

Supplementary material for

Examining the relationship between elections and wildfires

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Table S1: Baseline results from fixed effects Poisson Models

	(1) All Fires	(2) Non-Ag. Fires	(3) Forest Fires
LE_{-1}	-0.150*** (0.035)	-0.243*** (0.039)	-0.179*** (0.062)
LE_0	-0.379*** (0.049)	-0.501*** (0.052)	-0.414*** (0.085)
LE_{+1}	-0.115*** (0.035)	-0.165*** (0.039)	-0.133** (0.053)
NE_{-1}	-0.144*** (0.039)	-0.231*** (0.042)	-0.221*** (0.062)
NE_0	-0.305*** (0.053)	-0.439*** (0.057)	-0.384*** (0.082)
NE_{+1}	-0.192*** (0.040)	-0.279*** (0.045)	-0.206*** (0.065)
Observations	10607	10530	9842

Each column presents estimates from fixed effects Poisson model. All models control for region specific trends, terms-of-tenure dummies and weather conditions. LE_t and NE_t are dummy variables equal to 1 if local and national elections respectively are t years away. Standard errors clustered at the municipality level in parentheses * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table S2: Elections, Re-election incentives- Estimates from Poisson fixed effects models

	(1) All Fires	(2) All Fires	(3) Non Ag. Fires	(4) Non Ag. Fires	(5) Forest Fires	(6) Forest Fires
LE_{-1}	-0.182*** (0.043)	-0.180*** (0.043)	-0.279*** (0.046)	-0.277*** (0.046)	-0.239*** (0.067)	-0.239*** (0.068)
LE_0	-0.388*** (0.053)	-0.386*** (0.053)	-0.523*** (0.056)	-0.522*** (0.056)	-0.465*** (0.087)	-0.468*** (0.087)
LE_{+1}	-0.003 (0.041)	-0.003 (0.040)	-0.052 (0.045)	-0.053 (0.044)	-0.076 (0.056)	-0.074 (0.056)
NE_{-1}	-0.130*** (0.038)	-0.126*** (0.038)	-0.218*** (0.042)	-0.214*** (0.042)	-0.214*** (0.063)	-0.214*** (0.063)
NE_0	-0.305*** (0.053)	-0.298*** (0.053)	-0.438*** (0.058)	-0.433*** (0.058)	-0.376*** (0.084)	-0.382*** (0.083)
NE_{+1}	-0.187*** (0.041)	-0.183*** (0.041)	-0.273*** (0.045)	-0.270*** (0.045)	-0.200*** (0.065)	-0.204*** (0.065)
RE_{-1}	0.036 (0.037)	0.064 (0.041)	0.042 (0.040)	0.067 (0.043)	0.083 (0.053)	0.055 (0.056)
RE_0	0.012 (0.034)	0.026 (0.036)	0.031 (0.035)	0.047 (0.039)	0.081 (0.053)	0.044 (0.055)
RE_{+1}	-0.215*** (0.049)	-0.241*** (0.056)	-0.218*** (0.049)	-0.258*** (0.057)	-0.115** (0.058)	-0.150** (0.067)
SE_{-1}		-0.206* (0.120)		-0.176 (0.128)		0.203 (0.177)
SE_0		-0.104 (0.126)		-0.113 (0.128)		0.276* (0.162)
SE_{+1}		0.229 (0.189)		0.330* (0.198)		0.286 (0.267)
Obs.	10607	10605	10530	10528	9842	9840

Each column presents estimates from different Poisson Fixed Effects model. All models control for weather conditions during and outside the fire season, terms-of-tenure dummies and region specific trends. LE_t and NE_t are dummy variables equal to 1 if local and national elections respectively are t years away. Terms RE_t are binary, equal to 1 if the mayor of a municipality at time t runs for re-election in the subsequent local election. The SE_t terms are interactions between the electoral security proxy and the RE_t terms. Standard errors clustered at the municipality level in parentheses * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table S3: Wildfires, Elections and Land Cover – Estimates from Poisson fixed effects models

	(1)	(2)	(3)
	All Fires	Non-Ag. Fires	Forest Fires
LE_{-1}	-0.153*** (0.054)	-0.250*** (0.057)	-0.242*** (0.080)
LE_0	-0.400*** (0.062)	-0.536*** (0.068)	-0.401*** (0.098)
LE_{+1}	-0.138** (0.057)	-0.242*** (0.062)	-0.326*** (0.080)
$AG \times LE_{-1}$	0.032 (0.070)	0.029 (0.077)	0.149 (0.111)
$AG \times LE_0$	0.016 (0.071)	0.042 (0.082)	-0.042 (0.120)
$AG \times LE_{+1}$	-0.037 (0.098)	0.060 (0.098)	0.342** (0.169)
$UR \times LE_{-1}$	-0.347 (0.282)	-0.178 (0.246)	-0.143 (0.318)
$UR \times LE_0$	0.405** (0.180)	0.396 (0.264)	0.142 (0.299)
$UR \times LE_{+1}$	1.174*** (0.374)	1.221*** (0.345)	1.258*** (0.284)
Obs.	10607	10530	9842

Each column presents estimates from a different Poisson Fixed Effects model. All models control for national elections, region specific trends, terms-of-tenure dummies and weather conditions. Standard errors clustered at the municipality level in parentheses * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table S4: Fire occurrence and elections, July and August only

	(1) All Fires	(2) All Fires	(3) All Fires	(4) All Fires	(5) Non-Ag. Fires	(6) Non-Ag. Fires	(7) Non-Ag. Fires	(8) Non-Ag. Fires	(9) Forest Fires	(10) Forest Fires	(11) Forest Fires	(12) Forest Fires
LE_{-1}	-0.127*** (0.014)	-0.120*** (0.014)	-0.065** (0.028)	0.014 (0.029)	-0.083*** (0.014)	-0.079*** (0.014)	-0.049* (0.027)	0.006 (0.028)	-0.055*** (0.011)	-0.050*** (0.011)	-0.042** (0.021)	0.003 (0.022)
LE_0	-0.231*** (0.015)	-0.216*** (0.016)	-0.116*** (0.036)	-0.010 (0.037)	-0.188*** (0.014)	-0.176*** (0.015)	-0.121*** (0.035)	-0.046 (0.036)	-0.106*** (0.011)	-0.095*** (0.011)	-0.079*** (0.027)	-0.018 (0.028)
LE_{+1}	-0.173*** (0.018)	-0.172*** (0.019)	-0.120*** (0.024)	-0.193*** (0.026)	-0.102*** (0.016)	-0.100*** (0.017)	-0.067*** (0.023)	-0.119*** (0.024)	-0.018 (0.013)	-0.016 (0.013)	-0.004 (0.018)	-0.046** (0.018)
NE_{-1}			0.009 (0.027)	0.080*** (0.027)			0.003 (0.026)	0.052* (0.026)			0.003 (0.020)	0.044** (0.021)
NE_0			0.128*** (0.039)	0.195*** (0.040)			0.069* (0.038)	0.111*** (0.039)			0.017 (0.030)	0.056* (0.031)
NE_{+1}			0.072** (0.032)	0.071** (0.032)			0.050 (0.032)	0.046 (0.032)			0.024 (0.025)	0.023 (0.025)
Trends	No	Yes	Yes	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Terms	No	Yes	Yes	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Weather	No	No	No	Yes	No	No	No	Yes	No	No	No	Yes
Obs.	10846	10846	10846	10846	10846	10846	10846	10846	10846	10846	10846	10846

The table shows estimates of the relationship between the timing of local and national elections and wildfire occurrence when focusing on the peak of the fire season (July and August). In columns 1-4 the dependent variable is the natural logarithm of all ignitions that occurred in a municipality. In columns 5-8 the dependent variable is the natural logarithm of non-agricultural ignitions while in columns 9-12 the dependent variable is the natural logarithm of forest fires. LE_t and NE_t are dummy variables equal to 1 if local and national elections respectively are t years away. Standard errors clustered at the municipality level in parentheses * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table S5: Wildfire Occurrence, elections and re-election incentives, July and August only

	(1) All Fires	(2) All Fires	(3) Non-Ag. Fires	(4) Non-Ag. Fires	(5) Forest Fires	(6) Forest Fires
LE_{-1}	-0.033 (0.034)	-0.026 (0.036)	-0.036 (0.033)	-0.037 (0.033)	-0.004 (0.025)	-0.005 (0.025)
LE_0	-0.025 (0.041)	-0.018 (0.044)	-0.050 (0.040)	-0.051 (0.040)	-0.010 (0.031)	-0.012 (0.031)
LE_{+1}	-0.069** (0.033)	-0.062* (0.035)	-0.010 (0.031)	-0.010 (0.031)	0.002 (0.023)	0.002 (0.023)
NE_{-1}	0.105*** (0.028)	0.106*** (0.028)	0.076*** (0.027)	0.076*** (0.027)	0.056*** (0.021)	0.055** (0.021)
NE_0	0.183*** (0.040)	0.183*** (0.040)	0.103*** (0.039)	0.101*** (0.039)	0.051 (0.031)	0.048 (0.031)
NE_{+1}	0.059* (0.032)	0.059* (0.032)	0.034 (0.032)	0.033 (0.032)	0.020 (0.025)	0.018 (0.025)
RE_{-1}	0.074*** (0.028)	0.070** (0.032)	0.068** (0.027)	0.066** (0.029)	0.014 (0.020)	0.000 (0.022)
RE_0	0.008 (0.026)	-0.005 (0.030)	-0.004 (0.025)	-0.016 (0.027)	-0.015 (0.019)	-0.030 (0.020)
RE_{+1}	-0.226*** (0.037)	-0.285*** (0.042)	-0.199*** (0.033)	-0.244*** (0.037)	-0.086*** (0.024)	-0.100*** (0.027)
SE_{-1}		0.028 (0.089)		0.014 (0.064)		0.083* (0.048)
SE_0		0.079 (0.084)		0.070 (0.057)		0.089* (0.047)
SE_{+1}		0.416*** (0.120)		0.317*** (0.100)		0.097 (0.069)
Obs.	10846	10846	10846	10846	10846	10846

Each column presents estimates from a different model when focusing on the peak of the fire season (July and August).. In columns 1-2 the dependent variable is the natural logarithm of all ignitions that occurred in a municipality. In columns 3-4 the dependent variable is the natural logarithm of non-agricultural ignitions while in columns 5-6 the dependent variable is the natural logarithm of forest fires. All models include term controls, municipality specific fixed effects, weather controls and region specific trends. LE_t and NE_t are dummy variables equal to 1 if local and national elections respectively are t years away. Terms RE_t are binary, equal to 1 if the mayor of a municipality at time t runs for re-election in the subsequent local election. The SE_t terms are interactions between the electoral security proxy and the RE_t terms. Standard errors clustered at the level of municipalities in parentheses * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table S6: Wildfire Occurrence, elections and land-use July and August only

	(1)	(2)	(3)
	All Fires	Non-Ag. Fires	Forest Fires
LE_{-1}	-0.032 (0.034)	-0.035 (0.033)	-0.003 (0.025)
LE_0	-0.025 (0.041)	-0.050 (0.040)	-0.010 (0.031)
LE_{+1}	-0.067** (0.034)	-0.008 (0.031)	0.003 (0.023)
RE_{-1}	0.116*** (0.038)	0.081** (0.036)	0.002 (0.029)
RE_0	0.070* (0.036)	0.035 (0.034)	-0.041 (0.026)
RE_{+1}	-0.012 (0.050)	-0.079* (0.045)	-0.099*** (0.035)
$AG \times RE_{-1}$	-0.110* (0.060)	-0.044 (0.061)	0.020 (0.040)
$AG \times RE_0$	-0.173*** (0.058)	-0.120** (0.056)	0.045 (0.038)
$AG \times RE_{+1}$	-0.586*** (0.097)	-0.359*** (0.087)	-0.024 (0.055)
$UR \times RE_{-1}$	0.039 (0.064)	0.079 (0.062)	0.051 (0.048)
$UR \times RE_0$	0.106 (0.068)	0.124** (0.053)	0.089** (0.037)
$UR \times RE_{+1}$	0.340*** (0.115)	0.353*** (0.106)	0.296*** (0.082)
Observations	10846	10846	10846

Each column presents estimates from a different model focusing on July and August. In column 1 the dependent variable is the natural logarithm of all ignitions that occurred in a municipality within a year. In column 2 the dependent variable is the natural logarithm of non-agricultural ignitions while in column 3 the dependent variable is the natural logarithm of forest fires. All models include term controls, municipality specific fixed effects, weather controls and region specific trends. LE_t are dummy variables equal to 1 if local elections are t years away. Terms RE_t are binary, equal to 1 if the mayor of a municipality at time t runs for re-election in the subsequent local election. AG and UR capture the share of Agricultural and Artificial land respectively. All models control for region-specific trends, municipality fixed effects, terms of tenure, and weather conditions. Standard errors clustered at the municipality level in parentheses * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table S7: Burned area and elections: July and August only

	All Fires				Non-Agricultural Fires				Forest Fires			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
LE_{-1}	-0.730*** (0.074)	-0.694*** (0.074)	-0.410*** (0.147)	-0.006 (0.149)	-0.723*** (0.078)	-0.699*** (0.078)	-0.295* (0.153)	0.062 (0.157)	-0.636*** (0.078)	-0.602*** (0.079)	-0.070 (0.147)	0.276* (0.152)
LE_0	-1.154*** (0.077)	-1.097*** (0.080)	-0.502*** (0.190)	0.046 (0.195)	-1.108*** (0.080)	-1.067*** (0.083)	-0.357* (0.202)	0.132 (0.209)	-0.952*** (0.078)	-0.890*** (0.080)	-0.065 (0.200)	0.405* (0.207)
LE_{+1}	-0.927*** (0.091)	-0.944*** (0.092)	-0.599*** (0.124)	-0.976*** (0.129)	-0.672*** (0.091)	-0.689*** (0.092)	-0.306** (0.127)	-0.643*** (0.131)	-0.282*** (0.092)	-0.296*** (0.091)	0.151 (0.123)	-0.173 (0.125)
NE_{-1}			-0.068 (0.133)	0.296** (0.135)			0.119 (0.141)	0.432*** (0.145)			0.349** (0.141)	0.660*** (0.146)
NE_0			0.761*** (0.203)	1.092*** (0.206)			0.888*** (0.216)	1.154*** (0.221)			0.986*** (0.222)	1.267*** (0.228)
NE_{+1}			0.474*** (0.171)	0.457*** (0.171)			0.577*** (0.180)	0.539*** (0.180)			0.772*** (0.182)	0.754*** (0.183)
RE_{-1}	-0.730*** (0.074)	-0.694*** (0.074)	-0.410*** (0.147)	-0.006 (0.149)	-0.723*** (0.078)	-0.699*** (0.078)	-0.295* (0.153)	0.062 (0.157)	-0.636*** (0.078)	-0.602*** (0.079)	-0.070 (0.147)	0.276* (0.152)
RE_0	-1.154*** (0.077)	-1.097*** (0.080)	-0.502*** (0.190)	0.046 (0.195)	-1.108*** (0.080)	-1.067*** (0.083)	-0.357* (0.202)	0.132 (0.209)	-0.952*** (0.078)	-0.890*** (0.080)	-0.065 (0.200)	0.405* (0.207)
RE_{+1}	-0.927*** (0.091)	-0.944*** (0.092)	-0.599*** (0.124)	-0.976*** (0.129)	-0.672*** (0.091)	-0.689*** (0.092)	-0.306** (0.127)	-0.643*** (0.131)	-0.282*** (0.092)	-0.296*** (0.091)	0.151 (0.123)	-0.173 (0.125)
SE_{-1}			-0.068 (0.133)	0.296** (0.135)			0.119 (0.141)	0.432*** (0.145)			0.349** (0.141)	0.660*** (0.146)

			0.761 ^{***}	1.092 ^{**}			0.888 ^{***}	1.154 ^{***}			0.986 ^{***}	1.267 ^{***}		
			(0.203)	(0.206)			(0.216)	(0.221)			(0.222)	(0.228)		
			0.474 ^{***}	0.457 ^{***}			0.577 ^{***}	0.539 ^{***}			0.772 ^{***}	0.754 ^{***}		
			(0.171)	(0.171)			(0.180)	(0.180)			(0.182)	(0.183)		
			-0.730 ^{***}	-0.694 ^{***}	-0.410 ^{***}	-0.006	-0.723 ^{***}	-0.699 ^{***}	-0.295 [*]	0.062	-0.636 ^{***}	-0.602 ^{***}	-0.070	0.276 [*]
			(0.074)	(0.074)	(0.147)	(0.149)	(0.078)	(0.078)	(0.153)	(0.157)	(0.078)	(0.079)	(0.147)	(0.152)
			-1.154 ^{***}	-1.097 ^{***}	-0.502 ^{***}	0.046	-1.108 ^{***}	-1.067 ^{***}	-0.357 [*]	0.132	-0.952 ^{***}	-0.890 ^{***}	-0.065	0.405 [*]
			(0.077)	(0.080)	(0.190)	(0.195)	(0.080)	(0.083)	(0.202)	(0.209)	(0.078)	(0.080)	(0.200)	(0.207)
			-0.927 ^{***}	-0.944 ^{***}	-0.599 ^{***}	-0.976 ^{***}	-0.672 ^{***}	-0.689 ^{***}	-0.306 ^{**}	-0.643 ^{***}	-0.282 ^{***}	-0.296 ^{***}	0.151	-0.173
			(0.091)	(0.092)	(0.124)	(0.129)	(0.091)	(0.092)	(0.127)	(0.131)	(0.092)	(0.091)	(0.123)	(0.125)
					-0.068	0.296 ^{**}			0.119	0.432 ^{***}			0.349 ^{**}	0.660 ^{***}
					(0.133)	(0.135)			(0.141)	(0.145)			(0.141)	(0.146)
			0.761 ^{***}	1.092 ^{**}			0.888 ^{***}	1.154 ^{***}			0.986 ^{***}	1.267 ^{***}		
			(0.203)	(0.206)			(0.216)	(0.221)			(0.222)	(0.228)		
			0.474 ^{***}	0.457 ^{***}			0.577 ^{***}	0.539 ^{***}			0.772 ^{***}	0.754 ^{***}		
			(0.171)	(0.171)			(0.180)	(0.180)			(0.182)	(0.183)		
			-0.730 ^{***}	-0.694 ^{***}	-0.410 ^{***}	-0.006	-0.723 ^{***}	-0.699 ^{***}	-0.295 [*]	0.062	-0.636 ^{***}	-0.602 ^{***}	-0.070	0.276 [*]
			(0.074)	(0.074)	(0.147)	(0.149)	(0.078)	(0.078)	(0.153)	(0.157)	(0.078)	(0.079)	(0.147)	(0.152)
Obs	10846	10846	10846	10846	10846	10846	10846	10846	10846	10846	10846	10846	10846	10846

Each column presents estimates from a different model focusing on wildfires occurring in July and August. In columns 1-4 the dependent variable is the natural logarithm of area burned from all ignitions that occurred in a municipality within a year. In columns 5-8 the dependent variable is the natural logarithm of area burned from non-agricultural ignitions while in columns 9-12 the dependent variable is the natural logarithm of area burned forest fires. All models include term controls, municipality specific fixed effects, weather controls and region specific trends. LE_t are dummy variables equal to 1 if local elections are t years away. Terms RE_t are binary, equal to 1 if the mayor of a municipality at time t runs for re-election in the subsequent local election. AG and UR capture the share of Agricultural and Artificial land respectively. Standard errors clustered at the municipality level in parentheses * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$