Oil Discoveries and Political Windfalls: Evidence on Presidential Support in Uganda

Supplementary Appendices

Appendices

A Election Data Construction

The data described here are utilized first by Zhou and Grossman (2021). The study's unit of analysis is a parish. Parishes in Uganda are comprised of several nearby villages (median 5 villages per parish with SD=5.5) and they constitute an official administrative unit (local council-2 or LC2, villages are considered the lowest administrative unit, or LC1). In the past two decades, Uganda has experienced substantial proliferation of administrative units (Grossman and Lewis, 2014). According to the National Population and Housing Census Report (2016), the number of parishes increased from 5,238 in 2002 to 7,241 in 2014. As Table 1 makes clear, splits that (mechanically) increase in the number of administrative units took place at all level of local governments.

	Census Year			
Level of Administrative unit	1969	1991	2002	2014
District	21	38	56	112
County	111	163	163	181
Sub-county	594	884	958	1,382
Parish	3,141	4,636	5,238	7,241

Table 1: Number of Administrative Units by Census, 1969 – 2014

The proliferation of administrative units means that administrative boundaries have changed quite dramatically over the study period. In order to ensure that results across years represent a treatment and not a compositional effect, we had to keep parish boundaries, our unit of analysis, constant across years (2001, 2006, 2011, 2016). In other words, our first key task was to match and standardize parishes across years and datasets (census data, electoral data, schools and health facilities data, nightlight data, etc.). We note that this exercise has not been undertaken previously by scholars, and as such, we view it as one of the key contributions of our study.

We set our baseline parish boundaries to 2001, based on the mapping exercise of Uganda's Bureau of Statistics (UBoS) in preparation for the 2002 census. In other words, 2001 is the benchmark year we selected for all longitudinal empirical analysis for the purpose of boundary consistency. In order to map administrative unit boundaries across years, we used publicly available shapefiles, electoral data, and more limited crosswalks generated by other scholars. In more details, we considered 2006 parishes to be the same with 2002's and matched directly to 2002's mainly relying on string-based general matching methods (discussed in Section A.1). We generated a 2016-to-2002 crosswalk for mapping 2016 parishes to 2002's (discussed in Section A.1.1). Another crosswalk which maps 2011 parishes to 2016's (discussed in Section A.1.2) was also generated in converting 2011 parishes to 2016's first and subsequently to 2002's parishes.

Another key challenge stands in the way of making use of these crosswalks. Names and boundaries of different admin levels (district, county, sub-county, parish) are inconsistent across different datasets, even in the same year. For example, some administrative unit names in the 2016 electoral data are quite different than admin unit names we have in 2016-to-2002 crosswalk where the 2016 admin names come from Uganda's 2016 shapefiles.

Discrepancies are due to either different formatting, minor variations in names used by UBoS and Uganda's Electoral Commission (EC), or mostly, typos (see Table 2 for examples of frequent inconsistencies). Thus, as a pre-processing step before using crosswalks, we reply on general matching methods again to first match different datasets (i.e, electoral data, health facility data, school data, etc.) to these crosswalks before they could be used to harmonize the unit of study.

Types	**Examples**
Typo	single character becomes double
	double characters become single
	(ch, c, k), (u, w, y, v), (th, t, s), (r, l)
Minor variation	(west, western), (central, center, centre)
	(town council, T.C., T/C)
	(A parish, A ward, A)
Different formating	- ; _ ; . ; ; /

Table 2: Matching problem: examples of inconsistencies

A.1 General matching methods

String matching we used string matching when identifying non-identical names that describe the same administrative unit across datasets. Instead of using regular expressions, we developed a fuzzy-match algorithm that recognizes matches with one-letter discrepancy for strings less than 6 letters (e.g. *Koboko* VS. *Kobooko*, *Ombachi* VS. *Ombaci*). Strings that have more letters were allowed a discrepancy of 2 letters such as *Bukokho* vs. *Bukhoko*, *Kyegegwa* vs. *Kyegeguua*. We applied fuzzy-match under a fairly strict structured environment, that is, all upper-level administrative names were required to be the same. For example, to increase matching precision, when harmonizing parish level names, we used fuzzy-match to examine parishes under the same district, county, and sub-county.

Upper/Lower-level unit tracing is applied when administrative units were aggregated with other units to form a higher-level unit or splinted into different lower-level units. For example, *Kalungu* District in 2011 was a county (also named *Kalungu*) in 2002. Note that villages (LC1s) are also included in this step as they are the lower-level for parishes (LC2s). Applied after string matching, this method first scrutinizes the nearest upper and lower-levels for identical administrative unit names. If failed, all lower level units are compared. If over 50% of the lower units match, the two localities are considered the same no matter how different their names are. For example, Parish A in district D, county C, and sub-county S in 2006 would be matched to parish B in 2002 if all 3 villages of parish A in 2006 appear as villages in parish B in 2002. Note that to apply this rule, parish B needs to also be in district D, county C, and sub-county S.

A.1.1 2016-to-2002 crosswalk

String matching had limited usage when matching 2016 parishes back to 2002, because parishes in 2016 had substantially redrawn boundaries compared to 2002 boundaries, even for

parishes with identical names. Comparing Uganda parish level shapefiles in 2002 and 2016, we found that only 559 parishes in 2002 kept the same boundaries in 2016. By contrast, 1,867 parishes in 2002 got splinted into 2,759 parishes in 2016, and 756 parishes were combined into 719 parishes in 2016. Moreover, the majority of 2002 parishes (2,194) got redistributed rather randomly into 3,464 2016 parishes. Again, this haphazard process made string matching impractical.

Thus, building on shapefiles from 2002 and 2016, we used another approach to map between 2016 and 2002 parishes – an overlapping area method. Specifically, we used the intersection toolkit in ArcGIS and adjusted parameters such that minor misalignment on the boundaries would be disregarded to eliminate potential issues introduced by shapefile digitization errors. Each of the parishes in 2016 was proportionally assigned to 2002 parishes based on the percentage of overlapping areas. Under an additional assumption of evenly distributed population, we were able to allocate electoral and census data that are in 2016 parish units to 2002 parishes. Take parish Aninata in 2016 as an example. According to the overlapping area calculated by ArcGIS, 22% of Aninata was in Atunga parish, and 78% was in Kanu parish in 2002. Therefore, if there were 101 votes in parish Aninata in 2016 election, we assumed that 22 belongs to Atunga and 78 to Kanu.

A.1.2 2011-to-2016 crosswalk

Parish distribution in 2011 is much closer to 2016 than 2002. Since we already constructed a (relatively) precise 2016-to-2002 crosswalk based on parish overlapping area boundaries as discussed above, generating a 2011-to-2016 crosswalk increased precision in mapping 2011 parishes back to 2002.

B Wealth Index Construction

Household socioeconomic status (SES) is an important control factor in our analysis. Given data availability challenges in low-income countries, research has devised various approaches for generating SES index using for example expenditure, income, or census microdata. Following a common practice of aggregating assets, utilities, dwelling characteristics, and other housing conditions into a single latent variable, we generated a wealth index using principal component analysis.

In constructing a parish-level wealth index, we use Uganda census data in 2002 and 2014. After recoding categorical variables in the 2002 census into dichotomous ones (e.g., roof or wall material), we aggregated each measure to the parish level as a share of population with a positive (== 1) response. The 2014 census data was already at parish level with variables that count the number of people in each response category. We further transformed the 2014 census counting integers into percentages as in 2002. With a crosswalk file of 2014-to-2016 parishes, 2014 census data was converted into 2016 parish units and subsequently converted into 2002 parish units using our 2016-to-2002 crosswalk. The following wealth proxy variables were successfully standardized across 2002 and 2014 census data: number of rooms, energy sources for cooking and for lightening, various drinking water, roof / wall /floor materials, and multiple types of household assets (such as mattress, computer, refrigerator, etc.).

We used Principal Component Analysis (PCA) to extract the latent wealth index from parish-level percentages. PCA generates linear combinations of the proxy variables by assigning weights based on each variable's contribution. It has been frequently used in reducing data dimensions and the first component it produces, by construction, explains the maximum amount of variance. In order to select the best set of indicators, we tested the cronbach's alpha for different variable combinations, individually for each year as well as polling the 2 years' data together. Although studies show that various composition of variables usually do not result in large difference, we found that variables regarding assets ownership and electricity utilities are the most inner-consistent and relevant according to cronbach's alpha (0.84). The first component is explaining the most (40 %) of the total variance.

To validate our wealth index, we tested the correlation between our wealth index and the wealth index estimated by WorldPop in 1km resolution as defined by the Multidimensional wealth index. The Pearson correlation is high (-0.55) and statistically significant.

C Heterogeneous Effects Specification

To ease analysis, we limit this analysis to the binary definition of our treatment variable. Following Hainmueller et al. (2019), we estimate heterogeneous effects using both a binning estimator and a semi-parametric kernel smoothing method. To bin our moderator, we break the continuous pre-treatment vote share moderator into three bins represented by dummy variables and interact these dummy variables with our difference-in-difference interaction term. We define our bins according to levels of historical support for the president. Conceptually, we consider all parishes where more than 60% voted for Museveni as being areas of high support where voters are loyal to the President, where 40-60% voted for him as medium support where there is more political competition, and where less than 40% voted for him as low support and strongly opposed to the President. Results are unchanged when breaking the moderator into three equally sized bins based on the distribution of support. When using equally sized bins, low support parishes are those where the president received less than 49.1% of the vote in 2006 and High support parishes are those where the president received more than 80.4% of the vote. The regression model takes the following form:

$$y_{it} = \eta_i + \gamma_t + \beta_1(\text{oil}_i \cdot \text{post}_t) + \beta_2(\text{bin1}_t \cdot \text{oil}_i \cdot \text{post}_t) + \beta_3(\text{bin2}_t \cdot \text{oil}_i \cdot \text{post}_t) + \beta_4(\text{post}_t \cdot \text{voteshare}_i) + \beta_5(\text{X}_i \cdot \text{post}_t) + \epsilon_{it}$$

We present these results graphically along with the average marginal effect of the oil discovery within each bin. Where space permits we present results for both binning strategies.

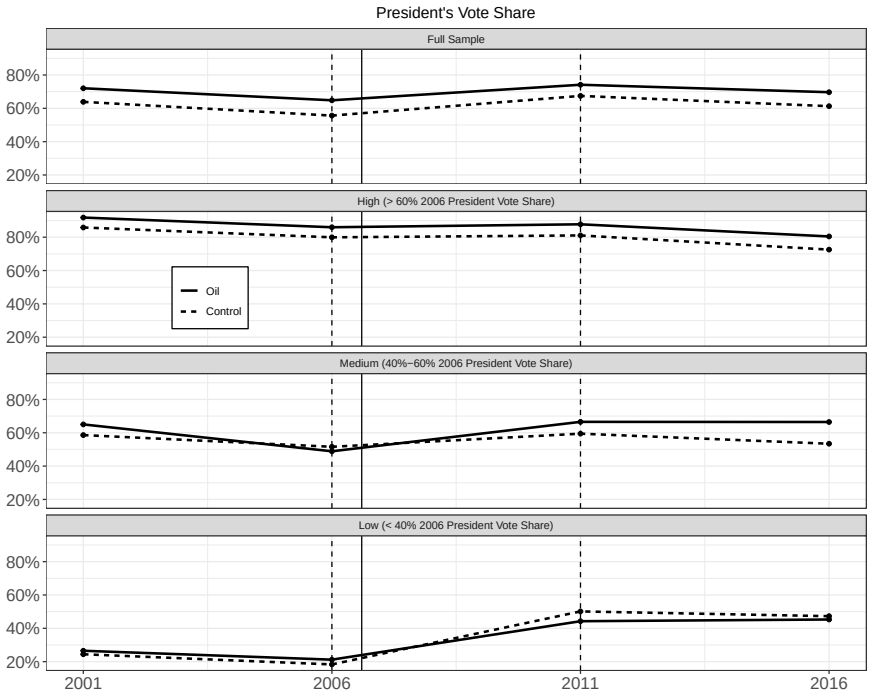
To estimate heterogeneous effects more flexibly, we use kernel density estimation to estimate the marginal effect of the oil discovery across the full range of the moderator. An optimal bandwidth for these varying-coefficient models is selected using 10-fold least-squares cross-validation and standard errors are produced by a non-parametric bootstrap. The regression model takes the following form:

$$\begin{aligned} y_{it} &= \eta_i + \gamma_t + f(\text{oil}_i \cdot \text{post}_t) + g(\text{post}_t \cdot \text{voteshare}_i) \\ &+ h(\text{post}_t \cdot \text{voteshare}_i^2) + i(\text{X}_i \cdot \text{post}_t) + \epsilon_{it} \end{aligned}$$

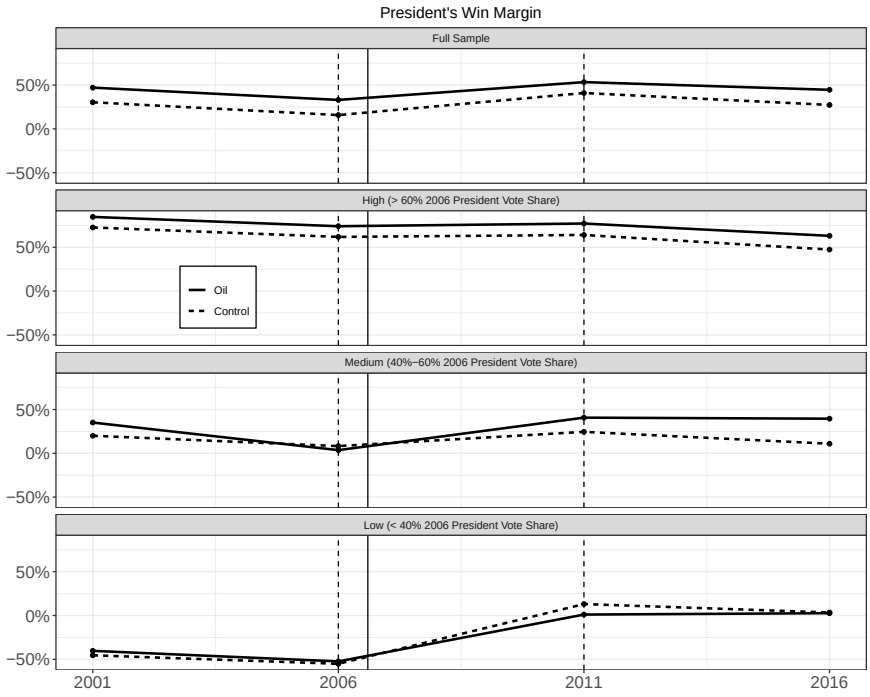
In this approach, each term in the model is estimated as a smooth function of the moderator. $f(\text{oil}_i \cdot \text{post}_t)$ captures the marginal effect of being within 100km of an oil discovery on the president's win margin across historical levels of support. As a final robustness test, we also estimate this relationship with a triple interaction by interacting the difference-in-differences interaction with the continuous vote share moderator and with its quadratic to allow for non-linearities. We note that while we aim to identify a causal effect of the oil discoveries, the conditioning variable *voteshare* is not itself causally identified. While the inclusion of fixed effects in our main specification controls for potential confounders, we also conduct robustness checks (described below) to address concerns about possible confounding.

D Model Assumptions and Parallel Trends

Causal inference in our estimation approach derives from the assumption that trends in incumbent support in oil and non-oil areas would have been the same in the absence of the oil discovery. In other words, within constituencies varying by their 2006 vote share, there would have been no divergence in incumbent support trends across oil versus non-oil constituencies had oil not been discovered. We present evidence to support the parallel trends assumption across oil and non-oil localities in general as well as within categories of political competitiveness.



(a) Vote Share



(b) Win Margin

Figure 1: Panels show trends in President Museveni's electoral support for the 2001, 2006, 2011, and 2016 elections across parishes with high, medium, and low levels of support in 2006. 'Oil' respondents are located in villages within 100km of the nearest oil discovery and control respondents are in villages 100–200km from the nearest discovery. Dashed vertical lines indicate the 2006 and 2011 general elections, which are the elections in our primary analysis. The solid vertical line indicates the month of the first reported oil discovery.

E Main Mechanism: Bargaining over the Benefits and Costs of Future Production

In this section, we investigate several potential mechanisms for our findings. Based on our knowledge of the case, our main mechanism of interest is citizen-leader interaction over the costs and benefits of future oil production. We thus look at the effects of oil discoveries on presidential promises of targeted benefits and heightened citizen expectations. We also check whether oil discoveries produced real increases in spending and public goods provision in advance of the arrival of oil revenue. In the next section we check a number of alternative possible mechanisms. The preponderance of our evidence suggests support for our main mechanism of interest.

E.1 Presidential Promises and Visits

Our argument assumes that due to heightened expectations in the oil regions and greater bargaining power, the incumbent president has an incentive to promise a higher share of benefits to the oil region relative to the rest of the country, and to exert efforts to signal the credibility of these promises. While this arrangement was enshrined in law in 2015, we test use original data to demonstrate increased promises to the oil region in the immediate post-discovery period. Specifically, we collect data from Ugandan newspaper articles that documents (a) all incidences in which the president made an explicit promise to contribute to development of a specific district (rather then the country as a whole), and (b) all visits that the president made to specific districts during the campaign period. We collected these data for both 2005 (prior to the February 2006 general elections that took place before the oil discoveries) and for 2010 (prior to February 2011 general elections that took place after the oil discoveries, but prior to production).[1]

We use this information to construct variables that measure the discrete count of visits and promises for each district. Districts located within 100km of the nearest oil discovery are coded as treated, and we present tables comparing oil districts to districts 100km–200km from a discovery and to all districts more than 100km from a discovery.[2] The tables below display basic summary statistics on presidential visits and promises. These tables show that President Museveni disproportionately increased both campaign promises and campaign visits to districts in the oil regions (relative to districts in non-oil regions) between his 2006 and 2011 Presidential election campaigns. Importantly, it is also the case that the president understands the importance of credible signaling, which is underscored by the dramatic increase in actual visits to oil region districts during the 2011 campaign period.

[1] A detailed description of our coding scheme, data sources, and descriptive information on the data is available on request.

[2] To keep the number of districts constant despite the creation of new districts during that period, we matched each 2010 rump district to its 2006 district. At the time of the 2006 general election, there were 72 districts plus Kampala, 36 of which were within 200km of an oil discovery.

Table 3: Presidential Visits Before and After Oil Discovery

	N	Promises 2005	Promises 2010	Promises/ district	Promises/ district	% Change
Control	26	71	181	2.7	7.0	155%
Oil	10	19	80	1.9	8	321%

Table 4: Presidential Visits Before and After Oil Discovery

	N	Visits 2005	Visits 2010	Visits/ district	Visits/ district	% Change
Control	26	97	112	3.7	4.3	15%
Oil	10	25	36	2.5	3.6	44%

Table 5: Presidential Visits Before and After Oil Discovery

	N	Promises 2005	Promises 2010	Promises/ district	Promises/ district	% Change
Control	62	161	439	2.6	7.1	173%
Oil	10	19	80	1.9	8	321%

Table 6: Presidential Visits Before and After Oil Discovery

	N	Visits 2005	Visits 2010	Visits/ district	Visits/ district	% Change
Control	62	191	298	3.1	4.8	56%
Oil	10	25	36	2.5	3.6	44%

E.2 Development Expectations

Using the same data and model specification described in Appendix E.4.2, this section investigates whether oil discoveries were associated with differential increases in development expectations in the oil region broadly, or in competitive communities in the oil region that may explain our main findings. To measure respondent expectations about the future, we rely on Afrobarometer data from the question "Looking ahead, do you expect the following to be better or worse? Your living conditions in twelve months time?" Responses are calculated on a five point scale, ranging from "Much worse" to "Much better". To capture large changes in expectations that may result in changes in voting behavior, we define our outcome variable as a binary indicator taking a value of one of the respondent answered "Much better" and zero otherwise.

The first table presents results when using the binary measure of the treatment, while the second and third tables use continuous measures.

Table 7: Effect of Oil Discovery on Expected Living Conditions

	Dependent variable:					
	Expected Living Conditions					
Oil X Post	0.047	0.015	0.024	0.050*	0.017	0.034*
	(0.030)	(0.029)	(0.022)	(0.027)	(0.027)	(0.020)
Rounds	3-4	2-4	2-5	3-4	2-4	2-5
Sample	≤200km	≤200km	≤200km	Full	Full	Full
Observations	1,681	2,470	3,249	3,610	5,399	7,292

Notes: Treated parishes are those within 100km of the nearest oil discovery. Models controls for year, village, age (not available for round 5), ethnicity (not available for round 2), religion, employment status, region, gender, education, language, and urbanicity. Survey rounds 1-5 were conducted in 2000, 2002, 2005, 2008, and 2012. Post begins with 2008. *p<0.1; **p<0.05; ***p<0.01

Table 8: Effect of Oil Discovery on Expected Living Conditions

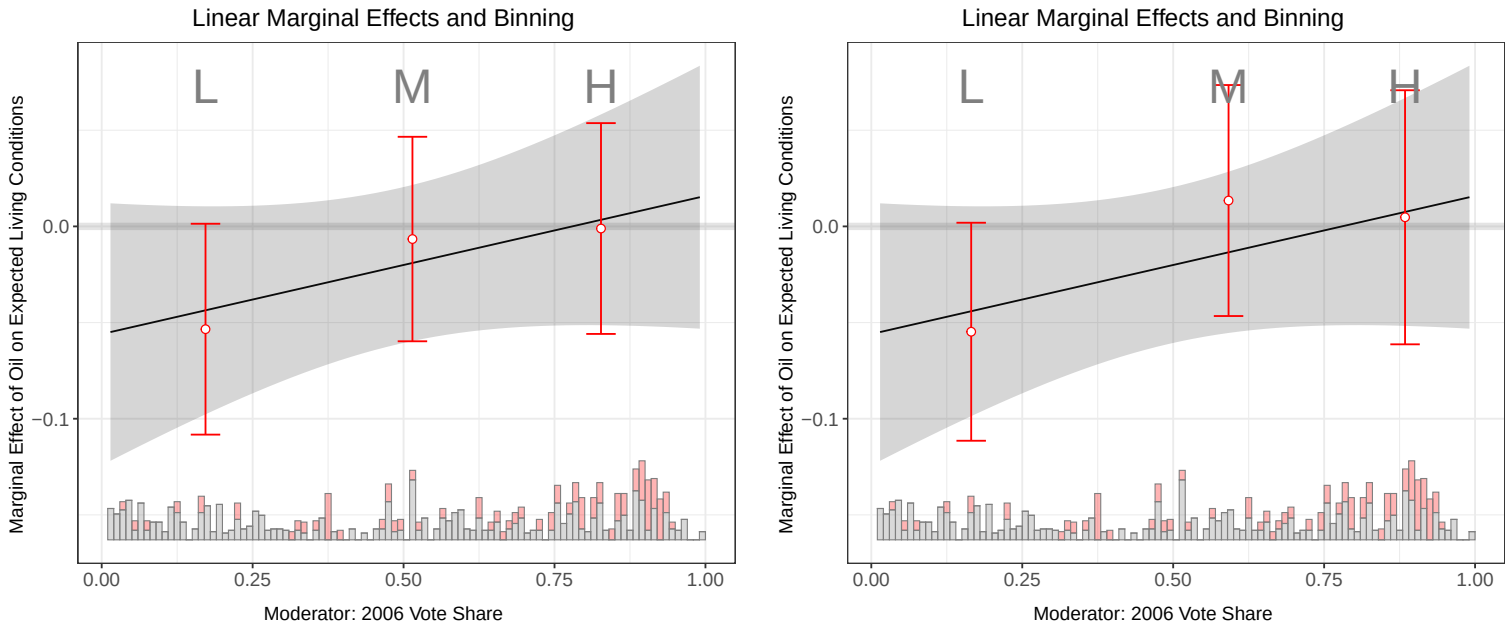
	Dependent variable:					
	Expected Living Conditions					
Oil X Post	0.001**	0.0004*	0.004**	0.0003**	0.0002*	0.002**
	(0.0002)	(0.0002)	(0.002)	(0.0001)	(0.0001)	(0.001)
Rounds	3-4	2-4	2-5	3-4	2-4	2-5
Sample	≤200km	≤200km	≤200km	Full	Full	Full
Observations	1,681	2,470	3,249	3,610	5,399	7,292

Notes: Treatment is measured as proximity to the nearest oil discovery in 10 km units. Models controls for year, village, age (not available for round 5), ethnicity (not available for round 2), religion, employment status, region, gender, education, language, and urbanicity. Survey rounds 1-5 were conducted in 2000, 2002, 2005, 2008, and 2012. Post begins with 2008. *p<0.1; **p<0.05; ***p<0.01

Table 9: Effect of Oil Discovery on Expected Living Conditions

	Dependent variable:					
	Expected Living Conditions					
ihs(Oil) X Post	0.055***	0.040**	0.040***	0.045***	0.029**	0.035***
	(0.018)	(0.018)	(0.015)	(0.014)	(0.014)	(0.011)
Rounds	3-4	2-4	2-5	3-4	2-4	2-5
Sample	≤200km	≤200km	≤200km	Full	Full	Full
Observations	1,681	2,470	3,249	3,610	5,399	7,292

Notes: Treatment is measured as proximity to the nearest oil discovery in km. Models controls for year, village, age (not available for round 5), ethnicity (not available for round 2), religion, employment status, region, gender, education, language, and urbanicity. Survey rounds 1-5 were conducted in 2000, 2002, 2005, 2008, and 2012. Post begins with 2008. *p<0.1; **p<0.05; ***p<0.01



(a) Custom Bins

(b) Equal Bins

Figure 2: Effect of oil discovery on future expected living conditions across levels of pre-treatment presidential vote share. Panel (a) bins the moderator according to our custom support groups. Panel (b) bins the moderator into three equally sized groups.

E.3 Government Expenditures

We check whether increases in electoral support for the incumbent president in localities proximate to an oil discovery is a result of actual benefits delivered in the pre-production period or anticipated benefits. Figure 3 compares government spending in Uganda to spending in other low-income countries before and throughout the period under analysis. We see no evidence that the government of Uganda increased spending in response to the discovery of oil in 2006.

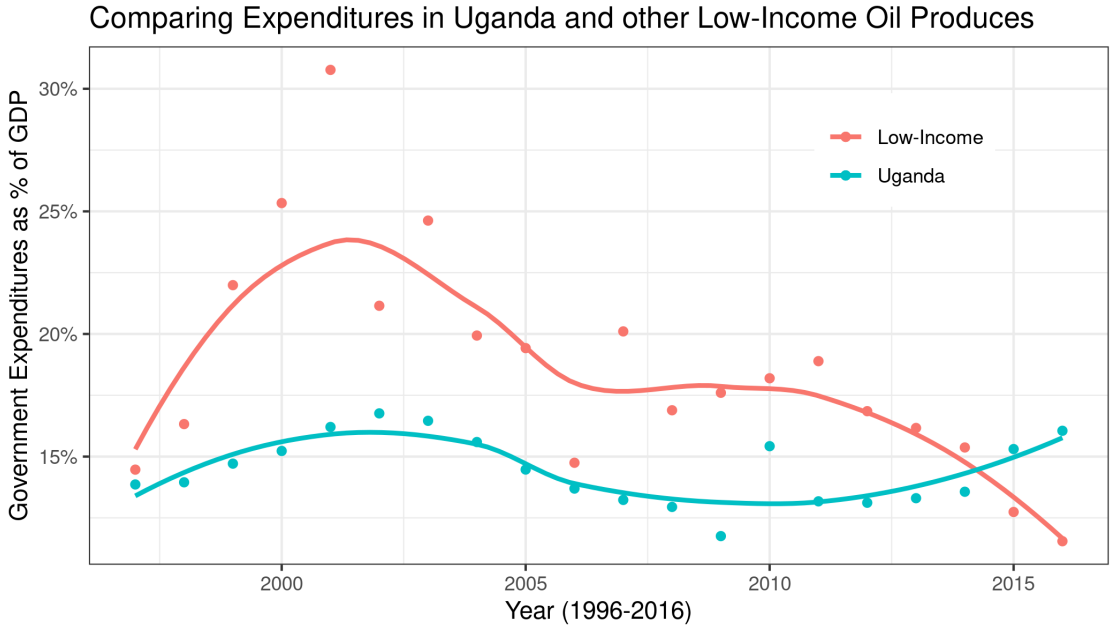


Figure 3: Comparing the changes in government expenditures between Uganda and other developing countries. Data on government expenditures comes from the International Monetary Fund.

E.4 Access to Public Goods

Relatedly, if the government of Uganda diverted resources away from localities outside the oil region to increase access to public goods in localities proximate to an oil discovery, this would also suggest that voters are responding to an increase in actual, rather than anticipated, benefits. Similarly, resources could also be directed to core and competitive locales specifically rather than the oil region as a whole. To rule out this alternative explanation, we use parish-level data from official government sources on the location of health facilities and schools as well as enumerator-reported village-level data on access to public goods and infrastructure provided by Afrobarometer. Across these measures, we find no evidence that localities within the oil region saw differential increases in the provision of public goods.

E.4.1 Health Facility and School Availability

Using the same models as for the main analysis, we estimate the effect of proximity to an oil discovery on the local availability of health facilities and schools. We also investigate heterogeneous effects according to pre-discovery levels of electoral support for the incumbent.

To construct a parish-level indicator of access to health services, we match data from three health facility censuses provided by the Uganda Ministry of Health and Bureau of

Statistics. These health facility census cover the years 2006, 2012, and 2016. There are 3,339 health facilities listed in the 2006 dataset, 5,410 in 2012, and 6,248 in 2016. All three datasets contains name, level, owner, authority of the facility and the district, county (except for 2016 dataset), subcounty, and parish name. Around 57% facilities in 2012 dataset and 64% in 2016 additionally have exact coordinates documented.

Based on the comprehensive geocoded health facility list containing 2006, 2011, and 2016 information, we constructed several parish-year variables for the 5 different levels of HC. We constructed two variables for HC I: the number of HC I; and an indicator of whether there is at least one HC I (YES = 1, NO = 0). For HC II, we normalized the number of HC II's in each subcounty by the population as an estimation of access. For HC III / IV / V where we have the most accurate coordinates, we constructed a measure of the shortest **Distance** from each parish's centroid to a facility and a measure of **Crowdedness** (the population served by the closet health center). Crowdedness is defined as the sum of population of all parishes that are closest to a given facility.

With a diverse combination of above methods, each parish-year has 42 potential indices. In order to better interpret results, they are all standardized to mean zero and standard deviation being one. To better evaluating each potential index, we first checked Cronbach's alpha for all possible combinations of the above variables. The dummy variable of HC I produced much larger Cronbach's Alpha compared to the count variables of HC I. So we excluded the count of HC I in Step 4. Also, Aggregation # 4 outperformed the others in general with Cronbach's alpha above 0.5. By further testing correlation matrices of different indexes, we found that different scalars exerted very minimal differences and have extremely highly correlations close to 1. Correlations between indexes are also high (from 0.6 to 1).

We generated school access indexes as additional outcome variables. We created a comprehensive primary school list by combining datasets from two sources. One is obtained from Uganda Education Management Information Systems (Uganda EMIS) with 19,518 primary schools listed with detailed information including name, ownership, contacts, founding year, and coordinates. This dataset has been verified The other is collected by our field research assistants in Uganda, which covered 5,277 primary schools with the same attributes. Following the same process as matching health facilities across different datasets, we found an overlap of 2,572 primary schools betweetn these 2 datasets. Therefore, the final primary school list consists of 19,518 EMIS records and 2,705 manually collected schools.

Building on this geocoded school list, we further constructed a parish-year cross-sectional dataset by first locating each school in 2002 admin units, then dissecting whether a school existed in 2001, 2006, 2011, and 2016 separately from its founding year information. This way, we have in total 10,255 primary schools existing in 2001, 12,655 in 2006, 16,857 in 2011, and 22,219 in 2016. We also recorded the number of schools in each category for each parish-year in our dataset. We defined the primary school access index to be the number of schools in each parish normalized by parish-level school-aged (6 - 13 years old) population (per thousand).

Table 10: Effect of Oil Discovery on Health Access (2006-2011)

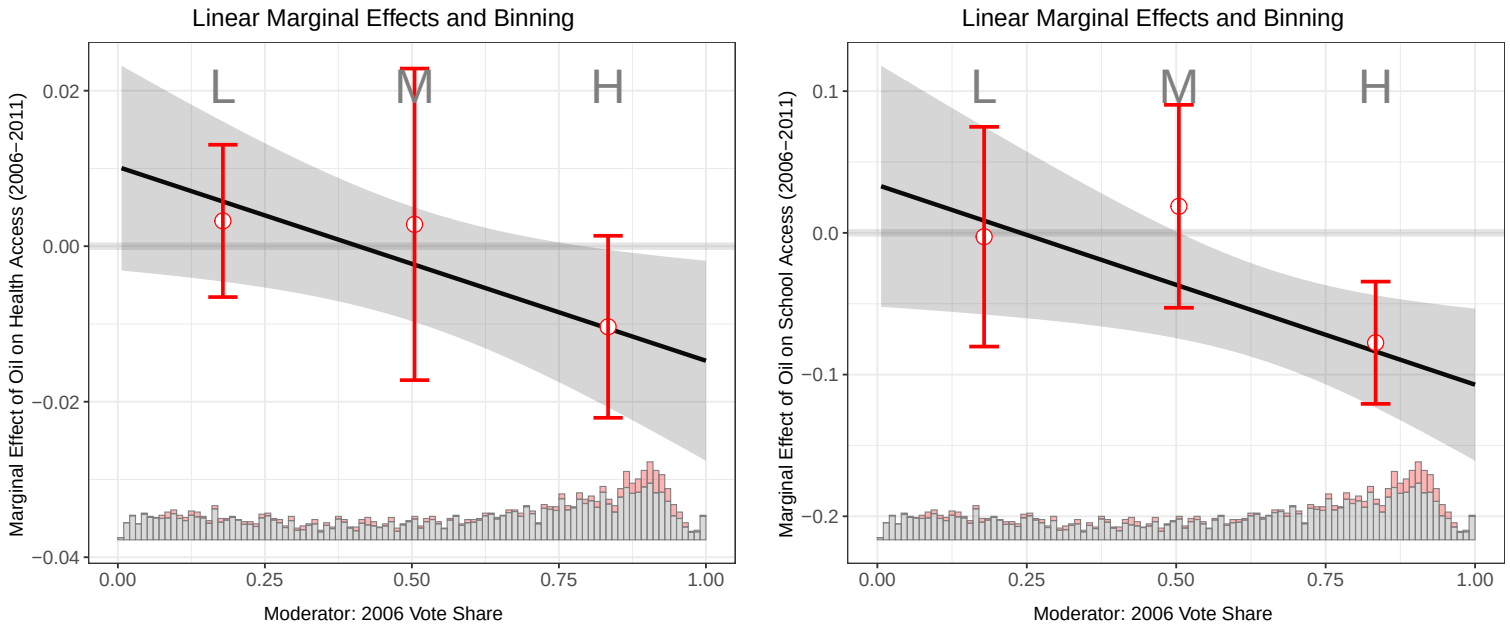
	Treatment Variable					
	Binary (w/in 100km)		Proximity (10 km)		ihs(Proximity)	
	(1)	(2)	(3)	(4)	(5)	(6)
Oil	−0.004	−0.004	−0.001**	−0.001***	−0.006***	−0.008***
	(0.004)	(0.004)	(0.0003)	(0.0003)	(0.002)	(0.002)
Controls	Share	Full	Share	Full	Share	Full
Observations	5,006	5,006	5,006	5,006	5,006	5,006
Adjusted R^2	0.925	0.927	0.925	0.927	0.925	0.927

Notes: Sample includes parishes within 200km of nearest oil discovery. Pre-treatment flexible controls include parish-level measurements of president's vote share and its square (labeled 'Share'), voter turnout, population, a wealth index, and the share of population employed in agriculture and coethnics with the president. *p<0.1; **p<0.05; ***p<0.01

Table 11: Effect of Oil Discovery on School Access (2006-2011)

	Treatment Variable					
	Binary (w/in 100km)		Proximity (10 km)		ihs(Proximity)	
	(1)	(2)	(3)	(4)	(5)	(6)
Oil	−0.059***	−0.052***	−0.006***	−0.005***	−0.040***	−0.032**
	(0.016)	(0.017)	(0.002)	(0.002)	(0.013)	(0.014)
Controls	Share	Full	Share	Full	Share	Full
Observations	5,006	5,006	5,006	5,006	5,006	5,006
Adjusted R^2	0.919	0.919	0.919	0.919	0.919	0.919

Notes: Sample includes parishes within 200km of nearest oil discovery. Pre-treatment flexible controls include parish-level measurements of president's vote share and its square (labeled 'Share'), voter turnout, population, a wealth index, and the share of population employed in agriculture and coethnics with the president. *p<0.1; **p<0.05; ***p<0.01



(a) Binning Estimator

(b) Kernel Estimator

Figure 4: Effect of oil discovery on access to health and education across levels of pre-treatment presidential vote share. Panel (a) bins the moderator according to our custom support groups. Panel (b) bins the moderator into three equally sized groups.

E.4.2 Afrobarometer Public Goods Access

For this analysis, we estimate a similar model to those used in the main analysis. We calculate the distance of each enumeration cluster to the nearest oil discovery and identify the parish in which each cluster is located in order to identify the pre-discovery level of electoral support for the incumbent. Importantly, these data are repeated cross-sections, so we cannot include unit-level fixed effects. Models include covariates for respondent age and dummies for education level, language, northern villages, ethnicity, religion, and urban villages. Though these variables are measured post-treatment, they are relatively slow-moving variables that we do not expect to be affected by the oil discovery.

The dependent variable is an index of village-level measures of access to eight different public services constructed using inverse-covariance weighting. These results are not self-reported, but are recorded by enumerators who assess whether each service is present in the enumeration village. Coefficients on the interaction terms of interest are uniformly insignificant and unstable across outcomes.

Table 12: Effect of Oil Discovery on Public Goods Access

	Dependent variable:					
	Public Goods Access					
Oil X Post	0.086	0.080	0.079	−0.032	−0.035	−0.017
	(0.113)	(0.113)	(0.097)	(0.096)	(0.096)	(0.083)
Rounds	3-4	2-4	2-5	3-4	2-4	2-5
Sample	≤200km	≤200km	≤200km	Full	Full	Full
Observations	1,714	1,714	2,519	3,704	3,705	5,578

Notes: Treated parishes are those within 100km of the nearest oil discovery. Models controls for year, village, age (not available for round 5), ethnicity (not available for round 2), religion, employment status, region, gender, education, language, and urbanicity. Survey rounds 1-5 were conducted in 2000, 2002, 2005, 2008, and 2012. Post begins with 2008. *p<0.1; **p<0.05; ***p<0.01

Table 13: Effect of Oil Discovery on Public Goods Access

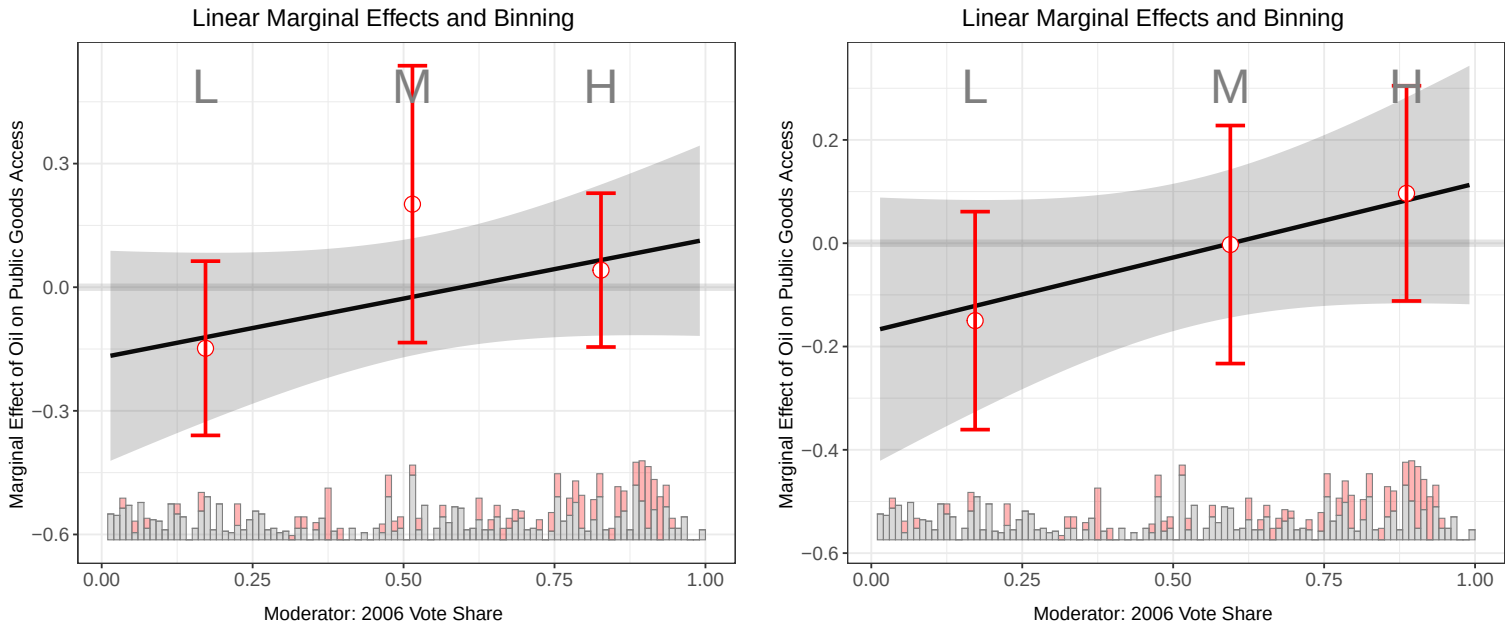
	Dependent variable:					
	Public Goods Access					
Oil X Post	0.001	0.0005	0.001	-0.001^{***}	-0.001^{***}	-0.006
	(0.001)	(0.001)	(0.009)	(0.0004)	(0.0004)	(0.004)
Rounds	3-4	2-4	2-5	3-4	2-4	2-5
Sample	$\leq$200km	$\leq$200km	$\leq$200km	Full	Full	Full
Observations	1,714	1,714	2,519	3,704	3,705	5,578

Notes: Treatment is measured as proximity to the nearest oil discovery in 10 km units. Models controls for year, village, age (not available for round 5), ethnicity (not available for round 2), religion, employment status, region, gender, education, language, and urbanicity. Survey rounds 1-5 were conducted in 2000, 2002, 2005, 2008, and 2012. Post begins with 2008. *p<0.1; **p<0.05; ***p<0.01

Table 14: Effect of Oil Discovery on Public Goods Access

	Dependent variable:					
	Public Goods Access					
ihs(Oil) X Post	0.052	0.048	0.017	-0.086	-0.085	-0.061
	(0.082)	(0.083)	(0.075)	(0.056)	(0.057)	(0.051)
Rounds	3-4	2-4	2-5	3-4	2-4	2-5
Sample	$\leq$200km	$\leq$200km	$\leq$200km	Full	Full	Full
Observations	1,714	1,714	2,519	3,704	3,705	5,578

Notes: Treatment is measured as proximity to the nearest oil discovery in km. Models controls for year, village, age (not available for round 5), ethnicity (not available for round 2), religion, employment status, region, gender, education, language, and urbanicity. Survey rounds 1-5 were conducted in 2000, 2002, 2005, 2008, and 2012. Post begins with 2008. *p<0.1; **p<0.05; ***p<0.01



(a) Custom Bins

(b) Equal Bins

Figure 5: Effect of oil discovery on access to public services across levels of pre-treatment presidential vote share. Panel (a) bins the moderator according to our custom support groups. Panel (b) bins the moderator into three equally sized groups.

E.5 Economic Development

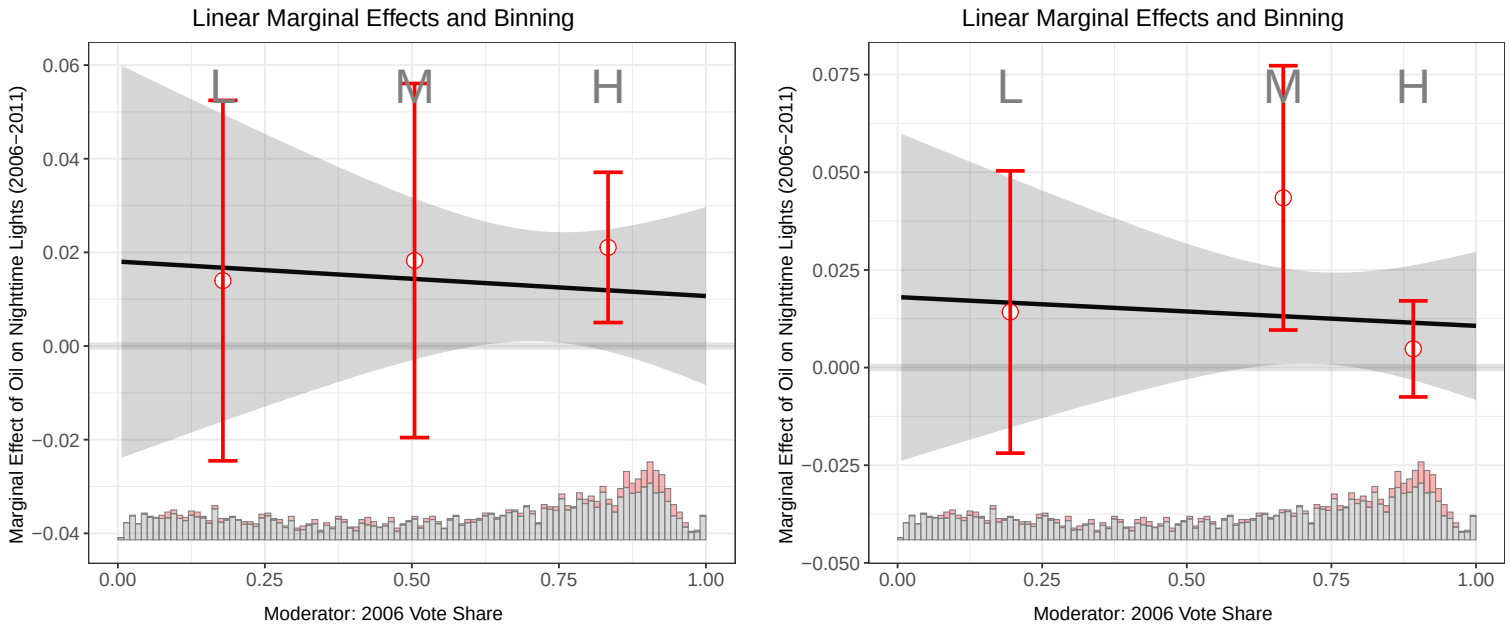
If the oil discovery sparked greater economic activity that increased the living conditions for residents of the oil region, and the president received credit for this development, respondents may again be respondeing to actual rather than anticipated benefits from the oil discoveries. To assess whether the oil region experienced greater economic benefits, we use panel data on nighttime luminosity obtained from NOAA for 2006 and 2013. We subject this dataset to the same difference-in-differences and heterogeneous effects models used in the main analysis, substituting nighttime lights as the dependent variable.

Results provide little evidence for an effect of the oil discovery on economic development at the local level. While there is no ex-ante reason to expect that development would be concentrated in the competitive and core localities where Museveni experienced electoral gains, we also investigate this possibility. Again, we see no evidence for differential growth in these areas.

Table 15: Effect of Oil Discovery on Nighttime Lights (2006-2011)

	Treatment Variable					
	Binary (w/in 100km)		Proximity (10 km)		ihs(Proximity)	
	(1)	(2)	(3)	(4)	(5)	(6)
Oil	0.009	0.011*	−0.0002	0.001	0.001	0.005
	(0.007)	(0.007)	(0.001)	(0.001)	(0.004)	(0.005)
Controls	Share	Full	Share	Full	Share	Full
Observations	5,006	5,006	5,006	5,006	5,006	5,006
Adjusted R^2	0.891	0.898	0.891	0.898	0.891	0.898

Notes: Sample includes parishes within 200km of nearest oil discovery. Pre-treatment flexible controls include parish-level measurements of president's vote share and its square (labeled 'Share'), voter turnout, population, a wealth index, and the share of population employed in agriculture and coethnics with the president. *p<0.1; **p<0.05; ***p<0.01



(a) Equal Bins

(b) Set Bins

Figure 6: Effect of oil discovery on standardized nighttime lights across levels of pre-treatment presidential vote share. Panel (a) bins the moderator according to our custom support groups. Panel (b) bins the moderator into three equally sized groups.

F Alternative Mechanisms

In this section, we provide evidence against several alternative explanations, including electoral intimidation, changes in turnout, and changes in the composition of the electorate due to migration and administrative unit splitting. The analyses below suggest that none of these factors are likely to explain our findings.

F.1 Electoral Intimidation

Using the same data and model specification described in Appendix E.4.2, this section investigates whether differential increases in electoral intimidation in the oil region broadly, or in competitive communities in the oil region may explain our main findings.

Section F.1.1 uses survey questions asking respondents about the perceived fairness of the 2006 and 2011 elections.[3]. Section F.1.2 uses survey questions asking respondents about their trust in the Electoral Commission in the 2006 and 2012 survey waves.[4] In each of these sections, the first table presents results when using the binary measure of the treatment, while the second and third tables use continuous measures. Overall, we see little evidence for disproportionate electoral intimidation in the oil region or in competitive localities therein.

F.1.1 Perceived Election Fairness

Table 16: Effect of Oil Discovery on Perceived Fairness

	Dependent variable:					
	Perceived Election Fairness					
Oil X Post	−0.006	−0.007	0.018	−0.140	−0.147	−0.120
	(0.119)	(0.118)	(0.098)	(0.102)	(0.102)	(0.085)
Rounds	3-4	2-4	2-5	3-4	2-4	2-5
Sample	≤200km	≤200km	≤200km	Full	Full	Full
Observations	1,813	1,813	2,643	3,861	3,862	5,808

Notes: Treated parishes are those within 100km of the nearest oil discovery. Models controls for year, village, age (not available for round 5), ethnicity (not available for round 2), religion, employment status, region, gender, education, language, and urbanicity. Survey rounds 1-5 were conducted in 2000, 2002, 2005, 2008, and 2012. Post begins with 2008. *p<0.1; **p<0.05; ***p<0.01

[3]The question asks "On the whole, how would you rate the freeness and fairness of the last national election, held in 2011." [Completely free and fair; Free and fair, but with minor problems; Free and fair, with major problems; Not free and fair]

[4]The question asks "How much do you trust each of the following, or haven't you heard enough about them to say?" [The Electoral Commission]

Table 17: Effect of Oil Discovery on Perceived Election Fairness

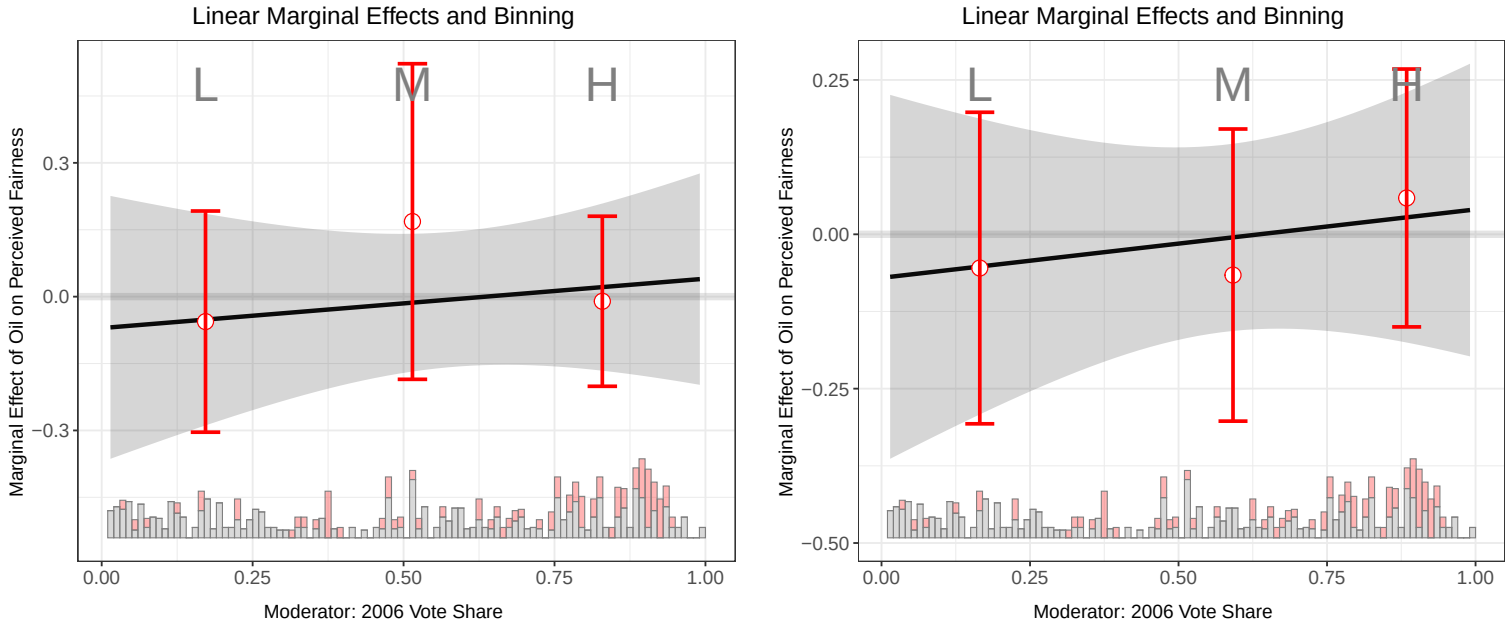
	Dependent variable:					
	Perceived Election Fairness					
Oil X Post	0.0003	0.0003	−0.002	−0.002***	−0.002***	−0.013***
	(0.001)	(0.001)	(0.009)	(0.0005)	(0.0005)	(0.004)
Rounds	3-4	2-4	2-5	3-4	2-4	2-5
Sample	≤200km	≤200km	≤200km	Full	Full	Full
Observations	1,813	1,813	2,643	3,861	3,862	5,808

Notes: Treatment is measured as proximity to the nearest oil discovery in 10 km units. Models controls for year, village, age (not available for round 5), ethnicity (not available for round 2), religion, employment status, region, gender, education, language, and urbanicity. Survey rounds 1-5 were conducted in 2000, 2002, 2005, 2008, and 2012. Post begins with 2008. *p<0.1; **p<0.05; ***p<0.01

Table 18: Effect of Oil Discovery on Perceived Fairness

	Dependent variable:					
	Perceived Election Fairness					
ihs(Oil) X Post	0.037	0.033	0.0001	−0.137**	−0.142**	−0.128**
	(0.079)	(0.080)	(0.071)	(0.057)	(0.057)	(0.050)
Rounds	3-4	2-4	2-5	3-4	2-4	2-5
Sample	≤200km	≤200km	≤200km	Full	Full	Full
Observations	1,813	1,813	2,643	3,861	3,862	5,808

Notes: Treatment is measured as proximity to the nearest oil discovery in km. Models controls for year, village, age (not available for round 5), ethnicity (not available for round 2), religion, employment status, region, gender, education, language, and urbanicity. Survey rounds 1-5 were conducted in 2000, 2002, 2005, 2008, and 2012. Post begins with 2008. *p<0.1; **p<0.05; ***p<0.01



(a) Custom Bins

(b) Equal Bins

Figure 7: Effect of oil discovery on perceived election fairness across levels of pre-treatment presidential vote share. Panel (a) bins the moderator according to our custom support groups. Panel (b) bins the moderator into three equally sized groups.

F.1.2 Trust in Electoral Commission

Table 19: Effect of Oil Discovery on Trust in EC

	Dependent variable:					
	Trust in Election Commission					
Oil X Post	0.137	0.129	0.114	0.083	0.117	0.155**
	(0.112)	(0.093)	(0.079)	(0.097)	(0.081)	(0.069)
Rounds	3-4	2-4	2-5	3-4	2-4	2-5
Sample	≤200km	≤200km	≤200km	Full	Full	Full
Observations	1,816	2,685	3,547	3,923	5,867	7,875

Notes: Treated parishes are those within 100km of the nearest oil discovery. Models controls for year, village, age (not available for round 5), ethnicity (not available for round 2), religion, employment status, region, gender, education, language, and urbanicity. Survey rounds 1-5 were conducted in 2000, 2002, 2005, 2008, and 2012. Post begins with 2008. *p<0.1; **p<0.05; ***p<0.01

Table 20: Effect of Oil Discovery on Trust in EC

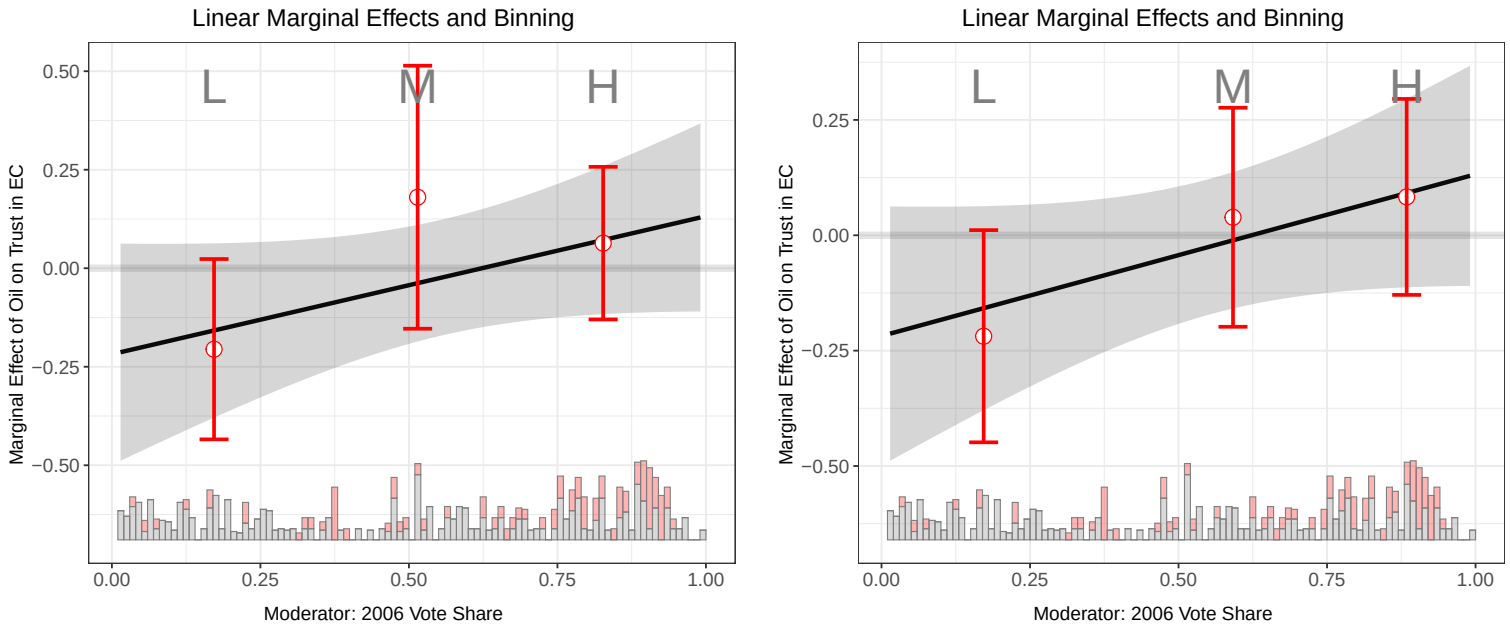
	Dependent variable:					
	Trust in Election Commission					
Oil X Post	0.001	0.001	0.006	−0.0002	0.0005	0.010***
	(0.001)	(0.001)	(0.007)	(0.0004)	(0.0003)	(0.003)
Rounds	3-4	2-4	2-5	3-4	2-4	2-5
Sample	≤200km	≤200km	≤200km	Full	Full	Full
Observations	1,816	2,685	3,547	3,923	5,867	7,875

Notes: Treatment is measured as proximity to the nearest oil discovery in 10 km units. Models controls for year, village, age (not available for round 5), ethnicity (not available for round 2), religion, employment status, region, gender, education, language, and urbanicity. Survey rounds 1-5 were conducted in 2000, 2002, 2005, 2008, and 2012. Post begins with 2008. *p<0.1; **p<0.05; ***p<0.01

Table 21: Effect of Oil Discovery on Trust in EC

	Dependent variable:					
	Trust in Election Commission					
ihs(Oil) X Post	0.064	0.070	0.045	0.002	0.058	0.100**
	(0.082)	(0.064)	(0.057)	(0.057)	(0.044)	(0.041)
Rounds	3-4	2-4	2-5	3-4	2-4	2-5
Sample	≤200km	≤200km	≤200km	Full	Full	Full
Observations	1,816	2,685	3,547	3,923	5,867	7,875

Notes: Treatment is measured as proximity to the nearest oil discovery in km. Models controls for year, village, age (not available for round 5), ethnicity (not available for round 2), religion, employment status, region, gender, education, language, and urbanicity. Survey rounds 1-5 were conducted in 2000, 2002, 2005, 2008, and 2012. Post begins with 2008. *p<0.1; **p<0.05; ***p<0.01



(a) Custom Bins

(b) Equal Bins

Figure 8: Effect of oil discovery on trust in the electoral commission across levels of pre-treatment presidential vote share. Panel (a) bins the moderator according to our custom support groups. Panel (b) bins the moderator into three equally sized groups.

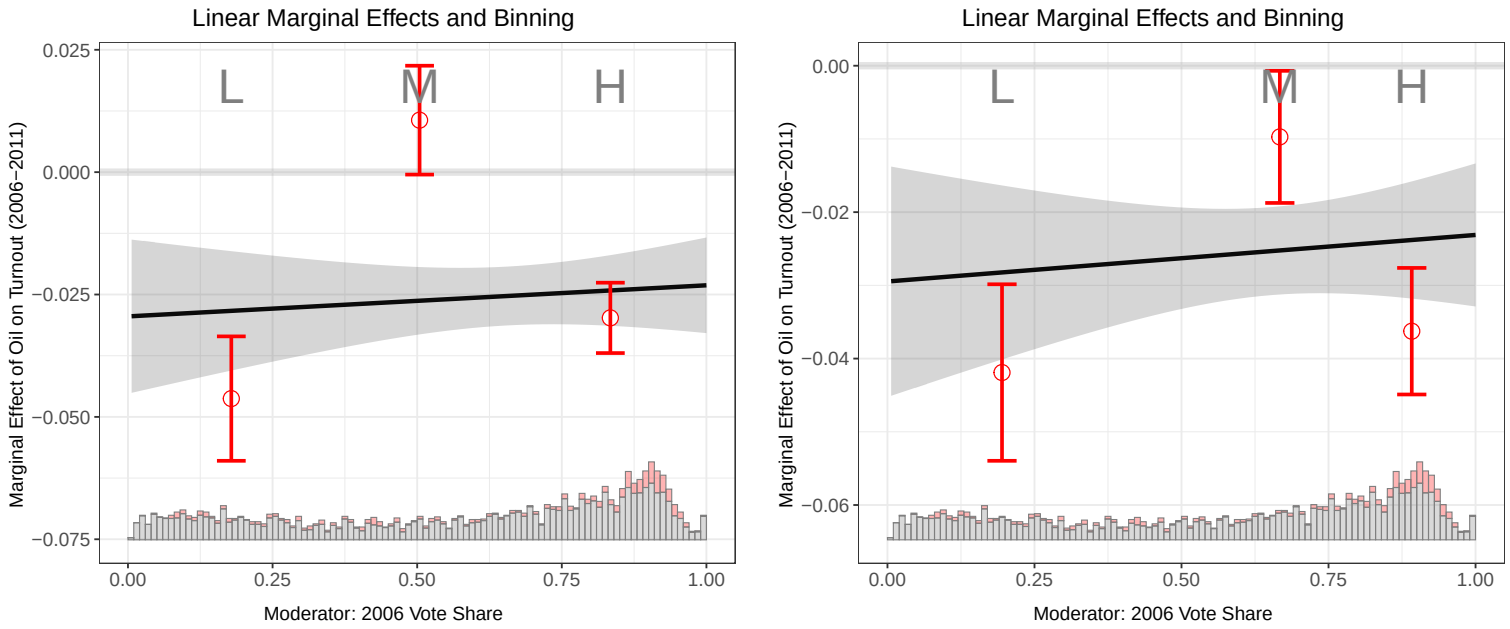
F.2 Turnout

If the discovery of oil depressed turnout among opposition supporters in the oil region, and in competitive parishes specifically, this may explain our main findings. We see some evidence for a differential decrease in election turnout in the oil region broadly. However, these decreases are concentrated in opposition and core localities with turnout in competitive areas being unaffected. This casts doubt on changes in turnout as an explanation for our main findings.

Table 22: Effect of Oil Discovery on Turnout (2006-2011)

	Treatment Variable					
	Binary (w/in 100km)		Proximity (10 km)		ihs(Proximity)	
	(1)	(2)	(3)	(4)	(5)	(6)
Oil	-0.018^{***}	-0.026^{***}	-0.003^{***}	-0.003^{***}	-0.019^{***}	-0.023^{***}
	(0.003)	(0.003)	(0.0003)	(0.0003)	(0.002)	(0.002)
Controls	Share	Full	Share	Full	Share	Full
Observations	5,006	5,006	5,006	5,006	5,006	5,006
Adjusted R^2	0.768	0.799	0.772	0.804	0.770	0.801

Notes: Sample includes parishes within 200km of nearest oil discovery. Pre-treatment flexible controls include parish-level measurements of president's vote share and its square (labeled 'Share'), voter turnout, population, a wealth index, and the share of population employed in agriculture and coethnics with the president. $^{*}p<0.1$; $^{**}p<0.05$; $^{***}p<0.01$



(a) Binning Estimator

(b) Kernel Estimator

Figure 9: Effect of oil discovery on logged population across levels of pre-treatment presidential vote share. Panel (a) bins the moderator according to our custom support groups. Panel (b) bins the moderator into three equally sized groups.

F.3 Migration

Although we see no evidence for increased economic activity in the oil region after the initial discoveries but before the start of production, voters may have migrated to the oil region in anticipation of employment opportunities. If these migrants were disproportionately supporters of Museveni, then changes in the composition of the electorate may explain an increase in Museveni's support in these locales. To assess the impact of the oil discovery on migration, we draw on parish-level measures of population and the proportion of residents that are male provided by the 2002 and 2014 Uganda census.

This explanation seems unlikely for several reasons. First, this would predict a decrease in support for areas outside of the oil region as supporters move West, rather than the level-shift in favor of the president that we see in our data. In fact, Museveni increased his overall win margin substantially between the 2006 and 2011 election from 22 to 42%, with no decrease in non-oil localities. Second, although we see an overall increase in population in the oil region (see Table 23), this increase is apparent and similarly sized across competitive, core, and opposition localities (see Figure 10) despite Museveni experiencing disproportionate losses in opposition localities. Third, if work prospects sparked migration, we would expect the to see population gains to be driven by males seeking employment. We see no overall increase in the male share of the population (see Table 24). While we see some evidence for a differential increase in the male share of the population in competitive parishes, this result is unstable when using different binning methods (see Figure 11).

Overall, we do not believe these results are consistent with migration driving our main findings. However, we flexibly control for population in our main specifications to further reduce concerns about this alternative explanation.

Table 23: Effect of Oil Discovery on log Population (2006-2011)

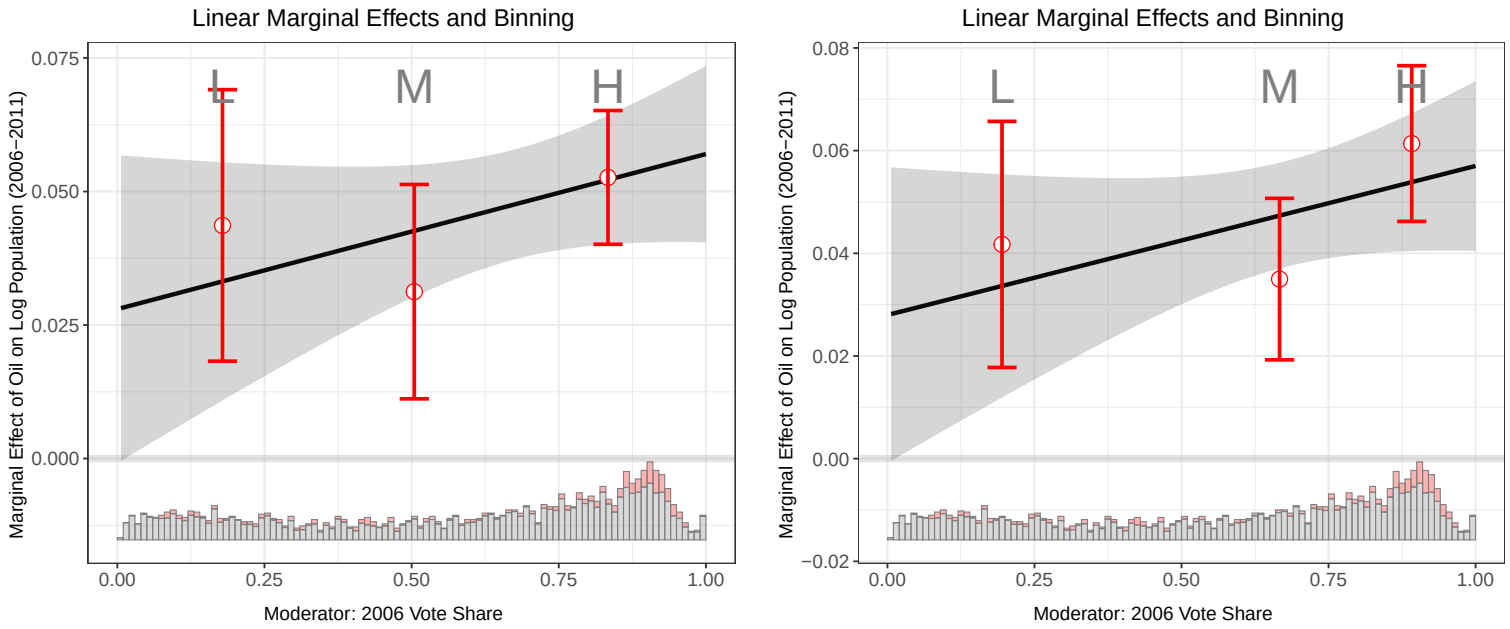
	Treatment Variable					
	Binary (w/in 100km)		Proximity (10 km)		ihs(Proximity)	
	(1)	(2)	(3)	(4)	(5)	(6)
Oil	0.045***	0.046***	0.004***	0.004***	0.033***	0.036***
	(0.005)	(0.005)	(0.0005)	(0.0005)	(0.004)	(0.004)
Controls	Share	Full	Share	Full	Share	Full
Observations	5,006	5,006	5,006	5,006	5,006	5,006
Adjusted R^2	0.985	0.985	0.985	0.985	0.985	0.985

Notes: Sample includes parishes within 200km of nearest oil discovery. Pre-treatment flexible controls include parish-level measurements of president's vote share and its square (labeled 'Share'), voter turnout, population, a wealth index, and the share of population employed in agriculture and coethnics with the president. *p<0.1; **p<0.05; ***p<0.01

Table 24: Effect of Oil Discovery on Proportion Male (2006-2011)

	Treatment Variable					
	Binary (w/in 100km)		Proximity (10 km)		ihs(Proximity)	
	(1)	(2)	(3)	(4)	(5)	(6)
Oil	-0.00002^{**}	-0.00002^{***}	0.00000	-0.00000	-0.00002^{**}	-0.00002^{***}
	(0.00001)	(0.00001)	(0.00000)	(0.00000)	(0.00001)	(0.00001)
Controls	Share	Full	Share	Full	Share	Full
Observations	5,006	5,006	5,006	5,006	5,006	5,006
Adjusted R^2	1.000	1.000	1.000	1.000	1.000	1.000

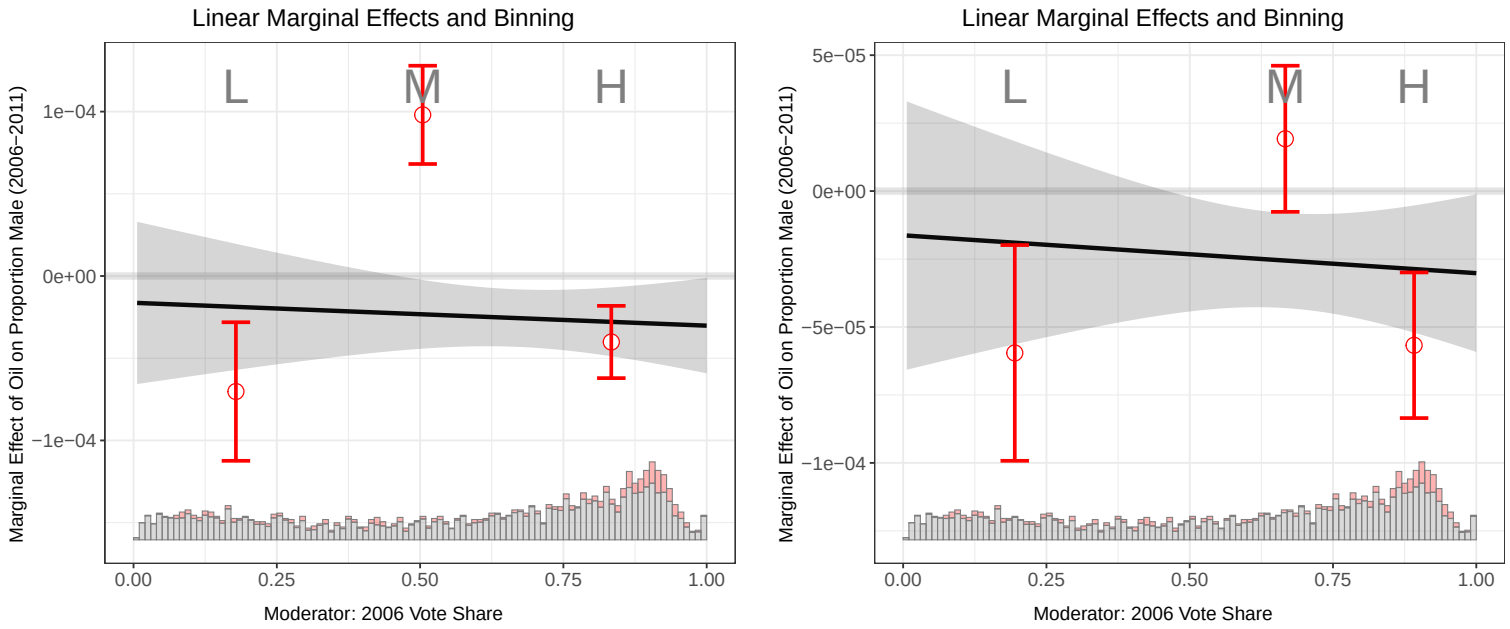
Notes: Sample includes parishes within 200km of nearest oil discovery. Pre-treatment flexible controls include parish-level measurements of president's vote share and its square (labeled 'Share'), voter turnout, population, a wealth index, and the share of population employed in agriculture and coethnics with the president. *p<0.1; **p<0.05; ***p<0.01



(a) Binning Estimator

(b) Kernel Estimator

Figure 10: Effect of oil discovery on logged population across levels of pre-treatment presidential vote share. Panel (a) bins the moderator according to our custom support groups. Panel (b) bins the moderator into three equally sized groups.



(a) Pre-Determined Bins

(b) Equally-Sized Bins

Figure 11: Effect of oil discovery on the male share of the population across levels of pre-treatment presidential vote share. Panel (a) bins the moderator according to our custom support groups. Panel (b) bins the moderator into three equally sized groups.

F.4 District Splitting

Splitting larger administrative units into smaller ones is a common tactic used by incumbents in Uganda and elsewhere to credibly commit to future transfers to communities that are not part of their core coalition (Gottlieb et al., 2019). In this section, we assess descriptively whether Museveni disproportionately awarded district status to swing counties in the oil region. This section assesses whether competitive constituencies in the oil region are more likely to receive district status than their non-oil counterparts between the 2006 and 2011 elections. We argue that district splitting is an unlikely explanation for the results that we find in the main analysis. As Figure 12 shows, only five counties in the oil region received district status between 2006 and 2011, and only one of these new districts was formed by a swing county. Table 25 shows the number and share of counties that remained part of a larger district (No Split) compared to the number of counties that received district status (Splinter) for counties across levels of historical support for the president before and after the oil discovery. While the share of swing counties in the oil region increased disproportionately after the oil discovery relative to those outside the oil region, this is driven by a single new district in the far Northwest of the country. Due to the relatively small number of the total swing parishes in our sample that are located in this new district, the use of district creation as a strategy to signal a credible promise of future benefits is an unlikely explanation for our main findings.

Table 25: Conditional Probability of Receiving District Status by 2006 Vote Share

	Control			Oil		
	Pre-Treatment (2001 – 2006)					
	<40%	40–60%	>60%	<40%	40–60%	>60%
No Split	29	27	58	4	3	14
	(76%)	(100%)	(77%)	(80%)	(100%)	(93%)
Splinter	9	0	17	1	0	1
	(24%)	(0%)	(23%)	(20%)	(0%)	(7%)
N=	38	27	75	5	3	15
	Post-Treatment (2006 – 2011)					
No Split	30	23	58	4	2	12
	(79%)	(85%)	(77%)	(80%)	(67%)	(80%)
Splinter	8	4	17	1	1	3
	(21%)	(15%)	(23%)	(20%)	(33%)	(20%)
N=	38	27	75	5	3	15

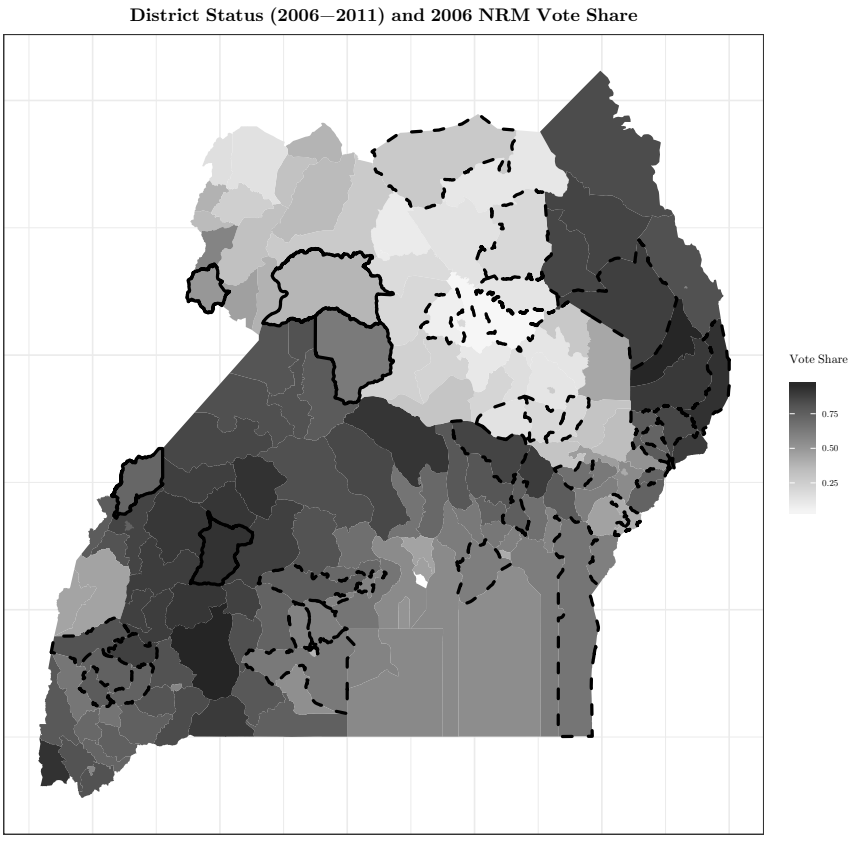


Figure 12: Counties that received district status between 2006 and 2011. Solid borders indicate counties within 100km of an oil discovery and dashed borders indicate counties more than 100km from the nearest oil discovery.

G Election Results (2006–2011)

This section presents results using data from the 2006 and 2011 Presidential elections. This sample includes one pre-treatment (2006) and one post-treatment (2011) election.

Results include a continuous measure that uses an IHS transformation. The IHS transformation is similar to a log transformation but allows for substantively meaningful zero values to be maintained. When the dependent variable is IHS transformed, and the independent variable is a dummy, one can estimate the percentage change in the DV resulting from a discrete change in the dummy in the same way as a log-dummy equation (Bellemare and Wichman, 2020, p. 53).

G.1 Simple Difference-in-Differences

G.1.1 Restricted Sample (Parishes w/in 200km of discovery)

Table 26: Effect of Oil Discovery on Presidential Win Margin (2006-2011)

	Treatment Variable					
	Binary (w/in 100km)			Proximity (10 km)		
	(1)	(2)	(3)	(4)	(5)	(6)
Oil	-0.057^{***}	0.022^{***}	0.013^{*}	-0.002^{*}	0.003^{***}	0.002^{***}
	(0.013)	(0.007)	(0.007)	(0.001)	(0.001)	(0.001)
Controls	None	Share	Full	None	Share	Full
Observations	5,006	5,006	5,006	5,006	5,006	5,006
Adjusted R^2	0.765	0.946	0.951	0.764	0.946	0.951

Notes: Sample includes parishes within 200km of nearest oil discovery. Pre-treatment flexible controls include parish-level measurements of president's vote share and its square (labeled 'Share'), voter turnout, population, a wealth index, and the share of population employed in agriculture and coethnics with the president. *p<0.1; **p<0.05; ***p<0.01

Table 27: Effect of Oil Discovery on Presidential Vote Share (2006-2011)

	Treatment Variable					
	Binary (w/in 100km)			Proximity (10 km)		
	(1)	(2)	(3)	(4)	(5)	(6)
Oil	-0.029^{***}	0.008^{**}	0.005	-0.001^{*}	0.002^{***}	0.001^{***}
	(0.006)	(0.004)	(0.004)	(0.001)	(0.0003)	(0.0003)
Controls	None	Share	Full	None	Share	Full
Observations	5,006	5,006	5,006	5,006	5,006	5,006
Adjusted R^2	0.811	0.942	0.946	0.810	0.943	0.946

Notes: Sample includes parishes within 200km of nearest oil discovery. Pre-treatment flexible controls include parish-level measurements of president's vote share and its square (labeled 'Share'), voter turnout, population, a wealth index, and the share of population employed in agriculture and coethnics with the president. *p<0.1; **p<0.05; ***p<0.01

Table 28: Effect of Oil Discovery on Presidential Support (2006-2011)

	Dependent variable:					
	ihs(Margin)			ihs(Share)		
	(1)	(2)	(3)	(4)	(5)	(6)
ihs(Oil)	-0.039^{***}	0.023^{***}	0.015^{***}	-0.020^{***}	0.008^{***}	0.005^{**}
	(0.008)	(0.004)	(0.004)	(0.003)	(0.002)	(0.002)
Controls	None	Share	Full	None	Share	Full
Observations	5,006	5,006	5,006	5,006	5,006	5,006
Adjusted R^2	0.755	0.941	0.947	0.785	0.942	0.945

Notes: Sample includes parishes within 200km of nearest oil discovery. Pre-treatment flexible controls include parish-level measurements of president's vote share and its square (labeled 'Share'), voter turnout, population, a wealth index, and the share of population employed in agriculture and coethnics with the president. *p<0.1; **p<0.05; ***p<0.01

G.1.2 Full Sample (All Parishes in Uganda)

Table 29: Effect of Oil Discovery on Presidential Win Margin (2006-2011)

	Treatment Variable					
	Binary (w/in 100km)			Proximity (10 km)		
	(1)	(2)	(3)	(4)	(5)	(6)
Oil	-0.026^{**}	0.022^{***}	0.025^{***}	0.002^{***}	0.0002	0.001^{***}
	(0.011)	(0.006)	(0.006)	(0.001)	(0.0003)	(0.0003)
Controls	None	Share	Full	None	Share	Full
Observations	9,976	9,976	9,850	9,976	9,976	9,850
Adjusted R^2	0.752	0.918	0.925	0.752	0.918	0.925

Notes: Sample includes all parishes in Uganda. Pre-treatment flexible controls include parish-level measurements of president's vote share and its square (labeled 'Share'), voter turnout, population, a wealth index, and the share of population employed in agriculture and coethnics with the president. *p<0.1; **p<0.05; ***p<0.01

Table 30: Effect of Oil Discovery on Presidential Vote Share (2006-2011)

	Treatment Variable					
	Binary (w/in 100km)			Proximity (10 km)		
	(1)	(2)	(3)	(4)	(5)	(6)
Oil	-0.017^{***}	0.007^{**}	0.009^{**}	0.001^{**}	-0.0001	0.0003
	(0.005)	(0.004)	(0.004)	(0.0003)	(0.0002)	(0.0002)
Controls	None	Share	Full	None	Share	Full
Observations	9,976	9,976	9,850	9,976	9,976	9,850
Adjusted R^2	0.784	0.917	0.921	0.784	0.917	0.921

Notes: Sample includes all parishes in Uganda. Pre-treatment flexible controls include parish-level measurements of president's vote share and its square (labeled 'Share'), voter turnout, population, a wealth index, and the share of population employed in agriculture and coethnics with the president. *p<0.1; **p<0.05; ***p<0.01

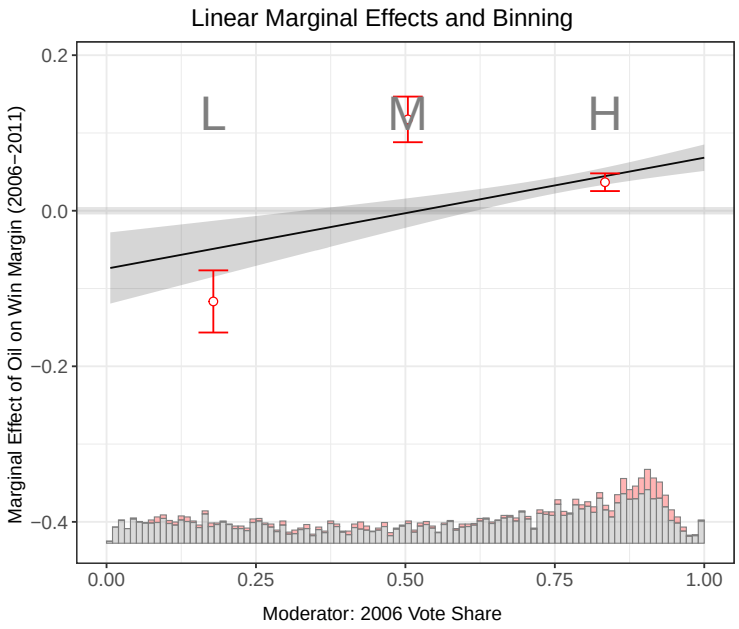
Table 31: Effect of Oil Discovery on Presidential Support (2006-2011)

	Dependent variable:					
	ihs(Margin)			ihs(Share)		
	(1)	(2)	(3)	(4)	(5)	(6)
ihs(Oil)	0.002	0.010^{***}	0.017^{***}	-0.001	0.002	0.004^{**}
	(0.006)	(0.004)	(0.004)	(0.003)	(0.002)	(0.002)
Controls	None	Share	Full	None	Share	Full
Observations	9,976	9,976	9,850	9,976	9,976	9,850
Adjusted R^2	0.742	0.915	0.922	0.761	0.918	0.922

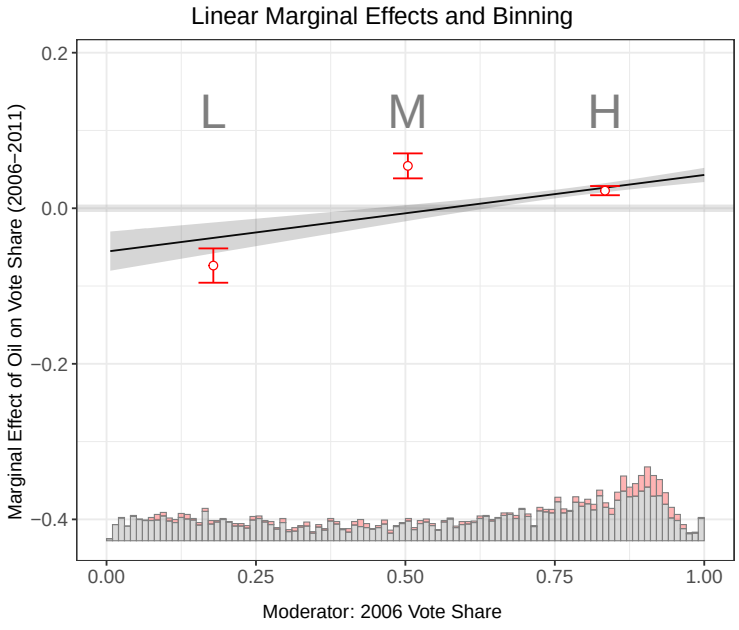
Notes: Sample includes all parishes in Uganda. Pre-treatment flexible controls include parish-level measurements of president's vote share and its square (labeled 'Share'), voter turnout, population, a wealth index, and the share of population employed in agriculture and coethnics with the president. *p<0.1; **p<0.05; ***p<0.01

G.2 Heterogeneous Effects by Historical Support

G.2.1 Binning: Unequal Share of Parishes in Each Bin



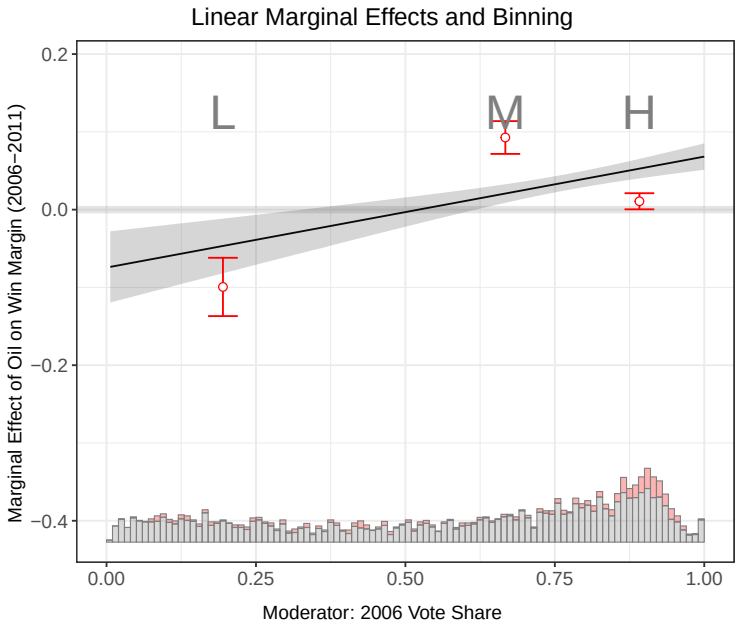
(a) Win Margin



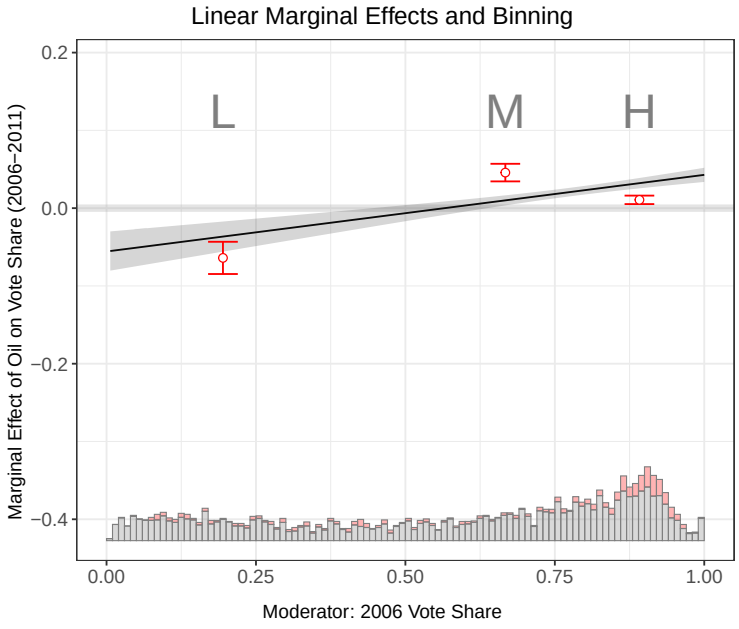
(b) Vote Share

Figure 13: Effect of oil discovery on presidential support across levels of pre-treatment presidential vote share.

G.2.2 Binning: Equal Share of Parishes in Each Bin



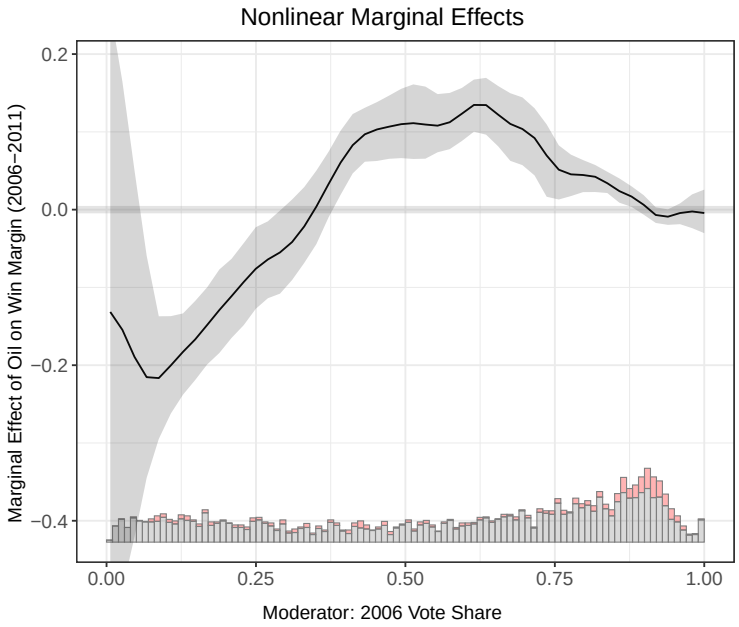
(a) Win Margin



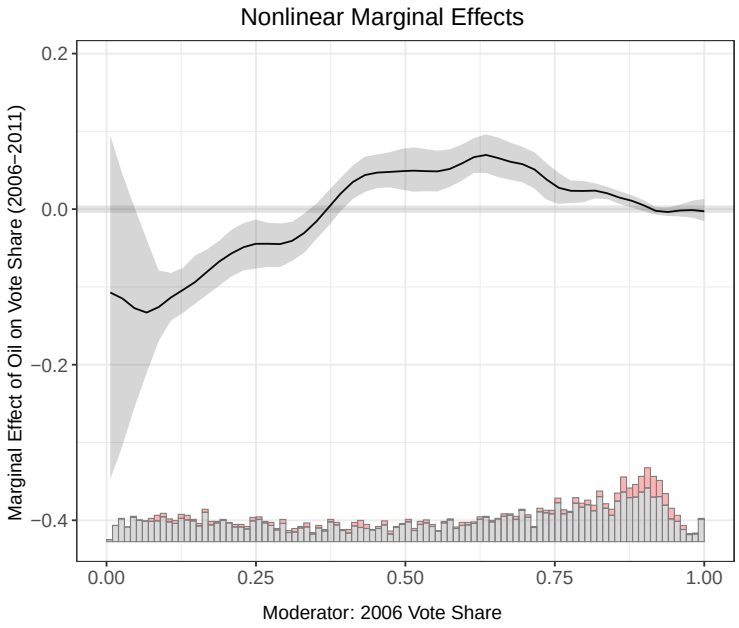
(b) Vote Share

Figure 14: Effect of oil discovery on presidential support across levels of pre-treatment presidential vote share.

G.2.3 Kernel: Nonlinear Marginal Effects



(a) Win Margin



(b) Vote Share

Figure 15: Effect of oil discovery on presidential support across levels of pre-treatment presidential vote share.

G.3 Triple Difference-in-Differences (Continuous Moderator)

G.3.1 Restricted Sample (Parishes w/in 200km of discovery)

Table 32: Effect of Oil Discovery on Presidential Win Margin (2006-2011)

	Treatment Variable			
	Binary (w/in 100km)		Proximity (10 km)	
	(1)	(2)	(3)	(4)
Oil X share	1.817***	1.622***	0.172***	0.154***
	(0.148)	(0.150)	(0.013)	(0.013)
Oil X share^2	−1.551***	−1.368***	−0.148***	−0.129***
	(0.122)	(0.123)	(0.011)	(0.011)
Oil	−0.375***	−0.347***	−0.036***	−0.034***
	(0.039)	(0.040)	(0.004)	(0.004)
Controls	None	Full	None	Full
Observations	5,006	5,006	5,006	5,006
Adjusted R^2	0.951	0.954	0.951	0.955

Notes: Sample includes parishes within 200km of nearest oil discovery. Pre-treatment flexible controls include parish-level measurements of president's vote share and its square, voter turnout, population, a wealth index, and the share of population employed in agriculture and coethnics with the president. *p<0.1; **p<0.05; ***p<0.01

Table 33: Effect of Oil Discovery on Presidential Support (2006-2011)

	Dependent variable:			
	ihs(Margin)		ihs(Share)	
	(1)	(2)	(3)	(4)
ihs(Oil) X share	1.471***	1.356***	0.769***	0.728***
	(0.156)	(0.152)	(0.079)	(0.077)
ihs(Oil) X share^2	−1.234***	−1.108***	−0.625***	−0.577***
	(0.127)	(0.123)	(0.063)	(0.062)
ihs(Oil)	−0.335***	−0.330***	−0.191***	−0.190***
	(0.043)	(0.042)	(0.022)	(0.022)
Controls	None	Full	None	Full
Observations	5,006	5,006	5,006	5,006
Adjusted R^2	0.945	0.950	0.946	0.949

Notes: Sample includes parishes within 200km of nearest oil discovery. Pre-treatment flexible controls include parish-level measurements of president's vote share and its square, voter turnout, population, a wealth index, and the share of population employed in agriculture and coethnics with the president. *p<0.1; **p<0.05; ***p<0.01

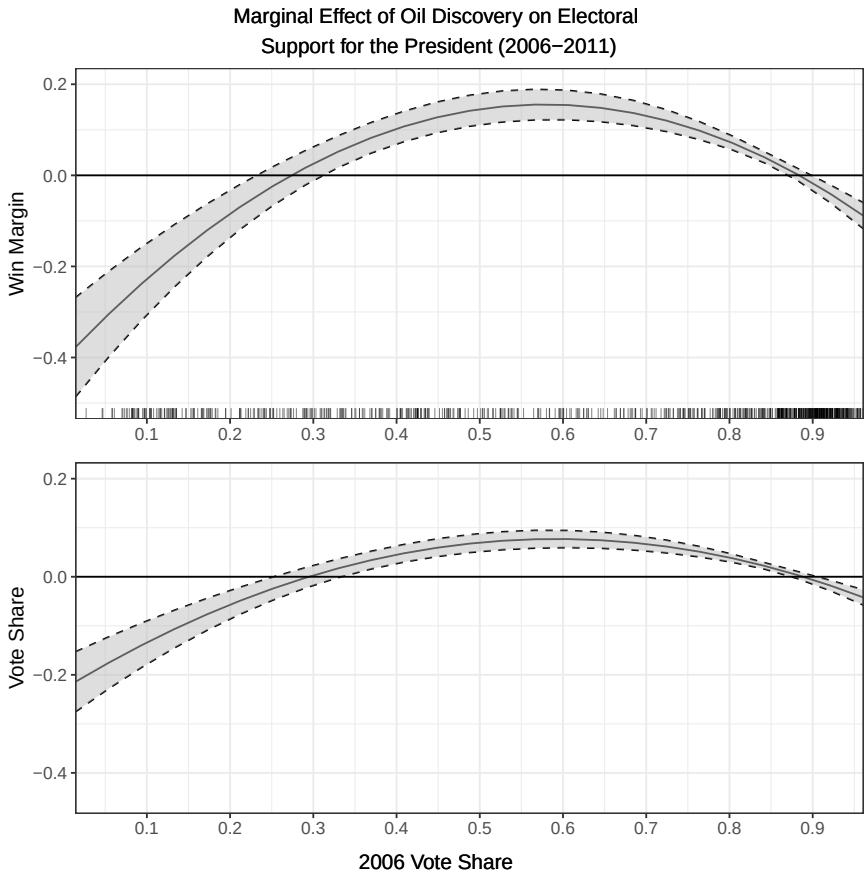


Figure 16: [Table 32 column 1] Triple Difference-in-difference estimates for the marginal effect of the oil discovery on electoral support for President Museveni across levels of pre-treatment support (without flexible controls). Treated parishes are located within 100km of the nearest oil discovery and control parishes are within 101–200km, and results are presented for the 2006 and 2011 elections. Shaded region is the 95% confidence interval. Data rug indicates the distribution of treatment parishes by their presidential vote share in 2006.

G.3.2 Full Sample (All Parishes in Uganda)

Table 34: Effect of Oil Discovery on Presidential Win Margin (2006-2011)

	Treatment Variable			
	Binary (w/in 100km)		Proximity (10 km)	
	(1)	(2)	(3)	(4)
Oil X share	1.403***	1.211***	−0.006	0.0004
	(0.144)	(0.146)	(0.008)	(0.009)
Oil X shareˆ2	−1.163***	−0.941***	0.012*	0.010
	(0.119)	(0.119)	(0.007)	(0.007)
Oil	−0.303***	−0.285***	−0.002	−0.004
	(0.039)	(0.039)	(0.002)	(0.002)
Controls	None	Full	None	Full
Observations	9,976	9,850	9,976	9,850
Adjusted R^2	0.920	0.927	0.919	0.927

Notes: Sample includes all parishes in Uganda. Pre-treatment flexible controls include parish-level measurements of president's vote share and its square, voter turnout, population, a wealth index, and the share of population employed in agriculture and coethnics with the president. *p<0.1; **p<0.05; ***p<0.01

Table 35: Effect of Oil Discovery on Presidential Support (2006-2011)

	Dependent variable:			
	ihs(Margin)		ihs(Share)	
	(1)	(2)	(3)	(4)
ihs(Oil) X share	0.296***	0.340***	0.236***	0.254***
	(0.111)	(0.115)	(0.055)	(0.056)
ihs(Oil) X shareˆ2	−0.190**	−0.177*	−0.144***	−0.143***
	(0.088)	(0.091)	(0.044)	(0.044)
ihs(Oil)	−0.093***	−0.122***	−0.084***	−0.094***
	(0.032)	(0.034)	(0.016)	(0.017)
Controls	None	Full	None	Full
Observations	9,976	9,850	9,976	9,850
Adjusted R^2	0.915	0.923	0.920	0.924

Notes: Sample includes all parishes in Uganda. Pre-treatment flexible controls include parish-level measurements of president's vote share and its square, voter turnout, population, a wealth index, and the share of population employed in agriculture and coethnics with the president. *p<0.1; **p<0.05; ***p<0.01

H Election Results (2001–2011)

This section presents results using data from the 2001, 2006 and 2011 Presidential elections. This sample includes two pre-treatment (2001, 2006) and one post-treatment (2011) election. In contrast to models including 2006 as the only pre-treatment election, in this section, we use a flexible control for turnout in 2001 (rather than 2006), and for model investigating heterogeneous effects, we take the incumbent's vote share in 2001, rather than (2006) as the moderator.

H.1 Simple Difference-in-Differences

H.1.1 Restricted Sample (Parishes w/in 200km of discovery)

Table 36: Effect of Oil Discovery on Presidential Win Margin (2002-2011)

	Treatment Variable					
	Binary (w/in 100km)			Proximity (10 km)		
	(1)	(2)	(3)	(4)	(5)	(6)
Oil	−0.055***	0.012	0.006	−0.002	0.002***	0.001
	(0.014)	(0.008)	(0.008)	(0.001)	(0.001)	(0.001)
Controls	None	Share	Full	None	Share	Full
Observations	6,672	6,672	6,672	6,672	6,672	6,672
Adjusted R^2	0.812	0.924	0.927	0.812	0.924	0.927

Notes: Sample includes parishes within 200km of nearest oil discovery. Pre-treatment flexible controls include parish-level measurements of president's vote share and its square (labeled 'Share'), voter turnout, population, a wealth index, and the share of population employed in agriculture and coethnics with the president. *p<0.1; **p<0.05; ***p<0.01

Table 37: Effect of Oil Discovery on Presidential Vote Share (2002-2011)

	Treatment Variable					
	Binary (w/in 100km)			Proximity (10 km)		
	(1)	(2)	(3)	(4)	(5)	(6)
Oil	−0.027***	0.004	0.002	−0.001	0.001***	0.001**
	(0.006)	(0.004)	(0.004)	(0.001)	(0.0003)	(0.0004)
Controls	None	Share	Full	None	Share	Full
Observations	6,672	6,672	6,672	6,672	6,672	6,672
Adjusted R^2	0.842	0.922	0.924	0.842	0.922	0.924

Notes: Sample includes parishes within 200km of nearest oil discovery. Pre-treatment flexible controls include parish-level measurements of president's vote share and its square (labeled 'Share'), voter turnout, population, a wealth index, and the share of population employed in agriculture and coethnics with the president. *p<0.1; **p<0.05; ***p<0.01

Table 38: Effect of Oil Discovery on Presidential Support (2002-2011)

	Dependent variable:					
	ihs(Margin)			ihs(Share)		
	(1)	(2)	(3)	(4)	(5)	(6)
ihs(Oil)	-0.034^{***}	0.016^{***}	0.009^{**}	-0.017^{***}	0.005^{***}	0.003
	(0.008)	(0.004)	(0.005)	(0.003)	(0.002)	(0.002)
Controls	None	Share	Full	None	Share	Full
Observations	6,672	6,672	6,672	6,672	6,672	6,672
Adjusted R^2	0.807	0.921	0.924	0.830	0.921	0.923

Notes: Sample includes parishes within 200km of nearest oil discovery. Pre-treatment flexible controls include parish-level measurements of president's vote share and its square (labeled 'Share'), voter turnout, population, a wealth index, and the share of population employed in agriculture and coethnics with the president. *p<0.1; **p<0.05; ***p<0.01

H.1.2 Full Sample (All Parishes in Uganda)

Table 39: Effect of Oil Discovery on Presidential Win Margin (2002-2011)

	Treatment Variable					
	Binary (w/in 100km)			Proximity (10 km)		
	(1)	(2)	(3)	(4)	(5)	(6)
Oil	0.016	0.018^{**}	0.022^{***}	0.006^{***}	0.001^{***}	0.002^{***}
	(0.012)	(0.007)	(0.007)	(0.001)	(0.0004)	(0.0003)
Controls	None	Share	Full	None	Share	Full
Observations	12,486	12,486	12,393	12,486	12,486	12,393
Adjusted R^2	0.760	0.859	0.865	0.764	0.859	0.865

Notes: Sample includes all parishes in Uganda. Pre-treatment flexible controls include parish-level measurements of president's vote share and its square (labeled 'Share'), voter turnout, population, a wealth index, and the share of population employed in agriculture and coethnics with the president. *p<0.1; **p<0.05; ***p<0.01

Table 40: Effect of Oil Discovery on Presidential Vote Share (2002-2011)

	Treatment Variable					
	Binary (w/in 100km)			Proximity (10 km)		
	(1)	(2)	(3)	(4)	(5)	(6)
Oil	0.004	0.008**	0.010***	0.003***	0.001***	0.001***
	(0.005)	(0.004)	(0.004)	(0.0003)	(0.0002)	(0.0002)
Controls	None	Share	Full	None	Share	Full
Observations	12,486	12,486	12,393	12,486	12,486	12,393
Adjusted R^2	0.787	0.859	0.865	0.790	0.859	0.865

Notes: Sample includes all parishes in Uganda. Pre-treatment flexible controls include parish-level measurements of president's vote share and its square (labeled 'Share'), voter turnout, population, a wealth index, and the share of population employed in agriculture and coethnics with the president. *p<0.1; **p<0.05; ***p<0.01

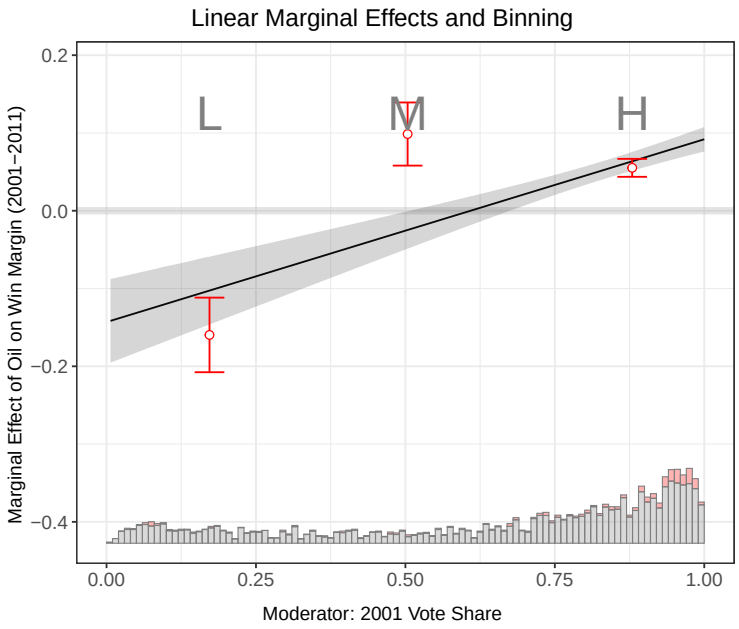
Table 41: Effect of Oil Discovery on Presidential Support (2002-2011)

	Dependent variable:					
	ihs(Margin)			ihs(Share)		
	(1)	(2)	(3)	(4)	(5)	(6)
ihs(Oil)	0.046***	0.014***	0.020***	0.019***	0.005***	0.007***
	(0.007)	(0.004)	(0.004)	(0.003)	(0.002)	(0.002)
Controls	None	Share	Full	None	Share	Full
Observations	12,486	12,486	12,393	12,486	12,486	12,393
Adjusted R^2	0.757	0.856	0.863	0.777	0.858	0.865

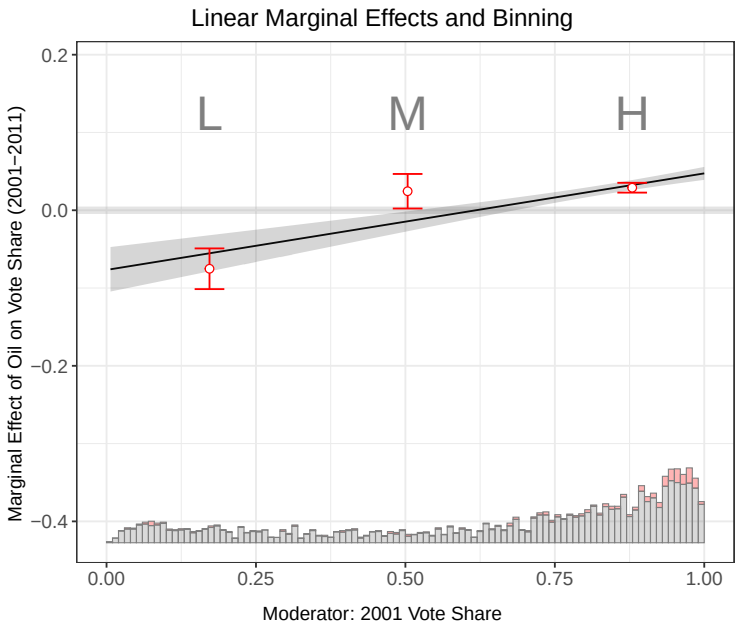
Notes: Sample includes all parishes in Uganda. Pre-treatment flexible controls include parish-level measurements of president's vote share and its square (labeled 'Share'), voter turnout, population, a wealth index, and the share of population employed in agriculture and coethnics with the president. *p<0.1; **p<0.05; ***p<0.01

H.2 Heterogeneous Effects by Historical Support

H.2.1 Binning: Unequal Share of Parishes in Each Bin



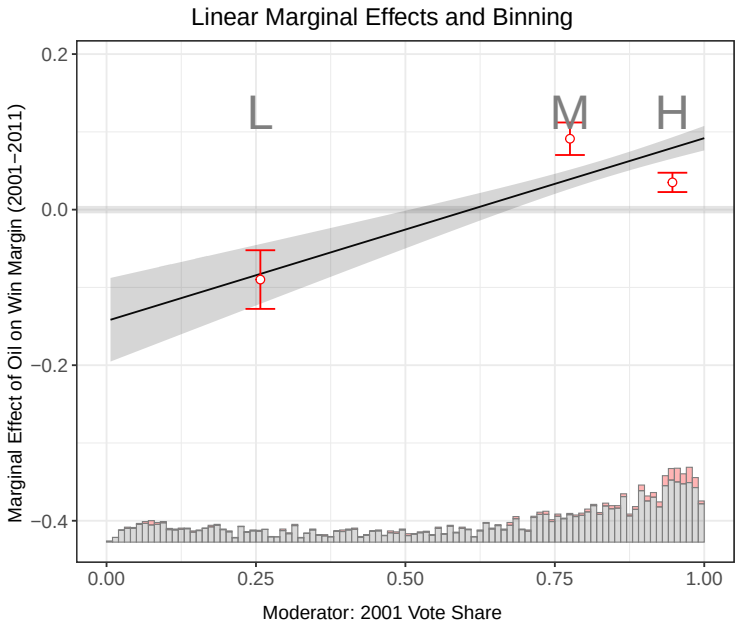
(a) Win Margin



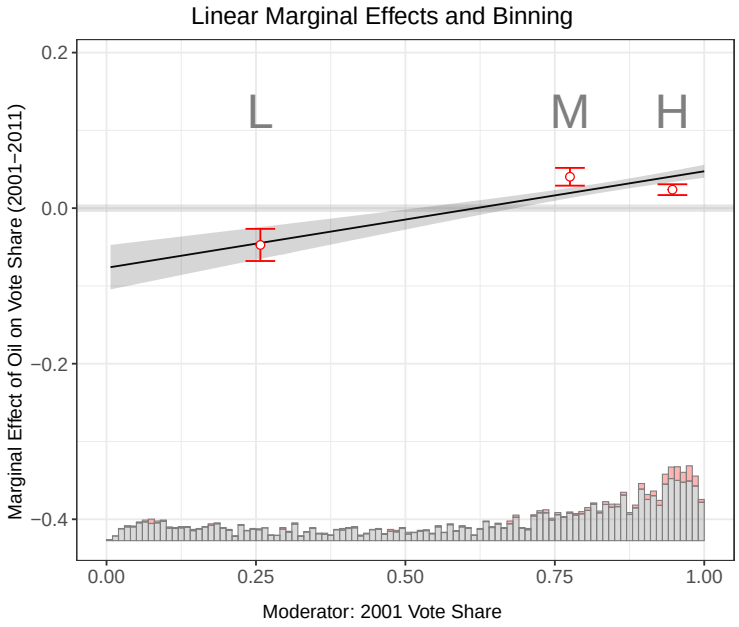
(b) Vote Share

Figure 17: Effect of oil discovery on presidential support across levels of pre-treatment presidential vote share.

H.2.2 Binning: Equal Share of Parishes in Each Bin



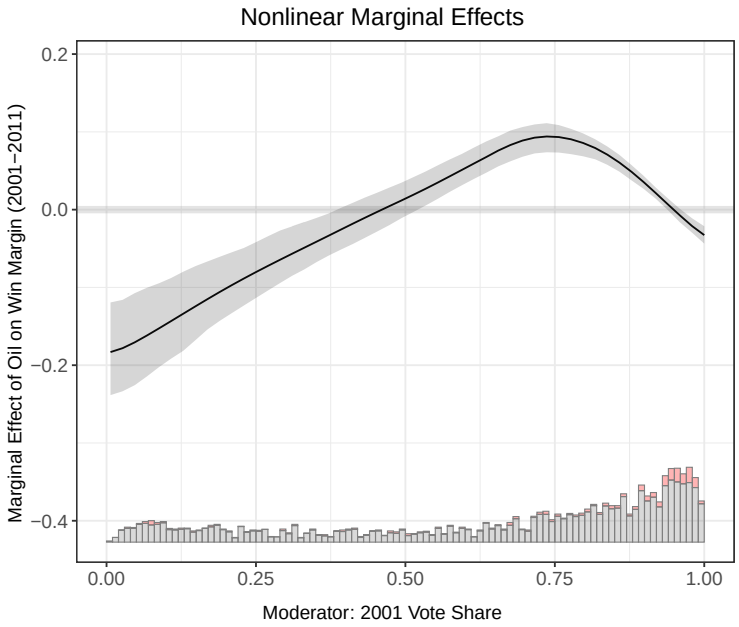
(a) Win Margin



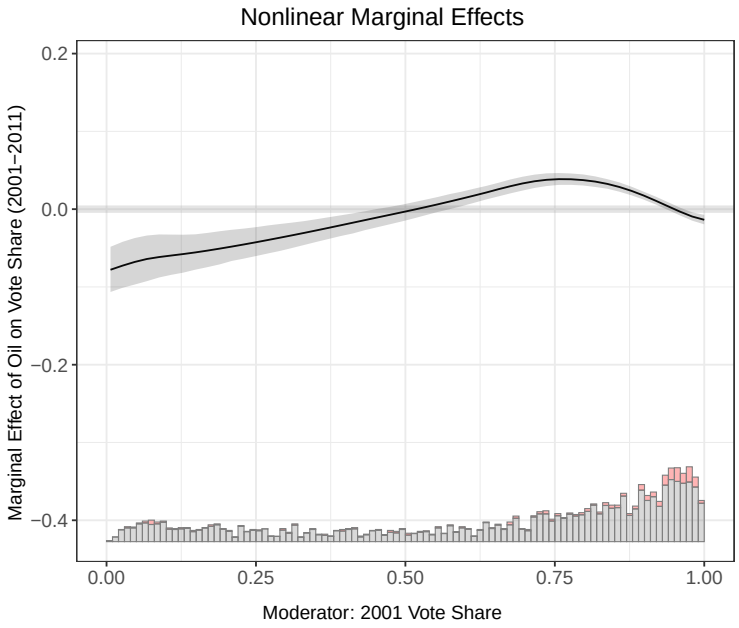
(b) Vote Share

Figure 18: Effect of oil discovery on presidential support across levels of pre-treatment presidential vote share.

H.2.3 Kernel: Nonlinear Marginal Effects



(a) Win Margin



(b) Vote Share

Figure 19: Effect of oil discovery on presidential support across levels of pre-treatment presidential vote share.

H.3 Triple Difference-in-Differences (Continuous Moderator)

H.3.1 Restricted Sample (Parishes w/in 200km of discovery)

Table 42: Effect of Oil Discovery on Presidential Win Margin (2001-2011)

	Treatment Variable			
	Binary (w/in 100km)		Proximity (10 km)	
	(1)	(2)	(3)	(4)
Oil X share	1.445***	1.278***	0.134***	0.116***
	(0.163)	(0.170)	(0.015)	(0.015)
Oil X shareˆ2	−1.185***	−1.028***	−0.109***	−0.090***
	(0.137)	(0.144)	(0.012)	(0.012)
Oil	−0.341***	−0.320***	−0.034***	−0.032***
	(0.042)	(0.044)	(0.004)	(0.004)
Controls	None	Full	None	Full
Observations	6,672	6,672	6,672	6,672
Adjusted R^2	0.923	0.925	0.923	0.925

Notes: Sample includes parishes within 200km of nearest oil discovery. Pre-treatment flexible controls include parish-level measurements of president's vote share and its square, voter turnout, population, a wealth index, and the share of population employed in agriculture and coethnics with the president. *p<0.1; **p<0.05; ***p<0.01

Table 43: Effect of Oil Discovery on Presidential Support (2001-2011)

	Dependent variable:			
	ihs(Margin)		ihs(Share)	
	(1)	(2)	(3)	(4)
ihs(Oil) X share	1.333***	1.237***	0.674***	0.635***
	(0.152)	(0.153)	(0.076)	(0.075)
ihs(Oil) X shareˆ2	−1.066***	−0.952***	−0.527***	−0.479***
	(0.121)	(0.123)	(0.059)	(0.060)
ihs(Oil)	−0.351***	−0.351***	−0.187***	−0.187***
	(0.044)	(0.044)	(0.022)	(0.022)
Controls	None	Full	None	Full
Observations	6,672	6,672	6,672	6,672
Adjusted R^2	0.920	0.923	0.923	0.925

Notes: Sample includes parishes within 200km of nearest oil discovery. Pre-treatment flexible controls include parish-level measurements of president's vote share and its square, voter turnout, population, a wealth index, and the share of population employed in agriculture and coethnics with the president. *p<0.1; **p<0.05; ***p<0.01

H.3.2 Full Sample (All Parishes in Uganda)

Table 44: Effect of Oil Discovery on Presidential Win Margin (2001-2011)

	Treatment Variable			
	Binary (w/in 100km)		Proximity (10 km)	
	(1)	(2)	(3)	(4)
Oil X share	1.085***	0.976***	−0.041***	−0.028**
	(0.161)	(0.162)	(0.011)	(0.011)
Oil X shareˆ2	−0.918***	−0.773***	0.032***	0.025***
	(0.133)	(0.134)	(0.009)	(0.009)
Oil	−0.217***	−0.224***	0.014***	0.009***
	(0.043)	(0.043)	(0.003)	(0.003)
Controls	None	Full	None	Full
Observations	12,486	12,393	12,486	12,393
Adjusted R^2	0.852	0.858	0.853	0.859

Notes: Sample includes all parishes in Uganda. Pre-treatment flexible controls include parish-level measurements of president's vote share and its square, voter turnout, population, a wealth index, and the share of population employed in agriculture and coethnics with the president. *p<0.1; **p<0.05; ***p<0.01

Table 45: Effect of Oil Discovery on Presidential Support (2001-2011)

	Dependent variable:			
	ihs(Margin)		ihs(Share)	
	(1)	(2)	(3)	(4)
ihs(Oil) X share	−0.156	−0.008	−0.027	0.043
	(0.144)	(0.146)	(0.066)	(0.067)
ihs(Oil) X share^2	0.090	0.023	0.030	−0.008
	(0.114)	(0.114)	(0.053)	(0.053)
ihs(Oil)	0.091**	0.023	0.015	−0.015
	(0.042)	(0.043)	(0.019)	(0.020)
Controls	None	Full	None	Full
Observations	12,486	12,393	12,486	12,393
Adjusted R^2	0.849	0.856	0.857	0.862

Notes: Sample includes all parishes in Uganda. Pre-treatment flexible controls include parish-level measurements of president's vote share and its square, voter turnout, population, a wealth index, and the share of population employed in agriculture and coethnics with the president. *p<0.1; **p<0.05; ***p<0.01

I Election Results (2006–2016)

This section presents results using data from the 2006 and 2016 Presidential elections. This sample includes one pre-treatment (2006) and one post-treatment (2016) election.

I.1 Simple Difference-in-Differences

I.1.1 Restricted Sample (Parishes w/in 200km of discovery)

Table 46: Effect of Oil Discovery on Presidential Win Margin (2006-2016)

	Treatment Variable					
	Binary (w/in 100km)			Proximity (10 km)		
	(1)	(2)	(3)	(4)	(5)	(6)
Oil	−0.004	0.085***	0.085***	0.006***	0.012***	0.011***
	(0.016)	(0.009)	(0.008)	(0.001)	(0.001)	(0.001)
Controls	None	Share	Full	None	Share	Full
Observations	5,012	5,012	5,012	5,012	5,012	5,012
Adjusted R^2	0.672	0.910	0.925	0.673	0.914	0.928

Notes: Sample includes parishes within 200km of nearest oil discovery. Pre-treatment flexible controls include parish-level measurements of president's vote share and its square (labeled 'Share'), voter turnout, population, a wealth index, and the share of population employed in agriculture and coethnics with the president. *p<0.1; **p<0.05; ***p<0.01

Table 47: Effect of Oil Discovery on Presidential Vote Share (2006-2016)

	Treatment Variable					
	Binary (w/in 100km)			Proximity (10 km)		
	(1)	(2)	(3)	(4)	(5)	(6)
Oil	−0.010	0.034***	0.035***	0.002***	0.005***	0.005***
	(0.008)	(0.005)	(0.004)	(0.001)	(0.0004)	(0.0004)
Controls	None	Share	Full	None	Share	Full
Observations	5,012	5,012	5,012	5,012	5,012	5,012
Adjusted R^2	0.712	0.914	0.924	0.713	0.918	0.927

Notes: Sample includes parishes within 200km of nearest oil discovery. Pre-treatment flexible controls include parish-level measurements of president's vote share and its square (labeled 'Share'), voter turnout, population, a wealth index, and the share of population employed in agriculture and coethnics with the president. *p<0.1; **p<0.05; ***p<0.01

Table 48: Effect of Oil Discovery on Presidential Support (2006-2016)

	Dependent variable:					
	ihs(Margin)			ihs(Share)		
	(1)	(2)	(3)	(4)	(5)	(6)
ihs(Oil)	0.004	0.072***	0.070***	−0.005	0.027***	0.026***
	(0.011)	(0.008)	(0.007)	(0.005)	(0.003)	(0.003)
Controls	None	Share	Full	None	Share	Full
Observations	5,012	5,012	5,012	5,012	5,012	5,012
Adjusted R^2	0.668	0.904	0.920	0.692	0.916	0.926

Notes: Sample includes parishes within 200km of nearest oil discovery. Pre-treatment flexible controls include parish-level measurements of president's vote share and its square (labeled 'Share'), voter turnout, population, a wealth index, and the share of population employed in agriculture and coethnics with the president. *p<0.1; **p<0.05; ***p<0.01

I.1.2 Full Sample (All Parishes in Uganda)

Table 49: Effect of Oil Discovery on Presidential Win Margin (2006-2016)

	Treatment Variable					
	Binary (w/in 100km)			Proximity (10 km)		
	(1)	(2)	(3)	(4)	(5)	(6)
Oil	0.046***	0.083***	0.102***	0.005***	0.002***	0.006***
	(0.014)	(0.008)	(0.007)	(0.001)	(0.0004)	(0.0004)
Controls	None	Share	Full	None	Share	Full
Observations	9,996	9,996	9,870	9,996	9,996	9,870
Adjusted R^2	0.650	0.888	0.913	0.654	0.887	0.915

Notes: Sample includes all parishes in Uganda. Pre-treatment flexible controls include parish-level measurements of president's vote share and its square (labeled 'Share'), voter turnout, population, a wealth index, and the share of population employed in agriculture and coethnics with the president. *p<0.1; **p<0.05; ***p<0.01

Table 50: Effect of Oil Discovery on Presidential Vote Share (2006-2016)

	Treatment Variable					
	Binary (w/in 100km)			Proximity (10 km)		
	(1)	(2)	(3)	(4)	(5)	(6)
Oil	0.015**	0.035***	0.042***	0.002***	0.001***	0.002***
	(0.007)	(0.004)	(0.004)	(0.0003)	(0.0002)	(0.0002)
Controls	None	Share	Full	None	Share	Full
Observations	9,996	9,996	9,870	9,996	9,996	9,870
Adjusted R^2	0.685	0.897	0.914	0.689	0.896	0.916

Notes: Sample includes all parishes in Uganda. Pre-treatment flexible controls include parish-level measurements of president's vote share and its square (labeled 'Share'), voter turnout, population, a wealth index, and the share of population employed in agriculture and coethnics with the president. *p<0.1; **p<0.05; ***p<0.01

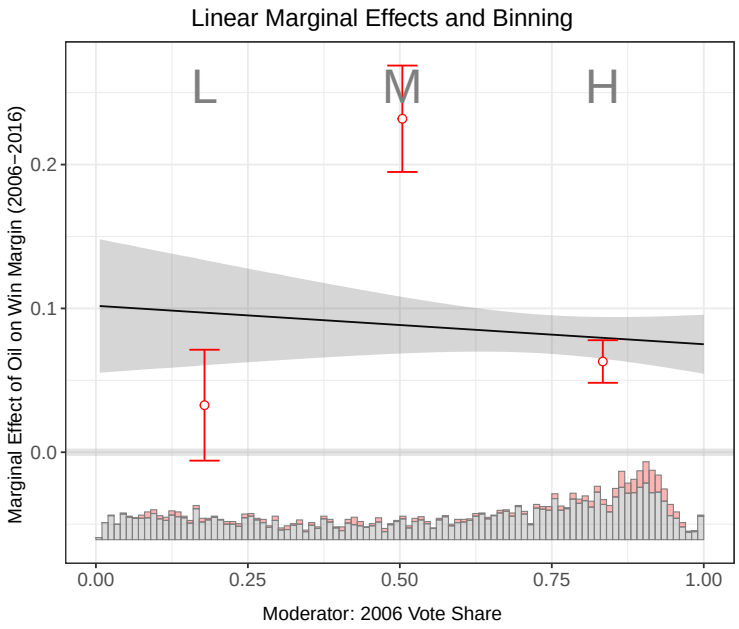
Table 51: Effect of Oil Discovery on Presidential Support (2006-2016)

	Dependent variable:					
	ihs(Margin)			ihs(Share)		
	(1)	(2)	(3)	(4)	(5)	(6)
ihs(Oil)	0.048***	0.043***	0.072***	0.019***	0.016***	0.027***
	(0.008)	(0.005)	(0.005)	(0.004)	(0.002)	(0.002)
Controls	None	Share	Full	None	Share	Full
Observations	9,996	9,996	9,870	9,996	9,996	9,870
Adjusted R^2	0.646	0.881	0.909	0.665	0.898	0.917

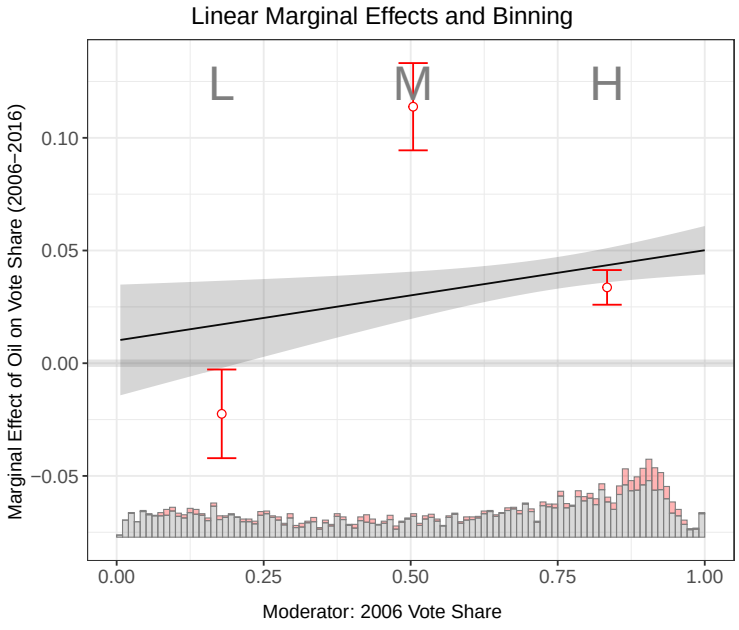
Notes: Sample includes all parishes in Uganda. Pre-treatment flexible controls include parish-level measurements of president's vote share and its square (labeled 'Share'), voter turnout, population, a wealth index, and the share of population employed in agriculture and coethnics with the president. *p<0.1; **p<0.05; ***p<0.01

I.2 Heterogeneous Effects by Historical Support

I.2.1 Binning: Unequal Share of Parishes in Each Bin



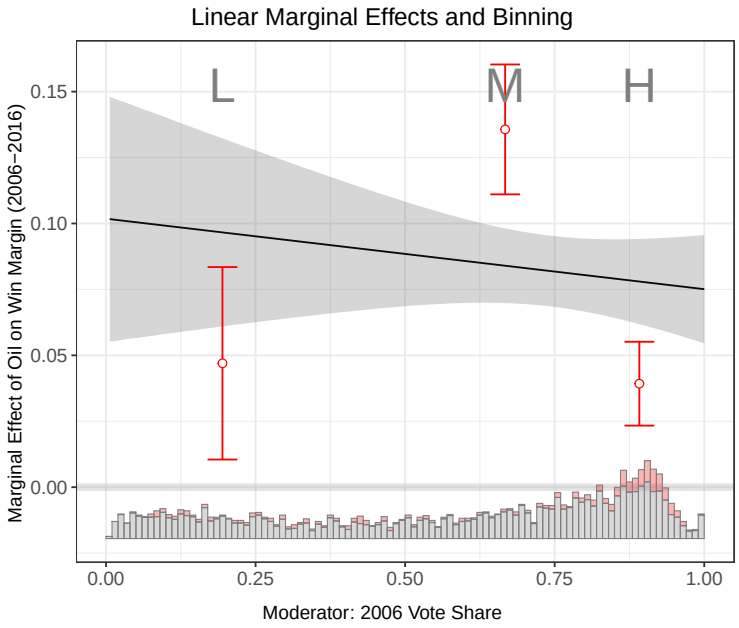
(a) Win Margin



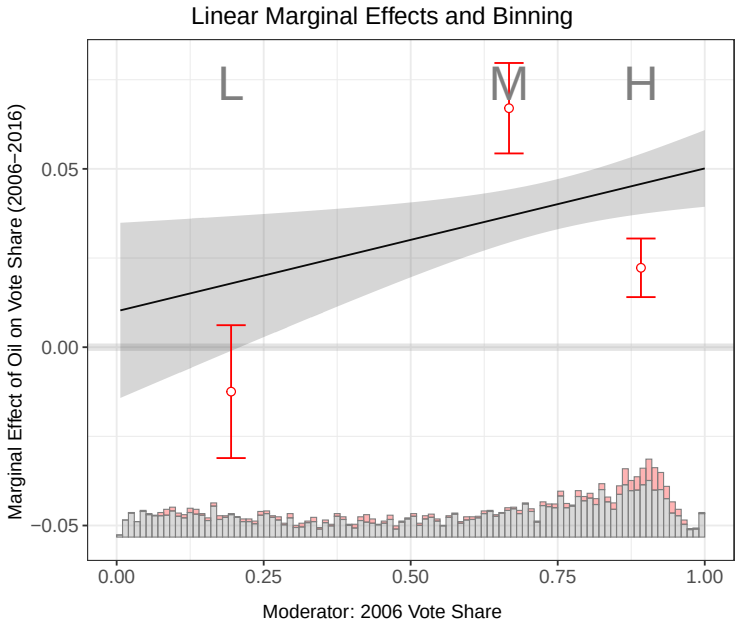
(b) Vote Share

Figure 20: Effect of oil discovery on presidential support across levels of pre-treatment presidential vote share.

I.2.2 Binning: Equal Share of Parishes in Each Bin



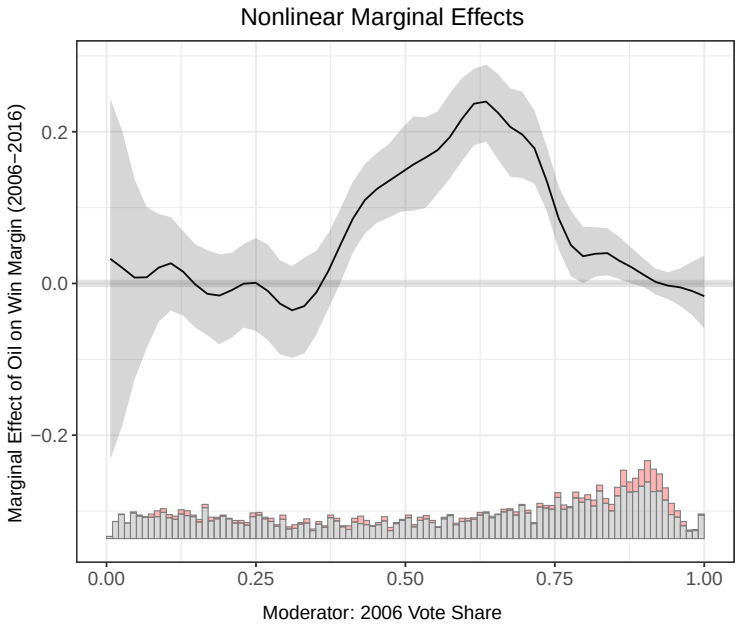
(a) Win Margin



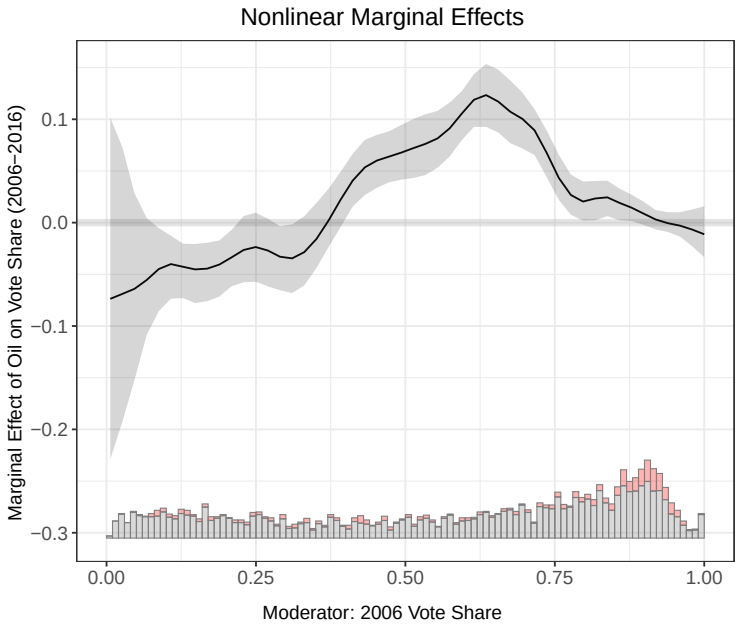
(b) Vote Share

Figure 21: Effect of oil discovery on presidential support across levels of pre-treatment presidential vote share.

I.2.3 Kernel: Nonlinear Marginal Effects



(a) Win Margin



(b) Vote Share

Figure 22: Effect of oil discovery on presidential support across levels of pre-treatment presidential vote share.

I.3 Triple Difference-in-Differences (Continuous Moderator)

I.3.1 Restricted Sample (Parishes w/in 200km of discovery)

Table 52: Effect of Oil Discovery on Presidential Win Margin (2006-2016)

	Treatment Variable			
	Binary (w/in 100km)		Proximity (10 km)	
	(1)	(2)	(3)	(4)
Oil X share	1.499***	1.205***	0.185***	0.153***
	(0.160)	(0.147)	(0.014)	(0.013)
Oil X share^2	−1.427***	−1.140***	−0.186***	−0.151***
	(0.141)	(0.128)	(0.012)	(0.011)
Oil	−0.174***	−0.124***	−0.017***	−0.014***
	(0.038)	(0.036)	(0.004)	(0.003)
Controls	None	Full	None	Full
Observations	5,012	5,012	5,012	5,012
Adjusted R^2	0.913	0.927	0.923	0.933

Notes: Sample includes parishes within 200km of nearest oil discovery. Pre-treatment flexible controls include parish-level measurements of president's vote share and its square, voter turnout, population, a wealth index, and the share of population employed in agriculture and coethnics with the president. *p<0.1; **p<0.05; ***p<0.01

Table 53: Effect of Oil Discovery on Presidential Support (2006-2016)

	Dependent variable:			
	ihs(Margin)		ihs(Share)	
	(1)	(2)	(3)	(4)
ihs(Oil) X share	0.998***	0.804***	0.675***	0.610***
	(0.175)	(0.159)	(0.084)	(0.080)
ihs(Oil) X share^2	−1.105***	−0.879***	−0.649***	−0.569***
	(0.152)	(0.136)	(0.073)	(0.068)
ihs(Oil)	−0.023	−0.013	−0.092***	−0.090***
	(0.043)	(0.041)	(0.021)	(0.021)
Controls	None	Full	None	Full
Observations	5,012	5,012	5,012	5,012
Adjusted R^2	0.910	0.923	0.922	0.929

Notes: Sample includes parishes within 200km of nearest oil discovery. Pre-treatment flexible controls include parish-level measurements of president's vote share and its square, voter turnout, population, a wealth index, and the share of population employed in agriculture and coethnics with the president. *p<0.1; **p<0.05; ***p<0.01

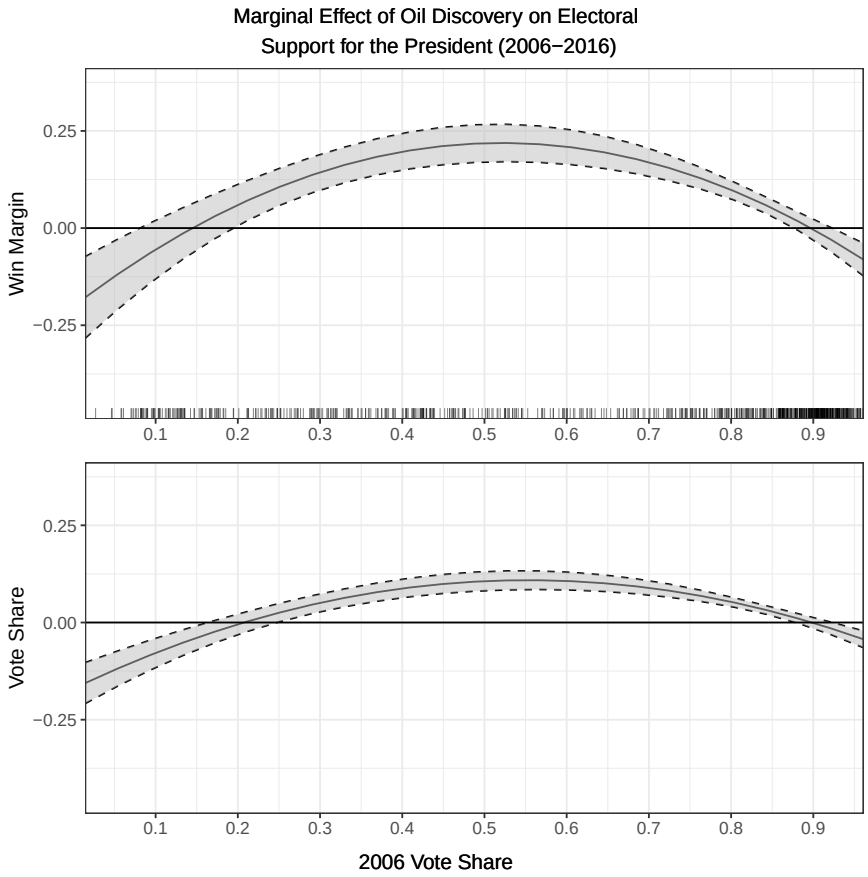


Figure 23: [Table 52 column 1] Triple Difference-in-difference estimates for the marginal effect of the oil discovery on electoral support for President Museveni across levels of pre-treatment support (without flexible controls). Treated parishes are located within 100km of the nearest oil discovery and control parishes are within 101–200km, and results are presented for the 2006 and 2011 elections. Shaded region is the 95% confidence interval. Data rug indicates the distribution of treatment parishes by their presidential vote share in 2006.

I.3.2 Full Sample (All Parishes in Uganda)

Table 54: Effect of Oil Discovery on Presidential Win Margin (2006-2016)

	Treatment Variable			
	Binary (w/in 100km)		Proximity (10 km)	
	(1)	(2)	(3)	(4)
Oil X share	1.841***	1.453***	0.069***	0.065***
	(0.151)	(0.137)	(0.008)	(0.007)
Oil X shareˆ2	−1.750***	−1.304***	−0.064***	−0.053***
	(0.130)	(0.118)	(0.006)	(0.006)
Oil	−0.234***	−0.187***	−0.011***	−0.011***
	(0.037)	(0.035)	(0.002)	(0.002)
Controls	None	Full	None	Full
Observations	9,996	9,870	9,996	9,870
Adjusted R^2	0.892	0.915	0.889	0.917

Notes: Sample includes all parishes in Uganda. Pre-treatment flexible controls include parish-level measurements of president's vote share and its square, voter turnout, population, a wealth index, and the share of population employed in agriculture and coethnics with the president. *p<0.1; **p<0.05; ***p<0.01

Table 55: Effect of Oil Discovery on Presidential Support (2006-2016)

	Dependent variable:			
	ihs(Margin)		ihs(Share)	
	(1)	(2)	(3)	(4)
ihs(Oil) X share	1.019***	0.909***	0.569***	0.533***
	(0.115)	(0.109)	(0.053)	(0.052)
ihs(Oil) X shareˆ2	−0.986***	−0.802***	−0.516***	−0.448***
	(0.095)	(0.088)	(0.044)	(0.041)
ihs(Oil)	−0.135***	−0.130***	−0.102***	−0.103***
	(0.031)	(0.030)	(0.014)	(0.014)
Controls	None	Full	None	Full
Observations	9,996	9,870	9,996	9,870
Adjusted R^2	0.884	0.911	0.902	0.919

Notes: Sample includes all parishes in Uganda. Pre-treatment flexible controls include parish-level measurements of president's vote share and its square, voter turnout, population, a wealth index, and the share of population employed in agriculture and coethnics with the president. *p<0.1; **p<0.05; ***p<0.01

J Election Results (2001–2016)

This section presents results using data from the 2001, 2006, 2011, and 2016 Presidential elections. This sample includes two pre-treatment (2001, 2006) and two post-treatment (2011, 2016) election. In contrast to models including 2006 as the only pre-treatment election, in this section, we use a flexible control for turnout in 2001 (rather than 2006), and for model investigating heterogeneous effects, we take the incumbent's vote share in 2001, rather than (2006) as the moderator.

J.1 Simple Difference-in-Differences

J.1.1 Restricted Sample (Parishes w/in 200km of discovery)

Table 56: Effect of Oil Discovery on Presidential Win Margin (2002-2016)

	Treatment Variable					
	Binary (w/in 100km)			Proximity (10 km)		
	(1)	(2)	(3)	(4)	(5)	(6)
Oil	−0.023	0.048***	0.046***	0.003**	0.006***	0.006***
	(0.015)	(0.008)	(0.007)	(0.001)	(0.001)	(0.001)
Controls	None	Share	Full	None	Share	Full
Observations	8,896	8,896	8,896	8,896	8,896	8,896
Adjusted R^2	0.748	0.894	0.899	0.748	0.895	0.900

Notes: Sample includes parishes within 200km of nearest oil discovery. Pre-treatment flexible controls include parish-level measurements of president's vote share and its square (labeled 'Share'), voter turnout, population, a wealth index, and the share of population employed in agriculture and coethnics with the president. *p<0.1; **p<0.05; ***p<0.01

Table 57: Effect of Oil Discovery on Presidential Vote Share (2002-2016)

	Treatment Variable					
	Binary (w/in 100km)			Proximity (10 km)		
	(1)	(2)	(3)	(4)	(5)	(6)
Oil	−0.014**	0.020***	0.020***	0.001*	0.003***	0.003***
	(0.007)	(0.004)	(0.004)	(0.001)	(0.0003)	(0.0003)
Controls	None	Share	Full	None	Share	Full
Observations	8,896	8,896	8,896	8,896	8,896	8,896
Adjusted R^2	0.786	0.898	0.902	0.786	0.899	0.903

Notes: Sample includes parishes within 200km of nearest oil discovery. Pre-treatment flexible controls include parish-level measurements of president's vote share and its square (labeled 'Share'), voter turnout, population, a wealth index, and the share of population employed in agriculture and coethnics with the president. *p<0.1; **p<0.05; ***p<0.01

Table 58: Effect of Oil Discovery on Presidential Support (2002-2016)

	Dependent variable:					
	ihs(Margin)			ihs(Share)		
	(1)	(2)	(3)	(4)	(5)	(6)
ihs(Oil)	−0.010	0.042***	0.038***	−0.008*	0.016***	0.015***
	(0.009)	(0.006)	(0.005)	(0.004)	(0.002)	(0.002)
Controls	None	Share	Full	None	Share	Full
Observations	8,896	8,896	8,896	8,896	8,896	8,896
Adjusted R^2	0.744	0.890	0.896	0.774	0.898	0.903

Notes: Sample includes parishes within 200km of nearest oil discovery. Pre-treatment flexible controls include parish-level measurements of president's vote share and its square (labeled 'Share'), voter turnout, population, a wealth index, and the share of population employed in agriculture and coethnics with the president. *p<0.1; **p<0.05; ***p<0.01

J.1.2 Full Sample (All Parishes in Uganda)

Table 59: Effect of Oil Discovery on Presidential Win Margin (2002-2016)

	Treatment Variable					
	Binary (w/in 100km)			Proximity (10 km)		
	(1)	(2)	(3)	(4)	(5)	(6)
Oil	0.055***	0.050***	0.063***	0.008***	0.002***	0.004***
	(0.013)	(0.007)	(0.007)	(0.001)	(0.0003)	(0.0003)
Controls	None	Share	Full	None	Share	Full
Observations	16,648	16,648	16,524	16,648	16,648	16,524
Adjusted R^2	0.704	0.827	0.838	0.711	0.827	0.839

Notes: Sample includes all parishes in Uganda. Pre-treatment flexible controls include parish-level measurements of president's vote share and its square (labeled 'Share'), voter turnout, population, a wealth index, and the share of population employed in agriculture and coethnics with the president. *p<0.1; **p<0.05; ***p<0.01

Table 60: Effect of Oil Discovery on Presidential Vote Share (2002-2016)

	Treatment Variable					
	Binary (w/in 100km)			Proximity (10 km)		
	(1)	(2)	(3)	(4)	(5)	(6)
Oil	0.022***	0.022***	0.028***	0.003***	0.001***	0.002***
	(0.006)	(0.004)	(0.003)	(0.0003)	(0.0002)	(0.0002)
Controls	None	Share	Full	None	Share	Full
Observations	16,648	16,648	16,524	16,648	16,648	16,524
Adjusted R^2	0.737	0.834	0.842	0.741	0.833	0.843

Notes: Sample includes all parishes in Uganda. Pre-treatment flexible controls include parish-level measurements of president's vote share and its square (labeled 'Share'), voter turnout, population, a wealth index, and the share of population employed in agriculture and coethnics with the president. *p<0.1; **p<0.05; ***p<0.01

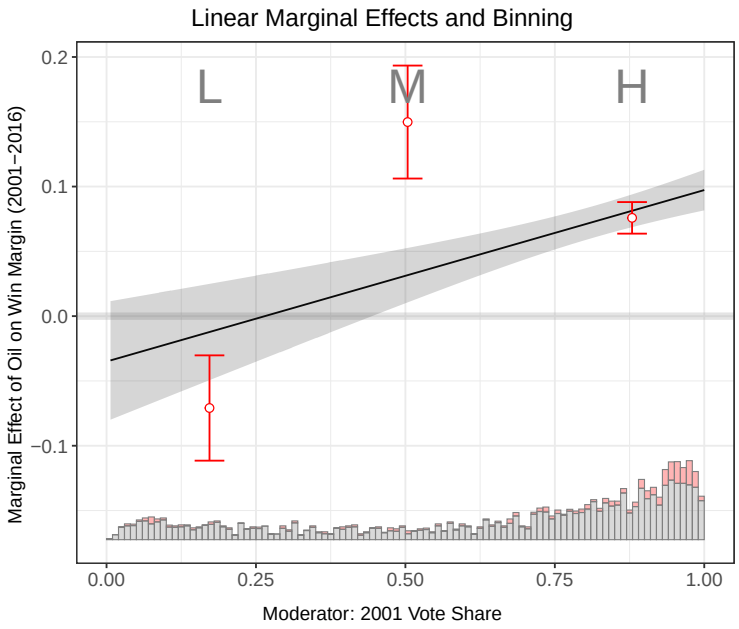
Table 61: Effect of Oil Discovery on Presidential Support (2002-2016)

	Dependent variable:					
	ihs(Margin)			ihs(Share)		
	(1)	(2)	(3)	(4)	(5)	(6)
ihs(Oil)	0.067***	0.029***	0.048***	0.028***	0.011***	0.019***
	(0.008)	(0.004)	(0.004)	(0.003)	(0.002)	(0.002)
Controls	None	Share	Full	None	Share	Full
Observations	16,648	16,648	16,524	16,648	16,648	16,524
Adjusted R^2	0.702	0.822	0.834	0.727	0.833	0.843

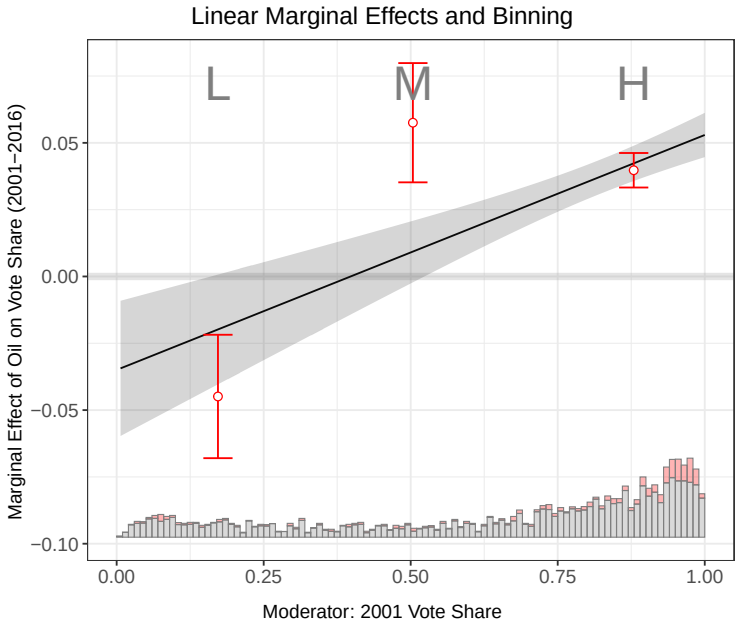
Notes: Sample includes all parishes in Uganda. Pre-treatment flexible controls include parish-level measurements of president's vote share and its square (labeled 'Share'), voter turnout, population, a wealth index, and the share of population employed in agriculture and coethnics with the president. *p<0.1; **p<0.05; ***p<0.01

J.2 Heterogeneous Effects by Historical Support

J.2.1 Binning: Unequal Share of Parishes in Each Bin



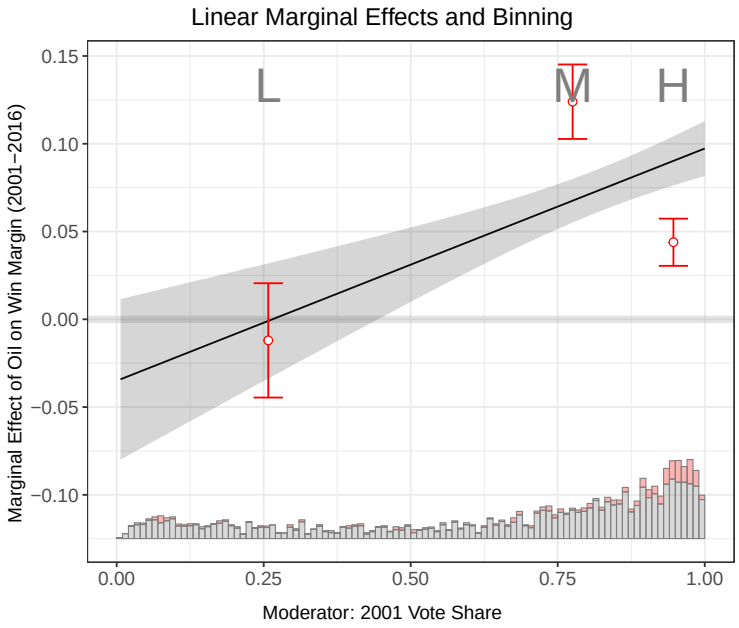
(a) Win Margin



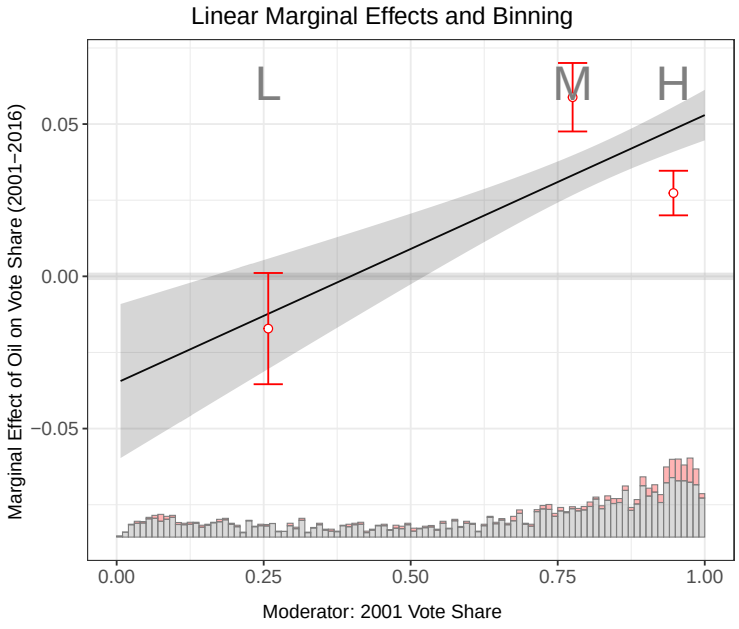
(b) Vote Share

Figure 24: Effect of oil discovery on presidential support across levels of pre-treatment presidential vote share.

J.2.2 Binning: Equal Share of Parishes in Each Bin



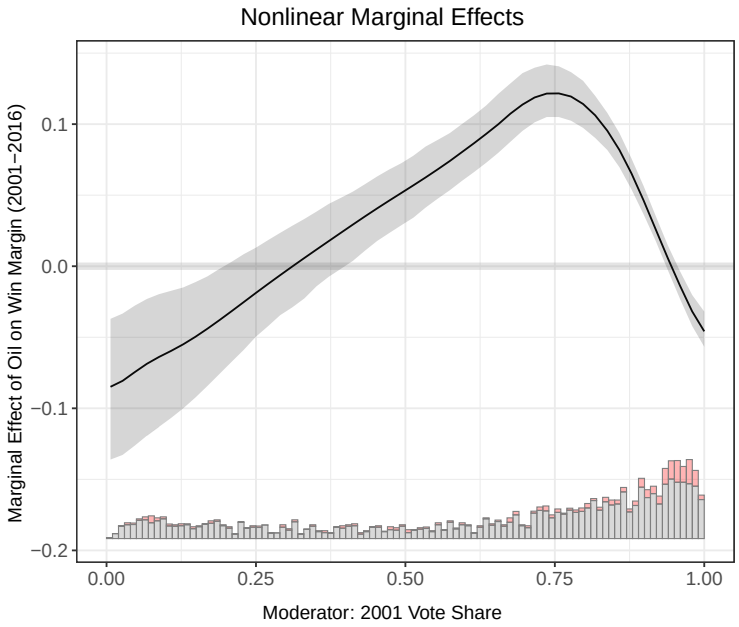
(a) Win Margin



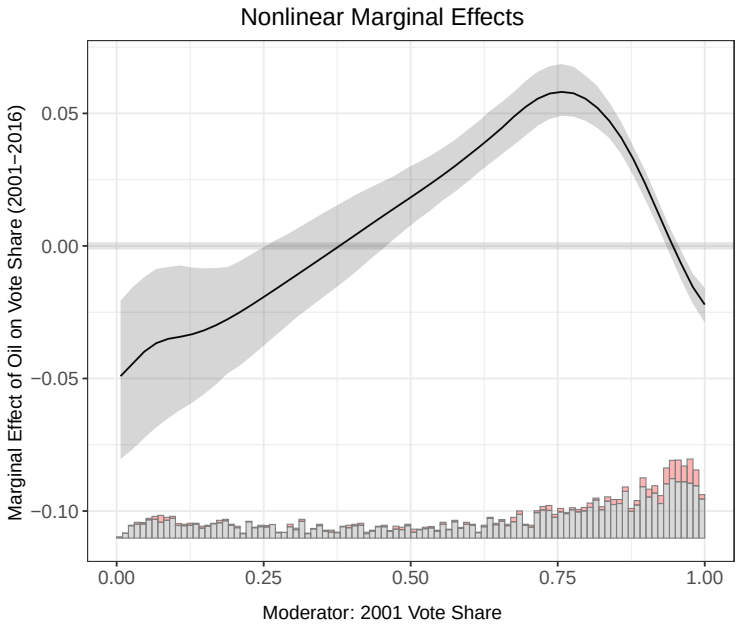
(b) Vote Share

Figure 25: Effect of oil discovery on presidential support across levels of pre-treatment presidential vote share.

J.2.3 Kernel: Nonlinear Marginal Effects



(a) Win Margin



(b) Vote Share

Figure 26: Effect of oil discovery on presidential support across levels of pre-treatment presidential vote share.

J.3 Triple Difference-in-Differences (Continuous Moderator)

J.3.1 Restricted Sample (Parishes w/in 200km of discovery)

Table 62: Effect of Oil Discovery on Presidential Win Margin (2001-2016)

	Treatment Variable			
	Binary (w/in 100km)		Proximity (10 km)	
	(1)	(2)	(3)	(4)
Oil X share	1.314***	1.110***	0.135***	0.113***
	(0.150)	(0.150)	(0.013)	(0.013)
Oil X share^2	−1.178***	−0.978***	−0.127***	−0.103***
	(0.130)	(0.131)	(0.011)	(0.011)
Oil	−0.228***	−0.201***	−0.021***	−0.020***
	(0.037)	(0.037)	(0.004)	(0.004)
Controls	None	Full	None	Full
Observations	8,896	8,896	8,896	8,896
Adjusted R^2	0.889	0.895	0.891	0.895

Notes: Sample includes parishes within 200km of nearest oil discovery. Pre-treatment flexible controls include parish-level measurements of president's vote share and its square, voter turnout, population, a wealth index, and the share of population employed in agriculture and coethnics with the president. *p<0.1; **p<0.05; ***p<0.01

Table 63: Effect of Oil Discovery on Presidential Support (2001-2016)

	Dependent variable:			
	ihs(Margin)		ihs(Share)	
	(1)	(2)	(3)	(4)
ihs(Oil) X share	1.049***	0.932***	0.606***	0.562***
	(0.143)	(0.138)	(0.071)	(0.070)
ihs(Oil) X share^2	−0.997***	−0.846***	−0.540***	−0.481***
	(0.116)	(0.112)	(0.057)	(0.056)
ihs(Oil)	−0.164***	−0.167***	−0.122***	−0.124***
	(0.040)	(0.038)	(0.020)	(0.020)
Controls	None	Full	None	Full
Observations	8,896	8,896	8,896	8,896
Adjusted R^2	0.885	0.891	0.898	0.902

Notes: Sample includes parishes within 200km of nearest oil discovery. Pre-treatment flexible controls include parish-level measurements of president's vote share and its square, voter turnout, population, a wealth index, and the share of population employed in agriculture and coethnics with the president. *p<0.1; **p<0.05; ***p<0.01

J.3.2 Full Sample (All Parishes in Uganda)

Table 64: Effect of Oil Discovery on Presidential Win Margin (2001-2016)

	Treatment Variable			
	Binary (w/in 100km)		Proximity (10 km)	
	(1)	(2)	(3)	(4)
Oil X share	1.247***	1.034***	−0.012	−0.004
	(0.144)	(0.141)	(0.009)	(0.009)
Oil X shareˆ2	−1.194***	−0.925***	−0.001	−0.0004
	(0.123)	(0.119)	(0.007)	(0.007)
Oil	−0.153***	−0.147***	0.012***	0.008***
	(0.037)	(0.036)	(0.003)	(0.003)
Controls	None	Full	None	Full
Observations	16,648	16,524	16,648	16,524
Adjusted R^2	0.823	0.831	0.823	0.832

Notes: Sample includes all parishes in Uganda. Pre-treatment flexible controls include parish-level measurements of president's vote share and its square, voter turnout, population, a wealth index, and the share of population employed in agriculture and coethnics with the president. *p<0.1; **p<0.05; ***p<0.01

Table 65: Effect of Oil Discovery on Presidential Support (2001-2016)

	Dependent variable:			
	ihs(Margin)		ihs(Share)	
	(1)	(2)	(3)	(4)
ihs(Oil) X share	0.096	0.138	0.102*	0.130**
	(0.123)	(0.124)	(0.058)	(0.059)
ihs(Oil) X share^2	−0.245**	−0.194**	−0.138***	−0.126***
	(0.097)	(0.097)	(0.046)	(0.046)
ihs(Oil)	0.110***	0.063*	0.021	−0.002
	(0.036)	(0.036)	(0.017)	(0.017)
Controls	None	Full	None	Full
Observations	16,648	16,524	16,648	16,524
Adjusted R^2	0.819	0.828	0.833	0.841

Notes: Sample includes all parishes in Uganda. Pre-treatment flexible controls include parish-level measurements of president's vote share and its square, voter turnout, population, a wealth index, and the share of population employed in agriculture and coethnics with the president. *p<0.1; **p<0.05; ***p<0.01

K External Validity

To explore the external validity of our finding that oil discoveries increase incumbent support, Figure 27 plots the average change in vote share for African countries that became prospective oil and gas exporters with 'giant' oil discoveries between 2001 and 2018. This includes Ghana, Kenya, Liberia, Mauritania, Mozambique, Niger, Senegal, Sierra Leone, Tanzania, Uganda. We see some evidence that larger discoveries are associated with larger increases in incumbent vote share. Indicated by the red dot, we also see that Uganda is not an outlier in the size of this effect. Furthermore, our data for Uganda covers a 10 year period after discovery but before production that lies well within the average of 12 years between discovery and production for countries with new discoveries (Mihalyi and Scurfield, 2020). Although only suggestive, these facts are encouraging for the external validity of our findings. Data on incumbent vote shares are sourced from the national election commissions for each country and data on forecasted revenues comes from Mihalyi and Scurfield (2020).

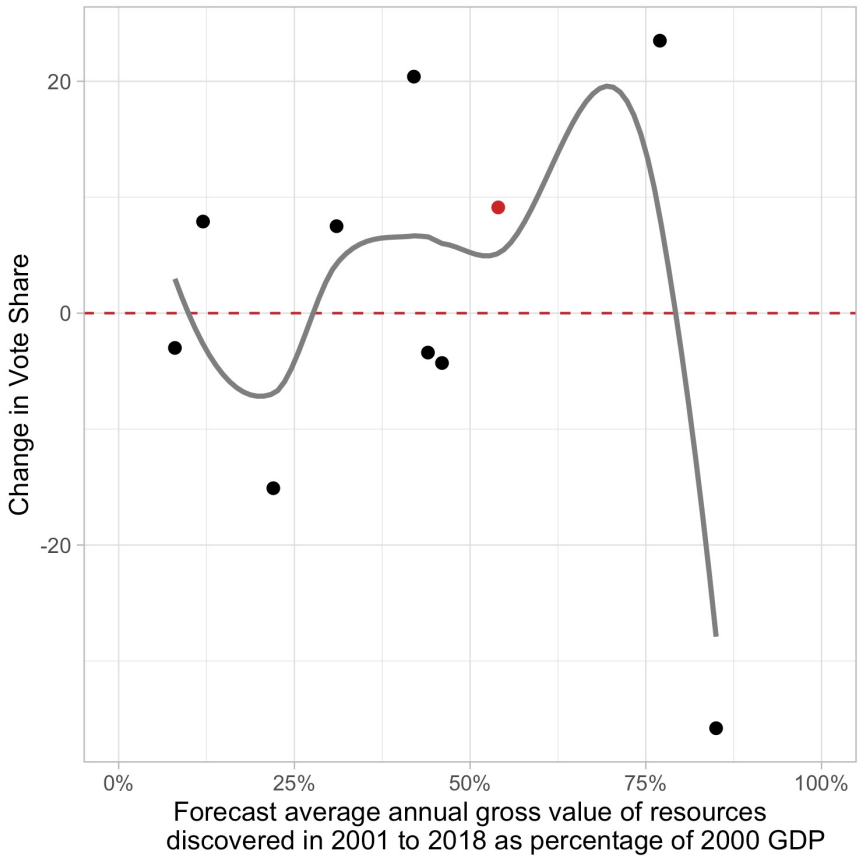


Figure 27: Average change in the incumbent's vote share as a percentage for African countries with a giant oil discoveries. Uganda is indicated by the red point.

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