

Patronage and Electoral Behavior: Evidence from Egypt First Presidential Elections*

Mohamad Al Ississ,[†] Samer Atallah[‡]

April 3, 2014

Abstract

We use the results of Egypt's first presidential elections conducted after the January 2011 revolution to test key determinants of voter behavior. We combine these results with household surveys and national statistics to test whether patronage (measured by public employment) is a key determinant in voting for the pre-revolution regime candidate. Using results of the first round of elections as a proxy for ideology, we find evidence of the effect of ideological preferences on voting behavior. Additionally, we test for candidate ability to mobilize supporters. The main contribution of our paper is to identify the relative impact of patronage versus ideology on election outcomes. Our results suggest that patronage has a stronger effect than secularist ideology but a weaker effect than pro-change ideology. Results show that the number of public sector and government employees in each electoral district has a positive impact on participation rates.

Keywords: Egypt, voting, patronage

JEL Classification: D74, P26, P48

*We would like to thank James Robinson and Mahmoud El Gamal for their comments. We also like to thank the participants in the annual conference of the Western Economic Association in Seattle 2013. We are grateful to Nora Jarrah and our research assistant Dina Abdallah.

[†]Department of Economics, The American University in Cairo. Email: alississ@aucegypt.edu

[‡]Department of Economics, The American University in Cairo. Email: satallah@aucegypt.edu

1 Introduction

What affects voter decisions when voting in a democratic election for the first time? Does ideology trump private gain from public employment? The political economy literature has yet to answer these two questions. Recent studies suggest that election cycles affect public employment and other forms of patronage. This reflects an attempt to influence voters (Golden [2003], Remmer [2007], Dahlberg and Mork [2011]). However, the effect on voter behavior and its key determinants have not been analyzed. The question remains: how does patronage affect voting behavior? We attempt to find an answer using data from Egypt's first presidential election held after the fall of Hosni Mubarak in February 2011. These elections also represent the first opportunity to study voting behavior in a key Arab state attempting to transition to democracy. Such an opportunity might not arise again in the near future, given the recent exclusion of Islamists from political participation. We used election results to link voter turnout and behavior to policies of the previous government, controlling for ideology and voters' socioeconomic indicators. In the Egyptian context, Mubarak's regime maintained a large bureaucracy that reached nearly six million employees towards the end of his tenure. Given that the total labor force in Egypt is nearly twenty seven million, this is a substantial figure. The 2012 presidential elections offered a natural experiment to test how this large bureaucracy could affect the election outcome given the political circumstances that led to the revolution. Although Mubarak himself was not a contestant in the elections, his close associate and the previous prime minister, Ahmed Shafik, ran for president. Thus, we were still able to evaluate the impact of patronage on continued support for the ousted regime.

Although Shafik ultimately failed to win the election, our paper tests for two possible channels that caused many Egyptians to vote for the status quo: patronage and ideology. Our results support the positive impact of patronage, measured as public employment, on voting for the candidate that represents the incumbent regime. This result is robust to the inclusion of different socioeconomic characteristics of voters. A one percent increase in public employment as a share of total employment increased the share of votes for Shafik by 0.38%. This is significant given that Shafik lost the elections by a small margin of 3%. We investigated whether the effect of patronage on voting is reflected by the incumbent candidate's ability to mobilize voters on election day. Our results show a positive and robust correlation between patronage and voter turnout in both rounds of presidential elections.

The second channel is voter position on the ideological spectrum. In the Egyptian context, we identify two axes on this spectrum: Islamist versus secularist and pro-change versus pro-status quo. Our classification of the candidates is based on their political history, positions taken during the revolution and political discourse prior to the elections. We do not view this classification as a contestable issue as the alignment of these candidates along these axes is the object of consensus among a wide array of experts. It is important to note that these two axes are not mutually exclusive. In other words, a secular voter could be either pro-change or pro-status quo. Our results suggest that a 1% increase in the total votes that went to pro-change candidates in the first round causes a 1.23% decrease in the votes that went to Shafik in the second round. Also, a 1% increase in the total votes that went to secular candidates in the first round results in a 0.18% increase in the votes that went to Shafik. Accordingly, patronage had a weaker effect than pro-change ideology but a stronger effect than secularist ideology.¹

¹The comparison here is between the relative impact of ideology and patronage on regime continuity. An alternative reading of our results would be to look at their impact on winning the elections. In this case, patronage had a stronger effect than pro-change ideology and a weaker

Our paper fits into two strands of literature. The first strand deals with the effect of election cycles on economic outcomes. The seminal work of Nordhaus on the theory of political business cycle suggested that elections cycles do have an impact on the economy. Prior to election cycles, governments signal good economic conditions by undertaking expansionary policies that reduce unemployment at the expense of inflation. Positive income effects, either from employment or cash transfers, increase a government's popularity and results in its re-election (Nordhaus [1975]). Additional work on this theory by Rogoff [1990] suggested that expansionary fiscal and monetary policies prior to elections are due to asymmetric information between the voter and government on the latter's performance. We complement the literature on political business cycle by addressing two important issues. Firstly, the theory of political business cycle provides insight on the effect of elections on the economy by shedding light on which policies affect voters. Early empirical work (such as Tufte [1980], Alesina et al. [1992], Alesina and Roubini [1992], Alesina et al. [1993], Alesina [1997] and Schuknecht [2000]) tested for the impact of the election year or quarter on macroeconomic variables such as GDP. In our paper, we answer a different question: how voter behavior is impacted by government policies. We test for the impact of prior public policies on voter behavior, thus putting this theory to a different type of empirical test. We also analyze electoral behavior in elections that were held for the first time after six decades of the absence of free participatory democracy. This is particularly interesting for countries transitioning to democracy, especially after a major popular movement. By doing so, we also complement the work of Brender and Drazen [2005] who suggested that the effect of election season is stronger in new democracies versus old democracies as voters in the former are less aware of plausible government fiscal and monetary manipulations used to achieve re-election.² Second,

effect than the secularist ideology.

²For a comprehensive review of empirical literature on political business cycle see Drazen [2001]

we address a type of government policy used to build political support that is absent from previous empirical literature. Public employment is a government policy more pertinent to developing countries and countries transitioning to democracy. It is used particularly in the absence of free elections to ensure political support and to minimize dissident.

The second strand of literature is the one investigating patronage and political support. Weingrod [1968] defined patronage as an exchange of employment in the public sector in return for political support. Unlike other forms of redistributive policies such as income transfers or tax policies, the offer of public employment is credible because it is a rational decision for politician ex-post. (Alesina [1987], Besley and Coate [1997]). It is also a credible and rational decision on the voter side. The fate of bureaucrats is tied to politicians which makes their electoral support credible. Conditions such as low levels of technology and high levels of inequality foster this form of clientism simply because of its low cost compared to other forms of building political support. Furthermore, patronage increases whenever there is an ideological difference between voters and politicians which ultimately increases its inefficiency (Robinson and Verdier [2002]). The probabilistic voting model suggests that a voter compares between her income under two scenarios: incumbent and challenger states, given her ideological preference for the incumbent. Using similar formulation as Robinson et al. [2006], a voter i would vote for incumbent A if her ideological preference for A , σ^i , is greater than the difference between income promised by challenger B and incumbent:

$$\sigma^i > Z^i(B) - Z^i(A) \tag{1}$$

where $Z^i(A)$ and $Z^i(B)$ are the expected income offered by incumbent and challenger respectively. This theory suggests that both incumbent and challenger promises of employment to their supporters are credible.

We complement this strand of literature by empirically testing for the relative effect of ideology and public employment on voter behavior. First, we empirically tests for the effect of patronage on the politician’s share of votes and on turnout rates. To our knowledge, this is the first empirical study of the effect of public employment patronage on actual voter behavior. Our paper complements previous studies that addressed the other forms by which public policy affected voting behavior and preferences. Linos [2013] studied the impact of conditional cash transfers (CCT) and its effect on changing voting behavior. Using the difference in difference model between treatment and control groups before and after a CCT program in Honduras, her results suggest that these programs increased the likelihood of re-elections for incumbent politicians. Similar findings by Manacorda et al. [2011] suggest that anti-poverty programs in Uruguay increased political support for governments that initiated the program.

The second contribution of this paper is the method that we use to proxy for ideological preferences. We stipulate that in the first round of a two-round elections with candidates representing a wide spectrum of ideologies, voters would vote for the candidate that best matches their preferences. Egypt’s first round featured thirteen candidates representing a variety of ideological doctrines. We use each candidate’s votes in the first round as a proxy for ideological preferences and use it to control for ideology when analyzing voter behavior in the second round. Thus, we investigate whether voters behave according to their ideological preferences or to their patronage gains from public sector employment. Our study contributes to the literature by quantifying the relative weight of both channels. The closest study to ours is the study by Carkoglu [2012] on Turkish parliamentary elections in 2002, 2007 and 2011. Carkoglu [2012] relied on evaluations of economic performance and ideological positions retrieved from surveys conducted prior to elections to compare economic and ideological effects. Our methodology relies on actual data to represent

economic effects and ideological preferences.

The next section of the paper provides an overview of Egypt's political landscape leading up to the presidential elections. The third section discusses the methodology. We present data and results in sections four and five respectively. Section six concludes.

2 Egypt's Political Landscape

Mohamed Hosni Mubarak was ousted on February 11th, 2011 after a popular uprising. During his thirty year tenure, there were no contested presidential elections, except during the fall of 2005. At the time, these elections were plagued with fraud and did not have minimum guarantees for free and fair elections. On March 19th, 2011, the Supreme Council of Armed Forces (SCAF), the de facto rulers during the post-Mubarak transitional period, held a referendum on major amendments to the 1971 constitution. The overwhelming majority of Egyptians approved the amendments which constituted a road map for the transition into a democratic political system. The amendments eased the requirements for individuals and political parties to contest the presidential elections.

Egypt's 2012 presidential elections were held in two rounds (first round conducted on May 23rd and 24th and second round conducted on June 16th and 17th). These were considered to be the first elections to be freely contested among multiple candidates. Twenty three candidates filed their paperwork to be listed on the ballot. The Supreme Presidential Electoral Commission (SPEC) dismissed the candidacy of ten candidates on legal grounds leaving only thirteen candidates to contest the elections. Ahmed Shafik and Mohamed Morsi received the most votes and these two candidates continued to the second round. Shafik, who was the last prime minister appointed by Mubarak, was from the military establishment. As an ex-commander of the air

forces like Mubarak before him, and minister of civil aviation for nearly a decade, he was considered to be closely associated with Mubarak regime. On the other hand, Morsi was the second choice of the Muslim Brotherhood in the presidential elections. The main candidate, Khairat El Shater, was dismissed by SPEC on legal grounds. The choice faced by Egyptians in the second round of elections was deemed a difficult one by political analysts. On one hand, voting for Shafik represented voting for the Mubarak regime with all its failures, oppression, and corruption. On the other hand, voting for Morsi was associated with fears from the agenda that the Muslim Brotherhood may have for Egypt. On June 24th, SPEC declared Mohamed Morsi as the winner to be the first elected civilian president of Egypt with a small margin. On July 3rd, 2013, following popular demonstrations, the Egyptian Armed Forces overthrew Mohamed Morsi and suspended the constitution. This turn of events does not impact the validity of the elections results nor the conclusions of this paper.

3 Data

We used data from the 2006 Population and Housing Census collected by Egypt's Central Agency for Public Mobilization and Statistics (CAPMAS). The census provides a wide variety of socioeconomic characteristics of Egyptian households. We use data on public employment in each district as our main explanatory variable to proxy for patronage as per Weingrod [1968] definition. We also consider three important control sets in our study. We use two measures of education in the first control set: percentage of people with university education and higher in each district (*qism*) and percentage rate of illiteracy. The second control set is urbanization through data on source of electricity and type of sewage connection in the household. Specifically, we proxy for urbanization by the percentage of households who are connected to the electric grid, and the percentage of households who are connected to

the public sewage network in each district and the residential density. Lastly, we consider employment as the third socioeconomic control. We use data on percentage of unemployed individuals and percentage of individuals who are hold professional jobs. Table (1) lists descriptive statistics for these variables.³

Table 1: Descriptive Statistics

Variable	Observations	Mean	Standard	Min	Max
1 st Round Participation Rate (%)	351	46.30	12.16	15.30	72.80
2 nd Round Participation Rate (%)	351	50.98	9.66	18.42	74.14
Shafik Votes 2 nd Round (%)	351	46.37	14.28	2.04	84.19
Pro-Change Axis (%)	351	40.29	13.09	13.03	88.15
Secular Axis (%)	351	33.62	14.89	3.12	80.22
Pro-Change X Secular	351	1472.41	1064.79	13.76	6634.08
Public Sector Employment (%)	317	12.24	6.71	1.28	44.25
Education: University & Higher	320	11.01	9.67	0.66	56.88
Education: Illiterate (%)	320	27.14	12.08	0.00	56.39
Electric Light Source (%)	320	97.26	9.17	30.91	100.00
Public Sewage Network (%)	320	49.22	39.99	0.26	100.00
Unemployed (%)	320	9.40	4.20	0.00	23.55
Professional Jobs (%)	320	6.09	3.90	0.52	19.45
Residential Density (persons/room)	319	1.15	0.16	0.58	2.40

We also use official results of presidential elections from SPEC's website. Ballots were considered void if no candidate was chosen or more than one candidate were chosen. Voting results are published on the district level, then aggregated on the governorate level, then finally on the country level (Table (2)). There were some discrepancies between some of districts in the 2006 census and the 351 districts in 2012 when elections were held. These discrepancies are due to the creation of new districts to accommodate the population increase between 2006-2012. In one type of these discrepancies, a district was divided into two districts. For instance, Al Salam

³ Unemployment figures include active students ages 15 and over.

district in Cairo was just one administrative district in 2006 but later was divided into districts Al Salam 1 and Al Salam 2. In this case, we added the voting values for both districts and matched them with the original district's in Cairo from the 2006 census. Another type of discrepancy resulted from a new administrative district that was established to accommodate for new urban developments. For these, we dropped elections results as they constituted less than one percent of voters.

Table 2: Elections Results

Candidate	1 st round (%)	2 nd round (%)
Mohammed Morsi	24.78	51.7
Ahmed Shafik	23.66	48.3
Hamdeen Sabahi	20.72	
Abdel Moneim Abou El Fotouh	17.47	
Amr Moussa	11.13	
Mohammed Salim Al Awa	1.01	
Khaled Ali	0.58	
Others	0.65	

4 Methodology

We stipulate that there are two channels through which voters would vote for the candidate that represents the status quo (Ahmed Shafik in this case). To test for the channels of patronage and ideology, we use the following estimation:

$$y_i = \alpha + \beta_1 X_{1,i} + \beta_2 X_{2,i} + \theta_1 Z_{1,i} + \theta_2 Z_{2,i} + \theta_3 Z_{3,i} + \epsilon_i \quad (2)$$

The dependent variable (y_i) in the above estimation is the percentage of votes that went for Shafik in the second round of the presidential elections for each district i . The patronage channel is proxied using the variable $X_{1,i}$ which captures the percentage of employment the public sector in each district. As entailed in table (1),

the average percentage of public employment is 12.27% with a maximum of 44.25%. Also, the ideology channel ($X_{2,i}$) is captured by two variables: the pro-change axis and the secular axis. In each axis, the variable is the summation of votes that went to candidates representing this axis in first round of presidential elections. The candidates were categorized based on their position and views in a matrix that corresponds to two previously mentioned axes (Table (3)). Candidates who were not associated in the past with Mubarak’s regime or the military rule were considered pro-change (excluding Morsi). The average percentage votes that went to these candidates is 40.3%. Similarly, candidates who were not affiliated with political Islam (excluding Shafik) were considered secular. The average percentage of votes that went to this axis is 33.64%.

Our interpretation of the effect of patronage on voter behavior is that patronage works through different mechanisms such as job security and mobilization. The voting power model sheds light on this mechanism. It suggests that bureaucrats have higher mobilization on voting day due to their organizational ability. This could be reflected either through being unionized or through a better ability for other collective action. Additionally, the cost of not participating in the vote could be considered higher for public employees as they may face repercussions for not providing political support. Compared to other type of employments, public employees have a higher net benefit to participate. This “vote power” could extend beyond bureaucrats as they influence their families and members of their surrounding network. The ability of bureaucrats to affect the outcome of elections depends positively on the ratio of public employees to private sector employees participating in elections and their share in the labor force (Bennett and Orzechowski [1983]). To test for the impact of patronage on mobilization, we adopt a different specification:

$$p_i = \alpha + \beta_1 X_{1,i} + \theta_1 Z_{1,i} + \theta_2 Z_{2,i} + \theta_3 Z_{3,i} + \epsilon_i \quad (3)$$

In this case, the dependent variable is participation rate in each round of presidential elections. We stipulate that public employment is one of the main tools of the incumbent (Mubarak’s regime in this case) to mobilize voters. We also include the three categories of socioeconomic characteristics as we did in the equation (2).

Both models were estimated using OLS regression weighted by the number of registered votes in each district. The reported standard errors are clustered at the district level.

Table 3: Ideology Axes

	Secularist	Islamist
Pro-change	Hamdeen Sabahi	Mohammed Morsi
	Khaled Ali	Abdel Moneim Abou El Fotouh
Pro-status quo	Ahmed Shafik	Mohamed Salim Al Awa
	Amr Moussa	

5 Results

Results of the specification of equation (2) are shown in table (4). All regressions have percentage votes for Shafik in the second round as the dependent variable. Regressions (1) and (2) test for each channel separately (patronage versus ideology) while regression (3) includes both channels. Regressions (4), (5) and (6) include one set of socioeconomic characteristics: education, urbanization and employment respectively. Regression (7) includes only the residential density while regression (8) includes all dependent variables. The first clear result is the significant and positive effect of public sector employment on the percentage votes that went to Shafik. Also, the two variables that represent ideologies are significant in all regressions (with the exception of regressions (4) and (8) for the secular axis) and have the expected signs. The sign for the secular axis is positive whereas the sign for pro-change

axis is negative. This is expected since Shafik was a candidate who was positioned as a secular and pro-status quo candidate. This result is robust to the inclusion of multiple socioeconomic characteristics. Results in regressions (4) and (8) suggest that including the education dimension reduces the impact of public sector employment substantially without affecting significance. Specifically, the illiteracy variable is the one that is significant and negative whereas higher education had a positive, yet insignificant, effect on voting for Shafik.

The other interesting finding is the impact of the interaction term of both ideological axes. Regressions (4) and (5) suggest each ideological axis has a positive and significant impact on the effect of other axis. Being secular reduces the negative effect of being pro-change. On the other hand, being pro-change increases the impact of being secular. It is worth noting that this result is significant only in regressions where the socioeconomic dimension of education is included (regressions (4) and (8)).

Table 4: Patronage and Ideology Channels

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Shafik Votes 2 nd Round (prc)	Shafik Votes 2 nd Round (prc)	Shafik Votes 2 nd Round (prc)	Shafik Votes 2 nd Round (prc)	Shafik Votes 2 nd Round (prc)	Shafik Votes 2 nd Round (prc)	Shafik Votes 2 nd Round (prc)	Shafik Votes 2 nd Round (prc)
Public Sector	1.230 ^{****} (0.153)		1.376 ^{****} (0.155)	0.496 ^{***} (0.169)	1.100 ^{****} (0.175)	0.885 ^{****} (0.180)	1.114 ^{****} (0.163)	0.414 ^{**} (0.183)
Pro-Change Axis		-0.698 ^{****} (0.196)	-0.930 ^{****} (0.188)	-1.295 ^{****} (0.185)	-1.190 ^{****} (0.217)	-1.121 ^{****} (0.189)	-0.901 ^{****} (0.197)	-1.268 ^{****} (0.214)
Secular Axis		0.746 ^{****} (0.191)	0.643 ^{****} (0.159)	0.217 (0.175)	0.393 ^{**} (0.186)	0.489 ^{***} (0.155)	0.671 ^{****} (0.166)	0.196 (0.196)
Pro-Change X Secular		-0.000952 (0.00373)	0.00155 (0.00333)	0.00870 ^{**} (0.00349)	0.00629 (0.00392)	0.00464 (0.00333)	0.000375 (0.00357)	0.00808 ^{**} (0.00410)
Education: University & Higher				0.110 (0.0879)				0.178 (0.194)
Education: Illiterate				-0.606 ^{****} (0.127)				-0.587 ^{****} (0.149)
Electric Light Source					0.255 (0.306)			-0.0705 (0.252)
Public Sewage Network					0.0904 ^{****} (0.0252)			0.0148 (0.0284)
Unemployed						0.261 (0.166)		0.281 (0.190)
Professional Jobs						1.155 ^{****} (0.203)		-0.629 (0.565)
Residential Density							-30.67 ^{****} (5.723)	-25.86 ^{****} (7.128)
Constant	34.43 ^{****} (1.898)	52.59 ^{****} (7.446)	46.15 ^{****} (6.456)	90.25 ^{****} (10.73)	31.18 (31.91)	50.57 ^{****} (6.660)	83.30 ^{****} (9.009)	126.6 ^{****} (30.80)
N	317	351	317	316	316	316	316	315

Figures in brackets under the coefficients are standard errors clustered at the district level.
 $p < 0.001$, $p < 0.01$, $p < 0.05$, $p < 0.10$

The second set of results is shown in tables (5) and (6) for the first and second rounds, respectively. These are the results of regression specified in equation (3). Effect of public employment on turnout is positive and robust in both rounds. Again, the effect of the education control reduces the impact of public employment. Districts with a higher percentage of university graduates have higher turnout while districts with a higher percentage of illiteracy have lower turnout. The latter effect is only significant in the first round of elections. It loses significance after controlling for other dimensions of socioeconomic characteristics (regression (6) in table (5)). It is worth noting that illiteracy has a negative effect on both voter turnout and on voting for Shafik.

Table 5: Mobilization Channel in First Round

	(1)	(2)	(3)	(4)	(5)
	1 st Round Participation Rate	1 st Round Participation Rate	1 st Round Participation Rate	1 st Round Participation Rate	1 st Round Participation Rate
Public Sector Employment	1.492 ^{*****} (0.118)	0.704 ^{*****} (0.155)	0.948 ^{*****} (0.108)	1.262 ^{*****} (0.114)	0.920 ^{*****} (0.133)
Education: University & Higher		0.287 ^{*****} (0.0682)			0.654 ^{*****} (0.138)
Education: Illiterate		-0.331 ^{*****} (0.0898)			-0.268 ^{***} (0.0836)
Electric Light Source			0.325 ^{***} (0.114)		0.313 ^{***} (0.110)
Public Sewage Network			0.128 ^{*****} (0.0109)		0.0691 ^{*****} (0.0144)
Unemployed					-0.410 ^{*****} (0.106)
Professional Jobs					-1.690 ^{*****} (0.354)
Residential Density				-25.28 ^{*****} (4.823)	-8.829 ^{**} (3.875)
Constant	29.59 ^{*****} (1.454)	45.05 ^{*****} (4.762)	-2.592 (11.20)	60.74 ^{*****} (6.093)	26.23 ^{**} (13.27)
N	317	316	316	316	315

Figures in brackets under the coefficients are standard errors clustered at the district level.
^{*****} $p < 0.001$, ^{****} $p < 0.01$, ^{**} $p < 0.05$, ^{*} $p < 0.10$

Table 6: Mobilization Channel in Second Round

	(1)		(2)		(3)		(4)		(5)		(6)	
	2 nd Round	Participation Rate	2 nd Round	Participation Rate	2 nd Round	Participation Rate	2 nd Round	Participation Rate	2 nd Round	Participation Rate	2 nd Round	Participation Rate
Public Sector Employment	1.078 ^{****}	(0.0946)	0.966 ^{****}	(0.137)	0.928 ^{****}	(0.103)	0.933 ^{****}	(0.108)	0.914 ^{****}	(0.0863)	0.923 ^{****}	(0.129)
Education: University & Higher Above			0.131 ^{**}	(0.0513)							0.302 ^{***}	(0.114)
Education: Illiterate			0.00555	(0.0718)							-0.00948	(0.0790)
Electric Light Source					0.446 ^{****}	(0.130)					0.486 ^{****}	(0.121)
Public Sewage Network					0.0286 ^{****}	(0.0100)					0.0249 [*]	(0.0144)
Unemployed							-0.350 ^{****}	(0.0850)			-0.373 ^{****}	(0.0872)
Professional Jobs							0.243 ^{***}	(0.0886)			-0.956 ^{***}	(0.323)
Residential Density									-0.180 ^{****}	(0.0362)	-0.118 ^{****}	(0.0381)
Constant	0.398 ^{****}	(0.0123)	0.396 ^{****}	(0.0381)	-0.0406	(0.128)	0.610 ^{****}	(0.0483)	0.620 ^{****}	(0.0436)	0.305 ^{***}	(0.152)
N	317		316		316		316		316		316	315

**** p<0.001, *** p<0.01, ** p<0.05, * p<0.1
 Figures in brackets under the coefficients are standard errors clustered at the district level.

6 Conclusion

We tested and found support for two channels, patronage and ideology, that affected voter behavior in Egypt’s first presidential elections. Patronage in the form of public employment is a strong predictor of voter intentions towards the candidate associated with the ruling regime. The effect of patronage continued even though the “patron” switched from Mubarak to Shafik. The effect of public employment on mobilization is also positive and robust. This result supports strong links between public employment, mobilization and voter intentions. Two ideological channels were found to be key determinants of voter intentions. The first one is found along the secularist/Islamist axis while the second is the on the pro-change and pro-status quo axis. We proxy for ideological preferences by using the votes in the first round of elections. Results support the notion that the electorate voted along ideological lines. Our results suggest that patronage had a stronger effect than the secularist ideology channel but a weaker effect than pro-change ideology. Finally, it is important to note that these effects impacted the votes cast in support of Shafik (representing the incumbent regime). The elections results led to Shafik’s loss. Conversely, if we were to examine these effects from the perspective of the election winner, patronage had a weaker effect than secularist ideology but a stronger effect than pro-change ideology.

References

- Alberto Alesina. Macroeconomic policy in a two-party system as a repeated game. *The Quarterly Journal of Economics*, 102(3):651–678, 1987.
- Alberto Alesina. *Political cycles and the macroeconomy*. the MIT Press, 1997.
- Alberto Alesina and Nouriel Roubini. Political cycles in oecd economies. *The Review of Economic Studies*, 59(4):663–688, 1992.

- Alberto Alesina, Gerald D. Cohen, and Nouriel Roubini. Macroeconomic policy and elections in oecd democracies*. *Economics & Politics*, 4(1):1–30, 1992.
- Alberto Alesina, Gerald D. Cohen, and Nouriel Roubini. Electoral business cycle in industrial democracies. *European Journal of Political Economy*, 9(1):1–23, 1993.
- James T Bennett and William P Orzechowski. The voting behavior of bureaucrats: Some empirical evidence. *Public Choice*, 41(2):271–283, 1983.
- Timothy Besley and Stephen Coate. An economic model of representative democracy. *The Quarterly Journal of Economics*, 112(1):85–114, 1997.
- Adi Brender and Allan Drazen. Political budget cycles in new versus established democracies. *Journal of Monetary Economics*, 52(7):1271–1295, 2005.
- Ali Carkoglu. Economic evaluations vs. ideology: Diagnosing the sources of electoral change in turkey, 2002–2011. *Electoral Studies*, 31(3):513–521, 2012.
- Matz Dahlberg and Eva Mork. Is there an election cycle in public employment? separating time effects from election year effects. *CESifo Economic Studies*, 57(3):480–498, 2011.
- Allan Drazen. *The political business cycle after 25 years*, pages 75–138. MIT PRes, 2001.
- Miriam A. Golden. Electoral connections: The effects of the personal vote on political patronage, bureaucracy and legislation in postwar italy. *British Journal of Political Science*, 33(2):189–212, 2003.
- Elizabeth Linos. Do conditional cash transfer programs shift votes? evidence from the honduran praf. *Electoral Studies*, (0), 2013.

- Marco Manacorda, Edward Miguel, and Andrea Vigorito. Government transfers and political support. *American Economic Journal: Applied Economics*, 3(3):1–28, 2011.
- William D. Nordhaus. The political business cycle. *The Review of Economic Studies*, 42(2):169–190, 1975.
- Karen L. Remmer. The political economy of patronage: Expenditure patterns in the argentine provinces, 1983-2003. *The Journal of Politics*, 69(2):363–377, 2007.
- James Robinson and Thierry Verdier. The political economy of clientelism. 2002.
- James A. Robinson, Ragnar Torvik, and Thierry Verdier. Political foundations of the resource curse. *Journal of Development Economics*, 79(2):447–468, 2006.
- Kenneth Rogoff. Equilibrium political budget cycles. *The American Economic Review*, 80(1):21–36, 1990.
- Ludger Schuknecht. Fiscal policy cycles and public expenditure in developing countries. *Public Choice*, 102(1-2):113–128, 2000.
- Edward R Tufte. *Political control of the economy*. Princeton University Press, 1980.
- Alex Weingrod. Patrons, patronage, and political parties. *Comparative Studies in Society and History*, 10(4):377–400, 1968.