AIC value refers to constrained models (14b, 10b, 13b)

Table 5.7: Cross tabulation between vote choice for party 1706 and respondents' education

stack_1706/EDU_rec	1	2	3	NA	Total
0	29	265	553	14	861
1	0	6	34	2	42
NA	7	28	59	3	97
Total	36	299	646	19	1000

Table 5.8: Cross tabulation between vote choice for party 1707 and respondents' education

stack_1707/EDU_rec	1	2	3	NA	Total
0	29	265	584	14	892
1	0	6	3	2	11
NA	7	28	59	3	97
Total	36	299	646	19	1000

Table 5.9: Cross tabulation between vote choice for party 1707 and respondents' subjective social class

stack_1707/D7_rec	0	1	2	NA	Total
0	387	353	125	27	892
1	5	5	1	0	11
NA	46	37	10	4	97
Total	438	395	136	31	1000

Table 5.10: Cross tabulation between vote choice for party 1707 and respondents' employment status

stack_1707/D6_une	0	1	Total
0	858	34	892
1	11	0	11
NA	91	6	97
Total	960	40	1000

Table 5.11: Cross tabulation between vote choice for party 1702 and respondents' education

$stack_1702/EDU_rec$	1	2	3	NA	Total
0	29	245	534	15	823
1	0	26	53	1	80
NA	7	28	59	3	97
Total	36	299	646	19	1000

Table 5.12: Propensity to vote for a relevant party according to respondents' socio-demographic characteristics (OLS regression models)

	1701	1703	1706	1705	1704	1707	1702
	Model 1	Model 2	Model 3	Model 4	${\bf Model~5}$	Model 6	Model 7
$D3$ _rec2	-0.013	0.031	-0.002	0.026	0.018	0.001	0.006
	(0.024)	(0.022)	(0.020)	(0.020)	(0.018)	(0.015)	(0.023)
$D8_rec1$	0.017	-0.011	0.055^{*}	-0.018	-0.010	-0.021	-0.084**
	(0.033)	(0.031)	(0.027)	(0.027)	(0.024)	(0.021)	(0.031)
$D5_rec1$	0.003	0.020	-0.030	0.015	0.029	0.001	0.032
	(0.025)	(0.023)	(0.021)	(0.021)	(0.019)	(0.016)	(0.024)
EDU_rec2	-0.121	-0.114	-0.020	0.023	0.055	0.044	-0.012
	(0.067)	(0.062)	(0.056)	(0.055)	(0.049)	(0.043)	(0.063)
EDU_rec3	-0.055	-0.088	0.008	0.005	0.031	-0.003	-0.043
	(0.066)	(0.062)	(0.056)	(0.055)	(0.049)	(0.042)	(0.063)
D1_rec1	0.024	0.073^{*}	0.080**	0.123***	0.103***	0.139***	0.117***
	(0.037)	(0.034)	(0.030)	(0.030)	(0.027)	(0.023)	(0.035)
$D7_rec1$	0.058*	-0.032	0.012	-0.029	-0.034	-0.013	-0.038
	(0.025)	(0.023)	(0.021)	(0.021)	(0.018)	(0.016)	(0.024)
$D7_rec2$	0.163***	-0.002	0.053	0.007	0.00002	-0.015	-0.029
	(0.035)	(0.033)	(0.029)	(0.029)	(0.026)	(0.023)	(0.034)
D6_une1	0.019	0.063	0.122*	0.178***	0.094*	0.059	0.134*
	(0.061)	(0.056)	(0.050)	(0.050)	(0.045)	(0.039)	(0.058)
D4_age	-0.001	-0.0002	-0.003***	-0.003***	-0.002***	-0.001	0.001
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.0005)	(0.001)
$D10_rec$	0.031***	0.005	-0.0001	0.002	0.0003	0.007	0.007
	(0.006)	(0.006)	(0.005)	(0.005)	(0.005)	(0.004)	(0.006)
Constant	0.405***	0.512***	0.422***	0.328***	0.259***	0.146**	0.320***
	(0.074)	(0.069)	(0.062)	(0.061)	(0.055)	(0.047)	(0.070)
N	887	888	881	888	884	879	887
R-squared	0.069	0.016	0.054	0.067	0.061	0.066	0.039
Adj. R-squared	0.057	0.004	0.042	0.055	0.049	0.054	0.026

^{***}p < .001; **p < .01; *p < .05

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Table 5.13: Vote choice for a relevant party according to respondents' socio-demographic characteristics (Logistic regression models)

Model	1701 8	1703 9	1706 10a	1706 10b	1705 11	$1704\\12$	1707 13a	1707 13b	1702 14a	$\begin{array}{c} \hline 1702 \\ 14b \\ \end{array}$
•										
$D3_rec2$	-0.322	0.452*	-0.392	-0.452	0.486	0.198	0.337	0.167	0.279	0.275
T .0	(0.204)	(0.218)	(0.382)	(0.378)	(0.371)	(0.540)	(0.804)	(0.768)	(0.266)	(0.264)
$D8_rec1$	0.298	0.211	0.501	0.503	-0.074	-1.367^*	0.774	0.552	-0.999***	-1.011***
	(0.299)	(0.301)	(0.622)	(0.620)	(0.463)	(0.547)	(1.183)	(1.104)	(0.281)	(0.281)
$D5_rec1$	0.240	0.240	0.108	0.169	-0.164	0.607	0.532	0.543	0.448	0.493
	(0.220)	(0.227)	(0.414)	(0.413)	(0.364)	(0.616)	(0.913)	(0.855)	(0.292)	(0.290)
EDU_rec2	-0.785	-0.817	13.953		0.452	0.326	17.669		14.499	
	(0.632)	(0.570)	(730.300)		(1.113)	(1.201)	(4941.218)		(733.709)	
EDU_rec3	-0.411	-0.663	14.775		0.522	0.029	16.265		14.209	
	(0.618)	(0.564)	(730.300)		(1.112)	(1.201)	(4941.218)		(733.709)	
D1_rec1	-0.177	0.156	1.243**	1.301**	0.821	0.191	1.387	1.327	-0.669	-0.687
	(0.314)	(0.319)	(0.416)	(0.412)	(0.453)	(0.716)	(0.800)	(0.746)	(0.540)	(0.538)
D7_rec1	$0.406^{'}$	-0.285	$0.457^{'}$	$0.538^{'}$	-0.472	-0.592	-0.051	,	$0.054^{'}$	-0.013
	(0.220)	(0.228)	(0.381)	(0.376)	(0.368)	(0.617)	(0.740)		(0.272)	(0.267)
$D7_rec2$	0.852**	$0.274^{'}$	-0.409	$-0.21\dot{1}$	-1.331	$0.555^{'}$	-17.218		-0.221	-0.306
_	(0.276)	(0.284)	(0.665)	(0.659)	(0.758)	(0.675)	(2316.843)		(0.412)	(0.404)
D6 une1	-14.326	-0.613	0.130	-0.029	$0.856^{'}$	$0.350^{'}$	-16.306		$0.524^{'}$	$0.621^{'}$
_	(437.598)	(0.754)	(1.067)	(1.059)	(0.669)	(1.092)	(5123.557)		(0.585)	(0.582)
D4_age	0.024***	0.013	0.0004	0.009	-0.008	-0.062^{**}	-0.018	-0.026	0.027**	0.027**
	(0.007)	(0.007)	(0.012)	(0.011)	(0.011)	(0.020)	(0.026)	(0.022)	(0.009)	(0.008)
D10 rec	0.178***	0.017	-0.186	-0.182	0.012	0.234	0.663**	0.649**	-0.017	-0.020
	(0.054)	(0.056)	(0.102)	(0.102)	(0.097)	(0.150)	(0.231)	(0.224)	(0.070)	(0.070)
Constant	-3.288***	-2.327***	-17.955	-3.941***	-3.167**	-1.421	-24.306	-6.881***	-17.587	-3.261***
Constant	(0.700)	(0.648)	(730.300)	(0.939)	(1.205)	(1.386)	(4941.219)	(1.942)	(733.709)	(0.618)
N	813	813	813	813	813	813	813	813	813	813
Log Likelihood	-346.085	-331.438	-131.969	-134.801	-144.872	-71.231	-36.011	-40.285	-234.565	-236.155
AIC	-340.065 716.170	-351.456 686.875	-131.909 287.937	-134.801 289.601	-144.672 313.744	-71.231 166.461	-30.011 96.022	-40.285 94.571	-234.303 493.130	-230.133 492.311

^{***}p < .001; **p < .01; *p < .05

6 Slovakia

Synthetic variables have been estimated for the full set of Slovakian parties available in the original 2019 EES Slovakia voter study selected according to the criteria stated in the EES 2019 SDM codebook (for the criteria see Sect. XXX; for the relevant parties see Table 6.1).

Table 6.1: Slovakia relevant parties

Dep. Var.	Party	Party name (eng)
stack_2510	2510	Christian Democratic Movement
$\rm stack_2501$	2501	People's Party Our Slovakia
$stack_2509$	2509	We are family
$\rm stack_2503$	2503	Direction - Social Democracy
$stack_2505$	2505	Freedom and Solidarity
$\rm stack_2506$	2506	Ordinary People and Independent Personalities
$stack_2508$	2508	Electoral alliance Progressive Slovakia and TOGETHER – Civic Democracy
$stack_2504$	2504	Slovak National Part
$stack_2507$	2507	Bridge

Full OLS models converge and coefficients do not show any particular issue (see Table 1.8). In terms of model fit, the adjusted coefficient of determination (R^2) values vary between a minimum value of 0.011 for party 2505 (Freedom and Solidarity) and a maximum of 0.135 for party 2510 (Christian Democratic Movement). Moreover, the difference between Akaike Information Criterion (AIC) values for full OLS models and null models shows that the full models perform better in all cases (see Table 1.2).

Table 6.2: Akaike Information Criterion values for OLS full and null models

Dep. Var.	Party	Full Mod.	Null Mod.	Diff. (Full-Null)
stack_2510	2510	130.031	249.895	-119.864
$\rm stack_2501$	2501	603.854	604.122	-0.268
$stack_2509$	2509	337.682	363.837	-26.155
$\rm stack_2503$	2503	616.736	633.097	-16.361
$stack_2505$	2505	404.040	403.405	0.635
stack_2506	2506	371.846	373.616	-1.770
$stack_2508$	2508	614.338	627.328	-12.990
$\rm stack_2504$	2504	218.824	223.280	-4.456
$stack_2507$	2507	-158.533	-157.311	-1.221

On the contrary, five out of eight logistic regression models (see Table 6.9) show inflated standard errors for some of the coefficients of interest, in particular:

- Model 9: D6 une
- Model 10a: EDU rec (both categories), D7 rec (second category), D6 une
- Model 11: D6 une
- Model 15: D6 une
- Model 16: D6_une

However, for models 9, 11, 15 and 16 the constant terms and other regressors are not affected by the inflated

standard errors. Model 10a appears more problematic.

The inflated standard errors in Model 10a are due to separation issues. In short, no respondents who are unemployed or of high subjective social status did vote for party 603. Only one respondent with low education voted for party 603. (See tables 1.5, 1.6, 1.7)

As a consequence, a constrained version of model 10 (namely, Model 10b) without said variables was estimated and contrasted with the original (Model 10a), full model. Likelihood-ratio test results show that H_0 (namely, that the constrained model fits better than the full model) cannot be rejected (see Table 1.3). Consequently, synthetic variables for respondents' vote choice for party 603 have been predicted relying on the constrained model (Model 10b).

Table 6.3: Likelihood-ratio Test between Model YY (Unconstrained) and Model XX (Constrained)

Model	Resid. Df	Resid. Dev	Df	Deviance	Pr(>Chi)
Constrained	888	98.63942			
Unconstrained	884	92.38181	4	6.257619	0.1807175

In terms of model fit, adjusted McFadden's pseudo R^2 values for the logistic full models vary between a minimum value of -0.06 for party 2507 (Bridge) and a maximum of 0.102 for party 2510 (Christian Democratic Movement). Moreover, the difference between Akaike Information Criterion (AIC) values for logistic full models and null models shows that in four cases out of eight null models perform better than full ones. According to AIC values the related null model appears to have a better fit than Model 11b (see Table 8.3).

Table 6.4: Akaike Information Criterion values for logistic full and null models

Dep. Var.	Party	Full Mod.	Null Mod.	Diff. (Full-Null)
stack_2501	2501	500.5100	488.3540	12.157000
$\rm stack_2503$	2503	482.4070	498.2260	-15.819000
$stack_2504$	2504	247.7680	237.3100	10.458000
$\rm stack_2505$	2505	415.6830	404.5320	11.151000
$stack_2506$	2506	287.7080	278.1040	9.603000
$stack_2507$	2507	116.3820	111.7950	4.587000
stack_2507*	2507	114.6394	111.7951	2.844343
$stack_2508$	2508	668.2410	673.2700	-5.029000
$stack_2509$	2509	325.6570	310.2900	15.366000
${\rm stack}_2510$	2510	298.8860	335.0130	-36.127000

^{*} AIC value refers to Model XXX (constrained).

Table 6.5: Cross tabulation between vote choice for party 2507 and respondents' education

stack_2507/EDU_rec	1	2	3	NA	Total
0	78	521	360	8	967
1	0	7	4	0	11
NA	3	11	7	1	22
Total	81	539	371	9	1000

Table 6.6: Cross tabulation between vote choice for party 2507 and respondents' trade union membership status

$stack_2507/D1_rec$	0	1	Total
0	803	164	967
1	10	1	11
NA	17	5	22
Total	830	170	1000

Table 6.7: Cross tabulation between vote choice for party 2507 and respondents' employment status

stack_2507/D6_une	0	1	Total
0	910	57	967
1	10	1	11
NA	21	1	22
Total	941	59	1000

Table 6.8: Propensity to vote for a relevant party according to respondents' socio-demographic characteristics (OLS regression models)

	2510	$\boldsymbol{2501}$	2509	2503	2505	2506	2508	$\boldsymbol{2504}$	2507
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9
$D3_rec2$	-0.023	-0.017	0.057**	-0.008	-0.010	0.005	0.020	-0.026	-0.012
	(0.017)	(0.023)	(0.020)	(0.023)	(0.020)	(0.020)	(0.023)	(0.018)	(0.015)
$D8_rec1$	-0.002	-0.032	-0.013	-0.010	-0.001	-0.008	0.019	-0.016	-0.031^*
	(0.018)	(0.024)	(0.020)	(0.024)	(0.021)	(0.021)	(0.024)	(0.019)	(0.016)
$D5_rec1$	-0.001	0.014	0.010	0.038	-0.014	-0.008	0.017	0.008	0.001
	(0.018)	(0.024)	(0.021)	(0.024)	(0.021)	(0.021)	(0.024)	(0.019)	(0.016)
EDU_rec2	0.0002	0.033	0.028	-0.092	0.009	-0.024	-0.097^*	-0.065	-0.042
	(0.037)	(0.048)	(0.041)	(0.048)	(0.043)	(0.042)	(0.049)	(0.038)	(0.031)
EDU_rec3	0.006	-0.020	-0.012	-0.098*	0.034	-0.011	-0.061	-0.098*	-0.023
	(0.037)	(0.048)	(0.042)	(0.048)	(0.043)	(0.042)	(0.049)	(0.039)	(0.032)
D1_rec1	0.007	$0.043^{'}$	0.034	$0.040^{'}$	0.006	-0.011	-0.002	0.073**	0.045^{*}
	(0.023)	(0.030)	(0.026)	(0.030)	(0.027)	(0.026)	(0.031)	(0.024)	(0.020)
D7_rec1	0.009	-0.051^*	-0.004	$0.023^{'}$	0.048^{*}	0.014	0.072**	0.028	0.015
	(0.019)	(0.025)	(0.022)	(0.025)	(0.022)	(0.022)	(0.026)	(0.020)	(0.016)
$D7_rec2$	0.011	-0.079^{*}	-0.076^*	-0.038	0.046	-0.009	0.102**	-0.003	0.007
	(0.029)	(0.038)	(0.032)	(0.038)	(0.034)	(0.033)	(0.038)	(0.030)	(0.025)
D6_une1	$0.051^{'}$	$0.043^{'}$	$0.070^{'}$	-0.001	-0.047	0.036	-0.090	-0.002	-0.031
	(0.039)	(0.050)	(0.043)	(0.050)	(0.045)	(0.044)	(0.052)	(0.040)	(0.033)
D4_age	0.00000	-0.001	-0.003***	0.004***	-0.002**	-0.002***	-0.001	0.001*	0.001
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.0005)
$D10_rec$	0.042***	-0.002	-0.001	$0.003^{'}$	-0.004	$0.005^{'}$	-0.007	0.005	0.008**
	(0.003)	(0.004)	(0.004)	(0.005)	(0.004)	(0.004)	(0.005)	(0.004)	(0.003)
Constant	0.146***	0.381***	0.430***	0.159^{**}	0.374***	0.418***	0.434***	0.245***	0.145***
	(0.041)	(0.054)	(0.046)	(0.054)	(0.048)	(0.047)	(0.055)	(0.044)	(0.035)
N	904	906	906	907	906	904	891	905	901
R-squared	0.145	0.024	0.052	0.041	0.023	0.026	0.039	0.029	0.025
Adj. R-squared	0.135	0.012	0.040	0.030	0.011	0.014	0.026	0.017	0.013

^{***}p < .001; **p < .01; *p < .05

Table 6.9: Vote choice for a relevant party according to respondents' socio-demographic characteristics (Logistic regression models)

N.C. 1.1	2510	2501	2509	2503	2505	2506	2508	2504	2507	2507
Model	10	11	12	13	14	15	16	17	18a	18b
$D3_rec2$	-0.224	-0.159	0.336	-0.210	0.036	-0.489	0.072	-0.396	0.641	0.709
	(0.344)	(0.256)	(0.346)	(0.259)	(0.289)	(0.374)	(0.209)	(0.413)	(0.711)	(0.710)
$D8_rec1$	-0.216	-0.067	0.074	0.434	-0.003	-0.181	0.465^{*}	0.804	-1.574*	-1.522*
	(0.346)	(0.269)	(0.364)	(0.292)	(0.309)	(0.378)	(0.236)	(0.511)	(0.712)	(0.704)
$D5_rec1$	-0.170	0.184	-0.053	-0.158	-0.455	-0.202	0.212	-0.045	0.011	0.119
	(0.360)	(0.274)	(0.356)	(0.270)	(0.297)	(0.387)	(0.227)	(0.427)	(0.715)	(0.714)
EDU_rec2	0.024	-0.243	-0.066	-0.180	-0.185	-0.363	-1.026*	-0.624	16.893	
	(0.720)	(0.545)	(0.693)	(0.661)	(0.611)	(0.722)	(0.405)	(0.851)	(3241.772)	
EDU_rec3	0.342	-0.203	-0.178	-0.569	0.237	-0.194	-0.992*	-0.665	16.610	
	(0.718)	(0.552)	(0.710)	(0.685)	(0.606)	(0.725)	(0.411)	(0.876)	(3241.772)	
$D1_rec1$	-0.198	-0.417	0.380	0.171	0.351	-0.794	0.255	0.283	-17.229	
	(0.474)	(0.393)	(0.418)	(0.342)	(0.359)	(0.619)	(0.264)	(0.517)	(2191.432)	
$D7_rec1$	-0.633	-0.355	-0.393	0.272	0.185	-0.325	0.616*	0.116	-0.618	-0.610
	(0.382)	(0.274)	(0.363)	(0.282)	(0.334)	(0.420)	(0.247)	(0.431)	(0.784)	(0.782)
$D7_rec2$	0.086	-0.487	-0.734	0.303	0.441	0.484	0.571	-1.225	1.265	1.041
	(0.496)	(0.450)	(0.658)	(0.451)	(0.457)	(0.527)	(0.354)	(1.075)	(0.902)	(0.817)
D6_une1	-0.417	0.920*	-0.009	0.148	-0.412	-15.358	-0.952	-0.198	-17.190	
	(0.784)	(0.425)	(0.759)	(0.633)	(0.750)	(916.391)	(0.737)	(1.061)	(3837.093)	
D4_age	0.005	0.004	-0.002	0.048***	0.007	0.010	0.020**	0.027	0.016	0.024
	(0.011)	(0.009)	(0.011)	(0.009)	(0.009)	(0.012)	(0.007)	(0.014)	(0.021)	(0.021)
$D10_rec$	0.492^{***}	-0.045	-0.120	0.065	-0.120	0.090	-0.038	0.076	0.031	0.031
	(0.079)	(0.053)	(0.077)	(0.049)	(0.063)	(0.070)	(0.042)	(0.077)	(0.131)	(0.128)
Constant	-4.646***	-2.117***	-2.695***	-5.023***	-2.788***	-3.028***	-2.795***	-4.815***	-21.463	-5.459***
	(0.899)	(0.612)	(0.794)	(0.773)	(0.684)	(0.820)	(0.483)	(1.031)	(3241.772)	(1.395)
N	896	896	896	896	896	896	896	896	896	896
Log Likelihood	-137.443	-238.255	-150.828	-229.203	-195.842	-131.854	-322.120	-111.884	-46.191	-49.320
AIC	298.886	500.510	325.657	482.407	415.683	287.708	668.241	247.768	116.382	114.639

^{***}p < .001; **p < .01; *p < .05

7 Poland

Synthetic variables have been estimated for the full set of Polish parties available in the original 2019 EES Poland voter study selected according to the criteria stated in the EES 2019 SDM codebook (for the criteria see Sect. XXX; for the relevant parties see Table 7.1).

Table 7.1: Poland relevant parties

Dep. Var.	Party	Party name (eng)
$stack_2104$	2104	Law and Justice
$\rm stack_2106$	2106	Kukiz'15
$\rm stack_2102$	2102	Spring
$\rm stack_2105$	2105	Poland Together
$stack_2103$	2103	European Coalition

Full OLS models converge and coefficients do not show any particular issue (see Table 1.8). In terms of model fit, the adjusted coefficient of determination (R^2) values vary between a minimum value of 0.028 for party 2103 (European Coalition) and a maximum of 0.132 for party 2104 (Law and Justice). Moreover, the difference between Akaike Information Criterion (AIC) values for full OLS models and null models shows that the full models perform better in all cases (see Table 1.2).

Table 7.2: Akaike Information Criterion values for OLS full and null models

Dep. Var.	Party	Full Mod.	Null Mod.	Diff. (Full-Null)
stack_2104	2104	826.702	943.422	-116.721
$stack_2106$	2106	437.745	502.658	-64.913
$stack_2102$	2102	467.864	555.309	-87.445
$\rm stack_2105$	2105	192.191	222.690	-30.499
stack_2103	2103	112.861	127.620	-14.759

On the contrary, five out of eight logistic regression models (see Table 6.9) show inflated standard errors for some of the coefficients of interest, in particular:

- Model 9: D6 une
- Model 10a: EDU_rec (both categories), D7_rec (second category), D6_une
- Model 11: D6_une
- Model 15: D6 une
- Model 16: D6_une

However, for models 9, 11, 15 and 16 the constant terms and other regressors are not affected by the inflated standard errors. Model 10a appears more problematic.

The inflated standard errors in Model 10a are due to separation issues. In short, no respondents who are unemployed or of high subjective social status did vote for party 603. Only one respondent with low education voted for party 603. (See tables 1.5, 1.6, 1.7)

As a consequence, a constrained version of model 10 (namely, Model 10b) without said variables was estimated and contrasted with the original (Model 10a), full model. Likelihood-ratio test results show that H_0 (namely,

that the constrained model fits better than the full model) cannot be rejected (see Table 1.3). Consequently, synthetic variables for respondents' vote choice for party 603 have been predicted relying on the constrained model (Model 10b).

Table 7.3: Likelihood-ratio Test between Model WWW (Unconstrained) and Model QQQ (Constrained)

Model	Resid. Df	Resid. Dev	Df	Deviance	Pr(>Chi)
Constrained	901	165.4308			
Unconstrained	896	155.3708	5	10.06004	0.0735519

In terms of model fit, adjusted McFadden's pseudo R^2 values for the logistic full models vary between a minimum value of -0.062 for party 2105 (Poland Together) and a maximum of 0.073 for party 2104 (Law and Justice). Moreover, the difference between Akaike Information Criterion (AIC) values for logistic full models and null models shows that in four cases out of eight null models perform better than full ones. According to AIC values the related null model appears to have a better fit than Model 11b (see Table 8.3).

Table 7.4: Akaike Information Criterion values for logistic full and null models

Dep. Var.	Party	Full Mod.	Null Mod.	Diff. (Full-Null)
stack_2102	2102	544.5020	548.0700	-3.568000
$stack_2103$	2103	1019.3140	1082.1110	-62.797000
$stack_2104$	2104	944.8220	1020.9980	-76.176000
$stack_2105*$	2105	179.3710	170.9330	8.438000
$stack_2105$	2105	179.4308	170.9328	8.498034
$stack_2106$	2106	477.1480	480.2080	-3.060000

^{*} AIC value refers to Model AAA (constrained).

Table 7.5: Cross tabulation between vote choice for party 2105 and respondents' education

stack_2105/EDU_rec	1	2	3	NA	Total
0	57	246	636	34	973
1	1	4	13	1	19
NA	1	2	3	2	8
Total	59	252	652	37	1000

Table 7.6: Cross tabulation between vote choice for party 2105 and respondents' subjective social class

stack_2105/D7_rec	0	1	2	NA	Total
0	314	493	147	19	973
1	11	8	0	0	19
NA	4	2	1	1	8
Total	329	503	148	20	1000

Table 7.7: Cross tabulation between vote choice for party 2105 and respondents' employment status

stack_2105/D6_une	0	1	Total
0	931	42	973
1	19	0	19
NA	8	0	8
Total	958	42	1000

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Table 7.8: Propensity to vote for a relevant party according to respondents' socio-demographic characteristics (OLS regression models)

	2104	2106	2102	2105	2103
	Model 1	Model 2	Model 3	Model 4	Model 5
D3_rec2	-0.053^*	-0.003	0.097***	0.054**	0.025
	(0.026)	(0.021)	(0.021)	(0.018)	(0.017)
$D8_rec1$	0.041	-0.015	-0.009	0.020	0.002
	(0.035)	(0.028)	(0.029)	(0.025)	(0.023)
$D5_rec1$	0.038	0.042	0.065^{*}	0.074***	0.029
	(0.030)	(0.024)	(0.025)	(0.021)	(0.020)
$\mathrm{EDU}_\mathrm{rec2}$	-0.044	0.025	0.054	0.012	0.020
	(0.065)	(0.052)	(0.054)	(0.047)	(0.043)
EDU_rec3	-0.012	0.044	0.041	-0.0002	0.010
	(0.061)	(0.049)	(0.050)	(0.043)	(0.040)
D1_rec1	0.009	-0.013	0.030	0.013	0.047^{*}
	(0.034)	(0.028)	(0.028)	(0.024)	(0.023)
$D7_rec1$	-0.037	-0.006	-0.027	-0.045^*	0.0001
	(0.029)	(0.023)	(0.024)	(0.020)	(0.019)
$D7_rec2$	0.004	-0.032	-0.045	-0.046	0.015
	(0.041)	(0.033)	(0.034)	(0.029)	(0.027)
D6_une1	0.006	0.042	-0.004	0.007	0.023
	(0.075)	(0.061)	(0.063)	(0.055)	(0.051)
D4_age	-0.001	-0.005***	-0.001	-0.002**	0.001*
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
$D10_rec$	0.061^{***}	0.017^{***}	-0.041^{***}	-0.017^{***}	-0.018***
	(0.005)	(0.004)	(0.004)	(0.004)	(0.004)
Constant	0.221**	0.481^{***}	0.424^{***}	0.348***	0.301***
	(0.071)	(0.057)	(0.058)	(0.051)	(0.047)
N	905	900	889	884	907
R-squared	0.142	0.092	0.116	0.058	0.040
Adj. R-squared	0.132	0.081	0.105	0.046	0.028

^{***}p < .001; **p < .01; *p < .05

Table 7.9: Vote choice for a relevant party according to respondents' socio-demographic characteristics (Logistic regression models)

	2104	2106	2102	2105	2105	2103
	Model 6	Model 7	Model 8	Model 9a	Model 9b	Model 10
$D3$ _rec2	-0.179	-0.066	0.406	0.255	0.134	-0.241
	(0.166)	(0.261)	(0.245)	(0.503)	(0.497)	(0.159)
$D8_rec1$	0.066	0.270	-0.053	1.099	1.092	0.298
	(0.216)	(0.385)	(0.338)	(1.047)	(1.040)	(0.230)
$D5_rec1$	0.559**	-0.299	0.171	0.118	0.169	-0.187
	(0.209)	(0.296)	(0.278)	(0.596)	(0.587)	(0.183)
EDU_rec2	0.048	0.584	0.266	16.061	, ,	0.240
	(0.452)	(0.709)	(0.685)	(2360.044)		(0.453)
EDU_rec3	0.182	1.037	0.211	16.342		0.329
	(0.424)	(0.664)	(0.652)	(2360.044)		(0.429)
D1_rec1	0.068	0.349	-0.187	0.663	0.724	-0.085
	(0.210)	(0.309)	(0.361)	(0.571)	(0.559)	(0.219)
$D7_rec1$	-0.091	-0.080	0.038	-0.623		0.438^{*}
	(0.187)	(0.281)	(0.261)	(0.501)		(0.181)
$D7_rec2$	0.213	-0.636	-0.460	-17.137		0.634*
	(0.253)	(0.482)	(0.430)	(1490.826)		(0.249)
D6_une1	0.009	0.564	0.604	-16.560		-0.982
	(0.500)	(0.581)	(0.579)	(3254.945)		(0.635)
D4_age	0.003	-0.034***	0.010	-0.004	-0.0002	0.032***
	(0.005)	(0.009)	(0.008)	(0.017)	(0.016)	(0.005)
$D10_rec$	0.315***	0.009	-0.207^{***}	-0.030	-0.045	-0.137^{***}
	(0.039)	(0.055)	(0.051)	(0.106)	(0.104)	(0.032)
Constant	-2.990***	-1.938*	-2.687^{***}	-20.710	-5.143***	-2.609***
	(0.507)	(0.758)	(0.754)	(2360.044)	(1.397)	(0.503)
N	908	908	908	908	908	908
Log Likelihood	-460.411	-226.574	-260.251	-77.685	-82.715	-497.657
AIC	944.822	477.148	544.502	179.371	179.431	1019.314

^{***}p < .001; **p < .01; *p < .05

8 Sweden

Synthetic variables have been estimated for the full set of Swedish parties available in the original 2019 EES Sweden voter study selected according to the criteria stated in the EES 2019 SDM codebook (for the criteria see Sect. XXX; for the relevant parties see Table 8.1).

Table 8.1: Sweden relevant parties

Dep. Var.	Party	Party name (eng)
stack_2702	2702	Social Democratic Labour Party
${\rm stack}_2705$	2705	Moderate Coalition Party
$stack_2707$	2707	Green Ecology Party
stack_2704	2704	Liberal People's Party
$stack_2703$	2703	Centre Party
stack_2708	2708	Sweden Democrats
$stack_2706$	2706	Christian Democrats
$\rm stack_2701$	2701	Left Party

Full OLS models converge and coefficients do not show any particular issue (see Table 1.8). In terms of model fit, the adjusted coefficient of determination (R^2) values vary between a minimum value of 0.018 for party 2702 (Social Democratic Labour Party) and a maximum of 0.1 for party 2707 (Green Ecology Party). Moreover, the difference between Akaike Information Criterion (AIC) values for full OLS models and null models shows that the full models perform better in all cases (see Table 1.2).

Table 8.2: Akaike Information Criterion values for OLS full and null models

Dep. Var.	Party	Full Mod.	Null Mod.	Diff. (Full-Null)
stack_2702	2702	738.604	742.960	-4.356
$\rm stack_2705$	2705	583.369	623.368	-39.998
$stack_2707$	2707	400.517	479.613	-79.096
$stack_2704$	2704	223.279	263.305	-40.026
$stack_2703$	2703	220.664	266.672	-46.008
stack_2708	2708	836.818	856.252	-19.434
$stack_2706$	2706	472.844	502.935	-30.091
${\rm stack}_2701$	2701	541.016	577.778	-36.762

On the contrary, five out of eight logistic regression models (see Table 6.9) show inflated standard errors for some of the coefficients of interest, in particular:

- Model 9: D6_une
- Model 10a: EDU_rec (both categories), D7_rec (second category), D6_une
- Model 11: D6_une
- Model 15: D6 une
- Model 16: D6_une

However, for models 9, 11, 15 and 16 the constant terms and other regressors are not affected by the inflated standard errors. Model 10a appears more problematic.

The inflated standard errors in Model 10a are due to separation issues. In short, no respondents who are unemployed or of high subjective social status did vote for party 603. Only one respondent with low education voted for party 603. (See tables 1.5, 1.6, 1.7)

As a consequence, a constrained version of model 10 (namely, Model 10b) without said variables was estimated and contrasted with the original (Model 10a), full model. Likelihood-ratio test results show that H_0 (namely, that the constrained model fits better than the full model) cannot be rejected (see Table 1.3). Consequently, synthetic variables for respondents' vote choice for party 603 have been predicted relying on the constrained model (Model 10b).

In terms of model fit, adjusted McFadden's pseudo R^2 values for the logistic full models vary between a minimum value of -0.037 for party 2704 (Liberal People's Party) and a maximum of 0.036 for party 2705 (Moderate Coalition Party). Moreover, the difference between Akaike Information Criterion (AIC) values for logistic full models and null models shows that in four cases out of eight null models perform better than full ones. According to AIC values the related null model appears to have a better fit than Model 11b (see Table 8.3).

Table 8.3: Akaike Information Criterion values for logistic full and null models

Dep. Var.	Party	Full Mod.	Null Mod.	Diff. (Full-Null)
$stack_2702$	2702	806.960	820.036	-13.076
$\rm stack_2705$	2705	501.752	522.644	-20.892
$stack_2707$	2707	359.917	359.457	0.460
$stack_2704$	2704	255.004	247.996	7.008
$stack_2703$	2703	299.293	299.837	-0.544
staals 2709	2708	736.415	735.017	1.398
$stack_2708$	2100	750.415	133.011	1.598
$stack_2706$	2706	369.826	370.795	-0.969
${\rm stack}_2701$	2701	416.961	424.960	-7.999

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Table 8.4: Propensity to vote for a relevant party according to respondents' socio-demographic characteristics (OLS regression models)

	2702	$\boldsymbol{2705}$	2707	2704	2703	2708	2706	2701
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
D3_rec2	0.016	-0.028	0.089***	0.017	0.040*	-0.090**	-0.021	0.056*
	(0.026)	(0.024)	(0.021)	(0.019)	(0.019)	(0.027)	(0.022)	(0.023)
D8_rec1	0.043	0.026	0.021	0.041	0.022	-0.047	$0.030^{'}$	-0.003
	(0.033)	(0.030)	(0.027)	(0.025)	(0.024)	(0.035)	(0.028)	(0.030)
D5_rec1	-0.016	-0.002	-0.051^{*}	-0.026	-0.026	$0.035^{'}$	0.008	-0.053^*
_	(0.027)	(0.025)	(0.022)	(0.020)	(0.020)	(0.028)	(0.023)	(0.024)
EDU_rec2	0.023	-0.063	0.031	0.029	-0.006	-0.041	-0.042	0.048
_	(0.050)	(0.046)	(0.041)	(0.037)	(0.037)	(0.053)	(0.043)	(0.045)
EDU_rec3	-0.003	-0.046	0.064	0.061	0.031	-0.112*	-0.026	0.077
	(0.049)	(0.045)	(0.040)	(0.036)	(0.036)	(0.052)	(0.042)	(0.044)
D1_rec1	0.068^{*}	-0.043	0.034	0.018	$0.025^{'}$	-0.015	-0.038	0.064**
	(0.027)	(0.025)	(0.022)	(0.020)	(0.020)	(0.029)	(0.023)	(0.024)
D7_rec1	-0.040	0.121***	$0.030^{'}$	0.079***	0.063**	0.016	0.092***	-0.089****
	(0.028)	(0.026)	(0.023)	(0.021)	(0.021)	(0.030)	(0.024)	(0.025)
D7_rec2	-0.097^*	0.227***	0.010	0.118***	0.066*	$0.014^{'}$	0.114***	-0.133****
	(0.040)	(0.036)	(0.033)	(0.029)	(0.029)	(0.042)	(0.034)	(0.035)
D6_une1	-0.075	-0.062	-0.076	0.001	-0.014	0.223***	-0.008	-0.052
	(0.054)	(0.049)	(0.044)	(0.040)	(0.040)	(0.057)	(0.046)	(0.048)
D4_age	-0.001	-0.001	-0.005****	-0.003***	-0.003***	0.001	-0.0001	-0.002**
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
D10_rec	0.008	$0.005^{'}$	0.010	0.010^{*}	0.017***	-0.003	0.028***	-0.008
	(0.007)	(0.006)	(0.006)	(0.005)	(0.005)	(0.007)	(0.006)	(0.006)
Constant	0.461***	0.433***	0.404***	0.280***	0.304***	0.426***	0.255***	0.389***
	(0.066)	(0.061)	(0.054)	(0.049)	(0.049)	(0.070)	(0.057)	(0.059)
N	854	852	852	849	853	852	851	850
R-squared	0.030	0.070	0.112	0.070	0.077	0.047	0.059	0.067
Adj. R-squared	0.018	0.058	0.100	0.058	0.065	0.035	0.047	0.055

^{***}p < .001; **p < .01; *p < .05

Table 8.5: Vote choice for a relevant party according to respondents' socio-demographic characteristics (Logistic regression models)

	2702	2705	2707	$\boldsymbol{2704}$	2703	2708	2706	2701
	Model 9	Model 10	Model 11	Model 12	Model 13	Model 14	Model 15	Model 16
D3_rec2	-0.070	-0.640*	0.844**	-0.122	0.004	-0.286	-0.140	0.223
	(0.184)	(0.270)	(0.324)	(0.404)	(0.351)	(0.200)	(0.319)	(0.281)
D8_rec1	0.353	0.248	-0.173	0.369	-0.220	-0.288	-0.089	0.188
	(0.251)	(0.337)	(0.395)	(0.556)	(0.442)	(0.233)	(0.379)	(0.382)
D5 rec1	0.063	0.511	0.144	-0.251	-0.811^*	0.133	0.053	-0.359
	(0.190)	(0.269)	(0.330)	(0.405)	(0.367)	(0.205)	(0.320)	(0.291)
EDU_rec2	0.695	0.458	-0.229	0.854	-0.567	-0.087	-0.550	0.698
	(0.463)	(0.648)	(0.548)	(1.076)	(0.653)	(0.366)	(0.616)	(0.770)
EDU_rec3	0.612	0.760	-0.037	0.838	-0.123	-0.340	-0.239	1.004
	(0.454)	(0.625)	(0.537)	(1.057)	(0.607)	(0.358)	(0.570)	(0.757)
D1_rec1	0.745***	-0.364	-0.326	-0.580	1.231**	-0.199	-0.127	0.617^{*}
	(0.203)	(0.257)	(0.325)	(0.411)	(0.444)	(0.201)	(0.321)	(0.310)
$D7_rec1$	-0.099	0.640^{*}	0.074	1.039	0.987^{*}	-0.098	-0.180	-1.040****
	(0.198)	(0.313)	(0.347)	(0.532)	(0.425)	(0.211)	(0.346)	(0.307)
D7 rec2	-0.221	1.033**	0.310	1.339*	0.147	-0.367	0.050	-1.290*
	(0.286)	(0.362)	(0.463)	(0.615)	(0.703)	(0.322)	(0.448)	(0.547)
D6 une1	-0.989	-14.799	-1.183	-0.303	0.350	0.742*	-0.973	-0.443
	(0.541)	(529.513)	(1.034)	(1.059)	(0.649)	(0.346)	(1.039)	(0.631)
D4 age	0.015**	0.008	-0.029**	0.012	0.0002	0.012^{*}	0.028**	0.003
	(0.005)	(0.007)	(0.010)	(0.012)	(0.011)	(0.006)	(0.009)	(0.009)
D10 rec	0.064	-0.006	0.034	-0.184	0.048	-0.058	0.188**	-0.217^*
	(0.045)	(0.065)	(0.074)	(0.136)	(0.087)	(0.055)	(0.067)	(0.100)
Constant	-3.522****	-3.841***	-1.817^*	-5.249***	-3.852^{***}	-1.555***	-3.935^{***}	-3.315^{***}
	(0.579)	(0.796)	(0.715)	(1.323)	(0.910)	(0.493)	(0.824)	(0.910)
N	847	847	847	847	847	847	847	847
Log Likelihood	-391.480	-238.876	-167.958	-115.502	-137.646	-356.207	-172.913	-196.481
AIC	806.960	501.752	359.917	255.004	299.293	736.415	369.826	416.961

^{***}p < .001; **p < .01; *p < .05