# Summary of Synthetic Variables Estimation

EES 2019 Voter Study (Danish, Estonian, German, Luxembourgian, Maltese, Dutch, Spanish and British (UK) samples)

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#### 1 Denmark

Synthetic variables have been estimated for seven of ten of Danish parties available in the original 2019 EES Danish 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: Danish relevant parties

Dep. Var.	Party	Party name (eng)
stack_701	701	Social Democratic Party
$stack_702$	702	Liberals
$stack_703$	703	Danish People's Party
$stack_704$	704	Radical Party
$stack_{-705}$	705	Socialist People's Party
$stack_706$	706	Red-Green Unity List
$stack_707$	707	Conservative People's Party

Full OLS models converge and coefficients do not show any particular issue (see Table 1.4). In terms of model fit, the adjusted coefficient of determination ( $R^2$ ) values vary between a minimum value of 0.006 for party 703 (Danish People's Party) and a maximum of 0.084 for party 707 (Conservative People's Party). Moreover, the difference between Akaike Information Criterion (AIC) values for full OLS models and null models shows that in 1 case out of 7 null models perform better than full ones (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_701	701	602.803	650.130	-47.327
$stack_{-702}$	702	664.540	698.147	-33.607
$stack_{-703}$	703	707.938	702.351	5.587
$stack_{-704}$	704	320.451	385.068	-64.616
$stack_{-705}$	705	606.771	637.521	-30.750
$stack_706$	706	652.782	694.182	-41.400
$stack_707$	707	366.698	431.607	-64.908

Furthermore, there were no unusual standard errors for any coefficients in the logistic regression models. (see Table 1.5)

In terms of model fit, adjusted McFadden's pseudo  $R^2$  values for the logistic full models vary between a minimum value of -0.044 for party 704 (Radical Party) and a maximum of 0.016 for party 703 (Danish People's Party). Moreover, the difference between Akaike Information Criterion (AIC) values for logistic full models and null models shows that in 3 cases out of 7 null models perform better than full ones (see Table 1.3).

Table 1.3: Akaike Information Criterion values for logistic full and null models

Dep. Var.	Party	Full Mod.	Null Mod.	Diff. (Full-Null)
stack_701	701	759.240	771.073	-11.833
$stack_702$	702	746.506	757.681	-11.175
$stack_{-703}$	703	591.607	602.927	-11.320
$stack_{-}704$	704	394.156	379.564	14.592
$stack_{-705}$	705	524.297	523.116	1.181
$stack_706$	706	408.469	412.696	-4.227
stack_707	707	316.194	314.621	1.573

Table 1.4: Propensity to vote for a relevant party according to respondents' socio-demographic characteristics (OLS regression models)

	701	700	700	70.4	<b>70</b> F	700	<b>707</b>
	701	702	703	704	705	706	707
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
$D3$ _rec2	0.083***	$-0.051^*$	-0.068**	0.034	0.088***	0.044	-0.086***
	(0.023)	(0.024)	(0.024)	(0.020)	(0.023)	(0.024)	(0.020)
$D8\_rec1$	0.068*	0.002	0.036	0.001	$0.064^{*}$	0.052	0.020
	(0.028)	(0.029)	(0.030)	(0.024)	(0.028)	(0.029)	(0.025)
$D5\_rec1$	-0.007	0.037	0.026	-0.025	-0.021	-0.038	-0.004
	(0.024)	(0.025)	(0.026)	(0.021)	(0.025)	(0.026)	(0.022)
$EDU\_rec2$	-0.061	0.113*	0.037	-0.034	-0.070	-0.056	0.071
	(0.051)	(0.053)	(0.055)	(0.044)	(0.053)	(0.054)	(0.046)
$EDU\_rec3$	-0.023	0.038	-0.005	0.004	-0.004	0.004	0.048
	(0.048)	(0.049)	(0.051)	(0.041)	(0.049)	(0.050)	(0.042)
D1_rec1	0.139***	$-0.056^{*}$	-0.003	0.005	0.068*	0.041	-0.007
	(0.026)	(0.027)	(0.028)	(0.022)	(0.026)	(0.027)	(0.023)
$D7\_rec1$	-0.001	0.100***	-0.047	$0.045^{*}$	-0.019	-0.021	0.063**
	(0.026)	(0.027)	(0.028)	(0.022)	(0.027)	(0.027)	(0.023)
$D7\_rec2$	-0.116**	0.172***	-0.053	0.048	-0.074*	-0.112**	0.192***
	(0.036)	(0.037)	(0.038)	(0.031)	(0.036)	(0.037)	(0.032)
D6_une1	0.053	-0.056	-0.003	-0.022	-0.043	-0.033	$-0.089^*$
	(0.048)	(0.049)	(0.051)	(0.041)	(0.048)	(0.050)	(0.042)
D4_age	0.0001	-0.002*	0.001	-0.005***	-0.002**	-0.004***	-0.001
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
$D10\_rec$	0.011	0.023**	0.006	$0.012^{*}$	0.007	0.005	$0.027^{***}$
	(0.007)	(0.007)	(0.007)	(0.006)	(0.007)	(0.007)	(0.006)
Constant	0.358***	0.389***	0.311***	0.512***	0.385***	0.494***	0.275***
	(0.062)	(0.064)	(0.066)	(0.053)	(0.063)	(0.065)	(0.055)
N	879	878	877	873	863	861	863
R-squared	0.076	0.061	0.019	0.094	0.059	0.071	0.096
Adj. R-squared	0.064	0.049	0.006	0.083	0.047	0.059	0.084

<sup>\*\*\*</sup>p < .001; \*\*p < .01; \*p < .05

# 2 Estonia

Synthetic variables have been estimated for seven of twelve Estonian parties available in the original 2019 EES Estonian voter study selected according to the criteria stated in the EES 2019 SDM codebook (for the

Table 1.5: Vote choice for a relevant party according to respondents' socio-demographic characteristics (Logistic regression models)

<u> </u>	701	700	700	70.4	<b>70</b> F	<b>7</b> 00	<b>707</b>
	701	702	703	704	705	706	707
	Model 8	Model 9	Model 10	Model 11	Model 12	Model 13	Model 14
$D3\_rec2$	0.515**	-0.193	-0.731**	-0.077	0.870***	0.187	-0.358
	(0.192)	(0.193)	(0.231)	(0.296)	(0.261)	(0.284)	(0.347)
$D8\_rec1$	0.117	0.010	0.420	-0.132	-0.416	-0.015	-0.478
	(0.233)	(0.231)	(0.296)	(0.361)	(0.276)	(0.348)	(0.374)
$D5\_rec1$	0.076	0.409	-0.311	-0.336	-0.073	-0.037	0.197
	(0.201)	(0.212)	(0.234)	(0.310)	(0.259)	(0.296)	(0.374)
$EDU\_rec2$	-0.600	-0.456	0.782	0.759	0.058	-0.279	0.423
	(0.417)	(0.453)	(0.652)	(0.815)	(0.628)	(0.635)	(0.830)
$EDU\_rec3$	-0.378	-0.331	0.420	0.924	0.550	0.012	-0.252
	(0.372)	(0.409)	(0.630)	(0.777)	(0.575)	(0.585)	(0.795)
$D1\_rec1$	0.726**	-0.201	-0.242	0.532	-0.219	0.237	0.011
	(0.232)	(0.216)	(0.241)	(0.365)	(0.272)	(0.320)	(0.392)
$D7\_rec1$	0.128	0.504*	0.127	0.014	0.101	-0.010	0.530
	(0.212)	(0.244)	(0.257)	(0.335)	(0.290)	(0.299)	(0.468)
$D7\_rec2$	-0.556	1.002***	-0.184	0.083	0.558	-2.402*	1.372**
	(0.329)	(0.290)	(0.372)	(0.458)	(0.352)	(1.035)	(0.510)
D6_une1	0.170	0.190	-0.182	-0.597	-0.247	-0.887	-0.474
	(0.363)	(0.407)	(0.496)	(0.744)	(0.545)	(0.741)	(1.039)
D4_age	0.003	0.012	0.024**	-0.012	-0.006	0.004	0.011
	(0.006)	(0.006)	(0.008)	(0.010)	(0.008)	(0.010)	(0.011)
$D10\_rec$	$0.140^{**}$	0.072	-0.010	-0.016	-0.001	-0.327**	0.174
	(0.052)	(0.053)	(0.067)	(0.085)	(0.070)	(0.114)	(0.089)
Constant	-2.591***	-2.585***	-3.560***	-3.101***	$-2.631^{***}$	-2.471**	-4.042***
	(0.513)	(0.537)	(0.757)	(0.925)	(0.700)	(0.758)	(0.999)
N	874	874	874	874	874	874	874
Log Likelihood	-367.620	-361.253	-283.804	-185.078	-250.148	-192.234	-146.097
AIC	759.240	746.506	591.607	394.156	524.297	408.469	316.194

<sup>\*\*\*</sup>p < .001; \*\*p < .01; \*p < .05

criteria see Sect. XXX; for the relevant parties see Table 2.1).

Table 2.1: Estonian relevant parties

Dep. Var.	Party	Party name (eng)
$stack_901$	901	Estonian Reform Party
$stack\_902$	902	Estonian Center Party
$stack\_903$	903	Conservative People's Party of Estonia
$stack\_904$	904	Union for the Republic – Res Publica
$stack\_905$	905	Social Democratic Party
stack_906 stack_907	906 907	Estonia 200 Estonian Greens

Full OLS models converge and coefficients do not show any particular issue (see Table 2.13). In terms of model fit, the adjusted coefficient of determination  $(R^2)$  values vary between a minimum value of 0.028 for party 906 (Estonia 200) and a maximum of 0.063 for party 905 (Social Democratic Party). Moreover, the difference between Akaike Information Criterion (AIC) values for full OLS models and null models shows that in 0 cases out of 7 null models perform better than full ones (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)
$stack_901$	901	645.297	681.225	-35.928
$stack\_902$	902	468.318	482.379	-14.061
$stack_903$	903	523.081	555.418	-32.337
$stack\_904$	904	316.225	331.505	-15.280
$stack\_905$	905	364.945	406.867	-41.922
${\rm stack}\_906$	906	321.048	332.960	-11.912
$stack\_907$	907	171.422	186.800	-15.378

On the contrary, three out of seven logistic regression models (see Table 2.14) show inflated standard errors for some of the coefficients of interest, in particular:

- Model 9: D6\_une;
- Model 13a: EDU\_rec;
- Model 14a: D5\_rec, EDU\_rec, D1\_rec, D6\_une.

Nevertheless, model's 9 constant terms and other regression coefficients are not affected by said inflated standard errors, whereas model 13a and 14a present a more problematic profile.

Model 13a's and 14a's inflated standard errors are due to separation issues. In short, no respondents from respondents with low education did vote for party 906 (see Table 2.8) and no respondents with low education, with high subjective social status, no members of trade unions, and unemployed and only very few respondents married or in partnership as well as married or in a partnership (2 and 9) did vote for party 907 (see Tables 2.9, 2.10, 2.11, 2.12).

As a consequence, a constrained version of model 13 (namely, Model 13b) without said variable was estimated and contrasted with the original (Model 13a), 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 2.3). Consequently, synthetic variables for respondents' vote choice for party 906 have been predicted relying on the constrained model (Model 13b).

Table 2.3: Likelihood-ratio Test between Model 13a (Unconstrained) and Model 13b (Constrained)

Model	Resid. Df	Resid. Dev	Df	Deviance	Pr(>Chi)
Constrained	800	202.6392			
Unconstrained	798	197.9122	2	4.726983	0.0940911

In 2.9 there is no 0 disrupting our logit regression. As a consequence, a constrained version of model 14 (namely, Model 14b\_1) without said variables and without D5\_rec was estimated and contrasted with the original (Model 14a), 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 2.4).

Furthermore, another constrained version of model 14 (namely, Model 14b\_2) without said variables, but with D5\_rec, was estimated and contrasted with the original (Model 14a), full model. Model 14b\_2 is therefore less constrained than 14b\_1 (by D5\_rec). Likelihood-ratio test results show that  $H_0$  (namely, that the constrained model fits better than the full model) cannot be rejected (see Table 2.5).

Then we compared the fit of  $14b\_1$  and  $14b\_2$ . Likelihood-ratio test results show that  $H_0$  (namely, that the 'fuller' constrained model with D5\_rec fits better than the constrained model without D5\_rec) cannot be rejected (see Table 2.5). Consequently, synthetic variables for respondents' vote choice for party 907 have been predicted relying on the less constrained model with D5\_rec (Model  $14b\_2$ ).

Table 2.4: Likelihood-ratio Test between Model 14a (Unconstrained) and Model 14b1 (Constrained and without D5rec)

Model	Resid. Df	Resid. Dev	Df	Deviance	Pr(>Chi)
Constrained	803	84.40316			
Unconstrained	798	73.88477	5	10.51839	0.0618107

Table 2.5: Likelihood-ratio Test between Model 14a (Unconstrained) and Model 14b2 (Constrained and with D5rec)

Model	Resid. Df	Resid. Dev	Df	Deviance	Pr(>Chi)
Constrained	802	78.30208			
Unconstrained	798	73.88477	4	4.417304	0.352466

Table 2.6: Likelihood-ratio Test between Model 14b1 (Constrained and without D5rec, here Constrained) and Model 14b2 (Constrained and with D5rec, here Unconstrained)

Model	Resid. Df	Resid. Dev	Df	Deviance	Pr(>Chi)
Constrained	803	84.40316			
Unconstrained	802	78.30208	1	6.101085	0.0135099

In terms of model fit, adjusted McFadden's pseudo  $R^2$  values for the logistic full models vary between a minimum value of -0.09 for party 907 (Estonian Greens) and a maximum of 0.035 for party 903 (Conservative

People's Party of Estonia). Moreover, the difference between Akaike Information Criterion (AIC) values for logistic full models and null models shows that in 3 cases out of 7 null models perform better than full ones. According to AIC values the related null model appears to have a better fit than Model 13b and 14b\_2 (see Table 2.7).

Table 2.7: Akaike Information Criterion values for logistic full and null models

Dep. Var.	Party	Full Mod.	Null Mod.	Diff. (Full-Null)
stack_901	901	692.70300	705.58000	-12.877000
$stack\_902$	902	508.65000	506.31300	2.337000
$stack_903$	903	507.99000	528.63400	-20.644000
$stack\_904$	904	415.24200	419.58900	-4.347000
$stack\_905$	905	650.16600	649.26800	0.898000
$stack_906$	906	221.91200	211.17100	10.741000
stack_906*	906	222.63922	211.17148	11.467732
$stack\_907$	907	97.88500	91.80200	6.083000
$stack_907*$	907	98.40316	91.80221	6.600954

<sup>\*</sup> AIC value refers to Model 13b for 906\* (constrained) and 14b\_2 for 907\* (constrained and with D5\_rec).

Table 2.8: Cross tabulation between vote choice for party 906 and respondents' education

stack_906/EDU_rec	1	2	3	NA	Total
0	46	456	425	29	956
1	0	9	18	0	27
NA	0	8	8	1	17
Total	46	473	451	30	1000

Table 2.9: Cross tabulation between vote choice for party 907 and respondents' marital status

stack_907/D5_rec	0	1	Total
0	328	644	972
1	2	9	11
NA	7	10	17
Total	337	663	1000

Table 2.10: Cross tabulation between vote choice for party 907 and respondents' education

stack_907/EDU_rec	1	2	3	NA	Total
0	46	463	436	27	972
1	0	2	7	2	11
NA	0	8	8	1	17
Total	46	473	451	30	1000

Table 2.11: Cross tabulation between vote choice for party 907 and respondents' trade union membership

stack_907/D1_rec	0	1	Total
0	880	92	972
1	11	0	11
NA	16	1	17
Total	907	93	1000

Table 2.12: Cross tabulation between vote choice for party 907 and respondents' employment status

stack_907/D6_une	0	1	Total
0	945	27	972
1	11	0	11
NA	16	1	17
Total	972	28	1000

Table 2.13: Propensity to vote for a relevant party according to respondents' socio-demographic characteristics (OLS regression models)

	901	902	903	904	905	906	907
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
$D3\_rec2$	0.042	-0.012	-0.127***	-0.040	0.125***	0.035	0.074***
	(0.025)	(0.023)	(0.024)	(0.021)	(0.021)	(0.021)	(0.019)
$D8\_rec1$	0.012	0.050	-0.080**	-0.111****	0.037	0.027	0.025
	(0.028)	(0.025)	(0.026)	(0.023)	(0.024)	(0.024)	(0.021)
$D5\_rec1$	0.009	-0.022	-0.015	-0.035	0.009	0.026	-0.002
	(0.027)	(0.024)	(0.025)	(0.022)	(0.023)	(0.023)	(0.020)
$EDU\_rec2$	-0.085	0.072	0.010	0.024	-0.017	-0.044	-0.031
	(0.061)	(0.055)	(0.058)	(0.051)	(0.052)	(0.051)	(0.046)
$EDU\_rec3$	-0.033	0.038	-0.013	0.048	0.005	-0.008	-0.007
	(0.061)	(0.055)	(0.058)	(0.051)	(0.052)	(0.051)	(0.046)
D1_rec1	-0.065	0.058	-0.008	-0.060	0.029	-0.040	-0.046
	(0.042)	(0.038)	(0.039)	(0.034)	(0.036)	(0.035)	(0.032)
$D7\_rec1$	0.098***	-0.040	-0.047	0.002	0.013	0.022	0.009
	(0.027)	(0.024)	(0.025)	(0.022)	(0.023)	(0.023)	(0.020)
$D7\_rec2$	0.174***	$-0.079^*$	$-0.084^*$	-0.042	0.061	0.099**	0.032
	(0.042)	(0.038)	(0.039)	(0.035)	(0.035)	(0.035)	(0.031)
D6_une1	-0.105	-0.029	0.031	-0.063	-0.045	0.023	0.071
	(0.075)	(0.067)	(0.069)	(0.061)	(0.063)	(0.063)	(0.056)
D4_age	-0.002*	0.001	0.001	0.001	-0.003***	-0.001*	-0.002***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
$D10\_rec$	-0.026**	0.026***	0.013	-0.001	-0.009	$-0.017^*$	-0.001
	(0.008)	(0.007)	(0.008)	(0.007)	(0.007)	(0.007)	(0.006)
Constant	0.519***	0.269***	0.360***	0.455***	0.421***	0.367***	0.372***
	(0.072)	(0.064)	(0.067)	(0.059)	(0.061)	(0.060)	(0.054)
N	814	817	810	807	814	794	810
R-squared	0.069	0.043	0.065	0.045	0.076	0.042	0.045
Adj. R-squared	0.056	0.030	0.052	0.032	0.063	0.028	0.032

<sup>\*\*\*</sup>p < .001; \*\*p < .01; \*p < .05

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Table 2.14: Vote choice for a relevant party according to respondents' socio-demographic characteristics (Logistic regression models)

	901	$\boldsymbol{902}$	903	904	905	906	906	907	907
	Model 14ax	Model 9	Model 10	Model 11	Model 12	Model 13a	Model 13b	Model 14a	Model 14b2
D3_rec2	0.184	-0.163	-1.365***	$-0.655^{*}$	0.573**	-0.433	-0.464	0.509	0.433
	(0.204)	(0.251)	(0.268)	(0.285)	(0.221)	(0.434)	(0.432)	(0.752)	(0.746)
$D8\_rec1$	0.069	0.451	$-0.570^*$	-0.596*	-0.199	0.125	0.202	-0.633	-0.518
	(0.227)	(0.307)	(0.258)	(0.288)	(0.229)	(0.522)	(0.518)	(0.762)	(0.750)
$D5\_rec1$	0.143	0.010	-0.271	-0.263	-0.113	-0.060	0.041	18.042	17.243
	(0.220)	(0.269)	(0.263)	(0.294)	(0.223)	(0.468)	(0.466)	(2716.366)	(1720.678)
$EDU\_rec2$	-0.280	0.672	0.284	0.362	-0.279	14.771	, ,	16.591	,
	(0.483)	(0.758)	(0.645)	(0.768)	(0.488)	(1012.475)		(6503.809)	
$EDU\_rec3$	-0.003	0.466	0.204	0.355	0.045	15.435		17.656	
	(0.478)	(0.761)	(0.647)	(0.774)	(0.482)	(1012.475)		(6503.809)	
D1_rec1	-0.453	$0.383^{'}$	-0.032	-0.649	$0.171^{'}$	-0.905	-0.818	-18.090	
	(0.377)	(0.369)	(0.427)	(0.612)	(0.331)	(1.036)	(1.033)	(4764.365)	
D7 rec1	$0.550^{*}$	0.089	-0.055	-0.296	$0.142^{'}$	$0.558^{'}$	0.668	0.621	0.699
	(0.223)	(0.266)	(0.266)	(0.291)	(0.229)	(0.481)	(0.473)	(0.892)	(0.874)
$D7\_rec2$	$0.728^{*}$	$0.243^{'}$	$0.244^{'}$	$-1.583^{*}$	$0.492^{'}$	-0.201	-0.021	$0.883^{'}$	$1.200^{'}$
	(0.308)	(0.390)	(0.379)	(0.750)	(0.321)	(0.830)	(0.816)	(1.047)	(1.017)
D6_une1	-1.156	-15.146	0.291	-0.586	$0.087^{'}$	$0.252^{'}$	$0.282^{'}$	-17.502	, ,
	(1.034)	(794.955)	(0.667)	(1.052)	(0.639)	(1.073)	(1.063)	(8763.359)	
D4_age	0.018**	0.019*	0.012	$0.020^{*}$	0.006	-0.012	-0.010	-0.013	-0.012
_ 0	(0.006)	(0.008)	(0.008)	(0.009)	(0.006)	(0.014)	(0.013)	(0.024)	(0.023)
D10 rec	$-0.228^{**}$	$0.117^{'}$	$0.150^{*}$	0.020	$-0.171^{*}$	-0.097	-0.104	-0.585	-0.601
	(0.080)	(0.072)	(0.069)	(0.088)	(0.081)	(0.162)	(0.164)	(0.518)	(0.524)
Constant	$-2.850^{***}$	$-4.260^{***}$	$-2.061^{**}$	$-2.751^{**}$	-2.198****	-18.036	-3.238****	-38.761	-21.035
	(0.590)	(0.916)	(0.732)	(0.884)	(0.577)	(1012.475)	(0.908)	(7048.274)	(1720.678)
N	810	810	810	810	810	810	810	810	810
Log Likelihood	-334.351	-242.325	-241.995	-195.621	-313.083	-98.956	-101.320	-36.942	-39.151
AIC	692.703	508.650	507.990	415.242	650.166	221.912	222.639	97.885	94.302

<sup>\*\*\*</sup>p < .001; \*\*p < .01; \*p < .05

### 3 Germany

Synthetic variables have been estimated for all of German parties available in the original 2019 EES German 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: German relevant parties

Dep. Var.	Party	Party name (eng)
stack_801	801	Christian Democratic Union / Christian Social Union
$stack_802$	802	Sozialdemokratische Partei Deutschlands (SPD)
$stack_805$	805	Free Democratic Party
$stack_803$	803	Alliance 90 / The Greens
$stack_804$	804	The Left
stack_807	807	Alternative for Germany
$stack_806$	806	Pirates

Full OLS models converge and coefficients do not show any particular issue (see Table 3.4). In terms of model fit, the adjusted coefficient of determination  $(R^2)$  values vary between a minimum value of 0.023 for party 807 (Alternative for Germany) and a maximum of 0.131 for party 806 (Pirates). Moreover, the difference between Akaike Information Criterion (AIC) values for full OLS models and null models shows that in 0 cases out of 7 null models perform better than full ones (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_801	801	629.185	723.798	-94.612
$stack_802$	802	479.527	515.917	-36.390
$stack\_805$	805	395.771	446.781	-51.009
$stack\_803$	803	730.198	749.883	-19.685
$stack_804$	804	562.801	597.527	-34.726
$stack\_807$	807	624.656	634.098	-9.442
$\rm stack\_806$	806	69.436	178.350	-108.914

On the contrary, one out of seven logistic regression models (see Table 3.5) show inflated standard errors for one of the coefficients of interest, in particular:

#### • Model 10: D6\_une

Nevertheless, model's 10 constant term and other regression coefficients are not affected by said inflated standard error. Therefore, we do not adapt the model.

In terms of model fit, adjusted McFadden's pseudo  $R^2$  values for the logistic full models vary between a minimum value of -0.127 for party 806 (Pirates) and a maximum of 0.069 for party 801 (Christian Democratic Union / Christian Social Union). Moreover, the difference between Akaike Information Criterion (AIC) values for logistic full models and null models shows that in 1 case out of 7 null models perform better than full ones (see Table 3.3).

Table 3.3: Akaike Information Criterion values for logistic full and null models

Dep. Var.	Party	Full Mod.	Null Mod.	Diff. (Full-Null)
$stack_801$	801	784.360	844.663	-60.303
$stack_802$	802	591.380	602.235	-10.855
$stack_805$	805	370.949	373.555	-2.607
$stack_803$	803	849.094	850.477	-1.383
$stack_804$	804	375.615	384.835	-9.220
$stack_807$	807	592.287	593.786	-1.500
$stack_806$	806	123.057	111.226	11.831

Table 3.4: Propensity to vote for a relevant party according to respondents' socio-demographic characteristics (OLS regression models)

	801	802	805	803	804	807	806
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
D3_rec2	-0.038	0.004	0.025	0.039	-0.006	-0.019	-0.016
	(0.024)	(0.022)	(0.021)	(0.025)	(0.023)	(0.024)	(0.017)
$D8\_rec1$	-0.039	0.022	-0.032	0.029	0.012	-0.021	0.036
	(0.027)	(0.025)	(0.024)	(0.029)	(0.026)	(0.027)	(0.020)
$D5\_rec1$	-0.002	-0.0003	0.019	-0.059*	-0.022	0.089***	0.031
	(0.025)	(0.023)	(0.022)	(0.027)	(0.024)	(0.025)	(0.018)
$EDU\_rec2$	-0.032	-0.029	0.0001	-0.009	-0.018	-0.063	-0.022
	(0.042)	(0.038)	(0.037)	(0.044)	(0.040)	(0.042)	(0.031)
EDU_rec3	0.001	-0.011	0.021	0.028	0.012	-0.052	0.029
	(0.043)	(0.039)	(0.038)	(0.045)	(0.041)	(0.043)	(0.031)
D1_rec1	-0.026	0.145***	0.009	0.096**	0.143***	0.018	0.096***
	(0.030)	(0.028)	(0.027)	(0.032)	(0.029)	(0.030)	(0.022)
D7_rec1	0.090***	0.029	0.044	0.082**	$-0.074^{**}$	$-0.088^{***}$	-0.056**
	(0.026)	(0.024)	(0.023)	(0.028)	(0.025)	(0.026)	(0.019)
$D7\_rec2$	0.180***	-0.010	0.159***	0.101*	-0.162***	-0.071	-0.081**
	(0.038)	(0.035)	(0.033)	(0.040)	(0.036)	(0.037)	(0.027)
D6_une1	-0.209**	-0.109	-0.111	-0.123	0.040	0.018	0.014
	(0.066)	(0.060)	(0.058)	(0.071)	(0.064)	(0.066)	(0.049)
D4_age	0.002**	$0.001^*$	0.0003	-0.001	-0.002*	-0.001	-0.005***
-	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
D10_rec	0.045***	0.018**	0.029***	0.011	-0.007	0.002	0.005
	(0.006)	(0.006)	(0.006)	(0.007)	(0.006)	(0.006)	(0.005)
Constant	0.254***	0.249***	0.258***	0.427***	0.451***	0.354***	0.392***
	(0.059)	(0.054)	(0.052)	(0.063)	(0.057)	(0.059)	(0.043)
N	866	865	862	867	863	868	854
R-squared	0.126	0.065	0.081	0.047	0.064	0.036	0.142
Adj. R-squared	0.115	0.053	0.069	0.035	0.052	0.023	0.131

<sup>\*\*\*</sup>p < .001; \*\*p < .01; \*p < .05

# 4 Luxembourg

Synthetic variables have been estimated for seven of ten of Luxembourgian parties available in the original 2019 EES Luxembourgian voter study selected according to the criteria stated in the EES 2019 SDM

Table 3.5: Vote choice for a relevant party according to respondents' socio-demographic characteristics (Logistic regression models)

·	801	802	805	803	804	807	806
	Model 8	Model 9	Model 10	Model 11	Model 12	Model 13	Model 14
D3_rec2	-0.462*	-0.152	0.177	0.317	0.353	-0.552*	0.521
	(0.188)	(0.226)	(0.308)	(0.178)	(0.307)	(0.230)	(0.675)
$D8\_rec1$	-0.345	0.293	0.251	0.397	-0.178	-0.103	1.212
	(0.204)	(0.275)	(0.374)	(0.219)	(0.340)	(0.255)	(1.070)
D5_rec1	-0.041	-0.063	0.581	-0.190	0.030	0.384	0.274
	(0.197)	(0.240)	(0.361)	(0.185)	(0.316)	(0.244)	(0.705)
$EDU\_rec2$	0.194	0.781	-0.128	0.016	-0.383	-0.102	-0.705
	(0.338)	(0.499)	(0.576)	(0.324)	(0.490)	(0.378)	(0.904)
$EDU\_rec3$	0.172	0.778	-0.001	0.276	-0.035	-0.512	-1.013
	(0.344)	(0.503)	(0.576)	(0.327)	(0.503)	(0.401)	(0.984)
$D1\_rec1$	-0.498*	0.903***	-0.387	0.057	0.850*	-0.241	-0.384
	(0.248)	(0.256)	(0.419)	(0.226)	(0.356)	(0.311)	(0.892)
$D7\_rec1$	$0.450^{*}$	0.321	0.620	0.289	-0.881**	$-0.492^{*}$	-0.790
	(0.215)	(0.257)	(0.403)	(0.203)	(0.317)	(0.241)	(0.755)
$D7\_rec2$	0.584*	0.084	1.271**	0.676*	$-2.589^*$	-0.566	0.100
	(0.288)	(0.374)	(0.462)	(0.269)	(1.033)	(0.382)	(0.902)
D6_une1	-1.543	-0.880	-13.943	-0.347	$1.165^{*}$	-0.078	$1.051^{'}$
	(1.035)	(1.038)	(716.816)	(0.561)	(0.551)	(0.640)	(1.166)
D4_age	0.023***	0.027***	0.018	$-0.011^*$	0.010	0.010	-0.039
	(0.006)	(0.007)	(0.010)	(0.005)	(0.010)	(0.007)	(0.021)
D10 rec	0.287***	$0.020^{'}$	0.109	-0.067	-0.193	-0.126	$0.095^{'}$
	(0.044)	(0.058)	(0.074)	(0.049)	(0.101)	(0.070)	(0.151)
Constant	-2.966****	$-4.761^{***}$	-5.038****	$-1.549^{***}$	$-2.698^{***}$	$-1.795^{**}$	$-3.307^{*}$
	(0.498)	(0.694)	(0.879)	(0.449)	(0.755)	(0.568)	(1.607)
N	871	871	871	871	871	871	871
Log Likelihood	-380.180	-283.690	-173.474	-412.547	-175.807	-284.143	-49.528
AIC	784.360	591.380	370.949	849.094	375.615	592.287	123.057

<sup>\*\*\*</sup>p < .001; \*\*p < .01; \*p < .05

codebook (for the criteria see Sect. XXX; for the relevant parties see Table 4.1).

Table 4.1: Luxembourgian relevant parties

Dep. Var.	Party	Party name (eng)
$stack_1801$	1801	Christian Social People's Party
$\rm stack\_1802$	1802	Socialist Workers' Party
$\rm stack\_1803$	1803	Democratic Party
$stack_1804$	1804	The Greens
$\rm stack\_1805$	1805	The Left
stack_1806 stack 1807	1806 1807	Alternative Democratic Reform Party Pirate Party of Luxembourg

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 0.015 for party 1806 (Alternative Democratic Reform Party) and a maximum of 0.135 for party 1804 (The Greens). Moreover, the difference between Akaike Information Criterion (AIC) values for full OLS models and null models shows that in 1 case out of 7 null models perform better than full ones (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_1801	1801	310.058	321.535	-11.478
$stack_1802$	1802	198.824	208.287	-9.462
$stack_1803$	1803	252.843	277.718	-24.875
$stack_1804$	1804	265.151	320.320	-55.169
$stack\_1805$	1805	161.525	168.247	-6.722
$stack_1806$	1806	55.842	51.752	4.090
$stack_1807$	1807	29.092	45.389	-16.297

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

• Model 8, 9, 10 and 12: D6\_une.

Nevertheless, models 8, 9, 10 and 12 constant term and other regression coefficients are not affected by said inflated standard error. Therefore, we do not adapt the model.

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 1805 (The Left) and a maximum of 0.022 for party 1801 (Christian Social People's Party). Moreover, the difference between Akaike Information Criterion (AIC) values for logistic full models and null models shows that in 6 cases out of 7 null models perform better than full ones (see Table 4.3).

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

Dep. Var.	Party	Full Mod.	Null Mod.	Diff. (Full-Null)
stack_1801	1801	374.918	385.253	-10.335
$stack\_1802$	1802	278.328	270.650	7.678
$stack_1803$	1803	433.884	426.431	7.453
$stack\_1804$	1804	415.830	408.096	7.735
$stack\_1805$	1805	201.244	188.620	12.624
stack_1806	1806 1807	179.510 156.210	171.048	8.461 3.645
stack_1807	1807	156.219	152.574	3.645

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

	1801	1802	1803	1804	1805	1806	1807
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
$D3\_rec2$	0.007	-0.008	0.010	0.056	0.006	-0.027	0.005
	(0.032)	(0.029)	(0.030)	(0.031)	(0.027)	(0.024)	(0.024)
$D8\_rec1$	-0.002	-0.028	0.021	-0.0004	-0.003	0.012	-0.016
	(0.032)	(0.029)	(0.030)	(0.031)	(0.028)	(0.025)	(0.024)
$D5\_rec1$	0.016	-0.029	-0.051	-0.034	-0.014	0.001	-0.058*
	(0.036)	(0.032)	(0.034)	(0.034)	(0.030)	(0.027)	(0.026)
$EDU\_rec2$	0.109	0.169**	0.082	-0.040	-0.052	0.064	$-0.087^{*}$
	(0.060)	(0.053)	(0.056)	(0.057)	(0.051)	(0.046)	(0.044)
$EDU\_rec3$	0.106	0.099	0.077	0.034	0.013	0.018	-0.082
	(0.057)	(0.051)	(0.054)	(0.055)	(0.049)	(0.044)	(0.042)
D1_rec1	0.004	0.060*	-0.045	-0.036	-0.009	-0.007	-0.025
	(0.032)	(0.029)	(0.031)	(0.031)	(0.028)	(0.025)	(0.024)
$D7\_rec1$	0.005	0.096*	$0.171^{***}$	$0.175^{***}$	-0.012	-0.032	0.031
	(0.045)	(0.041)	(0.043)	(0.043)	(0.039)	(0.035)	(0.034)
$D7\_rec2$	-0.023	0.154***	0.198***	0.218***	-0.011	-0.030	-0.012
	(0.048)	(0.043)	(0.045)	(0.046)	(0.041)	(0.037)	(0.035)
D6_une1	-0.188	-0.012	-0.218*	-0.167	0.096	$0.215^{*}$	0.170*
	(0.114)	(0.107)	(0.107)	(0.108)	(0.097)	(0.092)	(0.084)
D4_age	-0.0002	-0.002**	-0.002*	-0.005***	-0.003***	-0.001	-0.003***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
$D10\_rec$	0.050***	-0.002	-0.002	-0.010	-0.013	0.016*	-0.002
	(0.010)	(0.009)	(0.009)	(0.009)	(0.008)	(0.007)	(0.007)
Constant	0.281***	0.307***	0.370***	0.528***	0.435***	0.185**	0.423***
	(0.080)	(0.072)	(0.076)	(0.077)	(0.068)	(0.062)	(0.059)
N	454	449	453	454	453	446	453
R-squared	0.071	0.068	0.098	0.156	0.061	0.039	0.081
Adj. R-squared	0.048	0.044	0.076	0.135	0.038	0.015	0.058

<sup>\*\*\*</sup>p < .001; \*\*p < .01; \*p < .05

## 5 Malta

Synthetic variables have been estimated for the full set of Maltese parties (5) available in the original 2019 EES Maltese voter study selected according to the criteria stated in the EES 2019 SDM codebook ( for the

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

	1801	1802	1803	1804	1805	1806	1807
	Model 8	Model 9	Model 10	Model 11	Model 12	Model 13	Model 14
D3_rec2	0.268	-0.019	-0.020	0.162	0.386	-0.586	0.254
	(0.281)	(0.345)	(0.254)	(0.261)	(0.435)	(0.477)	(0.520)
$D8\_rec1$	-0.194	0.162	0.082	0.042	0.195	-0.857	-0.644
	(0.279)	(0.352)	(0.258)	(0.266)	(0.446)	(0.474)	(0.510)
D5_rec1	-0.239	0.140	0.341	-0.101	-0.361	0.196	-0.749
	(0.302)	(0.381)	(0.300)	(0.290)	(0.451)	(0.530)	(0.524)
$EDU\_rec2$	1.396*	0.517	0.531	-0.399	-0.402	-0.048	-0.395
	(0.673)	(0.602)	(0.588)	(0.492)	(0.753)	(0.732)	(0.698)
$EDU\_rec3$	$1.241^{'}$	-0.407	0.622	-0.098	$0.050^{'}$	-0.547	-0.975
	(0.670)	(0.607)	(0.563)	(0.450)	(0.687)	(0.734)	(0.687)
D1_rec1	0.155	0.589	-0.163	-0.085	0.460	0.400	0.363
	(0.281)	(0.349)	(0.258)	(0.267)	(0.447)	(0.472)	(0.534)
D7_rec1	-0.679	-0.598	0.888*	0.580	-0.889	0.098	-0.176
	(0.365)	(0.479)	(0.448)	(0.418)	(0.552)	(0.565)	(0.569)
$D7\_rec2$	-0.715	0.262	0.810	0.559	-0.778	-0.881	-1.481
	(0.387)	(0.462)	(0.463)	(0.435)	(0.583)	(0.723)	(0.857)
D6_une1	-14.963	-14.421	-14.970	-0.132	-13.908	1.487	$1.233^{'}$
	(900.955)	(885.351)	(885.011)	(1.098)	(866.852)	(1.158)	(1.224)
D4_age	0.020*	-0.012	0.003	-0.014	0.0003	0.004	-0.014
	(0.008)	(0.011)	(0.008)	(0.008)	(0.013)	(0.015)	(0.016)
$D10\_rec$	0.227**	0.052	0.004	-0.175	-0.199	-0.117	-0.116
	(0.073)	(0.097)	(0.075)	(0.091)	(0.155)	(0.159)	(0.172)
Constant	-3.584****	$-2.113^*$	-3.105****	-1.053	$-2.287^*$	$-2.236^*$	-0.945
	(0.854)	(0.837)	(0.769)	(0.654)	(0.997)	(1.116)	(1.030)
N	443	443	443	443	443	443	443
Log Likelihood	-175.459	-127.164	-204.942	-195.915	-88.622	-77.755	-66.109
AIC	374.918	278.328	433.884	415.830	201.244	179.510	156.219

<sup>\*\*\*</sup>p < .001; \*\*p < .01; \*p < .05

criteria see Sect. XXX; for the relevant parties see Table 5.1).

Table 5.1: Maltese relevant parties

Dep. Var.	Party	Party name (eng)
stack_1901	1901	Labour Party
$stack\_1902$	1902	Nationalist Party
$stack_1903$	1903	Democratic Alternative
$stack\_1904$	1904	Democratic Party
$\rm stack\_1905$	1905	Imperium Europa

Full OLS models converge and coefficients do not show any particular issue (see Table 5.19). In terms of model fit, the adjusted coefficient of determination ( $R^2$ ) values vary between a minimum value of 0.059 for party 1901 (Labour Party) and a maximum of 0.112 for party 1904 (Democratic Party). Moreover, the difference between Akaike Information Criterion (AIC) values for full OLS models and null models shows that in 0 cases out of 5 null models perform better than full ones (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_1901	1901	329.706	341.135	-11.429
$stack\_1902$	1902	242.091	269.234	-27.143
$stack_1903$	1903	5.845	26.449	-20.603
$stack_1904$	1904	-81.147	-48.198	-32.949
$stack_1905$	1905	-60.311	-48.173	-12.138

On the contrary, three out of five logistic regression models (see Table 5.20) show inflated standard errors for some of the coefficients of interest, in particular:

- Model 8a: D8\_rec, EDU\_rec, D1\_rec, D7\_rec (only for category 2), D6\_une;
- Model 9a: D8\_rec, D7\_rec (for category 1 and 2), D6\_une;
- Model 10a: D8\_rec, EDU\_rec (only for category 3), D7\_rec (only for category 2), D6\_une.

Models 8a, 9a and 10a constant terms and other regression coefficients are affected by the above mentioned variables' inflated standard error showing unusual values.

Model 8a inflated standard errors are due to separation issues. In short, no respondents from rural areas, with low education, with high subjective social status, members of trade unions, and unemployed did vote for party 1903 (see Tables 5.7, 5.8, 5.9, 5.10, 5.11, ??).

Model 9a inflated standard errors are due to separation issues. In short, no respondents from rural areas, with NA in their subjective social status and NA in their employment information did vote for party 1904 (see Tables 5.12, 5.13, 5.14).

Model 10a inflated standard errors are due to separation issues. In short, no respondents from rural areas, with high education or NA in their education information, with high subjective social status, members of trade unions, and unemployed or NA in their employment information did vote for party 1905 (see Tables 5.15, 5.16, 5.17, 5.18).

As a consequence, constrained versions of model 8, 9 and 10 (namely, Model 8b, 9b and 10b) without said variables were estimated and contrasted with the originals (Model 8a, 9a and 10a), full model.

For model 8 Likelihood-ratio test results show that  $H_0$  (namely, that the constrained model fits better than the full model) is rejected (see Table 5.3). Consequently, synthetic variables for respondents' vote choice for party 1903 have been predicted relying on the unconstrained model (Model 8a).

For model 9 Likelihood-ratio test results show that  $H_0$  (namely, that the constrained model fits better than the full model) can not be rejected (see Table 5.4). Consequently, synthetic variables for respondents' vote choice for party 1904 have been predicted relying on the constrained model (Model 9b).

For model 10 Likelihood-ratio test results show that  $H_0$  (namely, that the constrained model fits better than the full model) can not be rejected (see Table 5.5). Consequently, synthetic variables for respondents' vote choice for party 1905 have been predicted relying on the constrained model (Model 10b).

Table 5.3: Likelihood-ratio Test between Model 8a (Unconstrained) and Model 8b (Constrained)

Model	Resid. Df	Resid. Dev	Df	Deviance	Pr(>Chi)
Constrained	320	43.05034			
Unconstrained	313	28.50452	7	14.54582	0.0422826

Table 5.4: Likelihood-ratio Test between Model 9a (Unconstrained) and Model 9b (Constrained)

Model	Resid. Df	Resid. Dev	Df	Deviance	Pr(>Chi)
Constrained	317	54.51011			
Unconstrained	313	45.21436	4	9.295746	0.0541177

Table 5.5: Likelihood-ratio Test between Model 10a (Unconstrained) and Model 10b (Constrained)

Model	Resid. Df	Resid. Dev	Df	Deviance	Pr(>Chi)
Constrained	319	62.52901			
Unconstrained	313	53.36654	6	9.16247	0.164645

In terms of model fit, adjusted McFadden's pseudo  $R^2$  values for the logistic full models vary between a minimum value of -0.158 for party 1904 (Democratic Party) and a maximum of 0.042 for party 1901 (Labour Party). Moreover, the difference between Akaike Information Criterion (AIC) values for logistic full models and null models shows that in 2 cases out of 5 null models perform better than full ones. According to AIC values the related null model appears to have a better fit than Model 9b and 10b (see Table 5.6).

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

Dep. Var.	Party	Full Mod.	Null Mod.	Diff. (Full-Null)
$stack_1901$	1901	430.16300	450.91700	-20.753000
$stack_1902$	1902	324.72700	338.04900	-13.321000
$stack_1903$	1903	52.50500	53.66700	-1.162000
$stack_1904$	1904	69.21400	61.79300	7.421000
stack_1904*	1904	70.51011	61.79333	8.716779
stack_1905	1905	77.36700	69.57900	7.788000
stack_1905*	1905	74.52901	69.57895	4.950063

 $<sup>^*\,\</sup>rm AIC$  value refers to Model 9b for 1904\* (constrained) and to Model 10b for 1905\* (constrained).

Table 5.7: Cross tabulation between vote choice for party 1903 and respondents' area of residency

stack_1903/D8_rec	0	1	Total
0	4	367	371
1	0	6	6
NA	8	118	126
Total	12	491	503

Table 5.8: Cross tabulation between vote choice for party 1903 and respondents' education

stack_1903/EDU_rec	1	2	3	NA	Total
0	114	173	72	12	371
1	0	2	4	0	6
NA	33	61	31	1	126
Total	147	236	107	13	503

Table 5.9: Cross tabulation between vote choice for party 1903 and respondents' subjective SES

stack_1903/D1_rec	0	1	NA	Total
0	284	79	8	371
1	6	0	0	6
NA	97	24	5	126
Total	387	103	13	503

Table 5.10: Cross tabulation between vote choice for party 1903 and respondents' trade union membership

stack_1903/D7_rec	0	1	2	NA	Total
0	127	192	38	14	371
1	1	5	0	0	6
NA	40	60	13	13	126
Total	168	257	51	27	503

Table 5.11: Cross tabulation between vote choice for party 1903 and respondents' employment status

stack_1903/D6_une	0	1	NA	Total
0	352	17	2	371
1	6	0	0	6
NA	117	9	0	126
Total	475	26	2	503

Table 5.12: Cross tabulation between vote choice for party 1904 and respondents' area of residency

stack_1904/D8_rec	0	1	Total
0	4	366	370
1	0	7	7
NA	8	118	126
Total	12	491	503

Table 5.13: Cross tabulation between vote choice for party 1904 and respondents' subjective SES

stack_1904/D7_rec	0	1	2	NA	Total
0	127	194	35	14	370
1	1	3	3	0	7
NA	40	60	13	13	126
Total	168	257	51	27	503

Table 5.14: Cross tabulation between vote choice for party 1904 and respondents' employment status

stack_1904/D6_une	0	1	NA	Total
0	352	16	2	370
1	6	1	0	7
NA	117	9	0	126
Total	475	26	2	503

Table 5.15: Cross tabulation between vote choice for party 1905 and respondents' area of residency

stack_1905/D8_rec	0	1	Total
0	4	364	368
1	0	9	9
NA	8	118	126
Total	12	491	503

Table 5.16: Cross tabulation between vote choice for party 1905 and respondents' education

$stack_1905/EDU_rec$	1	2	3	NA	Total
0	111	169	76	12	368
1	3	6	0	0	9
NA	33	61	31	1	126
Total	147	236	107	13	503

Table 5.17: Cross tabulation between vote choice for party 1905 and respondents' subjective SES

stack_1905/D7_rec	0	1	2	NA	Total
0	122	195	38	13	368
1	6	2	0	1	9
NA	40	60	13	13	126
Total	168	257	51	27	503

Table 5.18: Cross tabulation between vote choice for party 1905 and respondents' trade union membership

stack_1905/D6_une	0	1	NA	Total
0	349	17	2	368
1	9	0	0	9
NA	117	9	0	126
Total	475	26	2	503

Table 5.19: Propensity to vote for a relevant party according to respondents' socio-demographic characteristics (OLS regression models)

	1901	1902	1903	1904	1905
	Model 1	Model 2	Model 3	Model 4	Model 5
D3_rec2	0.006	0.019	0.052*	0.035	0.022
	(0.040)	(0.035)	(0.025)	(0.023)	(0.023)
$D8\_rec1$	-0.055	0.123	0.070	0.107	0.080
	(0.120)	(0.112)	(0.081)	(0.072)	(0.074)
$D5\_rec1$	0.052	-0.062	-0.034	-0.037	$-0.059^*$
	(0.046)	(0.041)	(0.029)	(0.026)	(0.027)
$EDU\_rec2$	-0.096*	0.006	0.024	0.004	0.039
	(0.046)	(0.041)	(0.030)	(0.026)	(0.027)
$EDU\_rec3$	-0.169**	0.147**	0.125***	0.064	-0.027
	(0.058)	(0.052)	(0.038)	(0.033)	(0.034)
D1_rec1	0.087	-0.051	0.012	0.013	0.001
	(0.048)	(0.042)	(0.031)	(0.027)	(0.028)
$D7\_rec1$	-0.145***	$0.117^{**}$	0.021	0.039	0.009
	(0.042)	(0.038)	(0.027)	(0.024)	(0.025)
$D7\_rec2$	-0.198**	0.240***	0.063	0.095*	-0.005
	(0.074)	(0.065)	(0.047)	(0.041)	(0.043)
D6_une1	-0.048	0.164*	-0.054	-0.040	0.015
	(0.086)	(0.080)	(0.055)	(0.049)	(0.052)
D4_age	-0.001	-0.001	-0.002**	-0.003***	-0.003***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
$D10\_rec$	0.005	$0.017^{*}$	-0.001	0.004	0.006
	(0.008)	(0.007)	(0.005)	(0.005)	(0.005)
Constant	0.831***	0.122	0.155	0.115	0.132
	(0.141)	(0.130)	(0.094)	(0.084)	(0.086)
N	367	364	369	369	368
R-squared	0.087	0.126	0.109	0.138	0.089
Adj. R-squared	0.059	0.099	0.082	0.112	0.060

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

Table 5.20: Vote choice for a relevant party according to respondents' socio-demographic characteristics (Logistic regression models)

	1901	1902	1903	1904	1905		
	Model 10ax	Model 2	Model 8	Model 9a	Model 9b	Model 10a	Model 10b
$D3$ _rec2	-0.273	0.120	-2.373	-1.472	-1.501	-0.175	-0.243
	(0.241)	(0.295)	(1.456)	(1.152)	(1.112)	(0.825)	(0.784)
D8_rec1	-1.150	0.036	16.045	17.191	,	16.553	, ,
	(1.220)	(1.207)	(20644.170)	(13257.050)		(13817.140)	
D5_rec1	$0.567^{'}$	-0.150	2.365	-1.080	-1.162	-1.927*	-1.720
	(0.293)	(0.345)	(1.765)	(0.982)	(0.964)	(0.956)	(0.918)
$EDU\_rec2$	$-0.667^{*}$	0.483	18.858	$0.987^{'}$	$1.012^{'}$	$0.757^{'}$	` ,
	(0.283)	(0.374)	(3573.824)	(1.382)	(1.155)	(0.885)	
$EDU\_rec3$	-0.944**	$0.965^{*}$	20.619	-0.503	0.254	-17.021	
	(0.358)	(0.437)	(3573.824)	(1.531)	(1.442)	(3155.295)	
D1 rec1	$0.586^{*}$	-0.254	$-19.465^{'}$	$0.631^{'}$	$0.659^{'}$	-0.199	-0.474
	(0.291)	(0.368)	(4242.759)	(0.964)	(0.921)	(1.138)	(1.111)
D7_rec1	$-0.845^{***}$	1.162**	1.069	17.398	,	-1.467	,
	(0.256)	(0.365)	(1.345)	(2515.151)		(0.871)	
$D7\_rec2$	$-1.376^{**}$	ì.581**	-18.841	19.153		-18.140	
	(0.448)	(0.502)	(5649.703)	(2515.151)		(4450.592)	
D6 une1	-0.592	$1.025^{'}$	$-15.497^{'}$	$-15.807^{'}$		$-17.591^{'}$	
	(0.579)	(0.602)	(9581.531)	(6595.269)		(6560.746)	
D4 age	0.007	0.024**	-0.165	0.006	0.013	0.004	0.004
	(0.007)	(0.009)	(0.087)	(0.028)	(0.025)	(0.023)	(0.021)
D10 rec	-0.007	$0.065^{'}$	-0.380	-0.020	-0.032	-0.031	-0.030
	(0.050)	(0.063)	(0.259)	(0.175)	(0.169)	(0.159)	(0.146)
Constant	$1.423^{'}$	$-4.154^{**}$	-33.126	-38.375	$-4.118^{**}$	-18.828	$-2.846^{**}$
	(1.320)	(1.400)	(20951.230)	(13493.530)	(1.525)	(13817.140)	(1.016)
N	325	325	325	325	325	325	$\stackrel{}{3}25$
Log Likelihood	-203.082	-150.364	-14.252	-22.607	-27.255	-26.683	-31.265
AIC	430.163	324.727	52.505	69.214	70.510	77.367	74.529

<sup>\*\*\*</sup>p < .001; \*\*p < .01; \*p < .05

#### 6 Netherlands

Synthetic variables have been estimated for nine of 16 Dutch parties available in the original 2019 EES Dutch 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: Dutch relevant parties

Dep. Var.	Party	Party name (eng)
stack_2001	2001	People's Party for Freedom and Democracy
$\rm stack\_2002$	2002	Party of Freedom
$stack_2003$	2003	Christian Democratic Appeal
$stack\_2004$	2004	Democrats '66
$stack_2005$	2005	Green Left
$stack\_2006$	2006	Socialist Party
$stack_2007$	2007	Labour Party
$stack\_2008$	2008	Christian Union
stack_2012	2012	Forum for Democracy

Full OLS models converge and coefficients do not show any particular issue (see Table 6.4). In terms of model fit, the adjusted coefficient of determination ( $R^2$ ) values vary between a minimum value of 0.035 for party 2007 (Labour Party) and a maximum of 0.281 for party 2008 (Christian Union). Moreover, the difference between Akaike Information Criterion (AIC) values for full OLS models and null models shows that in 0 cases out of 9 null models perform better than full ones (see Table 6.2).

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

Dep. Var.	Party	Full Mod.	Null Mod.	Diff. (Full-Null)
stack_2001	2001	453.942	531.738	-77.797
$stack\_2002$	2002	548.437	581.994	-33.558
$stack_2003$	2003	214.898	350.169	-135.270
$stack\_2004$	2004	330.452	390.042	-59.590
$stack_2005$	2005	474.268	525.482	-51.214
$\mathrm{stack}\_2006$	2006	335.676	364.542	-28.866
$stack_2007$	2007	428.915	448.610	-19.694
$stack\_2008$	2008	46.234	315.802	-269.567
stack_2012	2012	624.523	658.327	-33.805

Full logit models converge and coefficients do not show any particular issue (see Table 6.5).

In terms of model fit, adjusted McFadden's pseudo  $R^2$  values for the logistic full models vary between a minimum value of -0.045 for party 2006 (Socialist Party) and a maximum of 0.432 for party 2008 (Christian Union). Moreover, the difference between Akaike Information Criterion (AIC) values for logistic full models and null models shows that in 4 cases out of 9 null models perform better than full ones (see Table 6.3).

Table 6.3: Akaike Information Criterion values for logistic full and null models

Dep. Var.	Party	Full Mod.	Null Mod.	Diff. (Full-Null)
stack_2001	2001	480.979	489.018	-8.039
$\rm stack\_2002$	2002	357.226	353.172	4.055
$stack_2003$	2003	316.879	317.798	-0.919
$stack_2004$	2004	250.224	247.659	2.565
$\rm stack\_2005$	2005	364.959	364.576	0.383
$\rm stack\_2006$	2006	342.596	329.791	12.805
$stack_2007$	2007	636.547	643.259	-6.712
$stack\_2008$	2008	165.479	293.155	-127.676
stack_2012	2012	618.969	639.394	-20.425

Table 6.4: Propensity to vote for a relevant party according to respondents' socio-demographic characteristics (OLS regression models)

	2001	2002	2003	2004	2005	2006	2007	2008	2012
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9
$D3\_rec2$	-0.074***	-0.096***	-0.036	-0.005	0.023	0.007	-0.019	-0.004	-0.103***
	(0.022)	(0.023)	(0.019)	(0.020)	(0.022)	(0.020)	(0.022)	(0.017)	(0.024)
$D8\_rec1$	-0.023	-0.041	-0.056**	-0.014	0.039	0.050*	0.027	-0.024	-0.045
	(0.024)	(0.025)	(0.021)	(0.022)	(0.024)	(0.022)	(0.024)	(0.019)	(0.027)
$D5\_rec1$	0.005	0.029	0.022	-0.029	$-0.052^*$	-0.025	-0.023	0.006	0.037
	(0.023)	(0.024)	(0.020)	(0.021)	(0.023)	(0.022)	(0.023)	(0.018)	(0.026)
$EDU\_rec2$	-0.056	0.024	-0.055	-0.047	-0.105*	-0.001	-0.098*	-0.059	0.022
	(0.041)	(0.043)	(0.036)	(0.038)	(0.042)	(0.038)	(0.040)	(0.032)	(0.046)
$EDU\_rec3$	0.003	-0.0002	-0.007	0.023	-0.030	0.043	-0.041	-0.014	0.058
	(0.040)	(0.042)	(0.034)	(0.037)	(0.040)	(0.037)	(0.039)	(0.031)	(0.044)
D1_rec1	0.010	0.069**	0.032	0.056*	$0.057^{*}$	0.076***	0.103***	0.033	0.034
	(0.024)	(0.026)	(0.021)	(0.023)	(0.025)	(0.023)	(0.024)	(0.019)	(0.027)
$D7\_rec1$	0.117***	-0.049	$0.055^{*}$	0.045	0.003	$-0.052^*$	0.020	0.0003	-0.050
	(0.025)	(0.027)	(0.022)	(0.023)	(0.026)	(0.024)	(0.025)	(0.020)	(0.028)
$D7\_rec2$	0.188***	-0.102**	0.095***	0.077**	-0.005	-0.127***	0.014	0.014	-0.100**
	(0.031)	(0.033)	(0.027)	(0.029)	(0.032)	(0.029)	(0.031)	(0.025)	(0.035)
$D6\_une1$	-0.022	0.041	-0.037	-0.038	0.012	0.024	-0.019	-0.056	-0.085
	(0.049)	(0.052)	(0.043)	(0.046)	(0.050)	(0.046)	(0.049)	(0.039)	(0.055)
D4_age	-0.003***	-0.002***	-0.003***	-0.004***	-0.003***	-0.001*	-0.001	-0.002**	-0.003***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
$D10\_rec$	0.004	-0.010	0.036***	-0.005	0.005	0.003	-0.004	0.068***	-0.016**
	(0.005)	(0.006)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.004)	(0.006)
Constant	0.461***	0.526***	0.476***	0.524***	0.556***	0.394***	0.466***	0.296***	0.555***
	(0.054)	(0.057)	(0.047)	(0.051)	(0.055)	(0.051)	(0.054)	(0.043)	(0.061)
N	852	852	850	851	850	850	851	849	842
R-squared	0.111	0.063	0.169	0.091	0.083	0.058	0.048	0.291	0.064
Adj. R-squared	0.099	0.051	0.158	0.080	0.070	0.046	0.035	0.281	0.052

<sup>\*\*\*</sup>p < .001; \*\*p < .01; \*p < .05

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Table 6.5: Vote choice for a relevant party according to respondents' socio-demographic characteristics (Logistic regression models)

	2001	2002	2003	2004	2005	2006	2007	2008	2012
	Model 10	Model 11	Model 12	Model 13	Model 14	Model 15	Model 16	Model 17	Model 18
$D3\_rec2$	-0.132	-0.991**	-0.552	-0.185	0.404	0.010	0.022	1.714***	-0.825***
	(0.261)	(0.343)	(0.350)	(0.400)	(0.316)	(0.328)	(0.216)	(0.495)	(0.226)
$D8\_rec1$	0.231	-0.238	-0.557	0.309	0.815	0.180	0.088	-0.225	-0.338
	(0.291)	(0.336)	(0.347)	(0.474)	(0.421)	(0.369)	(0.234)	(0.491)	(0.228)
$D5\_rec1$	-0.324	-0.026	0.048	-0.315	-0.315	-0.147	0.147	0.320	0.401
	(0.269)	(0.334)	(0.368)	(0.417)	(0.322)	(0.340)	(0.231)	(0.541)	(0.240)
$EDU\_rec2$	0.471	-0.525	-1.714**	-0.812	-0.972	0.107	-0.167	0.093	0.132
	(0.590)	(0.536)	(0.554)	(0.875)	(0.541)	(0.657)	(0.432)	(0.787)	(0.452)
$EDU\_rec3$	0.453	-0.359	$-0.957^*$	0.665	-0.132	0.294	0.098	-0.594	0.091
	(0.568)	(0.509)	(0.474)	(0.698)	(0.460)	(0.642)	(0.416)	(0.790)	(0.441)
D1_rec1	-0.167	0.380	-0.021	0.426	-0.046	0.355	$0.557^*$	0.294	-0.366
	(0.303)	(0.331)	(0.373)	(0.414)	(0.352)	(0.355)	(0.229)	(0.484)	(0.257)
$D7\_rec1$	1.196**	-0.650	0.517	0.198	0.114	-0.084	0.318	-0.701	$0.254^{'}$
	(0.408)	(0.355)	(0.426)	(0.518)	(0.371)	(0.352)	(0.263)	(0.538)	(0.255)
$D7\_rec2$	1.868***	-0.746	0.396	0.624	0.239	-1.053	0.505	-0.178	-0.179
	(0.435)	(0.451)	(0.500)	(0.547)	(0.435)	(0.590)	(0.311)	(0.607)	(0.332)
D6_une1	0.046	0.123	0.858	-0.186	0.248	0.252	-0.195	-0.577	-0.663
	(0.636)	(0.642)	(0.654)	(1.059)	(0.643)	(0.636)	(0.548)	(1.730)	(0.620)
D4_age	0.008	-0.007	0.010	$-0.027^*$	-0.017	0.017	0.025***	0.014	0.003
	(0.007)	(0.010)	(0.010)	(0.013)	(0.009)	(0.010)	(0.007)	(0.013)	(0.007)
$D10\_rec$	-0.047	-0.038	0.164*	-0.056	-0.049	-0.043	-0.118*	0.978***	-0.246***
	(0.066)	(0.077)	(0.070)	(0.099)	(0.080)	(0.086)	(0.059)	(0.140)	(0.073)
Constant	-4.141****	-1.277	$-2.562^{***}$	-2.722**	-2.433****	-3.962***	-3.680****	$-8.067^{***}$	$-1.613^{**}$
	(0.760)	(0.689)	(0.736)	(0.947)	(0.730)	(0.913)	(0.611)	(1.318)	(0.575)
N	842	842	842	842	842	842	842	842	842
Log Likelihood	-228.489	-166.613	-146.440	-113.112	-170.479	-159.298	-306.273	-70.739	-297.484
AIC	480.979	357.226	316.879	250.224	364.959	342.596	636.547	165.479	618.969

<sup>\*\*\*</sup>p < .001; \*\*p < .01; \*p < .05

### 7 Spain

Synthetic variables have been estimated for seven of 15 Spanish parties available in the original 2019 EES Spanish 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: Spanish relevant parties

Dep. Var.	Party	Party name (eng)
stack_2601	2601	Spanish Socialist Workers' Party
$\rm stack\_2602$	2602	Popular Party
$stack\_2603$	2603	Podemos (We Can)
$stack\_2604$	2604	Citizens - Party of the Citizenry
$stack\_2605$	2605	Voice
stack_2606 stack_2609	2606 2609	Republican Left of Catalonia Commitment to Europe

Full OLS models converge and coefficients do not show any particular issue (see Table 7.4). In terms of model fit, the adjusted coefficient of determination ( $R^2$ ) values vary between a minimum value of 0.036 for party 2601 (Spanish Socialist Workers' Party) and a maximum of 0.153 for party 2602 (Popular Party). Moreover, the difference between Akaike Information Criterion (AIC) values for full OLS models and null models shows that in 0 cases out of 7 null models perform better than full ones (see Table 7.2).

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

Dep. Var.	Party	Full Mod.	Null Mod.	Diff. (Full-Null)
stack_2601	2601	703.457	725.668	-22.211
$stack\_2602$	2602	554.471	694.177	-139.706
$stack_2603$	2603	588.620	689.794	-101.174
$stack\_2604$	2604	552.312	615.298	-62.985
$stack_2605$	2605	395.533	515.855	-120.322
$stack\_2606$	2606	294.000	327.931	-33.931
stack_2609	2609	225.172	262.243	-37.071

On the contrary, one out of seven logistic regression models (see Table 7.5) show inflated standard errors for one of the coefficients of interest, in particular:

#### • Model 14: D10\_rec.

Nevertheless, model 7's constant term and other regression coefficients are not affected by said inflated standard error. Therefore, we do not adapt the models.

In terms of model fit, adjusted McFadden's pseudo  $R^2$  values for the logistic full models vary between a minimum value of -0.092 for party 2609 (Commitment to Europe) and a maximum of 0.089 for party 2602 (Popular Party). Moreover, the difference between Akaike Information Criterion (AIC) values for logistic full models and null models shows that in 3 cases out of 7 null models perform better than full ones (see Table 7.3).

Table 7.3: Akaike Information Criterion values for logistic full and null models

Dep. Var.	Party	Full Mod.	Null Mod.	Diff. (Full-Null)
$stack_2601$	2601	1033.685	1023.898	9.787
$\rm stack\_2602$	2602	658.492	724.588	-66.096
$stack_2603$	2603	635.765	671.944	-36.179
$stack_2604$	2604	702.073	691.187	10.886
$stack_2605$	2605	410.385	414.884	-4.499
$stack\_2606$	2606	244.656	250.879	-6.223
stack_2609	2609	89.358	83.795	5.563

Table 7.4: Propensity to vote for a relevant party according to respondents' socio-demographic characteristics (OLS regression models)

	2601	2602	2603	2604	2605	2606	2609
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
D3_rec2	0.050*	-0.021	0.020	0.011	-0.081***	-0.024	-0.005
	(0.024)	(0.022)	(0.023)	(0.022)	(0.020)	(0.019)	(0.019)
D8_rec1	0.043	-0.051	0.030	0.007	-0.074**	0.032	0.027
	(0.033)	(0.031)	(0.031)	(0.030)	(0.028)	(0.027)	(0.026)
D5_rec1	-0.011	-0.009	0.008	0.004	0.009	0.020	0.011
	(0.026)	(0.024)	(0.025)	(0.024)	(0.022)	(0.021)	(0.021)
$EDU\_rec2$	0.062	0.011	-0.046	0.006	-0.017	-0.031	-0.042
	(0.047)	(0.043)	(0.044)	(0.043)	(0.039)	(0.037)	(0.037)
EDU_rec3	0.056	0.046	$-0.089^*$	0.043	0.030	-0.096**	$-0.071^*$
	(0.043)	(0.040)	(0.041)	(0.040)	(0.037)	(0.035)	(0.035)
D1_rec1	0.081**	-0.009	0.133***	0.008	0.043	0.128***	0.150***
	(0.031)	(0.029)	(0.029)	(0.029)	(0.026)	(0.025)	(0.024)
D7_rec1	-0.016	0.087***	-0.035	0.038	0.025	-0.024	-0.022
	(0.026)	(0.024)	(0.025)	(0.024)	(0.022)	(0.021)	(0.021)
$D7$ _rec2	-0.009	0.127***	-0.065	0.123***	0.088**	-0.012	-0.005
	(0.040)	(0.037)	(0.038)	(0.037)	(0.034)	(0.032)	(0.032)
D6_une1	$-0.093^*$	0.039	-0.018	-0.024	$0.081^*$	-0.025	-0.025
	(0.041)	(0.038)	(0.038)	(0.038)	(0.035)	(0.033)	(0.033)
D4_age	-0.003***	0.0001	-0.004***	-0.002**	-0.001	-0.001	$-0.001^*$
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
D10_rec	-0.015**	0.058***	-0.030***	0.037***	0.045***	-0.007	-0.004
	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.004)	(0.004)
Constant	0.535***	0.200***	0.624***	0.326***	0.216***	0.268***	0.298***
	(0.063)	(0.058)	(0.060)	(0.058)	(0.053)	(0.051)	(0.051)
N	905	905	901	905	904	893	865
R-squared	0.048	0.164	0.128	0.090	0.146	0.061	0.066
Adj. R-squared	0.036	0.153	0.117	0.078	0.135	0.049	0.054

<sup>\*\*\*</sup>p < .001; \*\*p < .01; \*p < .05

# 8 United Kingdom

Synthetic variables have been estimated for seven of 14 British (UK) parties available in the original 2019 EES British (UK) voter study selected according to the criteria stated in the EES 2019 SDM codebook ( for

Table 7.5: Vote choice for a relevant party according to respondents' socio-demographic characteristics (Logistic regression models)

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	2601	2602	2603	2604	2605	2606	2609
	Model 8	Model 9	Model 10	Model 11	Model 12	Model 13	Model 14
$D3$ _rec2	0.232	-0.197	-0.230	0.234	$-0.729^*$	-0.274	0.354
	(0.157)	(0.211)	(0.214)	(0.205)	(0.302)	(0.407)	(0.805)
$D8\_rec1$	0.072	$-0.877^{***}$	0.728*	0.068	-0.291	0.196	-0.148
	(0.219)	(0.260)	(0.346)	(0.292)	(0.391)	(0.565)	(1.121)
D5_rec1	0.049	0.063	-0.031	-0.067	-0.077	0.426	0.356
	(0.170)	(0.238)	(0.228)	(0.222)	(0.330)	(0.456)	(0.882)
$EDU\_rec2$	0.270	-0.022	-0.413	0.404	1.303	-0.119	-1.595
	(0.318)	(0.452)	(0.377)	(0.480)	(1.059)	(0.613)	(1.488)
$EDU\_rec3$	0.299	0.242	-0.381	0.763	1.640	$-1.242^*$	-0.841
	(0.297)	(0.418)	(0.344)	(0.448)	(1.031)	(0.624)	(1.161)
D1_rec1	0.337	-0.696*	0.569*	-0.308	-0.534	0.674	1.173
	(0.193)	(0.322)	(0.245)	(0.280)	(0.411)	(0.483)	(0.824)
$D7\_rec1$	-0.062	$0.826^{**}$	-0.583**	-0.142	0.011	0.216	-0.541
	(0.170)	(0.262)	(0.225)	(0.223)	(0.333)	(0.445)	(0.948)
$D7\_rec2$	-0.130	1.109***	-0.771	-0.113	0.376	0.411	1.161
	(0.263)	(0.335)	(0.396)	(0.334)	(0.429)	(0.703)	(0.991)
D6_une1	-0.640*	0.150	-0.105	-0.497	0.321	0.371	0.912
	(0.301)	(0.364)	(0.361)	(0.394)	(0.468)	(0.657)	(1.188)
D4_age	-0.00002	0.010	-0.009	-0.0001	-0.006	0.034**	0.033
	(0.005)	(0.007)	(0.007)	(0.006)	(0.009)	(0.013)	(0.025)
$D10\_rec$	-0.043	0.278***	$-0.337^{***}$	0.059	$0.194^{***}$	-0.408**	-17.141
	(0.036)	(0.043)	(0.071)	(0.044)	(0.059)	(0.158)	(2188.572)
Constant	-1.418***	$-2.857^{***}$	-1.043	-2.581***	-3.738**	-4.711***	-5.643**
	(0.426)	(0.598)	(0.536)	(0.609)	(1.154)	(1.116)	(2.179)
N	891	891	891	891	891	891	891
Log Likelihood	-504.843	-317.246	-305.882	-339.037	-193.192	-110.328	-32.679
AIC	1033.685	658.492	635.765	702.073	410.385	244.656	89.358

<sup>\*\*\*</sup>p < .001; \*\*p < .01; \*p < .05

the criteria see Sect. XXX; for the relevant parties see Table 8.1).

Table 8.1: British (UK) relevant parties

Dep. Var.	Party	Party name (eng)
stack_2801	2801	Conservative Party
$\rm stack\_2802$	2802	Labour Party
$stack_2803$	2803	Liberal Democrats
$stack_2804$	2804	Green Party
$stack_2805$	2805	Scottish National Party
stack_2806 stack_2807	2806 2807	United Kingdom Independence Party The Brexit Party

Full OLS models converge and coefficients do not show any particular issue (see Table 8.4). In terms of model fit, the adjusted coefficient of determination ( $R^2$ ) values vary between a minimum value of 0.031 for party 2807 (The Brexit Party) and a maximum of 0.216 for party 2805 (Scottish National Party). Moreover, the difference between Akaike Information Criterion (AIC) values for full OLS models and null models shows that in 0 cases out of 7 null models perform better than full ones (see Table 8.2).

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

Dep. Var.	Party	Full Mod.	Null Mod.	Diff. (Full-Null)
stack_2801	2801	610.463	701.857	-91.395
$\rm stack\_2802$	2802	511.818	692.047	-180.229
$stack_2803$	2803	502.618	556.253	-53.634
$stack_2804$	2804	358.451	446.949	-88.498
$stack_2805$	2805	49.968	246.372	-196.404
$\rm stack\_2806$	2806	291.141	351.711	-60.571
stack_2807	2807	740.111	756.590	-16.479

On the contrary, one out of seven logistic regression models (see Table 8.5) show inflated standard errors for one of the coefficients of interest, in particular:

- Model 8: D6\_une;
- Model 12: D7\_rec (only for category 2).

Nevertheless, models 8 and 12 constant terms and other regression coefficients are not affected by said inflated standard errors. Therefore, we do not adapt the models.

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 2806 (United Kingdom Independence Party) and a maximum of 0.055 for party 2807 (The Brexit Party). Moreover, the difference between Akaike Information Criterion (AIC) values for logistic full models and null models shows that in 3 cases out of 7 null models perform better than full ones (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_2801	2801	462.768	475.051	-12.283
$\rm stack\_2802$	2802	611.746	640.123	-28.377
$stack_2803$	2803	682.703	690.427	-7.724
$stack_2804$	2804	335.666	333.022	2.644
$stack_2805$	2805	223.508	214.772	8.736
$stack\_2806$	2806	154.722	145.559	9.162
$stack_2807$	2807	827.824	877.704	-49.880

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

	2801	2802	2803	2804	2805	2806	2807
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
$D3\_rec2$	0.010	0.007	0.006	0.031	0.010	0.004	-0.024
	(0.023)	(0.022)	(0.022)	(0.020)	(0.017)	(0.020)	(0.025)
$D8\_rec1$	-0.041	0.043	-0.025	0.002	$-0.043^*$	-0.016	-0.006
	(0.027)	(0.026)	(0.026)	(0.024)	(0.020)	(0.023)	(0.030)
$D5\_rec1$	0.036	-0.024	-0.003	-0.028	0.038*	0.040	0.061*
	(0.025)	(0.024)	(0.024)	(0.022)	(0.019)	(0.021)	(0.028)
$EDU\_rec2$	0.005	-0.045	-0.044	-0.001	-0.005	0.064	0.022
	(0.040)	(0.038)	(0.038)	(0.035)	(0.030)	(0.033)	(0.044)
$EDU\_rec3$	-0.058	0.043	0.052	0.074*	0.023	-0.022	$-0.097^*$
	(0.043)	(0.040)	(0.040)	(0.037)	(0.031)	(0.035)	(0.046)
D1_rec1	0.012	0.143***	0.071*	0.066*	0.134***	0.081**	0.047
	(0.030)	(0.028)	(0.028)	(0.026)	(0.022)	(0.025)	(0.033)
$D7\_rec1$	0.158***	-0.096***	0.071**	-0.018	$0.030^{'}$	0.028	0.010
	(0.025)	(0.024)	(0.024)	(0.022)	(0.019)	(0.021)	(0.028)
$D7\_rec2$	0.310***	-0.140**	0.080	-0.040	0.042	0.030	-0.014
	(0.047)	(0.044)	(0.044)	(0.041)	(0.034)	(0.040)	(0.051)
D6_une1	-0.039	0.040	-0.041	-0.054	-0.034	0.049	0.036
	(0.047)	(0.045)	(0.045)	(0.041)	(0.035)	(0.040)	(0.052)
D4_age	0.003***	-0.006***	-0.003***	-0.005***	-0.004***	-0.002***	0.001
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
D10 rec	0.016**	0.009	0.007	0.007	0.022***	0.023***	0.020**
	(0.006)	(0.005)	(0.005)	(0.005)	(0.004)	(0.005)	(0.006)
Constant	0.222***	0.686***	0.496***	0.566***	0.311***	0.219***	0.268***
	(0.060)	(0.057)	(0.057)	(0.052)	(0.045)	(0.050)	(0.066)
N	871	869	869	865	852	861	858
R-squared	0.122	0.208	0.083	0.120	0.226	0.091	0.044
Adj. R-squared	0.111	0.197	0.072	0.109	0.216	0.080	0.031

<sup>\*\*\*</sup>p < .001; \*\*p < .01; \*p < .05

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

	2801	2802	2803	<b>2804</b>	2805	2806	$\boldsymbol{2807}$
	Model 8	Model 9	Model 10	Model 11	Model 12	Model 13	Model 14
$D3$ _rec2	0.497	-0.258	-0.231	0.228	-0.096	-0.300	-0.405*
	(0.268)	(0.219)	(0.204)	(0.330)	(0.429)	(0.554)	(0.179)
$D8\_rec1$	-0.044	0.268	-0.118	0.250	-0.661	-0.323	0.187
	(0.296)	(0.265)	(0.230)	(0.408)	(0.444)	(0.575)	(0.209)
D5_rec1	-0.213	-0.187	-0.133	-0.511	-0.009	0.580	0.349
	(0.282)	(0.239)	(0.220)	(0.344)	(0.483)	(0.702)	(0.197)
$EDU\_rec2$	0.480	0.229	-0.463	0.960	-0.178	0.474	-0.044
	(0.502)	(0.423)	(0.335)	(0.782)	(0.796)	(1.088)	(0.292)
$EDU\_rec3$	0.647	0.392	0.167	1.392	0.468	-0.401	-0.517
	(0.522)	(0.434)	(0.342)	(0.783)	(0.803)	(1.168)	(0.327)
D1_rec1	-0.057	0.662**	0.011	0.364	1.024*	0.547	-0.449
	(0.346)	(0.248)	(0.259)	(0.382)	(0.470)	(0.664)	(0.258)
D7_rec1	0.183	$-0.530^*$	$0.473^{*}$	-0.112	-0.107	1.158	0.036
	(0.294)	(0.249)	(0.217)	(0.368)	(0.448)	(0.643)	(0.195)
$D7\_rec2$	1.251**	$-1.215^*$	0.138	0.251	-15.203	1.356	-0.054
	(0.403)	(0.551)	(0.403)	(0.583)	(804.939)	(0.914)	(0.389)
D6_une1	-15.866	$0.069^{'}$	-1.358	-1.682	-0.263	0.866	$0.505^{'}$
	(798.474)	(0.387)	(0.742)	(1.041)	(1.083)	(1.165)	(0.360)
D4_age	0.019*	-0.028***	0.010	-0.024*	0.004	0.012	0.034***
	(0.008)	(0.007)	(0.006)	(0.010)	(0.014)	(0.018)	(0.006)
D10_rec	0.078	0.063	0.018	-0.158	-0.070	0.212	-0.038
	(0.061)	(0.049)	(0.048)	(0.094)	(0.105)	(0.111)	(0.048)
Constant	-4.322***	-1.082	-2.110***	-2.829**	-3.497**	-6.268***	-3.023***
	(0.748)	(0.560)	(0.522)	(0.936)	(1.156)	(1.692)	(0.508)
N	875	875	875	875	875	875	875
Log Likelihood	-219.384	-293.873	-329.352	-155.833	-99.754	-65.361	-401.912
AIC	462.768	611.746	682.703	335.666	223.508	154.722	827.824

<sup>\*\*\*</sup>p < .001; \*\*p < .01; \*p < .05