

Online Appendix to
Political Corruption Cycles in Democracies and Autocracies:
Evidence from micro-data on extortion in West Africa
Jasper Cooper

A: Additional Results

- Table A.1 illustrates the pre-election period causes a large increase in the average bribe extorted both from foreigners and from co-nationals of the country in which the bribe is paid. The data is first subset to foreigners and co-nationals, before being aggregated and interpolated as in the main results.
- Table A.2 illustrates the pre-election period causes a large increase in the total bribe extorted per trip.
- Table A.3 performs an analysis that aggregates observations at the checkpoint-level when constructing the country-week panel. Consistent with the main results, the first column shows that the average bribe that officials at a checkpoint extorted (as opposed to the average bribe that drivers paid at any checkpoint) increases in the buildup to democratic elections only. However, there is no statistically significant evidence that the number of trucks stopped at a given checkpoint or the number of bribes extorted from stopped drivers varies systematically around elections.
- Tables A.4 and A.5 estimate electoral cycles using an alternative identification strategy that leverages variation in election timing *within the same journey*: e.g., the difference in bribes paid by the same driver as they travel on the same trip from a country that is not having elections to one that is (or vice versa). The results are consistent with the main findings presented in Table 2. Because the panel is imbalanced and sensitive to the weighting scheme introduced by the >10,000 trip-level fixed effects, the Tables A.4 and A.5 present results using subsets of the data that impose different requirements on the minimum number of stops that must be included in each country. In the first column, for example, all trips included in the analysis involve at least three stops in each country. In the final column, all trips included in the analysis featured at least seven stops in each country (thus better estimate the within-country averages).
- Table A.6 decomposes political corruption cycles not according to the ex ante institutional features of the countries, but according to the ex post outcomes of the elections. Four elections are coded as ex post “non-competitive”: Burkina Faso (2010), Togo (2010), Mali (2007), and Senegal (2007). And four are coded as ex post “competitive”: Ghana (2008 and 2012); Mali (2013); and Senegal (2012).

B: Robustness

- In Section B.1, I discuss the problems highlighted with two-way fixed effects estimators in recent econometrics literature and why these issues do not pose a serious threat to inference in this study. I describe a simulation study in which I show that, even under pessimistic assumptions, any estimation bias is inconsequential to the main results.

- Table B.2 illustrates that the democracy-specific, pre-election increase in average bribes is also detected when one uses the main estimator with the disaggregated, imbalanced panel at the bribe-level.
- Tables B.3, B.4, and B.5 illustrate that the results are robust and sometimes even stronger when I do not winsorize, exclude Mali, or exclude Senegal, respectively.
- Table B.6 shows the results are robust to the inclusion of up to three lags.
- Table B.7 shows the results are robust to allowing for a given country-week in the panel to be coded as both pre- and post-election (due to the presence of pre- and post-election days in that week).
- Table B.8 shows the main results are robust to clustering standard errors one way, at the country-level, only.
- Table B.9 shows the main results are robust to relying on the data that has been verified and cleaned by the West African Trade Hub (WATH). Bribe data is available for most (though not all) of the quarters from the Q4 2006 to Q2 2013. The WATH put quarters Q2 2009 to Q3 2012 through its cleaning and verification process, which cannot be replicated (see “Data Cleaning Manual nr.pdf” in replication archive). Because this cleaning cannot be replicated and because it is not available for the remaining quarters, the main results rely entirely on the data that has not been cleaned and verified. This table illustrates that combining the non-cleaned data (Q4 2006 - Q1 2009, Q4 2012 - Q2 2013) with the cleaned data (Q2 2009 - Q3 2012) makes virtually no difference to the substantive and statistical significance of the main results.

C: Supplementary Information

- Figure C.1 presents a plot of the weekly panel data.
- Figures C.2 and C.3 present the partial autocorrelation in the series of the democratic and autocratic countries, respectively.

A Additional Results

A.1 Electoral cycles among foreigners and co-nationals

	Average Bribe Paid			
	Foreigners	Co-Nationals	Foreigners	Co-Nationals
	(1)	(2)	(3)	(4)
Pre-Election	247.525** (114.903)	173.927 (153.838)		
Post-Election	155.116** (63.652)	104.976 (102.959)		
Pre-Election (autocracies)			62.385 (55.700)	-123.584 (108.309)
Post-Election (autocracies)			138.187** (67.560)	-186.435** (81.177)
Pre-Election (democracies)			318.084** (140.207)	295.394** (144.149)
Post-Election (democracies)			167.357* (98.685)	238.443*** (68.528)
Country FE	Y	Y	Y	Y
Period FE	Y	Y	Y	Y
Interpolation used	Y	Y	Y	Y
Interpolation FE	Y	Y	Y	Y
Observations	1,775	1,775	1,775	1,775
Adjusted R ²	0.698	0.566	0.699	0.577

Note:

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

Table A.1: Effect of elections on total bribe extorted per trip, **disaggregated by whether driver is a foreigner in country when paying bribe.**

All data aggregated from the the driver-day-level to the country-week level through arithmetic averaging. Outcome in columns labeled “Foreigners” is the country-week average of bribes paid by drivers who were not co-nationals when paying the bribe. Outcome in columns labeled “Co-Nationals” is the country-week average of bribes paid by drivers who were co-nationals when paying the bribe. See caption to Table 2 for explanation of estimates and labels.

A.2 Electoral cycles in total bribes per trip

	Total Bribe Extorted per Trip		
	All Trucks (1)	Domestic Trucks (2)	Foreign Trucks (3)
Pre-Election (autocracies)	498.748 (2,488.218)	-977.209 (2,371.299)	69.914 (2,697.601)
Post-Election (autocracies)	2,022.777 (1,657.806)	-67.341 (1,294.983)	2,886.669** (1,313.103)
Pre-Election (democracies)	4,804.707* (2,462.770)	6,247.043* (3,193.616)	3,672.706* (2,191.732)
Post-Election (democracies)	1,034.162 (3,141.492)	3,349.805 (3,260.102)	1,278.112 (2,787.710)
Country FE	Y	Y	Y
Period FE	Y	Y	Y
Interpolation used	Y	Y	Y
Interpolation FE	Y	Y	Y
Observations	1,775	1,775	1,775
Adjusted R ²	0.589	0.466	0.693

Note:

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

Table A.2: Effect of elections on total bribe extorted per trip.

Outcome is the average trip-level total of all bribes paid by drivers in a given country and week. All data aggregated from the the driver-day-level to the country-week level through arithmetic averaging. See caption to Table 2 for explanation of estimates and labels.

A.3 Political corruption cycles analyzed at the checkpoint-level

	<i>Dependent variable:</i>		
	Average Bribe Paid	N Trucks Stopped	N Bribes Taken
	(1)	(2)	(3)
Pre-Election (autocracies)	−9.213 (60.895)	19.315 (25.660)	18.747 (23.937)
Post-Election (autocracies)	9.885 (75.108)	−21.602 (14.339)	−19.273 (13.055)
Pre-Election (democracies)	290.639 (186.440)	−31.739 (20.275)	−25.557 (17.080)
Post-Election (democracies)	−47.339 (104.327)	−16.314 (25.634)	−12.266 (23.541)
Country FE	Y	Y	Y
Period FE	Y	Y	Y
Interpolation used	Y	Y	Y
Interpolation FE	Y	Y	Y
Observations	1,775	1,775	1,775
Adjusted R ²	0.331	0.378	0.396

Note: *p<0.1; **p<0.05; ***p<0.01

Table A.3: Evidence of political corruption cycles, using checkpoints as the first unit of panel aggregation.

All data aggregated to the checkpoint-level and then to the country-week-level through arithmetic averaging. See caption to Table 2 for explanation of standard errors and labels.

A.4 An alternative identification strategy leveraging within-trip variation

<i>Dependent variable:</i>					
	Bribe Paid				
	(1)	(2)	(3)	(4)	(5)
Pre-Election	53.651** (21.825)	48.524** (21.121)	54.474** (22.338)	59.185** (23.449)	56.480* (29.461)
Post-Election	-76.725* (40.944)	-71.745* (39.226)	-63.286* (38.237)	-97.660** (40.305)	-139.488*** (53.768)
Min. Stops per Country	3	4	5	6	7
Country FE	Y	Y	Y	Y	Y
Trip FE	Y	Y	Y	Y	Y
Observations	234,365	219,436	206,751	184,238	154,074

Note: *p<0.1; **p<0.05; ***p<0.01

Table A.4: Evidence of political corruption cycles, using bribes as the unit of analysis and estimating within-trip differences.

Estimated at the individual bribe-level, conditioning on country and trip-level fixed effects. In order to estimate within-trip differences, data is subset to bribes gathered during trips that crossed at least one international border. To account for the fact that some drivers are stopped only once or twice in a given country, within-trip differences are estimated on trips where at least three stops occurred in each country. “Min. Stops per Country” indicates the minimum number of stops that need to be made in any country in order for the trip to be included in the analysis. Parametric standard errors allow for two-way clustering at the country-week level. The standard errors are used in a Wald test to derive p -values. In columns labeled ‘Y’ for ‘Country FE’ and ‘Trip FE,’ fixed effects for countries and trips are included (‘N’ otherwise). ‘Pre-Election Period’ and ‘Post-Election Period’ are 1 if bribe paid in three months preceding or following an election in that country, respectively, 0 otherwise.

<i>Dependent variable:</i>					
	Bribe Paid				
	(1)	(2)	(3)	(4)	(5)
Pre-Election (autocracies)	60.018*** (21.873)	38.514 (24.014)	33.376 (26.819)	20.860 (27.773)	6.375 (32.680)
Post-Election (autocracies)	-106.468*** (38.172)	-120.818*** (42.463)	-127.523*** (44.699)	-145.453*** (50.109)	-186.440*** (65.929)
Pre-Election (democracies)	44.432 (35.397)	60.468* (34.445)	79.226** (36.269)	104.406** (42.206)	111.737** (52.003)
Post-Election (democracies)	9.576 (103.321)	58.487 (72.060)	121.033*** (43.669)	78.082* (46.859)	73.049 (58.033)
Min. Stops per Country	3	4	5	6	7
Country FE	Y	Y	Y	Y	Y
Trip FE	Y	Y	Y	Y	Y
Observations	234,365	219,436	206,751	184,238	154,074

Note:

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

Table A.5: Evidence of political corruption cycles, using bribes as the unit of analysis and estimating within-trip differences.

Estimated at the individual bribe-level, conditioning on country and trip-level fixed effects. In order to estimate within-trip differences, data is subset to bribes gathered during trips that crossed at least one international border. To account for the fact that some drivers are stopped only once or twice in a given country, within-trip differences are estimated on trips where at least three stops occurred in each country. “Min. Stops per Country” indicates the minimum number of stops that need to be made in any country in order for the trip to be included in the analysis. Standard errors allow for two-way clustering at the country-week level. The standard errors are used in a Wald test to derive p -values. In columns labeled ‘Y’ for ‘Country FE’ and ‘Trip FE,’ fixed effects for countries and trips are included (‘N’ otherwise). ‘Pre-Election Period’ and ‘Post-Election Period’ are 1 if bribe paid in three months preceding or following an election in that country, respectively, 0 otherwise. ‘Democracies’ are Ghana, Senegal, and Mali; ‘Autocracies’ are Togo and Burkina Faso (as of early 2013).

A.5 Alternative Coding of Competitiveness

	<i>Dependent variable:</i>		
	Average Bribe Paid		
	(1)	(2)	(3)
Pre-Election (ex-post non-competitive)	330.876 (217.480)	252.546 (216.329)	192.568* (110.720)
Post-Election (ex-post non-competitive)	27.769 (63.257)	-28.376 (75.882)	4.031 (8.422)
Pre-Election (ex-post competitive)	227.909 (182.750)	290.125* (160.227)	124.833 (103.841)
Post-Election (ex-post competitive)	201.780* (108.452)	210.225*** (73.601)	124.730** (55.618)
Country FE	Y	Y	Y
Period FE	Y	Y	Y
Interpolation used	Y	N	Y
Interpolation FE	Y	NA	Y
Lagged DV	N	N	Y
Observations	1,775	1,255	1,770
Adjusted R ²	0.701	0.703	0.757

Note:

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

Table A.6: Evidence of political corruption cycles, using ex post election outcomes to define competitiveness.

Elections whose outcomes were ex post “non-competitive”: Burkina Faso (2010), Togo (2010), Mali (2007), and Senegal (2007). Elections whose outcomes were ex post “competitive”: Ghana (2008 and 2012); Mali (2013); and Senegal (2012). See Table 1 and caption to Table for more details. ‘Pre-Election Period’ and ‘Post-Election Period’ are 1 if bribe paid in three months preceding or following an election, respectively, 0 otherwise.

B Robustness

B.1 Diagnosis of Two-Way Fixed Effects Estimator

The two specifications in equations 4 and 5 are equivalent to the two-way fixed effects (TWFE) estimator. This estimator is also known as the generalized difference-in-differences model because it estimates the causal effect of D on Y as the weighted average of every two-period difference-in-difference in the sample (Angrist and Pischke, 2008).

A recent body of literature has pointed to two main estimation issues that arise with the TWFE estimator when three conditions hold, as they are assumed to here: a) countries enter into and out of treatment at different times; b) treatment effects vary by country, and; c) treatment effects vary by time. I show here descriptively and through a simulation study, however, that any bias arising from these two issues in my particular application is likely very small due to the relative homogeneity in weights.

The estimation issues arise because the TWFE estimator’s estimate of the average treatment effect is equivalent to the weighted average of estimators that use time, unit, and no fixed effects (Humphreys, 2009; Goodman-Bacon, 2018; Imai and Kim, 2018). To obtain an efficient estimate of the average effect, those composite estimators weight time-specific, unit-specific, and overall estimates by the time-specific, unit-specific, and overall variance of the treatment variable, and not by the respective sample sizes.

The first potential issue therefore arises from a divergence between the average treatment effect and the estimate of the average treatment effect calculated from the average of country-level heterogeneous treatment effects weighted by the country-level treatment variance (Humphreys, 2009; Lin, 2013). If the rate at which countries have elections is correlated with country-level heterogeneity in electoral effects, for example, this can bias the average of the effects towards the effect size of those countries that have the most variance in elections. In my data, however, the proportion of treated periods is very even across countries, especially when splitting them into autocracies and democracies as the main results do. For Mali, Ghana, and Senegal, the average of the pre-election treatment variable is 7%, 8%, and 8%, respectively, and for Togo and Burkina Faso these are both 4%.

The second issue arises from the combination of period-level effect heterogeneity and treatment timing variation. de Chaisemartin and D’Haultfoeuille (2019) show that certain setups can lead to negative weighting of the estimate across the two-period difference-in-differences in the sample. This phenomenon arises from the way in which differenced treatment periods function as controls for other treatment periods in two-way FE models. In my case, units’ rapid entry into and out of treatment prevents such scenarios. The de Chaisemartin and D’Haultfoeuille weights on an indicator for the pre- or post-election period in my study are all positive, with a mean and median of 1 and a minimum and maximum of 0.74 and 1.12, respectively. Thus, the weights cannot cause sign-flipping, and are sufficiently homogeneous as to pose minimal threat of bias.

To assess sensitivity to these issues in my study, I conducted a simulation study in `DeclareDesign` assuming the worst case scenario, in which treatment effects and assignment probabilities are highly heterogeneous and correlated.

The untreated and treated potential outcomes $Y_{c,t}(0)$ and $Y_{c,t}(1)$ are generated from the observed data according to the following model:

$$Y_{c,t}(0) = \tilde{Y}_{c,t}, \quad Y_{c,t}(1) = \tilde{Y}_{c,t} + t \times 10 + \lambda_c \times 100,$$

where $\tilde{Y}_{c,t}$ is the observed average bribe in country c at time t (in XOF) from the actual data, t is an integer increasing with each period, and λ is a country-specific shock. The election treatment variable, $D_{c,t}$, is more likely to equal 1 in some countries than in others, and is five times likelier to occur in September, October, November, and December of each year than in other months, though this information is assumed hidden to the researcher. Using 4,000 simulations, the average distance between the TWFE estimate and the true underlying ATT and ATE is less than 1% of the estimated effect size. Moreover, this estimate of the bias is small enough as to be indistinguishable from simulation error. Even under extremely pessimistic assumptions, the design appears to feature minimal if any estimation bias.

On Table B.1, I present the results of the simulation study. I include a version of the TWFE estimator that weights observations by the inverse of their treatment propensity, which is assumed unknown. In both estimators the estimate is very close to the estimand, and the difference in the ATT and ATE is not large. The estimated bias is lower for the IPW estimator, but indistinguishable from zero in both cases. Note that the standard deviation across repeated simulations of the study is lower than the estimated standard error in the main results, suggesting the approach taken may be moderately conservative under the assumptions of this design.

	Design Label	Estimand Label	Estimator Label	Term	N Sims	Mean Estimate	Mean Estimand	Bias	SD Estimate
1	design	ate	IPW 2wayFE	Z	4000	444.12	446.58	-2.46	84.57
2						(1.45)	(0.00)	(1.45)	(0.99)
3	design	ate	Unweighted 2wayFE	Z	4000	443.15	446.58	-3.43	86.77
4						(1.47)	(0.00)	(1.47)	(0.94)
5	design	att	IPW 2wayFE	Z	4000	444.12	446.66	-2.54	84.57
6						(1.45)	(0.09)	(1.46)	(0.99)
7	design	att	Unweighted 2wayFE	Z	4000	443.15	446.66	-3.50	86.77
8						(1.47)	(0.09)	(1.47)	(0.94)

Table B.1: Simulation study of the design under pessimistic assumptions about heterogeneous effects and assignment probabilities. Simulation study conducted in `DeclareDesign` for `R` (Blair et al., 2019). Simulations conducted using real data. Parentheses give simulation standard error, calculated through 100 bootstraps of the diagnosand.

B.2 Results estimated at individual-level

	<i>Dependent variable:</i>	
	Bribe Paid	
	(1)	(2)
Pre-Election	74.069 (54.096)	
Post-Election	46.064 (73.067)	
Pre-Election (autocracies)		19.987 (44.049)
Post-Election (autocracies)		-12.166 (100.938)
Pre-Election (democracies)		138.107* (78.150)
Post-Election (democracies)		156.475*** (28.600)
Country FE	Y	Y
Week FE	Y	Y
Observations	243,484	243,484

Note: *p<0.1; **p<0.05; ***p<0.01

Table B.2: Evidence of political corruption cycles, **estimated at individual-level using imbalanced panel.**

Estimated at the individual bribe-level, conditioning on country and week-level fixed effects. Parametric standard errors allow for two-way clustering at the country-week level. The standard errors are used in a Wald test to derive p -values. In columns labeled ‘Y’ for ‘Country FE’ and ‘Period FE,’ fixed effects for countries and weeks are included (‘N’ otherwise). ‘Pre-Election Period’ and ‘Post-Election Period’ are 1 if bribe paid in three months preceding or following an election in that country, respectively, 0 otherwise. ‘Democracies’ are Ghana, Senegal, and Mali; ‘Autocracies’ are Togo and Burkina Faso (as of early 2013).

B.3 Results Without Winsorizing

	<i>Dependent variable:</i>	
	Average Bribe Paid	
	(1)	(2)
Pre-Election	342.988*	
	(179.219)	
Post-Election	115.480	
	(90.806)	
Pre-Election (autocracies)		24.664
		(72.539)
Post-Election (autocracies)		-3.863
		(85.994)
Pre-Election (democracies)		467.067**
		(191.449)
Post-Election (democracies)		175.393*
		(99.949)
Country FE	Y	Y
Period FE	Y	Y
Interpolation used	Y	Y
Interpolation FE	Y	Y
Lagged DV	N	N
Observations	1,775	1,775
Adjusted R ²	0.539	0.543

Note: *p<0.1; **p<0.05; ***p<0.01

Table B.3: Evidence of political corruption cycles, **without winsorizing outliers**.
See appendix page 7 and caption of Table 2 in main text for explanatory notes.

B.4 Excluding Mali

	<i>Dependent variable:</i>	
	Average Bribe Paid	
	(1)	(2)
Pre-Election	177.012*	
	(94.096)	
Post-Election	106.572	
	(94.726)	
Pre-Election (autocracies)		-6.855
		(53.196)
Post-Election (autocracies)		-2.998
		(61.577)
Pre-Election (democracies)		277.029***
		(88.039)
Post-Election (democracies)		168.687
		(111.717)
Country FE	Y	Y
Period FE	Y	Y
Interpolation used	Y	Y
Interpolation FE	Y	Y
Observations	1,420	1,420
Adjusted R ²	0.649	0.653
<i>Note:</i>	*p<0.1; **p<0.05; ***p<0.01	

Table B.4: Evidence of political corruption cycles, **with Mali excluded**.

See appendix page 7 and caption of Table 2 in main text for explanatory notes.

B.5 Excluding Senegal

	<i>Dependent variable:</i>	
	Average Bribe Paid	
	(1)	(2)
Pre-Election	327.438*	
	(179.110)	
Post-Election	146.699	
	(117.285)	
Pre-Election (autocracies)		58.530
		(74.276)
Post-Election (autocracies)		-3.227
		(94.010)
Pre-Election (democracies)		486.508**
		(205.707)
Post-Election (democracies)		253.557*
		(132.559)
Country FE	Y	Y
Period FE	Y	Y
Interpolation used	Y	Y
Interpolation FE	Y	Y
Observations	1,420	1,420
Adjusted R ²	0.714	0.720

Note: *p<0.1; **p<0.05; ***p<0.01

Table B.5: Evidence of political corruption cycles, **with Senegal excluded**.
See appendix page 7 and caption of Table 2 in main text for explanatory notes.

B.6 Inclusion of More Lags

	<i>Dependent variable:</i>			
	Average Bribe Paid			
	(1)	(2)	(3)	(4)
Pre-Election (autocracies)	19.496 (40.410)	11.981 (27.429)	8.991 (28.273)	7.590 (28.653)
Post-Election (autocracies)	2.854 (38.398)	6.259 (18.998)	9.839 (12.405)	11.512 (7.115)
Pre-Election (democracies)	212.933*** (74.977)	164.800*** (55.557)	141.716*** (51.202)	132.562** (52.163)
Post-Election (democracies)	86.117 (52.621)	56.545 (45.531)	39.034 (45.261)	32.151 (48.621)
Lag 1	0.423*** (0.037)	0.322*** (0.012)	0.290*** (0.018)	0.282*** (0.016)
Lag 2		0.233*** (0.032)	0.186*** (0.031)	0.176*** (0.033)
Lag 3			0.137*** (0.015)	0.120*** (0.018)
Lag 4				0.059* (0.032)
Country FE	Y	Y	Y	Y
Period FE	Y	Y	Y	Y
Interpolation used	Y	Y	Y	Y
Interpolation FE	Y	Y	Y	Y
Observations	1,770	1,765	1,760	1,755
Adjusted R ²	0.758	0.772	0.776	0.776

Note:

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

Table B.6: Evidence of political corruption cycles, **including up to four lags**.

See appendix page 7 and captions of Table 2 in main text for explanatory notes.

B.7 Allowing for Overlapping Pre- and Post-Election Periods

	<i>Dependent variable:</i>					
	Average Bribe Paid					
	(1)	(2)	(3)	(4)	(5)	(6)
Pre-Election	255.916** (125.902)	243.060 (148.318)	137.872** (56.838)			
Post-Election	87.038 (77.544)	55.892 (42.774)	47.337 (41.795)			
Pre-Election (autocracies)				35.030 (71.650)	42.676 (57.483)	23.392 (29.991)
Post-Election (autocracies)				0.361 (82.598)	5.589 (75.772)	2.873 (35.536)
Pre-Election (democracies)				342.897*** (128.682)	392.709** (176.632)	185.466*** (62.416)
Post-Election (democracies)				130.950 (93.044)	106.511* (62.815)	70.837 (55.193)
Country FE	Y	Y	Y	Y	Y	Y
Period FE	Y	Y	Y	Y	Y	Y
Interpolation used	Y	N	Y	Y	N	Y
Interpolation FE	Y	NA	Y	Y	NA	Y
Lagged DV	N	N	Y	N	N	Y
Observations	1,775	1,255	1,770	1,775	1,255	1,770
Adjusted R ²	0.700	0.702	0.757	0.703	0.705	0.757

Note:

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

Table B.7: Evidence of political corruption cycles, **allowing for country-weeks that are simultaneously pre- and post-election.**

See appendix page 7 and captions of Table 2 in main text for explanatory notes.

B.8 Clustering Standard Errors at the Country-Level

	<i>Dependent variable:</i>					
	Average Bribe Paid					
	(1)	(2)	(3)	(4)	(5)	(6)
Pre-Election	278.996** (119.407)	262.483* (158.777)	156.391** (68.031)			
Post-Election	105.226 (78.328)	77.289 (52.089)	57.583 (45.049)			
Pre-Election (autocracies)				29.335 (76.030)	36.241 (55.088)	19.496 (48.420)
Post-Election (autocracies)				0.703 (85.548)	6.293 (71.039)	2.854 (45.499)
Pre-Election (democracies)				376.645*** (122.728)	433.285** (175.430)	212.933*** (63.509)
Post-Election (democracies)				156.919* (86.640)	149.069*** (43.988)	86.117 (56.475)
Country FE	Y	Y	Y	Y	Y	Y
Period FE	Y	Y	Y	Y	Y	Y
Interpolation used	Y	N	Y	Y	N	Y
Interpolation FE	Y	NA	Y	Y	NA	Y
Lagged DV	N	N	Y	N	N	Y
Observations	1,775	1,255	1,770	1,775	1,255	1,770
Adjusted R ²	0.701	0.702	0.757	0.704	0.707	0.758

Note:

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

Table B.8: Evidence of political corruption cycles, **clustering standard errors only at the country-level.**

See appendix page 7 and captions of Table 2 in main text for explanatory notes.

B.9 Using Verified WATH Data

	<i>Dependent variable:</i>					
	Average Bribe Paid					
	(1)	(2)	(3)	(4)	(5)	(6)
Pre-Election	280.891** (132.824)	263.469 (162.286)	159.066** (68.271)			
Post-Election	88.255 (82.905)	40.203 (58.591)	47.336 (42.358)			
Pre-Election (autocracies)				50.457 (69.678)	67.667 (53.872)	31.714 (34.626)
Post-Election (autocracies)				-50.104 (80.231)	-39.164 (57.956)	-30.879 (28.330)
Pre-Election (democracies)				372.134*** (140.791)	411.422** (198.185)	212.350*** (71.932)
Post-Election (democracies)				153.878 (93.849)	119.809** (57.114)	85.392 (53.844)
Country FE	Y	Y	Y	Y	Y	Y
Period FE	Y	Y	Y	Y	Y	Y
Interpolation used	Y	N	Y	Y	N	Y
Interpolation FE	Y	NA	Y	Y	NA	Y
Lagged DV	N	N	Y	N	N	Y
Observations	1,775	1,297	1,770	1,775	1,297	1,770
Adjusted R ²	0.673	0.675	0.733	0.677	0.678	0.734

Note:

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

Table B.9: Evidence of political corruption cycles, using data that has been through verification and cleaning by West African Trade Hub.

See appendix page 7 and captions of Table 2 in main text for explanatory notes.

C Supplementary Information

C.1 Time-Series Data

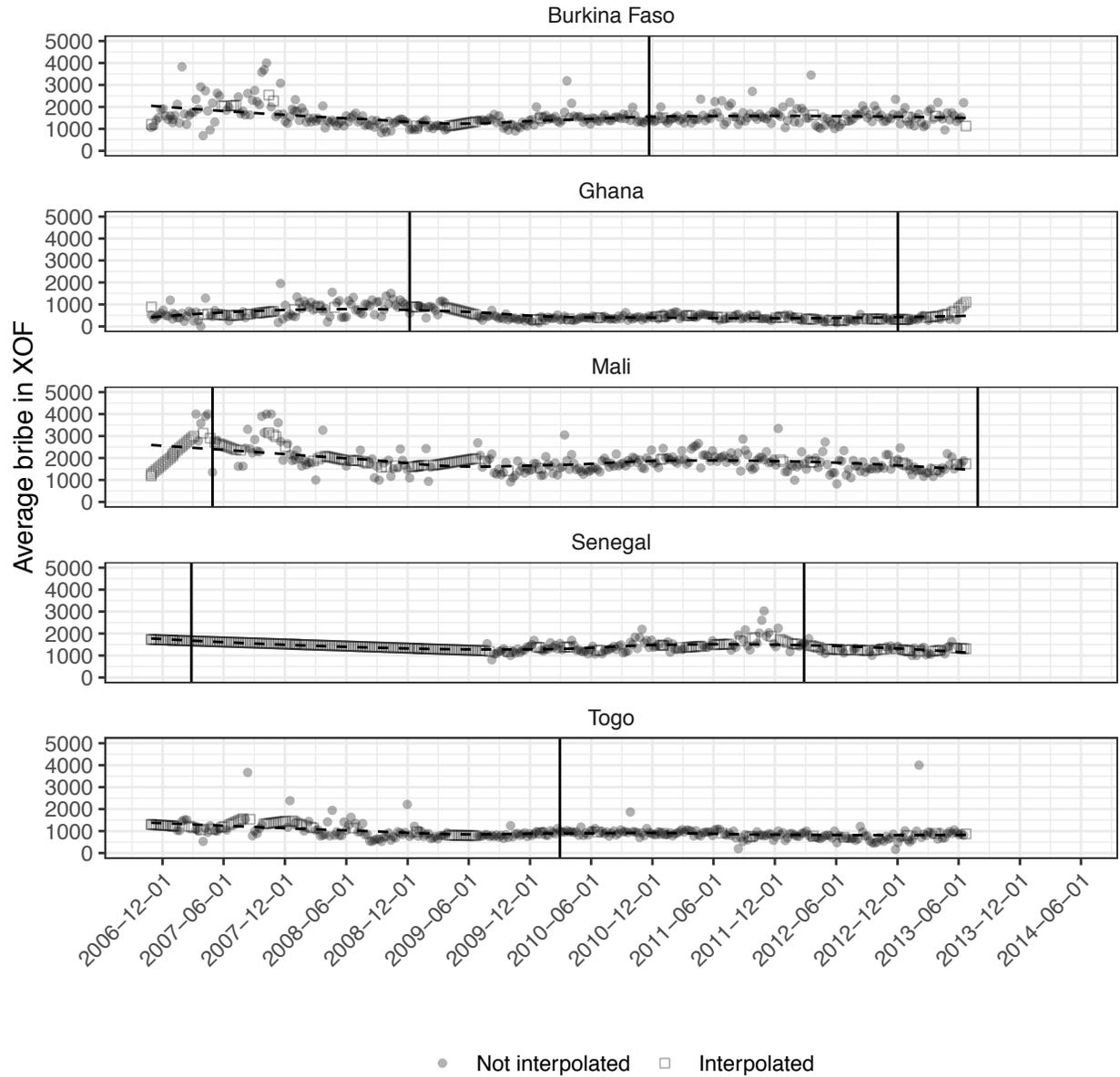


Figure C.1: Time-series aggregated to week-level.

Each point represents an average of driver-level arithmetic averages of bribes paid in that week of the year in that country. Each square represents an imputed average from linear interpolation. Vertical bars represent elections. Dotted horizontal line represents LOESS-smoothed trend.

C.2 Partial Autocorrelation

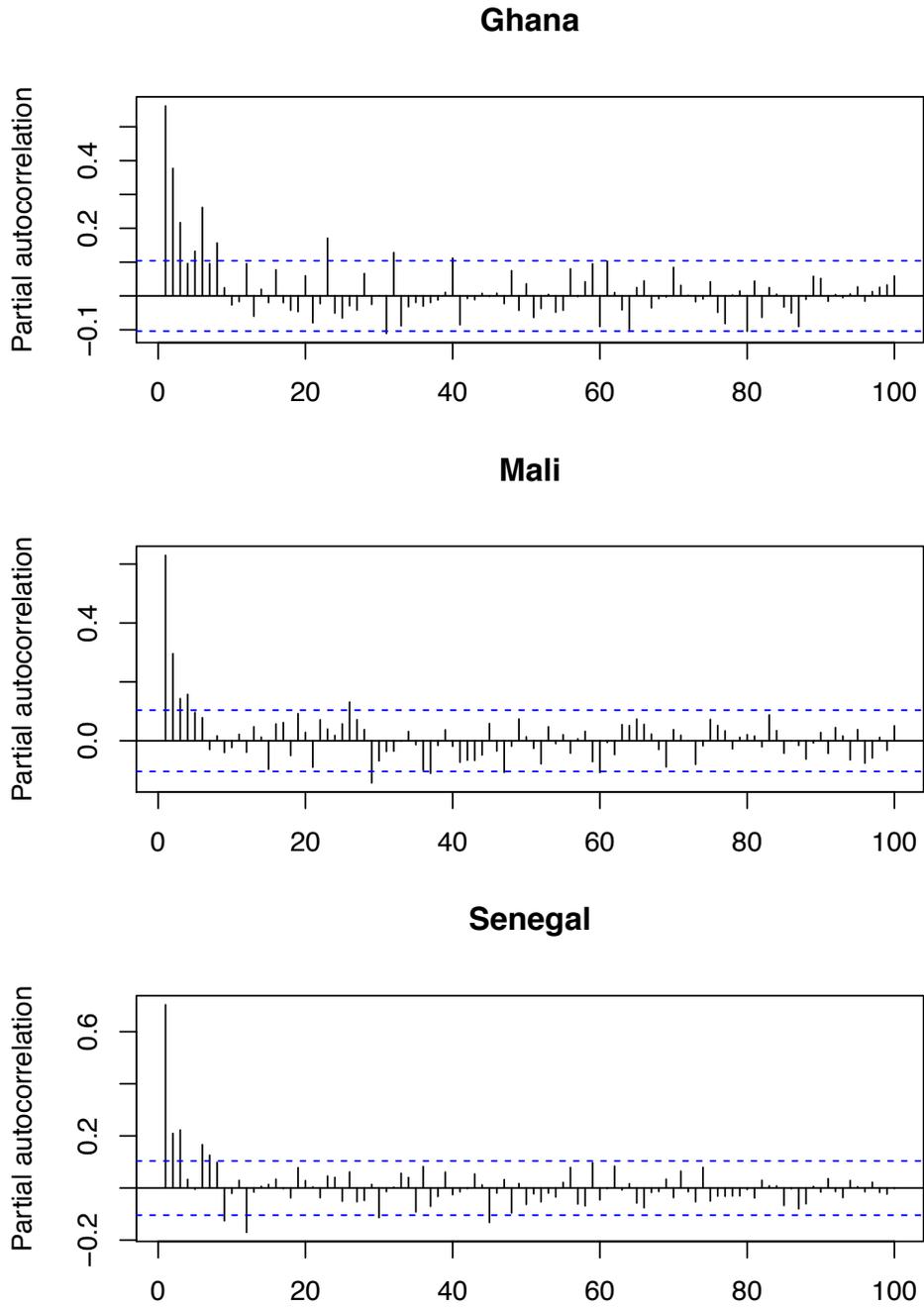
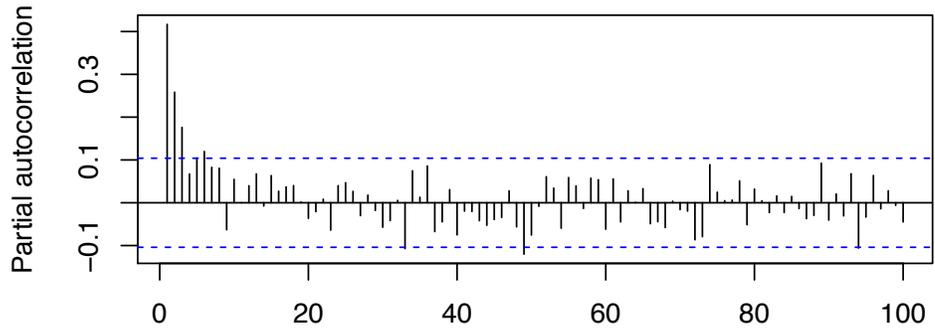


Figure C.2: Partial autocorrelation in time-series of average bribes extorted by bureaucrats in democracies. Dotted horizontal lines represent 95% confidence interval.

Burkina Faso



Togo

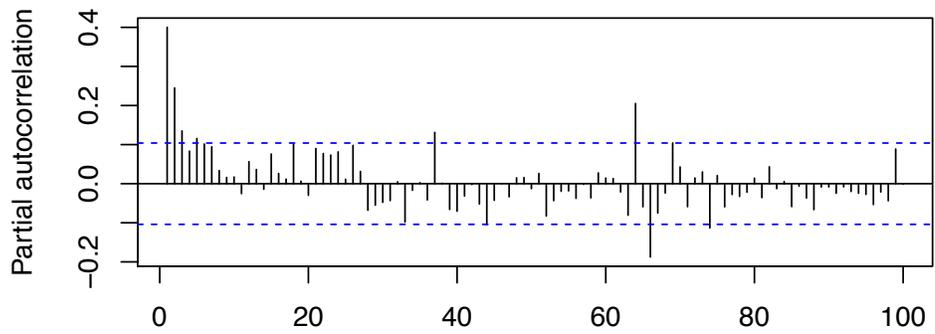


Figure C.3: Partial autocorrelation in time-series of average bribes extorted by bureaucrats in autocracies. Dotted horizontal lines represent 95% confidence interval.