

## Supplemental Online Appendices

<b>Appendix A: Descriptive statistics</b>	<b>Page Number</b>
<i>A.1: First level covariate averages by country</i>	<i>1</i>
<i>A.2: Demographic control variables</i>	<i>3</i>
<i>A.3: Correlations among independent variables</i>	<i>3</i>
<i>A.4: Second level covariate averages by country</i>	<i>4</i>
<b>Appendix B: Table 2 results when GDP per capita PPP (national wealth) is lagged 1 year</b>	<i>5</i>
<b>Appendix C: Question wording and original variable scales</b>	<i>6-7</i>
<b>Appendix D: Relationships between dependent and independent variables</b>	
<i>D.1: Correlations among dependent variable and relevant independent variables</i>	<i>8</i>
<i>D.2: Cross tabular analysis of coup justification and trust in the military</i>	<i>8</i>
<i>D.3: Cross tabular analysis of coup justification and support for democracy</i>	<i>8</i>
<i>D.4: Cross tabular graphical analysis of trust in the military and support for democracy</i>	<i>9</i>
<b>Appendix E: Serial autocorrelation tests on second level model</b>	
<i>E.1: Testing for serial autocorrelation using the Woolridge test for correlation in panel-data models</i>	<i>10</i>
<i>E.2: Testing for serial autocorrelation using panel corrected standard errors</i>	<i>10</i>
<i>E.3: 3-level hierarchical linear model</i>	<i>11-12</i>
<b>Appendix F: Do civil-military relations affect coup justification?</b>	<i>13</i>
<b>Appendix G: Two-step model presented as a logit model</b>	
<i>G.1: Table 1 (first step of the two-step model) presented with logit standard errors</i>	<i>14</i>
<i>G.2: Table 2 (second step of the two-step model) presented with logit standard errors (in the first step)</i>	<i>15</i>

## Appendix A: Descriptive Statistics

*A.1: First Level Covariate Averages by Country (Explanatory Variables)—change over time in parentheses*

Country	Years Included (even only)	Coup Support	Net Change, Coup Support	Trust in the Military	System Support	Democracy as the Best Form of Government	Corruption as Widespread
Mexico	2004-2014	63.1	.31	70.0 (.08)	57.1 (-6)	68.1 (-3.3)	74.9 (-.02)
Guatemala	2004-2014	53.2	-9.1	56.6 (21)	50.1 (.009)	63.2 (10)	74.6 (-.01)
El Salvador	2004-2014	60.8	-17.7	64.8 (.07)	56.2 (-4)	65.6 (-3.4)	67.5 (.02)
Honduras	2004-2014	54.1	-20.0	57.4 (4)	51.2 (.67)	62.7 (2.6)	73.7 (-.02)
Nicaragua	2006-2014	54.5	2.9	63.0 (13)	53.0 (12)	69.0 (.49)	71.3 (-.06)
Costa Rica	2004; 2010-2014	42.5	-23.9	NA	62.7 (-5)	77.1 (-3.5)	75.4 (-.01)
Panama	2004; 2010-2014	35.1	-10.4	NA	50.9 (.3)	67.8 (-14.2)	73.9 (-.04)
Colombia	2004-2006; 2010-2014	52.6	-10.2	64.2 (-7)	56.8 (-8)	71.6 (1.2)	76.7 (.06)
Ecuador	2004-2014	54.8	-30.1	59.7 (19)	46.6 (17)	65.8 (7.3)	69.0 (-.15)
Bolivia	2004-2014	49.4	-15.9	52.3 (5)	50.3 (7)	66.7 (4.2)	.62 (-.01)
Peru	2006-2014	63.8	-11.8	52.6 (-.2)	45.9 (1.3)	62.3 (2.6)	78.4 (-.02)
Paraguay	2006; 2010-2014	52.7	18.9	51.8 (10)	41.6 (4.1)	65.6 (4.0)	77.0 (-.01)
Chile	2006; 2010-2014	35.2	-6.6	66.0 (-5)	54.5 (-3)	74.2 (2.2)	66.4 (.01)
Uruguay	2008-2014	37.8	-8.1	56.1 (-.4)	61.7 (-2)	85.8 (2.7)	62.7 (-.01)
Brazil	2008-2014	49.5	2.1	68.0 (-6)	44.9 (-6)	70.0 (4.3)	67.2 (-.04)
Venezuela	2008-2014	38.3	-6.1	52.5 (-12)	49.3 (-7.4)	79.8 (-7.7)	78.2 (.01)
Argentina	2010-2014	33.7	6	45.3 (18)	51.0 (8)	82.9 (-5.2)	80.6 (-.05)

Dominican Republic	2006-2014	45.9	-13.6	53.2 (16)	50.6 (5.4)	72.9 (-6.1)	78.4 (-.04)
Jamaica	2006-2014	52.0	9.6	64.9 (-6)	49.2 (-6.4)	71.7 (-13)	81.1 (-.05)
Guyana	2006-2014	60.6	-10.5	62.0 (-11)	53.2 (-5.7)	72.2 (-1.8)	78.9 (.01)
Trinidad and Tobago	2010-2012	44.4	-7.9	53.3 (0.002)	47.2 (8.2)	70.9 (5.3)	82.2 (-.02)
Belize	2008-2014	57.6	-13.3	63.8 (-12)	55.7 (-9)	72.3 (-4.4)	72.0 (.06)
Suriname	2010-2012	34.4	1.9	64.4 (.2)	60.3 (3.6)	71.7 (-11.3)	45.5 (-.12)
<b>AVERAGE [standard deviation]</b>		<b>49.7 [11.5]</b>	<b>-9.3 [11.4]</b>	<b>59.1 [31.4]</b>	<b>51.7 [22.7]</b>	<b>69.7 [28.6]</b>	<b>73.5 [-.02]</b>

*(continued)*

<b>Country</b>	<b>Years Included (even only)</b>	<b>Neighbor-hood Insecurity</b>	<b>Presidential Approval</b>
Mexico	2004-2014	44.1 (10.7)	53.8 (-9.1)
Guatemala	2004-2014	42.1 (-.79)	53.0 (-3.6)
El Salvador	2004-2014	45.9 (3.6)	60.1 (6.4)
Honduras	2004-2014	37.3 (-.48)	53.7 (19.8)
Nicaragua	2006-2014	38.8 (-3.8)	52.5 (16.6)
Costa Rica	2004; 2010-2014	40.5 (6.8)	50.4 (-17.1)
Panama	2004; 2010-2014	39.2 (-5.4)	51.6 (21.3)
Colombia	2004-2006; 2010-2014	40.5 (5.1)	64.0 (-19.4)
Ecuador	2004-2014	42.9 (-2.3)	55.0 (29.8)
Bolivia	2004-2014	48.4 (5.8)	57.1 (9.3)
Peru	2006-2014	54.5 (-3.4)	47.5 (3.4)
Paraguay	2006; 2010-2014	39.2 (.68)	51.0 (13.6)
Chile	2006; 2010-2014	43.6 (-5)	55.6 (4.9)
Uruguay	2008-2014	42.5 (1.3)	64.5 (-.88)
Brazil	2008-2014	41.5 (8.3)	63.6 (-9.9)
Venezuela	2008-2014	52.0 (16.4)	49.1 (-18.8)
Argentina	2010-2014	48.8 (-11.2)	51.4 (-7.8)
Dominican Republic	2006-2014	47.6 (5.2)	61.7 (11.1)
Haiti	2012-2014	44.5 (-9.0)	46.2 (21.8)
Jamaica	2006-2014	31.8 (-11.3)	46.1 (4.5)

Guyana	2006-2014	36.8 (-3.9)	53.8 (-2.6)
Trinidad and Tobago	2010-2012	32.5 (-5.4)	40.8 (4.7)
Belize	2008-2014	40.9 (9.8)	49.1 (15.9)
Suriname	2010-2012	40.0 (1.1)	59.0 (20.3)
<b>AVERAGE (standard deviation)</b>		<b>42.1 (30.8)</b>	<b>54.4 (24.8)</b>

Source: LAPOP AmericasBarometer, 2004-2014

All variables represented here as 0-100 for ease of interpretation. In the models presented, independent variables are scaled 0-1.

Averages and standard deviations include the 21 countries in our analysis (excluding Costa Rica, Panama, Haiti, and the U.S.)

#### *A.2: Demographic control variables (sample wide)*

<b>Variable</b>	<b>Mean</b>	<b>Standard Deviation</b>
Age	39.3	15.8
Gender	.51	.5
Wealth Quintile	2.9	1.4
Education	9.2	4.5
Size of City	3.1	1.6

#### *A.3: Correlations among independent variables (demographics excluded)*

<b>Variable</b>	<b>Corruption</b>	<b>Neighborhood Insecurity</b>	<b>System Support</b>	<b>Support for Democracy</b>	<b>Presidential Approval</b>	<b>Trust in the Military</b>
<b>Corruption</b>	1.000					
<b>Neighborhood Insecurity</b>	0.023	1.000				
<b>System Support</b>	-0.175	-0.136	1.000			
<b>Support for Democracy</b>	0.023	-0.066	0.184	1.000		
<b>Presidential Approval</b>	-.0120	-0.075	0.340	0.090	1.000	
<b>Trust in the Military</b>	-0.088	-0.114	0.399	0.121	0.189	1.000

*A.4: Second level covariate averages by country (change from last to first survey wave in parentheses)*

<b>Country</b>	<b>GDP per capita, PPP</b>	<b>Year of Democratization</b>
Mexico	14455.67 (2025.646)	2000
Guatemala	6417.025 (733.57)	1996
El Salvador	7215.979 (866.168)	1994
Honduras	4200.834 (560.3623)	1998; 2010*
Nicaragua	4013.058 (504.7715)	1990
Costa Rica	12133.85 (2049.713)	1953
Panama	14619.3 (3538.164)	1994
Colombia	10493.36 (1781.38)	1958
Ecuador	8862.424 (1221.531)	1996
Bolivia	5200.422 (805.5635)	1983
Peru	9784.446 (574.9844)	2001
Paraguay	7278.451(325.0552)	1993
Chile	18758.48 (-466.2803)	1989
Uruguay	17775.77 (-1356.373)	1985
Brazil	14526.29 (-1153.456)	1990
Venezuela	17305.06 (-2888.456)	1958; ceases in 2007**
Argentina	20160.19 (4632)	1983
Dominican Republic	9553.298 (2228.058)	1970
Haiti	1555.171 (31.42297)	1996; ceases in 2000**
Jamaica	8483.758 (-301.29)	1962
Guyana	5559.359 (403.9448)	1992
Trinidad and Tobago	31111.29 (-3579.512)	2002
Belize	7950.359 (-454.0225)	1981
Suriname	15911.24 (-2079.42)	2010

\*Accounts for the 2009 military coup where democracy was suspended in 2009, and reinstated in 2010

\*\*Previous democratic regime fails (subsequent survey waves following this date are represented by a 0 for age of democracy)

**Appendix B: Table 2 results when GDP per capita PPP (national wealth) is lagged 1 year**

<b><math>\beta_{0j}</math> Main Effect</b>	
LAGGED National Wealth	-.0006*** (0.0002)
Age of Democracy	-0.862 (0.0620)
Constant	60.8053*** (2.2986)
Observations	88
R-squared	.22
Standard errors in parentheses *** p<0.001, ** p<0.01, * p<0.05, ^p<.10	

## **Appendix C: Question wording and original variable scales**

### *Demographics*

- Age (q2): “How old are you?”
  - Scale: 16-101
- Gender (q1): Sex (recorded but not asked)
  - (1) Male          (2) Female
- Education (ed): “How many years of schooling have you completed?”
  - Scale: None – 18+
- Size of place (tamano): (recorded by enumerator)
  - (1) National Capital (Metropolitan area)
  - (2) Large City
  - (3) Medium City
  - (4) Small City
  - (5) Rural Area
- Wealth Quintile: Calculated by totaling the household items a respondent owns
  - Scale: 1 (lowest quintile) to 5 (highest quintile)

### *Perceptions of Crime and Corruption*

- Perception of corruption (exc7): Taking into account your own experience or what you have heard, corruption among public officials is:
  - (1) Very common
  - (2) Common
  - (3) Uncommon; or
  - (4) Very uncommon?
  - (88) DK (98) DA
- Perception of neighborhood insecurity (aoj11): “Speaking of the neighborhood where you live and thinking of the possibility of being assaulted or robbed, do you feel very safe, somewhat safe, somewhat unsafe or very unsafe?”
  - (1) Very safe
  - (2) Somewhat safe
  - (3) Somewhat unsafe
  - (4) Very unsafe
  - (88) DK (98) DA

### *Support for Democracy*

- System support (psar): Additive index of respondents’ evaluations of the following questions. All scales are 1-7, where 1 = “not at all” and 7 = “a lot”
  - B1. To what extent do you think the courts in (country) guarantee a fair trial?
  - B2. To what extent do you respect the political institutions of (country)?
  - B3. To what extent do you think that citizens’ basic rights are well protected by the political system of (country)?

- B4. To what extent do you feel proud of living under the political system of (country)?
- B6. To what extent do you think that one should support the political system of (country)?
- Support for democracy as the best form of government (ing4): “Changing the subject again, democracy may have problems, but it is better than any other form of government. To what extent do you agree or disagree with this statement?”
  - Scale: (1) Strongly disagree; to (7) strongly agree

#### *Evaluation of Institutions*

- Trust in the military (b12): “To what extent do you trust the Armed Forces?”
  - Scale: (1) Not at all; to (7) a lot
- Presidential Approval (m1): Speaking in general of the current administration, how would you rate the job performance of President NAME CURRENT PRESIDENT?
  - (1) Very good
  - (2) Good
  - (3) Neither good nor bad (fair)
  - (4) Bad
  - (5) Very bad
  - (88) DK (98) DA



## Appendix D: Relationships between dependent and independent variables

### *D.1: Correlations among dependent variable and relevant independent variables*

Variable	Correlation with DV, Coup Justification	Average (100 unit scale)
COUP JUSTIFICATION		43.7
Trust in the Military	.08	59
System Support	-.04	51.5
Presidential Approval	-.05	54.7
Support for Democracy	-.12	69.8

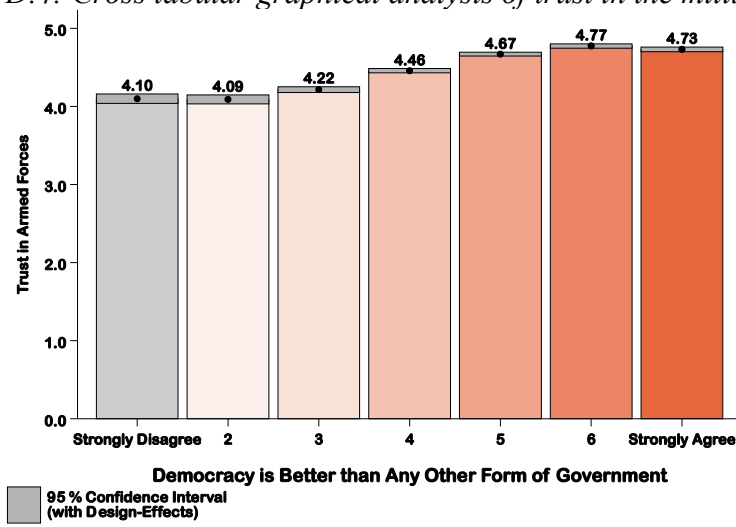
### *D.2: Cross tabular analysis of coup justification and trust in the military*

	Justify Coup			
Trust in the Military	0	50	100	Total
Not at all – 1	7,535	1,807	4,382	13,724
2	5,108	1,470	3,112	9,690
3	8,429	2,585	5,196	16,210
4	12,516	3,868	8,244	24,628
5	14,692	4,822	10,194	29,708
6	11,875	4,306	9,674	25,855
A lot – 7	11,904	4,652	9,674	25,855
Total	72,059	23,510	53,040	148,609

### *D.3: Cross tabular analysis of coup justification and support for democracy*

	Justify Coup			
Democracy is Better than Any Other Form of Government	0	50	100	Total
Strongly Disagree – 1	3,049	1,027	3,119	7,195
2	2,428	918	2,595	5,941
3	5,560	2,200	5,505	13,265
4	10,625	4,012	9,301	23,936
5	13,730	4,941	10,415	29,086
6	14,889	4,679	9,149	28,717
Strongly Agree – 7	28,050	7,062	14,550	50,662
Total	79,329	24,839	54,634	158,802

*D.4: Cross tabular graphical analysis of trust in the military and support for democracy*



## Appendix E: Serial autocorrelation tests on second level model

### *E.1: Testing for serial autocorrelation using the Woolridge test for correlation in panel-data models*

The following test is performed in Stata 13 using the xtserial command using the model in Table 2:<sup>1</sup>

F (1, 15) = .526  
Prob > F = .4795

Thus, we fail to reject the null hypothesis that there is serial autocorrelation present in the model. However, because there is theoretical reason to suspect autocorrelation, we cluster at the country level to try to account for non-independence of errors.

### *E.2: Testing for serial autocorrelation using panel corrected standard errors*

Additionally, we ran the model using panel corrected standard errors, specifying both casewise and pairwise selection.<sup>2</sup>

	<b>Original OLS Model</b>	<b>Casewise panel corrected SEs</b>	<b>Pairwise panel corrected SEs</b>
National Wealth	-0.0007*** (0.0002)	-.0007*** (0.0001)	-.0007*** (0.0001)
The Age of Democracy	-.0862 (0.0620)	-.0862** (0.0371)	-.0862* (0.0371)
Constant	60.8053*** (2.2986)	60.8053*** (.9359)	60.8053*** (2.1156)
Observations	88	88	88
R-squared	.22	.22	.22
Standard errors in parentheses *** p<0.001, ** p<0.01, * p<0.05, ^p<.10			

Standard errors are clustered by country in the original OLS model

Our results remain robust regardless of the standard error specification. Additionally, the model presented in Table 2 is the most conservative of the models tested.

<sup>1</sup> See <http://www.stata-journal.com/sjpdf.html?articlenum=st0039> for more information.

<sup>2</sup> See [http://fmwww.bc.edu/repec/bocode/x/xtscc\\_paper](http://fmwww.bc.edu/repec/bocode/x/xtscc_paper) for more information.

### E.3: 3-level hierarchical linear model

As a final check, we ran a 3-level hierarchical linear model with individuals nested in countries nested in years. A null model yields the following for a total of 149,332 individual observations:

Group Variable	No. of Groups	Observations per Group		
		Minimum	Average	Maximum
Year	6	12,758	24,888.7	33,726
Country	95	1,127	1,571.9	2,969

The intraclass correlations of the null model are:

Level 1 (individual)	95%
Level 2 (year)	.005%
Level 3 (country)	.045%

A fully specified model with level 1 and level 2 covariates (consistent with Table 1 and Table 2) yields the following:

Short Term Factors	Original LPM Model	HLM
Belief that Corruption is Widespread	.11 (1.34)	.28 (0.51)
Neighborhood Insecurity	8.32*** (0.99)	8.81*** (0.47)
Presidential Approval	-7.14** (1.96)	-7.37*** (0.65)
Long Term Factors		
Gender (female = 1)	1.60** (0.43)	1.55*** (0.28)
Age	-0.37*** (0.04)	-.037*** (0.01)
Education	-0.70*** (0.11)	-0.70*** (0.04)
Size of City	0.07 (0.33)	0.04 (0.10)
Wealth Quintile	-0.41 (0.27)	-0.40*** (0.11)
System Support	-11.08*** (2.71)	-11.30*** (0.75)
Support for Democracy	-13.83*** (1.63)	-14.00*** (0.51)
Trust in the Armed Forces	20.05*** (2.04)	20.19*** (0.50)
Constant	82.66*** (2.89)	85.31*** (2.40)

Observations	122,348	121,145
R-Squared	0.08	
Standard errors in parentheses *** p<0.001, ** p<0.01, * p<0.05, ^ p<.10		

Second level variables in Model 1 are presented from Table 2.

Again, the substantive findings remain the same between the LPM two-step model and the three-level hierarchical linear model. We choose to present the former because of the problematic nature of small sample sizes in traditional HLM models. There are only two to four survey waves per country for the second level of analysis (year), and 88 observations at the tertiary level (country), which can be problematic for estimation of HLM. Additionally, the utility of a three-level model is called into question upon examination of the variance. In the null model, 95% of the variance occurs at the individual level.<sup>3</sup> However, we rely on the two-step model not only due to the shortcomings of our data with respect to the HLM structure, but for the flexibility of two-step modeling. By modeling a country-year intercept, fixed effects are included for each year, each country, and their interaction. In addition, we account for country-level clustered standard errors. Based upon these tests, we are confident that clustering at the country level with a country-year intercept is adequate to account for 1) the nested nature of the data, and 2) potential serial autocorrelation, as evidenced by robust findings across models.

---

<sup>3</sup> The individual level percent of variance explained by the model increases to 97.5% upon the inclusion of the level 1 and level 2 variables.

## Appendix F: Do civil-military relations affect coup justification?

To date, Michael Kenwick's dataset is the most comprehensive for our purposes, covering all of our Latin American cases from 2004-2010. This leaves us with a total of 16 cases out of 21, and all cases dropped after 2010. Other similar databases (See (Booth and Richard 2015b), Table 1, 9 for a summary) typically end prior to 2010, and/or omit more cases. We test both Kenwick's dynamic and static measures<sup>4</sup> of civilian-military control separately in the second step of the two-step model, originally presented in Table 2.

	(1)	(2)	(3)
	<b>Original Model (Table 2)</b>	<b>Dynamic Civilian- Military Control</b>	<b>Static Civilian- Military Control</b>
National Wealth	-0.0007*** (0.0002)	-0.0007* (0.0003)	-0.0006^ (0.0003)
The Age of Democracy	-.0862 (0.0620)	-0.1562 (0.1353)	-0.2244 (0.1336)
Civil-Military Control (Dynamic)		-2.5881 (2.8910)	
Civilian-Military Control (Static)			3.7789 (4.0088)
Constant	60.8053*** (2.2986)	65.1567*** (3.8397)	63.3483*** (4.2454)
Observations	88	46	46
R-squared	.22	.22	.22
Standard errors in parentheses *** p<0.001, ** p<0.01, * p<0.05, ^p<.10			

We cannot make any definitive conclusions about whether or not civilian-military relations affects individual coup justification based on only half of our country-year observations. However, with the data we have, neither the dynamic or static measures yield a significant finding. Intuitively, we would expect a negative relationship: as civilian control approaches 1, individual coup support should presumably decrease. However, this only appears to be the case for the dynamic measure. Kenwick does find that the dynamic measure outperforms the static measure, which our results theoretically (and inconclusively) support.

<sup>4</sup> Interested readers are encouraged to review Kenwick (2016) for details on these measures.

## Appendix G: Two-step model presented as a logit model

*G.1: Table 1 (first step of the two-step model) presented with logit standard errors*

<b>Short Term Factors</b>	Original LPM Model	Logit Model
Belief that Corruption is Widespread	.11 (1.34)	0.00 (0.06)
Neighborhood Insecurity	8.32*** (0.99)	0.38*** (0.03)
Presidential Approval	-7.14** (1.96)	-0.31*** (0.09)
<b>Long Term Factors</b>		
Gender (female = 1)	1.60** (0.43)	0.07*** (0.02)
Age	-0.37*** (0.04)	-0.02*** (0.00)
Education	-0.70*** (0.11)	-0.03*** (0.01)
Size of City	0.07 (0.33)	0.00 (0.01)
Wealth Quintile	-0.41 (0.27)	-0.02 (0.01)
System Support	-11.08*** (2.71)	-0.49*** (0.12)
Support for Democracy	-13.83*** (1.63)	-0.60*** (0.07)
Trust in the Armed Forces	20.05*** (2.04)	0.87*** (0.10)
Constant	82.66*** (2.89)	1.40*** (0.13)
Observations	122,348	122,348
R-Squared	0.08	
Standard errors in parentheses *** p<0.001, ** p<0.01, * p<0.05, ^ p<.10		

Year, country, and country-year fixed effects included but not presented.  
Standard errors clustered by country.

*G.2: Table 2 (second step of the two-step model) presented with logit standard errors (in the first step)*

	<b>LPM Model (Table 1)</b>	<b>Logit Model</b>
National Wealth	-0.0007*** (0.0002)	-.0000*** (0.0000)
The Age of Democracy	-.0862 (0.0620)	-0.0009 (0.0006)
Constant	60.8053*** (2.2986)	0.6087*** (0.0232)
Observations	88	88
R-squared	.22	.22
Standard errors in parentheses *** p<0.001, ** p<0.01, * p<0.05, ^p<.10		