Storm in a Teacup: Methodological Appendix

The overview of the appendix is as follows.

Part A of the appendix includes the fit indices of the model of populist attitudes and the level of invariance associated with it (Tables A1 and A2). Additionally, Part A presents the distribution of populist attitudes in Croatia (Figure A1). *Part B* provides the categorization of dependent variables and their distributions (Tables B1 and B2) as well as description of predictors operationalization, their descriptive statistics, and t-test results (Table B3). *Part C* outlines the marginal effects of the included models (Tables C1, C2, and C3). Lastly, *Part D* shows and describes the results of the robustness tests, which include the outcomes of models that do not measure the preference for strong leaders, satisfaction with democracy, and trust in the government (Tables D1, D2, and D3).

Part A: MGCFA, invariance, distribution

Table A1 presents the results of two models. In the first model, all parameters are set to free estimation, while in the second model, factor loadings are fixed over the years. Since the values of latent variables (sub-components of populism) are unknown, some parameters need to be fixed to facilitate identification. To achieve this, we fixed the variance (1) and mean (0) of the latent values (s. Kenny, Kashy and Bolger, 1998).

Table A1. MGCFA (populist attitudes)

		Main model		Metric model	
		2020.	**2018.**	**2018.**	**2020.**
People-centrism 1		0.637	0.586	0.614	
People-centrism 2	PC	0.642	0.605	0.620	
People-centrism 3		0.373	0.373	0.372	
Anti-elitism 1		0.598	0.689	0.622	
Anti-elitism 2	AE	0.414	0.400	0.404	
Anti-elitism 3		0.679	0.468	0.595	
Covariance (PC*AE)		0.840	0.672	0.840	0.672
X^2		33.653 (0.006)		50.021 (0.001)	
CFI		0.989		0.982	
TLI		0.979		0.975	
RMSEA		0.035 [0.018-0.052]		0.038[0.024-0.052]	
SRMR		0.023		0.031	
Log. likelihood		-14252.265		-14260.449	

Our objective is to determine the metric or weak level of invariance, which tests the similarity of the relationship between the latent variable and indicators over the years. This, in turn, enables us to confirm whether the changes on the scale of populist attitudes are equal among the surveyed populations in 2018 and 2020 (Steenkamp and Baumgartner, 1998). Establishing metric invariance allows us to use a latent construct as a measure whose variance and relationships with other variables are estimated similarly across different years. This means the obtained factor scores can be used in regression models for both years (Schumann and Wolfowicz, 2023).

There are two things to note about fit indices. Firstly, as seen in Table A1, the values of fit indices meet the standard cut-off values, which are CFI>0.95, TLI>0.95, SRMR<0.08, and RMSEA<0.06 (Hu and Bentler, 1998).

Secondly, as shown in Table A2, fixing the factor loadings (metric model) does not derogate the quality of the model beyond the permitted levels. In other words, the introduction of new criteria (i.e., factor fixing) did not result in a change in the value of the fit indices greater than 0.01 (CFI) and 0.015 (RMSEA) compared to the previous model (see Rutkowski and Svetina, 2014). However, it is important to note that the scalar level of invariance has not been established because the changes in the fit indices (ΔCFI = -0.040, ΔRMSEA = 0.022) relative to the metric invariance model are greater than recommended. This means that the latent construct cannot be compared between measurement points.

Table A2. Measurement invariance (fit indices)

Invariance level	X^2	df	CFI	RMSEA	ΔCFI	ΔRMSEA
Configural	33.653	16	0.989	0.035	/	/
Metric	50.021	22	0.982	0.038	-0.007	0.003
Scalar	118.685	28	0.942	0.060	-0.040	0.022
Residual	153.594	34	0.923	0.063	-0.019	0.003

Figure A1. Populist attitudes distribution
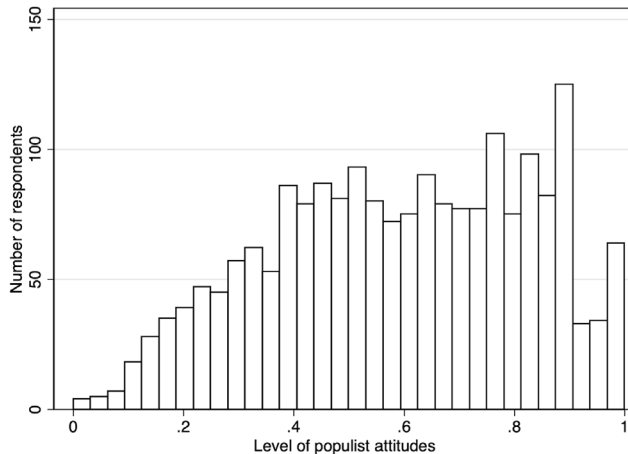
Part B: operationalization

Dependent variables

In the 2018 survey, respondents were divided based on their voting intentions for political parties such as HDZ, SDP, the Bridge, Human Shield, center parties (HNS, HSS, IDS, Intelligently, and GLAS), other parties (residual category) and those who did not intend to vote. However, in the 2020 survey, the dependent variable was changed. The center parties were not represented as a separate category because, in 2020, GLAS, HSU, HSS, and IDS were part of the pre-election Restart coalition. As a result, they were grouped with SDP, which led the coalition. Only Intelligently remained a center party and was thus grouped with other parties in the residual category of other parties.

Additionally, the 2020 survey included a category for the newly formed Homeland Movement, while the voting intention for Human Shield was grouped with Ivan Pernar's Party. The reason was that these parties later formed a pre-election coalition called Enough of Robbery. Meanwhile, HDSSB and Independents for Croatia (2018) and Croatian Sovereigns (2020) were excluded from the analysis due to the small number of cases.

Table B1. Dependent variables distribution (parliamentary elections)

	2018 n[%]	2020 n[%]
HDZ	253 [25.2]	225 [23.3]
SDP/Restart coall.	166 [16.6]	287 [29.7]
Homeland Movement	x	113 [11.7]
The Bridge	82 [8.2]	34 [3.5]
Human Shield/IPP	146 [14.6]	61 [6.3]
Center parties	98 [9.8]	x
Others (residual)	47 [4.7]	68 [7.0]
Non-voters	210 [21.0]	178 [18.4]

The dependent variable that tackles voting in the first round of presidential elections has 6 categories (Kolinda Grabar-Kitarović, Zoran Milanović, Miroslav Škoro, Ivan Pernar, and Mislav Kolakušić, others, and non-voters). The category of others includes Dalija Orešković, Katarina Peović, Dario Juričan and Dejan Kovač. Based on existing studies, we have categorized the vote for Pernar and Kolakušić into one group (see Henjak, 2019). Additionally, we have followed the classifications from the field of political communication and marketing that distinguish Škoro, a right-wing celebrity populist, from Kolakušić and Pernar as populist celebrities (Šalaj and Grbeša, 2022; Grbeša and Šalaj, 2023). This classification separates Škoro's campaign as more traditional, where he tried to distance himself from his celebrity status to appear more professionally political. On the other hand, Pernar and Kolakušić used celebrity tactics in their campaigns to build a messianic aura (Kolakušić) and the image of a showman (Pernar) (Grbeša and Šalaj, 2023).

Table B2. Dependent variable distribution (presidential elections)

	n[%]
Kolinda Grabar-Kitarović	220 [22.5]
Zoran Milanović	245 [25.0]
Miroslav Škoro	119 [12.2]
Ivan Pernar i Mislav Kolakušić	50 [5.1]
Others (residual)	57 [5.8]
Non-voters	288 [29.4]

Independent variables

Age was measured on a ratio scale, while gender was represented as a categorical variable, with 1 for females and 0 for males. Education is a continuous variable with 7 categories, where higher values on the scale indicate higher levels of education ranging from unfinished elementary school to master's degrees and PhD. Unemployment is a binary variable, with a value of 1 for those unemployed (including those who have lost their job and those who have never worked) and 0 for all other categories, such as employed, self-employed, housewives, students, and retired. The perception of the state of the economy over the past 4 years is measured by sociotropic evaluation. Higher values indicate a perception of decline. The variable for measuring religiosity has 5 values, with higher values indicating higher levels of religiosity. Ideological self-identification is measured by a scale of 10 values ranging from 0 (far left) to 10 (far right). The preference for strong leaders over democracy is recorded as nominal and recoded to 1 for respondents who believe strong leaders are sometimes needed and 0 for those who believe democracy is always best. Satisfaction with democracy and trust in the government are measured on a continuous

Table B3. Descriptive statistics of predictors and t-test results

	Min	Max	2018.		2020.		t-test
			$\bar{x}$	SD	$\bar{x}$	SD	(p)
Age	18	99	46.76	16.57	47.21	17.31	0.56
Gender	0	1	0.53	0.50	0.54	0.50	0.73
Education	1	7	4.00	1.19	4.01	1.22	0.84
Unemployed	0	1	0.09	0.29	0.08	0.27	0.52
Sociotrop. ev.	1	5	3.18	0.77	3.23	1.01	0.21
Religiosity	1	6	3.83	0.98	3.83	1.10	0.99
L-R placement	1	10	5.40	2.28	5.46	2.53	0.60
Strong leaders	0	1	0.39	0.49	0.45	0.50	0.02*
Democracy sat.	1	4	2.06	0.82	2.12	0.87	0.14
Trust in gov.	1	5	2.29	1.14	2.22	1.13	0.19

scale with 4 and 5 values, respectively. Higher values indicate higher satisfaction with democracy and greater trust in the government.

Additionally, t-tests were used to see whether there were significant changes in the means of predictors during the treated period. As per the results presented in Table B3, only the mean of the variable measuring the preference for strong leaders showed a significant increase (x̄ in 2018 = 0.39, x̄ in 2020 = 0.45).

Part C: AMEs (main model)

Table C1. AMEs, parliamentary elections 2018

	HDZ	SDP	the Bridge	H. Shield	center	others	NV
Age	**0.003*** [0.001]	**0.002*** [0.001]	-0.001 [0.001]	**-0.003*** [0.001]	0.001 [0.001]	-0.001 [0.000]	**-0.002** [0.001]
Gender	-0.035† [0.021]	-0.025 [0.023]	0.007 [0.019]	0.039† [0.023]	0.019 [0.022]	-0.013 [0.014]	0.009 [0.024]
Education	0.012 [0.010]	-0.010 [0.010]	0.015† [0.009]	-0.020† [0.010]	0.016† [0.009]	0.006 [0.006]	-0.019† [0.011]
Unemployed	0.048 [0.042]	0.008 [0.042]	-0.095† [0.057]	-0.034 [0.043]	0.013 [0.037]	**0.034*** [0.017]	0.025 [0.041]
Sociotropic evaluation	-0.011 [0.015]	0.002 [0.015]	-0.003 [0.013]	0.016 [0.016]	0.001 [0.014]	0.002 [0.009]	-0.007 [0.016]
Religiosity	**0.035*** [0.014]	0.000 [0.012]	-0.002 [0.011]	-0.014 [0.013]	**-0.023*** [0.011]	-0.006 [0.007]	0.010 [0.014]
L-R placement	**0.086*** [0.004]	**-0.078*** [0.006]	0.001 [0.004]	-0.004 [0.005]	-0.004 [0.005]	**0.006*** [0.003]	-0.007 [0.005]
Strong leaders	0.005 [0.021]	0.026 [0.024]	0.013 [0.020]	-0.004 [0.024]	0.024 [0.022]	-0.028† [0.016]	-0.035 [0.026]
Democracy satisfaction	0.014 [0.014]	**0.036*** [0.016]	0.008 [0.013]	-0.029† [0.016]	-0.004 [0.015]	**-0.020*** [0.010]	-0.006 [0.017]
Trust in government	**0.048*** [0.010]	-0.011 [0.013]	-0.013 [0.010]	-0.004 [0.012]	-0.016 [0.012]	0.010 [0.007]	-0.014 [0.013]
Populist attitudes	**-0.206*** [0.043]	-0.014 [0.047]	-0.062 [0.039]	0.009 [0.048]	0.042 [0.044]	0.053† [0.031]	**0.178*** [0.054]

[1] Significance levels: .05*, .01**, .001***
[2] Marginal effects whose p-value is less than 0.1 are marked (†)

Table C2. AMEs, parliamentary elections 2020

	HDZ	Restart	H. Mov.	the Bridge	HS/IPP	others	NV
Age	0.000 [0.001]	**0.004***** [0.001]	**-0.002**** [0.001]	-0.001† [0.000]	**-0.001*** [0.001]	-0.000 [0.001]	-0.000 [0.001]
Gender	0.015 [0.028]	0.032 [0.031]	0.030 [0.024]	-0.001 [0.014]	-0.003 [0.017]	**-0.057**** [0.020]	-0.016 [0.026]
Education	0.001 [0.012]	-0.012 [0.013]	-0.006 [0.010]	-0.005 [0.006]	-0.000 [0.007]	**0.023**** [0.008]	-0.000 [0.011]
Unemployed	-0.027 [0.052]	-0.021 [0.060]	-0.028 [0.044]	-0.031 [0.035]	**0.047*** [0.022]	0.007 [0.035]	0.053 [0.042]
Sociotropic evaluation	-0.025† [0.015]	0.003 [0.016]	0.008 [0.012]	-0.015† [0.008]	-0.004 [0.009]	-0.000 [0.010]	**0.033*** [0.013]
Religiosity	**0.030*** [0.015]	-0.026† [0.014]	0.023† [0.013]	-0.005 [0.007]	-0.011 [0.007]	**-0.018*** [0.009]	**-0.030**** [0.014]
L-R placement	**0.056***** [0.005]	**-0.077***** [0.006]	0.008† [0.004]	0.002 [0.003]	0.002 [0.003]	-0.003 [0.004]	**-0.010*** [0.005]
Strong leaders	-0.044 [0.028]	-0.014 [0.031]	0.020 [0.023]	-0.010 [0.014]	0.031† [0.017]	-0.017 [0.019]	-0.034 [0.025]
Democracy satisfaction	-0.002 [0.017]	0.031 [0.019]	0.005 [0.015]	-0.013 [0.009]	-0.005 [0.010]	**-0.035**** [0.012]	0.018 [0.016]
Trust in government	**0.095***** [0.013]	**-0.035*** [0.016]	**-0.024*** [0.012]	-0.002 [0.007]	-0.015 [0.009]	-0.012 [0.010]	-0.007 [0.013]
Populist attitudes	-0.003 [0.065]	-0.085 [0.075]	-0.015 [0.056]	-0.043 [0.034]	0.041 [0.041]	-0.023 [0.047]	**0.129*** [0.062]

[1] Significance levels: .05*, .01**, .001***
[2] Marginal effects whose p-value is less than 0.1 are marked (†)

Table C3. AMEs, presidential elections

	KGK	Z. Milanović	M. Škoro	IP/MK	others	NV
Age	**0.002*** [0.001]	**0.003*** [0.001]	0.000 [0.001]	-0.001 [0.000]	-0.000 [0.001]	**-0.004*** [0.001]
Gender	0.016 [0.028]	0.006 [0.029]	-0.007 [0.025]	**-0.037*** [0.017]	-0.010 [0.018]	-0.031 [0.031]
Education	0.007 [0.012]	0.016 [0.012]	-0.008 [0.011]	0.001 [0.007]	**0.018*** [0.007]	**-0.034*** [0.014]
Unemployed	-0.054 [0.055]	-0.029 [0.062]	**0.098*** [0.038]	-0.009 [0.032]	-0.060 [0.055]	0.055 [0.054]
Sociotropic evaluation	-0.009 [0.015]	0.001 [0.016]	-0.002 [0.013]	-0.004 [0.008]	0.003 [0.009]	0.011 [0.016]
Religiosity	0.030† [0.016]	**-0.030*** [0.013]	0.026† [0.014]	0.004 [0.007]	-0.008 [0.007]	-0.021 [0.015]
L-R placement	0.052*** [0.005]	**-0.074*** [0.006]	0.021*** [0.005]	-0.001 [0.003]	-0.004 [0.004]	0.004 [0.006]
Strong leaders	-0.014 [0.028]	-0.032 [0.029]	-0.028 [0.025]	0.022 [0.016]	0.001 [0.017]	0.051† [0.031]
Democracy satisfaction	-0.009 [0.017]	0.030† [0.018]	0.008 [0.015]	**-0.021*** [0.010]	**-0.022*** [0.011]	0.014 [0.019]
Trust in government	**0.095*** [0.013]	-0.011 [0.015]	**-0.043*** [0.013]	-0.013 [0.009]	0.001 [0.009]	-0.029† [0.016]
Populist attitudes	0.031 [0.065]	-0.069 [0.071]	0.004 [0.059]	-0.016 [0.038]	-0.030 [0.044]	0.080 [0.075]

[1] Significance levels: .05*, .01**, .001***
[2] Marginal effects whose p-value is less than 0.1 are marked (†)

Part D: AMEs (robustness checks)

The results of an additional model specification, which excluded variables measuring preference for strong leaders, dissatisfaction with democracy, and trust in the government, confirm the findings of the primary model. Specifically, Table D1 (parliamentary context, 2018) shows that populist attitudes significantly and negatively affect the probability of voting for HDZ and positively affect the probability of non-voting, just like in the basic model. Additionally, the results for the 2020 parliamentary elections (see Table D2) demonstrate that excluding the variables further increased the negative effect of populist attitudes on the probability of voting for the HDZ. The additional model for 2020 also repeatedly showed the positive effect of populist attitudes on the probability of non-voting, which aligns with the study's main findings.

The additional model for 2020 demonstrates that populist attitudes have a greater effect on the likelihood of voting for Human Shield/Ivan Pernar's Party when three variables conceptually similar to populism are excluded. However, this effect is not statistically significant (p=0.057) and does not challenge the main findings and interpretation. The results of the additional model for the presidential elections (Ta-

ble D3) confirm the main model's results, as none of the effects of populist attitudes on the dependent variable categories are significant. There are two minor changes, however. The effects of populist attitudes on the likelihood of voting for Kolinda Grabar-Kitarović and the likelihood of non-voting increased in the additional model, but they did not reach a significance level.

Table D1. AMEs, parliamentary elections 2018

	HDZ	SDP	the Bridge	H. Shield	center	others	NV
Age	**0.003***** [0.001]	**0.002***** [0.001]	-0.001 [0.001]	**-0.003***** [0.001]	0.001 [0.001]	-0.000 [0.000]	**-0.002***** [0.001]
Gender	-0.025 [0.021]	-0.030 [0.023]	0.002 [0.019]	0.040† [0.023]	0.023 [0.022]	-0.012 [0.013]	0.001 [0.024]
Education	0.013 [0.009]	-0.012 [0.010]	0.014† [0.008]	-0.019† [0.010]	0.014 [0.009]	0.007 [0.006]	-0.017 [0.011]
Unemployed	0.051 [0.041]	0.008 [0.041]	-0.101† [0.056]	-0.029 [0.042]	0.008 [0.037]	**0.034*** [0.017]	0.029 [0.039]
Sociotropic evaluation	-0.023 [0.014]	0.002 [0.014]	-0.001 [0.013]	0.019 [0.015]	0.002 [0.014]	0.001 [0.009]	-0.000 [0.016]
Religiosity	**0.047***** [0.014]	0.005 [0.012]	-0.005 [0.011]	-0.018 [0.012]	**-0.025*** [0.011]	-0.007 [0.007]	0.003 [0.013]
L-R placement	**0.093***** [0.004]	**-0.077***** [0.005]	0.001 [0.004]	-0.008 [0.005]	-0.006 [0.004]	**0.005*** [0.003]	-0.008† [0.005]
Populist attitudes	**-0.268***** [0.040]	-0.040 [0.044]	-0.058 [0.036]	0.040 [0.046]	0.055 [0.042]	0.054† [0.028]	**0.218***** [0.051]

[1] Significance levels: .05*, .01**, .001***
[2] Marginal effects whose p-value is less than 0.1 are marked (†)
[3] Multinomial logistic model: N=875, X^2=721.66, controls: ✓, (ps)R^2=0.227

Table D2. AMEs, parliamentary elections 2020

	HDZ	Restart	H. Mov.	the Bridge	HS/IPP	others	NV
Age	**0.002***	**0.004***	**-0.002***	-0.001†	**-0.002***	-0.000	-0.000
	[0.000]	[0.001]	[0.001]	[0.000]	[0.001]	[0.001]	[0.001]
Gender	-0.004	0.017	0.032	-0.006	0.004	**-0.041***	-0.002
	[0.027]	[0.029]	[0.023]	[0.013]	[0.017]	[0.019]	[0.025]
Education	0.003	-0.010	-0.006	-0.003	-0.001	**0.024****	-0.003
	[0.012]	[0.012]	[0.010]	[0.006]	[0.007]	[0.008]	[0.011]
Unemployed	-0.008	-0.011	-0.051	-0.012	0.037†	0.009	0.035
	[0.049]	[0.054]	[0.044]	[0.025]	[0.022]	[0.032]	[0.042]
Sociotropic evaluation	**-0.063***	0.014	0.021†	-0.014†	0.003	0.004	**0.035****
	[0.014]	[0.015]	[0.011]	[0.008]	[0.008]	[0.009]	[0.013]
Religiosity	**0.045****	**-0.032***	0.026*	-0.006	-0.013†	0.007	**-0.026***
	[0.015]	[0.013]	[0.013]	[0.006]	[0.007]	[0.009]	[0.012]
L-R placement	**0.065***	**-0.078***	0.005	0.002	0.002	-0.005	0.008†
	[0.005]	[0.006]	[0.004]	[0.002]	[0.003]	[0.004]	[0.005]
Populist attitudes	**-0.130***	-0.087	0.030	-0.040	0.076†	0.014	**0.137***
	[0.061]	[0.068]	[0.051]	[0.031]	[0.040]	[0.043]	[0.060]

[1] Significance levels: .05*, .01**, .001***
[2] Marginal effects whose p-value is less than 0.1 are marked (†)
[3] Multinomial logistic model: N=783, X²=434.51, controls: ✓, (ps)R²=0.162

Table D3. AMEs, presidential elections

	KGK	Z. Milanović	M. Škoro	IP/MK	others	NV
Age	**0.004***	**0.003***	-0.000	**-0.001***	-0.000	**-0.005***
	[0.001]	[0.001]	[0.001]	[0.000]	[0.000]	[0.001]
Gender	0.011	0.009	-0.013	-0.028†	-0.017	0.038
	[0.027]	[0.028]	[0.023]	[0.016]	[0.017]	[0.030]
Education	0.015	0.013	-0.008	0.001	**0.017***	**-0.038****
	[0.012]	[0.011]	[0.010]	[0.006]	[0.007]	[0.013]
Unemployed	-0.024	-0.045	**0.071***	-0.025	-0.067	0.089†
	[0.052]	[0.059]	[0.036]	[0.033]	[0.054]	[0.050]
Sociotropic evaluation	**-0.043****	0.001	0.011	0.006	0.006	0.019
	[0.014]	[0.014]	[0.012]	[0.008]	[0.008]	[0.016]
Religiosity	**0.043****	**-0.036****	0.022†	0.003	-0.008	-0.025†
	[0.016]	[0.012]	[0.012]	[0.007]	[0.007]	[0.015]
L-R placement	**0.061***	**-0.071***	**0.015***	-0.001	-0.005	0.000
	[0.005]	[0.006]	[0.004]	[0.003]	[0.003]	[0.006]
Populist attitudes	-0.114†	-0.065	0.051	0.026	-0.021	0.123†
	[0.061]	[0.066]	[0.054]	[0.035]	[0.039]	[0.070]

[1] Significance levels: .05*, .01**, .001***
[2] Marginal effects whose p-value is less than 0.1 are marked (†)
[3] Multinomial logistic model: N=796, X²=420.74, controls: ✓, (ps)R²=0.164