

Supplementary Material: Two Sword Lengths Apart: Credible Commitment Problems and Physical Violence in Multi-party Elected National Legislatures

March 20, 2015

Details on Prior Correction of the Rare Logistic Regression Models

For prior correction (see King and Zeng, 2001) in the models with the full sample of elected multi-party legislatures I used the observed proportion of all observations with legislative violence ^{c1}through 2012: ^{c1} ~~up to~~ ^{c1} ~~2010~~
i.e. ^{c2}2.2 percent of observations up until 2010 had violence ($\tau = \frac{117}{5360} = 0.022$). There were ^{c3}109 ^{c2} ~~2.1~~
observed incidences of violence and ^{c4}3990 country-years from 1990 through ^{c5}2012 in the sample, so: ^{c3} ~~63~~
 $\tau = \frac{109}{3390} = 0.027$. ^{c4} ~~2654~~
^{c5} ~~2009~~

Table 1: Legislative Violence Rare Events Logistic Regression Results (Multi-Party Elected Legislature 1981-2012)

	<i>Dependent variable:</i>									
	Violent Incident									
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Low Disproportionality	−0.572** (0.249)	−0.551** (0.250)	−0.825*** (0.258)	−0.419 (0.280)	−0.667** (0.292)	−0.400 (0.352)	−0.605** (0.257)	−0.522** (0.254)	−0.522** (0.251)	−0.416 (0.261)
Dem. Age	−0.011** (0.005)	−0.011** (0.005)	−0.012** (0.005)	−0.017*** (0.006)	−0.010** (0.005)	−0.012* (0.007)	−0.017*** (0.005)	−0.015*** (0.005)	−0.015*** (0.005)	−0.016** (0.007)
Majority Size	−0.030*** (0.008)	−0.030*** (0.008)	−0.029*** (0.008)	−0.031*** (0.010)	−0.028*** (0.009)	−0.015 (0.012)	−0.028*** (0.008)	−0.029*** (0.009)	−0.032*** (0.008)	−0.029*** (0.008)
Internal Armed Conflict		0.782*** (0.267)	0.704*** (0.270)	0.760** (0.318)	0.817*** (0.302)	0.776* (0.415)	0.752*** (0.276)	0.846*** (0.274)	0.899*** (0.273)	1.000*** (0.284)
Leg. Immunity			−0.263 (0.255)							
PR Electoral System			1.452*** (0.452)							
Single Party Gov.			−0.248 (0.243)							
Self Expression				2.334 (2.290)						
Ethnic Frac.				−0.973 (0.728)						
Perc. Women in Parl.					0.010 (0.015)					
Murder Rate						−0.001 (0.012)				
Federal							0.605* (0.313)			
Gov. Frac.							0.109 (0.434)			
No. of Parties by Seats								−0.053 (0.079)		
GINI									−0.048*** (0.015)	
GDP per Capita										0.019 (0.018)
(Intercept)	−1.333*** (0.436)	−1.468*** (0.443)	−2.358*** (0.636)	−3.932 (2.867)	−1.685*** (0.528)	−2.165*** (0.686)	−1.558*** (0.478)	−1.261** (0.622)	0.606 (0.767)	−1.686*** (0.482)
Observations	1,941	1,941	1,846	965	1,792	988	1,662	1,697	1,878	1,864
Log Likelihood	−308.268	−304.556	−288.874	−213.419	−247.829	−148.022	−276.202	−283.482	−295.120	−274.209
Akaike Inf. Crit.	624.537	619.112	593.749	440.837	507.658	308.045	566.404	578.965	602.240	560.419

Note:

*p<0.1; **p<0.05; ***p<0.01

Standard errors are in parentheses. All models use robust (WEAVE) standard errors.

Table 2: Legislative Violence Regression Results (Multi-Party Elected Legislature from 1990-2012)

	<i>Dependent variable:</i>					
	Violent Incident					
	(1)	(2)	(3)	(4)	(5)	(6)
Low Disproportionality	−0.542* (0.297)	−0.400 (0.352)	−0.548** (0.261)	−0.472* (0.258)	−0.439* (0.256)	−0.327 (0.267)
Dem. Age	−0.010* (0.005)	−0.012* (0.007)	−0.016*** (0.006)	−0.015*** (0.005)	−0.015*** (0.005)	−0.020** (0.008)
Majority Size	−0.027*** (0.009)	−0.015 (0.012)	−0.026*** (0.009)	−0.029*** (0.009)	−0.031*** (0.008)	−0.029*** (0.009)
Internal Armed Conflict	0.674** (0.332)	0.776* (0.415)	0.684** (0.303)	0.793*** (0.300)	0.889*** (0.298)	0.976*** (0.309)
Perc. Women in Parliament	0.003 (0.016)					
Murder Rate		−0.001 (0.012)				
Federal			0.474 (0.343)			
Gov. Frac.			0.037 (0.454)			
No. of Parties by Seats				−0.072 (0.082)		
Gini					−0.054*** (0.015)	
GDP per Capita						0.032* (0.019)
(Intercept)	−1.690*** (0.546)	−2.165*** (0.686)	−1.629*** (0.486)	−1.238* (0.643)	0.709 (0.793)	−1.774*** (0.499)
Observations	1,494	988	1,408	1,440	1,598	1,573
Log Likelihood	−224.461	−148.022	−253.877	−259.815	−270.205	−249.330
Akaike Inf. Crit.	460.922	308.045	521.755	531.631	552.410	510.660

Note:

*p<0.1; **p<0.05; ***p<0.01

Standard errors are in parentheses. All models use robust (WEAVE) standard errors.

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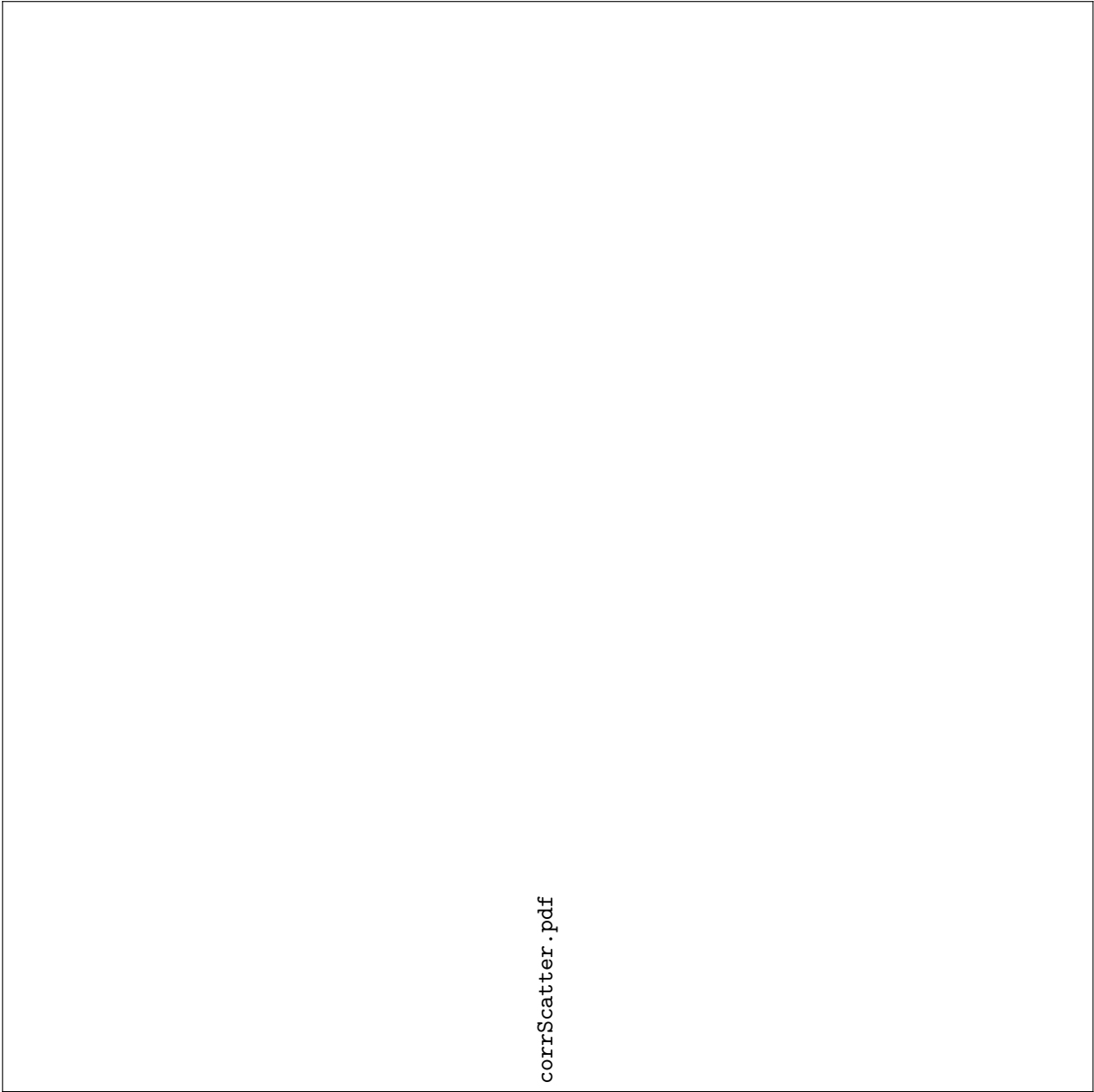
Table 3: Variable Summary

Variable	Description	Source
Disprop	Gallagher Index of Electoral Disproportionality	Gallagher (2015) & Carey and Hix (2011)
ENPS	Effective number of parties by seats	Gallagher (2015) & Carey and Hix (2011)
ENPV	Effective number of parties by votes	Gallagher (2015) & Carey and Hix (2011)
Ethnic Fractionalization	Probability two randomly selected members of society are from the same ethnic group	Alesina et al. (2003)
Federal	Whether a country has a federal system or not	Carey and Hix (2011), updated from 2003 by the author
GDP/Capita	GDP per capita in thousands of US dollars	World Bank (2015)
Gov. Fractionalization	Probability that two members of the Government will be from different parties	Beck et al. (2001)
Gini	Gini Coefficient of income inequality	UNU-WIDER (2015)
Immunity	Whether a legislators are immune from arrest and/or criminal prosecution or not	Fish and Kroening (2009)
Internal Conflict	Internal armed conflict involving purely domestic as well as external combatants	UCDP/PRIO Armed Conflict Dataset (Themnér and Wallensteen, 2014)
LEIC	Legislative Indices of Electoral Competitiveness. Includes both the existence of a legislature and its level of electoral competitiveness.	Beck et al. (2001)
Majority	Percentage of legislature controlled by governing parties	Beck et al. (2001)
Murder Rate	Murders per 100,000 population	United Nations (2013)
Polity	Polity IV Score	Marshall and Jaggers (2009)
PR	Whether a country uses a proportional representation electoral system or a plurality system	Beck et al. (2001)
Self Expression	WVS self-expression indicator averaged across country-survey waves	World Values Survey Association (2009)
System	Government system (parliamentary, presidential, or mixed)	Beck et al. (2001)
Tenshort	Tenure of the shortest serving veto player	Beck et al. (2001)
Trust	Average of WVS responses where 1 = most people can be trusted and 2 = you can't be too careful	World Values Survey Association (2009)
UDS	Posterior Mean Unified Democracy Score	Pemstein, Meserve and Melton (2010)
Violence	Incidences of violence between legislators in the national parliamentary chamber	author
Perc. Women in Parl.	Percentage of parliamentary seats held by women	Paxton, Green and Hughes (2008) & Inter-Parliamentary Union (2013)

Please contact the author for detailed summary statistics.

All of the data from Beck et al. (2001) was updated through 2012.

Figure 1: Correlation Matrix for Variables Included in the Analysis (Multi-Party Elected Legislatures)



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