Economic and Political Institutions: Three Empirical Essays

Ph.D. Dissertation

Andrea Celico

Universidad de Navarra

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Contacts: acelico@unav.es

Chapter 1

Can we all be Denmark?
The role of civic attitudes in welfare state reforms

with *M. Rode*

Introduction

Welfare-state: The set of a country's arrangements for income maintenance.

Motivation for the study:

- Long-standing trends like changing demography, globalization and immigration, and labour market changes represent challenges for welfare state systems. Exacerbated by global crises.
- Viability of welfare state designs is closely related to the individual incentives provided.

$\longrightarrow$ Understanding how new welfare state designs shape individuals' behaviours is crucial.

Background

Welfare state designs and informal norms:

- **Informal norms shape welfare systems**: Stronger collective civic virtues are associated to the provision of larger unemployment benefits (Algan and Cahuc, 2009);
- **Welfare systems shape informal norms:**
  - Crowding-out hypothesis: generous social systems provide moral-hazard incentives and erode social norms (Lindbeck, 1995; Heinemann and Tanz, 2008; Halla and Schneider, 2014);
  - Crowding-in hypothesis: large social benefits may foster social norms' creation, or do not erode them (Rothstein, 2001; Van Oorschot and Arts, 2005)

Flexicurity

A welfare state model entailing three pillars:

- Workers' security $\rightarrow$ adequate social benefits;
- Labour market flexibility $\rightarrow$ flexible hiring and firing rules;
- Active labor market policies (ALMP);

Employed first in Denmark in the 1990s.

A fundamental means in the implementation of the EU Lisbon Strategy and Europe 2020 Strategy.

Despite the literature's focus on social benefits provision and social norms, the combination of regulation and social protection is relatively understudied.

Research question and methodology

RQ: Do reforms inspired to flexicurity principles crowd-out individuals' civic attitudes?

- Level of analysis: individuals from 70+ OECD and non-OECD countries;
- Methodology: OLS fixed effects model;
- Variables of interest:
  - Benefits morale: How justifiable is it to claim government benefits to which you are not entitled? [0,10] ;
  - Tax morale: How justifiable is it to cheat on taxes if you have a chance? [0,10] ;
- Data sources:
  - Individuals' attitudes: World Values Survey/European Values Study (WVS/EVS);
  - Public transfers' size and labor market regulation: Economic Freedom of the World Index (EFW);
  - Active Labor Market Policies (ALMP) statistics: OECD data;

A measure of flexicurity

A proxy for flexicurity (FX index): ▸ FX index evolution

$$FX = (Labor\ market\ regulation - Transfers\ and\ subsidies) \times ALMP\ exp \qquad [1, 100]$$

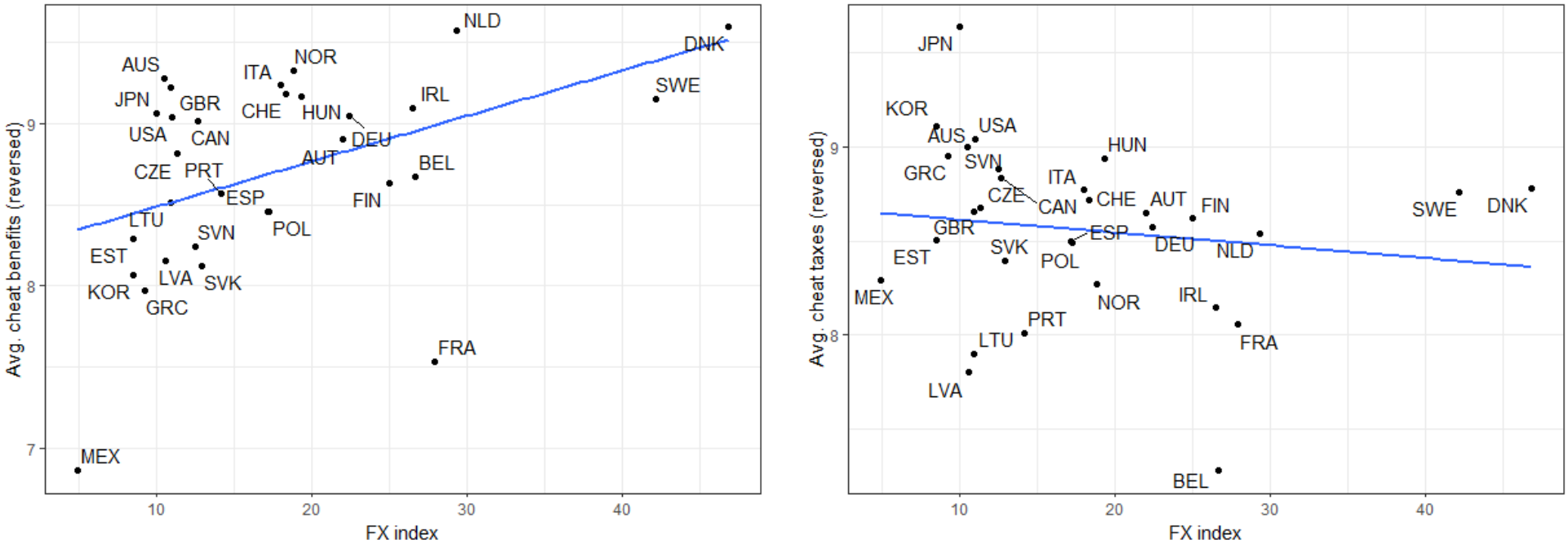


Figure: Flexicurity and civic attitudes - Average levels

Empirical approach

- **Baseline model:**

$$Civ.Att._{ijt} = \beta_0 + \beta_1 FX_{jt} + \beta_2 X_{ijt} + \beta_3 Z_{jt} + \alpha_j + \gamma_t + \epsilon_i$$

$FX_{j,t}$: Flexicurity index at time t in country j;
$X_{i,j,t}$: Individual-level controls;
$Z_{j,t}$: Country-level controls;
α_j: Country fixed-effects;
γ_t: Time fixed-effects;

- **Augmented models:**
  - Delayed effects of flexicurity;
  - Individuals' social trust interaction;

▸ Summary statistics and controls

Main results: baseline and delayed effects

	Cheat on government benefits			Cheat on taxes		
	(1)	(2)	(3)	(4)	(5)	(6)
FX index	-0.0144	-0.0299**	-0.0256	-0.000721	0.00159	0.00426
	(0.00929)	(0.0136)	(0.0154)	(0.00894)	(0.0127)	(0.0168)
FX lag 3	-	0.0120	0.00877	-	-0.00367	-0.00421
		(0.00858)	(0.0139)		(0.00553)	(0.0155)
FX lag 5	-	-	0.00468	-	-	0.00268
			(0.0154)			(0.0176)
Log GDPPC	0.451	0.851**	1.161**	-0.0180	0.110	0.449
	(0.297)	(0.397)	(0.519)	(0.307)	(0.318)	(0.456)
Log GDPPC lag 3	-	-0.664*	-0.521	-	-0.119	-0.167
		(0.386)	(0.425)		(0.305)	(0.293)
Log GDPPC lag 5	-	-	-0.288	-	-	-0.170
			(0.185)			(0.273)
Unemployment	-0.0430	-0.0102	0.00782	-0.0203	-0.0126	0.0183
	(0.0339)	(0.0253)	(0.0407)	(0.0187)	(0.0187)	(0.0314)
Unemployment lag 3	-	-0.0409	-0.0691	-	-0.00489	-0.0708
		(0.0326)	(0.0444)		(0.0113)	(0.0483)
Unemployment lag 5	-	-	0.0299	-	-	0.0610
			(0.0438)			(0.0469)
Constant	-1.052	1.441	-0.578	3.779	3.670	2.089
	(3.031)	(3.018)	(3.964)	(3.219)	(3.817)	(4.715)
Observations	98,762	94,975	93,236	98,762	94,975	93,236
Nr. of countries	31	31	31	31	31	31
Controls (Ind. lev.)	✓	✓	✓	✓	✓	✓
Country & year F.E.	✓	✓	✓	✓	✓	✓
R-squared	0.133	0.136	0.138	0.078	0.080	0.081

Note: Robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1

Table: Flexicurity and civic attitudes in OECD countries

▸ Alternative FX

Main results: individuals' trust interactions

	Cheat on government benefits			Cheat on taxes		
	(1)	(2)	(3)	(4)	(5)	(6)
FX	-0.0146	-0.0269*	-0.0206	-0.00130	-0.00269	0.000351
	(0.0116)	(0.0134)	(0.0157)	(0.0105)	(0.0139)	(0.0172)
FX lag 3	-	0.0116	-0.00243	-	-0.000296	-0.00366
		(0.0114)	(0.0174)		(0.00592)	(0.0159)
FX lag 5	-	-	0.0170	-	-	0.00558
			(0.0195)			(0.0186)
Social trust	-0.00377	0.0448	0.0427	0.0359	0.0227	0.00661
	(0.0984)	(0.101)	(0.1000)	(0.0711)	(0.0640)	(0.0591)
Social trust × FX	0.000315	-0.00594	-0.00707	0.00109	0.00761	0.00789
	(0.00872)	(0.00972)	(0.0104)	(0.00511)	(0.00619)	(0.00576)
Social trust × FX lag3	-	0.00119	0.0202*	-	-0.00564	0.000400
		(0.00816)	(0.0117)		(0.00452)	(0.00757)
Social trust × FX lag5	-	-	-0.0233*	-	-	-0.00689
			(0.0129)			(0.00838)
Controls	✓	✓	✓	✓	✓	✓
Country dummies × social trust	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓
Observations	98,762	94,975	93,236	98,762	94,975	93,236
Nr. of countries	31	31	31	31	31	31
R-squared	0.136	0.138	0.140	0.079	0.082	0.082

Note: Robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1

▸ Alternative FX

Table: Interacting flexicurity and social trust in OECD countries

Conclusions

- Findings do not support the crowding-out hypothesis: flexicurity reforms are not associated to civicness erosion in both OECD and non-OECD countries;
- Flexicurity arrangements might reinforce or do not affect civic attitudes;
- Not conclusive results: mixed evidences arise when analyzing different timeframes;
- The political argument about the unviability of flexicurity reforms in context with low social responsibility is not verified;

Chapter 2

Will the real populists please stand up? A machine-learning index of party populism

with *M. Rode & I. Rodriguez Carreño*

Background

Stylized facts:

- Populism has become a global political phenomenon;
- (Some) Causes: economic uncertainties, globalization, migration flows, distrust in traditional politics;
- (Some) Consequences: negative economic performance, anti-social behaviors legitimization, political contagion;

Motivation:

- Satisfactory cross-national measures of populism are lacking :
  - Binary measures;
  - Limited geographic and temporal scope;
- Continuous measures can bring significant enhancements in populism studies;

Defining populism

Recent definitions:

- A set of ideas (Hawkins and Kaltwasser, 2018; Mudde 2004,2017):
  - Political sovereignty belongs to the people;
  - Ordinary people are homogeneous and indivisible;
  - The people has a general will;
  - Manichean struggle between the people and the elite;
- A communication style, discourse or rhetoric (Norris and Inglehart,2019; Laclau,2004):
  - Manichean message;
  - People as the only source of political authority;
  - Low on policy specifics;

Contribution

Methodology:

- Supervised machine-learning - Random Forest Regression:
  - Political parties expert-surveys;
  - Existing (short-term) countinuous measures of populism;

Outcome:

- Two [0,10] indexes assessing how populist are different political parties:
  - Ideational & rethoric definitions of populism

Coverage:

- 3467 parties;
- 3151 elections;
- 169 countries;
- 1970-2019 period;

Why Machine Learning?

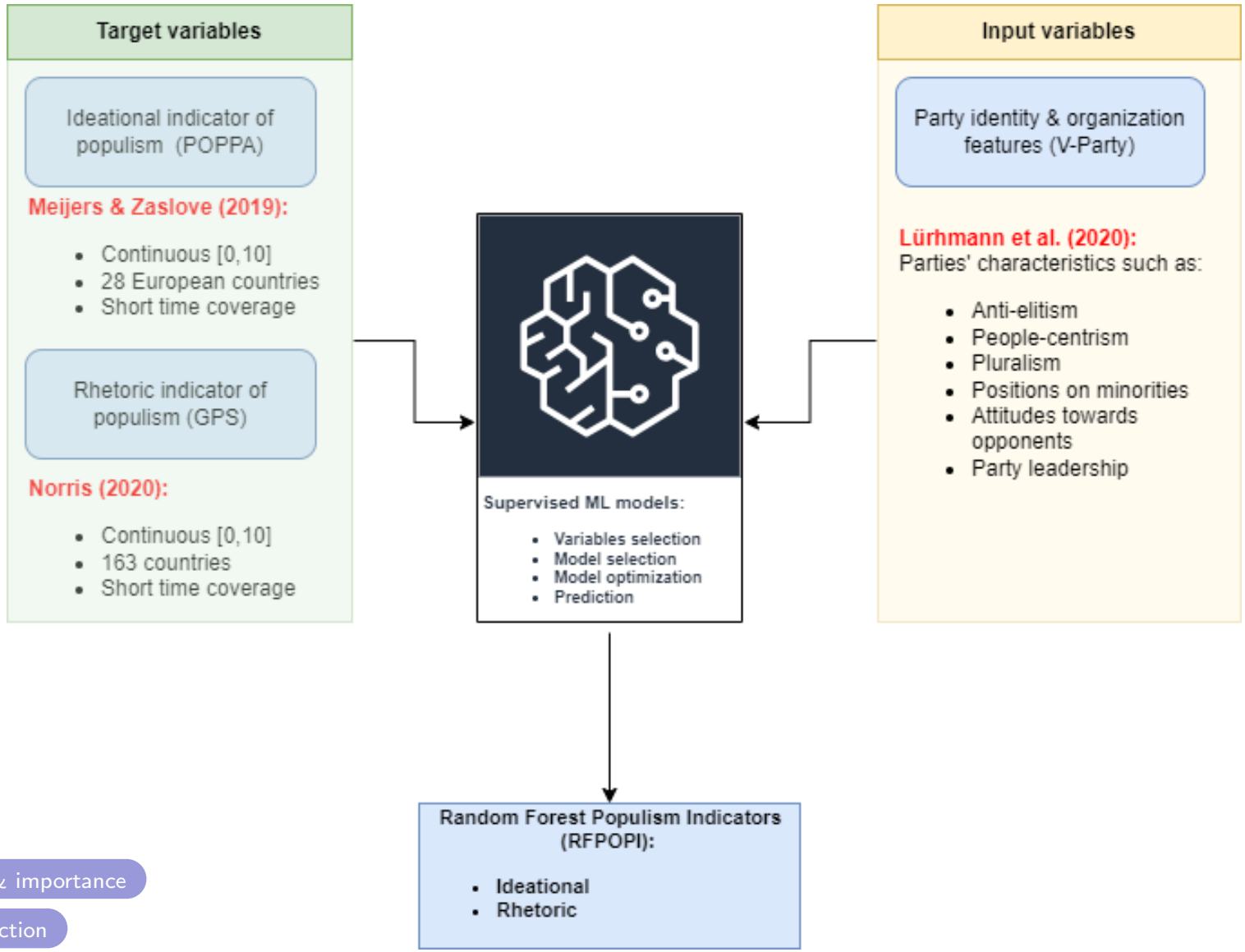
Populism measurement is a multi-dimensional problem $\longrightarrow$ A problem of data aggregation :

1. Aggregation function needs to be consistent with conceptual assumptions;
2. Real aggregation function is not observable;
   - Assumptions are usually simplistic or arbitrary

Machine-learning advantages:

- No need for *ex-ante* assumptions about functional form;
- Flexible optimization of non-linear problems;
- Data-driven;

Methodology



- Variables & importance
- Model selection
- Model performance

Results: populism scores

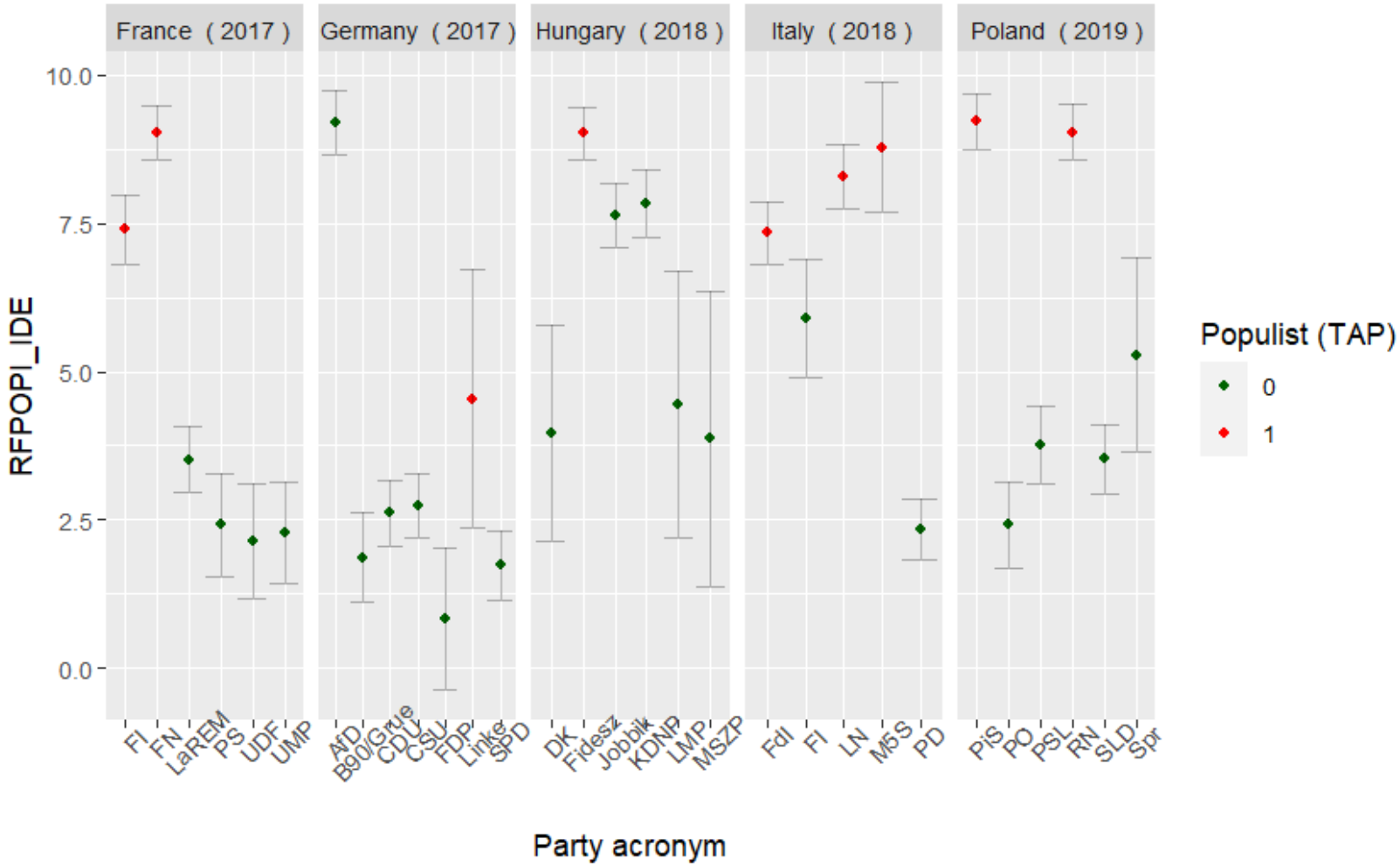


Figure: RFPOPI ideational populism scores for a selection of European countries (95% C.I.)

Results: populism and ideology

Figure: RFPOPI ideational index and ideological positioning

Results: Long time coverage

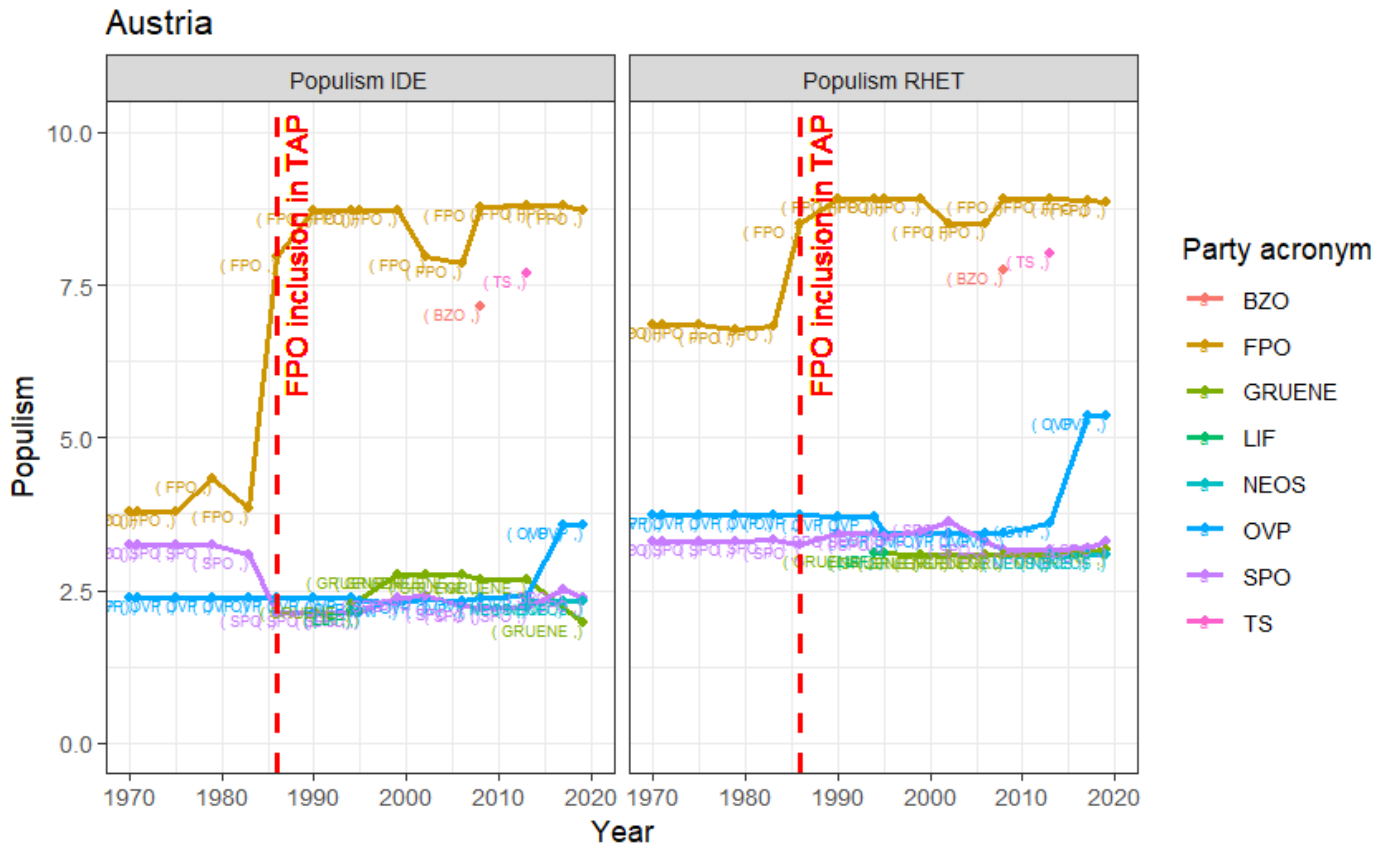


Figure: RFPOPI indicators for austria and validity check

Results: Country-level proxies of populism

Multiple potential country-level aggregations of RFPOPI scores:

- How populist is a country ruling party?
- How populist is a country executive?
- How populist is a country party system?

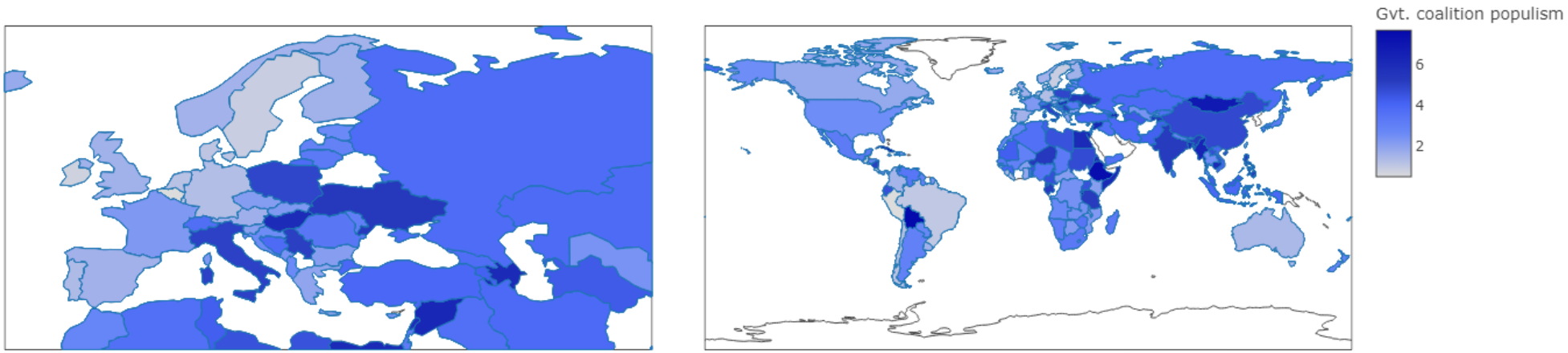


Figure: Populism scores weighted by seat share distribution within government coalition

Further results

- Comparisons with V-Party index of populism; Go
- Comparison with the binary classification of Funke et al. (2023); Go
- Fresh insights: the case of labor market institutions and populism; Go

Conclusions: Pros & cons

Advantages:

- Overcome binary classifications: capture heterogeneity within populist and non-populist categories of parties;
- Provide a new tool to score populism worldwide over a 50 years time span;
- Data-driven approach: avoids making arbitrary assumptions about populism determinants;

Limitations:

- Generalizes our current understanding of populism to previous times;
- Expert-surveys & country-level comparisons: populism and its determinants might be interpreted differently across different socio-political contexts;
- Random Forest as a "black-box" methodology;
- Updates will be conditioned to the availability of new surveys;

Chapter 3

Facing the populists:
the effect of populist challengers on mainstream parties' welfare state positions

Motivation

- Social protection and redistribution are frequently core elements of populists' campaigns;
  - **Larger redistribution**: PiS Family 500+ program in Poland; 5MS "Reddito di cittadinanza" in Italy; Podemos (Spain) or Syriza (Greece) redistributive and anti-austerity agendas;
  - **Exclusionary welfare:** welfare should target exclusively natives (e.g. Danish DF; Dutch PVV; French FN; Swedish SD; Austrian FPO; German AfD etc.)

- Populist parties can influence welfare state policy:
  - Directly: shaping policy actions when in government or exploiting veto powers within government coalitions (Guriev and Papaioannou, 2022);
  - Indirectly: shifting established parties positions (Haegel and Mayer, 2018), even when not in government.

Background:

Populists and welfare state policy:

- **Economic dimension**: Overly expansive redistribution policies (Dornbusch and Edwards, 1991; Mudde, Cas and Kaltwasser, 2017) and unconditional commitments (Morelli et al., 2021)
- **Cultural dimension** (*Welfare-chauvinism*): Welfare state access should be guaranteed only to natives and it should not bear the cost of non-natives' social protection (Andersen and Bjørklund, 1990; Mudde and Kaltwasser, 2013)

Mainstream parties' adjustments to populists' electoral success:

- Non-populist parties imitate populists' platforms (Guiso et al., 2017);
- Anti-multiculturalism and anti-immigration positions of populist parties are "contagious" (Abou-Chadi and Krause, 2020; Van Spanje, 2010; Wagner and Meyer, 2017);
- Associations between competition with a populist party and changes in mainstream parties' welfare state positions (Krause and Giebler, 2020);

Research question

How mainstream parties respond to populists' electoral success in terms of their welfare state policy positions ?

Economic dimension: do parties respond with shifts favoring larger/smaller social expenditure?

Cultural dimension: do parties respond with shifts favoring inclusive/exclusive welfare state?

- Level of analysis: 29 European democracies national elections (1970-2020);
- Methodology: Regression Discontinuity Design;
- Variable of interest: programmatic shift of party positions across subsequent elections
- Mainstream parties: All parties that participated in at least 3 elections with an average vote share of 8%.
- Populists' electoral success: a populist party passing the national electoral threshold and obtaining representation

Why should mainstream parties shift their programmatic positions?

Demand side:

- The success and consolidation of a populist party is a signal of a change in public opinion preferences (Downs et al., 1957);

Supply side:

- The entry of a new party can shift other parties' positions *per se*, independently from public opinion changes (Downs et al., 1957);
- A populist party obtaining parliamentary representation may constitute a threat to mainstream parties:
  - Representation provides parties with larger resources and media coverage (Abou-Chadi and Krause, 2020), increasing their chances of survival within the party system (Dinas et al., 2015), and pushing mainstream parties to adjust.

Measuring shifts in parties' positions

Objective: the shift in party positions between election $t-1$ and election t

Inputs from CMP:

- *per504* (Welfare state expansions);
- *per505* (Welfare state limitations);
- *per608* (Multiculturalism: negative)

$$\Delta\text{Welfare size}_{i,t} = \left(\log \frac{\text{per504}+0.5}{\text{per505}+0.5}\right)_{i,t} - \left(\log \frac{\text{per504}+0.5}{\text{per505}+0.5}\right)_{i,t-1}$$

$$\Delta\text{Chauvinism}_{i,t} = \left(|\log \frac{\text{per504}+0.5}{\text{per505}+0.5}| \times \log(\text{per608}+0.5)\right)_{i,t} - \left(|\log \frac{\text{per504}+0.5}{\text{per505}+0.5}| \times \log(\text{per608}+0.5)\right)_{i,t-1}$$

Identification: close election RDD

The idea: Rule out public opinion effects by comparing mainstream parties that competed with a populist party that closely failed to win a seat with mainstream parties that competed with a populist that closely obtained a seat.

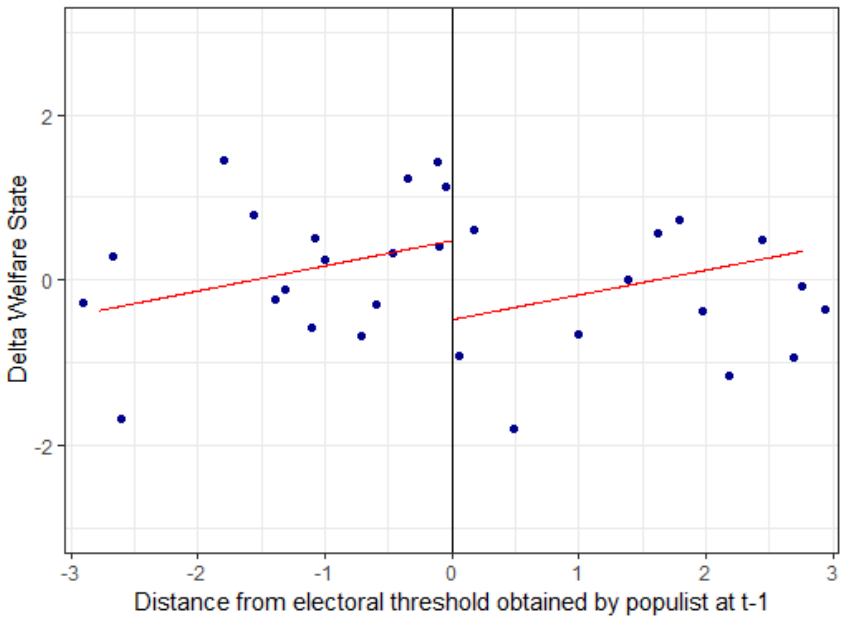
- **Cut-off:** national electoral thresholds ▸ Effective thresholds;
- **Assignment var.:** difference between vote share and electoral threshold for a populist party at $t-1$ (x_i);
- **Treatment status:** populist party presence in parliament after election $t-1$ (D_i);

$$\Delta Y_i = \alpha + \tau D_i + f(x_i) + \epsilon_i \quad \forall x_i \in (-h, h) \tag{1}$$

Identification assumptions:

- Continuity assumption: within a small interval around the cutoff parties are similar except for their treatment status;
- Local randomization: mainstream parties cannot perfectly control or predict populists' electoral result: ▸ Manipulation test
  - Electoral fraud;
  - Threshold manipulation;

Results: main RDD estimates



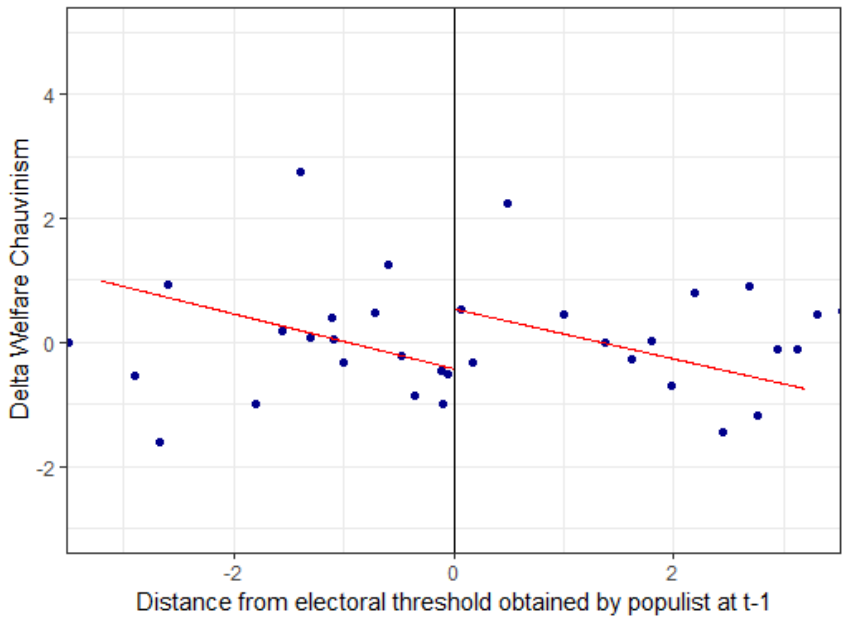


Figure: Mainstream parties' positions adjustment

Results: RDD estimates

Estimation	Local			
Variable	ΔWelfare Size		ΔWelfare chauvinism	
Polynomial order	1	2	1	2
LATE	−0.862**	−1.899***	1.451***	1.818***
	(0.368)	(0.301)	(0.366)	(0.251)
Bandwidth	2.696	3.209	3.016	2.764
N_-/N_+	58/65	66/93	63/85	58/76

Note: Robust standard errors are in parentheses, clustered at the national election level. P-values: ***p < 0.01, **p < 0.05, *p < 0.1.

Table: RDD local estimates

Further tests:

- Cutoff Sensitivity
- Placebo cutoffs
- Robustness checks
- Jackknife analyses

Results: RDD estimates by ideology group

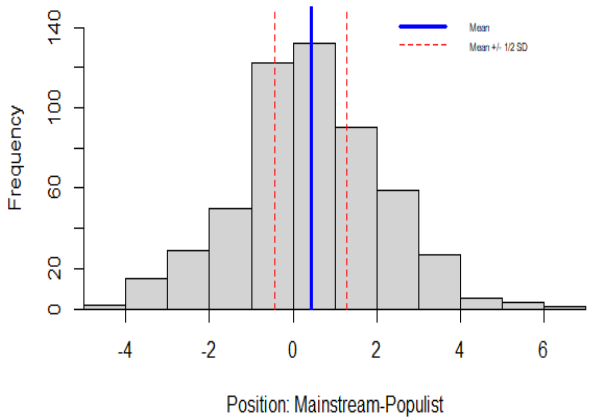
Estimation	Local			
Variable	ΔWelfare Size		ΔWelfare chauvinism	
Polynomial order	1	2	1	2
Subgroups estimations				
LATE Left-wing	0.268	-0.038	1.869**	2.201***
	(0.587)	(0.719)	(0.758)	(0.621)
Bandwidth	2.540	4.078	3.084	3.718
N_-/N_+	20/32	28/57	27/44	27/57
LATE Right-wing	-2.030***	-3.108***	1.319***	1.834***
	(0.555)	(0.918)	(0.461)	(0.561)
Bandwidth	2.240	3.378	2.171	3.506
N_-/N_+	31/24	36/47	31/24	36/49

Note: Robust standard errors are in parentheses, clustered at the national election level. P-values: ***p < 0.01, **p < 0.05, *p < 0.1.

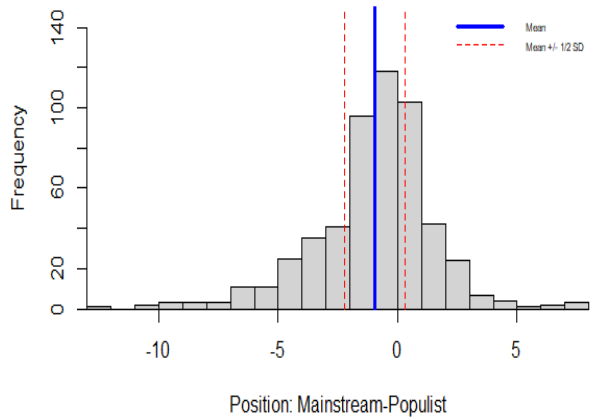
Table: RDD local estimates

▸ Sensitivity

Results: positional distances



(a) Distances - Welfare size



(b) Distances - Welfare chauvinism

Estimation	Local			
Variable	Welfare size dist.		Welfare Chauvinism dist.	
Polynomial order	1	2	1	2
LATE	-0.624***	-0.666***	-3.121***	-2.912***
	(0.100)	(0.084)	(0.067)	(0.179)
Bandwidth	3.134	4.568	1.800	3.915
N_-/N_+	27/83	28/120	17/41	27/101

Note: Robust standard errors are in parentheses, clustered at the national election level. P-values: ***p < 0.01, **p < 0.05, *p < 0.1.

Table: Positional distances

Conclusions

- Populists success is a supply-side mechanism influencing party competition;
- After competing with a populist, mainstream parties' positions shift in favor of smaller and more exclusionary welfare state;
- After competing with a populist, positions distances between mainstream parties and populists parties shrink (regarding social protection)

Caveats:

- The RDD in this paper captures the effect of "weak" populists;
- Literature and models of promissory representation suggest that parties will stick to their electoral commitments, this paper can't currently verify if parties' positional shifts translate into tangible policy actions.

Flexicurity index

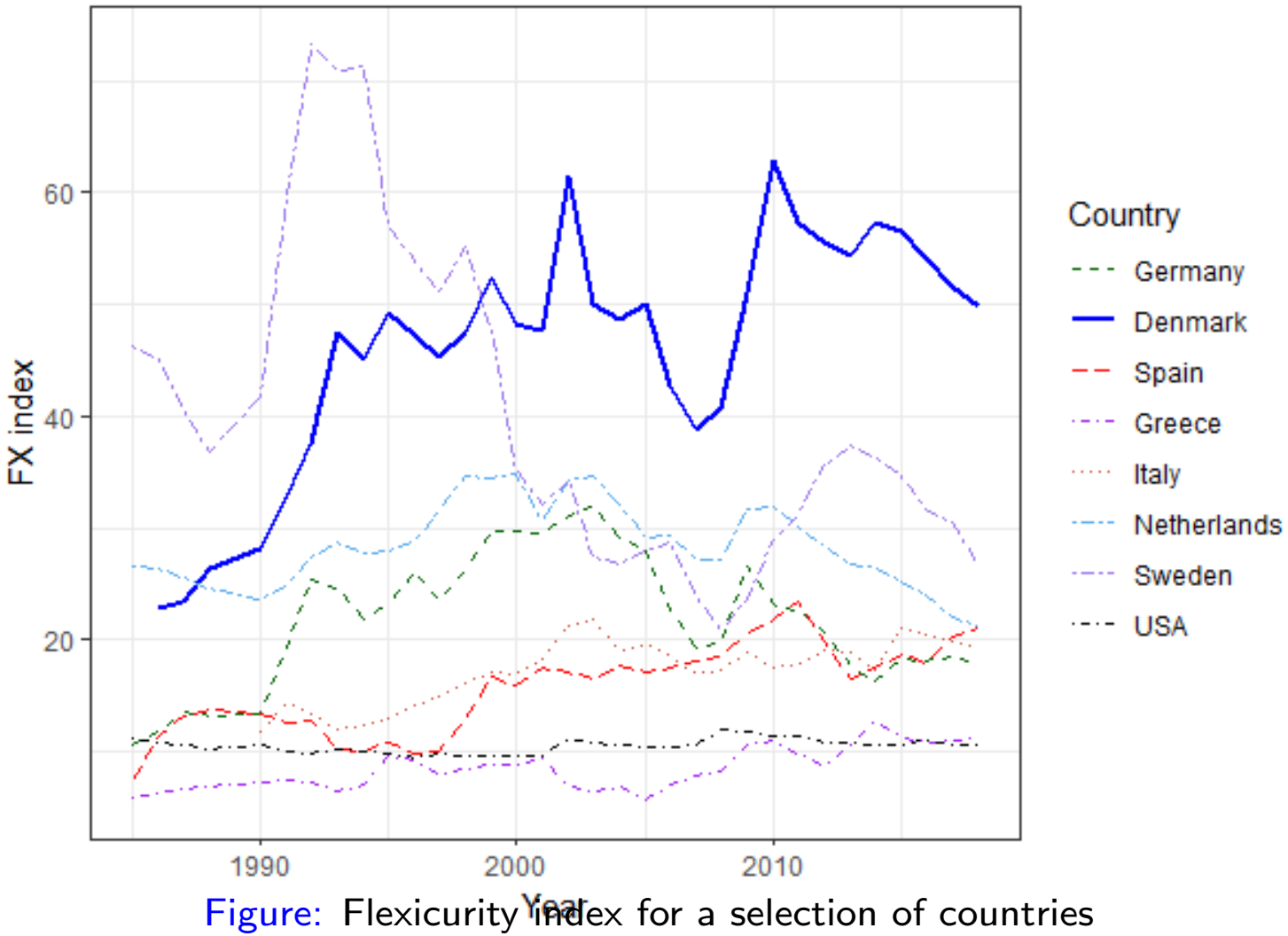


Figure: Flexicurity index for a selection of countries

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Controls

	OECD countries					Non-OECD countries				
	Mean	SD	Min	Max	N	Mean	SD	Min	Max	N
Individual-level										
Cheat on government benefits	2.274	2.155	1	10	138582	2.706	2.535	1	10	99662
Cheat on taxes	2.339	2.163	1	10	138582	2.370	2.318	1	10	99662
Female	0.505	0.500	0	1	138582	0.500	0.500	0	1	99662
Age 15-30	0.248	0.432	0	1	138582	0.327	0.469	0	1	99662
Age 60 +	0.216	0.411	0	1	138582	0.127	0.333	0	1	99662
Unemployed	0.056	0.230	0	1	138582	0.119	0.324	0	1	99662
Low income	0.212	0.409	0	1	138582	0.267	0.442	0	1	99662
High income	0.468	0.499	0	1	138582	0.298	0.457	0	1	99662
Low education	0.110	0.313	0	1	138582	0.185	0.388	0	1	99662
High education	0.499	0.500	0	1	138582	0.250	0.433	0	1	99662
Children 1 or 2	0.364	0.481	0	1	138582	0.379	0.485	0	1	99662
Good health	0.690	0.462	0	1	138582	0.669	0.471	0	1	99662
Religious person	0.592	0.491	0	1	138582	0.737	0.440	0	1	99662
Left-wing	5.527	2.121	1	10	138582	5.364	2.526	1	10	99662
Life control	7.068	2.104	1	10	138582	6.922	2.409	1	10	99662
Social trust	0.367	0.482	0	1	138582	0.211	0.408	0	1	99662
Survey wave	4.353	2.111	1	7	138582	5.487	1.656	2	7	99662
Country-level										
Labor market regulations	5.642	1.615	2.830	9.160	131381	6.104	1.402	2.900	9.370	77215
Transfers & subsidies	5.311	1.738	1.198	8.834	135862	7.836	1.614	3.494	10	78215
Log GDPPC	9.885	0.828	7.792	11.482	136483	8.162	1.231	5.478	10.790	85375
Unemployment rate	7.160	3.719	1.832	22.677	101282	-	-	-	-	-
Total active measures (% GDP)	0.423	0.322	0	1.790	99493	-	-	-	-	-
FX index	17.319	8.912	2.973	74.771	98762	-	-	-	-	-
FX alt. index	0.293	2.011	-4.534	5.100	130650	-1.746	2.111	-5.540	3.190	73913

Table: Summary statistics

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Main results: an alternative FX measure

	OECD countries				Non-OECD countries			
	Cheat on gvt. benefits		Cheat on taxes		Cheat on gvt. benefits		Cheat on taxes	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
FX alt. index	-0.117***	-0.114	-0.0932**	-0.101	-0.0340	0.205	-0.185**	-0.175
	(0.0421)	(0.0671)	(0.0441)	(0.0636)	(0.0864)	(0.176)	(0.0691)	(0.125)
FX alt. lag 3	-	0.110	-	-0.0648	-	-0.427**	-	-0.222
		(0.0713)		(0.0463)		(0.186)		(0.147)
FX alt. lag 5	-	-0.112	-	0.0629	-	0.398**	-	0.108
		(0.0858)		(0.0665)		(0.165)		(0.104)
Log GDPPC	0.655	1.209**	0.0201	0.109	-0.698	-0.476	-0.184	-0.581
	(0.422)	(0.561)	(0.246)	(0.299)	(0.575)	(0.880)	(0.596)	(0.888)
Log GDPPC lag 3	-	-0.305	-	-0.358	-	-0.946	-	-0.161
		(0.499)		(0.279)		(0.971)		(0.696)
Log GDPPC lag 5	-	-0.220	-	0.195	-	1.323***	-	0.914***
		(0.392)		(0.266)		(0.435)		(0.291)
Observations	98,762	93,236	98,762	93,236	73,913	61,431	73,913	61,431
Nr. of countries	31	31	31	31	39	32	39	32
Country & year F.E.	✓	✓	✓	✓	✓	✓	✓	✓
R-squared	0.133	0.137	0.078	0.081	0.086	0.109	0.088	0.099

Note: Robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1

Table: Flexicurity and civic attitudes in OECD & non-OECD countries

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Main results: alternative FX and trust interactions

	OECD countries				Non-OECD countries			
	Cheat on gvt. benefits		Cheat on taxes		Cheat on gvt. benefits		Cheat on taxes	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
FX alt. index	-0.122***	-0.132**	-0.104**	-0.144**	-0.0232	0.214	-0.172**	-0.159
	(0.0408)	(0.0610)	(0.0465)	(0.0535)	(0.0877)	(0.189)	(0.0728)	(0.139)
FX alt. lag 3	-	0.134	-	-0.0244	-	-0.438**	-	-0.225
		(0.0845)		(0.0516)		(0.187)		(0.147)
FX alt. lag 5	-	-0.120	-	0.0691	-	0.377**	-	0.0942
		(0.0860)		(0.0641)		(0.169)		(0.113)
Social trust	-0.0130	-0.00203	0.0325	0.0466*	0.475*	0.492	0.210	0.195
	(0.0234)	(0.0331)	(0.0220)	(0.0265)	(0.249)	(0.753)	(0.215)	(0.662)
Social trust × FX alt. index	0.00864	0.0345	0.0214	0.0989***	-0.0214	-0.0530	-0.0405	-0.0523
	(0.0248)	(0.0424)	(0.0238)	(0.0318)	(0.0824)	(0.166)	(0.0751)	(0.167)
Social trust × FX alt. lag 3	-	-0.0532	-	-0.0767*	-	0.00822	-	-0.0546
		(0.0498)		(0.0405)		(0.138)		(0.0914)
Social trust × FX alt. lag 5	-	0.0197	-	-0.0257	-	0.0737	-	0.0716
		(0.0355)		(0.0327)		(0.125)		(0.0832)
Constant	-4.156	-4.870	2.861	3.239	6.493	2.440	3.048	-0.623
	(4.087)	(4.729)	(2.474)	(2.532)	(4.601)	(5.680)	(4.678)	(4.735)
Controls	✓	✓	✓	✓	✓	✓	✓	✓
Country dummies × social trust	✓	✓	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓	✓	✓
Observations	98,762	93,236	98,762	93,236	73,913	61,431	73,913	61,431
Nr. of countries	31	31	31	31	39	32	39	32
R-squared	0.135	0.140	0.080	0.083	0.088	0.111	0.090	0.101

Note: Robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1

Table: Interacting flexicurity and social trust in OECD & non-OECD countries

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Model selection

	RFPOPI_IDE					RFPOPI_RHET West					RFPOPI_RHET Non-West.				
	OLS	RF	SVM_L	SVM_R	XGB	OLS	RF	SVM_L	SVM_R	XGB	OLS	RF	SVM_L	SVM_R	XGB
Mean	1.30	1.13	1.31	1.30	1.19	1.50	1.47	1.52	1.46	1.62	1.99	1.97	1.99	2.01	2.18
Variance	0.11	0.12	0.11	0.12	0.14	0.13	0.12	0.14	0.13	0.18	0.15	0.13	0.16	0.14	0.13
Wilcoxon test (P-values)															
RF	0.00	-	-	-	-	1.00	-	-	-	-	1.00	-	-	-	-
SVM_L	1.00	0.00	-	-	-	1.00	1.00	-	-	-	1.00	1.00	-	-	-
SVM_R	1.00	0.00	1.00	-	-	1.00	1.00	1.00	-	-	1.00	1.00	1.00	-	-
XGB	0.02	1.00	0.01	0.04	-	0.18	0.01	0.33	0.01	-	0.00	0.00	0.00	0.00	-

Note: The upper part of the table shows the mean and the variance of the RMSE distribution across 30 iterations of the train-test split for each type of populism. The lower part of the table displays the p-values relative to the significance of the difference between the central tendency of the RMSEs distribution of each method across the 30 iterations.

Table: Out-of-sample average RMSEs (across n=30 iterations) and Wilcoxon test of differences

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Variables' importance

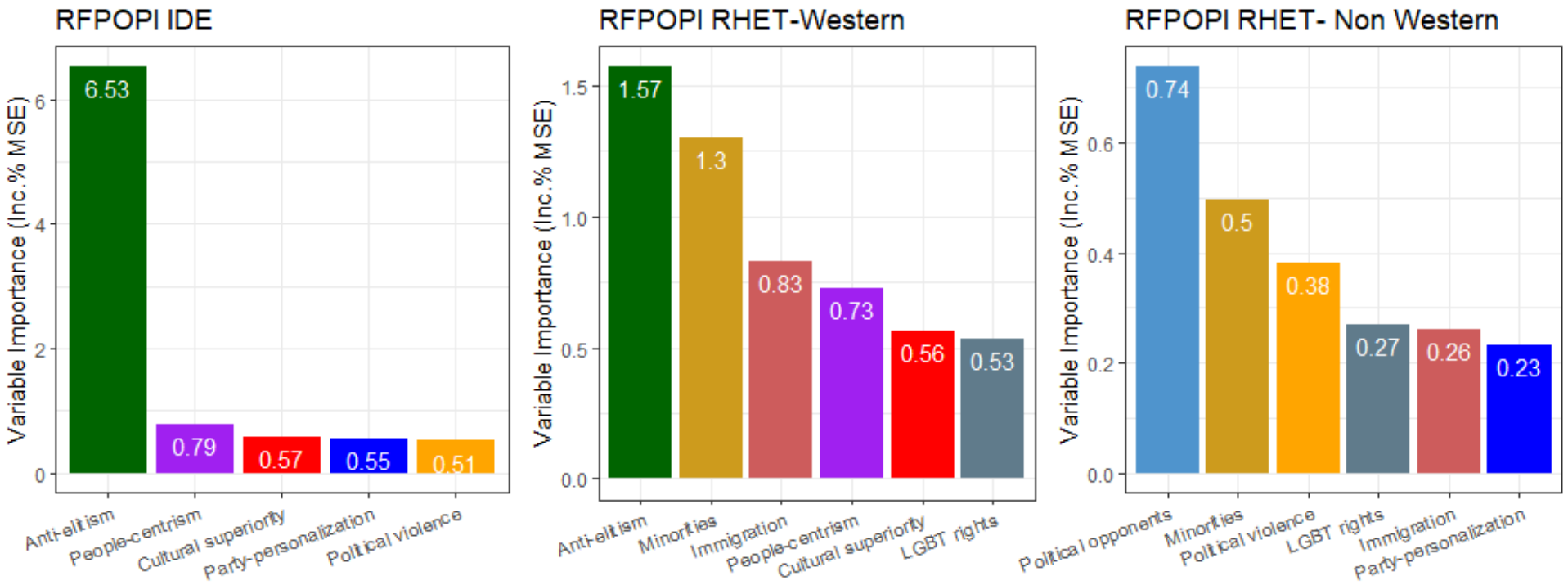

Figure: Selected variables and importance

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Model performance

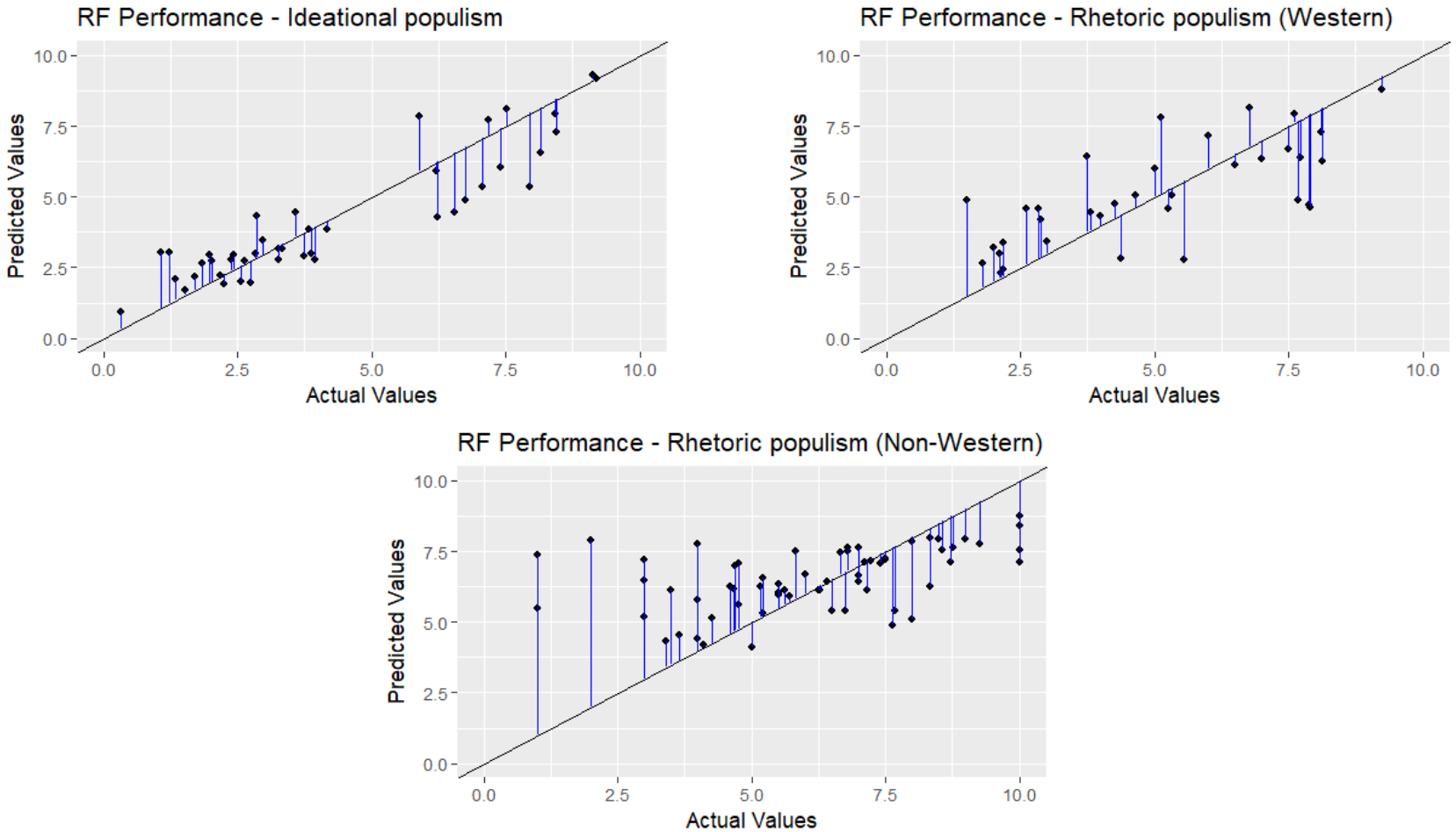

Figure: Test set errors distribution - Actual values versus predicted values

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RFPOPI & V-Party

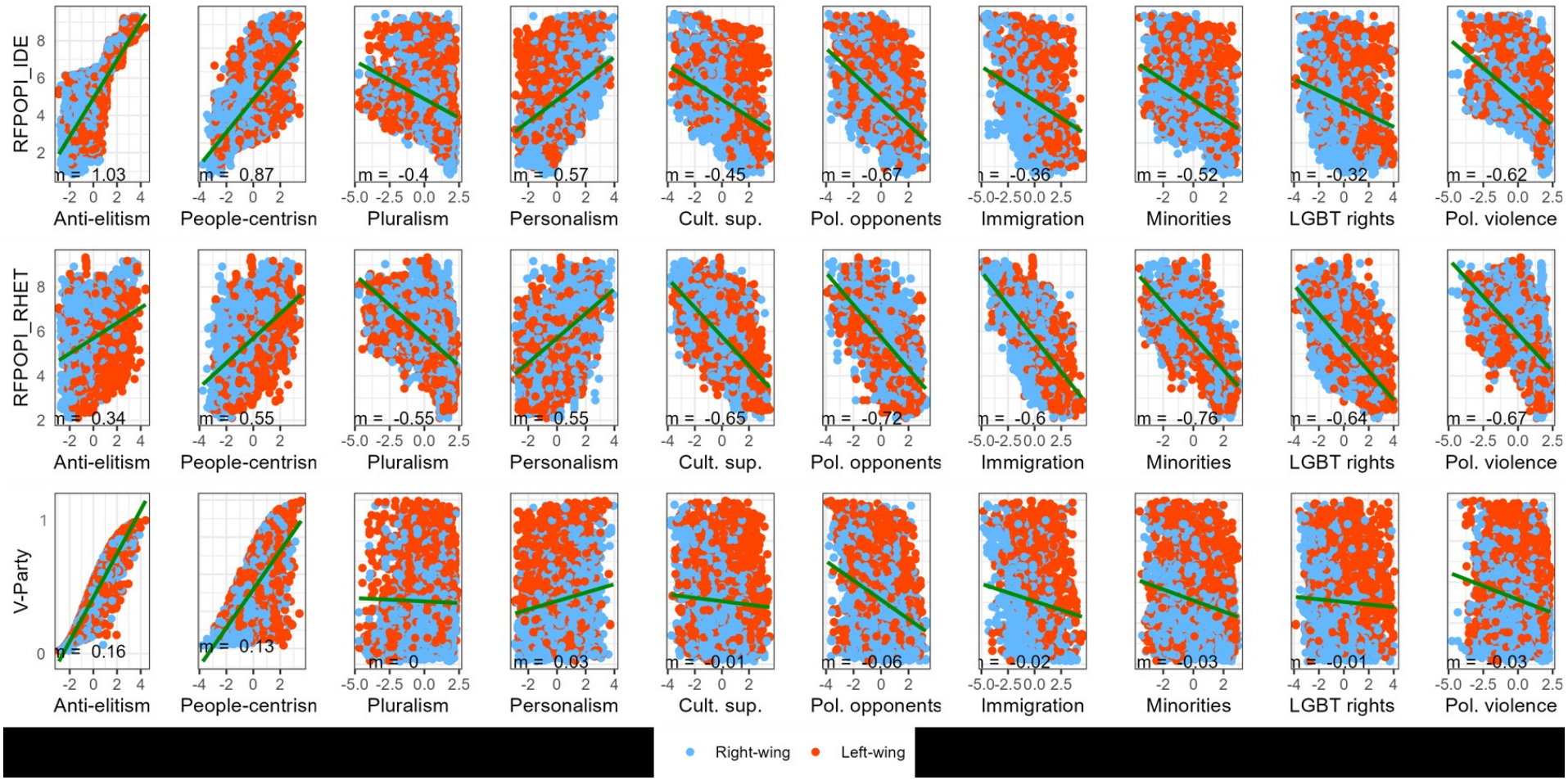

Figure: Bivariate relationships between indexes and input features

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Labor market institutions and populism

Ideology:	Right-wing		Left-wing	
Dependent Variable:	Avg. popu. supply	Popu. vote (%) B&K (2022)	Avg. popu. supply	Popu. vote (%) B&K (2022)
Employment protection index	– (***)	+ (**)	+ (**)	–
Population share, 15-64	+ (**)	–	–	+
EU membership	+ (**)	+ (**)	+	– (**)
Total social spending, %GDP	+	–	+	–
Gini, disposable income	+ (**)	–	+	+
Years of schooling, 25-64	–	+	+ (***)	–
Unemployment	– (***)	+	–	+ (***)
GDPPC	– (*)	–	+	–
Observations	682	682	682	682
R^2	0.63	0.39	0.59	0.30
Countries	26	26	26	26

*Signif. Codes: ***: 0.01, **: 0.05, *: 0.1. The estimates employ heteroskedasticity robust standard errors.*
Average populism supply employs RFPOPI_IDE

Table: Populism intensity within party systems and labor markets

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Binary classifications and continuous indexes

Country-Election	Leader	Party	RFPOPI IDE	RFPOPI RIIET	Cvt. pop. (IDE)	Cvt. pop. (RIIET)	Party system pop. (IDE)	Party system pop. (RIIET)
Min./Max.:	-	-	**0/10**	**0/10**	**0/8.56**	**0/8.15**	**0.30/4.21**	**0.37/4.08**
Mean/Median:	-	-	**4.68/4.37**	**5.62/5.83**	**2.63/2.36**	**3.36/3.21**	**1.11/0.93**	**1.36/1.16**
Argentina 1973	Perón/Martínez	PJ	8.47	6.85	5.57	4.51	1.74	1.54
Argentina 1989	Menem	PJ	6.18	5.30	3.35	2.88	1.58	1.53
Argentina 1991	Menem	PJ	3.72	5.97	2.25	3.65	1.13	1.75
Argentina 1993	Menem	PJ	3.93	6.14	2.36	3.69	1.81	2.66
Argentina 1995	Menem	PJ	3.95	6.15	2.18	3.40	1.29	1.73
Argentina 1997	Menem	PJ	3.72	6.04	1.99	3.22	1.35	1.67
Argentina 2003	Kirchner	PJ	7.22	5.29	4.72	3.46	2.03	1.58
Argentina 2005	Kirchner	FPV-PJ	8.21	6.37	5.33	4.14	1.67	1.39
Argentina 2007	Fernández	FPV-PJ	8.25	6.34	5.89	4.51	1.39	1.10
Argentina 2009	Fernández	FPV-PJ	8.46	6.45	5.19	3.96	1.61	1.38
Argentina 2011	Fernández	FPV-PJ	8.52	6.27	4.66	3.43	1.25	1.07
Argentina 2013	Fernández	FPV-PJ	8.52	6.26	5.00	3.67	1.65	1.36
Bolivia 2009	Morales	MAS	8.78	6.80	6.20	4.81	3.69	3.27
Bolivia 2014	Morales	MAS	8.59	6.99	7.72	6.28	4.07	3.46
Brazil 2018	Bolsonaro	PSL	5.65	7.40	1.03	1.57	0.44	0.55
Bulgaria 2009	Borisov	GERB	7.06	6.95	3.56	3.51	1.13	1.23
Bulgaria 2014	Borisov	GERB	3.51	6.32	1.63	2.78	0.67	0.99
Bulgaria 2017	Borisov	GERB	3.37	6.31	2.12	3.53	0.90	1.62
Ecuador 1996	Bucaram	PRE	8.50	7.50	2.12	1.88	0.78	0.81
Ecuador 2007	Correa	PAIS	8.62	6.83	6.45	5.11	2.73	2.30
Ecuador 2009	Correa	PAIS	8.62	7.05	4.89	4.00	1.28	1.18
Ecuador 2013	Correa	PAIS	8.54	7.10	6.42	5.34	1.27	1.15
Greece 2015	Tsipras	SYRIZA	8.50	6.72	4.57	3.61	1.38	1.37
Hungary 2010	Orbán*	Fidesz	8.07	7.75	5.47	5.30	1.45	1.47
India 2014	Modi	BJP	6.14	6.18	4.36	4.39	1.47	1.47
Indonesia 2014	Widodo	PDIP	7.50	5.92	2.63	2.64	0.59	0.66
Israel 1996	Netanyahu	L	4.64	4.99	2.37	2.66	0.62	0.78
Israel 2009	Netanyahu	L	4.28	6.01	3.11	3.91	0.82	1.04
Italy 1994	Berlusconi	FI	7.15	7.68	4.18	4.85	0.57	0.68
Italy 2001	Berlusconi	FI	6.57	7.51	3.49	4.30	0.56	0.70
Italy 2008	Berlusconi	IPdL	6.20	7.32	3.53	4.05	0.77	0.91
Italy 2018	Lega/M5S(a)		6.49	8.45	5.05	4.95	1.38	1.41
Japan 2003	Koizumi	LDP	3.63	5.88	2.19	3.33	0.87	1.17
Japan 2005	Koizumi	LDP	4.93	5.82	3.51	4.08	0.99	1.15
Mexico 1970	Echeverría	PRI	4.12	6.08	3.56	5.26	1.95	2.98
Mexico 1973	Echeverría	PRI	4.12	6.09	3.62	5.35	1.96	2.99
Mexico 2018	López Obrador	MORENA	8.64	7.37	3.28	2.80	0.72	0.76

(Continued)

Table: Populist leaders (as in Funke et al. (2023)), party populism and country-level aggregations

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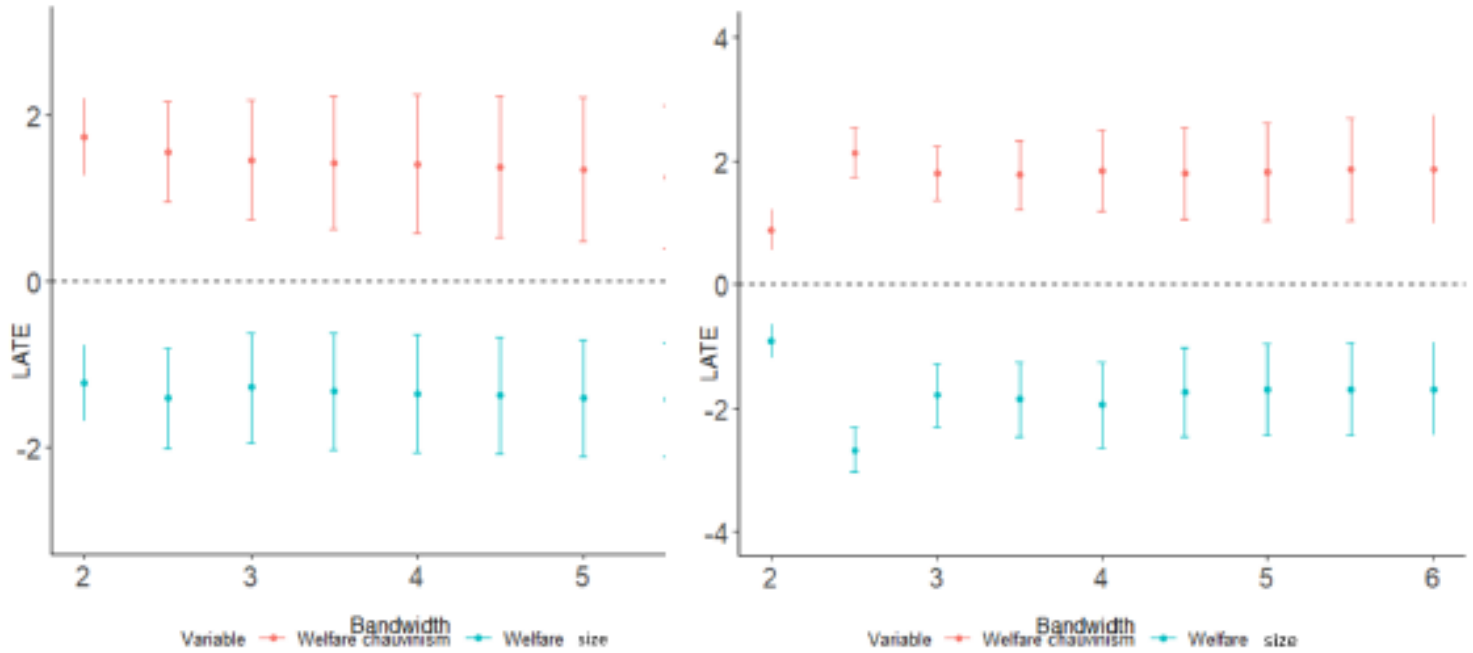
Bandwidth sensitivity



(a) Linear polynomial (b) Quadratic polynomial

Figure: Alternative bandwidths sensitivity

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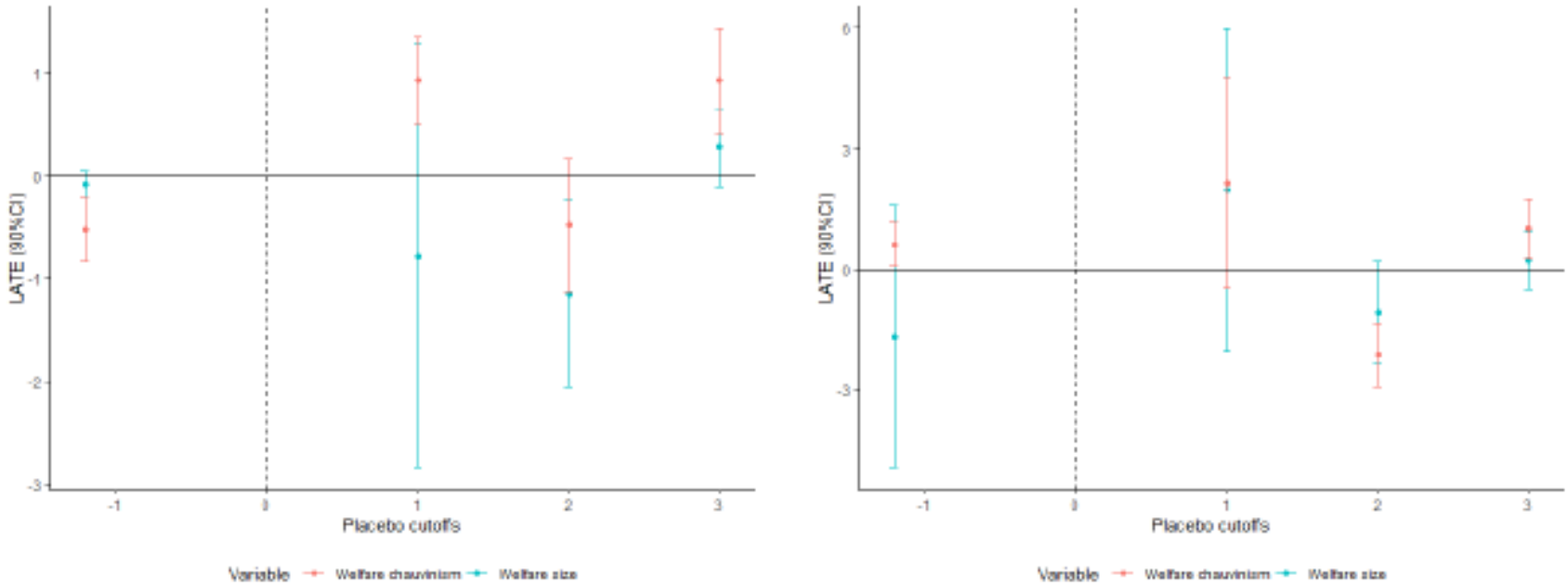
Placebo cutoffs



(a) Linear polynomial

(b) Quadratic polynomial

Figure: Placebo cutoffs

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Robustness checks

Variable	ΔWelfare Size		ΔWelfare chauvinism	
Polynomial order	1	2	1	2
1) RDD features				
Alternative kernel: Epanechnikov	-1.350***	-3.477***	1.650***	2.297***
	(0.389)	(0.258)	(0.446)	(0.35)
Alternative bandwidth selector: MSE-two	-1.278***	-1.613***	0.585*	1.28***
	(0.329)	(0.375)	(0.334)	(0.181)
2) Observations close to cut-off				
Radius around cutoff = 0.1	-1.635**	-4.008***	-0.586	2.476***
	(0.667)	(0.882)	(0.642)	(0.887)
Radius around cutoff = 0.2	-7.021***	-1.666**	5.144	3.371***
	(1.841)	(0.963)	(8.532)	(0.986)
Radius around cutoff = 0.3	-1.799	-3.166***	2.249**	1.382*
	(1.496)	(0.645)	(0.665)	(0.707)
3) Alternative definitions				
Legal thresholds	-0.496	-0.889**	0.232	0.913***
	(0.329)	(0.415)	(0.150)	(0.271)
Mainstream party (10% v.s. in 4 el.)	-1.193	-2.308***	1.941***	2.212***
	(0.505)	(0.708)	(0.493)	(0.533)
Populist party (RFPOPI $\geq$ 8)	-1.136***	-1.634***	1.607***	1.784***
	(0.339)	(0.385)	(0.351)	(0.386)
ΔWelfare Size (per504)	-0.702***	-1.265***	-	-
	(0.069)	(0.131)		
Δ Welfare chauvinism (Schumacher and Van Kersbergen)	-	-	1.753	4.530***
			(2.069)	(1.346)

Note: Robust standard errors are in parentheses, clustered at the national election level. P-values: ***p < 0.01, **p < 0.05, *p < 0.1.

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Manipulation test

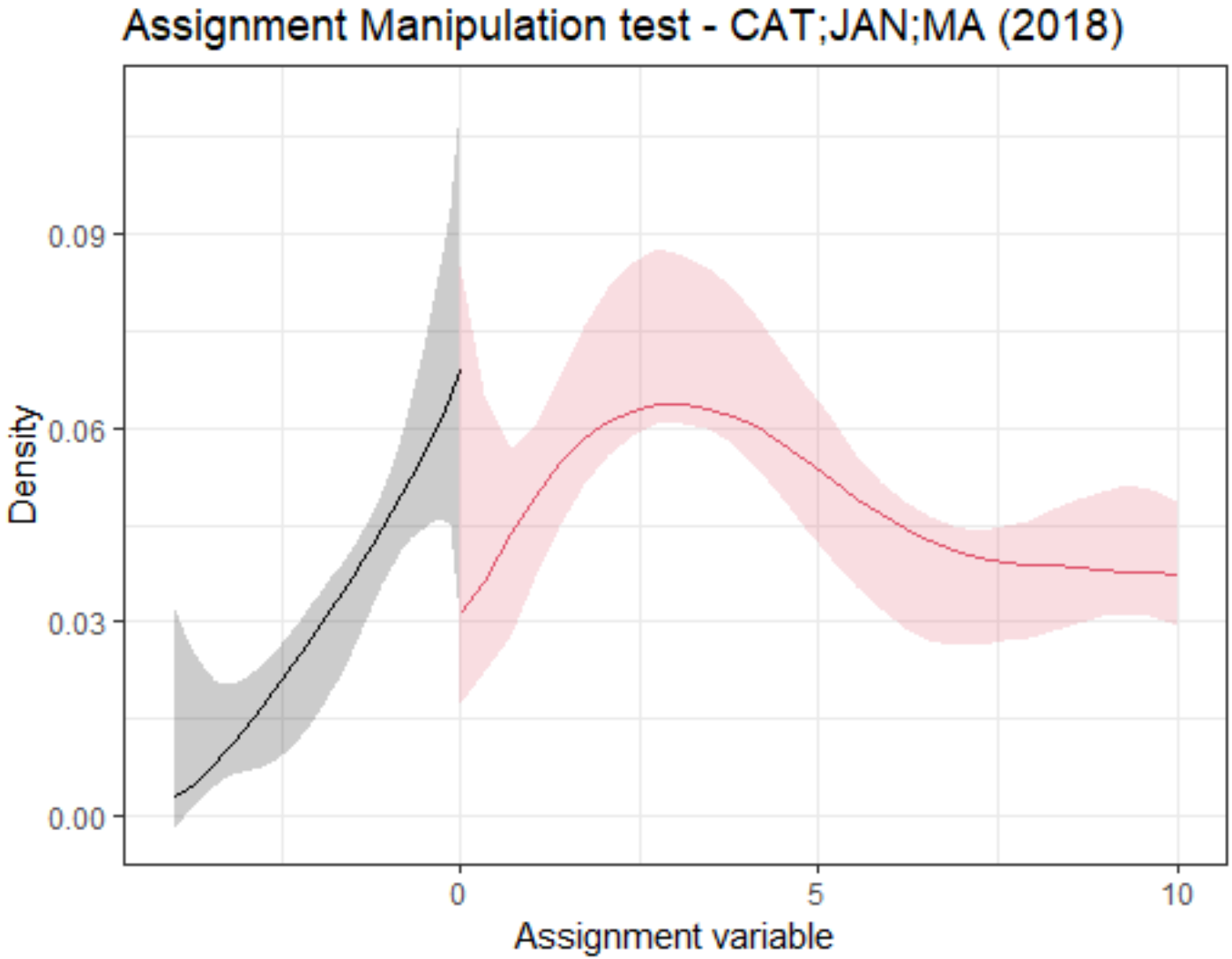

Figure: Assignment variable's manipulation test

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Jackknife analysis

Estimation	Linear			Quadratic		
Country	Coef.	Std.Err	P-val	Coef.	Std.Err	P-val.
Austria	-1.18	0.34	0.00	-1.85	0.28	0.00
Bulgaria	-0.97	0.34	0.00	-1.93	0.26	0.00
Czech Republic	-1.84	0.28	0.00	-1.98	0.36	0.00
Denmark	-1.20	0.34	0.00	-1.73	0.36	0.00
Estonia	-1.21	0.33	0.00	-1.94	0.31	0.00
Finland	0.16	0.37	0.66	-0.48	0.31	0.13
France	-1.12	0.34	0.00	-1.88	0.32	0.00
Germany	-1.35	0.46	0.00	-2.27	0.53	0.00
Greece	-1.11	0.34	0.00	-1.90	0.30	0.00
Ireland	-1.76	0.14	0.00	-2.02	0.18	0.00
Italy	-0.54	0.49	0.28	-1.90	0.30	0.00
Latvia	-0.95	0.35	0.01	-1.90	0.30	0.00
Luxembourg	-1.16	0.34	0.00	-2.01	0.34	0.00
Netherlands	-0.86	0.32	0.01	1.53	0.26	0.00
Norway	-0.96	0.47	0.04	-5.75	1.74	0.00
Poland	-0.99	0.34	0.00	-1.87	0.30	0.00
Portugal	-1.06	0.34	0.00	-1.90	0.29	0.00
Romania	-1.15	0.34	0.00	-1.91	0.29	0.00
Slovakia	-1.11	0.34	0.00	-1.87	0.32	0.00
Slovenia	-1.08	0.34	0.00	-1.90	0.30	0.00
Spain	-1.10	0.34	0.00	-1.87	0.32	0.00
Sweden	-1.93	0.31	0.00	-2.80	0.25	0.00
Switzerland	-1.11	0.34	0.00	-1.90	0.30	0.00

Figure: Jackknife analysis - Δ Welfare size

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Jackknife analysis

Estimation	Linear			Quadratic		
Country	Coef.	Std.Err	P-val	Coef.	Std.Err.	P-val.
Austria	1.93	0.33	0.00	2.25	0.30	0.00
Bulgaria	1.94	0.33	0.00	2.23	0.31	0.00
Czech Republic	1.89	0.33	0.00	2.17	0.26	0.00
Denmark	1.90	0.32	0.00	2.15	0.33	0.00
Estonia	1.74	0.29	0.00	2.02	0.27	0.00
Finland	1.03	0.33	0.00	1.60	0.28	0.00
France	1.96	0.33	0.00	2.28	0.31	0.00
Germany	2.44	0.39	0.00	2.95	0.40	0.00
Greece	1.97	0.33	0.00	2.28	0.31	0.00
Ireland	2.19	0.22	0.00	2.47	0.24	0.00
Italy	1.96	0.34	0.00	2.25	0.33	0.00
Latvia	1.99	0.33	0.00	2.28	0.31	0.00
Luxembourg	1.96	0.33	0.00	2.28	0.32	0.00
Netherlands	1.81	0.33	0.00	2.22	0.32	0.00
Norway	2.11	0.43	0.00	2.45	0.41	0.00
Poland	1.97	0.33	0.00	2.27	0.31	0.00
Portugal	1.99	0.33	0.00	2.28	0.31	0.00
Romania	1.99	0.33	0.00	2.28	0.32	0.00
Slovakia	1.97	0.33	0.00	2.28	0.31	0.00
Slovenia	1.97	0.33	0.00	2.28	0.31	0.00
Spain	1.92	0.33	0.00	2.28	0.31	0.00
Sweden	2.17	0.36	0.00	2.78	0.33	0.00
Switzerland	2.11	0.34	0.00	2.28	0.31	0.00

Figure: Jackknife analysis - Δ Welfare chauvinism

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Effective thresholds of representation

From Taagepera (2002): "an average threshold of representation at which parties have a 50–50 chance to win their first seat."

- The "effective" minimum national threshold of representation (T);
- The number of seats in the assembly (S);
- Number of electoral districts (E);

$$T = \frac{75\%}{\left[\left(\frac{S}{E} + 1\right) \times \sqrt{E}\right]}$$

Back

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