Sovereign Credit and Physical Integrity Rights
SUPPLEMENTARY APPENDIX

Table 1A: Summary Statistics, 1982-2009

	Mean	*SD*	*Min*	*Max*	*Source*
$PhysInt_{t-1}$	4.802	2.302	0	8	CIRI
$Disappearances_{t-1}$	1.678	.621	0	2	CIRI
$Killings_{t-1}$	1.286	.772	0	2	CIRI
$Political\ Imprisonment_{t-1}$	1.120	.844	0	2	CIRI
$Torture_{t-1}$	.718	.724	0	2	CIRI
IIR_{t-1}	41.992	25.611	4.05	98.25	*Institutional Investor* Magazine
Polity	3.002	7.028	-10	10	Polity IV
Durable Regime	26.620	31.535	0	200	Polity IV
ln(population)	9.428	1.460	5.935	14.096	Penn World Tables v7.0
$ln(GDPpc)_{t-1}$	8.577	1.277	4.913	11.917	Penn World Tables v7.0
$Growth_{t-1}$	0.023	0.063	-0.648	0.887	Penn World Tables v7.0
War on Location	0.119	0.324	0	1	UCDP

Table 2A: Linear Models Excluding OECD States

	Pooled	**Fixed Effects**	**2SLS**
LDV	0.637***	0.433***	0.618***
	(0.036)	(0.043)	(0.024)
IIR_{t-1}	0.011***	0.021***	0.021**
	(0.002)	(0.004)	(0.009)
Polity	0.018***	0.041***	0.017***
	(0.004)	(0.008)	(0.004)
Durable Regime	-0.004***	0.003	-0.006***
	(0.001)	(0.003)	(0.002)
ln(population)	-0.237***	-1.072***	-0.277***
	(0.030)	(0.206)	(0.040)
$ln(GDPpc)_{t-1}$	0.014	-0.632***	-0.085
	(0.027)	(0.118)	(0.095)
$Growth_{t-1}$	-0.353	-0.212	-0.542
	(0.360)	(0.355)	(0.424)
War on Location	-0.752***	-0.700***	-0.731***
	(0.107)	(0.117)	(0.084)
Constant	3.439***	18.689***	4.413***
	(0.475)	(3.070)	(0.943)
Observations	2,556	2,556	2,556
R^2	0.713	0.752	0.710
Countries	134	134	134
Durbin-Wu-Hausman p-value			0.25
F-Statistic			70
Hansen J p-value			0.24

Models 1 and 2 report panel-corrected standard errors. Rating instrumented with the number of external debt crisis and the number of domestic debt crises in a state's region.

*** p<0.01, ** p<0.05, * p<0.1

Table 3A: Multinomial Estimates of a Positive and Negative Change in Respect for Physical Integrity Rights

VARIABLES	*Phys. Int. Index*	*Killings*	*Disappearances*	*Political Imprisonment*	*Torture*
Pr(Negative Change)					
$CIRI_{t-1}$	0.385***	1.803***	0.740***	1.948***	2.388***
	(0.040)	(0.129)	(0.159)	(0.153)	(0.175)
IIR_{t-1}	-0.024***	-0.035***	-0.029***	-0.020***	-0.034***
	(0.005)	(0.006)	(0.007)	(0.006)	(0.007)
Polity	-0.052***	-0.008	-0.038***	-0.107***	-0.032**
	(0.009)	(0.011)	(0.014)	(0.015)	(0.013)
Durable Regime	-0.006**	-0.003	-0.007	-0.006*	-0.007*
	(0.003)	(0.004)	(0.004)	(0.003)	(0.004)
ln(population)	0.337***	0.432***	0.354***	0.316***	0.360***
	(0.048)	(0.071)	(0.058)	(0.065)	(0.072)
$ln(GDPpc)_{t-1}$	0.032	-0.075	0.084	-0.034	0.144
	(0.076)	(0.108)	(0.106)	(0.098)	(0.094)
$Growth_{t-1}$	0.490	0.031	1.442	1.540*	-0.124
	(0.873)	(0.944)	(1.169)	(0.818)	(0.905)
War on Location	0.605***	0.914***	1.049***	1.074***	0.602***
	(0.198)	(0.300)	(0.258)	(0.246)	(0.184)
Constant	-4.524***	-6.448***	-6.498***	-6.059***	-7.000***
	(0.841)	(1.179)	(1.084)	(0.990)	(1.053)
Pr(Positive Change)					
$CIRI_{t-1}$	-0.369***	-1.662***	-2.494***	-1.540***	-1.702***
	(0.044)	(0.157)	(0.236)	(0.138)	(0.143)
IIR_{t-1}	0.005	0.014*	-0.003	-0.000	0.029***
	(0.004)	(0.008)	(0.009)	(0.007)	(0.006)
Polity	0.001	-0.040***	-0.036*	0.080***	0.009
	(0.009)	(0.012)	(0.018)	(0.017)	(0.010)
Durable Regime	-0.009***	-0.006	-0.019*	-0.010*	-0.009**
	(0.003)	(0.005)	(0.010)	(0.005)	(0.004)
ln(population)	-0.140***	-0.267***	-0.057	-0.270***	-0.354***
	(0.048)	(0.067)	(0.090)	(0.079)	(0.061)
$ln(GDPpc)_{t-1}$	0.070	-0.074	0.172	0.011	0.012
	(0.078)	(0.115)	(0.157)	(0.128)	(0.113)
$Growth_{t-1}$	-0.831	-0.457	-0.264	-1.835**	-1.810*
	(0.659)	(0.896)	(1.030)	(0.902)	(0.942)
War on Location	-0.792***	-0.935***	-1.701***	-0.576**	0.093
	(0.205)	(0.223)	(0.348)	(0.254)	(0.209)
Constant	2.138***	2.884**	1.025	2.130	1.407
	(0.806)	(1.187)	(1.637)	(1.377)	(1.119)
Observations	3,264	3,270	3,268	3,269	3,270

Robust standard errors clustered by country in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Figure 1A: Credit Rating and the Probability of a Positive and Negative Change in Physical Integrity Rights

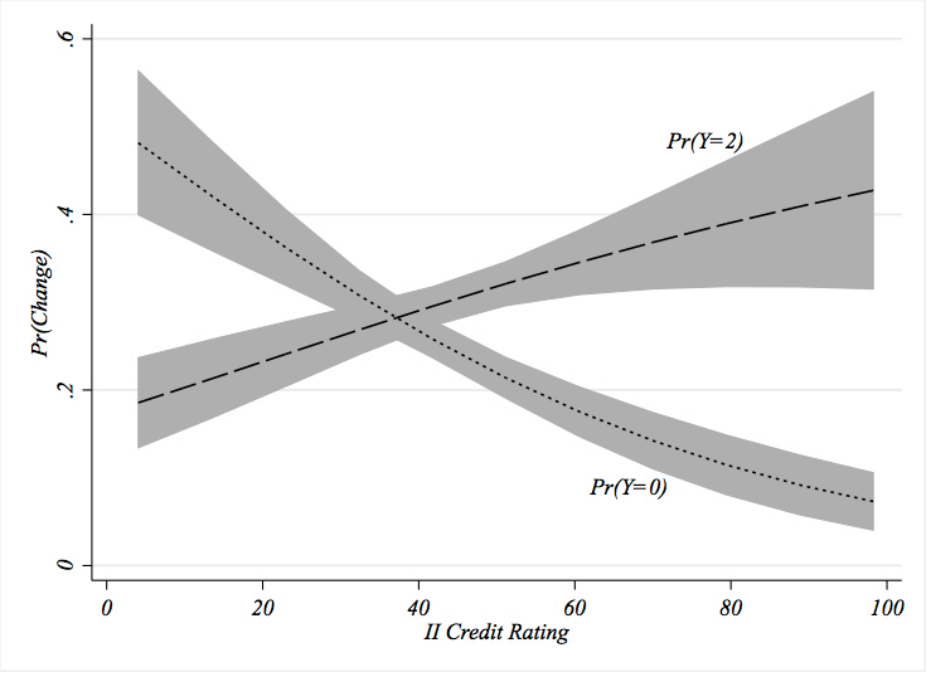
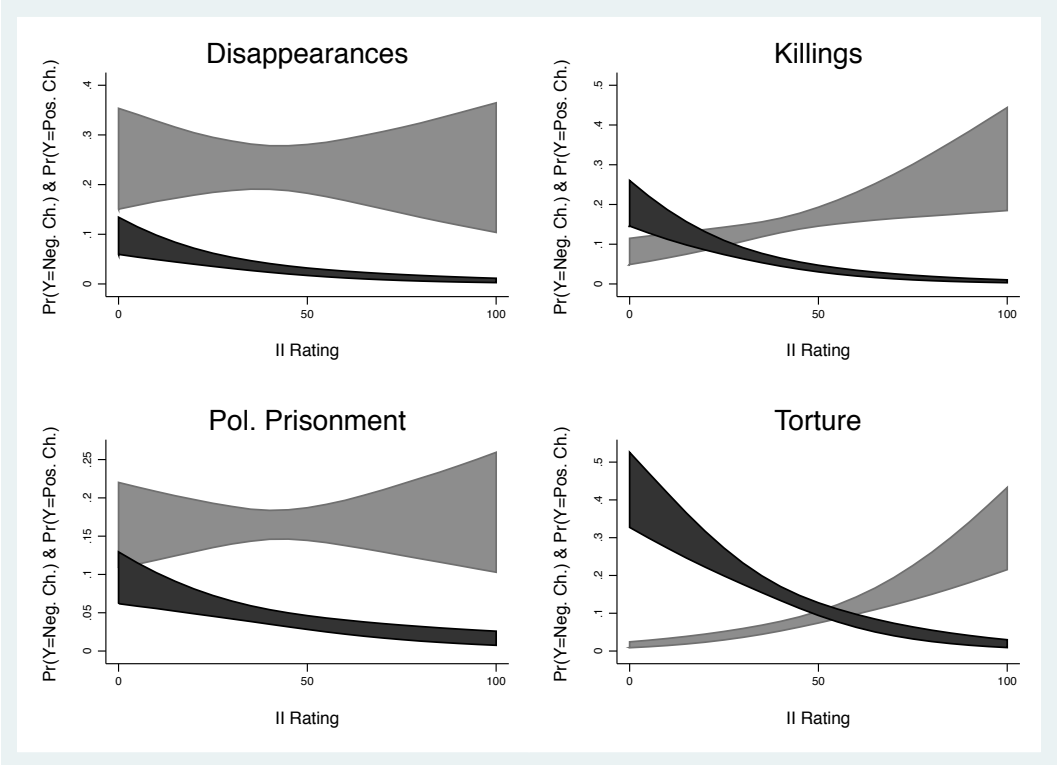


Figure 2A: Multinomial Logit Estimates of Credit Rating and the Probability of a Change in Repression



Note: Black shaded areas represent the 95% confidence intervals around the predicted probability of a negative change (Y=0), Grey shaded areas represent the 95% confidence intervals surrounding the predicted probabilities of a positive change (Y=2).

Table 4A: Potentially Confounding Variables in Pooled and Fixed Effects Models

	Relative Political Capacity		**Violent Dissent (Banks)**		**Oil Rents Per Capita**		**Total Trade/GDP**		**Structural Adjustment**		**Contract Economy**	
	Pooled	Fixed	Pooled	Fixed	Pooled	Fixed	Pooled	Fixed	Pooled	Fixed	Pooled	Fixed
LDV	0.621***	0.410***	0.638***	0.413***	0.641***	0.403***	0.651***	0.426***	0.613***	0.381***	0.582***	0.243***
	(0.0387)	(0.0484)	(0.0351)	(0.0425)	(0.0386)	(0.0482)	(0.0351)	(0.0432)	(0.0412)	(0.0515)	(0.0581)	(0.0698)
IIR_{t-1}	0.0181***	0.0214***	0.0130***	0.0159***	0.0145***	0.0187***	0.0137***	0.0172***	0.0182***	0.0225***	0.0189***	0.0233***
	(0.00261)	(0.00417)	(0.00203)	(0.00342)	(0.00231)	(0.00398)	(0.00220)	(0.00368)	(0.00244)	(0.00425)	(0.00439)	(0.00706)
Polity	0.0273***	0.0390***	0.0274***	0.0416***	0.0238***	0.0405***	0.0237***	0.0361***	0.0256***	0.0429***	0.0238***	0.0144
	(0.00504)	(0.00994)	(0.00410)	(0.00762)	(0.00452)	(0.00871)	(0.00409)	(0.00808)	(0.00453)	(0.00937)	(0.00704)	(0.0146)
Durable Regime	0.000907	0.00358	-0.000331	0.00211	0.000114	0.00315	-0.000166	0.00229	0.000354	0.00274	0.00107	-0.0106*
	(0.000893)	(0.00393)	(0.000663)	(0.00294)	(0.000797)	(0.00361)	(0.000731)	(0.00342)	(0.000799)	(0.00385)	(0.000982)	(0.00565)
ln(population)	-0.249***	-1.142***	-0.203***	-1.097***	-0.220***	-1.245***	-0.241***	-1.056***	-0.235***	-0.893***	-0.219***	-1.367***
	(0.0300)	(0.257)	(0.0247)	(0.204)	(0.0276)	(0.236)	(0.0322)	(0.206)	(0.0288)	(0.233)	(0.0384)	(0.503)
$ln(GDPpc)_{t-1}$	-0.0823**	-0.697***	0.00774	-0.643***	-0.00515	-0.689***	0.00822	-0.687***	-0.0308	-0.590***	0.0835*	-0.384
	(0.0368)	(0.162)	(0.0259)	(0.111)	(0.0295)	(0.156)	(0.0268)	(0.142)	(0.0314)	(0.127)	(0.0499)	(0.302)
$Growth_{t-1}$	-0.522	-0.255	-0.618*	-0.237	-0.550	-0.301	-0.741*	-0.406	-0.154	-0.153	-0.383	0.381
	(0.440)	(0.423)	(0.360)	(0.345)	(0.387)	(0.383)	(0.432)	(0.419)	(0.428)	(0.414)	(0.937)	(0.895)
War on Location	-0.727***	-0.760***	-0.618***	-0.669***	-0.764***	-0.766***	-0.727***	-0.733***	-0.832***	-0.812***	-0.935***	-0.884***
	(0.110)	(0.124)	(0.0987)	(0.105)	(0.114)	(0.120)	(0.105)	(0.112)	(0.116)	(0.123)	(0.163)	(0.194)
Confounding Variable	0.0709	0.0910	-0.000***	-0.000***	-0.000*	-0.000	-0.107*	0.022	-	-	-0.0324	-0.0259
	(0.0642)	(0.0874)	(0.000)	(0.000)	(0.000)	(0.000)	(0.0558)	(0.104)	-	-	(0.0357)	(0.0783)
World Bank SAP									0.292***	0.216***		
									(0.0702)	(0.0715)		
Years Under SAP									-0.0121	-0.0186*		
									(0.00741)	(0.00998)		
Constant	4.033***	22.36***	3.108***	21.98***	3.277***	23.96***	3.775***	21.66***	3.588***	18.50***	2.775***	26.33***
	(0.560)	(3.721)	(0.410)	(2.972)	(0.479)	(3.558)	(0.621)	(3.124)	(0.535)	(3.268)	(0.690)	(6.585)
Observations	2226	2226	3247	3247	2692	2692	3066	3066	2484	2484	1025	1025
R^2	0.774	0.808	0.778	0.811	0.764	0.802	0.771	0.805	0.770	0.806	0.807	0.852

Panel corrected standard errors in parentheses, * p<0.1, ** p<0.05, *** p<0.01

Table 5A: Robustness Check with S&P Credit Ratings

VARIABLES	**Pooled**	**No OECD**	**Fixed Effects**	**2SLS**
LDV	0.668***	0.614***	0.262***	0.624***
	(0.053)	(0.064)	(0.068)	(0.047)
S&P Rating$_{t-1}$	0.057***	0.031**	0.027	0.116**
	(0.013)	(0.014)	(0.026)	(0.055)
Polity	0.030***	0.015**	0.058**	0.032***
	(0.007)	(0.007)	(0.027)	(0.007)
Durable Regime	0.001	-0.003	-0.000	0.000
	(0.001)	(0.002)	(0.006)	(0.001)
ln(population)	-0.215***	-0.329***	-0.996	-0.252***
	(0.036)	(0.058)	(0.661)	(0.041)
ln(GDPpc)$_{t-1}$	0.055	0.007	-0.581*	-0.139
	(0.046)	(0.062)	(0.336)	(0.188)
Growth$_{t-1}$	-0.463	0.076	-0.552	-0.826
	(0.832)	(1.016)	(0.883)	(0.839)
War on Location	-0.579***	-0.645***	-0.356**	-0.627***
	(0.162)	(0.189)	(0.141)	(0.157)
Constant	2.640***	4.691***	22.368***	4.539**
	(0.549)	(0.957)	(7.446)	(1.820)
Observations	1,038	533	1,038	1,038
R-squared	0.847	0.779	0.887	0.843
Countries	70	50	70	
Durbin-Wu-Hausman p-value				0.27
F-Statistic				24.1
Hansen J p-value				0.74

Standard errors in parentheses. Models 1-3 include panel corrected standard errors. S&P credit rating instrumented with the number of external debt crisis and the number of domestic debt crises in a state's region.

*** p<0.01, ** p<0.05, * p<0.1

Table 6A: The Conditional Impact of Violent Dissent on Budget Surplus/Deficit

	Budget Surplus/Deficit
LDV	0.446***
	(0.166)
Polity	-0.00607
	(0.0942)
ln(population)	-0.0369
	(0.152)
$ln(GDPpc)_{t-1}$	0.165
	(0.438)
Violent Dissent	-0.0674
	(0.177)
IIR_{t-1}	-0.00219
	(0.0111)
IIR_{t-1} *X Violent Dissent*	-0.00407
	(0.00362)
Constant	-1.577
	(3.038)
Observations	1192
R-squared	0.205
Panel corrected standard errors in parentheses	
*** p<0.01, ** p<0.05, * p<0.1	

Figure 3A: The Marginal Effect of Violent Dissent on Budget Balance Across IIR

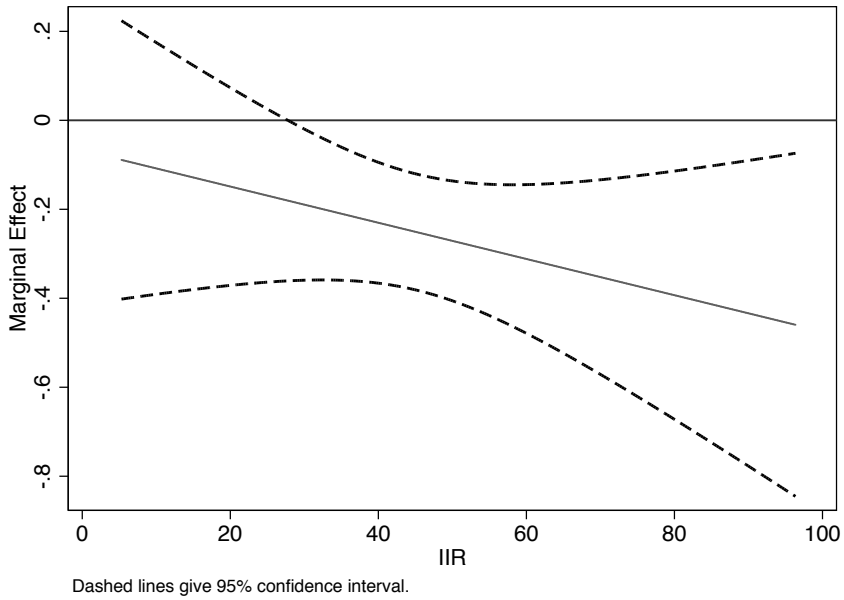


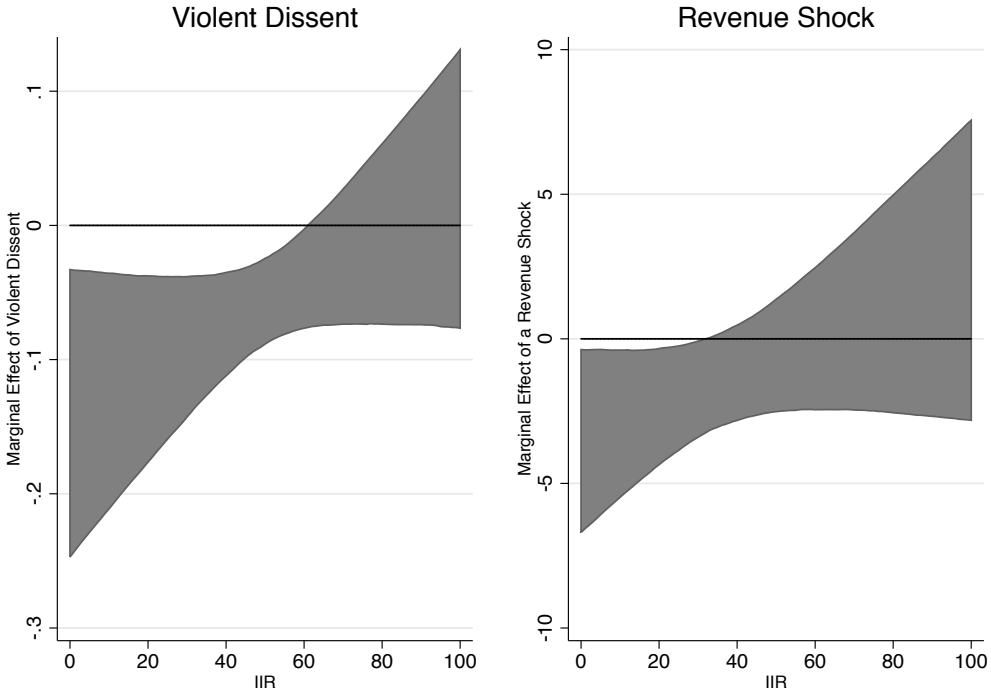
Table 7A: The Conditional Effects of Violent Dissent and Revenue Shocks in One Model

	Phys. Int.
$CIRI_{t-1}$	0.580***
	(0.0563)
IIR_{t-1}	0.0103***
	(0.00302)
Revenue Shock	-3.664*
	(2.043)
*Revenue Shock*IRR*	0.0730*
	(0.0428)
Violent Dissent	-0.140***
	(0.0537)
*Violent Dissent*IRR*	0.00168*
	(0.00101)
Violent Dissent Revenue Shock*	0.113
	(1.053)
Violent Dissent Revenue Shock*IIR*	-0.0128
	(0.0270)
Polity	0.0336***
	(0.00922)
Durable Regime	0.00252**
	(0.00116)
ln(population)	-0.167***
	(0.0333)
$ln(GDPpc)_{t-1}$	0.0582
	(0.0600)
$Growth_{t-1}$	0.284
	(0.864)
War on Location	-0.966***
	(0.168)
Constant	2.764***
	(0.759)
Observations	1033
R^2	0.787

Panel corrected standard errors in parentheses.

*** p<0.01, ** p<0.05, * p<0.1

Figure 4A: Marginal Effects of Violent Dissent and Revenue Shocks on Physical Integrity Rights (One Model)



Note: Shaded area indicates the 95% confidence intervals around the marginal effect. The marginal effects were generated using 10,000 draws of the betas and variance-covariance matrices. Each panel reflects the estimates of the model presented in Table 7A.

Table 8A: Models Omitting the Lagged Dependent Variable

	1	2
	Pooled Sample	**Fixed-Effects**
IIR_{t-1}	0.0418***	0.0292***
	(0.00208)	(0.00368)
Polity	0.0654***	0.0708***
	(0.00386)	(0.00755)
Durable Regime	0.00104	0.00640*
	(0.000822)	(0.00364)
ln(population)	-0.617***	-1.942***
	(0.0229)	(0.212)
$ln(GDPpc)_{t-1}$	-0.0645*	-0.906***
	(0.0334)	(0.121)
$Growth_{t-1}$	-1.072**	-0.00233
	(0.471)	(0.373)
War on Location	-1.929***	-1.091***
	(0.188)	(0.132)
Constant	9.447***	35.70***
	(0.255)	(2.843)
Observations	3268	3268
R^2	0.590	0.763
Countries	158	158

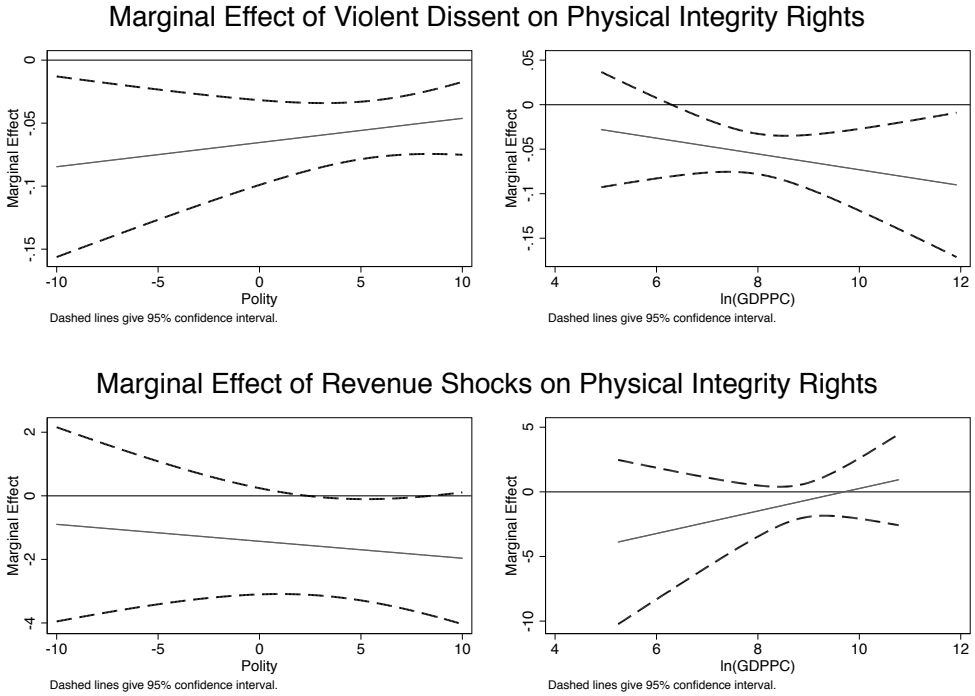
Panel corrected standard errors in parentheses.
*** p<0.01, ** p<0.05, * p<0.1

Table 9A: Models Employing Fariss and Schnakenberg (2014) & Fariss (2014) Dynamic Latent Variable Measure of Physical Integrity Rights

	1	2
	Pooled Sample	**Fixed-Effects**
IIR_{t-1}	0.0194***	0.00619***
	(0.00196)	(0.00108)
Polity	0.0331***	0.0201***
	(0.00217)	(0.00234)
Durable Regime	0.00631***	0.00250***
	(0.000692)	(0.000797)
ln(population)	-0.390***	0.644***
	(0.0153)	(0.0794)
$ln(GDPpc)_{t-1}$	0.00457	0.0673
	(0.0330)	(0.0440)
$Growth_{t-1}$	0.0238	-0.0229
	(0.0542)	(0.0460)
War on Location	-0.228***	-0.101***
	(0.0329)	(0.0179)
Constant	2.729***	-8.782***
	(0.286)	(1.043)
Observations	3323	3323
R^2	0.540	0.799
Countries	159	159

Panel corrected standard errors in parentheses.
*** p<0.01, ** p<0.05, * p<0.1

Figure 5A: The Conditional Effects of Revenue Shocks and Violent Dissent Across both Regime Type and Development.



Countries Included in the Estimated Sample (Model 1):

1. Afghanistan
2. Albania
3. Algeria
4. Angola
5. Argentina
6. Armenia
7. Australia
8. Austria
9. Azerbaijan
10. Bahrain
11. Bangladesh
12. Belarus
13. Belgium
14. Benin
15. Bhutan
16. Bolivia
17. Botswana
18. Brazil
19. Bulgaria
20. Burkina Faso
21. Burundi
22. Cambodia
23. Cameroon
24. Canada
25. Cape Verde
26. Cen. Afr. Republic
27. Chad
28. Chile
29. China
30. Colombia
31. Comoros
32. Dem. Rep. of Congo
33. Republic of Congo
34. Costa Rica
35. Cote d'Ivoire
36. Croatia
37. Cuba
38. Cyprus
39. Czech Republic
40. Denmark
41. Djibouti
42. Dominican Republic
43. East Timor
44. Ecuador
45. Egypt
46. El Salvador
47. Eritrea
48. Estonia
49. Ethiopia
50. Finland
51. France
52. Gabon
53. Gambia
54. Georgia
55. Germany
56. Ghana
57. Greece
58. Guatemala
59. Guinea
60. Guinea-Bissau
61. Guyana
62. Haiti
63. Honduras
64. Hungary
65. India
66. Indonesia
67. Iran
68. Iraq
69. Ireland
70. Israel
71. Italy
72. Jamaica
73. Japan
74. Jordan
75. Kazakhstan
76. Kenya
77. Korea, Republic of
78. Kuwait
79. Kyrgyz Republic
80. Laos
81. Latvia
82. Lebanon
83. Lesotho
84. Liberia
85. Libya
86. Lithuania
87. Macedonia
88. Madagascar
89. Malawi
90. Malaysia
91. Mali
92. Mauritania
93. Mauritius
94. Mexico
95. Moldova
96. Mongolia
97. Montenegro
98. Morocco
99. Mozambique
100. Namibia
101. Nepal
102. Netherlands
103. New Zealand
104. Nicaragua
105. Niger
106. Nigeria
107. Norway
108. Oman
109. Pakistan
110. Panama
111. Papua New Guinea
112. Paraguay
113. Peru
114. Philippines
115. Poland
116. Portugal
117. Qatar
118. Romania
119. Russia
120. Rwanda
121. Saudi Arabia
122. Senegal
123. Serbia
124. Sierra Leone
125. Singapore
126. Slovak Republic
127. Slovenia
128. Solomon Islands
129. South Africa
130. Spain
131. Sri Lanka
132. Sudan
133. Swaziland
134. Sweden
135. Switzerland
136. Syria
137. Taiwan
138. Tajikistan
139. Tanzania
140. Thailand
141. Togo
142. Trinidad and Tobago
143. Tunisia
144. Turkey
145. Turkmenistan
146. Uganda
147. Ukraine
148. United Arab Emirates
149. United Kingdom
150. USA
151. Uruguay
152. Uzbekistan
153. Venezuela
154. Vietnam
155. Yemen
156. Zambia
157. Zimbabwe