Predictably Unpredictable: The Effects of Conflict Involvement on the Error Variance of Vote Models

Online Appendix

Laron K. Williams
Department of Political Science
University of Missouri
williamslaro@missouri.edu

David J. Brule
Department of Political Science
Purdue University
dbrule@purdue.edu

Overview

This document provides analyses briefly discussed—but not presented—in "Predictably Unpredictable: The Effects of Conflict Involvement on the Error Variance of Vote Models".

Sample and Summary Statistics

We present the sample countries and summary statistics in Tables S.1 and S.2.

[Tables S.1-S.2 about here]

As it stands, the only democratic elections that are excluded are due to missing economic data (especially prior to 1970), or non-partisan governments (e.g., Greece). We are therefore confident that we have included all government parties for all available elections in the 24 advanced democracies for our sample time period.

Full Results

Due to space constraints, we omitted the country-specific fixed effects coefficients in the manuscript. Table S.3 presents the full set of results.

[Table S.3 about here]

Robustness Checks

We conducted a series of robustness checks. In the manuscript we present the results counting the number of hostile MIDs in the entire election cycle in the manuscript and then refer to the other time domains (24-, 12-, and 6-months prior to the election) in Table S.4.

[Table S.4 about here]

As expected, the coefficient for *hostile MIDs* in the variance equation is statistically significant at conventional levels and positive in each model. Moreover, as one gets closer to the election, the hostile disputes increase the error variance of vote share.

As a second set of robustness checks, we estimate the *hostile MIDs* as a continuous weight by proximity to the election. We create eight different variables in total, split into four time domains (36-months prior to the election, 24-months, 12-months, and 6-months), based on two types of decay functions (exponential and linear decay). These variables represent an interesting robustness check, since they provide greater weight to disputes that occur closer to the election (as shown in Figure S.1).

[Figures S.1-S.2 about here]

In Figure S.2 we present the coefficients for the dispute variable with decay function for the variance part of the equation. Our initial results are robust to this modification of model specification, as the value of the coefficient is positive in all eight models, as well as statistically significant at the 95% confidence level. This would suggest that involvement in hostile disputes increases the error variance of voting models, even once we take into account the proximity of the dispute to the election.

Tables and Figures

Table S.1: Distribution of Disputes within Sample Countries

Country	No. of Elections	Elections with a Hostile MID	Obs	Elections
Australia	14	3	22	1966-1998
Austria	10	0	16	1966-1999
Belgium	11	2	37	1968-1999
Canada	10	4	10	1965-1997
Denmark	14	0	32	1966-1998
Finland	10	0	40	1966-1999
France	8	6	9	1967-1997
Germany	2	2	4	1994-1998
Great Britain	9	7	9	1966-1997
Greece	5	3	6	1981-2000†
Iceland	3	0	6	1991-1999
Ireland	9	1	13	1969-1997
Israel	5	5	6	1981-1999†
Italy	8	2	20	1968-1994
Japan	11	0	12	1967-1996
Luxembourg	4	0	8	1984-1999
Netherlands	10	2	24	1967-1998
New Zealand	11	3	12	1966-1996
Norway	8	3	15	1969-1997
Portugal	4	0	6	1980-1995
Spain	6	2	6	1979-1996
Sweden	10	4	14	1968-1994
Switzerland	8	0	35	1967-1995
USA	8	8	8	1968-1996
Total	198	59	370	

Note: Beginning dates are determined by the availability of economic and CMP data; end dates are determined by availability of MID data.
† A number of elections are excluded due to missing data.

Table S.2: Summary Statistics

	Min.	**Max.**	**Mean**	**Std. Dev.**	**Mode**
Dependent Variable					
Vote Share (V_t)	.50	51.03	23.60	14.56	
Explanatory Variables					
Previous Vote Share (V_{t-1})	1.37	57.71	25.54	15.06	
Majority	0	1	.82	.39	1
Coalition	0	1	.29	.45	0
Executive	0	1	.52	.50	1
Time Left in CIEP (%)	0	88.33	17.92	22.33	
Executive×CIEP	0	88.33	9.69	18.53	
Real GDP Per Capita Growth	-7.28	14.92	3.03	3.32	
Unemployment	0	22.7	5.97	4.28	
Differenced Inflation	-14.22	228.18	1.11	16.97	
Disputes					
Hostile MIDs	0	9	0.5	1.27	0

Figure S.1: Values of the *Hostile MIDs* Variable across the Election Cycle for Different Continuous Proximity Weights

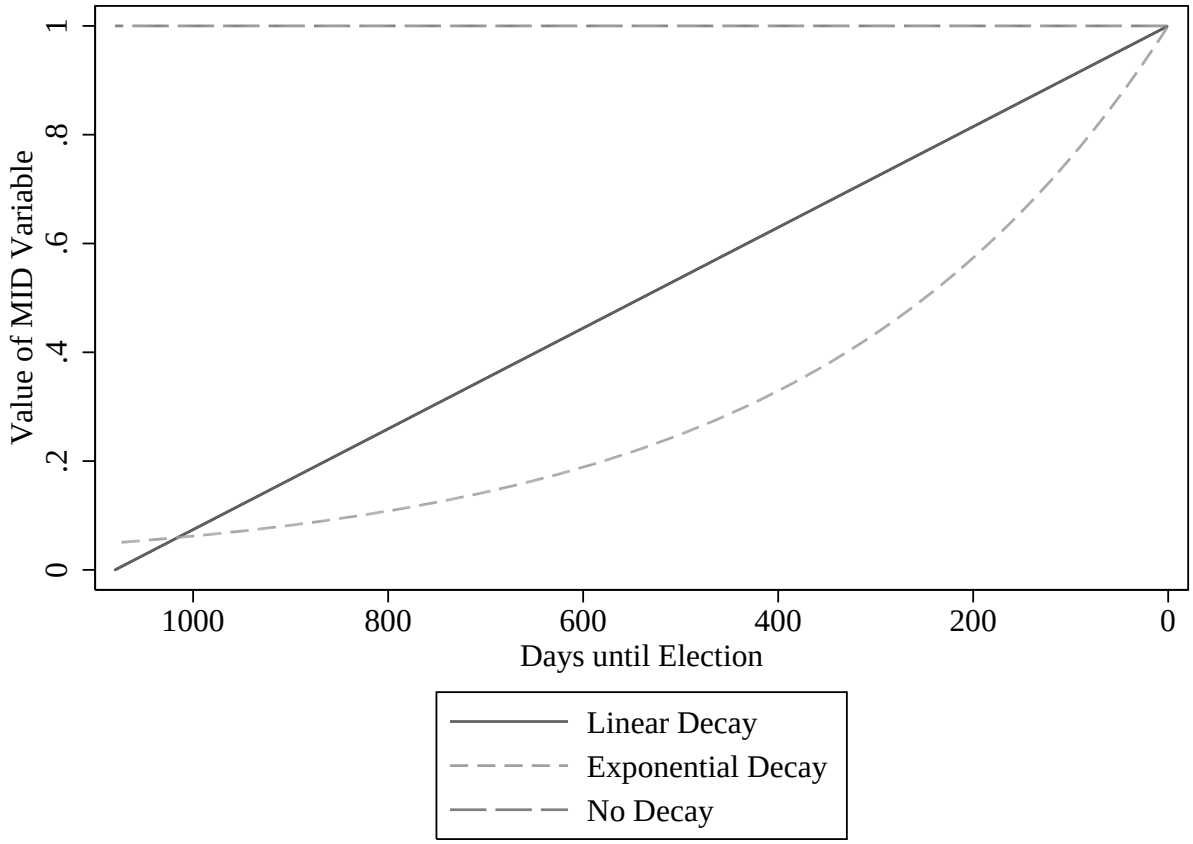

Table S.3: Heteroskedastic Regression Results for the Effects of Involvement in Hostile Disputes in the Election Cycle on Government Parties' Vote Shares (V_t)

	β	**S.E.**
Vote Share (V_{t-1})	0.91***	(0.02)
Real GDP Per Capita Growth	0.07**	(0.04)
Unemployment	-0.05**	(0.03)
First-Differenced Inflation	-0.02***	(.01)
Majority Government	-1.41***	(0.48)
Coalition Government	0.06	(0.37)
Executive Party	0.34	(0.81)
Time Left in CIEP (%)	0.01	(0.01)
Executive×CIEP	0.02	(0.02)
Hostile MIDs	-0.04	(0.06)
Constant	1.54***	(0.57)
Heteroskedasticity Terms		
Hostile MIDs	0.28***	(0.10)
USA	-5.70***	(1.60)
Canada	-0.63	(1.46)
Great Britain	-2.32*	(1.47)
Ireland	-2.02	(1.44)
Netherlands	-1.79	(1.45)
Belgium	-3.44**	(1.44)
Luxembourg	-3.26**	(1.44)
France	-0.89	(1.45)
Switzerland	-1.08	(1.44)
Spain	0.11	(1.44)
Portugal	0.82	(1.44)
Germany	-3.46**	(1.46)
Austria	-1.07	(1.44)
Italy	-1.71	(1.45)
Greece	-2.69*	(1.49)
Finland	-3.36**	(1.44)
Sweden	-2.54*	(1.45)
Norway	-1.94	(1.44)
Denmark	-1.92	(1.44)
Iceland	-2.36*	(1.44)
Israel	-1.75	(1.42)
Japan	-2.23*	(1.44)
Australia	-2.38*	(1.45)
σ^2	4.56***	(1.02)
N		370
Adjusted R^2		0.97

Note: Robust standard errors in parentheses;
$** = p < .05$,$* = p < .1$ (two-tailed).
New Zealand is the excluded fixed effect.

Table S.4: Heteroskedastic Regression Results for the Effects of Involvement in Hostile Disputes across Different Time Domains on Government Parties' Vote Shares (V_t)

	24 Months Prior	**12 Months Prior**	**6 Months Prior**
Vote Share (V_{t-1})	0.91***	0.91***	0.92***
	(0.02)	(0.02)	(0.02)
Real GDP Per Capita Growth	0.07**	0.06*	0.05
	(0.04)	(0.04)	(0.04)
Unemployment	-0.05**	-0.05*	-0.04
	(0.03)	(0.03)	(0.03)
First-Differenced Inflation	-0.02***	-0.02**	-0.02***
	(.01)	(0.01)	(0.01)
Majority Government	-1.48***	-1.41***	-1.38***
	(0.48)	(0.50)	(0.44)
Coalition Government	0.16	0.28	0.30
	(0.35)	(0.40)	(0.38)
Executive Party	0.38	0.36	0.33
	(0.82)	(0.82)	(0.81)
Time Left in CIEP (%)	0.01	0.01	0.01
	(0.01)	(0.01)	(0.01)
Executive×CIEP	0.02	0.02	0.02
	(0.02)	(0.02)	(0.02)
Hostile MIDs	-0.13	-0.35**	-0.67***
	(0.10)	(0.16)	(0.21)
Constant	1.54***	1.44***	1.36***
	(0.58)	(0.57)	(0.52)
Heteroskedasticity Terms			
Hostile MIDs	0.37**	0.41*	0.67***
	(0.15)	(0.27)	(0.32)
σ^2	4.58***	4.61***	4.62***
	(1.02)	(1.02)	(1.02)
N	370	370	370
Adjusted R^2	0.97	0.96	0.96

Note: Robust standard errors in parentheses; $** = p < .05$,$* = p < .1$ (two-tailed). Country-specific fixed effects coefficients in the variance equation have been omitted for presentation purposes.

Figure S.2: Gamma Coefficients (and 95% Confidence Intervals) for the Effects of Hostile MIDs on Error Variance: Exponential and Linear Continuous Decays