Reversal of Fortune for Political Incumbents after Oil Shocks

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Abstract

This paper explores the effect of oil shocks on electoral outcomes. Using a new polling and election dataset for 207 elections across 50 democracies, we show that oil price increases systematically lower the odds of reelection for incumbents. We verify that these shocks—which reduce consumption growth—are associated with worsening performance for incumbents in the run-up to reelection and a reversal in the leaning of the political party in power post-election.

1. **Introduction**

The increase in gasoline prices stemming from the oil crisis overshadowed the United States presidential debate of October 1980. Ronald Reagan and then President Jimmy Carter were going head to head in the election. Carter's, the incumbent's, loss that year coincided with a peak in oil prices. Other modern US presidential incumbents – for example, Presidents Ford and Bush Sr - also lost their reelection bids following oil price spikes. This anecdotal evidence points to a broader question about the role of exogenous shocks in determining electoral outcomes.

This paper explores the effect of oil price shocks on the odds of reelection of political incumbents. We use a novel dataset of 207 elections in 50 democracies. In addition to the 207 elections, our dataset includes polling data in the run-up to elections. The polling data allows us to explore the effect of exogenous shocks prior to elections. Depending on the political system, the dataset includes elections of the chief executive in parliamentary or presidential systems. As large oil imports leave a country vulnerable to changes in crude oil prices, we rely on these prices as an exogenous source of variation in terms of trade. The shock consists of two components, namely the change in international crude oil prices and the exposure of a country to crude oil imports.

The results show that an increase in oil prices one year prior to election significantly reduces the odds of reelection for the incumbent party. In our sample, the average crude oil price shock is respectively 0.25 percent for elections when the incumbent party loses, and -0.55 percent when the incumbent party wins. This pattern suggests that a negative terms of trade shock associated with rising oil prices could contribute to the change in political fortune for incumbents.

Since most countries in our sample are oil importers, an increase in crude oil prices would reduce the purchasing power of the population, consistent with Hamilton (2003) and Blanchard and Gali (2009). An increase in oil prices is found to reduce consumption growth and hurt the chances of incumbent reelection one year later. Both right-wing and left-wing incumbent parties are likely to lose elections following a crude oil price increase. We verify that the winning parties are more likely to belong to the opposite end of the political spectrum. In other words, following an oil price increase, a left-leaning incumbent party is more likely to be replaced by a right-leaning party and vice versa.

The results remain robust to a variety of checks and alternative specifications. Results from polling data also reinforce our main findings. We use data from multiple polls prior to a general election, which are aggregated to construct a monthly series. We find that for each election, fluctuations in oil prices 12 months before the polls shift the standing of the incumbent party. Our results survive when we control for voter turnout, pre-determined elections, other macro variables, and different lag structure for oil shocks.

This research is related to a large public choice literature suggesting that voters act rationally. Voters favor candidates who are expected to deliver the highest "monetary return" (Buchanan and Tullock 1962). Downs (1957) and Hinich and Munger (1994) argue that in addition to self-interest, ideology, culture, and moral codes also drive the behavior of voters. However, the empirical support for the role of ideology is mixed (see Degan and Merlo, 2009). Using US election data, Henry and Mourifie (2013) empirically reject that ideological bias. Our findings also suggest that citizens on average seem to vote without a clear ideological pattern in response to exogenous shocks.

Our findings are consistent with the literature investigating exogenous shocks on electoral outcomes. A number of papers examine the effects of natural disasters or other shocks originating outside of the local economy on elections (see, for example, Abney and Hill (1966); Achen and Bartels (2004, 2017); Cole et al. (2012); Gasper and Reeves (2011); Healy and Malhotra (2010); Healy et al. (2010) and Wang and Berdiev (2015)). A consistent finding is that the incumbents' electoral fortunes do suffer following such shocks.

Finally, our paper is related to the political business cycle literature that examines how voters respond to economic conditions. This literature, dating back to Nordhaus (1975), conventionally assumes voters to be myopic (i.e. they focus only on economic outcomes in election years as in Wlezien (2015)). The effect of growth on re-election prospects was found to be insignificant in most cross-section studies in developed countries, with the US being an exception (see Brender and Drazen (2008) for a summary, and Alesina and Rosenthal (1995) for the US). Alesina et al. (1997), however, provide evidence that other OECD countries behave similarly to the United States.

The remainder of the paper is as follows. Section 2 presents the data. Section 3 shows the main results. Section 4 presents several robustness checks. Section 5 concludes.

2. The Data

Our analysis draws on two main datasets. The first covers election polls and outcomes for 207 elections across 50 countries worldwide over the period 1980-2020. Only elections with available polling data are included. On average, each country has four elections. There are 149 parliamentary and 58 presidential elections. The list of countries and the number of elections in each country by year are presented in Online Appendix Table OA1 and Online Appendix Figure OA1. Most of the elections in our dataset are for recent years. The polling data originate from multiple polling agencies for each country. Official election results are available from multiple sources. For each election, voting intentions by political party (i.e. polls) are gathered, alongside election outcomes.[1] It is important to consider the political party rather than individual outcomes considering term limits could create mechanical turnover of individuals. Countries for which polling data are not available are not included in our dataset. In total, the dataset has over 13,333 polling observations, which are aggregated into 2,552 election-month polling observations for the incumbent party. Hence, on average, each election has about 12 election-month polling observations.

In addition to voter intentions, we include data on several additional election characteristics. First, an indicator variable is created to denote elections where the incumbent party remains in power following the election. This variable is at the party-level, and therefore term limits will not affect the outcome. For example, consider the 1988 US Presidential Election. George H.W. Bush was elected president, after Ronald Reagan served two terms. Since the Republican party remained in power, we treat that episode as the incumbent staying in power.

In cases of political coalitions, where multiple parties form the government, our measure of incumbency considers the political party of the chief executive. Second, we collect data on the

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[1] In some polls, respondents are allowed to answer election questions with "Don't Know" or "Not Sure". This will mechanically make voting intentions incompatible with the final election outcomes. In such cases, we drop the extraneous responses, and rescale the polls, considering only respondents who have selected a political data.

name of the political party incumbent, and the political party which wins the election. With that data, the political orientation of the incumbents and election winners are calculated based on party orientation.

For the majority of elections and parties, data on left-right orientation are taken from the ParlGov Party Database (Döring and Manow, 2019). These data rate political leaning of parties on a 10-point scale from left-wing to right-wing. We treat parties with a score below 5 as left-wing. Since the ParlGov data cover only Europe, data on parties outside Europe are collected using online sources. Of the 207 elections in our main sample, there are 91 left-wing incumbents and 116 right-wing incumbents. Separately, there are 82 left-wing election winners, and 125 right-wing election winners. Finally, voter turnout data are collected, as well as an indicator for whether voting is compulsory for a given election. Most of the data are from the IDEA Voter Turnout Database; any gaps are supplemented using online sources.

The main source of shock is based on changes in international oil prices, weighted by the average country-specific oil import values. International oil prices are obtained from the World Bank "Pink Sheet" data. That data contains real and nominal crude oil prices; both series are used in our analysis. Data on the value of oil imports and GDP in US dollars are obtained from the IMF's World Economic Outlook. The country-year weights are constructed by taking three-year rolling averages of oil imports to GDP. Combining these weights with oil prices, our main index is constructed as:

$$\Delta \log(Crude\ Oil\ Index)_{i,t} = \Delta\big[\log(Crude\ Oil\ Price)_t\ \Omega_{i,Oil,t}\big]$$

Where weights are calculated as:

$$\Omega_{i,Oil,t} = \frac{1}{3}\left[\left(\frac{Oil\_Import}{GDP}\right)_{t-1} + \left(\frac{Oil\_Import}{GDP}\right)_{t-2} + \left(\frac{Oil\_Import}{GDP}\right)_{t-3}\right]$$

For robustness, we also construct five-year rolling weights.

The last data source is the Commodity Terms of Trade Database introduced in Gruss and Kebhaj (2019). These data consist of country-specific commodity price indices, based on a set of 45 individual commodities. The formula for the gross import price index is:

$$\Delta \log(Import\ ComPI)_{i,t} = \sum_{j=1}^{J} \Delta P_{j,t}\Omega_{i,j,t}$$

In the above specification, $P_{j,t}$ refers to the logarithm of the real price of commodity j in time period t. $\Omega_{i,j,t}$ denote the commodity-country-specific weights by which the prices are weighted. The country specific weights are based on the ratio of gross imports to GDP. We use a moving average of the last three years before t to construct $\Omega_{i,j,t}$.

Online Appendix Table OA2 provides summary statistics for the key variables. For an average election, the average oil shock in real terms is 0.16 percent, and 0.14 percent in nominal terms. In 51 percent of the elections, the incumbent party wins the election.

3. Main Results

Our baseline specification is as follows:

$$1(IncumbentStays)_{c,y} = \alpha_c + \beta_y + \mu\Delta \log(Crude\ Oil\ Index)_{c,y-1} + \epsilon_{c,t} \quad (1)$$

where c is for country, y is for year. $1(IncumbentStays)_{c,y}$ takes the value of 1 if the incumbent party wins the election. $\Delta \log(Crude\ Oil\ Index)_{c,y-1}$ captures an oil shock one year ago. α_c and β_y are country and time fixed effects.

Similarly, for the polls, our specification takes the form

$$Voting\_Intention\_Incumbent_{i,m} = \alpha_i + \beta_m + \mu\Delta \log(Crude\ Oil\ Index)_{i,m-12} + \epsilon_{i,m}$$

where i is for election, m is for month. $Voting\_Intention\_Incumbent_{i,m}$ takes the value of 1 if the incumbent party is predicted to win the election. $\Delta \log(Crude\ Oil\ Index)_{i,m-12}$ captures the country specific change in crude oil price index over the last 12 months. α_i and β_m are election and month fixed effects.

Table 1 shows that an increase in crude oil prices in the previous year systematically and negatively affects the reelection chance of the incumbent party. A 0.1% increase in crude oil index reduces the reelection chance by 0.5 to 0.8 percentage points depending on the specification. This is quantitatively large given that the average crude oil shock is -0.16 percent. Online Appendix Figure OA2 shows the binned scatter plot of column (1) of Table 1. The relationship is robust.

To address the concern of potential term limits for individual politicians, incumbency is defined at the party-level, as aforementioned. Hence, an incumbent is considered winning the reelection even if another member of the party wins the election. An incumbent is considered losing the reelection when a member of a different party wins the election.

Table 1: Changes in Crude Oil Prices and Electoral Turnover

	(1)	(2)	(3)	(4)
Dependent variable:		=1 Incumbent Stays		
Oil Shock Specification:	3-Year MA		5-Year MA	
Real Oil Shock$_{t-1}$	-5.875*** (2.125)		-7.832** (3.383)	
Nominal Oil Shock$_{t-1}$		-5.450** (2.057)		-7.101** (3.379)
Year FE	✓	✓	✓	✓
Country FE	✓	✓	✓	✓
R2	0.451	0.450	0.441	0.440
Mean Dependent Variable	0.511	0.511	0.511	0.511
Number of Elections	184	184	182	182
Number of Countries	47	47	47	47

Note: In columns (1) and (2), oil import exposure is the 3-year rolling average, from t-3 to t-1, of oil imports as a share of GDP. In columns (3) and (4), oil import exposure is the 5-year rolling average, from t-5 to t-1, of oil imports as a share of GDP. In the first row, international crude oil prices are in real terms. In the second row, international crude oil prices are in nominal terms. Standard errors are reported in parentheses, (*** $p<0.01$, ** $p<0.05$, *$p<0.1$).

Oil price shocks reduce consumption growth, suggesting one potential mechanism through which oil shocks affect voting behavior. Table 2 shows the regression results using data on per capita final consumption by household and non-profit institutions serving households from the World Bank. The results suggest that oil shocks in the previous period have a significant negative effect on private consumption in the current year. This reduction could provide an explanation for why voters react so strongly against incumbents in upcoming elections. Interestingly, lagged oil shocks do not have a significant effect on GDP growth (reported in Online Appendix Table OA3).

Table 2: Oil Shocks and Final Consumption Growth

	(1)	(2)
Dependent variable:	$\Delta \ln(\text{Final Consumption})_{t-1}$	
Oil Shock Specification:	3-Year MA	
Real Oil Shock$_{t-1}$	-0.362**	
	(0.153)	
Real Oil Shock$_{t-2}$	0.318	
	(0.204)	
Real Oil Shock$_{t-3}$	-0.100	
	(0.215)	
Nominal Oil Shock$_{t-1}$		-0.321**
		(0.135)
Nominal Oil Shock$_{t-2}$		0.295
		(0.189)
Nominal Oil Shock$_{t-3}$		-0.120
		(0.202)
Year FE	✓	✓
Country FE	✓	✓
R2	0.567	0.565
Mean Dependent Variable	0.019	0.019
Number of Elections	179	179
Number of Countries	46	46

Note: In columns (1) and (2), oil import exposure is the 3-year rolling average, from t-3 to t-1, of oil imports as a share of GDP. Standard errors are reported in parentheses, (*** *p<0.01*, ** *p<0.05, *p<0.1*).

In Table 3, we test whether the results we present in Table 1 are driven by the political orientation of the incumbent. We define two types of political orientation: left wing (LF) and right-wing (RW). It is noteworthy that the interaction terms between oil shock and the political orientation of incumbents are both statistically insignificant. This result implies that incumbents irrespective of their political orientation are vulnerable to oil shocks.

A crude oil shock is not only more likely to cause electoral turnover, but it may also cause a reversal in political leaning. In Table 4, we use indicators for different types of ideological transitions to test for these transitions. A transition is defined as any instance where the incumbent and election winners have a different ideology. All columns in Table 4 show that oil shocks cause a reversal in political orientation. A 0.1 percent increase in oil price shock leads to a 0.55 to 0.7 percentage points increase in the likelihood that the winning party belongs to the other end of the political spectrum. In other words, following an oil price increase, a left-leaning incumbent party is more likely to be replaced by a right-leaning party and vice versa. It is as if voters punish the incumbent party and would like a wholesale change in political orientations.

Table 3: Oil Shocks and Turnover by Incumbent's Political Orientation

Dependent variable:	(1)	(2)	(3)	(4)
Oil Shock Specification:		=1 Incumbent Stays		
	3-Year MA		5-Year MA	
=1 Incumbent Left Wing	-0.095	-0.098	-0.134**	-0.134**
	(0.059)	(0.059)	(0.059)	(0.058)
Real Oil Shock$_{t-1}$	-8.587***		-12.196**	
	(2.696)		(5.521)	
Nominal Oil Shock$_{t-1}$		-8.024***		-10.994*
		(2.714)		(5.609)
Real Oil Shock$_{t-1}$ X LW Incumbent	5.648		7.358	
	(3.606)		(5.918)	
Nominal Oil Shock$_{t-1}$ X LW Incumbent		5.447		6.911
		(3.549)		(5.854)
Country FE	✓	✓	✓	✓
Year FE	✓	✓	✓	✓
R2	0.472	0.470	0.460	0.459
Mean Dependent Variable	0.511	0.511	0.511	0.511
Number of Elections	184	184	182	182
Number of Countries	47	47	47	47

Note: In columns (1) and (2), oil import exposure is the 3-year rolling average, from t-3 to t-1, of oil imports as a share of GDP. In columns (3) and (4), oil import exposure is the 5-year rolling average, from t-5 to t-1, of oil imports as a share of GDP. Standard errors are reported in parentheses, (*** $p<0.01$, ** $p<0.05$, *$p<0.1$). Political orientation is constrained to left-wing (LW) and right-wing (RW) political parties.

Table 4: Reversal of political orientation

Dependent variable:	(1)	(2)	(3)	(4)
Oil Shock Specification:		=1 Ideology Transition		
	3-Year MA		5-Year MA	
Real Oil Shock$_{t-1}$	6.020***		7.093**	
	(2.098)		(3.471)	
Nominal Oil Shock$_{t-1}$		5.595***		6.495*
		(2.025)		(3.374)
Country FE	✓	✓	✓	✓
Year FE	✓	✓	✓	✓
R2	0.437	0.436	0.425	0.424
Mean Dependent Variable	0.375	0.375	0.374	0.374
Number of Elections	184	184	182	182
Number of Countries	47	47	47	47

Note: In columns (1) and (2), oil import exposure is the 3-year rolling average, from t-3 to t-1, of oil imports as a share of GDP. In columns (3) and (4), oil import exposure is the 5-year rolling average, from t-5 to t-1, of oil imports as a share of GDP. Standard errors are reported in parentheses, (*** p<0.01, ** p<0.05, *p<0.1). Ideology transition takes the value of 1 if a right-wing incumbent party is replaced by a left-wing party and vice versa.

Panel A of Table 5 shows that when the contemporaneous effect and annual lags of oil shocks are used, the one-year lag is the only one that causes significant electoral turnover. Panel B confirms this finding. It further suggests that when different quarterly lags are used (up to 8 quarters before the elections), only oil shocks 4 and 5 quarters before elections are statistically significantly correlated with the change of power. This period may best coincide with the electoral cycle, though further research is needed to ascertain this hypothesis. The magnitude is also much larger than that of the annual lags. For example, a 0.1% increase in crude oil index 4 quarters before an election reduces the reelection chance by 2 to 2.7 percentage points.

Table 5: Oil Shocks With Lags

Panel A: Annual Lags

Dependent variable:	(1)	(2)
	=1 Incumbent Stays	
Oil Shock Specification:	Real Shock	Nominal Shock
Oil Shock$_t$	-1.670	-2.106
	(3.183)	(2.780)
Oil Shock$_{t-1}$	-7.168**	-6.036**
	(3.060)	(2.898)
Oil Shock$_{t-2}$	4.941	4.106
	(4.754)	(4.343)
Oil Shock$_{t-3}$	-6.539	-6.577
	(4.929)	(4.246)
Country FE	✓	✓
Year FE	✓	✓
R2	0.461	0.461
Mean Dependent Variable	0.511	0.511
Number of Elections	182	182
Number of Countries	47	47

Note: Oil shocks calculated using international crude oil prices weighted by 3-year rolling windows of oil import to GDP value for each country. Annual lags are included. For example, Oil Shock$_{t-1}$ is Crude Oil Shocks one year before the election. Standard errors are reported in parentheses, stars indicate *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Panel B: Quarterly Lags

Dependent variable:	(1)	(2)
	=1 Incumbent Stays	
Oil Shock Specification:	3-Year MA	5-Year MA
Oil Shock$_t$	-0.076	-3.689
	(7.868)	(7.683)
Oil Shock$_{t-1}$	-0.363	-1.537
	(7.436)	(12.977)
Oil Shock$_{t-2}$	14.077	11.928
	(8.451)	(8.307)
Oil Shock$_{t-3}$	-3.118	-1.777
	(4.937)	(8.478)
Oil Shock$_{t-4}$	-26.788***	-19.942**
	(8.949)	(9.145)
Oil Shock$_{t-5}$	-11.004***	-2.014
	(4.030)	(7.609)
Oil Shock$_{t-6}$	-3.108	7.257
	(3.622)	(5.349)
Oil Shock$_{t-7}$	3.129	1.838
	(6.407)	(6.890)
Oil Shock$_{t-8}$	4.047	5.388
	(4.663)	(7.150)
Country FE	✓	✓
Quarter FE	✓	✓
R2	0.730	0.697
Mean Dependent Variable	0.510	0.503
Observations	151	149
Number of Elections	43	43

Note: Oil shocks calculated using international crude oil prices weighted by 3-year rolling windows of oil import to GDP value for each country. Quarterly lags are included. For example, Oil Shock$_{t-1}$ is Crude Oil Shocks one quarter before the election. Standard errors are reported in parentheses, stars indicate *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

4. Robustness checks

Our baseline results survive a battery of robustness checks. First, the polling data analyses yield similar results (Online Appendix Table OA4). A 0.1% increase in the crude oil index 12 months ago reduces voter's intention to reelect incumbent party by 2.2 to 5.9 percentage points. The effect in polls is much larger than the magnitude of election outcomes presented in Table 1. The fluctuations in oil prices shift the political fortunes of the incumbent party.

The results are robust to controlling for the change of the import commodity index, consisting of 45 import commodities including oil (see Gruss and Kebhaj, 2019). Appendix Table OA5 shows that the coefficients of oil shocks remain statistically significant even when the change of the import commodity index is included, suggesting that oil shocks are the main driver of our result.

When controlling for voter turnout and compulsory voting in elections, the baseline results remain qualitatively and quantitatively similar (Online Appendix Table OA6). Furthermore, Table OA6 also controls for whether the election is a snap election or predetermined. This test addresses the concern that the timing of an election could be influenced by oil price movements.

The results are robust to dropping large countries that could arguably influence oil prices (Online Appendix Table OA7). Online Appendix Table OA8 shows that oil shocks still sway electoral outcomes even when other macro variables at current year and one -year prior are controlled for, namely GDP growth, inflation and unemployment rate. Online Appendix Table OA9 shows that the results are also robust when we control for changes in copper prices, arguably a proxy for global demand shocks (see Hamilton 2015).

Finally, Online Appendix Table OA10 tests for non-linear effects of oil shocks, as it is possible that larger oil shocks could have disproportionately larger impacts on electoral outcomes. However, the quadratic term of oil shocks is not significant, suggesting an absence of non-linear effects.

5. Conclusion

We examine the effect of oil shocks on electoral outcomes. The results show that oil price increases systematically lower the odds of reelection for incumbents. We verify that these shocks—which are found to reduce consumption growth—are associated with worsening polling performance for incumbents in the run-up to reelection and a reversal in the leaning of the political party in power.

The systematic nature of the bias against the incumbent irrespective of political leaning suggests a rejection of the often-argued voting patterns on the basis of ideology. However, our results are broadly consistent with the traditional assumption in the political business cycle literature of voter myopia.

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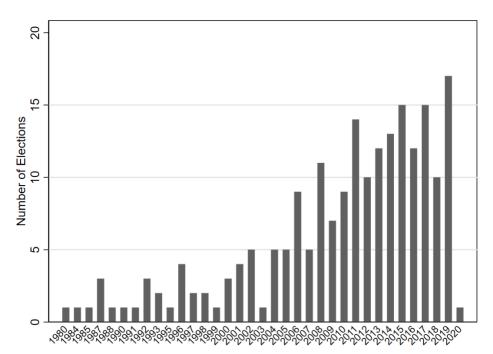
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Online Appendix for

Reversal of Fortune for Political Incumbents:
Evidence from Oil Shocks

Our analysis draws on two main datasets. The first covers election polls and outcomes for 207 elections across 50 countries worldwide over the period 1980-2020. On average, each country has four elections. There are 149 parliamentary and 58 presidential elections. The list of countries and the number of elections in each country by year are presented in the Table OA1 and Figure OA1.

Table OA2 provides summary statistics for the key variables. For an average election, the average oil shock in real terms is 0.16 percent, and 0.14 percent in nominal terms. In 51 percent of the elections, the incumbent party wins the election.

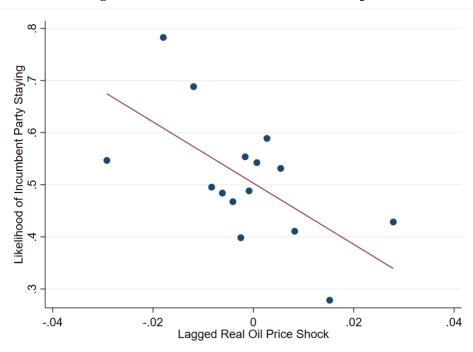**Figure OA1: Number of Elections by Year**

Table OA1: Election and Polling Data by Country

Country	Number of Elections
argentina	4
australia	12
austria	5
belgium	1
brazil	2
bulgaria	4
canada	5
chile	3
colombia	4
croatia	3
cyprus	3
czech republic	8
denmark	3
ecuador	4
estonia	2
finland	3
france	4
germany	4
greece	5
hungary	4
iceland	4
india	2
ireland	2
italy	3
japan	3
korea, republic of	2
malta	2
mexico	1
netherlands	2
new zealand	6
norway	3
paraguay	2
peru	4
philippines	3
poland	8
portugal	11
romania	3
russian federation	6
serbia	3
slovakia	3
slovenia	4
south africa	2
spain	8
sweden	4
switzerland	3
taiwan, province of china	4
turkey	5
united kingdom	9
united states	10
uruguay	2
Total	207

Table OA2: Summary Statistics for Main Variables

Variable	Count	Mean	Standard Deviation	25 Pctile	50 Pctile	75 Pctile
Real Oil Shock	198|	-.001638	.0252184	-.0144295	.0008879	.0100226
Nominal Oil Shock	198	-.0014319	.0261631	-.0137416	.0011724	.0109492
$\Delta \ln(ComPI\ IM\ Rolling)$	202	-.0009198	.0145936	-.0051851	.0008016	.007443
Indicator: Incumbent Stays	207	.5120773	.5010659	0	1	1

Figure OA2 shows the binned scatter plot of column (1) of Table 1 in the paper. The scatterplot shows that the relationship between lagged oil price shocks the reelection chance of incumbent is robust.

Figure OA2: Partial Correlation Scatterplot

Note: Binned scatterplot with 15 equal-size bins. The full sample contains 207 elections. Year and country fixed effects are residualized to produce the figure.

Table OA3 shows that lagged oil shocks do not have a significant effect on GDP growth.

Table OA3: Oil Shocks and GDP Growth

	(1)	(2)
Dependent variable:	GDP Growth (% Change)$_{t-1}$	
Oil Shock Specification:	3-Year MA	
Real Oil Shock$_{t-1}$	2.909 (14.654)	
Real Oil Shock$_{t-2}$	-13.216 (19.550)	
Real Oil Shock$_{t-3}$	-1.034 (17.230)	
Nominal Oil Shock$_{t-1}$		6.918 (14.435)
Nominal Oil Shock$_{t-2}$		-14.896 (18.902)
Nominal Oil Shock$_{t-3}$		-3.562 (16.784)
Year FE	✓	✓
Country FE	✓	✓
R2	0.586	0.588
Mean Dependent Variable	2.714	2.714
Number of Elections	182	182
Number of Countries	47	47

Note: Oil shocks calculated using international crude oil prices weighted by 3-year rolling windows of oil import to GDP value for each country. Standard errors are reported in parentheses, (*** $p<0.01$, ** $p<0.05$, *$p<0.10$).

Our baseline results survive a battery of other robustness checks. First, the polling data analyses yield similar results (Table OA4). A 0.1% increase in the crude oil index 12 months ago reduces voter's intention to reelect incumbent party by 2.2 to 5.9 percentage points. That effect in polls is much larger than the magnitude of election outcomes presented in Table 1. The fluctuations in oil prices shift the political fortunes of the incumbent party.

The results are robust to controlling for the change of the import commodity index, consisting of prices of 45 import commodities, including oil (see Gruss and Kebhaj, 2019). Table OA5 shows that the coefficent of oil shocks remain highly significant even when aggregate import commodity shocks are included, suggesting that oil shocks are the main driver of our result.

When controlling for voter turnout and compulsory voting in elections, the baseline results remain qualitatively and quantitatively similar (Table OA6). Furthermore, Table OA6 also controls for whether the election is a snap election or predetermined. This test addresses the concern that the timing of an election could be influenced by oil price movements.

The results are robust to dropping large countries that could arguably influence oil prices (Table OA7). Table OA8 shows that oil shocks still sway electoral outcomes even when other macro variables at current year and one -year prior are controlled for, namely GDP growth, inflation and unemployment rate. Table OA9 shows that the results are also robust when we control for changes in copper prices, arguably a proxy for global demand shocks.

Finally, Table OA10 tests for non-linear effects of oil shocks, as it is possible that larger oil shocks could have disproportionately larger impacts on electoral outcomes. However, the quadratic term of oil shocks is not significant, suggesting an absence of non-linear effects.

Table OA4: Oil Shocks and Polling

Dependent variable: Oil Shock Specification:	(1)	(2)	(3)	(4)
	Voting Intention for Incumbent			
	3-Year MA		5-Year MA	
Oil Shock$_{t-12}$	-49.155** (22.177)	-21.760** (9.948)	-59.152* (32.661)	-28.926* (14.711)
Month FE	✓	✓	✓	✓
Country FE	✓		✓	
Election FE		✓		✓
R2	0.710	0.936	0.709	0.935
Mean Dependent Variable	33.721	33.721	33.641	33.641
Observations	2,354	2,354	2,331	2,331
Number of Elections	189	189	187	187

Note: Voting intention captures the percentage of voters intending to vote for the incumbent party. In columns (1) and (2), oil import exposure is the 3-year rolling average, from t-3 to t-1, of oil imports as a share of GDP. In columns (3) and (4), oil import exposure is the 5-year rolling average, from t-5 to t-1, of oil imports as a share of GDP. Standard errors are reported in parentheses, (*** p<0.01, ** p<0.05, *p<0.10). The poll sample includes the actual elections as well.

Table OA5: Oil Shocks, Change in Import Commodity Index and Electoral Outcomes

Dependent variable: Oil Shock Specification:	(1)	(2)	(3)	(4)
	=1 Incumbent Stays			
	3-Year MA		5-Year MA	
Real Oil Shock$_{t-1}$	-5.003** (2.405)		-8.138** (3.106)	
Nominal Oil Shock$_{t-1}$		-4.707** (2.314)		-7.610** (2.991)
$\Delta \ln$ (ComPI Import Rolling)$_{t-1}$	-7.565 (5.474)	-7.294 (5.542)	-7.128 (5.113)	-6.536 (5.164)
Country FE	✓	✓	✓	✓
Year FE	✓	✓	✓	✓
R2	0.467	0.466	0.464	0.463
Mean Dependent Variable	0.514	0.514	0.514	0.514
Number of Elections	181	181	179	179
Number of Countries	46	46	46	46

Note: *ComPI IM Rolling* captures gross import commodity price index with a 3-year moving average share $\Omega_{i,j,t}$ across years. Standard errors are reported in parentheses, (*** p<0.01, ** p<0.05, *p<0.1).

Table OA6: Election Characteristics

Dependent variable: Estimation:	(1)	(2)	(3)	(4)
	=1 Incumbent Stays			
	OLS			
Real Oil Shock$_{t-1}$	-5.875*** (2.125)	-5.922*** (2.095)	-5.828*** (2.088)	-5.897*** (2.144)
Voter Turnout		-0.005 (0.006)		
=1 Compulsory Voting Election			0.051 (0.325)	
=1 Snap Election				-0.046 (0.096)
Country FE	✓	✓	✓	✓
Year FE	✓	✓	✓	✓
R2	0.451	0.453	0.451	0.452
Mean Dependent Variable	0.511	0.511	0.511	0.511
Number of Elections	184	184	184	184
Number of Countries	47	47	47	47

Note: Oil shocks calculated using international crude oil prices weighted by 3-year rolling windows of oil import to GDP value for each country. Standard errors are reported in parentheses, (*** p<0.01, ** p<0.05, *p<0.10).

Table OA7: Oil Shocks and Electoral Turnover (without large countries)

Dependent variable: Estimation: Sample:	(1)	(2)	(3)	(4)	(5)
	=1 Incumbent Stays				
	OLS				
	Drop USA	Drop DEU	Drop GBR	Drop FRA	Drop All 4
Real Oil Shock$_{t-1}$	-5.465** (2.153)	-5.919** (2.209)	-5.774** (2.188)	-6.228*** (2.194)	-5.929** (2.408)
Country FE	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓
R2	0.468	0.458	0.446	0.463	0.481
Mean Dependent Variable	0.514	0.506	0.497	0.511	0.494
Number of Elections	175	180	175	180	160
Number of Countries	46	46	46	46	43

Note: Oil shocks calculated using international crude oil prices weighted by 3-year rolling windows of oil import to GDP value for each country. Standard errors are reported in parentheses, stars indicate *** p < 0.01, ** p < 0.05, * p < 0.10.

Table OA8: Oil Shocks and Macro Covariates

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dependent variable:				=1 Incumbent Stays			
Estimation:				OLS			
Real Oil Shock$_{t-1}$	-5.875*** (2.125)	-5.310** (2.332)	-5.606** (2.252)	-5.983*** (2.149)	-5.795*** (2.134)	-5.184** (2.273)	-4.555* (2.398)
GDP Growth$_t$		0.042* (0.023)					
GDP Growth$_{t-1}$			0.046*** (0.012)				
Inflation$_t$				-0.018* (0.010)			
Inflation$_{t-1}$					-0.003 (0.006)		
Δ(Unemployment Rate)$_t$						-0.075* (0.039)	
Δ(Unemployment Rate)$_{t-1}$							-0.091** (0.038)
Country FE	✓	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓	✓
R2	0.451	0.468	0.484	0.460	0.451	0.467	0.476
Mean Dependent Variable	0.511	0.511	0.511	0.514	0.514	0.511	0.511
Number of Elections	184	184	184	183	183	182	182
Number of Countries	47	47	47	47	47	46	46

Notes: Oil shocks calculated using international crude oil prices weighted by 3-year rolling windows of oil import to GDP value for each country. Standard errors are reported in parentheses, stars indicate *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Table OA9: Oil Shocks and Changes in Copper Price

	(1)	(2)	(3)	(4)
Dependent variable:		=1 Incumbent Stays		
Oil Shock Specification:	3-Year MA		5-Year MA	
Real Oil Shock$_{t-1}$	-3.660*** (1.201)		-6.484*** (2.204)	
Nominal Oil Shock$_{t-1}$		-3.242*** (1.186)		-5.366** (2.160)
$\Delta \ln$(Copper Price)	-0.354* (0.180)	-0.348* (0.179)	-0.302* (0.174)	-0.305* (0.174)
Country FE	✓	✓	✓	✓
R2	0.355	0.352	0.359	0.353
Mean Dependent Variable	0.515	0.515	0.518	0.518
Number of Elections	194	194	191	191
Number of Countries	47	47	47	47

Notes: Oil shocks calculated using international crude oil prices weighted by 3-year rolling windows of oil import to GDP value for each country. Standard errors are reported in parentheses, stars indicate *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Table OA10 tests for non-linear effects of oil shocks, as it is possible that larger oil shocks could have disproportionately larger impacts on electoral outcomes. However, the quadratic term of oil shocks is not significant, suggesting an absence of non-linear effects.

Table OA10: Non-linear Effects of Oil Shocks

	(1)	(2)	(3)	(4)
Dependent variable:		=1 Incumbent Stays		
Oil Shock Specification:	3-Year MA		5-Year MA	
Real Oil Shock$_{t-1}$	-4.932**		-7.698**	
	(2.327)		(3.537)	
Real Oil Shock$^2_{t-1}$	48.126		94.995	
	(30.935)		(119.447)	
Nominal Oil Shock$_{t-1}$		-4.593**		-7.154*
		(2.263)		(3.601)
Nominal Oil Shock$^2_{t-1}$		42.566		108.084
		(27.056)		(104.200)
Year FE	✓	✓	✓	✓
Country FE	✓	✓	✓	✓
R2	0.457	0.455	0.444	0.444
Mean Dependent Variable	0.511	0.511	0.511	0.511
Number of Elections	184	184	182	182
Number of Countries	47	47	47	47

Notes: Oil shocks calculated using international crude oil prices weighted by 3-year rolling windows of oil import to GDP value for each country. Standard errors are reported in parentheses, stars indicate *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.