Opportunistic, not Optimal Delegation: The Political Origins of Central Bank Independence

Abstract

Economists have long argued that central banks ran by technocrats have greater policy independence from the government. But in many countries, politically experienced central bankers are at the helm, including those banks that are highly independent. To explain why, we develop a formal model where central bank nominees are screened for their political ambitions and show how screening and reelection efforts by the nominating official changes the level of policy discretion awarded to different types of candidates. We predict that technocrats get higher levels of policy discretion than nominees with political experience, but as the appointing official faces tougher reelection, those candidates with political experience get higher policy discretion as well. We test our theory using new data from 29 post-communist countries between 1990-2012. We find evidence that the reelection strategy of the nominating official is an important predictor of the level of policy discretion awarded.

Introduction

Economists have long argued that central bank independence (CBI) protects citizens from opportunistic governments. They believe that appointing a politically independent, technocratic central banker can shield the economy from expectations driven inflation. Puzzling, however, is that while the level of central bank independence is increasing globally (Garriga 2016), we continue to see central bank governors (CBGs) with either past or future political experience. What explains the co-occurrence of rising central bank independence on the one hand and politically experienced central bankers on the other hand? What role (if any) do the electoral strategies of the appointing politician play in how much policy independence is awarded?

According to the standard delegation story, the government gives up monetary policy discretion to independent experts with inflation aversion (Barro and Gordon 1983; Rogoff 1985; Bodea and Higashijima 2017) so as to commit to credible low inflation.[1] Research suggests that delegation works best in democracies (Broz 2002; Bearce and Hallerberg 2011; Bodea and Higashijima 2017), although, even in non-democracies, handing over monetary authority to bureaucratic experts, or technocrats, can help save the economy from economic cycles, especially if power is shared with elites through dominant parties (Shih 2008; Bodea, Garriga, and Higashijima 2017). With its focus on credibility, previous explanations ignore the possibility that central bankers themselves may have ambitions for elected office and consequently, those individuals appointing central bankers have incentives to screen central bank candidates for their electoral ambitions as well as their policy preferences. For example, we observe a number of cases where the heads of even highly independent central banks have previously ran in and won elections. In the Czech Republic, the first governor of the newly independent central bank, Josef Tošovský, also served as the country's prime minister in 1998, subsequently going back to head the central bank until 2000. Later on, the CBG, Jiří Rusnok acted as the country's prime minister from 2013 to 2014 (Petříček 2016).

---

[1]But see Ainsley (2017), which suggests that delegation to inflation-adverse bankers is suboptimal.

1

Furthermore, at times, central bank appointments to candidates with political backgrounds coincide with *increases,* not drops, in policy discretion. For example, in Ukraine in 2010, CBG Volodymyr Stelkmakh was pressured to resign to make way for Serhiy Arbuzov, yet, at the time of Arbuzov's appointment, formal central bank independence *rose* rather than declined.[2] Arbuzov went on to have a prominent political career, serving as vice–prime minister and then prime minister following his stint at the National Bank of Ukraine (Dpa International 2010; BBC Monitoring: International Reports 2011).

Instead of focusing on the policy preferences of the central bank candidate, in this paper, we shift focus and instead consider how the reelection efforts of the politician with appointment powers to the central bank affects the level of policy discretion awarded to the CBG. We show how the level of policy independence a politician awards to a CBG depends on how easy or hard it is for the appointing politician to identify the "electoral threat level" of the CBG candidate. In the case where the politician is relatively uncertain about the political ambitions of the candidate, the nominating politician commits resources to deter any politically minded CBG candidates from disguising their political ambitions. Consequentially, candidates whose biography shows no inclination towards holding political office are more likely to be awarded greater levels of discretion than those with past political experience. Yet, as the appointing politician becomes more electorally insecure, it becomes less efficient for her to commit resources to deterring politically interested CBG candidates — additional effort spent on screening candidates will not increase her chance of winning the election relative to other reelection tactics. Thus, under these conditions, the nominating politician expends relatively less effort on screening CBG candidates for their political aspirations and delegates similar levels of policy independence to candidates irrespective of whether they held political office before. We therefore predict that increases in the electoral insecurity of the politician with appointment powers is associated with increases in discretion awarded to central bankers with

---

[2]According to measures from Bodea and Hicks (2015), CBI rose from 0.71 to 0.87 in the year of Arbuzov's appointment.

political experience.

Our mechanism is analogous to traditional labor market screening models. Consider a situation where an employer does not know a job seeker's true ability and would like to screen out candidates of low ability from those of high ability. The pool of candidates that the prospective employer faces, however, can vary. If the unemployment rate is relatively high such that the employer has a wealth of candidates to choose from, it is efficient for the employer to spend resources on sorting out candidates of low quality. Alternatively, if all job candidates are expected to be of low quality, or the labor market is competitive, it is less efficient for the employer to invest in screening candidates. One consequence of this situation is that even low ability candidates may get higher wages. In our case, that means that when all CBG candidates are politically ambitious or if the appointing politician is electorally vulnerable, screening no longer "pays" and even politically ambitious CBG candidates are awarded relatively higher levels of policy discretion as well.

Our main empirical expectation is that under conditions of electoral competition, CBGs with political experience are awarded higher levels of policy discretion than the same candidates would be if the nominating politician was more electorally secure. We test our argument using original data from 29 post-communist countries between 1990 and 2012. As the main dependent variable, we measure monetary policy discretion a number of ways including rules allowing independent policy-making and formal restrictions on lending to the government (Garriga 2016). We find that when CBGs with political experience are appointed, their central banks can lend to governments more easily and less policy-independent. However, as elections facing the appointer become more competitive, any gap in policy independence and lending limitations narrows for those governors that have political experience compared to those without. Such a finding is consistent with our argument that nominating officials can appoint technocrats to deter politically minded CBGs, but their willingness to do so decreases as their own electoral insecurity rises.

Our findings offer a new explanation for the puzzle of why we observe both central banks that are highly independent yet are also staffed with politically experienced CBGs. We show that any

policy independence penalty that politically experienced CBGs receive on account of their political background attenuates as the nominating politician becomes more electorally vulnerable. Our theory therefore highlights a new mechanism illustrating the politics of central bank appointments, demonstrating how institutional independence may be compromised by the electoral strategies of those already in power. Thus, our theory aligns well with a growing literature showing the opportunistic use of bureaucratic institutions by political elites and the prevalence of inter-elite politics, especially in countries transitioning to democracy (Alesina and Tabellini 2007; Gandhi and Lust-Okar 2009; Svolik 2009).

The Political Origins of CBI

Previous explanations for CBI usually center on domestic factors, such as policy preferences and partisanship; the role of democracy and democratic institutions; the solving of political business cycles (see, e.g., Kydland and Prescott 1977; Barro and Gordon 1983; Chang 2003; Bearce and Hallerberg 2011; Alesina, Roubini, and Cohen 1997); or the role of international organizations, private capital markets, and pressures for reforms by internationally linked epistemic communities (Gray 2009; Johnson 2016; Maxfield 1998; Santiso 2013; Giesenow and Haan 2019). Even in non-democracies, Shih (2008), shows how Chinese party cadres are willing to hand over monetary policy to an elite faction that does not want to expand the monetary base and trigger short-term growth, but do so only when the economy is doing poorly.[3]

Even if governments would prefer to control the money supply, the economic and political benefits of monetary delegation often compel them to delegate. Besides reducing expectations-driven inflation, delegation of monetary policy to an autonomous central bank can help stabilize coalitions with diverse policy preferences (Crowe 2008); can restrain deficit spending (Bodea and Higashijima 2017); and can reduce information asymmetries among legislators, coalition partners, and government officials. Such latter achievements are also associated with the quelling of costly

---

[3]For a good review, see Goodman (1991) and Fernández-Albertos (2015).

4

domestic conflicts between factions or rivals (Bernhard 1998; Treisman 2000).

In addition to these institutional accounts, scholars also highlight the personal attributes of central bankers and the role that their individual backgrounds might play. In Kaplan (2017), left-leaning parties use information about the educational background of central bankers to infer their policy preferences and find that left governments appoint mainstream economists, but only when the economy is doing poorly. In Johnson (2016), appointers use information about careers in international organizations (IOs) to determine preferences. Actors with IO experience are expected to hold loyalties to global epistemic communities, which skews their preferences towards their international peer group. Similarly in Adolph (2013), central bankers' future career aspirations can affect their present policy preferences, with those interested in a future career in finance demonstrating more inflation aversion.

While the aforementioned literature finds that candidates are likely screened for their policy preferences or expertise, to our knowledge, previous research ignores whether (or when) candidates are screened for political backgrounds. Furthermore, no research to our knowledge examines how incentives to deter politically minded CBGs may affect the level of policy discretion awarded. Yet, in looking at countries around the world, it is important to note that members of the professional class often play multiple roles, including holding both elected and appointed office during one's career, especially in countries transitioning to democracy.[4] Indeed, while central bankers in most developed countries seem uninterested in running or winning elections, there is little evidence that electoral disinterest applies to developing countries.[5]

According to the biographies of CBGs in post-communist countries, which is the sample of countries we focus on in this paper, between 1990 and 2012, 76 out of 160 (47%) central bankers acted as politicians before taking the helm of the country's central bank. Figure 1 shows both

---

[4]For recent exceptions, see Johnson 2016; Shih 2008; Kaplan 2017

[5]Even in the U.S., the suggested appointment of Herman Cain to the Federal Reserve is noteworthy as Cain competed in the 2012 Presidential election and in primaries against President Trump. "Trump Considering Herman Cain for Federal Reserve Board, Sources Say," Bloomberg, January 31 2019. Similarly, Finnish Central Bank Governor Olli Rehn was also previously Minister of Economic Affairs.

the increase in CBI and also variation in the proportion of technocrats (operationalized as having had vocational experience exclusively outside of government) versus politicians (operationalized as vocational experience inside of government) appointed as CBGs in post-communist countries since transition. Even more puzzling is that while the number of central bankers with political experience and those that do not has stayed relatively constant over time, CBI has risen, and it has risen at a faster pace for those CBGs with political experience. These two trends, the relatively constant share of technocrats and the increase in the level of CBI awarded to CBGs with political experience suggests that something in addition to the standard delegation story is at play. We offer a theoretical model that suggests that the electoral vulnerability facing the appointing politician is one previously unexplored explanation of these trends.

Figure 1: CBI and Political Appointments
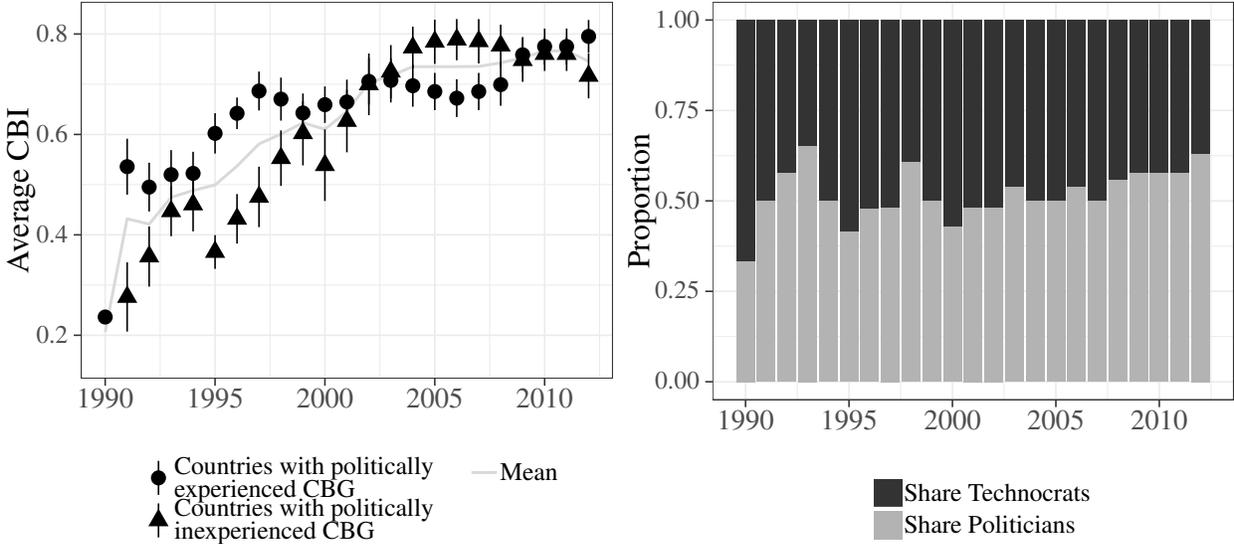
Theory

This section presents a formal model illustrating our argument. We present a simple, two actor screening model where a principal, in this case a politician with appointment powers to the central

bank, has imperfect information about a possible CBG's political ambition.[6] We present our argument in three steps. Firstly, we consider a situation where the nominating politician, who we call the "leader," needs to appoint a central bank head. At the same time, she wants to ensure her own reelection and also wants to give up as little policy discretion to the nominee as possible. Assuming the leader is assessing a single candidate for the job, she needs to decide both the optimal level of policy discretion to award to the candidate as well as sufficiently invest in her reelection strategy against a potential political rival. To simplify the model, we assume that the leader only considers a single candidate and any selection criteria besides the political ambitions of the candidate occurred previously.[7] We also assume that the candidate's political ambitions are less well known to the leader than they are to the candidate. While the leader can observe information about the candidate's past career to infer political ambition, the leader remains, however, only imperfectly informed. The key question that the leader then asks is how to both ensure her reelection and also limit the amount of policy discretion given to the candidate?

Secondly, we show how the leader (she) can prevent the candidate (he) from misreporting his true type by making discriminating offers. More specifically, the leader presents the candidate with a menu of appointment offers with a different set of policy discretion, d and reelection efforts, e, committed to different realizations of the candidate's type. We show that in equilibrium, the leader makes discriminating offers in order to induce the candidate to reveal his true type. Intuitively, the leader lays out different combinations of re-election efforts and policy discretion which target the different types of candidates. This is similar to offering different wages to different types of workers. By promising greater policy discretion to those more interested in policy, the leader can deter those types that are politically ambitious from misreporting. In the end, each type accepts a different offer from the leader, and, holding all else constant, policy discretion is *lower* for those

---

[6]This is different than in Alesina and Tabellini 2007 who consider a similar appointment situation from a normative perspective.

[7]We do not have lists of the possible pool of candidates nor measures of their policy preferences, so we assume that any candidate meets the leader's other criteria at some early stage.

with political ambitions.

Thirdly, while the candidate's true political ambitions are unknown, their previous career path is observable. Therefore, we compare the leader's offer to the candidate when she observes prior political experience and when she does not. Since politically experienced candidates are also those candidates more likely to be interested in electoral politics, the leader wants to grant less discretion. Working in an opposing direction, however, the leader has less incentive to invest resources on separating types as the candidate becomes either more electorally motivated or as the election becomes more competitive because any information gained is marginally less efficient. For example, in the case where it becomes more certain that the candidate is politically motivated, it pays marginally less to acquire such information. Similarly, as the election becomes more fierce, spending resources on information gathering at the expense of other tools to secure the election is more costly. Thus, as either the electoral arena becomes more competitive or the exogenous pool of possible candidates becomes, on average, more electorally threatening, the level of discretion awarded to candidates with political experience *increases*, holding all else constant, as the appointer commits less resources to blocking their entry.

The Model

Formally, consider a situation where a nominating politician or leader, (L) must appoint a candidate to the central bank, (K).[8] In the United States, the nominating official is the president, however, in other countries, other political actors make central bank appointments as well. Importantly, in our model, the candidate the leader considers is both the leader's agent and also a possible electoral rival. We assume that different candidates have different relative preferences for holding political office, f, and policy discretion, p. To keep our model general, we model these preferences as depending on three things: Candidate K's preference for holding political office, $\theta > 0$; the Leader L's reelection efforts, $e \in [0, 1]$; and the amount of policy discretion the leader grants the

---

[8]We use K as the nominee so as not to confuse him with a contender.

candidate $d \in [0, 1]$. We call a candidate with relatively little interest in holding political office a *Technocrat* and a candidate with a stronger interest in political life a *Contender*. We make a number of assumptions in order to keep the model simple, which we outline below. While more complicated models are certainly possible, we try to limit the model such that it illustrates our key mechanism.

Assumptions about the actors: First, as mentioned, we assume that the leader considers only a single candidate and wants to determine whether the candidate is politically ambitious or not. To keep it simple, we assume that other dimensions, such as his policy preferences, are acceptable to the leader. We also assume that candidate K is only of two types: policy seeking ($\underline{\theta}$) (i.e. a technocrat) or office seeking ($\bar{\theta}$) (i.e. a contender) and that K's political ambition, or type, is private information known only to himself. We also assume that contenders always want elected office more than technocrats, so that $f(e, \bar{\theta}) > f(e, \underline{\theta})$ for all $e(\theta) > 0$.[9] We also assume that the leader's own expected valuation of retaining office, $o(e)$, is increasing in her reelection efforts.[10]

Assumptions about the relationship between variables: Second, we assume that there is a positive relationship between policy discretion, effort, and the candidate's expected influence over policy.[11] We also assume that the leader faces a greater risk of losing an election the more formidable the candidate. Therefore, we assume that the likelihood of winning the election is positively related to the leader's effort: the more effort the leader expends, the safer her reelection.[12]

Assumptions about information: Finally, we also assume that while the leader cannot perfectly observe the candidate's type, the leader can observe the candidate's previous career.[13] From observing the candidate's previous career path, the leader can derive (imperfect) information about

---

[9]We also assume that K's elected office value is continuous, twice differentiable, and decreasing in the leader's reelection effort so that $\frac{\partial f}{\partial e} = f_1 < 0$ and $\frac{\partial^2 f}{\partial^2 e} \geq 0$.

[10]$\frac{\partial o}{\partial e} = o_1 > 0$.

[11]$p(e, d)$, increases such that $\frac{\partial p}{\partial e} > 0$ and $\frac{\partial p}{\partial d} > 0$.

[12]In our model, stronger candidates discourage the leader from investing additional effort, which increases the odds of unseating the leader (Banks and Kiewiet 1989). Formally, we define the electoral vote-margin, v, as a function of the leader's reelection efforts, $v(e)$, so that $\frac{\partial v}{\partial e} > 0$ and $\frac{\partial v}{\partial e^2} < 0$ with $v(e) \in [0, 1]$.

[13]$\pi \in \{0, 1\}$, where $\pi = 1$ indicates that the candidate has held a political office before. Let $\Phi(\pi)$ be the probability that a nominee turns out to be a contender conditional on his past political career or $\Phi(\pi) = P(\theta = \bar{\theta}|\pi)$.

whether the nominee is a technocrat or a contender.[14]

Equation (1) shows the candidate's payoff. K's utility increases in the expected office valuation and the expected valuation of policy influence if he accepts the appointment. In the case where he rejects, K receives a reservation utility, $r > 0$.

$$
u_K(d, e, \theta) = \begin{cases} f(e, \theta) + p(e, d) & \text{if K accepts} \\ \\ r & \text{if K rejects.} \end{cases} \tag{1}
$$

Similarly, the leader's payoff is given in equation (2).

$$
u_L(d, e, \theta) = \begin{cases} o(e) - p(e, d) - c(e) & \text{if K accepts} \\ \\ 0 & \text{if K rejects} \end{cases} \tag{2}
$$

Like K, L's payoff increases in the expected office valuation o but decreases in the level of discretion awarded. In other words, the leader would like to win the election, award little discretion, and expend effort efficiently. To keep things simple, we normalize the leader's reservation utility to zero in the case where the candidate rejects. Lastly, we assume that reelection efforts are increasing at an increasing rate.[15]

Game Sequence

The game sequence is depicted in Figure 2. Unaware of the candidate's political ambition, the leader's choice depends on a costless message, sent by the candidate, about his type. First, the

---

[14]A contender had incentives to enter into politics prior to becoming a candidate for the central bank governorship. Similar to the connection between latent productivity and education level of workers in job-market screening models (Spence 1973), political ambitions may influence a nominee's previous career path. Contenders incur less costs of choosing a career path involving politics or have less prospects in career paths outside politics.

[15]$c(e)$ with $c(0) = 0$, $\frac{\partial c}{\partial e} = c_1 \geq 0$ and $\frac{\partial c}{\partial e^2} = c_2 \geq 0$

leader chooses a message space, M, from which the candidate, K, chooses to report his type, $\mu \in M$. Having observed K's message, L makes K an offer to become central bank governor, with the offer consisting of a level of policy discretion $d(\mu) \in [0, 1]$ and reelection effort $e(\mu) \in [0, 1]$. Importantly, we assume that the leader is committed to this offer and discretion and reelection efforts are offered simultaneously as a "take it or leave it" deal. The candidate then accepts or rejects the leader's offer. We solve the game for perfect Bayesian equilibria (PBE) in pure strategies.

Figure 2: Model Sequence
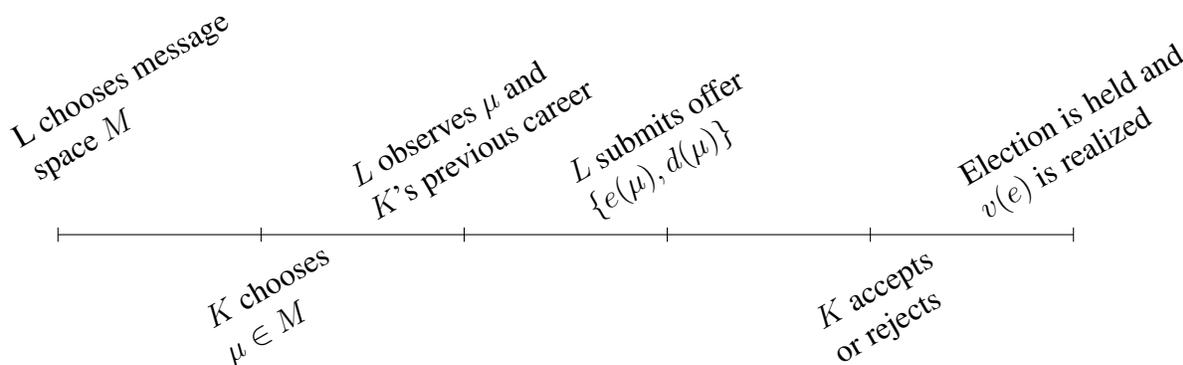
Equilibrium

A key concern of the leader is that both *technocrats* and *contenders* may benefit from misreporting their type. If the leader makes a one-size-fits-all offer, both types of candidates may have an incentive to try to extract more concessions from the leader.[16] Following the revelation principle (Myerson 1979), we focus on characterizing a truth-telling mechanism i.e. an offer menu that depends on the true types of candidate K. We simplify notation so that $d(\underline{\theta}) = \underline{d}$, $d(\bar{\theta}) = \bar{d}$, $e(\underline{\theta}) = \underline{e}$ and $e(\bar{\theta}) = \bar{e}$ and find that the candidate reports truthfully as long as the leader's offer satisfies the following constraint for each type:

---

[16]In the appendix we show how the leader always gains by preventing the nominee from misreporting.

$$u_K(\underline{d}),\underline{e}),\underline{\theta}) \geq u_K(\bar{d},\bar{e}),\underline{\theta}) \tag{$\underline{IC}$}$$

$$u_K(\bar{d},\bar{e}),\bar{\theta}) \geq u_K(\underline{d},\underline{e}),\bar{\theta}) \tag{$\overline{IC}$}$$

These constraints are important for uncovering the equilibrium outcome given the cases of reported types shown in the next section.

Case 1: Candidate says he is a Technocrat

We first establish L's equilibrium offer if the candidate reports that he is a technocrat. Since L always prefers that K accepts her offer, she needs to make an offer that is larger than the candidate's reservation utility. As the candidates can be of two types, this implies that the offer must be greater than the reservation utility of both types, or:

$$f(\bar{e},\bar{\theta}) + p(\bar{e},\bar{d}) \geq r \tag{$\overline{P}$}$$

$$f(\underline{e},\underline{\theta}) + p(\underline{e},\underline{d}) \geq r \tag{$\underline{P}$}$$

In conjunction with the truth telling constraint listed above, $\overline{IC}$, $\underline{P}$ implies that,

$$f(\bar{e},\bar{\theta}) + p(\bar{e},\bar{d}) \geq r + f(\underline{e},\bar{\theta}) - f(\underline{e},\underline{\theta}). \tag{3}$$

Two implications follow from equation (3). First, if an offer is acceptable to a technocrat, it will also be acceptable to a contender. Second, a technocrat always receives exactly his reservation utility in the form of some combination of effort and policy discretion.[17]

---

[17]How effort and policy discretion relate in equilibrium depends on the relative size of his reservation utility, r, and the value that he places on holding elected office.

Case 2: Candidate says he is a Contender

Next, we consider the leader's equilibrium offer if the candidate reports that he is a contender. Intuitively, the leader, not being able to observe the candidate's political ambition, is concerned that the candidate might misreport his type. In order to prevent misreporting, the leader must therefore implement an offer strategy that balances the commitment of reelection efforts on the one hand and the delegation of policy discretion on the other hand while minimizing the information advantage that the candidate has. The leader's equilibrium offer reflects these trade-offs.

First, we find that the leader grants more discretion to a candidate reporting to be a technocrat than to a candidate reporting to be a contender.[18] As effort is increasing in discretion, nominees who are technocrats also face more reelection efforts devoted by the leader. Second, any additional effort exerted towards a technocrat is increasing in the leader's prior belief that the nominee is a contender.[19]

Proposition 1

In equilibrium, the leader's offer, e^*, d^* satisfies discriminating offers:

$$f_1(\bar{e}^*, \bar{\theta}) = c_1(\bar{e}^*) - o_1(\bar{e}^*) \qquad\qquad p(\bar{d}^*, \bar{e}^*) = r - f(\bar{e}^*, \bar{\theta})$$

$$f_1(\underline{e}^*, \underline{\theta}) = c_1(\underline{e}^*) - o_1(\underline{e}^*) \qquad\qquad\qquad\quad + f(\underline{e}^*, \bar{\theta}) - f(\underline{e}^*, \underline{\theta})$$

$$+ \frac{\Phi}{1-\Phi}(f_1(\underline{e}^*, \bar{\theta}) - f_1(\underline{e}^*, \underline{\theta})) \qquad p(\underline{d}^*, \underline{e}^*) = r - f(\underline{e}^*, \underline{\theta})$$

Importantly, while the leader cannot observe the true political ambitions of the candidate, she can observe his prior career-path. One important question, therefore, centers on how information about the nominee's prior experience affects the relationships above?

Proposition 2

---

[18]This can be verified by evaluating $p(\bar{d}^*, \bar{e}^*)$ in light of the implication $f(\bar{e}^*, \bar{\theta}) > f(\underline{e}^*, \bar{\theta})$ from Proposition 1 and our assumption $f(e, \bar{\theta}) > f(e, \underline{\theta})$.

[19]This is true as long as $f_1(\underline{e}^*, \bar{\theta}) > f_1(\underline{e}^*, \underline{\theta})$, which holds by our assumption that a contender values elected office more than a technocrat does.

If the leader's expected value of holding office is sufficiently high, she offers less discretion to a candidate with political experience.

$$\frac{\partial p(\bar{e}^*, \bar{d}^*)}{\partial \Phi} < 0 \ if \ o(\underline{e}^*) > 2\frac{\partial f(\underline{e}^*, \bar{\theta})}{\partial \Phi} - f(\underline{e}^*, \bar{\theta}) - c(\underline{e}^*)$$

The intuition behind Proposition 2 is shown by examining the composition of the equilibrium level of policy discretion. Consider the equilibrium discretion choice from Proposition (1):

$$p(\bar{d}^*, \bar{e}^*) = r - f(\bar{e}^*, \bar{\theta}) + \underbrace{f(\underline{e}^*, \bar{\theta}) - f(\underline{e}^*, \underline{\theta})}_{\text{Information Rent}} \tag{4}$$

The key reason why the leader makes discriminating offers based on types is that the contender can extract more policy discretion from the leader if he exploits his information advantage. In order to protect against this, the leader tries to minimizes the amount of discretion granted by extending discriminating offers. The leader exerts more reelection effort against the technocrat in order to make it less attractive for a contender to misreport. However, the leader needs to compensate the technocrat to ensure that he accepts the appointment, and in doing so, offers the technocrat greater policy discretion. Intuitively, this means that the technocrat is awarded more policy discretion as a function of the leader wanting to *deter contenders* and that this relationship holds independently of any personal characteristics that the technocrat may have, such as his policy preferences, ability, or expertise, and depends only on the technocrat being more interested in policy than holding elected office. Thus, new to the literature, this mechanism implies that one reason technocrats are awarded greater policy discretion is to dissuade contenders from participating in the first place.

Second, prior observable information about the candidate changes how much the leader needs to discriminate in her offers. The leader adjusts her discriminating offers such that any information rent that the candidate may enjoy, or the advantage for the candidate that arises from him knowing something the leader does not, is minimized. As long as the leader's own reelection value is

14

sufficiently high, the leader will grant less discretion to candidates with a previous political career. Like above, this implies a negative relationship between candidates with political experience and policy discretion.

Finally, we ask how the above relationship changes when the leader faces greater threats to her reelection. Here we find that:

Proposition 3

As long as it is sufficiently likely that a candidate turns out to be a contender, the discriminating effect increases (decreases) in size as the leader faces an easier (harder) reelection.

$$\frac{\partial p(\bar{e}^*, \bar{d}^*)}{\partial \Phi \partial \underline{e}^*} < 0 \ if \ \frac{\partial f_1(\underline{e}^*, \underline{\theta})}{\partial \Phi} < \frac{f_1(\underline{e}^*, \bar{\theta}) - f_1(\underline{e}^*, \underline{\theta})}{(1 - \Phi)^2}$$

Proposition 1 implies that as the leader becomes more certain that she faces a contender, she expends more effort towards reelection against a technocrat than she would under conditions of perfect information. Intuitively, the leader provides more incentives for the contender to tell the truth by making it more costly for him to pretend to be a technocrat. This implies there is an additional "discretion premium" awarded to the technocrat as a consequence of imperfect information and irrespective of the candidate's other qualities such as preferences or ability. The intuition for Propositions 2 & 3 is similar. If the information provided by a past political career and subsequently the effort expended towards reelection effectively reduces the contender's information rent, the leader grants less discretion to a candidate with a past political career. Yet, working in an opposite direction, the leader will limit paying this "discretion premium" as her reelection becomes more contested. The more vulnerable she is, the less it makes sense for her to deter contenders by rewarding technocrats.

Political Experience and Electoral Vulnerability

This section illustrates the main results from above graphically using specific functional forms.[20] We show how the level of discretion offered to the candidates changes as: (1) whether or not the leader observes past political experience or not and (2) whether the leader's reelection vulnerability increases or decreases.

First, given our assumptions, the leader always offers less discretion to the nominee after having observed that he has previous political experience. As shown in Figure 3, what this means in terms of our model is that $\underline{d}_\Phi^*$ and $\bar{d}_\Phi^*$ are both negative. For the leader, observing a political career indicates that she is more likely to face a contender, so it is less important that she learn about the candidate's political ambitions by investing in screening. Thus, when facing a politically experienced candidate, the leader needs to threaten less reelection efforts in order to learn about the candidate's true ambitions. Along with not having to pay these costs for information, it also lowers the discretion payoff granted to both the contender and the technocrat. Furthermore, this result holds generally, as long as the candidate's outside option is more valuable than the technocrat's elected office value ($\underline{\theta} < r < \bar{\theta}$).

Second, the penalty for having a political career decreases as the leader faces greater electoral threats. As noted in Proposition (3), this attenuation effect is conditional on how any additional information affects the contender's information advantage. For example, if the electoral arena is becoming more competitive because the pool of candidates begins to pose a more serious electoral threat to the leader, even politically experienced candidates will receive higher offers of policy discretion from the leader.[21]

---

[20]For simplicity, we assume linear expected value functions $f(e, \theta) = (1 - e)\theta$, $p(e, d) = ed$ and $o = eo$. We also assume a quadratic cost function for effort, $c(e) = e^2$. Further, we assume a positive linear relationship between the leader's effort e and the electoral vote-margin, $v(e) = e$. Lastly, let $\{\bar{e}^*, \bar{d}^*\}$ $\{\underline{e}^*, \bar{d}^*\}$ be the leader's equilibrium offers and $\bar{d}_\Phi^*$, $\underline{d}_\Phi^*$ the change in discretion d offered to a technocrat and a contender due to observing that the nominee has past political experience, Φ.

[21]This result generalizes to any parameter value of o, $\bar{\theta}$ and Φ. For the case that the candidate reports to be a technocrat (solid line), the effect is also negative so long as $\underline{\theta} < r < \bar{\theta}$.

Figure 3: The Effect of Political Experience on Discretion
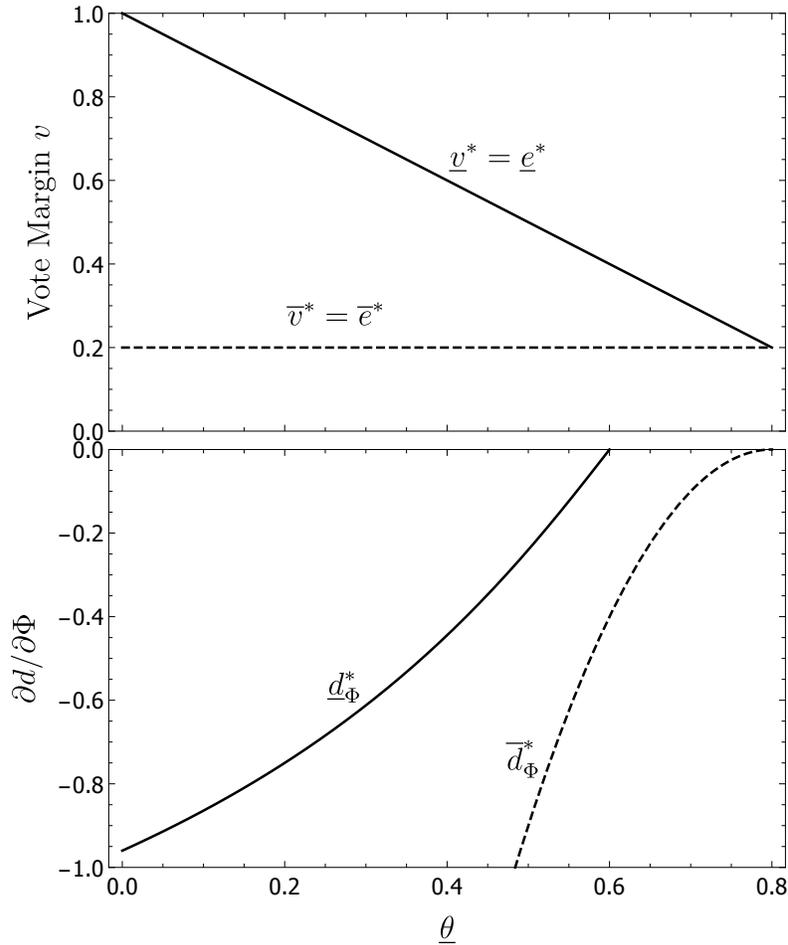
Note: The figure shows equilibrium changes for the functional forms of f, p and o as shown in the appendix, assuming $r = 0.6$, $o = 1.2$, $\bar{\theta} = 0.8$, and $\Phi = 0.5$

Empirical Implications of the Model

Our model predicts a negative relationship between political experience and policy discretion. While this negative relationship is consistent with prior research, our mechanism suggests a new rationale for why this may be the case. According to previous theories, technocrats are awarded greater policy discretion either because their presumed policy biases for lower inflation help the government credibly commit to low inflation or because political parties in competitive elections want to tie the hands of future governments. Both of these theories suggest that independent central banks will co-occur with the appointment of technocrats in politically competitive environments.

17

This is because competitive environments are also those where incentives to hand-tie future governments is most pronounced. Alternatively, our model finds that in environments of low-electoral competition, politicians with appointment rights to the central bank can use technocratic appointments opportunistically so as to secure their own political power. As shown by the model, the leader uses discriminating offers so as to deter politically minded candidates from misreporting their interest in policy-making. Another way of saying this is that by granting technocrats even greater policy discretion than the leader would under conditions of perfect information, the leader effectively creates an entry barrier to political markets. This entry barrier works to block possible political challengers from entering either elected or appointed office. In sum, technocratic appointees can be used by those already in power as a mechanism to secure their own politician survival in addition to solving commitment issues across elections and/or parties. Yet, the leader will pursue the above political market blocking strategy less the more electoral threatening the political arena. Therefore, our first empirical prediction is that:

H1 Imperfect Information: As the nominating politician's electoral insecurity increases, the level of policy discretion offered to candidates with political experience increases as well.

In order to assess whether or not our mechanism is at work, we also want to evaluate the perfect information story. In the perfect information story, technocrats get greater policy discretion because they are experts and have an advantage at choosing better monetary policy (as opposed to politicians, who have the same qualifications as the leader). Furthermore, the nominating official is more likely to appeal to outside expertise when political insecurity is higher. This is because she wants to tie the hands of any opposition party from using monetary policy opportunistically in the future. In order to evaluate whether or not the data supports this explanation instead, we also test the following hypothesis:

H2 Perfect Information: As the nominating politician's electoral insecurity increases, the level of policy discretion offered to candidates with policy expertise increases as well.

Data and Methodology

Post-communist countries represent an excellent sample to test the expected relationship between central bankers' backgrounds, electoral competition, and policy discretion. First, despite varying levels of wealth and economic conditions, all countries faced a need to undertake economic and political reforms around the same time (Frye 2010). This alone makes understanding the ways in which countries' central bank reform trajectories diverged worthwhile. Second, the paths that these countries took vary significantly over time and across countries (see also Johnson 2016). Some countries, such as Azerbaijan, Kazakhstan, Hungary, and Romania reformed in three steps, increasing their independence at each step. Not all countries show such a sustained upward trend, however. Countries such as Belarus and Macedonia also rolled back their level of discretion. Furthermore, the level of changes also varies, with some countries implementing dramatic increases in their central bank independence, such as Lithuania and the Ukraine, when compared to other countries, such as Moldova and Albania.

We contribute a new dataset on monetary policy independence and biographical information of CBG career experience across time in 29 post-communist countries, between 1990 and 2012.[22] This new dataset includes measures of policy discretion including a measure of monetary policy independence and constraints on government borrowing. It also includes newly compiled biographical information on all CBG appointments for those countries that were either Soviet republics, members of the Warsaw Pact, or held very close ties to the Soviet Union, such as Mongolia. To be consistent with previous literature, we follow the coding efforts of Hallerberg and Wehner (2017), who also code biographical information for political actors (CBGs, Prime Ministers, Presidents, and Finance Ministers), although these authors consider the biographies of actors in OECD countries only. To do our coding, we hired three research assistants with Russian and English language skills to compile information from online sources such as official central bank websites, individual

---

[22]We consider Czechoslovakia as a separate country. Plots of the CBI variable for each country are given in the Appendix.

CVs, biographies, and Wikipedia. We code whether the individual has ever held a political post in any post-communist government or legislature. Thus, in our dataset, being politically experienced in the early 1990s means that an individual held a position in the transition government/legislature, not the communist regime.[23] As a result, this makes our key independent variable somewhat different from Hallerberg and Wehner (2017), however, we use the same coding rules as these authors for coding vocational experience. Finally, our data also includes important information about which nominating politician is eligible to make central bank appointments in the first place.

Policy Discretion

Our main dependent variable is policy discretion. The aggregate CBI index commonly used in the literature is an average of four dimensions of *de jure* CBI including personnel, policy objectives, policy tools, and limitations on lending to the government. In the composite measure, these dimensions are weighted according to the judgment of the initial authors (Cukierman 1992). Rather than use the composite index, we consider those components most related to policy discretion and operationalize policy discretion two ways. First, we use the component "policy independence" in country j in year t, from the Cukierman (1992) measure, recently updated by Garriga (2016). This is the most direct test of our argument as it measures how much policy independence the central bank is awarded by the government. As a second measure of policy discretion, we also examine whether or not the central bank has legal limitations on lending to the national government, "limitations on lending" from the same index. The logic for this measure is that the greater the policy independence, the larger the legal limitations for lending to the government, and the more autonomous the central bank is from the government.[24]

---

[23]As a robustness check, we distinguish between political experience before and political experience before and after the individual holds the central bank governorship. Our main tables report the results for those with previous political experience, however, the results are similar for both specifications.

[24]In order to examine the robustness of our results, we also use the composite CBI index rather than just the two components listed above. The full index ranges from 0 (completely dependent) to 1 (completely independent), with a sample mean of 0.64 and a standard error of 0.20. The main results show our findings with policy independence and limitations on lending and the index results are shown in the appendix, however, the results do not vary significantly.

Career Experience

Our key explanatory variable is whether or not the appointed CBG has past *political experience* or not. We define political experience as having held a career as a party official, running in an election, or holding a political office via direct or indirect election, or holding an appointed office in one of the three branches of the government after 1990 or the first year of independence; this variable is coded 1 if yes to the above and 0 if no.[25]

In addition, we also code whether or not the appointed CBG's two significant vocational experiences involved working in a international organization. As above, *IO experience* is coded 1 if the individual has experience in an IO and 0 if not. Importantly, these two attributes are not mutually exclusive. Approximately half of the individuals that held previous careers in politics also have vocational experience working in an IO (52%). Those that do match on these attributes, however, held office for a relatively short period of time. Only in 5% of country-years with political appointments does the CBG also have experience working in an IO.

To measure policy ability or expertise, we also code whether or not an individual holds a Ph.D. in Economics. This variable also represents a large share of those people in our sample (57 out of 162, or 35%).

Electoral Competition facing the Appointer

In our theoretical model, the political leader has direct appointment powers as well as control over the level of discretion awarded to the nominee. In order to best match our empirics with the theoretical model, we focus our attention on those electoral contests where the politician has the appointment rights to the central bank. To determine this, we collected information from central bank laws, directories, websites and secondary sources to determine which leader gets to draft the initial nominee list for the central bank. Interestingly, we find significant variation in who

---

[25]Information about the CBGs past employment experience is not included in any measure of the CBI index, and therefore we are confident that these measures are independent from our main explanatory variables.

gets to draft the initial list of nominee names across central banks in our sample. In 153 country-year cases, the initial appointment is made by parliament; in 393 country-year cases, the initial appointment is made by the president; and finally, in 43 country-year cases, the initial appointment is made by the prime minister. We drop 23 country-year cases in which the initial appointing government office is not clearly identifiable. These country-year cases include Georgia, where the suggestion for the CBG comes directly from the central bank board. We also drop all cases where the central bank law is not reformed and the country retains Soviet-era central bank governors.

We measure *electoral competition* facing the nominating official two ways. First, we proxy electoral competition using the margin of victory that the political candidate wins in the election. For legislative elections, we measure competition with seat margins, or the difference in the number of seats won by the first and second most successful parties.[26] We then transform the variable, taking $1 - $ `seatmargin` such that electoral competition is higher when the seat margin is smaller and electoral competition is lower when the seat margin is larger. For those cases where the president rather than the legislature determines the CBG appointment, we use the difference in the number of votes between the first and second candidate in the first round of the presidential elections. As above, we transform this variable $1 - $ `votemargin`, such that a smaller vote margin is again associated with higher competition and a larger vote margin with lower competition.[27] The underlying data are from Coppedge et al. (2017), which aggregates election data from Europe and Asia (Nohlen and Stöver 2010; Nohlen, Grotz, and Hartmann 2001).

As a second indicator of political competition, we also measure the level of popular mobilization against the government before elections. The measure we use is the number of anti-government pre-election protests as reported in the British Broadcasting Corporation's Summary of World Broadcasts coded in the Cline Center Historical Phoenix Event Dataset (Althaus et al. 2017;

---

[26]We use the seat margins for the parliamentary elections rather than vote margins because of greater data availability. However, our results hold irrespective of whether or not we use seat margins or vote margins.

[27]There are a few cases with the vote margin is larger than one in our dataset. This is due to cases where candidate B in the first round received less votes than candidate A, but in subsequent rounds, received more votes than candidate A.

Beaulieu 2014). More specifically, we count the reported number active protest, postures of force, coercion, breakdown of negotiations, assaults, and physical fights targeting government institutions or officials in a given year. For those years where the nominating official faced an election, we included only those protest events that happened before the election date.

Other Variables

We also include a number of other variables to account for possible confounding factors. In order to control for the level of financial development or trust in the central bank, we include a measure of *contract-intensive money* (CIM). CIM reflects the proportion of money that is held in the official banking sector derived from a measure of the money supply (M2) (Clague et al. 1999). One interpretation is that CIM proxies the security of property rights (in this case, financial assets).

Previous literature finds that political institutions are essential to the proper functioning of CBI in democracies. As such, we also include a measure of *checks and balances* from the Database of Political Institutions (Beck et al. 2001). As in Keefer and Stasavage (2003), we expect the level of checks to be positively associated with higher levels of policy discretion.

The degree of urbanization may affect the level of prices and also the demand for independent economic institutions. Therefore, we include the share of the population living in urban areas, *urban population*, from the World Bank's World Development Indicators (WDI). Like the above measures, we also expect this variable to be positively associated with higher levels of CBI.

We include a measure of the country's growth rate from the WDI, which we expect matters for both the level of policy discretion as well as for the competitiveness of the election, *gdp per capita growth*.[28]

Finally, there is an obvious upward trend in our CBI index variable over time. We follow the strategy employed by Marsh and Mikhaylov (2012), who, in studying the Irish economic crisis,

---

[28]We also include EU membership and candidacy and Ilzetzki, Reinhart, and Rogoff (2017)'s coarse measure of a country's exchange rate regime in robustness checks available in the Online Appendix. To preview our findings, we find no major differences across the models even when we account for these additional variables.

include a *time* count variable. This variable starts at the beginning of our sample (1990) and goes up incrementally by 1 unit until the end of our sample (2012).[29]

Model Specification

In order to test our hypotheses, we estimate three models, with each model increasing in structure: a pooled model (1), a country fixed-effects model (2) and a country fixed-effects model with an assumed AR(1) process (3).[30] Model (2), for example, is specified as:[31]

$$
\begin{aligned}
y_{j,t} =& \alpha + \beta_1 PA_{j,t} + \beta_2 EC_{j,t} + \beta_3 AO_{j,t} + \beta_4 (PA_{j,t} * EC_{j,t} * AO_{j,t}) + \beta_5 (PA_{j,t} * EC_{j,t}) + \\
& \beta_6 (PA_{j,t} * AO_{j,t}) + \beta_7 (EC_{j,t} * AO_{j,t}) + \beta_8' X_{j,t} + \theta_j + \epsilon_{j,t}
\end{aligned}
$$

Empirical Results

We present the results from our model specifications (1-3) using a coefficients' plot for ease of interpretation. As expected, we find a negative independent relationship between political experience and policy discretion, measured either by policy independence or limits on government lending. This implies that, conditional on the appointer being electorally secure, CBGs with political backgrounds get lower levels of discretion than those CBGs without political experience. Our other main variable, electoral competition, measured either by vote and/or seat margin or number of protests, however, demonstrates little independent effect, either statistically or substantively.

Rather than only consider the independent effects, our hypotheses consider the interaction be-

---

[29]As another specification, we also subtracted the global mean level of CBI from the dependent variable and re-ran the analyses; the simple time trend seems to work more effectively at removing the trend, and so we report these and other robustness exercises in the supplementary appendix.

[30]Model 3 addresses potential serial correlation of type AR(1) using a two-step Prais-Winsten feasible generalized least squares (FGLS) procedure with panel-specific autocorrelation coefficients. We estimate the model $y_{j,t} = \alpha + \beta_1 PA_{j,t} + \beta_2 EC_{j,t} + \beta_3 AO_{j,t} + \beta_4 (PA_{j,t} * EC_{j,t} * AO_{j,t}) + \beta_5 (PA_{j,t} * EC_{j,t}) + \beta_6 (PA_{j,t} * AO_{j,t}) + \beta_7 (EC_{j,t} * AO_{j,t}) + \beta_8' X_{j,t} + \theta_j + \nu_{j,t}$, with $\nu_{i,t} = \rho_i \nu_{i,t-1} + u_{i,t}$ assuming that $u_{i,t}$ is white noise.

[31]The shares of missing values in our data range between 0 and 19%, which leads to the listwise deletion of 386 country-years. For our main analyses, we report the findings with missing data. In the appendix we report the models using imputed data 10 times using a prediction model featuring a wide array of predictors using the AMELIA II package (Honaker, King, Blackwell, et al. 2011). The results are consistent with the results of the main analysis.

Figure 4: Effects of Political Experience and Electoral Competition on Lending Limitations and Policy Independence
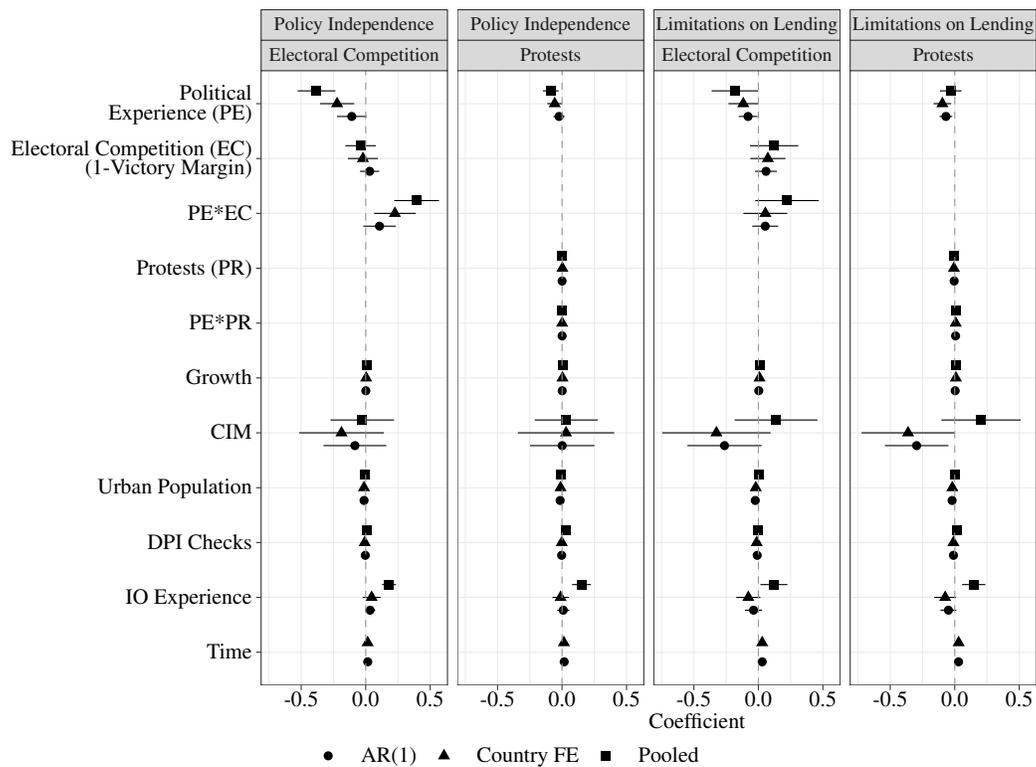
Note: The plot represent the model results depicted in the supplemental appendix. Columns (1) and (2) report coefficients from the models using the CBI index component "Limitations on Lending" as dependent variable, using "Electoral Competition" and "Protests" as independent variables. Columns (2) and (3) report the corresponding coefficients for the models using "Policy Independence" as dependent variable. We report heteroskedasticity robust standard errors except for the AR(1) model.

tween political experience and the strength of political competition facing the nominating politician. As reported in Figure 5, which shows the marginal effects, we find that CBGs with political experience are associated with higher levels of policy independence as political competition for the appointer's post increases. When we opperationalize policy discretion as limitations on lending to the government, such a positive effect is less pronounced. Interestingly, however, we find the converse pattern when we measure electoral competition using protests against the government. Here we find that CBGs with political experience are only weakly positively associated with policy independence but the positive relationship is much stronger when we consider limitations

Figure 5: Marginal Effects of Political Experience on Lending Limitations and Policy Independence
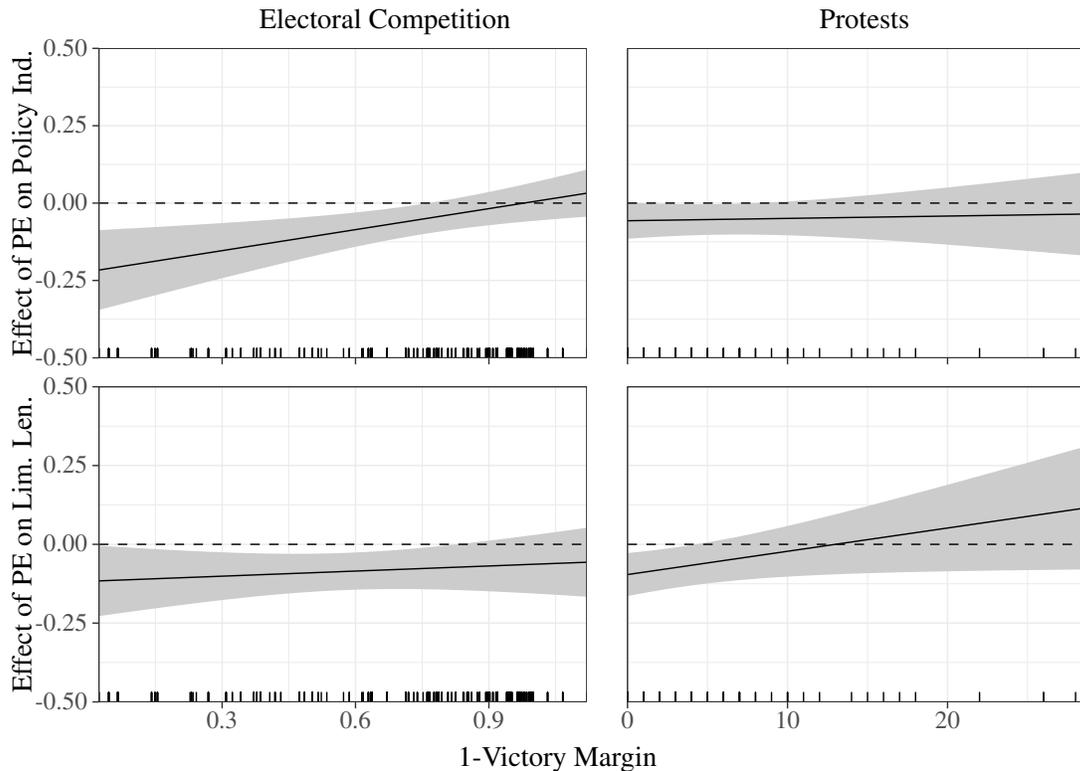
Note: The plot reports the marginal effects from the country fixed-effects models. Rows represent the CBI components "Policy Independence" and "Limitations on Lending" as dependent variables and columns represent "Electoral Competition" and "Protests" as independent variables. The shaded areas show 95% confidence intervals using heteroscedasticity robust standard errors.

on government lending then it is when we consider policy independence.

In terms of our other variables, figure 5, shows that GDP growth is positively associated with policy discretion across all models, although its effects are not large. The CIM measure is positively associated with discretion until we include the time counter to account for the observed increasing trend in central bank independence over time. The time trend likely picks up over-time covariation in movements, such as an increase in the credibility of central banks over time. Our urban population variable is also not substantively important; neither is the democracy variable DPI checks. Similarly, another possible explanation is that career experience in international organizations (IOs) rather than electoral threats matters for policy discretion (Johnson 2016). While we

find a positive relationship between IO experience and policy discretion in the pooled model, the effects are less clear once we account for country and time trends. Furthermore, our interaction is robust even when we include whether or not someone has worked in an IO suggesting that political rather than IO vocational experience matters for policy independence.

While the above results suggests some support for our theory, we also test the perfect information case as it could be that the above positive relationship also holds for experts as well. To do this, we replace CBG political experience with those CBGs with Economics PhDs. We then test whether or not we observe a similar upward slope as electoral competition rises as well. Recall that in contrast to the predictions made by our theory, according to the perfect information case, technocrats will receive higher levels of policy discretion because they are experts and have an advantage at choosing better monetary policy (as opposed to politicians, who have the same qualifications as the leader) and that we expect this premium to increase as electoral competition increases.

We present the results from our same model specifications (1-3) as before. Interestingly, we find little evidence of an independent relationship between having an Economics PhD and the level of policy discretion. Similarly our measures of electoral competition are not related to policy discretion in any independent way, as above.

As before, our variable of interest is the interaction between expertise (proxied by having a PhD in Economics) and the strength of political competition facing the nominating official. As shown in Figure 7, we find that CBGs with more expertise do not get higher levels of policy discretion as political competition for the appointer's post increases. Interestingly, and unlike the political experience results reported above, we find null results irrespective of whether we measure electoral competition by vote/seat margin or by number of protests or whether we consider policy independence or limitations on government lending.

In summary, we find evidence that candidates with political experience are associated with *higher* levels of policy discretion as electoral competition facing the appointing politician rises.

Figure 6: Effects of an Economics PhD and Electoral Competition on Lending Limitations and Policy Independence
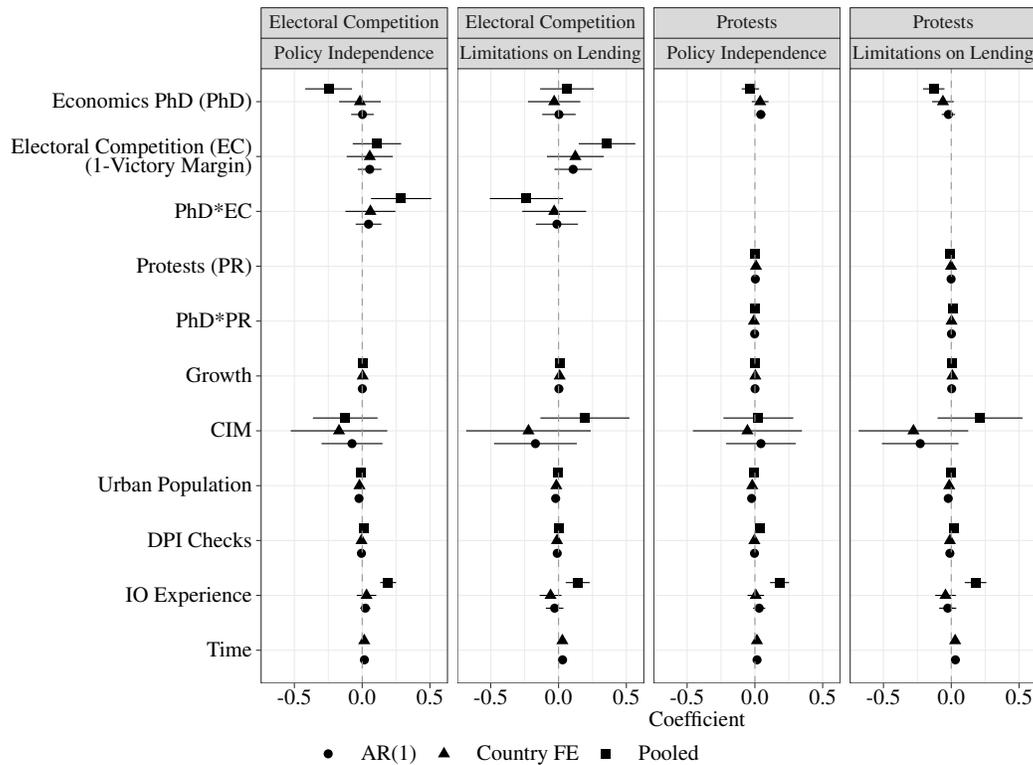

Note: The plot represent the model results depicted in the supplemental appendix. Columns (1) and (2) report coefficients from the models using the CBI index component "Limitations on Lending" as dependent variable, using "Electoral Competition" and "Protests" as independent variables. Columns (2) and (3) report the corresponding coefficients for the models using "Policy Independence" as dependent variable. We report heteroskedasticity robust standard errors except for the AR(1) model.

Furthermore, we find no evidence of such a relationship for those CBG with expertise, as measured by having a PhD in economics. This, coupled with the fact that we examine elections only for those nominating officials that directly hold appointment powers for the CBG, is suggestive evidence in support of the predictions made by a theoretical model of information screening.

The Politics of Central Banking in Serbia

The statistical results above suggest that while technocrats are awarded more policy discretion than candidates with political experience when electoral competition is low, as electoral competition

28

Figure 7: Marginal Effect of the CB Governor holding an Economics PhD on CBI
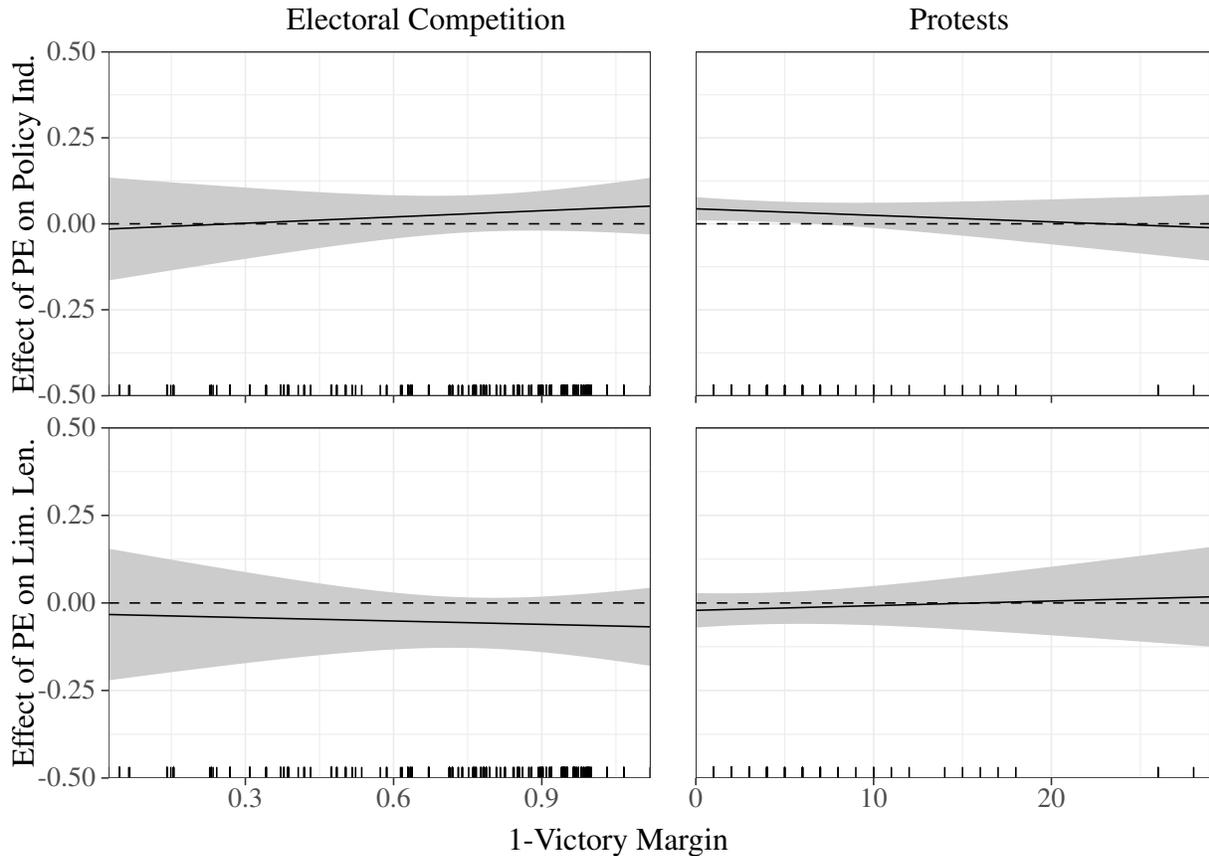
Note: The plot reports the results from the country fixed-effects models with the CBI components "Policy Independence" and "Limitations on Lending" as dependent variables and an indicator if the CB Governor holds a PhD in Economics as conditional independent variable. The shaded areas show 95% confidence intervals using heteroscedastic robust standard errors.

increases, central bankers with political experience are more likely to preside over central banks with higher levels of policy discretion. In order to further demonstrate that political threats posed by the CBG can matter for the level of discretion awarded, as well as the interesting means that politicians case use to block central bankers from holding either appointed or elected office, the following case illustrates central bank appointments in Serbia.

After the violent breakup of Yugoslavia that extended until the mid-1990s, the country remained under the rule of the authoritarian Slobodan Milošević until he was ousted in elections in 2000. Throughout the 1990s, the opposition to Milošević remained fragmented ideologically and

ridden with personality conflicts (Bunce and Wolchik 2011). After the fall of communism, the law establishing the National Bank of the Federal Republic of Yugoslavia (then comprising Serbia and Montenegro) was passed in 1993 and the central bank collaborated closely with the government.[32] In the 1990s, Serbia experienced some of the world's worst recorded episodes of hyperinflation.

In part because previous electoral challenges had proven unsuccessful, 19 of the country's opposition parties formed an opposition coalition called the Democratic Opposition of Serbia (DOS). Once Milošević lost the election, the new Prime Minister of Serbia, Zoran Djindjić, made it a necessary condition that Mladjan Dinkić, who in 1997 founded a think tank called the "G-17 Plus," be named governor of the National Bank of Yugoslavia (B29 2000).

Dinkić had risen to prominence in the late 1990s through publishing a series of books on the economic consequences of Miloşeviıc's regime. In addition to his economic writings, however, Dinkić was also a frequent speaker at protest rallies and in 1999, put forward a proposal called the Stability Pact for Serbia, which laid out a political and economic road-map for Serbia, calling for a transitional government that would be made up of experts. An early newspaper article described him as "showing a surprisingly natural flair for the spotlight" (Gojgic 1999).

The independence of the central bank rose significantly under Dinkić's tenure. In the first year of his tenure at the helm of the central bank, Dinkić introduced a new dinar along with price controls (Chatelot 2000). He then served as the Governor of the National Bank of Serbia for three years after Milošević's fall. By 2003, the governing coalition had broken up into three components: the Democratic Party of Serbia (the party of the former president), Djindjić's Democratic Party, and the newly formed G17 Plus, created by Dinkić.[33]

According to Dinkić: "I created a [political] party just to show that I could do it. I was never

---

[32]As one analysis noted at the time, "the Constitutional provisions on the central bank's independence ... are valid only inasmuch as it suits the ruling group at a given moment." ("Vuk Ognjanovic: Robbers without Cops - Transitions Online" 1992)

[33]By 2003, the Serbian president, Vojislav Koštunica, had stepped down from the presidency over his party's discontent with the extradition of Miloşeviıc to the International Criminal Tribunal at The Hague, and Djindjić was assassinated that same yearby a Belgrade mafia gang.

a politician, just a technocrat. ... It was obvious that I couldn't be a prime minister. But I was everything in politics except that. I was very conscious of this. I'm not so capable as a politician as I am as a technocrat. ... , but they saw that I can understand what they are doing, that I could say something critical if I chose."[34] Despite his protestations otherwise, Dinkić was a formidable political presence in Serbia for over 15 years. He served as the country's finance minister (2004-2006 and again from 2012-2013), economics minister (2007-2011) as well as deputy prime minister (2008-2011).

The death of Djindjić and the resignation of Koštunica led to presidential and then parliamentary elections in 2003, which were held three times because low voter turnout meant that the results never met the legal threshold. Finally, the candidate from the late Djindjić's Democratic Party, Boris Tadić, won the presidency in 2004, with Koštunica serving as prime minister. Tadić, the successor of Dinkić's former ally, removed him as central bank governor as he was too politically threatening. According to Dinkić: "After Djindjić was killed, the successor [Tadić] wanted to remove me, and this was supported by Djelić [the finance minister at the time]. I was too popular. It was 22 July 2003. At that time I was removed in a very strange way. According to the central bank law, we were independent. So they changed the name of the bank. It had been the National Bank of Yugoslavia but they said it couldn't be called that because Montenegro wasn't part of it, they always had their own monetary authority. So they changed the name [to the National Bank of Serbia], and once they did, they said they also need now a new governor. So they changed the name and also changed me."[35]

The government replaced Dinkić with Kori Udovički who was appointed governor of the National Bank of Serbia on July 23, 2003, a position she held until February 25, 2004, when her appointment was annulled due to the illegal use of a proxy vote in the Serbian parliament. Udovički was then replaced by Radovan Jelašić who held no previous political experience and who held the

---

[34]Interview in Belgrade, 20 July 2016.
[35]Interview in Belgrade, 20 July 2016.

helm until 2010. Jelašić was succeeded by another economist with no political experience, Dejan Šoškić, from 2010 to 2012. Under Šoškić, Serbia's CBI increased, jumping from 0.676 to 0.811 according to a *de jure* measure of CBI. In 2012, two years into his term, Šoškić resigned over disagreements with the government.

The politics of central bank appointments above nicely illustrate the political threat that some central bankers can pose to politicians. In places where politics is divided and candidates rotate themselves into and out of political office, central bankers can appear to be formidable political threats to those in power and leaders therefore have electoral incentives to neutralize them. Furthermore, even if actors themselves refer to their motivations as being primarily policy driven, such as Dinkić, under conditions of low electoral competition, we observe how it is politically expedient for the nominating official to remove any such threats, and appoint someone less threatening.

Conclusion

What conditions determine the granting of policy discretion to those at the helm of a country's central bank? Our theory demonstrates that politicians who are responsible for nominating central banks governors (CGB) may use technocratic appointments to dissuade politically motivated central bank candidates. We show that the success in doing so, however, crucially depends on the expected closeness of the race facing the nominating official. As either the overall quality of challengers increases or as elections become more competitive, the appointer's willingness to use discriminating offers to deter politically minded central bankers lessens. Our model therefore finds evidence of a previously unexplored relationship between central bank appointments and policy discretion, one that is mediated by the level of electoral competition facing the nominating politician. We find that the level of discretion granted to candidates with political backgrounds increases as electoral victories narrow. Another contribution is the development of a new and important dataset that looks at the career experience of CBGs outside of OECD countries.

While our argument focuses on those conditions that determine discretion given to CBGs as

a consequence of election concerns facing the appointer, outstanding questions remain. Future research might explore the consequences of an increasing number of CBGs with political experience on a battery of macroeconomic outcomes that independence is expected to matter for, such as inflation, asset prices, and growth rates. Similarly, questions about bureaucratic politics naturally arise from our results. While some have called for central banks to be more accountable to voters, it is worth investigating whether or not those countries with more politically experienced central bankers are indeed more accountable to citizens. One alternative and more pessimistic argument, which our evidence points to, is that with an increase in political competition in countries transitioning to democracy, the marginal efficiency of investing resources to keep politically minded candidates out of important arms of the government declines for those politicians appointing them. Our argument, therefore, points to challenges in the development of a country's bureaucracy: on the one hand, new countries must select and promote a new generation of political leaders in order to effectively manage the country. On the other hand, the coupling of independent agencies staffed with governors with strong political motivations may bring to the forefront inter-elite conflict.

Our paper contributes a deeper understanding of the interaction between strategies aimed at electoral survival and those aimed at delegation to outside experts. While previous research has centered on the need for nominating officials to signal to investors, domestic publics, and opposition parties that they are credibly committing to a low-inflation policy, our findings support recent evidence that calculations by elites about their survivability matters and that this is especially true in environments of heightened political competition. Thus, our paper paints a more nuanced picture of the calculations that politicians make in handing over power.

References

Adolph, Christopher. 2013. *Bankers, Bureaucrats, and Central Bank Politics: The Myth of Neutrality.* Cambridge University Press, April 15.

Ainsley, Caitlin. 2017. "The Politics of Central Bank Appointments." *The Journal of Politics* 79, no. 4 (August 29): 1205–1219.

Alesina, Alberto, Nouriel Roubini, and Gerald D. Cohen. 1997. *Political Cycles and the Macroeconomy.* MIT Press.

Alesina, Alberto, and Guido Tabellini. 2007. "Bureaucrats or Politicians? Part I: A Single Policy Task." *The American Economic Review* 97 (1): 11.

Althaus, Scott, Joseph Bajjelieh, John F. Carter, Buddy Peyton, and Dan A. Shalmon. 2017. *Cline Center Historical Phoenix Event Data. v.1.0.0.* Cline Center for Advanced Social Research: http://www.clinecenter.illinois.edu/data/event/phoenix/.

B29. 2000. "Djindjic: Dinkic Guverner NBJ po cenu pada vlade." B29.net. Accessed 04.03.2018. November 18. https://www.b92.net/info/vesti/index.php?yyyy=2000&mm=11&dd=18&nav_id=16248.

Banks, Jeffrey S., and D. Roderick Kiewiet. 1989. "Explaining Patterns of Candidate Competition in Congressional Elections." *American Journal of Political Science* 33 (4): 997–1015.

Barro, Robert J., and David B. Gordon. 1983. "Rules, discretion and reputation in a model of monetary policy." *Journal of Monetary Economics* 12 (1).

BBC Monitoring: International Reports. 2011. *Ukraine's new chief banker linked to president's family.* Available at:http://www.lexisnexis.com/hottopics/lnacademic/ [Accessed 15 Feb. 2019].

Bearce, David H., and Mark Hallerberg. 2011. "Democracy and De Facto Exchange Rate Regimes." *Economics & Politics* 23, no. 2 (July 1): 172–194.

Beaulieu, Emily. 2014. *Electoral Protest and Democracy in the Developing World.* Cambridge University Press, March 10.

Beck, Thorsten, George Clarke, Alberto Groff, Philip Keefer, and Patrick Walsh. 2001. "New Tools in Comparative Political Economy: The Database of Political Institutions." *The World Bank Economic Review* 15 (1): 165–176.

Bernhard, William. 1998. "A Political Explanation of Variations in Central Bank Independence." *The American Political Science Review* 92 (2): 311–327.

Bodea, Cristina, Ana Carolina Garriga, and Masaaki Higashijima. 2017. "Economic Institutions and Autocratic Breakdown: Monetary Constraints and Spending in Dominant-Party Regimes." *Journal of Politics* (December 5).

Bodea, Cristina, and Raymond Hicks. 2015. "Price Stability and Central Bank Independence: Discipline, Credibility, and Democratic Institutions." *International Organization* 69 (1): 35–61.

Bodea, Cristina, and Masaaki Higashijima. 2017. "Central Bank Independence and Fiscal Policy: Can the Central Bank Restrain Deficit Spending?" *British Journal of Political Science* 47, no. 1 (January): 47–70.

Broz, J. Lawrence. 2002. "Political System Transparency and Monetary Commitment Regimes." *International Organization* 56, no. 4 (September): 861–887.

Bunce, Valerie J., and Sharon L. Wolchik. 2011. *Defeating Authoritarian Leaders in Postcommunist Countries.* Cambridge University Press, June 30.

Chang, Kelly H. 2003. *Appointing Central Bankers: The Politics of Monetary Policy in the United States and the European Monetary Union.* Cambridge University Press, August 18.

Chatelot, Christophe. 2000. "Belgrade Tries to Fend off Economic Ruin." *Guardian Weekly* (October 25): 29.

Clague, Christopher, Philip Keefer, Stephen Knack, and Mancur Olson. 1999. "Contract-Intensive Money: Contract Enforcement, Property Rights, and Economic Performance." *Journal of Economic Growth* 4, no. 2 (June 1): 185–211.

Coppedge, Michael, John Gerring, Staffan I. I. Lindberg, Svend-Erik Skaaning, Jan Teorell, David Altman, Michael Bernhard, et al. 2017. *V-Dem Dataset v7.1.* Varieties of Democracy (V-Dem) Project. https://www.v-dem.net/en/data/data-version-7-1/.

Crowe, Christopher. 2008. "Goal Independent Central Banks: Why Politicians Decide to Delegate." *European Journal of Political Economy,* Does central bank independence still matter?, 24, no. 4 (December): 748–762.

Cukierman, Alex. 1992. *Central Bank Strategy, Credibility, and Independence: Theory and Evidence.* MIT Press.

Dpa International. 2010. *Ukraine president Yanukovych replaces national bank head.* Available at: http://www.lexisnexis.com/hottopics/lnacademic/ [Accessed 15 Feb. 2019].

Fernández-Albertos, José. 2015. "The Politics of Central Bank Independence." *Annual Review of Political Science* 18 (1): 217–237.

Frye, Timothy. 2010. *Building States and Markets After Communism: The Perils of Polarized Democracy.* Cambridge University Press.

Gandhi, Jennifer, and Ellen Lust-Okar. 2009. "Elections Under Authoritarianism." *Annual Review of Political Science* 12 (1): 403–422.

Garriga, Ana Carolina. 2016. "Central Bank Independence in the World: A New Data Set." *International Interactions* 42, no. 5 (October 19): 849–868.

Giesenow, Federico M., and Jakob de Haan. 2019. "The influence of government ideology on monetary policy: New cross-country evidence based on dynamic heterogeneous panels." *Economics & Politics.*

Gojgic, Ljubica. 1999. "Mladjan's Way." *Wall Street Journal* (August 30).

Goodman, John B. 1991. "The Politics of Central Bank Independence." *Comparative Politics* 23 (3): 329–349.

Gray, Julia. 2009. "International Organization as a Seal of Approval: European Union Accession and Investor Risk." *American Journal of Political Science* 53, no. 4 (October 1): 931–949.

Hallerberg, Mark, and Joachim Wehner. 2017. "When do you get economists as policy-makers?" *British Journal of Political Science:* (In Press).

Honaker, James, Gary King, Matthew Blackwell, et al. 2011. "Amelia II: A program for missing data." *Journal of Statistical Software* 45 (7): 1–47.

Ilzetzki, Ethan, Carmen M Reinhart, and Kenneth S Rogoff. 2017. *Exchange Arrangements Entering the 21st Century: Which Anchor Will Hold?* Working Paper 23134. National Bureau of Economic Research, February.

Johnson, Juliet. 2016. *Priests of Prosperity: How Central Bankers Transformed the Postcommunist World.* Cornell University Press.

Kaplan, Stephen B. 2017. "Partisan Technocratic Cycles in Latin America." *Electoral Studies* 45 (Supplement C): 219–229.

Keefer, Philip, and David Stasavage. 2003. "The Limits of Delegation: Veto players, Central Bank Independence, and the Credibility of Monetary Policy." *American Political Science Review* 97 (3): 407–423.

Kydland, Finn E., and Edward C. Prescott. 1977. "Rules Rather than Discretion: The Inconsistency of Optimal Plans." *Journal of Political Economy* 85, no. 3 (June 1): 473–491.

Marsh, Michael, and Slava Mikhaylov. 2012. "Economic voting in a crisis: The Irish election of 2011." *Electoral Studies,* Special Symposium: Economic Crisis and Elections: The European Periphery, 31, no. 3 (September 1): 478–484.

Maxfield, Sylvia. 1998. *Gatekeepers of Growth: The International Political Economy of Central Banking in Developing Countries.* Princeton: Princeton University Press.

Myerson, Roger B. 1979. "Incentive Compatibility and the Bargaining Problem." *Econometrica* 47 (1): 61–73.

Nohlen, Dieter, Florian Grotz, and Christof Hartmann. 2001. *Elections in Asia and the Pacific: A Data Handbook: Volume I: Middle East, Central Asia, and South Asia.* OUP Oxford.

Nohlen, Dieter, and Philip Stöver. 2010. *Elections in Europe: A Data Handbook.* Nomos.

Petříček, Martin. 2016. "V čele České národní banky stanul Rusnok. Zemanův muž není žádný „kývač"." *iDNES.cz* (May 25): http://ekonomika.idnes.cz/jiri–rusnok–guverner–cnb–profil–dny–/ekonomika.aspx?c=A160524_223649_ekonomika_hro.

Rogoff, Kenneth. 1985. "The Optimal Degree of Commitment to an Intermediate Monetary Target." *The Quarterly Journal of Economics* 100 (4): 1169–1189.

Santiso, Javier. 2013. *Banking on Democracy: Financial Markets and Elections in Emerging Countries.* MIT Press.

Shih, Victor. 2008. *Factions and Finance in China: Elite Conflict and Inflation.* Cambridge; New York: Cambridge University Press.

Spence, Michael. 1973. "Job Market Signaling." *The Quarterly Journal of Economics:* 355–374.

Svolik, Milan W. 2009. "Power Sharing and Leadership Dynamics in Authoritarian Regimes." *American Journal of Political Science* 53, no. 2 (April 1): 477–494.

"Vuk Ognjanovic: Robbers without Cops - Transitions Online." 1992. *Transitions Online* (December 10).

Treisman, Daniel. 2000. "Decentralization and Inflation: Commitment, Collective Action, or Continuity." *The American Political Science Review* 94 (4): 837–857.