# 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 stack_707	706 707	Red-Green Unity List 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 0.088 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	600.463	650.130	-49.667
$stack_{-702}$	702	664.818	698.147	-33.329
$stack_{-703}$	703	708.256	702.351	5.905
$stack_{-704}$	704	320.091	385.068	-64.976
$stack_{-705}$	705	604.462	637.521	-33.060
$stack_706$	706	651.928	694.182	-42.255
$stack_707$	707	363.465	431.607	-68.141

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	757.463	771.073	-13.610
$stack_{-702}$	702	746.983	757.681	-10.698
$stack_703$	703	591.403	602.927	-11.523
$stack_704$	704	394.100	379.564	14.536
$stack\_705$	705	524.266	523.116	1.150
$stack_706$	706	409.327	412.696	-3.369
$stack_707$	707	316.348	314.621	1.727

 $\label{thm:conding} \begin{tabular}{ll} Table 1.4: Propensity to vote for a relevant party according to respondents' socio-demographic characteristics (OLS regression models) \\ \end{tabular}$ 

	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***	$-0.050^{*}$	-0.068**	0.035	0.088***	0.044	-0.086***
	(0.023)	(0.024)	(0.024)	(0.020)	(0.023)	(0.024)	(0.020)
$D8\_rec1$	$0.069^{*}$	0.001	0.036	0.001	$0.065^{*}$	0.053	0.020
	(0.028)	(0.029)	(0.030)	(0.024)	(0.028)	(0.029)	(0.025)
$D5\_rec1$	-0.008	0.036	0.026	-0.025	-0.022	-0.039	-0.006
	(0.024)	(0.025)	(0.026)	(0.021)	(0.025)	(0.026)	(0.022)
$EDU\_rec2$	-0.060	$0.112^{*}$	0.037	-0.034	-0.069	-0.056	0.070
	(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	0.003	0.048
	(0.048)	(0.049)	(0.051)	(0.041)	(0.049)	(0.050)	(0.042)
D1 rec1	0.137***	$-0.056^{*}$	-0.002	0.004	$0.066^{*}$	$0.040^{'}$	-0.009
_	(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	-0.118**	0.173***	-0.053	0.048	$-0.076^{*}$	$-0.113^{**}$	0.192***
	(0.036)	(0.037)	(0.038)	(0.031)	(0.036)	(0.037)	(0.032)
D6 une1	$0.053^{'}$	-0.057	-0.004	-0.022	-0.043	-0.033	$-0.090^{*}$
	(0.047)	(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	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
$D10\_rec$	$0.015^{*}$	0.023**	$0.005^{'}$	$0.013^{*}$	0.013	0.008	0.029***
	(0.007)	(0.007)	(0.007)	(0.006)	(0.007)	(0.007)	(0.006)
Constant	0.353***	0.386***	0.312***	0.509***	0.379***	0.490***	0.269***
	(0.062)	(0.064)	(0.066)	(0.053)	(0.063)	(0.065)	(0.055)
N	879	878	877	873	863	861	863
R-squared	0.078	0.061	0.018	0.095	0.062	0.072	0.099
Adj. R-squared	0.067	0.049	0.006	0.083	0.050	0.060	0.088

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

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

	701	702	703	704	705	706	707
	Model 8	Model 9	Model 10	Model 11	Model 12	Model 13	Model 14
D3_rec2	0.523**	-0.191	-0.729**	-0.078	0.871***	0.167	-0.356
	(0.193)	(0.193)	(0.230)	(0.296)	(0.261)	(0.284)	(0.347)
$D8\_rec1$	$0.123^{'}$	$0.007^{'}$	0.418	-0.134	-0.413	-0.011	-0.484
	(0.233)	(0.231)	(0.296)	(0.361)	(0.276)	(0.348)	(0.374)
$D5\_rec1$	$0.072^{'}$	0.408	-0.308	-0.334	-0.074	-0.039	0.190
	(0.201)	(0.212)	(0.234)	(0.310)	(0.259)	(0.296)	(0.374)
$EDU\_rec2$	-0.608	-0.463	$0.769^{'}$	$0.757^{'}$	$0.059^{'}$	-0.267	0.413
	(0.418)	(0.452)	(0.652)	(0.815)	(0.628)	(0.635)	(0.829)
$EDU\_rec3$	-0.382	-0.330	$0.415^{'}$	$0.926^{'}$	$0.547^{'}$	$0.006^{'}$	-0.252
	(0.372)	(0.408)	(0.630)	(0.777)	(0.575)	(0.584)	(0.795)
D1_rec1	0.719**	-0.199	-0.234	$0.536^{'}$	-0.224	0.243	0.009
	(0.232)	(0.216)	(0.241)	(0.366)	(0.272)	(0.320)	(0.392)
D7_rec1	$0.127^{'}$	$0.504^{*}$	0.130	0.013	0.101	-0.005	0.534
	(0.213)	(0.244)	(0.257)	(0.335)	(0.290)	(0.299)	(0.468)
$D7\_rec2$	-0.565	1.006***	-0.174	0.086	0.554	$-2.400^*$	1.381**
	(0.330)	(0.290)	(0.372)	(0.458)	(0.352)	(1.034)	(0.510)
D6_une1	$0.166^{'}$	0.189	-0.184	-0.598	-0.248	-0.884	-0.477
	(0.363)	(0.407)	(0.496)	(0.744)	(0.545)	(0.741)	(1.039)
D4_age	0.004	$0.012^{'}$	0.025**	-0.012	-0.006	0.003	0.011
	(0.006)	(0.006)	(0.008)	(0.010)	(0.008)	(0.009)	(0.011)
D10 rec	0.158**	$0.063^{'}$	-0.032	-0.026	$0.012^{'}$	$-0.309^{**}$	$0.172^{'}$
	(0.052)	(0.054)	(0.068)	(0.086)	(0.070)	(0.110)	(0.090)
Constant	-2.640****	$-2.587^{***}$	$-3.542^{***}$	-3.088****	$-2.640^{***}$	$-2.409^{**}$	$-4.064^{***}$
	(0.515)	(0.537)	(0.757)	(0.926)	(0.700)	(0.757)	(1.000)
N	874	874	874	874	874	874	874
Log Likelihood	-366.732	-361.492	-283.702	-185.050	-250.133	-192.664	-146.174
AIC	757.463	746.983	591.403	394.100	524.266	409.327	316.348

<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 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 0.026 for party 906 (Estonia 200) and a maximum of 0.061 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	648.376	681.225	-32.850
$stack\_902$	902	468.344	482.379	-14.035
$stack_903$	903	523.076	555.418	-32.342
$stack\_904$	904	315.169	331.505	-16.336
$stack\_905$	905	366.351	406.867	-40.517
stack_906	906	322.705	332.960	-10.255
stack_907	907	171.172	186.800	-15.628

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	202.9630			
Unconstrained	798	198.2016	2	4.761363	0.0924875

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	85.96929			
Unconstrained	798	75.48917	5	10.48012	0.0627196

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	79.88766			
Unconstrained	798	75.48917	4	4.398489	0.3547543

In terms of model fit, adjusted McFadden's pseudo  $R^2$  values for the logistic full models vary between a minimum value of -0.108 for party 907 (Estonian Greens) and a maximum of 0.038 for party 903 (Conservative People's Party of Estonia). Moreover, the difference between Akaike Information Criterion (AIC) values for

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	85.96929			
Unconstrained	802	79.88766	1	6.081631	0.0136595

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	694.22900	705.58000	-11.351000
$stack\_902$	902	508.86500	506.31300	2.552000
$stack_903$	903	506.76400	528.63400	-21.871000
$stack\_904$	904	415.12500	419.58900	-4.464000
$stack\_905$	905	652.00400	649.26800	2.736000
$stack_906$	906	222.20200	211.17100	11.030000
stack_906*	906	222.96295	211.17148	11.791471
$stack\_907$	907	99.48900	91.80200	7.687000
stack_907*	907	99.96929	91.80221	8.167081

 $<sup>^*</sup>$  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***	-0.039	0.126***	0.035	0.075***
	(0.026)	(0.023)	(0.024)	(0.021)	(0.021)	(0.021)	(0.019)
$D8\_rec1$	0.011	0.050	-0.080**	-0.112***	0.036	0.027	0.024
	(0.029)	(0.025)	(0.026)	(0.023)	(0.024)	(0.024)	(0.021)
$D5$ _rec1	0.009	-0.021	-0.015	-0.034	0.010	0.026	-0.002
	(0.027)	(0.024)	(0.025)	(0.022)	(0.023)	(0.023)	(0.020)
$EDU\_rec2$	-0.086	0.074	0.011	0.025	-0.017	-0.045	-0.030
	(0.061)	(0.055)	(0.058)	(0.051)	(0.052)	(0.051)	(0.046)
$EDU\_rec3$	-0.034	0.039	-0.012	0.049	0.006	-0.008	-0.006
	(0.061)	(0.055)	(0.058)	(0.051)	(0.052)	(0.051)	(0.046)
D1_rec1	-0.066	0.058	-0.008	-0.062	0.028	-0.041	-0.047
	(0.042)	(0.038)	(0.039)	(0.034)	(0.036)	(0.035)	(0.032)
$D7\_rec1$	0.100***	-0.042	-0.049	0.001	0.014	0.023	0.009
	(0.027)	(0.024)	(0.025)	(0.022)	(0.023)	(0.023)	(0.020)
$D7\_rec2$	0.175***	$-0.080^*$	$-0.084^*$	-0.042	0.062	0.099**	0.032
	(0.042)	(0.038)	(0.039)	(0.035)	(0.035)	(0.035)	(0.031)
D6_une1	-0.108	-0.027	0.032	-0.065	-0.047	0.021	0.070
	(0.075)	(0.067)	(0.069)	(0.061)	(0.063)	(0.063)	(0.056)
D4_age	-0.001	0.001	0.001	0.0004	-0.003***	-0.001*	-0.002***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
D10_rec	-0.022**	0.026***	0.014	0.007	-0.003	$-0.015^*$	0.003
	(0.008)	(0.007)	(0.008)	(0.007)	(0.007)	(0.007)	(0.006)
Constant	0.518***	0.269***	0.361***	0.453***	0.420***	0.366***	0.371***
	(0.072)	(0.064)	(0.067)	(0.059)	(0.061)	(0.060)	(0.054)
N	814	817	810	807	814	794	810
R-squared	0.065	0.043	0.065	0.046	0.074	0.040	0.045
Adj. R-squared	0.052	0.030	0.052	0.033	0.061	0.026	0.032

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

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 8	Model 9	Model 10	Model 11	Model 12	Model 13a	Model 13b	Model 14a	Model 14b
D3_rec2	0.181	-0.163	-1.362***	-0.654*	0.571**	-0.430	-0.461	0.522	0.447
	(0.204)	(0.251)	(0.268)	(0.285)	(0.221)	(0.434)	(0.432)	(0.750)	(0.746)
$D8\_rec1$	0.064	0.453	$-0.567^*$	$-0.597^*$	-0.208	0.123	0.197	-0.659	-0.583
	(0.227)	(0.306)	(0.259)	(0.288)	(0.229)	(0.522)	(0.518)	(0.759)	(0.751)
D5_rec1	$0.139^{'}$	0.010	-0.259	-0.257	-0.114	-0.064	0.039	17.058	17.268
	(0.220)	(0.269)	(0.264)	(0.295)	(0.223)	(0.468)	(0.466)	(1676.995)	(1749.196)
$EDU\_rec2$	-0.288	$0.676^{'}$	$0.305^{'}$	$0.358^{'}$	-0.278	14.762	,	15.512	,
	(0.483)	(0.758)	(0.646)	(0.768)	(0.488)	(1014.112)		(3995.567)	
EDU rec3	-0.0001	$0.463^{'}$	$0.212^{'}$	$0.349^{'}$	$0.054^{'}$	15.433		$\stackrel{\cdot}{1}6.573$	
	(0.478)	(0.761)	(0.648)	(0.774)	(0.482)	(1014.112)		(3995.567)	
D1 rec1	-0.459	$0.387^{'}$	-0.033	-0.650	$0.163^{'}$	-0.916	-0.833	$-17.124^{'}$	
<del>_</del>	(0.377)	(0.369)	(0.428)	(0.612)	(0.330)	(1.035)	(1.033)	(2956.242)	
D7_rec1	$0.564^{*}$	$0.078^{'}$	-0.066	-0.300	$0.150^{'}$	$0.561^{'}$	$0.669^{'}$	$\stackrel{\cdot}{0.597}$	0.695
<del>_</del>	(0.224)	(0.267)	(0.267)	(0.292)	(0.229)	(0.481)	(0.473)	(0.891)	(0.875)
$D7\_rec2$	$0.732^{*}$	$0.244^{'}$	$0.238^{'}$	$-1.583^{'*}$	$0.498^{'}$	-0.198	-0.015	$0.928^{'}$	$1.261^{'}$
_	(0.308)	(0.390)	(0.380)	(0.750)	(0.321)	(0.829)	(0.816)	(1.043)	(1.017)
D6_une1	-1.178	-15.134	$0.295^{'}$	-0.601	$0.067^{'}$	$0.248^{'}$	$0.277^{'}$	-16.569	,
<del>_</del>	(1.034)	(795.306)	(0.670)	(1.053)	(0.638)	(1.072)	(1.062)	(5415.937)	
D4 age	0.019**	0.018*	0.011	$0.019^{*}$	$0.007^{'}$	-0.012	-0.010	-0.013	-0.013
_ 0	(0.006)	(0.008)	(0.008)	(0.009)	(0.006)	(0.014)	(0.013)	(0.024)	(0.023)
D10 rec	$-0.207^{**}$	$0.115^{'}$	$0.172^{*}$	$0.036^{'}$	-0.134	-0.048	-0.052	-0.215	-0.237
_	(0.078)	(0.074)	(0.070)	(0.088)	(0.078)	(0.154)	(0.156)	(0.335)	(0.337)
Constant	$-2.864^{***}$	$-4.250^{***}$	$-2.093^{**}$	$-2.752^{**}$	$-2.210^{***}$	-18.050	$-3.246^{***}$	-36.807	-21.105
	(0.593)	(0.914)	(0.734)	(0.884)	(0.579)	(1014.112)	(0.909)	(4333.229)	(1749.197)
N	810	810	810	810	810	810	810	810	810
Log Likelihood	-335.115	-242.432	-241.382	-195.562	-314.002	-99.101	-101.481	-37.745	-39.944
AIC	694.229	508.865	506.764	415.125	652.004	222.202	222.963	99.489	95.888

<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
$\rm stack\_807$	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 0.132 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	631.253	723.798	-92.544
$\rm stack\_802$	802	479.712	515.917	-36.205
$stack\_805$	805	396.890	446.781	-49.891
$stack\_803$	803	729.551	749.883	-20.332
$stack_804$	804	562.799	597.527	-34.728
$stack\_807$	807	624.700	634.098	-9.398
$\rm stack\_806$	806	68.843	178.350	-109.507

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 0.07 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	783.323	844.663	-61.339
$stack\_802$	802	591.363	602.235	-10.872
$stack_805$	805	371.471	373.555	-2.084
$stack_803$	803	850.034	850.477	-0.444
$stack_804$	804	374.707	384.835	-10.128
stack_807	807	592.655	593.786	-1.131
$stack_806$	806	123.144	111.226	11.918

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	0.026	0.040	-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	-0.033	0.029	0.012	-0.022	0.037
	(0.027)	(0.025)	(0.024)	(0.029)	(0.026)	(0.027)	(0.020)
$D5$ _rec1	-0.004	-0.001	0.018	-0.060*	-0.021	0.089***	0.031
	(0.025)	(0.023)	(0.022)	(0.027)	(0.024)	(0.025)	(0.018)
$EDU\_rec2$	-0.034	-0.029	-0.001	-0.009	-0.018	-0.063	-0.022
	(0.042)	(0.038)	(0.037)	(0.044)	(0.040)	(0.042)	(0.031)
$EDU\_rec3$	-0.003	-0.012	0.019	0.028	0.013	-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	0.094**	0.143***	0.019	0.095***
	(0.030)	(0.028)	(0.027)	(0.032)	(0.029)	(0.030)	(0.022)
$D7\_rec1$	0.091***	0.029	0.044	0.082**	-0.074**	-0.088***	-0.057**
	(0.026)	(0.024)	(0.023)	(0.028)	(0.025)	(0.026)	(0.019)
$D7\_rec2$	0.181***	-0.009	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	-0.207**	-0.108	-0.110	-0.122	0.040	0.018	0.014
	(0.066)	(0.060)	(0.058)	(0.071)	(0.064)	(0.066)	(0.049)
D4_age	0.002**	0.002*	0.0004	-0.001	-0.002*	-0.001	-0.005****
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
$D10\_rec$	0.044***	0.018**	0.029***	0.012	-0.007	0.001	0.006
	(0.006)	(0.006)	(0.006)	(0.007)	(0.006)	(0.006)	(0.005)
Constant	0.254***	0.249***	0.258***	0.425***	0.451***	0.354***	0.391***
	(0.059)	(0.054)	(0.052)	(0.063)	(0.057)	(0.059)	(0.043)
N	866	865	862	867	863	868	854
R-squared	0.124	0.065	0.080	0.048	0.064	0.036	0.143
Adj. R-squared	0.113	0.053	0.068	0.035	0.052	0.023	0.132

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

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	0.178	0.315	0.352	-0.553*	0.528
_	(0.188)	(0.226)	(0.308)	(0.178)	(0.307)	(0.230)	(0.674)
$D8\_rec1$	-0.349	$0.293^{'}$	$0.245^{'}$	$0.400^{'}$	-0.180	-0.098	$1.210^{'}$
	(0.204)	(0.275)	(0.374)	(0.219)	(0.340)	(0.255)	(1.070)
$D5\_rec1$	-0.058	-0.064	$0.580^{'}$	-0.192	0.044	0.386	$0.273^{'}$
	(0.197)	(0.240)	(0.361)	(0.185)	(0.316)	(0.245)	(0.706)
$EDU\_rec2$	0.189	0.781	-0.138	$0.025^{'}$	-0.384	-0.096	-0.715
	(0.338)	(0.499)	(0.576)	(0.323)	(0.490)	(0.378)	(0.903)
$EDU\_rec3$	0.156	$0.778^{'}$	-0.014	0.286	-0.030	-0.500	-1.026
	(0.344)	(0.503)	(0.576)	(0.327)	(0.503)	(0.401)	(0.983)
D1_rec1	-0.503*	0.902***	-0.372	0.040	0.866*	-0.246	-0.370
	(0.249)	(0.256)	(0.418)	(0.226)	(0.355)	(0.312)	(0.892)
$D7\_rec1$	0.448*	0.321	0.623	0.284	-0.879**	$-0.494^*$	-0.790
	(0.215)	(0.257)	(0.402)	(0.203)	(0.317)	(0.241)	(0.756)
$D7\_rec2$	0.589*	0.084	1.276**	$0.669^{*}$	-2.590*	-0.570	0.102
	(0.288)	(0.374)	(0.461)	(0.269)	(1.033)	(0.382)	(0.902)
D6_une1	-1.533	-0.878	-13.942	-0.351	1.162*	-0.083	1.054
	(1.035)	(1.038)	(716.924)	(0.561)	(0.551)	(0.640)	(1.166)
D4_age	0.023***	0.027***	0.018	-0.012*	0.010	0.009	-0.039
	(0.006)	(0.007)	(0.010)	(0.005)	(0.010)	(0.007)	(0.021)
$D10\_rec$	0.293***	0.021	0.095	-0.048	$-0.215^*$	-0.118	0.084
	(0.045)	(0.058)	(0.075)	(0.049)	(0.103)	(0.069)	(0.154)
Constant	-2.987***	-4.765***	-5.020***	-1.569***	-2.675***	-1.797**	-3.292*
	(0.500)	(0.694)	(0.879)	(0.449)	(0.754)	(0.568)	(1.605)
N	871	871	871	871	871	871	871
Log Likelihood	-379.662	-283.681	-173.736	-413.017	-175.353	-284.327	-49.572
AIC	783.323	591.363	371.471	850.034	374.707	592.655	123.144

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

Dep. Var. Party Party name (eng)  $stack_1801$ 1801 Christian Social People's Party stack 1802 1802 Socialist Workers' Party stack\_1803 1803 Democratic Party stack 1804 1804 The Greens  $stack\_1805$ The Left 1805 1806 Alternative Democratic Reform Party  $stack_1806$  $stack_1807$ 1807Pirate Party of Luxembourg

Table 4.1: Luxembourgian relevant parties

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 0.013 for party 1806 (Alternative Democratic Reform Party) and a maximum of 0.136 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 model	Table 4.2:	Akaike Inform	nation Criterion	values for (	OLS	full and	l null mode
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Dep. Var.	Party	Full Mod.	Null Mod.	Diff. (Full-Null)
$stack_1801$	1801	307.051	321.535	-14.484
$stack\_1802$	1802	198.883	208.287	-9.404
$stack_1803$	1803	252.751	277.718	-24.967
$stack\_1804$	1804	264.835	320.320	-55.485
$stack_1805$	1805	160.767	168.247	-7.480
$stack\_1806$	1806	56.601	51.752	4.849
stack_1807	1807	28.790	45.389	-16.599

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 -0.074 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	374.770	385.253	-10.483
$stack_1802$	1802	278.141	270.650	7.491
$stack_1803$	1803	433.856	426.431	7.425
$stack_1804$	1804	416.070	408.096	7.975
$stack_1805$	1805	200.446	188.620	11.825
stack_1806 stack_1807	1806 1807	179.297 155.919	171.048 152.574	8.248 3.345

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
$D3\_rec2$	0.009	-0.009	0.009	0.056	0.006	-0.026	0.005
	(0.032)	(0.029)	(0.030)	(0.031)	(0.027)	(0.024)	(0.024)
$D8\_rec1$	-0.004	-0.028	0.022	-0.0002	-0.003	0.011	-0.016
	(0.032)	(0.029)	(0.030)	(0.031)	(0.028)	(0.025)	(0.024)
$D5$ _rec1	0.013	-0.029	-0.052	-0.033	-0.013	0.0003	-0.058*
	(0.036)	(0.032)	(0.034)	(0.034)	(0.030)	(0.027)	(0.026)
$EDU\_rec2$	0.115	0.169**	0.083	-0.041	-0.053	0.065	$-0.087^*$
	(0.059)	(0.053)	(0.056)	(0.057)	(0.051)	(0.046)	(0.044)
$EDU\_rec3$	0.110	0.099	0.077	0.033	0.012	0.020	$-0.083^*$
	(0.057)	(0.051)	(0.054)	(0.055)	(0.049)	(0.044)	(0.042)
D1_rec1	0.005	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	0.097*	0.173***	0.175***	-0.012	-0.033	0.031
	(0.045)	(0.041)	(0.043)	(0.043)	(0.039)	(0.035)	(0.034)
$D7\_rec2$	-0.026	0.154***	0.198***	0.219***	-0.010	-0.031	-0.012
	(0.048)	(0.043)	(0.045)	(0.046)	(0.041)	(0.037)	(0.035)
D6_une1	-0.192	-0.012	$-0.221^*$	-0.166	0.098	$0.215^*$	0.172*
	(0.114)	(0.107)	(0.107)	(0.108)	(0.097)	(0.092)	(0.084)
D4_age	-0.0001	-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)
$D10\_rec$	0.053***	-0.001	0.003	-0.012	-0.015	0.015*	-0.004
	(0.010)	(0.009)	(0.009)	(0.009)	(0.008)	(0.007)	(0.007)
Constant	0.270***	0.307***	0.365***	0.531***	0.439***	0.183**	0.426***
	(0.080)	(0.072)	(0.076)	(0.077)	(0.068)	(0.062)	(0.059)
N	454	449	453	454	453	446	453
R-squared	0.077	0.068	0.098	0.157	0.063	0.038	0.082
Adj. R-squared	0.054	0.044	0.076	0.136	0.040	0.013	0.059

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

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
$D3\_rec2$	0.279	-0.020	-0.020	0.153	0.379	-0.587	0.259
	(0.281)	(0.345)	(0.254)	(0.261)	(0.435)	(0.477)	(0.519)
$D8\_rec1$	-0.203	0.160	0.084	0.053	0.204	-0.858	-0.643
	(0.279)	(0.352)	(0.257)	(0.265)	(0.446)	(0.474)	(0.511)
D5_rec1	-0.250	0.137	0.340	-0.091	-0.354	0.202	-0.747
	(0.302)	(0.381)	(0.300)	(0.289)	(0.451)	(0.530)	(0.524)
$EDU\_rec2$	1.419*	0.528	0.532	-0.412	-0.446	-0.067	-0.422
	(0.674)	(0.603)	(0.588)	(0.493)	(0.755)	(0.734)	(0.701)
$EDU\_rec3$	1.264	-0.401	0.622	-0.113	0.020	-0.550	-0.988
	(0.670)	(0.607)	(0.563)	(0.450)	(0.688)	(0.733)	(0.688)
D1_rec1	0.157	0.593	-0.162	-0.088	0.449	0.399	0.357
	(0.281)	(0.349)	(0.258)	(0.267)	(0.448)	(0.472)	(0.534)
$D7\_rec1$	-0.687	-0.597	0.890*	0.582	-0.895	0.106	-0.173
	(0.365)	(0.479)	(0.448)	(0.418)	(0.553)	(0.566)	(0.570)
$D7\_rec2$	-0.729	0.259	0.811	0.568	-0.774	-0.877	-1.473
	(0.387)	(0.462)	(0.462)	(0.435)	(0.585)	(0.723)	(0.858)
D6_une1	-14.981	-14.425	-14.974	-0.115	-13.885	1.511	1.245
	(901.653)	(885.645)	(884.461)	(1.098)	(863.380)	(1.157)	(1.229)
D4_age	0.020*	-0.012	0.003	-0.015	0.0005	0.004	-0.013
	(0.008)	(0.011)	(0.008)	(0.008)	(0.013)	(0.015)	(0.016)
$D10\_rec$	$0.232^{**}$	0.067	0.014	-0.169	-0.244	-0.140	-0.151
	(0.074)	(0.097)	(0.076)	(0.090)	(0.162)	(0.163)	(0.178)
Constant	-3.629***	$-2.139^*$	-3.116***	-1.027	-2.212*	-2.220*	-0.925
	(0.856)	(0.840)	(0.771)	(0.655)	(0.999)	(1.116)	(1.028)
N	443	443	443	443	443	443	443
Log Likelihood	-175.385	-127.070	-204.928	-196.035	-88.223	-77.648	-65.959
AIC	374.770	278.141	433.856	416.070	200.446	179.297	155.919

<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 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
$stack_1905$	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 0.058 for party 1901 (Labour Party) and a maximum of 0.105 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	328.713	339.868	-11.155
$\rm stack\_1902$	1902	241.813	267.804	-25.991
$stack_1903$	1903	2.060	20.944	-18.884
$stack_1904$	1904	-86.223	-56.098	-30.124
stack_1905	1905	-59.754	-47.221	-12.532

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	319	42.95925			
Unconstrained	312	28.50452	7	14.45473	0.0436599

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

Model	Resid. Df	Resid. Dev	Df	Deviance	Pr(>Chi)
Constrained	316	54.49792			
Unconstrained	312	45.14544	4	9.352487	0.0528682

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

Model	Resid. Df	Resid. Dev	Df	Deviance	Pr(>Chi)
Constrained	318	62.42784			
Unconstrained	312	53.36654	6	9.0613	0.1701599

In terms of model fit, adjusted McFadden's pseudo  $R^2$  values for the logistic full models vary between a minimum value of -0.157 for party 1904 (Democratic Party) and a maximum of 0.04 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	429.65800	449.66400	-20.006000
$stack_1902$	1902	324.54300	337.57100	-13.028000
$stack_1903$	1903	52.50500	53.63500	-1.131000
$stack_1904$	1904	69.14500	61.75600	7.389000
stack_1904*	1904	70.49792	61.75601	8.741919
stack_1905 stack 1905*	1905 1905	77.36700 74.42784	69.53500 69.53533	7.831000 4.892508

 $<sup>^*\,\</sup>rm AIC$  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	0.009	0.017	0.048	0.031	0.023
	(0.040)	(0.036)	(0.025)	(0.023)	(0.023)
$D8\_rec1$	-0.054	0.122	0.069	0.106	0.081
	(0.120)	(0.112)	(0.081)	(0.072)	(0.074)
$D5\_rec1$	0.051	-0.061	-0.033	-0.036	$-0.059^*$
	(0.046)	(0.041)	(0.029)	(0.026)	(0.027)
$EDU\_rec2$	$-0.099^*$	0.010	0.029	0.010	0.037
	(0.046)	(0.042)	(0.030)	(0.026)	(0.027)
$EDU\_rec3$	-0.174**	0.153**	0.132***	0.071*	-0.030
	(0.058)	(0.052)	(0.038)	(0.033)	(0.035)
D1_rec1	0.086	-0.049	0.014	0.015	0.0004
	(0.048)	(0.042)	(0.030)	(0.027)	(0.028)
$D7\_rec1$	-0.145***	$0.117^{**}$	0.021	0.038	0.010
	(0.042)	(0.038)	(0.027)	(0.024)	(0.025)
$D7\_rec2$	-0.184*	$0.229^{***}$	0.046	0.078	0.001
	(0.075)	(0.066)	(0.047)	(0.042)	(0.044)
D6_une1	-0.052	0.162*	-0.051	-0.038	0.012
	(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	0.018*	-0.0003	0.005	0.005
	(0.008)	(0.007)	(0.005)	(0.005)	(0.005)
Constant	0.838***	0.115	0.144	0.103	0.136
	(0.141)	(0.131)	(0.094)	(0.083)	(0.086)
N	366	363	368	368	367
R-squared	0.087	0.124	0.105	0.132	0.090
Adj. R-squared	0.058	0.096	0.077	0.105	0.062

<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)

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	1901	1902	1903	1904	1904	1905	1905
	Model 6	Model 7	Model 8	Model 9a	Model 9b	Model 10a	Model 10b
$D3\_rec2$	-0.265	0.128	-2.373	-1.437	-1.496	-0.175	-0.225
	(0.242)	(0.295)	(1.456)	(1.153)	(1.112)	(0.825)	(0.785)
$D8\_rec1$	-1.157	0.029	16.044	17.178		16.553	
	(1.219)	(1.206)	(20639.260)	(13271.490)		(13818.130)	
D5_rec1	0.561	-0.151	2.365	-1.079	-1.159	$-1.927^*$	-1.718
	(0.293)	(0.345)	(1.765)	(0.980)	(0.965)	(0.956)	(0.918)
$EDU\_rec2$	$-0.677^*$	0.470	18.869	0.952	1.005	0.757	, ,
	(0.283)	(0.375)	(3592.839)	(1.381)	(1.156)	(0.885)	
EDU_rec3	-0.958**	$0.950^{st}$	20.630	-0.537	0.248	-17.021	
	(0.358)	(0.438)	(3592.839)	(1.531)	(1.442)	(3155.681)	
D1_rec1	0.581*	-0.256	-19.465	0.620	0.658	-0.199	-0.483
	(0.291)	(0.367)	(4241.033)	(0.965)	(0.921)	(1.138)	(1.111)
D7_rec1	$-0.845^{***}$	1.164**	1.069	17.402	` '	-1.467	, ,
	(0.256)	(0.365)	(1.345)	(2518.866)		(0.871)	
$D7\_rec2$	$-1.335^{**}$	1.605**	-18.873	19.172		-18.094	
	(0.452)	(0.504)	(5741.919)	(2518.866)		(4498.985)	
D6_une1	-0.594	$1.004^{'}$	$-15.495^{'}$	-15.842		-17.585	
	(0.577)	(0.600)	(9574.639)	(6600.938)		(6559.436)	
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	-0.006	0.061	-0.380	-0.022	-0.034	-0.031	-0.034
	(0.050)	(0.063)	(0.259)	(0.175)	(0.169)	(0.159)	(0.146)
Constant	$1.446^{'}$	$-4.111^{**}$	-33.136	-38.323	$-4.105^{**}$	-18.828	$-2.818^{**}$
	(1.321)	(1.402)	(20949.640)	(13508.410)	(1.528)	(13818.130)	(1.017)
N	324	324	324	324	$\stackrel{\circ}{324}$	324	324
Log Likelihood	-202.829	-150.271	-14.252	-22.573	-27.249	-26.683	-31.214
AIC	429.658	324.543	52.505	69.145	70.498	77.367	74.428

<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
$stack_2002$	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 0.287 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	454.279	531.738	-77.459
$stack_2002$	2002	548.978	581.994	-33.017
$stack_2003$	2003	217.757	350.169	-132.411
$stack_2004$	2004	330.443	390.042	-59.599
$stack_2005$	2005	473.891	525.482	-51.591
$\mathrm{stack}\_2006$	2006	335.561	364.542	-28.981
$stack_2007$	2007	429.023	448.610	-19.586
$stack\_2008$	2008	40.047	315.802	-275.755
$stack_2012$	2012	625.283	658.327	-33.044

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 0.431 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	481.305	489.018	-7.712
$\rm stack\_2002$	2002	357.133	353.172	3.962
$stack_2003$	2003	317.331	317.798	-0.467
$stack_2004$	2004	250.381	247.659	2.723
$stack_2005$	2005	364.861	364.576	0.285
$\rm stack\_2006$	2006	342.485	329.791	12.694
$stack_2007$	2007	636.889	643.259	-6.369
$stack\_2008$	2008	165.732	293.155	-127.423
stack_2012	2012	620.365	639.394	-19.029

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
$D3\_rec2$	-0.073***	-0.096***	-0.034	-0.006	0.024	0.007	-0.019	-0.001	-0.103***
	(0.022)	(0.023)	(0.019)	(0.020)	(0.022)	(0.020)	(0.022)	(0.017)	(0.024)
$D8\_rec1$	-0.023	-0.040	-0.057**	-0.014	0.039	0.050*	0.027	-0.025	-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	0.023	-0.029	$-0.052^*$	-0.025	-0.023	0.007	0.036
	(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*	-0.060	0.022
	(0.041)	(0.043)	(0.036)	(0.038)	(0.042)	(0.038)	(0.040)	(0.032)	(0.046)
$EDU\_rec3$	0.003	0.0004	-0.009	0.023	-0.030	0.043	-0.041	-0.017	0.059
	(0.040)	(0.042)	(0.035)	(0.037)	(0.040)	(0.037)	(0.039)	(0.031)	(0.044)
D1_rec1	0.011	0.068**	0.031	$0.057^{*}$	0.056*	0.076***	0.103***	0.028	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	-0.001	-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**	0.094***	0.078**	-0.006	-0.127***	0.014	0.011	-0.100**
	(0.031)	(0.033)	(0.027)	(0.029)	(0.032)	(0.029)	(0.031)	(0.025)	(0.035)
$D6\_une1$	-0.023	0.042	-0.039	-0.038	0.012	0.024	-0.019	-0.057	-0.084
	(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)
$D10\_rec$	0.003	-0.009	0.035***	-0.005	0.006	0.004	-0.003	0.069***	-0.015**
	(0.005)	(0.006)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.004)	(0.006)
Constant	0.463***	0.525***	0.476***	0.524***	0.554***	0.393***	0.465***	0.292***	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	0.110	0.063	0.166	0.091	0.083	0.058	0.048	0.296	0.063
Adj. R-squared	0.099	0.050	0.155	0.080	0.071	0.046	0.035	0.287	0.051

<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	-0.134	-0.995**	-0.545	-0.189	0.400	0.008	0.017	1.727***	-0.830***
	(0.261)	(0.343)	(0.350)	(0.400)	(0.316)	(0.328)	(0.216)	(0.495)	(0.225)
$D8\_rec1$	0.234	-0.239	-0.564	0.311	0.816	0.179	0.092	-0.234	-0.329
	(0.291)	(0.335)	(0.346)	(0.473)	(0.421)	(0.368)	(0.234)	(0.491)	(0.227)
$D5\_rec1$	-0.325	-0.024	0.049	-0.318	-0.316	-0.147	0.146	0.313	0.396
	(0.269)	(0.334)	(0.368)	(0.417)	(0.322)	(0.340)	(0.231)	(0.541)	(0.240)
$EDU\_rec2$	0.469	-0.524	-1.713**	-0.811	-0.970	0.107	-0.166	0.090	0.135
	(0.590)	(0.536)	(0.553)	(0.875)	(0.542)	(0.657)	(0.432)	(0.788)	(0.452)
$EDU\_rec3$	0.459	-0.358	-0.965*	0.671	-0.129	0.294	0.103	-0.604	0.100
	(0.568)	(0.509)	(0.474)	(0.698)	(0.461)	(0.642)	(0.416)	(0.791)	(0.441)
$D1\_rec1$	-0.180	0.388	-0.024	0.420	-0.038	0.363	$0.558^{*}$	0.288	-0.358
	(0.304)	(0.331)	(0.374)	(0.416)	(0.353)	(0.356)	(0.230)	(0.486)	(0.258)
$D7\_rec1$	1.195**	-0.649	0.515	0.201	0.116	-0.083	0.320	-0.706	0.260
	(0.408)	(0.355)	(0.426)	(0.518)	(0.371)	(0.353)	(0.263)	(0.538)	(0.255)
$D7\_rec2$	1.860***	-0.742	0.392	0.627	0.243	-1.049	0.507	-0.196	-0.171
	(0.435)	(0.451)	(0.501)	(0.547)	(0.435)	(0.590)	(0.311)	(0.606)	(0.332)
D6_une1	0.055	0.124	0.850	-0.174	0.245	0.251	-0.189	-0.584	-0.655
	(0.635)	(0.642)	(0.654)	(1.059)	(0.643)	(0.636)	(0.547)	(1.733)	(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)
$D10\_rec$	-0.029	-0.045	0.158*	-0.040	-0.055	-0.052	-0.113	0.981***	-0.230**
	(0.065)	(0.078)	(0.071)	(0.097)	(0.081)	(0.087)	(0.058)	(0.140)	(0.071)
Constant	$-4.160^{***}$	-1.264	-2.555****	$-2.741^{**}$	$-2.422^{***}$	$-3.947^{***}$	-3.678****	$-8.086^{***}$	-1.619**
	(0.760)	(0.689)	(0.737)	(0.948)	(0.731)	(0.913)	(0.611)	(1.320)	(0.575)
N	842	842	842	842	842	842	842	842	842
Log Likelihood	-228.653	-166.567	-146.665	-113.191	-170.430	-159.243	-306.445	-70.866	-298.182
AIC	481.305	357.133	317.331	250.381	364.861	342.485	636.889	165.732	620.365

<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)
$\rm stack\_2604$	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 0.033 for party 2601 (Spanish Socialist Workers' Party) and a maximum of 0.151 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	705.870	725.668	-19.798
$stack\_2602$	2602	557.069	694.177	-137.108
$stack_2603$	2603	594.433	689.794	-95.361
$stack_2604$	2604	555.534	615.298	-59.764
$stack_2605$	2605	406.763	515.855	-109.092
$\rm stack\_2606$	2606	295.035	327.931	-32.896
$stack_2609$	2609	225.770	262.243	-36.474

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 -0.086 for party 2609 (Commitment to Europe) and a maximum of 0.085 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	1034.103	1023.898	10.205
$stack\_2602$	2602	661.246	724.588	-63.343
$stack_2603$	2603	642.191	671.944	-29.752
$stack_2604$	2604	702.135	691.187	10.948
$stack_2605$	2605	411.134	414.884	-3.750
$\rm stack\_2606$	2606	244.572	250.879	-6.307
$stack_2609$	2609	88.819	83.795	5.024

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
$D3\_rec2$	$0.050^{*}$	-0.022	0.020	0.011	-0.081***	-0.024	-0.006
	(0.024)	(0.022)	(0.023)	(0.022)	(0.020)	(0.019)	(0.019)
$D8\_rec1$	0.043	-0.054	0.031	0.006	-0.076**	0.032	0.027
	(0.033)	(0.031)	(0.032)	(0.031)	(0.028)	(0.027)	(0.026)
$D5\_rec1$	-0.012	-0.010	0.008	0.004	0.009	0.019	0.010
	(0.026)	(0.024)	(0.025)	(0.024)	(0.022)	(0.021)	(0.021)
$EDU\_rec2$	0.061	0.013	-0.047	0.007	-0.016	-0.031	-0.042
	(0.047)	(0.043)	(0.045)	(0.043)	(0.040)	(0.037)	(0.037)
$EDU\_rec3$	0.055	0.049	$-0.091^*$	0.045	0.033	-0.097**	$-0.071^*$
	(0.044)	(0.040)	(0.041)	(0.040)	(0.037)	(0.035)	(0.035)
$D1\_rec1$	0.082**	-0.016	$0.136^{***}$	0.004	0.039	0.128***	$0.150^{***}$
	(0.031)	(0.029)	(0.029)	(0.029)	(0.026)	(0.025)	(0.024)
$D7\_rec1$	-0.016	0.086***	-0.035	0.037	0.024	-0.024	-0.023
	(0.026)	(0.024)	(0.025)	(0.024)	(0.022)	(0.021)	(0.021)
$D7\_rec2$	-0.011	0.128***	-0.068	0.125***	0.091**	-0.013	-0.007
	(0.040)	(0.037)	(0.038)	(0.037)	(0.034)	(0.032)	(0.032)
D6_une1	$-0.093^*$	0.036	-0.017	-0.026	$0.079^*$	-0.025	-0.025
	(0.041)	(0.038)	(0.039)	(0.038)	(0.035)	(0.033)	(0.033)
D4_age	-0.003***	0.0004	-0.004***	-0.002*	-0.0005	-0.001	$-0.001^*$
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
$D10\_rec$	-0.013*	0.057***	-0.027***	0.036***	0.042***	-0.005	-0.002
	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.004)	(0.004)
Constant	$0.537^{***}$	0.188**	0.629***	0.318***	0.207***	0.268***	0.298***
	(0.063)	(0.058)	(0.060)	(0.058)	(0.054)	(0.051)	(0.051)
N	905	905	901	905	904	893	865
R-squared	0.045	0.161	0.122	0.086	0.135	0.060	0.065
Adj. R-squared	0.033	0.151	0.111	0.075	0.124	0.048	0.053

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

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

	2601	$\boldsymbol{2602}$	2603	$\boldsymbol{2604}$	2605	2606	2609
	Model 8	Model 9	Model 10	Model 11	Model 12	Model 13	Model 14
$D3$ _rec2	0.232	-0.198	-0.229	0.234	$-0.732^*$	-0.277	0.332
	(0.157)	(0.211)	(0.213)	(0.205)	(0.302)	(0.407)	(0.806)
$D8\_rec1$	0.073	-0.879***	$0.740^{*}$	0.067	-0.296	0.211	-0.125
	(0.219)	(0.259)	(0.345)	(0.292)	(0.390)	(0.566)	(1.124)
$D5$ _rec1	0.047	0.064	-0.031	-0.068	-0.080	0.425	0.327
	(0.170)	(0.237)	(0.227)	(0.222)	(0.330)	(0.456)	(0.886)
$EDU\_rec2$	0.268	-0.016	-0.420	0.406	1.314	-0.117	-1.577
	(0.318)	(0.452)	(0.376)	(0.480)	(1.059)	(0.613)	(1.492)
$EDU\_rec3$	0.296	0.257	-0.397	0.766	1.655	$-1.251^*$	-0.850
	(0.297)	(0.417)	(0.343)	(0.448)	(1.031)	(0.624)	(1.164)
D1_rec1	0.339	$-0.713^*$	0.592*	-0.315	-0.549	0.681	1.190
	(0.194)	(0.322)	(0.244)	(0.281)	(0.411)	(0.482)	(0.818)
$D7\_rec1$	-0.061	$0.817^{**}$	$-0.573^{*}$	-0.144	0.008	0.234	-0.522
	(0.170)	(0.261)	(0.225)	(0.223)	(0.333)	(0.445)	(0.950)
$D7\_rec2$	-0.136	1.119***	$-0.779^*$	-0.111	0.387	0.423	1.169
	(0.263)	(0.334)	(0.394)	(0.333)	(0.428)	(0.704)	(0.990)
D6_une1	-0.638*	0.135	-0.100	-0.501	0.311	0.374	0.870
	(0.301)	(0.363)	(0.360)	(0.394)	(0.468)	(0.657)	(1.193)
D4_age	-0.0003	0.011	-0.011	0.0002	-0.005	0.032*	0.030
	(0.005)	(0.007)	(0.007)	(0.006)	(0.009)	(0.013)	(0.026)
$D10\_rec$	-0.036	0.269***	-0.281***	0.058	0.188**	-0.405**	-17.167
	(0.036)	(0.043)	(0.064)	(0.044)	(0.059)	(0.154)	(2163.353)
Constant	-1.412***	-2.907***	-0.999	-2.592***	-3.775**	$-4.647^{***}$	-5.436*
	(0.426)	(0.596)	(0.536)	(0.609)	(1.152)	(1.118)	(2.200)
N	891	891	891	891	891	891	891
Log Likelihood	-505.051	-318.623	-309.096	-339.068	-193.567	-110.286	-32.410
AIC	1034.103	661.246	642.191	702.135	411.134	244.572	88.819

<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 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 0.033 for party 2807 (The Brexit Party) and a maximum of 0.225 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	608.974	701.857	-92.883
$\rm stack\_2802$	2802	511.047	692.047	-180.999
$stack_2803$	2803	501.942	556.253	-54.311
$stack\_2804$	2804	358.272	446.949	-88.678
$stack_2805$	2805	40.646	246.372	-205.726
$\rm stack\_2806$	2806	284.626	351.711	-67.085
$stack_2807$	2807	738.940	756.590	-17.650

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 -0.083 for party 2806 (United Kingdom Independence Party) and a maximum of 0.054 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	463.434	475.051	-11.617
$\rm stack\_2802$	2802	611.773	640.123	-28.350
$stack_2803$	2803	682.822	690.427	-7.605
$stack_2804$	2804	336.476	333.022	3.455
$stack_2805$	2805	223.256	214.772	8.485
$\rm stack\_2806$	2806	155.407	145.559	9.848
$stack_2807$	2807	828.182	877.704	-49.522

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	0.011	0.007	0.007	0.032	0.011	0.004	-0.023
	(0.023)	(0.022)	(0.022)	(0.020)	(0.017)	(0.019)	(0.025)
$D8\_rec1$	-0.039	0.044	-0.024	0.003	$-0.041^*$	-0.014	-0.005
	(0.027)	(0.026)	(0.026)	(0.024)	(0.020)	(0.023)	(0.030)
$D5\_rec1$	0.036	-0.024	-0.003	-0.028	0.037*	0.040	0.061*
	(0.025)	(0.024)	(0.024)	(0.022)	(0.019)	(0.021)	(0.028)
$EDU\_rec2$	0.006	-0.044	-0.043	-0.0001	-0.003	0.066*	0.024
	(0.040)	(0.038)	(0.038)	(0.035)	(0.029)	(0.033)	(0.044)
$EDU\_rec3$	-0.057	0.043	0.053	0.074*	0.024	-0.020	$-0.095^*$
	(0.043)	(0.040)	(0.040)	(0.037)	(0.031)	(0.035)	(0.046)
D1_rec1	0.008	0.141***	$0.069^{*}$	$0.065^{*}$	0.126***	0.074**	$0.043^{'}$
	(0.030)	(0.028)	(0.028)	(0.026)	(0.022)	(0.025)	(0.033)
$D7\_rec1$	0.157***	-0.097****	0.070**	-0.019	$0.027^{'}$	$0.025^{'}$	0.008
	(0.025)	(0.024)	(0.024)	(0.022)	(0.019)	(0.021)	(0.028)
$D7\_rec2$	0.307***	-0.142**	0.078	-0.041	0.037	0.025	-0.017
	(0.047)	(0.045)	(0.044)	(0.041)	(0.034)	(0.039)	(0.051)
D6_une1	-0.037	0.041	-0.040	-0.053	-0.031	0.052	0.038
	(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	0.018**	0.010	0.008	0.007	0.025***	0.027***	0.022***
	(0.006)	(0.005)	(0.005)	(0.005)	(0.004)	(0.005)	(0.006)
Constant	0.213***	0.681***	0.491***	0.563***	0.297***	0.205***	0.258***
	(0.060)	(0.057)	(0.057)	(0.052)	(0.045)	(0.050)	(0.066)
N	871	869	869	865	852	861	858
R-squared	0.124	0.208	0.084	0.120	0.235	0.098	0.045
Adj. R-squared	0.112	0.198	0.072	0.109	0.225	0.087	0.033

<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	2804	2805	2806	2807
	Model 8	Model 9	Model 10	Model 11	Model 12	Model 13	Model 14
D3_rec2	0.504	-0.251	-0.229	0.210	-0.102	-0.273	-0.410*
	(0.268)	(0.219)	(0.204)	(0.329)	(0.429)	(0.554)	(0.179)
$D8\_rec1$	-0.044	0.271	-0.121	0.241	-0.670	-0.297	0.189
	(0.296)	(0.266)	(0.230)	(0.408)	(0.444)	(0.575)	(0.209)
$D5\_rec1$	-0.212	-0.189	-0.132	-0.507	-0.008	0.600	$0.349^{'}$
	(0.282)	(0.239)	(0.220)	(0.345)	(0.483)	(0.699)	(0.197)
$EDU\_rec2$	0.476	0.231	-0.467	0.944	-0.186	$0.453^{'}$	-0.043
	(0.502)	(0.423)	(0.335)	(0.780)	(0.796)	(1.087)	(0.292)
$EDU\_rec3$	$0.652^{'}$	$0.398^{'}$	$0.170^{'}$	$1.364^{'}$	$0.465^{'}$	-0.390	-0.520
	(0.521)	(0.434)	(0.342)	(0.781)	(0.802)	(1.168)	(0.327)
D1_rec1	-0.043	0.654**	0.023	$0.365^{'}$	$1.047^{*}$	$0.540^{'}$	-0.457
	(0.347)	(0.250)	(0.260)	(0.386)	(0.470)	(0.668)	(0.259)
D7_rec1	$0.191^{'}$	$-0.535^{*}$	$0.478^{*}$	-0.110	-0.091	1.148	0.030
	(0.294)	(0.249)	(0.217)	(0.368)	(0.449)	(0.643)	(0.195)
$D7\_rec2$	1.265**	$-1.224^*$	$0.148^{'}$	$0.253^{'}$	-15.172	$1.352^{'}$	-0.064
	(0.404)	(0.552)	(0.403)	(0.584)	(805.417)	(0.915)	(0.389)
D6_une1	-15.862	$0.077^{'}$	-1.357	$-1.69\acute{6}$	-0.276	$0.895^{'}$	$0.504^{'}$
	(798.462)	(0.386)	(0.742)	(1.041)	(1.083)	(1.164)	(0.360)
D4_age	0.020*	-0.027****	0.010	$-0.025^{*}$	0.003	0.014	0.034***
	(0.008)	(0.007)	(0.006)	(0.010)	(0.014)	(0.018)	(0.006)
D10 rec	$0.060^{'}$	$0.063^{'}$	0.006	-0.134	-0.088	$0.193^{'}$	-0.025
	(0.062)	(0.050)	(0.049)	(0.091)	(0.107)	(0.114)	(0.048)
Constant	-4.323****	$-1.112^{*}$	-2.100****	$-2.772^{**}$	-3.430**	$-6.330^{***}$	-3.025****
	(0.748)	(0.563)	(0.523)	(0.939)	(1.163)	(1.699)	(0.510)
N	875	875	875	` 875 <sup>^</sup>	`875 <sup>^</sup>	` 875 <sup>^</sup>	875
Log Likelihood	-219.717	-293.886	-329.411	-156.238	-99.628	-65.704	-402.091
AIC	463.434	611.773	682.822	336.476	223.256	155.407	828.182

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