Ruling Party Personalism and Central Bank Independence

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Short title: Party Personalism and Central Bank Independence (47 characters with spaces)

Abstract This study shows that greater personalism in the support party of incumbent leaders increases the likelihood of attacks on central bank independence. Using data on levels of personalism in the incumbent party in democracies worldwide from 1991 to 2020, it finds that personalist governments are more likely to publicly pressure the central bank to shift monetary policy (nearly always with an eye toward loosening it), as well as more likely to set in motion legal changes that decrease central bank autonomy. This finding holds even when accounting for other known factors associated with central bank interference, such as populist posturing. Put simply, where leaders backed by personalist parties come to power, we are likely to see greater efforts to steer monetary policy and weaken central bank independence. The election of personalist leaders therefore signals potentially higher and unpredictable patterns of inflation in the years that follow.

Keywords: personalism, personalist parties, central bank independence, monetary policy

Replication files are available in the JOP Data Archive on Dataverse (https://dataverse.harvard.edu/dataverse/jop). The empirical analysis has been successfully replicated by the JOP replication analyst. An Online Appendix with supplementary material is also available at the JOP Data Archive on Dataverse.

Soon after winning the United States presidency in 2024, Donald Trump appointed loyalists with little government experience to key positions of power while taking steps to weaken the bureaucracy and independent government agencies he perceived as constraints on his behavior. One of Trump's early targets was the Federal Reserve, the U.S. central bank that is protected by law to pursue independent monetary policy. Trump publicly criticized the Federal Reserve, pressured it to loosen monetary policy, and attempted to fire a member of its board who he viewed as an obstacle to pursuing his preferred interest rate policy (Grossman and Leary, 2025). Far from condemning attacks on central bank independence, many Republican Party elites endorsed Trump's behavior.

Trump is not the first U.S. president to meddle with the Federal Reserve's affairs (Fessenden, 2016). In his first term, he tried and failed to bend the bank to his will. Since then, however, Trump has increased his control over the Republican Party, turning it into a "personalist" political party (Frantz et al., 2024), which functions primarily as a vehicle to further his career and interests rather than promote an established policy platform. This shift places the party alongside other personalist ruling parties, such as Nayib Bukele's New Ideas in El Salvador and Bidzina Ivanishvili's Georgian Dream in Georgia. In these parties, political careers rise and fall based on loyalty to the leader rather than competence, resulting in cadres staffed with sycophants. Fearful their careers will end if they fall out of favor, elites in personalist parties rarely resist a leader's abuses of power and often condone them. As such, when leaders come to power backed by personalist parties, institutional constraints erode, and democracies slide toward authoritarianism (Frantz et al., 2024).

Using data on ruling party personalism in democracies (1991–2020), this study shows that personalism increases government attacks on central bank independence (CBI). Personalist leaders are more likely to publicly pressure the bank to shift monetary policy (nearly always to loosen it) and initiate changes that reduce central bank autonomy or block expansion of its independence. Examples discussed in Appendix D include Nicaragua's Daniel Ortega

(2007), Ecuador's Rafael Correa (2008), and Sierra Leone's Ernest Bai Koroma (2011). In each case, increased personalism led to legislation enabling greater executive control over the central bank. Put simply, when leaders backed by personalist parties come to power, efforts to steer monetary policy and weaken central bank independence are more likely. The election of personalist leaders therefore signals potentially higher and more unpredictable inflation in the years that follow.

Who attacks the central bank and why?

The economic motivation for CBI is firmly established: greater CBI is associated with lower and more stable inflation because independent central banks solve time inconsistency problems of monetary policy, enabling governments to credibly signal commitment to low inflation (Alesina and Stella, 2010; Fernandez-Albertos, 2015). Despite strong economic grounds for preserving CBI, it is not always a top priority for political leaders. Politicians of all stripes tend to prefer lower interest rates than their central banks do (Ehrmann and Fratzscher, 2011). There are several reasons for this, but a common theme is that politicians care less about inflation and more about economic growth (Feldmann and Morgan, 2022), prioritizing what best helps them maintain office and please constituents.

Consistent with this, researchers find that populist leaders threaten CBI (e.g., Romelli (2022); Gavin and Manger (2023); Meyer (2024)) because economic crises, such as the Great Recession in 2008, fuel citizen discontent with central banks that opens the door for leaders to make appeals that CBI should be limited (Binder, 2021). Populist messaging is a natural fit for framing such appeals, as populists malign technocratic elites as the "enemy" responsible for economic crises (Gavin and Manger, 2023).

This study complements this research by identifying an additional factor that predicts attacks on CBI: *personalism* in the ruling party. By personalist, we mean that the party is primarily a vehicle to support the leader's career and interests rather than advance a

clear policy program (Frantz et al., 2024). Though there is some overlap between personalist parties and populist parties in practice (see Appendix C), the two are not synonymous: personalism is an organizational feature of a political party, rather than an ideological approach. Senegal's Macky Sall, for example, was backed by a personalist party, but one that was decidedly not populist. Conversely, leaders of the Peronist coalition in Argentina, such as the Kirchners, are populists but their party is not personalist. We expect the election of leaders backed by personalist parties to lead to greater threats to CBI.

Why ruling party personalism threatens CBI

Leaders have an incentive to accumulate power in domains that can potentially challenge them. They are thus willing to accept the economic drawbacks that come with their personal control over the central bank, if it means ensuring they cannot be handcuffed by it (Kern and Seddon, 2024: 453-455). Even though CBI boosts a country's long-term economic health, it limits a leader's available monetary policy options (Bodea and Garriga, 2023: 63). Given that leaders tend to prefer lower interest rates than central banks do[1] – as nearly all theories of CBI indicate (see Fernandez-Albertos (2015: 218)) – an independent central bank prevents leaders from steering monetary policy toward their preferences. Where leaders have greater latitude to act as they please, we should thus see more attacks on central bank autonomy.

This is the case when leaders come to power backed by personalist political parties. In these parties, elites line up behind the leader, regardless of the soundness of their actions, given that their future in the party depends on staying in the leader's good favor. As such, leaders can promote monetary policy that challenges economic orthodoxy and attempt to weaken CBI without facing pushback from their party. Greater concentration of leader power in the ruling party should thus lead to increased pressure on CBI.

[1]Most, but not all, leaders will share this preference. We adjust for factors that influence this, such as left/right-wing ideology (Binder, 2021), in the empirical tests in Appendix A.

This insight builds on path-breaking work by Redwood (2023), showing that autocracies with both low and high levels of personalism have lower CBI (see Appendix B.7 for tests extending this work). Concentration of power is associated with lower CBI in autocracies, as examples from Angola under Dos Santos and Turkey under Erdogan illustrate. In both cases, a pliant ruling party enabled the leader to attack CBI (Redwood, 2023).

We expect greater ruling party personalism to increase attacks on CBI. Importantly, this pressure should succeed in altering CBI where institutional constraints on the leader are low, given evidence that attacks on CBI are more likely where there are few checks and balances (Binder, 2021; Bodea and Garriga, 2023; Meyer, 2024). Attacks on CBI can be both informal (public pressures on central banks) and formal (removal of central bank governors, legal changes to weaken CBI) (Binder, 2021; Bodea and Garriga, 2023).[2] We expect ruling party personalism to increase both types of attacks, given that personalist leaders should be less likely to face pushback from within their party should they publicly pressure the central bank to ease monetary policy or push changes that undermine or prevent its independence.

Empirical approach

To measure ruling party personalism, we use data from Frantz et al. (2022) that capture whether the leader created a new political party to campaign for national executive office and the political positions (elected or appointed) the leader held with the party at the local or national level prior to their candidacy in the executive election. Unlike expert-coded measures of ideology or populism, the ruling party personalism measure uses information from prior to the leader assuming office as chief executive and does not contain information about how the leader behaves once in office, including attempts by the leader or party to pressure the central bank or undermine its independence. These data cover democracies

[2]Evaluating factors that influence the *types* of attacks on CBI falls outside our scope; Bodea and Garriga (2023) argue that the procedural hurdles to altering CBI play a key role.

from 1991 to 2020. We next evaluate whether ruling party personalism increases the chance of informal attacks on central banks, before turning to its impact on formal attacks.

Informal CBI attacks We capture informal CBI attacks by looking at two measures of political pressure on central banks. The first, covering 2010 to 2018, identifies political pressure events from the Economist Intelligence Unit (EIU) and BMI reports, recording instances of political pressure and the "direction" of this pressure – to either ease or tighten monetary policy (Binder, 2021). Consistent with our theory, we examine *pressure to ease* monetary policy. A second data source, covering 1996 to 2018, uses text classification methods to estimate *public pressure* on central banks by the governing party (Gavin and Manger, 2023). In these samples, pressure to ease monetary policy occurs in 3.7 percent of quarters, while public pressure occurs in 3.9 percent of quarters. The two measures of informal attacks are correlated at 0.68. (Appendix B.8 shows that a latent measure of informal attacks, aggregated to the yearly level, is associated with lower levels of formal CBI.)

The outcome variables are binary, so we test probit models. Consistent with studies of *de jure* central bank independence (e.g., Romelli, 2022), we account for prior trends in political pressure with a dynamic specification that includes a lag of the outcome variable. The lag not only accounts for serial correlation in the panel data but directly models "status quo" bias in the persistence of behavior over time (Romelli, 2022). The specification is the following, where $Y_{i,t-1}$ is the lagged outcome; $d_{i,t}$ is the treatment; $X_{i,t}$ are potential confounders; and ν_t is a linear time trend: $Y_{i,t} = Y_{i,t-1} + \beta d_{i,t} + \gamma X_{i,t} + \nu_t + \varepsilon_{i,t}$

The main specification adjusts for the age of democracy (log) and initial level of democracy in the year in which each leader is selected as chief executive: leaders in new democracies are more likely to be backed by parties they helped create – and are thus more likely to be personalist because new opposition parties created by ascendant opposition elites often won elections during and after democratic transitions, especially in the 1990s (Frantz et al. 2024).

New democracies are also less likely to have independent political institutions that potentially constrain leaders' attempts to manipulate economic policy for electoral gain. If elected leaders know institutions in new democracies are weak (including central banks), these rulers may be more likely to pressure them. Meanwhile, the level of democracy in the leader selection year ($t = 0$) adjusts for broad constraints on the leader, which tends to decrease pressure (Binder, 2021). (Appendix A.5 shows robustness to additional covariates.)

Table 1: Ruling party personalism and pressure on central banks

Outcome:	Pressure to ease	Public pressure	Pressure to ease	Public pressure
	(1)	(2)	(3)	(4)
Ruling party personalism$_{t=0}$	0.999*	1.063*	0.959*	1.124*
	(0.439)	(0.423)	(0.354)	(0.421)
Democracy age (log)	0.085	0.230	0.087	0.228
	(0.157)	(0.136)	(0.160)	(0.133)
Democracy level$_{t=0}$	-0.059	0.342	-0.068	0.255
	(0.747)	(0.887)	(0.762)	(0.928)
Party populism$_{t=0}$			0.075	0.083
			(0.346)	(0.358)
Pressure$_{t-1}$	1.679*	1.968*	1.676*	1.952*
	(0.309)	(0.274)	(0.296)	(0.270)
(Intercept)	-1.824	-2.171*	-1.898	-2.047*
	(1.250)	(0.878)	(1.442)	(0.867)
N×T	1416	1749	1416	1727
countries	43	32	43	32
Baseline probability of outcome	0.037	0.039	0.037	0.040
Average marginal effect	0.065*	0.063*	0.063*	0.068*
for ruling party personalism	(0.024)	(0.010)	(0.020)	(0.009)

Binary outcome probit model. All specifications adjust for a time trend (not reported). * $p < 0.05$. Variables measured in the year the leader is selected as chief executive are labeled $t = 0$. Cluster robust errors.

Tests reported in Table 1 columns (1)-(2), suggest that ruling party personalism increases government pressure on central banks to ease monetary policy and boosts public pressure on banks, respectively. The next two columns add ruling party populism in the leader selection year, as measured by the Varieties of Party project, and the result for personalism remains.

Figure 1 shows the probability of political pressure increases as party personalism rises, using estimates from columns (1) and (2). The left plot shows that pressure to ease policy rises from 1 percent to 4 percent as personalism increases from the 10th percentile to the

90th. The right plot shows a similar pattern for public pressure. These are large effects because the baseline probabilities are roughly 4 percent. In each plot, the probability of pressure roughly doubles, from 2 to 4 percent, as personalism moves from middle levels to high levels. While monthly pressure on central banks is rare at 4 percent, personalism substantially boosts these probabilities.

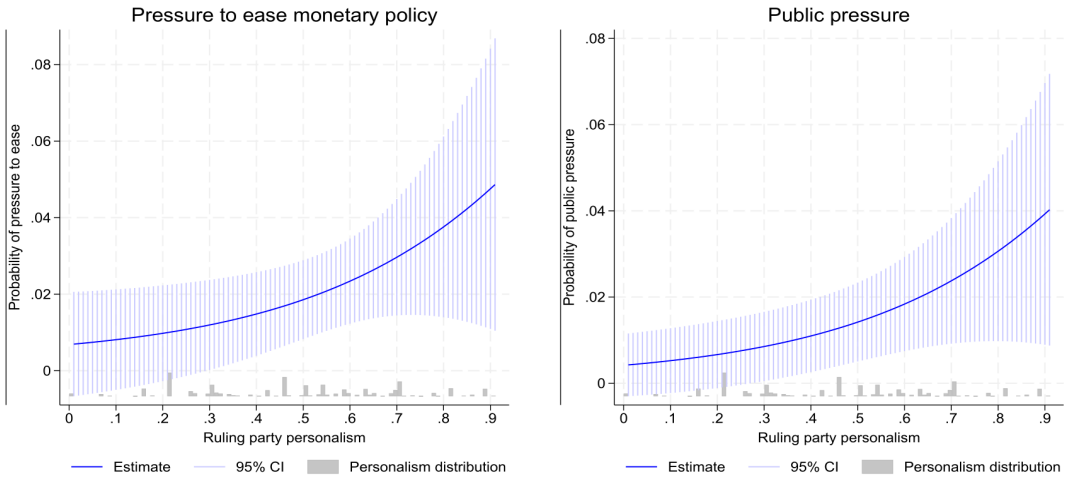

Figure 1: Ruling party personalism and political pressure on central banks.

Appendix A demonstrates robustness to: (a) altering the specification; (b) using a fixed effects estimator; (c) estimating a binary TCSC model with time dependence; (c) altering how we model the time trend; (d) expanding the sample for public pressure to all countries; and (e) specifications with covariate adjustment for 24 potential confounders.

Formal CBI attacks We measure formal CBI attacks by looking at *de jure* changes in CBI. We measure this using updated CBI data from Garriga (2025), leading to a sample of 101 democracies from 1991 to 2020. The outcome is relatively rare, occurring roughly 4 percent of the time. Drawing on the econometric literature on CBI (e.g., Romelli, 2022), we estimate dynamic panel models where the outcome is the year-to-year change in the index of CBI, with two-way fixed effects ($\tau_t + \alpha_i$) and a lagged outcome to adjust for the "status quo" ($Y_{i,t-1}$): $\triangle Y_{i,t} = Y_{i,t-1} + \beta d_{i,t} + \gamma X_{i,t} + \tau_t + \alpha_i + \varepsilon_{i,t}$

The baseline specification reported in Appendix Table B-3 adjusts for democratic consolidation (*Democracy age* and *Polyarchy score*) that might cause selection into treatment. A second adjusts for ruling party populism. A third model includes institutional constraints on executive behavior to rule out the possibility that ruling party personalism is simply a proxy for legislative and judicial constraints. In these tests, the estimate for ruling party personalism is negative and significant: the -2.6 percent estimate in the baseline model suggests that a change in ruling party personalism from a low level of 0.3 (e.g., George W. Bush) to a high level of 0.7 (e.g., Donald Trump) lowers CBI by roughly 1 percent per year on average.[3]

We also test an interaction between constraint and personalism because personalism in the ruling party should matter most when other forms of constraint are weak and elites in the ruling party are the last remaining check on the leader's behavior. Figure 2 shows how the average marginal effect of personalism varies across levels of institutional constraint on the executive. At low levels (0.50), the effect of personalism is -0.05 and significant, but at high levels (0.85) the estimate is not statistically different from zero.

Overall, changes in de jure central bank independence are rare in democracies, occurring in roughly 4 percent of years. But party personalism at low levels of executive constraint can more than double this probability. Indeed, the low incidence of changes to de jure CBI should not be interpreted as the leader's *attempts* to undermine CBI but rather as *successes*. With de jure CBI data, we only observe a leader's successful attempt at undermining CBI,

[3]The Appendix B shows robustness using: (a) an unweighted measure of CBI from Garriga (2025); (b) alternative measures of CBI; (c) longer outcome lags; (d) additional populism measures; (d) adjustments for regional CBI diffusion; (e) interactive fixed effects estimators; and (f) adjusting for 30 potential confounding political and economic variables. We test outcomes related to the direction of change in CBI in Appendix B.3. Figures B-4 and B-5 account for many time-varying *observed* factors that may cause selection into personalism and CBI but we cannot rule out selection on other time-varying unobservables.

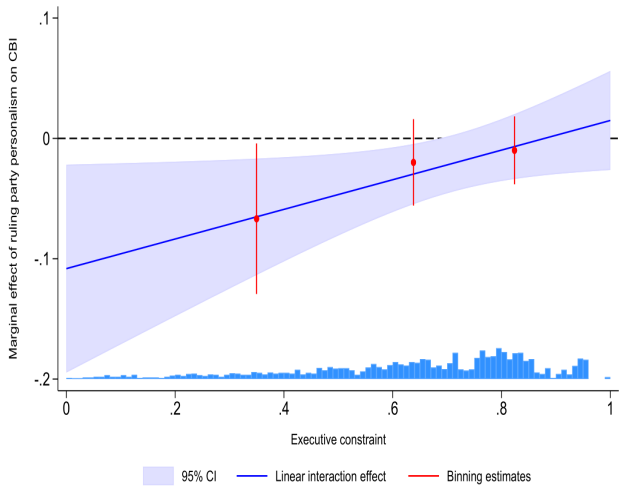

Figure 2: Ruling party personalism lowers central bank independence

by either dismantling independence or blocking reforms that might otherwise increase it.

Concluding remarks

Since the turn of the century, elected leaders increasingly come to power backed by personalist political parties, which primarily serve to advance the leader's career and interests rather than a clear policy platform (Frantz et al., 2024). This trend is troubling, as evidence shows that when leaders win office with such backing, the risk of democratic decline increases substantially. This helps explain the eventual collapse of democracies in places like Benin under Patrice Talon, Venezuela under Hugo Chavez, and Hungary under Viktor Orban—each launched by a personalist party. This study deepens understanding of the harmful consequences of ruling party personalism by unpacking how it also undermines central bank independence. We show that when leaders rise with personalist party support, attacks on central bank autonomy become more likely, decreasing independence.

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Alt text Figure 1: The left plot measures pressure to ease monetary policy, while the right shows public pressure. The plots show a clear upward trend: as personalism increases, so does the likelihood of central bank pressure. Figure 2: Ruling party personalism reduces central bank independence (CBI) more sharply when executive constraints (x-axis) are weaker.

Appendix

Contents

A Appendix A: Pressure on Central Banks

A.1 Summary statistics

Table A-1: Summary statistics for Pressure to ease policy

Variable	Obs	Mean	Std. Dev.	Min	Max
Pressure to ease policy	1416	0.037	0.19	0	1
Ruling party personalism$_{t=0}$	1416	0.52	0.21	0	0.89
Democracy age (log)	1416	3.49	0.87	0.69	5
Democracy level$_{t=0}$	1416	0.74	0.14	0.41	0.92
Party populism$_{t=0}$	1416	0.44	0.27	0.03	0.98
Year	1416	2014	2.5	2010	2018

Table A-2: Summary statistics for *Public pressure*

Variable	Obs	Mean	Std. Dev.	Min	Max
Public pressure	1749	0.039	0.19	0	1
Ruling party personalism$_{t=0}$	1749	0.56	0.2	0.07	0.91
Democracy age (log)	1749	2.82	0.77	0.69	4.22
Democracy level$_{t=0}$	1749	0.68	0.14	0.37	0.91
Party populism$_{t=0}$	1727	0.43	0.24	0.03	0.99
Year	1749	2007	5.35	1997	2016

Table A-3: Sample countries for *Pressure to ease policy*

Country	Min	Max	Country	Min	Max	Country	Min	Max
Albania	2010	2018	Guatemala	2010	2018	Peru	2010	2018
Argentina	2010	2018	Hungary	2010	2018	Philippines	2010	2018
Australia	2010	2018	Iceland	2010	2018	Poland	2010	2018
Bolivia	2010	2018	Indonesia	2010	2018	Romania	2010	2018
Bulgaria	2010	2018	Israel	2010	2018	Sri Lanka	2010	2018
Canada	2010	2018	Japan	2010	2018	Sweden	2010	2018
Chile	2010	2018	Kenya	2010	2018	Thailand	2010	2014
Colombia	2010	2018	Korea, Republic of	2010	2018	Turkey	2010	2016
Costa Rica	2010	2018	Mauritius	2010	2018	Ukraine	2010	2018
Czech Republic	2011	2018	Mexico	2010	2018	United Kingdom	2010	2018
Denmark	2010	2018	Mongolia	2010	2018	United States of America	2010	2018
Dominican Republic	2012	2018	New Zealand	2010	2018	Uruguay	2010	2018
Ecuador	2010	2018	Nicaragua	2010	2016	Zambia	2012	2018
Georgia	2010	2018	Nigeria	2010	2018			
Ghana	2010	2018	Norway	2010	2018			

Table A-4: Sample countries for *Public pressure*

Country	Min year	Max year	Country	Min year	Max year	Country	Min year	Max year
Albania	1998	2016	Israel	1997	2014	Poland	1997	2014
Argentina	2003	2006	Kenya	2003	2016	Romania	2001	2015
Bolivia	1997	2016	Mauritius	2004	2016	Sri Lanka	1997	2016
Chile	2000	2016	Mexico	2001	2016	Thailand	2009	2013
Colombia	1997	2016	Moldova	1997	2016	Tunisia	2012	2016
Costa Rica	1997	2016	Mongolia	1997	2008	Turkey	1998	2015
Dominican Republic	2003	2016	Nicaragua	1997	2016	Ukraine	1999	2008
Georgia	2004	2016	Nigeria	2006	2014	Uruguay	1997	2016
Ghana	2002	2011	Paraguay	1997	2016	Venezuela	1997	2001
Guatemala	1997	2016	Peru	2002	2016	Zambia	2012	2014
Indonesia	2000	2016	Philippines	1997	2016			

A.2 Descriptive data pattern for pressure on central banks

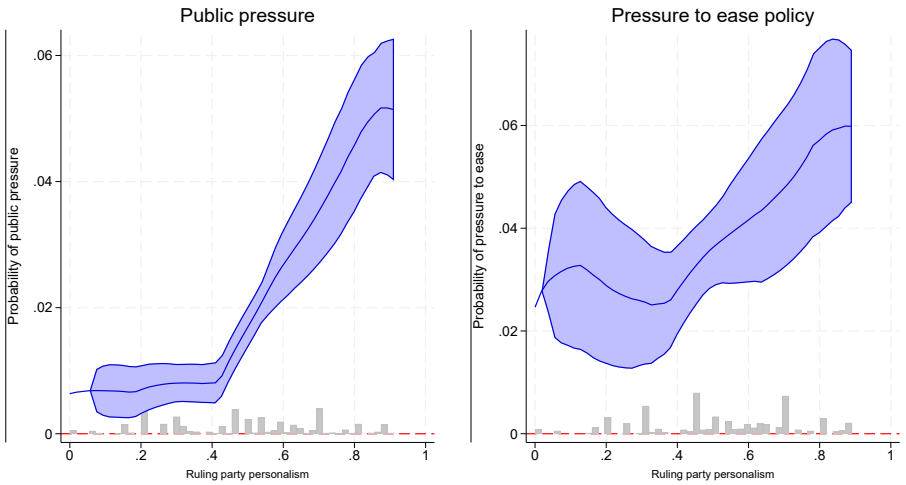

Figure A-1: Ruling party personalism and political pressure on Central Banks

Figure A-1 shows the nonlinear fit between ruling party personalism (treatment) and measures of pressure on central banks. The left plot shows pressure to ease monetary policy (Binder, 2021) and the right plot shows public political pressure by the ruling party (Gavin and Manger, 2023). Note that these events are low probability, as indicated by the vertical axis.

Figure A-2 shows t-tests for each outcome using the sample split into high and low ruling party categories at the median value of ruling party personalism. The left panel shows that when personalism is low, pressure to ease policy occurs at a rate of 2.4 percent but more than doubles, to 5.1 percent, at high personalism levels. The right plot shows a similar pattern for public pressure on the central bank.

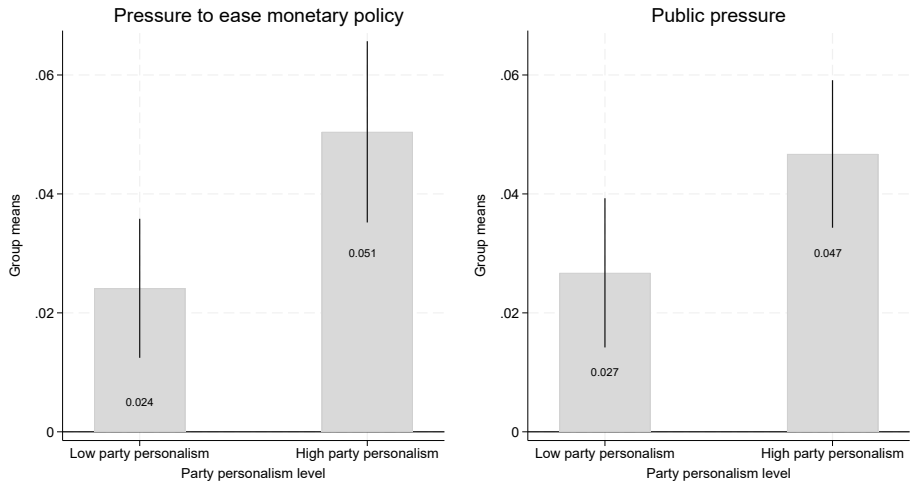

Figure A-2: Ruling party personalism and political pressure on Central Banks

A.3 Additional tests for political pressure

Table A-5 reports results from a series of robustness tests: the first seven columns reports tests of *Pressure to ease monetary policy* from Binder (2021); and the latter seven report tests of *Public pressure on the CBI* from Gavin and Manger (2023). The first (and eighth) columns report results from a specification with no covariates to ensure against specification bias. The second and ninth columns come from a specification with additional covariate adjustment for potential confounding variables drawn from Gavin and Manger (2023). Next, in columns three and ten we adjust for covariates that might influence selection into ruling party personalism, such as the level of democracy in the leader selection year ($t = 0$), social polarization in the selection year, and party system institutionalization in the selection year. The fourth and eleventh columns report results from a "kitchen sink" specification with all of the covariates from the prior two specifications.

In column (5) we report a placebo test for *Pressure to Tighten* monetary policy. The advantage of data from Binder (2021) is that it includes data on both pressure to ease policy (our interest) and pressure to tighten policy. Theoretically, we expect ruling party personalism to influence pressure to ease but, crucially, not pressure to tighten monetary policy. The result shown in column (5) confirms this, as the estimate for ruling party personalism is close to zero and not significant. Thus, we find that personalism shapes pressure to ease monetary policy but *not* pressure to tighten policy.

In column (12) we report estimates from a model with an ordered outcome measure of public pressure on central banks. (In all other tests of public pressure the outcome is collapsed to a binary variable.) Of the 69 quarters with public pressure in the estimating sample: 52 have one pressure; 13 have two; and 4 have three.

Tests reported in columns (6) and (13) model country fixed effects using a within-unit (or Mundlak) approach with a binary outcome. This approach is sometimes called the "corre-

lated random effects" model (CRE); it models unit heterogeneity (i.e. unit FE) by adding the unit-means of all RHS variables to the specification as proxies for FEs (Wooldridge, 2019). As a result, we report estimates for the within-unit RHS variables for these tests. Finally, columns (7) and (14) test binary DV duration models that adjust for the log duration time since last event.[4]

In all tests, save one, the estimate for personalism is positive and significant at the 0.06 level: pressure on the CBI increases as personalism increases. The result in column (5), where the outcome is pressure to *tighten* monetary policy, is as a placebo test that yields null results.

[4]We condition this specification on the observations of two quarters of no pressure; that is, Y_{t-1}=0 and Y_{t-2}=0.

Table A-5: Ruling party personalism and pressure on central banks

Outcome:	Pressure to ease monetary policy (1-4) & (6-7)							Public pressure on CBI (7-14)						
					Pressure tighten policy	CRE	Duration					Public pressure count	CRE	Duration
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Ruling party personalism	0.859*	0.839*	0.863*	0.895*	-0.070	1.930*	0.867*	0.773	1.079*	1.109*	1.142*	1.082*	1.012	0.989*
	(0.393)	(0.343)	(0.410)	(0.410)	(0.481)	(0.546)	(0.379)	(0.408)	(0.467)	(0.467)	(0.527)	(0.418)	(0.527)	(0.461)
Democracy age (log)		0.279	0.286*	0.561*	-0.066	0.782*	-0.014		0.323*	0.236*	0.330*	0.228	-0.001	0.162
		(0.213)	(0.140)	(0.150)	(0.338)	(0.217)	(0.141)		(0.138)	(0.103)	(0.113)	(0.125)	(0.491)	(0.138)
Democracy level$_{t=0}$			-0.386		0.975	1.358	0.775			0.276		0.289	6.014*	0.277
			(1.465)		(1.907)	(1.933)	(0.858)			(0.985)		(0.856)	(2.375)	(0.684)
Democracy level$_{t-1}$		-1.599		-2.716*					0.253		-0.293			
		(1.016)		(1.269)					(0.858)		(0.804)			
LagOutflow%Gdp		-0.000		-0.000					-0.001		-0.001			
		(0.000)		(0.000)					(0.000)		(0.000)			
DlectionRunup		-0.316*		-0.514*					-0.026		-0.014			
		(0.143)		(0.149)					(0.140)		(0.126)			
Debt2Gdp		-0.003		-0.006					-0.012		-0.004			
		(0.005)		(0.007)					(0.011)		(0.008)			
Lag3lnCpi		-0.127		-0.099					-0.004		0.023			
		(0.128)		(0.141)					(0.101)		(0.091)			
DifflnExchRate		7.987*		6.778					2.364		1.821			
		(3.996)		(4.235)					(5.974)		(5.749)			
Lag3DifflnGdp		2.245		2.629					1.535		2.398			
		(5.438)		(5.890)					(3.217)		(3.107)			
MonetaryRate		0.023*		0.033*					-0.003		-0.004			
		(0.010)		(0.008)					(0.005)		(0.005)			
Party system inst.$_{t=0}$			0.256	1.329						0.444	0.830			
			(0.912)	(0.760)						(0.575)	(0.535)			
Polarization$_{t=0}$			0.157	0.109						0.188*	0.160*			
			(0.099)	(0.093)						(0.077)	(0.078)			
Populism$_{t=0}$			0.088	-0.176						-0.229	-0.212			
			(0.410)	(0.353)						(0.320)	(0.288)			
Y_{t-1}	1.682*	1.592*	1.516*	1.306*	1.139*	0.745*		2.015*	1.968*	1.850*	1.851*	1.934*	1.358*	
	(0.307)	(0.305)	(0.287)	(0.269)	(0.347)	(0.349)		(0.250)	(0.307)	(0.252)	(0.267)	(0.260)	(0.277)	
(Intercept)	-1.576	-0.606	-0.809	0.561	-8.173*	-3.210	-4.671*	-1.235	-1.994	-1.942	-1.722		-8.587*	-2.810*
	(1.485)	(1.773)	(1.664)	(2.141)	(2.351)	(10.021)	(2.242)	(0.904)	(1.088)	(1.033)	(1.172)		(1.952)	(0.867)
Time trend	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Unit means (FE)						✓							✓	
Duration time (log)							✓							✓
N×T	1416	1288	1372	1244	1416	1416	1275	1749	1710	1721	1682	1749	1749	1641
Countries	43	43	42	42	43	43	43	32	32	32	31	32	32	32

All specifications adjust for a time trend (not reported). * $p < 0.05$. Columns (6) and (13) report estimates from a Correlated Random Effects model that adjusts for unit means of all RHS variables as proxies for unit fixed effects (Wooldridge, 2019). Columns (7) and (14) report estimates from BTSC models that adjust for time since last event, Duration (log); these samples exclude observations where $Y_{t-1} = 0$ and $Y_{t-2} = 0$. Ordered probit in column (12) with ordered outcome. Cluster robust errors in all columns. Estimate for *Personalism* is significant at p =0.058 in column (8) and p =0.055 in (13).

A.4 Adjusting the time trend

In the main analysis, we adjust for a linear time trend. Here we relax this assumption by: (a) omitting a time trend; (b) testing specifications with year effects; and (c) adjusting for a non-linear time trend using a third-order polynomial. Figure A-3 shows the results, with *Ease* referring to the outcome variable *Pressure to ease monetary policy*, and *Public* referring to the outcome of *Public pressure on the central bank* by the governing party. All adjustments to the time trend yield similar, significant estimates for ruling party personalism.

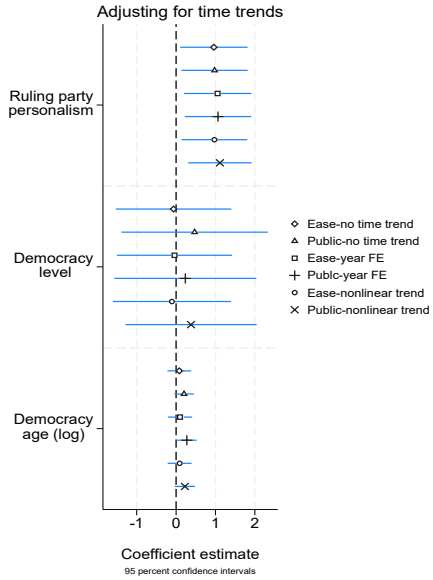

Figure A-3: Adjusting the time trend

A.5 Covariate adjustments

Next we test robustness to including any one of 24 variables as potential confounders. We note that some of these variables, like a lagged democracy score, could be post-treatment and thus introduce bias into the estimate of the main variable of interest. In each plot in Figure A-4, the dashed horizontal gray line represents the estimate of $\beta_{Personalism}$ reported in the main text. For these baseline specifications, we then add one covariate at a time and report the estimate $\beta_{personalism}$ to see how adding the covariate changes this estimate. The horizontal axis lists the added covariates; and the vertical axis measures the size of the estimate for $\beta_{Personalism}$. For both measures of pressure on the central bank, we find the estimate of interest remains positive and significant in all these tests.

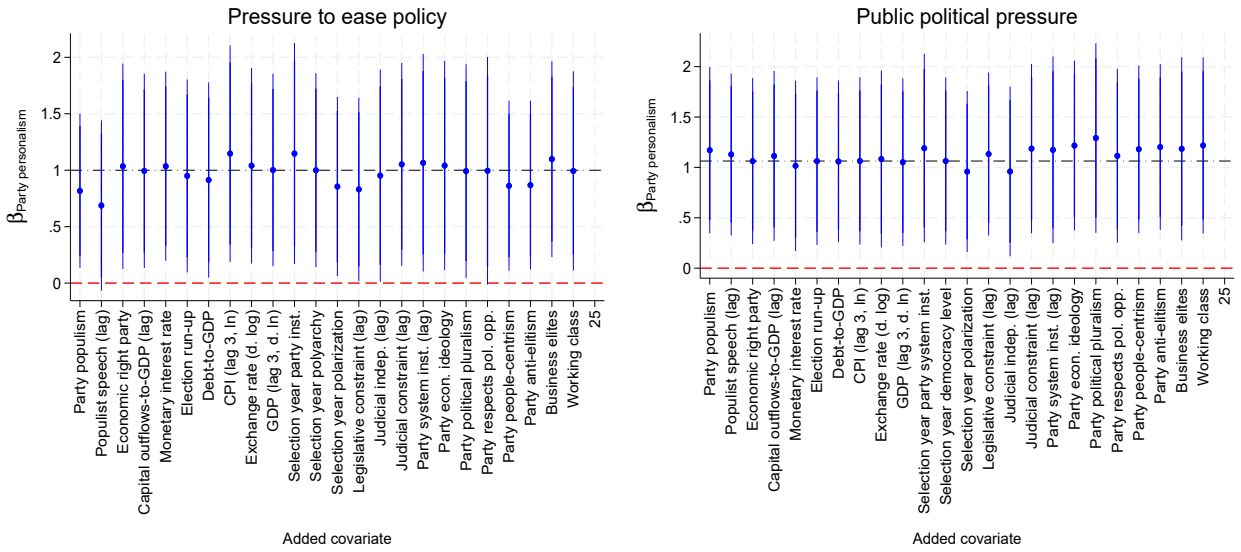

Figure A-4: Covariate adjustments

A.6 Lagged outcome models of pressure on banks

In the main text we report results from tests using a one-year lag of the outcome variable to address serial correlation in the data. Even with clustered errors, the Arellano and Bond (1991) test (AB) for autocorrelation is still significant when we include no lagged outcome variable. Once we include a one-year lag, the AB test is no longer significant, indicating that this lag purges the panel data of serial correlation. Table A-6 shows results of the baseline model for each measure of political pressure on central banks. We vary the number of lagged outcomes from `0` to `4`. Note that the tests with just one lag (columns (2) and (6)) are the same as those reported in the main text in Table 1 (columns (1) and (2)).

In all tests, the estimate for ruling party personalism is positive and greater than 0.9. However, the estimates are only statistically significant at the 0.05 level once we purge the data of serial correlation by including at least one lag of the outcome. The main effect of including the lag is to reduce the error estimate, not to change the coefficient estimate. The larger point, though, is that varying the number of lags does not alter the substantive findings.

Table A-6: Ruling party personalism and pressure on central banks, lag models

	Pressure to ease policy				Public pressure			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Ruling party personalism$_{t=0}$	0.907	0.999*	1.349*	1.311*	1.152	1.063*	1.068*	1.063*
	(0.539)	(0.439)	(0.360)	(0.346)	(0.598)	(0.423)	(0.388)	(0.383)
Democracy age (log)	0.062	0.085	0.063	0.054	0.278	0.230	0.213	0.204
	(0.186)	(0.157)	(0.168)	(0.174)	(0.191)	(0.136)	(0.122)	(0.118)
Democracy level$_{t=0}$	0.169	-0.059	0.502	0.428	0.367	0.342	0.311	0.300
	(0.874)	(0.747)	(0.871)	(0.890)	(1.294)	(0.887)	(0.761)	(0.739)
Y$_{t-1}$		1.679*	1.186*	1.034*		1.968*	1.558*	1.514*
		(0.309)	(0.263)	(0.286)		(0.274)	(0.263)	(0.287)
Y$_{t-2}$			1.142*	0.862*			0.931*	0.838*
			(0.196)	(0.199)			(0.207)	(0.227)
Y$_{t-3}$				0.724*				0.252
				(0.184)				(0.207)
(Intercept)	-1.530	-1.824	-2.947	-2.284	-1.746	-2.171*	-2.388*	-2.407*
	(1.260)	(1.250)	(1.611)	(1.781)	(1.275)	(0.878)	(0.760)	(0.725)
Time trend	✓	✓	✓	✓	✓	✓	✓	✓
N×T	1456	1416	1376	1336	1749	1749	1749	1749
Countries	43				32			

* $p < 0.05$. Cluster robust errors. Time trend included in all specifications (unreported).

A.7 Expanded sample for analysis of public pressure on banks

In the main text, we test models of public pressure on central banks using data from Gavin and Manger (2023) and we use the same sample of countries they analyze. However, their data on public pressure covers additional countries and they show in supplementary analysis that their findings hold in this expanded same. We do the same by testing the baseline specification for the expanded sample. Column (1) of Table A-7 re-reports the same test as that in the main text, Table 1 column (2), so that we can compare these results to those with the expanded sample. Thus the column (2) test has a sample of 58 countries (instead of 32); we find the same positive and significant estimate for ruling party personalism. The last column simply adds ruling party populism to the specification, and we again find a strong, positive estimate for ruling party personalism.

Table A-7: Ruling party personalism and public pressure, expanded sample

	(1)	(2)	(3)
Ruling party personalism$_{t=0}$	1.063*	1.226*	1.041*
	(0.423)	(0.317)	(0.356)
Democracy age (log)	0.230	0.028	0.027
	(0.136)	(0.125)	(0.134)
Democracy level$_{t=0}$	0.342	-0.988	-1.083
	(0.887)	(1.024)	(1.093)
Party populism$_{t=0}$			0.428
			(0.286)
Y$_{t-1}$	1.968*	2.006*	2.042*
	(0.274)	(0.163)	(0.161)
(Intercept)	-2.171*	-1.037	-0.933
	(0.878)	(0.899)	(0.873)
Time trend	✓	✓	✓
N×T	1749	4812	4777
Countries	32	58	58

* $p < 0.05$. Cluster robust errors. Time trend included in all specifications (unreported).

B Appendix B: Index of Central Bank Independence

B.1 CBI index descriptives

Table B-1: Summary statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Year	2354	2006	8.4	1991	2020
Δ CBI	2354	0.01	0.06	-0.60	0.62
CBI_{t-1}	2354	0.60	0.22	0.12	0.94
Ruling party personalism$_{t=0}$	2354	0.52	0.23	0	1
Democracy age (log)	2354	3.04	1.08	0.69	5.02
Democracy level$_{t=0}$	2354	0.72	0.17	0.23	0.92
Party populism$_{t=0}$	2270	0.38	0.25	0.03	0.99
Exec. constraint	2343	0.64	0.22	0	1

Table B-2: Sample countries for *CBI index*

Country	Min year	Max year	Country	Min year	Max year	Country	Min year	Max year
Afghanistan	2015	2019	Albania	1992	2020	Argentina	1991	2020
Australia	1991	2020	Austria	1991	2020	Bangladesh	2003	2014
Belgium	1991	2020	Benin	1992	2019	Bolivia	1991	2019
Brazil	1991	2020	Bulgaria	1992	2020	Burkina Faso	2016	2020
Burundi	1995	2010	Canada	1991	2020	Central African Republic	1994	2003
Chile	1991	2020	Colombia	1991	2020	Costa Rica	1991	2020
Croatia	1993	2020	Czech Republic	1994	2020	Denmark	1991	2020
Dominican Republic	1991	2020	Ecuador	1993	2020	Estonia	1994	2020
Finland	1991	2020	France	1991	2020	Gambia	2018	2020
Georgia	2004	2020	Germany	1991	2020	Ghana	2001	2020
Greece	1991	2020	Guatemala	1996	2020	Guinea	2011	2020
Guinea Bissau	2001	2020	Haiti	1995	2020	Hungary	1991	2018
Iceland	1991	2020	India	1991	2020	Indonesia	2000	2020
Iraq	2015	2020	Ireland	1991	2020	Italy	1991	2020
Ivory Coast	2012	2020	Japan	1991	2020	Kenya	2003	2020
Kyrgyzstan	2011	2020	Latvia	1993	2020	Lebanon	2006	2020
Liberia	2006	2020	Lithuania	1994	2020	Macedonia	1995	2020
Malawi	1995	2020	Malaysia	2019	2020	Mali	1993	2020
Mauritius	1991	2020	Mexico	2001	2020	Moldova	1993	2020
Mongolia	1996	2020	Nepal	1992	2020	Netherlands	1991	2020
New Zealand	1991	2020	Niger	1994	2020	Nigeria	2000	2020
Norway	1991	2020	Pakistan	1991	2020	Panama	1991	2020
Paraguay	1994	2020	Peru	1991	2020	Philippines	1991	2020
Poland	1997	2020	Portugal	1991	2020	Republic of Congo	1993	1997
Romania	1991	2020	Russia	1992	1993	Senegal	2001	2020
Sierra Leone	1997	2020	Slovakia	1994	2020	Slovenia	1992	2020
South Africa	1995	2020	South Korea	1991	2020	Spain	1991	2020
Sri Lanka	1995	2020	Sweden	1991	2020	Taiwan	2001	2020
Thailand	1991	2014	Tunisia	2012	2020	Turkey	1991	2016
Ukraine	1992	2020	United Kingdom	1991	2020	United States of America	1991	2020
Uruguay	1991	2020	Venezuela	1991	2005	Zambia	1992	2020

B.2 CBI index results

This section reports tests of central bank independence (CBI), which employ data on CBI from Garriga (2025). The outcome is a weighted average of four features of CBI: (1) CB chief executive officer; (2) CB objectives; (3) policy formulation; and (4) limitations on lending to government. We test a dynamic panel model where the outcome is $\triangle$ CBI. The dynamic part of the specification includes the lagged outcome in levels (CBI_{t-1}) on the right-hand side of the equation to adjust for ceiling effects. All models contain country (α_i) and year (ν_t) fixed effects. The treatment is ruling party personalism ($d_{i,t}$) and observed confounders are denoted by $X_{i,t}$.

$$\Delta CBI_{i,t} = CBI_{i,t-1} + \beta d_{i,t} + \gamma X_{i,t} + \alpha_i + \nu_t + \varepsilon_{i,t} \tag{1}$$

We borrow the dynamic panel approach to modeling CBI from Romelli (2022), as shown in equation (1). The lagged outcome not only adjusts for possible ceiling effects but it also reflects the fact that CBI is "sticky", or as Romelli notes, there exists "status quo bias" in CBI. Changes in CBI are infrequent because institutional change is often difficult for political actors to implement in a democracy (see e.g. Keefer and Stasavage 2003). We also note that the lagged outcome, $CBI_{i,t-1}$, blocks the causal pathway by which prior CBI influences selection into ruling party personalism.

Finally, the outcome measure is year-on-year change in CBI ($\Delta CBI_{i,t}$), which can have negative (decreasing independence) and positive (increasing independence) values. We investigate these components of the outcome in Appendix 2.3. Here we simply note that this outcome measure reflects *observed* – and thus successful – changes in CBI. An increase in CBI might occur because some political actors (e.g. opposition parties or elites in the ruling party) have an incentive to boost CBI *and* the leader cannot stop these actors from implementing changes. Thus a leader who wants more control over monetary policy might attempt to *block* reforms that increase the independence of the central bank. If this is the case, then observing no increases in CBI might reflect the preferences of the leader to thwart attempts to increase CBI and thereby keep CBI relatively weak. Of course, observed decreases in CBI might also reflect the power of the leader relative to other elites to actually undermine the formal independence of the central bank. For these reasons, we test models of $\Delta CBI_{i,t}$ – and not just models of *decreases* in CBI.

Table B-3 reports results. The first column contains results from a specification with only the treatment and no confounders. The second adds two baseline covariates that measure democratic consolidation to adjust for selection into ruling party personalism: democracy age and democracy level in the year in which the leader is selected into power as chief executive. Column (3) adjusts for ruling party populism in the selection year; and Column (4) adjusts for an index of judicial and legislative constraints on the executive.[5] In all these

[5]We note that the sample size drops when including a measure of ruling party populism due to missing data on this variable. The constraints measure is a linear combination, using Cronbach's alpha, of the four-year lag for legislative and judicial constraints on the

Table B-3: Ruling party personalism and central bank independence

Outcome:	△Index of central bank independence (△ CBI)				
	(1)	(2)	(3)	(4)	(5)
Party personalism	-0.026*	-0.026*	-0.026*	-0.031*	-0.108*
	(0.010)	(0.010)	(0.010)	(0.013)	(0.044)
Democracy age (log)		0.000	-0.002	-0.011	-0.011
		(0.004)	(0.005)	(0.006)	(0.006)
Democracy level$_{t=0}$		0.078*	0.082*	0.120*	0.117*
		(0.032)	(0.034)	(0.037)	(0.035)
Party populism$_{t=0}$			-0.003		
			(0.008)		
Executive constraint				0.057	-0.020
				(0.034)	(0.052)
Personalism × Exec constraint					0.123*
					(0.060)
CBI$_{t-1}$	-0.188*	-0.192*	-0.199*	0.682*	0.679*
	(0.021)	(0.021)	(0.023)	(0.027)	(0.027)
(Intercept)	0.135*	0.080*	0.090*	0.116*	0.171*
	(0.016)	(0.023)	(0.024)	(0.034)	(0.042)
Country FE	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓
N×T	2354	2354	2269	2343	2343
Countries	101	101	98	101	101

* $p < 0.05$. Cluster robust errors. Years: 1991-2020; 101 countries with democracies.

specifications, the estimate for ruling party personalism is negative and significant, indicating that changes in CBI are lower, on average, the higher is ruling party personalism.

In column (5) of Table B-3, we test an interaction model where we interact the treatment, $d_{i,t}$, and the moderator, executive constraint ($m_{i,t}$):

$$\triangle CBI_{i,t} = CBI_{i,t-1} + \beta d_{i,t} + \lambda(d_{i,t} \times m_{i,t}) + \psi m_{i,t} + \gamma X_{i,t} + \alpha_i + \nu_t + \varepsilon_{i,t} \quad (2)$$

The estimate for the interaction is positive and negative, while the estimate for personalism itself is negative and significant. Using these estimates, Figure B-1 plots the marginal effects of personalism on $\triangle CBI$ across a range of values for executive constraint. At relatively low levels of constraint (e.g. 0.5 on the horizontal axis) the estimate for personalism is negative and significant, but this estimate increases as constraint increases such that personalism has no significant effect on $\triangle CBI$ at high levels of institutional constraint on the executive. The negative effect of ruling party personalism is concentrated among cases where the executive faces few institutional constraints on their power.

executive. In the verification files, we show that a specification with populism and constraints as covariates yields similar, significant estimates for ruling party personalism.

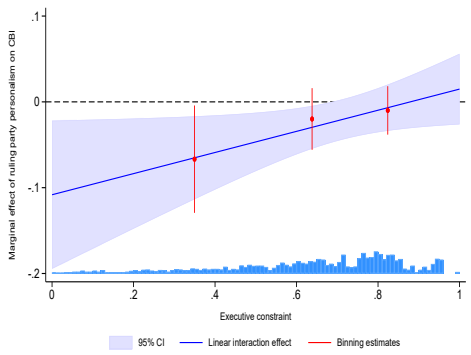

Figure B-1: Marginal effect of party personalism on CBI, across levels of legislative constraint

B.3 Direction of change in CBI

This section reports results from analyzing the direction of change in the CBI index. The outcome is ordered such that a decrease in CBI from the prior year is coded `-1`; no change is coded `0`; and an increase in CBI is coded `1`. There are 91 time periods with an increase in CBI and 27 periods with a decrease in CBI. Figure B-2 shows the incidence of increases and decreases in CBI across the range of ruling party personalism. The left plot looks at places with low executive constraints; and the right plot those with high constraints. Each plot also shows the nonlinear (unadjusted) relationship between ruling party personalism and the direction of change in CBI. In the left plot, the nonlinear fit is slightly negative, indicating that direction of change is lower as ruling party personalism increases when executive constraint is low. The right plot shows a positive nonlinear fit when executive constraint is high.

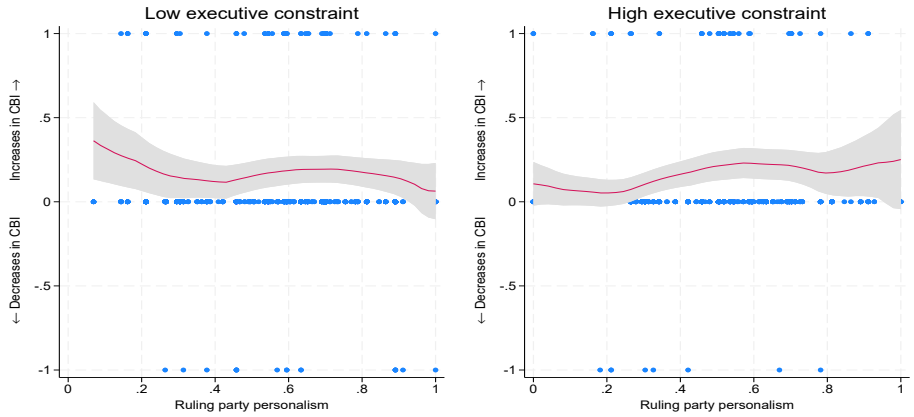

Figure B-2: Increases and decreases in CBI, across levels of ruling party personalism

The results for the first direction of change test is reported in the first column of Table B-4. The estimate for party personalism is negative and significant at the 0.10 level. This suggests that party personalism shifts the direction of change in CBI. The second column shows the interaction between personalism and executive constraint, with the interaction estimate positive and significant. This suggests that personalism negatively affects the direction of change at low levels of constraint but not at high levels. The next two columns examine *increases* in CBI using a dynamic panel linear probability model: personalism, on average, decreases the probability of an increase in CBI by about 5 percent; and, as the column (4) results indicate, this effect is much stronger when executive constraints are lower.

Finally, in the last two columns of Table B-4 we examine *decreases* in CBI. The average effect of personalism is much smaller and not statistically significant, but the direction is positive. This indicates that ruling party personalism increases the probability of a *decrease* in CBI by about 1 percent. The interaction effect in column (6) is significant. The marginal effects of personalism from column (6) are plotted across a range of values for executive constraint in Figure B-3. At low levels of constraint (around 0.5 on the horizontal axis), the

Table B-4: Ruling party personalism and direction of change in CBI

Outcome	Direction of change		Increase in CBI		Decrease in CBI	
	(1)	(2)	(3)	(4)	(5)	(6)
Party personalism	-0.055	-0.375*	-0.051	-0.276*	0.011	0.103*
	(0.032)	(0.106)	(0.026)	(0.088)	(0.013)	(0.045)
Executive constraint		-0.270*		-0.202*		0.068
		(0.100)		(0.087)		(0.039)
Personalism × Exec constraint		0.509*		0.356*		-0.149*
		(0.156)		(0.127)		(0.067)
Democracy age (log)	0.004	-0.001	0.002	-0.002	-0.001	0.000
	(0.014)	(0.015)	(0.013)	(0.013)	(0.004)	(0.004)
Democracy level$_{t=0}$	0.110	0.072	0.151	0.131	0.037	0.052
	(0.120)	(0.109)	(0.106)	(0.098)	(0.046)	(0.050)
CBI$_{t-1}$	-0.472*	-0.490*	-0.439*	-0.451*	0.037	0.042*
	(0.056)	(0.054)	(0.052)	(0.051)	(0.019)	(0.019)
(Intercept)	0.251*	0.480*	0.214*	0.381*	-0.040	-0.101*
	(0.093)	(0.103)	(0.080)	(0.084)	(0.036)	(0.046)
Country FE	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓
# non-zero outcomes	118		91		27	
N×T	2354	2343	2354	2343	2354	2343
Leaders	579	576	579	576	579	576

Direction of change: -1 ≡ decrease in CBI; 0 ≡ no △ in CBI; 1 ≡ increase in CBI. * $p < 0.05$. Clustered errors. Years: 1991-2020; 101 countries with democracies.

marginal effect is about 5 percent. At higher levels of constraint, the marginal effect is close to zero and not significant. In short, party personalism boosts the chances that governments *undermine* CBI (i.e., increase the probability of a decrease in CBI) when executive constraints are low.

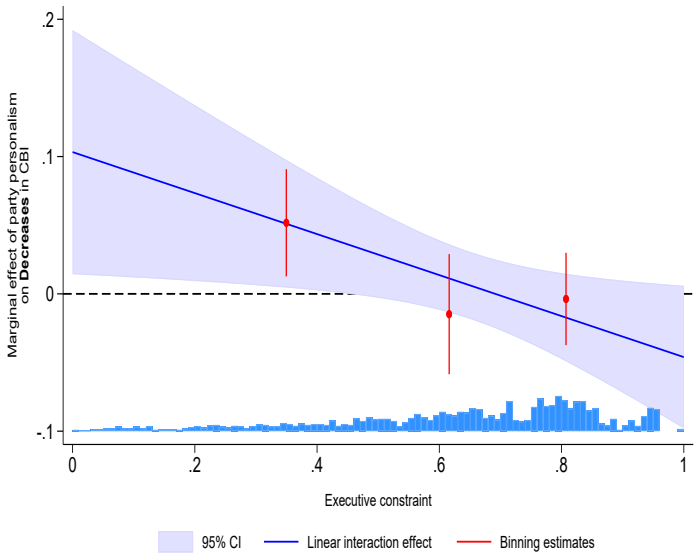

Figure B-3: Marginal effect of party personalism on **Decreases** in CBI, across levels of legislative constraint

B.4 Additional tests of CBI index

Table B-5 reports results from various robustness tests. The first column is a specification that includes longer lags of the outcome variable to ensure un-modeled serial correlation does not bias estimates. Column (2) uses the unweighted index of CBI from Garriga (2025) instead of the weighted index. Column (3) is a specification that adjusts for measures of regional diffusion of central banks and their independence. Column (4) reports estimates from an interactive fixed effects model that accounts for the fact that common temporal shocks (e.g. 2008 Great Recession) might have different effects on CBI for different countries. In all these tests the estimate for ruling party personalism remains stable.

The next four columns of Table B-5 reports results from models that adjust for different measures of populism. In Table B-3, we reported a specification that adjusts for populism of the ruling party measured in the year the chief executive was selected into office to ensure populism was not causing selection into ruling party personalism. In column (5) of Table B-5 we adjust for current year ruling party populism; in the next column we account for indicators of right-wing and left-wing populism (mutually exclusive). Column (7) adjusts for the year-on-year change in the level of ruling party populism; and column (8) adjusts for the change in populism from the chief executive's selection year to the current year. In all these tests, the estimate for ruling party personalism remains stable, between -0.028 and -0.021.

The final four columns of Table B-5 report results from tests that examine each component of the CBI index separately. The results are strongest for policy formulation and weakest for policy objectives. This should not be too surprising because central bank objectives are often institutional rules that are more difficult to change, whereas policy formulation is much more susceptible to various forms of pressure from the leader and governing party.

Table B-5: Ruling party personalism and pressure on central banks

	Longer lag on outcome	Unweighted CBI index	Regional diffusion	Interactive FE	Additional ways of measuring populism				CB executive	Policy objectives	CB formulation	Lending limit
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Personalism	-0.026*	-0.027*	-0.021*	-0.023*	-0.023*	-0.027*	-0.026*	-0.026*	-0.020*	-0.019	-0.040*	-0.027*
	(0.010)	(0.010)	(0.010)	(0.008)	(0.010)	(0.010)	(0.011)	(0.010)	(0.006)	(0.014)	(0.017)	(0.013)
Democracy age (log)	-0.001	0.001	0.004	0	-0.002	-0.002	-0.001	-0.003	-0.005	0.001	0.001	0.006
	(0.004)	(0.005)	(0.004)	(0.004)	(0.005)	(0.005)	(0.006)	(0.005)	(0.003)	(0.008)	(0.009)	(0.007)
Democracy level$_{t=0}$	0.072*	0.065*	0.080*	0.093*	0.081*	0.084*	0.074*	0.079*	0.049*	0.036	0.073	0.093*
	(0.033)	(0.032)	(0.035)	(0.029)	(0.035)	(0.034)	(0.037)	(0.034)	(0.023)	(0.038)	(0.051)	(0.040)
	(0.033)	(0.032)	(0.035)	(0.029)	(0.037)	(0.036)	(0.036)	(0.036)	(0.023)	(0.038)	(0.051)	(0.040)
CBI regional diffusion			0.283*									
			(0.055)									
Regional central bank			0.018									
			(0.016)									
Populism$_t$					-0.013							
					(0.009)							
Right-wing populism						0.006						
						(0.005)						
Left-wing populism						-0.010*						
						(0.005)						
△ Populism							-0.004					
							(0.007)					
Populism$_t$-Pop.$_{t=0}$								-0.020				
								(0.010)				
(Intercept)	0.090*	0.089*	-0.074	0.067*	0.095*	0.092*	0.096*	0.095*	0.079*	0.118*	0.088	0.074*
	(0.024)	(0.027)	(0.039)	(0.020)	(0.024)	(0.024)	(0.028)	(0.024)	(0.020)	(0.036)	(0.047)	(0.035)
Country FE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Lag DV	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
N×T	2340	2235	2354	2354	2211	2211	2090	2211	2235	2235	2235	2235
Leaders	573	561	101	101	535	535	513	535	561	561	561	561

* $p < 0.05$. Cluster robust errors.

B.5 Covariate adjustment in models of CBI

Figure B-4 plots the estimates for the treatment variable, ruling party personalism, when adding covariates to the model specification, one at a time. The red horizontal line is pinned at zero, to help visualize whether the estimated confidence intervals contain zero. The black horizontal line marks the estimate from the baseline model, which is -2.6 percent. Each estimate (blue dot) and associated 95 percent confidence interval (vertical blue lines) represent the estimate of ruling party personalism when adding the confounder listed along the horizontal axis to the baseline specification. All the estimates fall between -2 percent and -3 percent; and all the confidence intervals lie outside of zero, indicating statistical significance at the 95 percent level. Note that some of the confounders, particularly the one-year lags of variables measure democracy and executive constraint, may be post-treatment variables and should not be included in specifications that test the effect of ruling party personalism on CBI. Nonetheless, these tests indicate robustness of the estimate to many potential confounders.

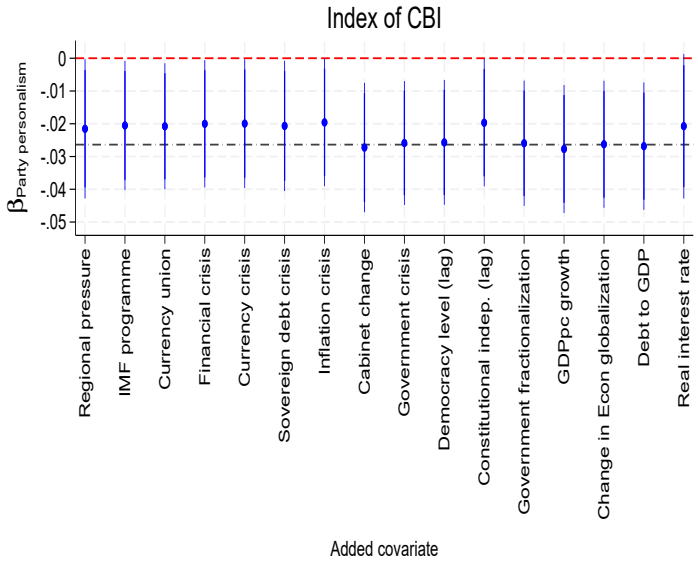

Figure B-4: Covariate adjustments in models of CBI, with covariates from Romelli (2022)

Figure B-5 conducts a similar exercise, but this time the covariates that represent potential confounders are drawn from Romelli (2022) (Table 3). We have updated these variables: regional CBI pressure; participation in an IMF program; monetary union dummy; financial crisis; currency crisis; sovereign debt crisis; inflationary episodes; cabinet change; government crisis; democracy level; constitution; government fractionalization; GDP growth; one-year change in a globalization index; and the debt to GDP ratio.[6] We then add each covariate to

[6]Instead of a dummy variable for economic growth, we use the two-year moving average of the GDP per capita growth rate.

the baseline specification, one at a time. The estimates for ruling party personalism reported in Figure B-4 again all fall within the range of -2 percent and -3 percent, with the confidence bands falling outside of zero. Thus the finding is robust to the potential confounders tested in Romelli (2022). Even a kitchen sink model that includes all these variables in same specification (reported in replication materials) yields an estimate of -2.2 percent. This is estimate, though, is only significant at the 0.068 level because the sample size (18 percent fewer observations) is much smaller due to data missingness in the covariates.

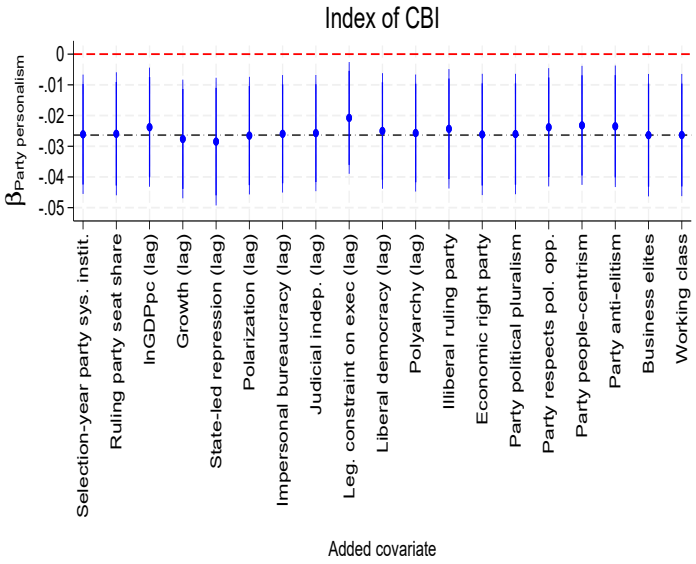

Figure B-5: Covariate adjustments in models of CBI, with additional covariates

B.6 CBI index from Romelli (2022)

Table B-6 reports results from two models, where the outcome is the year-to-year difference in the CBI index and the specification includes the lagged outcome and two-way fixed effects. The first column is the baseline model that uses the Garriga (2025) updated index of CBI as the outcome (difference) and as the lag DV (CBI_{t-1}). The second is the same specification and model but uses the Romelli (2022) data on CBI. In levels, the two measures of the outcome are correlated at 0.81 and in differences the correlation is 0.72; thus they are highly correlated but not exactly the same. The estimates for the treatment are similar, -2.6 and -2.0 percent respectively. However, once we account for the difference in the standard deviations of the outcome measures, these estimates are nearly identical: 41 percent of one standard deviation in the (differenced) outcome variable for both estimates. In short, the result remains when using Romelli's measure of CBI.

Table B-6: Ruling party personalism and central bank independence

△ CBI index:	Garriga (2025)	Romelli (2024)
	(1)	(2)
Party personalism	-0.026*	-0.020*
	(0.010)	(0.008)
Democracy age (log)	0	0.006
	(0.004)	(0.004)
Democracy level$_{t=0}$	0.078*	0.074*
	(0.032)	(0.028)
CBI$_{t-1}$	-0.192*	-0.193*
	(0.021)	(0.025)
(Intercept)	0.080*	0.071*
	(0.023)	(0.022)
Country FE	✓	✓
Year FE	✓	✓
N×T	2354	2049
Leaders	579	515
Countries	101	91

* $p < 0.05$. Cluster robust errors. Years: 1991-2020.

B.7 Semiparametric estimates

Redwood (2023) argues that highly personalist and nonpersonalist autocratic regimes both have low levels of CBI but that autocracies at intermediate levels of personalism have high CBI. The empirical expectation is therefore that there is an inverse-U relationship between personalism and CBI in autocratic regimes. The empirical evidence to support this expectations arises from pooled OLS models of CBI with geographic region and year fixed effects, tested on a sample of autocratic regimes. The nonlinearity is estimated using *personalism* and its squared term $personalism^2$ in the specification.

To understand empirically whether our study is simply an extension of Redwood's work from dictatorships to democracies, we explore whether there is a nonlinear relationship between personalism and CBI. In doing so, we note a key difference between our empirical approach and that in Redwood (2023): we test a dynamic panel model (two-way fixed effects + a lagged DV) of CBI that accounts for the fact that CBI tends to be very sticky, especially in democracies. The dynamic panel approach also means our empirical model is asking a different question than the pooled OLS approach in Redwood (2023). The dynamic panel model asks: How do changes in personalism within democracies affect changes in CBI over time? This is a different question than that posed by the pooled OLS approach: Do more personalist autocracies have more/less CBI than less personalist autocracies?

We estimate and report results from three semiparametric models – all of which have the same specification and the same sample.[7] We use a semiparametric approach in which all covariates and fixed effects are estimated using (parametric) OLS but the treatment variable is estimated non-parametrically. Hence the model is semi-perimetric. This approach allows us to visualize potential nonlinearities in the relationship between treatment and outcome without making functional form assumptions necessary when estimating *personalism* and its squared term $personalism^2$ parametrically. In the first model, we use a pooled OLS approach with region FE and year FE; the second substitutes country FE for region FE; and the third adds a lagged outcome (LDV) to the two-way FE model.

Figure B-6 shows the non-parametric results describing the relationship between personalism and CBI, from each of the three models. The horizontal axis in each plot shows the level of ruling party personalism in democracies and the vertical axis depicts the estimated level of CBI. The blue lines in each plot show the non-parametric relationship between the two. The left plot, from a pooled OLS with region and year FE, shows an inverse U-shaped pattern. At high and low levels of ruling party personalism, CBI is about 0.56; at middle levels of personalism, however, CBI is relatively high at about 0.64. This result is consistent with Redwood's (2023) finding for dictatorships.

The middle plot shows results when using a model with country and year FE (two-way FE). While there is some nonlinearity in the pattern, the estimate indicates that expected CBI decreases after ruling party personalism reaches its midpoint.

The right plot shows results from a dynamic panel model (TWFE + LDV). This is

[7]The specification adjusts for: democracy age, initial democracy level, and GDP per capita. The sample covers 101 countries with democracies from 1991-2020 for N×T=2,261.

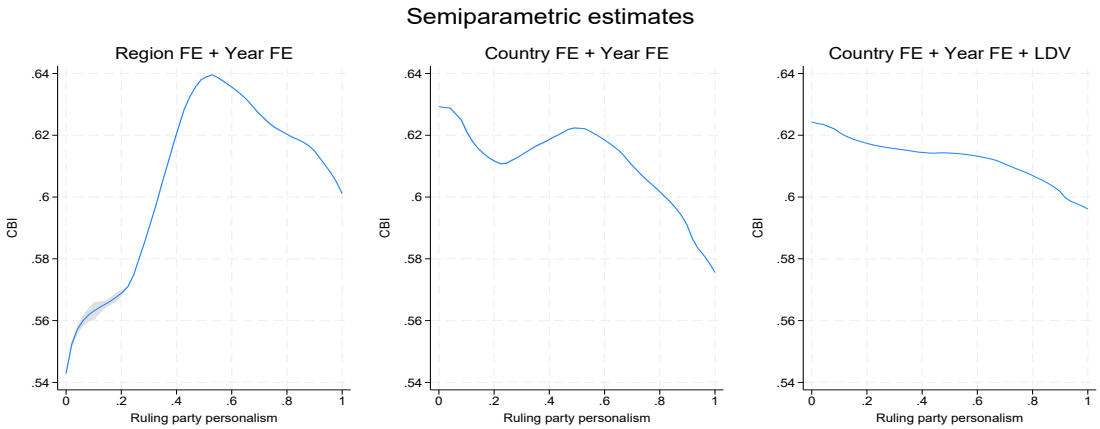

Figure B-6: Semiparametric estimates for the relationship between personalism and CBI

the model we use in our paper because, as Romelli (2023) points out, CBI is so sticky in democracies. [The dynamic panel setting also addresses the serial correlation in the data.] The pattern in the right plot is negative and roughly linear. The negative slope is also smaller – and roughly the same size as the estimate we report in the CBI tests in the first four columns of Table B-3: 0.026. We note that this slope is much smaller than the slopes in the left plot because the dynamic panel approach (right plot) accounts for all differences between countries while the pooled OLS approach in the left plot does not.

In short, the semiparametric results indicate that the finding we report – that personalism decreases CBI – relies on the dynamic panel approach for modeling the relationship between personalism and CBI in democracies (e.g., Romelli, 2022. A pooled OLS approach, which allows for cross-country comparisons to inform the estimates, yields an inverse-U pattern, consistent with Redwood's (2023) finding for personalism and CBI in autocracies.

B.8 Informal attacks on CBI and formal CBI

This section discusses whether and how informal attacks on CBI, which we measure with two different data sets, is related to de facto CBI. To start, we note that, at the quarterly level, the binary indicator of pressure to ease monetary policy and public pressure on the bank are correlated at 0.68, which is quite strong. Thus the two measures are likely captures many of the same events. We then construct a latent measure of the political pressure by aggregating the two binary indicators.[8] This yields a quarterly measure of latent pressure.

To test whether party personalism is associated with this quarterly measure of latent pressure, we estimate a dynamic panel model of latent pressure with two-way fixed effects (country and quarter) as well as a lagged DV. The covariates for adjustment are democracy and initial democracy level when the leader enters office. The sample covers 43 countries over 34 quarters during the period 2010 to 2018. The estimate for ruling party personalism is positive and significant (0.157, se = 0.05), suggesting that party personalism increases latent pressure on central banks.

Next we test whether this latent pressure variable is related to changes in de facto CBI. We first aggregate the quarterly measure of latent pressure to an annual maximum, indicating whether there is any form of pressure on the central bank in a given year. We then test the annualized latent pressure variable in a dynamic panel model of CBI (see equation (1) in Appendix 2.2). We adjust for democracy age and initial level of democracy. The results indicate that latent pressure is associated with decreases (or the absence of increases) in de facto CBI: the estimate for latent pressure is negative and small (-0.004, se=0.002) but statistically significant.

[8] We use Cronbach's α with standarized items, which is a linear combination of two binary variables.

C Ruling party personalism and populism

Figure C-1 shows the scatter plot for measures of populism (vertical scale) and ruling party personalism (horizontal scale). The nonlinear fit between the two is positive in the left plot (sample for public pressure), reflecting a correlation of $\rho = 0.21$. As the scatterplot indicates, there are a substantial number of leaders in the upper left quadrant (high populism and low personalism; e.g. Kirchners in Argentina) as well as in the lower right quadrant (low populism and high personalism; e.g. Rafael Caldera in Venezuela). An example of a leader with high populism and personalism is Hugo Chavez (Venezuela) while a low populism and personalism leader is Lars Lokke Rasmussen (Denmark). The right plot in Figure C-1 shows a similar pattern for the pressure to ease sample.

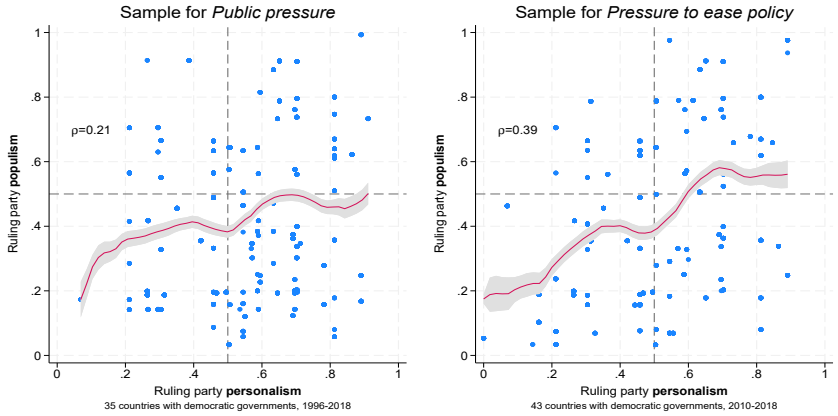

Figure C-1: Personalism and populism correlations

Figure C-2 shows the histograms of ruling party personalism for populist and non-populist leaders, where we code a populist leader (binary category) as one with an initial populism score of greater than 0.5. Both samples show a wide distribution of ruling party personalism for populist and non-populist leaders.

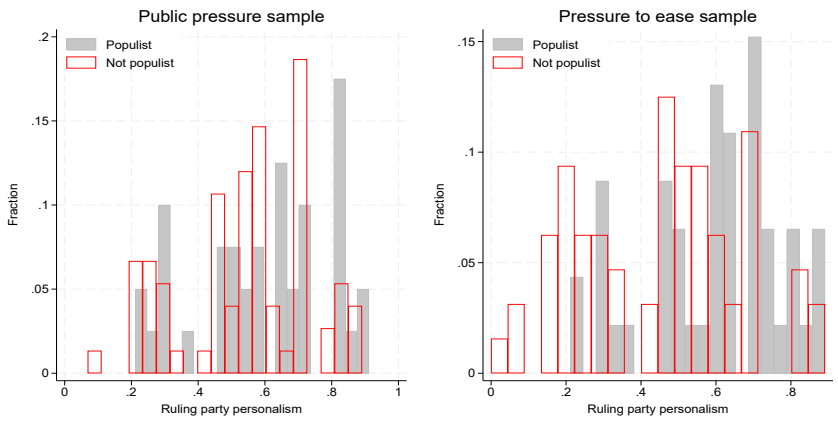

Figure C-2: Personalism distributions among populists and non-populists

D Additional notes and references

- Some examples of Republican Party elites endorsing Trump's criticism of the Federal Reserve include the following:
  - "The most incompetent, worst Federal Reserve chairman in American history should resign," said GOP Ohio Sen. Bernie Moreno (Groves, 2025)
  - Senate Banking Committee member Sen. Cynthia Lummis, R-Wyo., slammed the central banker for overseeing a "black hole" that "consumes information, but never releases it," including when requested by Congress. She later implied in a post on X that Powell, who most experts agree can only be let go for legal violations or personal misconduct, should be "fired" (Mueller, 2025).
- The observed values approach to calculating predicted probabilities in Figure 1 of the main text draws on Hanmer and Ozan Kalkan (2013).
- Carter and Signorino (2010) suggest third-order time dependence polynomials as a method to adjust for nearly any functional form of time dependence in a binary DV model that mimics a duration model.
- Data on central bank independence from Garriga (2025) were first introduced by Garriga (2016).
- In addition to Romelli (2022), Kern, Reinsberg and Rau-Göhring (2019) estimate dynamic panel models of CBI. We draw our designs from these studies.
- For references to legislative changes that enabled greater executive control over the central bank, see Freedom House (2010) for Nicaragua in 2007, Bodea and Garriga (2023) for Ecuador in 2008, and Global Times Newspaper (2018) for Sierra Leone in 2011.

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