Presidents and Patronage

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ABSTRACT

To what extent do presidents select appointees based upon campaign experience and connections? The answer to this question has important implications for our understanding of presidential management and political leadership. This paper presents a theory explaining where presidents place different types of appointees and why, focusing on differences in ideology, competence, and non-policy patronage benefits among potential appointees. We develop a formal model and test its implications with new data on 1,307 persons appointed in the first six months of the Obama Administration. The empirical results broadly support the theory, suggesting that President Obama was more likely to place appointees selected for non-policy patronage reasons in agencies off his agenda, in agencies that shared his policy views, and where appointees are least able to affect agency performance. We conclude that patronage continues to play an important role in American politics with important consequences for campaigns, presidential politics, and governance. Keywords: president, appointment, patronage, agency, appointee

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Presidents and Patronage

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Abstract

To what extent do presidents select appointees based upon campaign experience and connections? The answer to this question has important implications for our understanding of presidential management and political leadership. This paper presents a theory explaining where presidents place different types of appointees and why, focusing on differences in ideology, competence, and non-policy patronage benefits among potential appointees. We develop a formal model and test its implications with new data on 1,307 persons appointed in the first six months of the Obama Administration. The empirical results broadly support the theory, suggesting that President Obama was more likely to place appointees selected for non-policy patronage reasons in agencies off his agenda, in agencies that shared his policy views, and where appointees are least able to affect agency performance. We conclude that patronage continues to play an important role in American politics with important consequences for campaigns, presidential politics, and governance.

Keywords: president, appointment, patronage, agency, appointee
The proper means of filling appointed government positions has been controversial since before the drafting of the Constitution. Alexander Hamilton argued that “the true test of a good government is its aptitude and tendency to produce good administration” and lauded the Constitution’s appointment process.\(^2\) According to Hamilton, presidents would “investigate with care the qualities requisite to the stations to be filled” and thereby increase the chances that offices would be filled persons of ability.\(^3\) Hamilton’s defense of the Article II appointment powers rested upon the belief that presidential appointment would lead to the selection of persons on the basis of merit rather than personal connections, “private and party likings and dislikes…”, or unseemly political exchange.\(^4\)

The long history of presidential appointments in the United States challenges Hamilton’s optimism, at least for some positions and agencies (See e.g., Fish 1904; Friedrich 1937; Kaufman 1965; Skowronek 1982; Van Riper 1958; White 1948, 1954; Wilson 1887). Starting with George Washington, but accelerating notably under Andrew Jackson and his successors, presidents have named persons to administration jobs at least partly in exchange for electoral or political support. Reformers hoped to curb the excesses of the spoils-based personnel system with the passage of the Pendleton Act in 1883; however, actual results fell short of their aspirations.\(^5\) Indeed, despite

\(^2\) Rossiter, ed. 1961. *Federalist* 68, 414. Hamilton particularly lauded the Constitution’s mode of selection relative to other possible modes such as legislative selection.

\(^3\) Rossiter, ed. 1961. *Federalist* 76, 456.

\(^4\) Ibid.

\(^5\) 22 Stat. 403 (1883). For accounts of the enactment of the act see Johnson and Libecap 1994, ch. 2; Skowronek 1982, ch. 3; Theriault 2003.
the enactment of the Pendleton Act and subsequent reforms, thousands of federal jobs continue
to be filled at the discretion of the president, and a significant portion of these positions are filled
as a form of political exchange (Mackenzie 1981; Patterson 2008; Patterson and Pfiffner 2001;
Tolchin and Tolchin 1971, 2010). Moreover, some positions and agencies have historically been
targeted for patronage appointments while others have been left largely unscathed. For example,
during the Jacksonian era many departmental clerks and the whole Revenue Cutter Service were
more or less insulated from the practice of rotation in office (White 1954, 315). Similarly, in the
modern period some agencies have earned reputations as “turkey farms” while others have
escaped this moniker. The consequences of patronage for performance are illustrated vividly by
the performance of the Federal Emergency Management Agency during Hurricane Katrina and
the Coalition Provision Authority during Iraq Reconstruction (Chandrasekaran 2006; Cooper and
Block 2006).6

Despite the persistence of patronage in American presidential politics and its influence on
the partiality and competence of government administration suggested by the above examples,
the questions of how, when, and where presidents prioritize patronage considerations over other
factors are relatively understudied ones within the field of American politics (Bearfield 2009,
Sorauf 1960; but see Lewis 2009; Lewis and Waterman 2013; Tolchin and Tolchin 1971, 2010).
One reason for the scarcity is that it is hard to identify when an appointment has been made for
patronage reasons as opposed to—or even in addition to—what Hamilton calls “intrinsic merit.”
Partisans on both sides complain about the quality of appointments but do so for political

6 For social science analysis of the relationship between patronage or partisan appointees and
performance see Gallo and Lewis 2012; Gordon 2009, 2011; Wilson 1887.
reasons. However, without the ability to accurately identify patronage appointments it is hard to examine variation, which is necessary for both theorizing and objective empirical analysis.

This paper presents a formal theory of executive appointments that identifies the conditions under which presidents find it easiest to appoint essential-to-place persons in their administrations. We derive a series of expectations about what types of agencies are the most likely to receive such appointees. We then draw on data on the backgrounds of 1,307 President Obama’s initial appointees to evaluate the theory’s claims. The empirical results provide broad support for our theory, suggesting that President Obama was more likely to place appointees selected for political reasons in liberal agencies, in agencies that were not on the president’s agenda, and in positions where individual appointee contributions to agency outputs might be less noticeable. The paper concludes by evaluating Hamilton’s argument in light of this new evidence, elaborating on how the results presented here influence our understanding of political appointments and presidential leadership more generally.

**Researching Presidents and Patronage Appointments**

Political scientists have long been interested in the backgrounds and qualifications of political appointees (see, e.g., Cohen 1988; Fisher 1987; Krause and O’Connell 2012a; Millet and McMahon 1939; Mann 1964; National Academy of Public Administration 1985; Stanly, Mann, and Doig 1967). Foundational works have described the different factors that presidents consider when making personnel decisions such as ideology, loyalty to the president, competence, political connections, congressional acceptability, and work for the party among other factors (Cohen 1988; Fenno 1959; Heclo 1977; Mackenzie 1981; Mann 1964). More recent scholarship emphasizes the importance of loyalty to the president and competence in
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personnel selection (Edwards 2001; Moe 1985; Weko 1995). Additionally, agencies vary in their views about policy and their willingness to follow presidential direction (Aberbach et al. 1981; Aberbach and Rockman 1976, 1995, 2000; Bertelli and Grose 2009; Clinton and Lewis 2008; Clinton et al. 2012; Maranto 1993). Where an agency’s main policy goals need to be changed because they are at odds with the president’s goals, presidents select appointees with a similar ideology, or loyalty, and substantial political and managerial skill, particularly those that are key to implementing policies on the president’s agenda (Bertelli and Feldmann 2007; Krause and O’Connell 2012b; Lewis 2008; Parsneau 2013).7

Presidents also distribute federal jobs in exchange for electoral or political support (See e.g., Fish 1902; Friedrich 1937; Kaufman 1965; Van Riper 1958; White 1948, 1954; Wilson 1887). Appointments are an important political resource that presidents use in working with parties, interest groups, and Congress (Hecl 1977; Mackenzie 1981; Tolchin and Tolchin 1971, 2010; Weko 1995). For a president short on formal constitutional power, the ability to give and withhold jobs is an important source of leverage in the political system. Federal patronage can help unite party factions and induce political support from key groups (Bearfield 2009; Key 1964). Members of Congress also ask for, and receive, appointments for their staff and constituents (Mackenzie 1981; Rottinghaus and Bergan 2011). Presidents who use appointments wisely find it easier to build legislative support for themselves and their programs.

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7 Whether presidents prefer appointees who exactly share their ideology is unclear since presidents may select appointees to offset the influence of agency stakeholders (Bertelli and Feldmann 2007; Epstein and O’Halloran 1999). If they do so, presidents may prefer to appoint persons with views that differ quite dramatically from their own.
While scholars have made significant progress describing the backgrounds of federal executives and the different factors that presidents take into account in the personnel selection process, we know less about how presidents make decisions about where to place appointees with different background characteristics. Presidents would prefer that all appointees be loyal, competent, and satisfy key political considerations but the pool of available appointees rarely satisfies all three considerations; thus, they may be forced to make tradeoffs (Hollibaugh 2012; Parsneau 2013). However, the question of which types of agencies receive appointees selected for particular qualities is unsettled within the literature. For example, Lewis (2008, 2009) and Lewis and Waterman (2013) argue informally that presidents are more likely to place appointees selected for electoral or political reasons in agencies that share the president’s policy views, are low on the president’s agenda, and to positions that have little influence on policy outputs. Conversely, Parsneau (2013) argues that high-priority departments and agencies receive more appointees selected for loyalty and other political reasons—and fewer selected for demonstrated agency experience—due to presidential desires for responsiveness and distrust of experienced bureaucrats. Given the uncertainty over which types of appointees are placed in different types of agencies, and the different explanations of the interplay between loyalty, competence, and patronage considerations that this implies, an important next step is to provide a theory explaining which agencies and positions get appointees selected for political considerations and which agencies get appointees selected for loyalty or expertise. In the next section we do just this.

**A Theory of Presidential Appointments**

Modern presidents share a common outlook based upon their constitutional and political position. Starting from this assumption, we present a theory of the appointments process based
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on a formal model that formalizes the tradeoffs presidents make in personnel selection. Here, because of space constraints, we only present a stylized version of the model and its intuition; those interested in a more formal treatment of the model and its solutions should consult the Appendix.

The executive appointment model consists of two players—the Executive and the Agency. Both players are assumed to have quadratic preferences over policy outcomes on a single dimension. We assume that decisions are delegated to agencies because of agencies’ superior information and expertise regarding policy decisions and consequences. Formally, the outcome of agency decision making is $x = p + \omega$, where $p \in \mathbb{R}$ is the policy chosen by the agency and $\omega \sim U[-\Omega, \Omega]$—where $\Omega \in \mathbb{R}^{++}$—represents factors unobserved when statutes are written and agency staffers are chosen, but observed by the agency before policy

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8 The model abstracts away from some aspects of the appointments process to illustrate more clearly the underlying dynamics that can be obscured in the midst of the process’s complexities. Notably, potential appointees in the model differ in ideology, competence, and the potential patronage benefits they provide presidents but we refer to them as types (i.e., patronage, professional). The model also omits the Senate confirmation process. In both cases the simplifications ease exposition of the key intuition. The substantive results discussed here—and in the empirical section that follows—do not depend on the inclusion or exclusion of a legislative confirmation step. Indeed, as our focus is entirely on the executive’s decision, the model presented here may be thought of as a reduced-form where the executive’s choices of appointments are implicitly constrained by several outside factors, including what the legislature is willing to confirm and the characteristics of the pool of possible appointees.
implementation. Similar to the model of Huber and McCarty (2004), $\Omega$ corresponds to the benefits of agency expertise in a particular policy area. However, in contrast to previous models, and to account for the possibility that different types of appointees may have differing levels of expertise, we relax the assumption that agencies can discern the true value of $\omega$ without error. Rather, an arbitrary agency observes $\omega$ with positive probability.

Next, in order to analyze the conditions that might prompt an executive to prioritize non-policy factors in personnel selection, we assume executives face the choice of which type of appointment to make; in particular, executives can choose to make a professional or patronage appointment, or no appointment at all. Professional appointees and patronage appointees have distinct backgrounds; these background characteristics determine the structure of the executive's utility functions.\(^9\)

We assume professional appointees are highly skilled and make the simplifying assumption they are always able to observe the state of the world without error. However, for any given agency, the pool of patronage appointees that are competent is assumed to be less deep and more heterogeneous than the pool for professional appointees. Lower competence among

\(^9\) We assume that the policy preferences and competence of each type of appointee are exogenously set. This assumption, while in contrast to many models of appointments and agency delegation, is arguably more realistic. The characteristics of the pool of potential nominees and/or appointees are often limiting factors for the executive and, we argue, should be reflected in models of appointments. However, the assumption that the executive can choose between one possible professional/careerist and one possible patronage appointee is only an abstraction of the constraints executives face vis-à-vis pools of potential candidates.
patronage appointees can result from many sources, including the fact that patronage appointees tend to have less experience in the agencies to which they are appointed, less subject area experience, and less public management experience in general (Cohen, 1998; Heclo, 1975, 1977; Lewis, 2007). Thus, we assume patronage appointees are no more competent than professional appointees, with the exact levels of competence determined by Nature prior to any appointment. Importantly, this assumption does not presume the incompetence of any particular patronage appointee. Rather, it simply captures the increased variation and higher potential for incompetence within the pool of potential appointees who are considered for appointments because of electoral or political work or connections (i.e., they provide non-policy benefits equal to or greater than professional appointees).

Next, we account for the fact that certain agencies may be higher or lower priorities on the executive's agenda. When agencies and their policies are low on the executive’s agenda, agency policy is unlikely to exert much influence in the executive’s decision-making process. To account for these variations in executive priorities, we weigh the executive's utility function by a positive salience term which captures the relative weight that the executive places on a particular policy area. For example, the president may care substantially more about policy outcomes in the Department of Defense than in the Federal Maritime Commission because policy outcomes in the former will have greater potential national and electoral consequences than the latter.

We further assume the agency's post-appointment ideal point is a convex combination of the status quo and the ideal point of the new appointee, as individual positions differ in their abilities to influence overall agency outputs. This assumption recognizes that some appointed positions, such as cabinet secretaries, have more influence over agency policy outputs than others, such as assistant secretaries for management, or Schedule C positions.
Finally, to reflect the fact that presidents name some appointees for electoral or political reasons, we allow for non-policy patronage benefits.\(^{10}\) Thus, if a patronage appointment is made, we assume the executive derives some additional non-policy benefit from doing so.

As the informed player moves last, we employ the sequential equilibrium solution concept and solve the game via backwards induction (Kreps and Wilson, 1982). After Nature draws $\omega$, the executive can choose which type of appointment to make, if one is to be made at all.\(^{11}\) Appointees induce an \textit{ex post} agency ideal point and an \textit{ex post} level of agency competence, both of which are described above. If no appointment is made, then the status quo agency stays in effect. Following executive action (or inaction), the agency observes $\omega$ with positive probability and sets a policy $p$, which it chooses to maximize its utility. Payoffs are then allocated to both players.

\(^{10}\) For example, President Clinton famously wanted an executive branch drawn from diverse demographics—one that “look[ed] like America” (Weko 1995; 101). Gump (1971) argues that patronage has value in “generating campaign contributions” and “obtaining campaign effort” (107). See also Parsneau (2013). While the model as described and the following analyses are framed in terms of patronage benefits, the model as designed is general enough to capture a wide array of non-policy benefits, including those not directly relating to patronage as traditionally conceived (e.g., Senatorial courtesy).

\(^{11}\) We assume that if the executive is indifferent between making an appointment and maintaining the status quo, she will make an appointment. We further assume that if the executive is indifferent between making a professional appointment and making a patronage appointment, she will make a patronage appointment.
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Empirical Predictions

One of the virtues of the model described above is that it simplifies a choice executives must make between ideology, competence, and the non-policy political benefits that are connected to appointments. The model produces a number of testable hypotheses, many of which—such as those concerning the role of appointee ideology—are outside the scope of this paper. Instead, we focus here on those predictions concerning different archetypes of appointees—professional types and patronage types—and for which non-policy benefits are most likely to be key factors in appointments. By patronage appointees we mean persons selected primarily because of the non-policy (e.g., political) benefits their appointment provides. For simplicity, in the model and predictions we define these patronage appointees as having no less non-policy benefits and no more expertise than professional appointees. In other words, persons selected primarily for the political benefits their appointment provides will be less competent on average than appointees selected primarily on the basis of their competence. We do this because it comports with reality (see below) and because it emphasizes the tradeoffs presidents make when choosing appointees with different configurations of characteristics (i.e., ideology, expertise, non-policy benefits). In the empirical section to follow, however, we make no assumptions about whether persons selected for non-policy benefits have lower or higher levels of expertise. Additionally, given our focus on a particular type of executive—presidents—we couch our predictions in terms of presidents and federal agencies.

One result suggests that patronage appointments should be less likely in agencies where expertise requirements are high (or, conversely, patronage appointments should be more

\[12\] All of the derivations of the testable hypotheses are in the Appendix.
common in agencies where expertise requirements are low), which motivates our first hypothesis, derived from Proposition 1 and Corollary 1 in the appendix:

**Hypothesis 1.** Agencies where expertise requirements are high (low) should have more professional (patronage) appointments.

Additionally, the model suggests that if professional appointees are minimally loyal (i.e., they will pursue a policy sufficiently close to the president’s ideal, though not necessarily completely in line with the president’s objectives), then professional appointees should be more likely (and patronage appointees less likely) to be placed in agencies that are sufficiently high priority to the president. If presidents care about policy outcomes, they need appointees that can effectively deliver them with minimal error; competent appointees are better able to achieve this goal. Thus, another implication of the model—derived from Proposition 2 in the appendix—is:

**Hypothesis 2.** Agencies that are high priorities to the president should have more professional, and fewer patronage, appointees.

The model also suggests that if patronage appointees are sufficiently incompetent, they will be relegated to positions where they will have minimal effects on agency outcomes. Presidents often confront situations where appointees must be placed for political reasons, yet they have few skills to recommend them for the types of positions they merit. In such cases, executives try and place appointees in positions where they can have least influence on agency outputs. 13 This is formally stated as Proposition 4 in the appendix, and is presented here as Hypothesis 3.

13 How much influence positions have on agency outputs is a function of, among other things, the location of the positions in the agency hierarchy. We do not evaluate this claim here but a natural expectation would be that patronage appointees are more likely to appear in positions
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Hypothesis 3. Patronage appointments are more likely to be made to positions that have minimal impacts on agency outcomes.

A final result of the model—derived from Propositions 1, 3, and 4 in the appendix—is that executives are more likely to place patronage appointees in agencies whose existing policies are close to the president’s ideal.\(^{14}\) If an agency’s preferences are quite far from those of the executive, the executive is more likely to prefer a professional appointee in order to rein it in as much as possible.

Hypothesis 4. Agencies whose status quo preferences sufficiently align with (diverge from) those of the president should have a greater number of patronage (professional) appointees.

In total, our theory produces four clear predictions about the way that President Obama should staff his administration. The president will clearly have an interest in staffing his administration to ensure that agencies of the executive branch share his views on policy (although we do not evaluate here the model’s predictions about the placement of appointees lower in the hierarchy (Krause and O’Connell 2012b; Lewis and Waterman 2013). While we cannot explore this here, it is also likely that presidents are more or less constrained to use some positions to repay campaign or political debts than others.

\(^{14}\) We note here that these predictions depend upon assumptions about the ideology of professional and patronage appointees. For example, if no professional appointees had ideologies that would pull distant agencies closer to the president, patronage appointees would be preferred in many more cases. We do not have measures of appointee ideology that allow us to assess the availability of professional and patronage appointees with the “right” policy views from the president’s perspective but note once again the importance of the composition of the pool of potential appointees.
based upon their loyalty or ideology). The president will also select persons at least partly for non-policy benefits. These “patronage” appointees may be equally competent to what we call “professional” appointees but less certainly so. The question this theory answers is where such patronage appointees are most likely to be placed. The president should place patronage appointees in agencies where expertise requirements are low, in agencies off the agenda, in agencies where appointee actions are not reasonably connected to agency outputs, and in agencies that share his policy views.

Data, Variables, and Methods

To evaluate the predictions above we collected detailed background data on all political appointees named by President Obama during the first six months of his administration. The data include information about appointees’ education, work history, and policy expertise as well as campaign work or political experience.15 We collected data on 1,307 Obama Administration

15 Along with the names, titles, and appointment information for each appointee, we collected biographical information from a variety of sources, namely the Federal Leadership Directory, Washington Post’s Head Count and WhoRunsGov.com websites, and the White House website. For Senate-confirmed (PAS) appointees, we used the Washington Post’s “Head Count” website (http://projects.washingtonpost.com/2009/federal-appointments/), WhoRunsGov.com, Federal Leadership Directory (online at http://www.leadershipdirectories.com/products/fldo.html), and the White House website (http://www.whitehouse.gov/briefing_room/PressReleases/). Information on NA, SC, and PA appointees was taken solely from the Federal Leadership Directory (Online; http://www.leadershipdirectories.com/products/fldo.html). For full details see Supplementary Appendix A.
appointees as of July 22, 2009, six months into the new administration. There were 370 Senate-
confirmed appointees (PAS), 380 non-career assignments in the Senior Executive Service (NA),
and 557 schedule C appointees (SC). The bulk of the biographical information came from
*Federal Leadership Directories Online*, the electronic version of the *Federal Yellow Book*
publication.

*Dependent Variables*

To measure variation in appointee competence we coded background information for
each appointee in the following areas: previous experience in the agency to which they were
appointed, previous federal government experience, whether the appointee was an appointee in
the Clinton or Bush administrations, subject area expertise deriving from work outside the
agency to which they were appointed, and whether or not they possess a Ph.D. To measure
political factors in an appointee’s background that are related to patronage we coded each
appointee on the following characteristics: work on the campaign and whether the appointee’s
most recent previous job was in politics as compared to work in another sector (Table 1 includes
summary statistics). After collecting the individual-level data, we aggregated the results by
agency, keeping the agency-level means as our dependent variables of interest.

*Independent Variables*

Our first expectation was that agencies with easier tasks and fewer specific expertise
requirements would receive more patronage appointees (i.e., those chosen for their non-policy
benefits). To identify agencies with these characteristics, we operate under the assumption that
the proportion of professional employees is an indicator of high agency task complexity and the proportion of clerical and blue-collar employees is an indicator of low complexity.

[Insert Table 1 about here.]

We then define *Professionalism* as $\ln(1+\text{Proportion of Professional Employees in Agency}) - \ln(1+\text{Proportion of Clerical and Blue-Collar Employees in Agency})$. Our expectation is that agencies with higher degrees of professionalism will house higher proportions of staff chosen for expertise purposes and lower proportions selected for political or electoral considerations.

The second key expectation was that presidents would be more likely to place patronage appointees in agencies off the president’s agenda. To measure which agencies are important to achieving President Obama’s policy goals, we rely on the president’s February 24, 2009 address before a joint session of Congress (Fishel 1985). We coded all agencies mentioned responsible for a policy or issue raised in the speech with a 1 and all other agencies with a 0. Our expectation is agencies on the president’s agenda are more likely to get appointees with high demonstrated expertise and lower levels of non-policy benefits.

Our third expectation was that patronage appointees would be more likely to be placed in agencies where their appointment would have the least visible influence on agency outputs. We

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16 Source: Office of Personnel Management, Central Personnel Data File


argue that in agencies with large staffs, the average employee will be less influential than the average employee in smaller agencies. Thus, we simply include the logged size of the agency workforce. Our expectation is that agencies with larger workforces will include higher proportions of employees chosen for political purposes and lower proportions with demonstrated expertise.

The final expectation is that presidents will be more likely to place patronage appointees in agencies that share the president’s policy views. Since this analysis covers the first months of the Obama administration, this implies that liberal agencies are more likely to house appointees selected for political or campaign experience and connections. To measure agency ideology we estimate models using agency ideal points from Clinton and Lewis (2008). They fielded an expert survey to get data on agency liberalism-conservatism and used an item-response model to generate estimates in a way that accounted for rater heterogeneity. Lower values indicate more liberal agencies and higher values the opposite. Here, we expect President Obama placed

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18 We acknowledge that any attempt to measure agency preferences reduces a complex set of missions, histories, cultures, and workforces to a single dimension, which hopefully correlates well with an underlying liberal-conservative dimension. However, our empirical analysis requires a measure that captures, to some degree, which agencies are more likely to agree with the president’s policy priorities and which ones are more likely to offer resistance. We also note that the survey mechanism asked respondents to examine agencies’ “policy views due to law, practice, culture, or tradition that can be characterized as liberal or conservative,” suggesting that the underlying dimension should correlate well with a liberal-conservative dimension (Clinton and Lewis 2008, 5).
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appointees with fewer demonstrated credentials and more political experience in *liberal* agencies and those with more demonstrated credentials in *conservative* agencies.19

Methods

Because our theory suggests that the same independent variables are likely to affect all the outcome variables, correlation across error terms is likely. Thus, in order to properly test our hypotheses, we use the seemingly unrelated regressions (SUR) framework instead of seven

19 While not directly resulting from the formal model, there may reason to suspect an interactive effect between *Agency Ideology* and *Agency Priority*, wherein high-priority agencies that do not share the president’s policy views are the most likely to receive professional appointments, as presidents seek to staff these agencies with policy-relevant appointees (Lewis 2009). To examine this possibility, we reestimated our system of equations with the addition of an *Agency Ideology x Agency Priority* interaction term. We are hesitant to do so given the limited number of cases and the few degrees of freedom. Nonetheless, results are presented in Supplementary Appendix 3. We find suggestive evidence that high-priority conservative agencies are more likely to receive professional appointees and less likely to receive patronage appointees, *ceteris paribus*. For liberal agencies, the effect of being on the agenda is more muted. Other results indicate the high priority agencies tend to get more expert appointees, in line with the results presented here. However, the effects of agency ideology on patronage characteristics are less consistent. While high priority conservative agencies rarely get patronage appointees, lower priority conservative agencies are estimated to get more patronage appointees even than more liberal agencies off the agenda. With the few number of cases it is difficult to tell whether this is a robust effect or the product of the linear nature of the interaction.
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separate equations (Zellner 1962, 1963). Since our outcome variables are all percentages, and thus censored at both 0 and 1, we estimate a seemingly unrelated Tobit regression (SUTR) system of seven equations.\(^{20}\) In addition, because our dependent variables are aggregated from varying amounts of individual-level data, we weight our agency-level data by the number of appointments to that agency in our dataset.\(^{21}\) Full details of model estimation are included in Supplementary Appendix 2.\(^{22}\)

Results

To which agencies has President Obama appointed more and less qualified appointees? Model estimates in Table 2 provide some insights. Notably, agencies off the president’s agenda and agencies that share the president’s policy views are the most likely to get appointees with lower levels of competence and more political connections. Additionally, there is some evidence that larger agencies with fewer expertise requirements are also more likely to get appointees with

\(^{20}\) Because of the high number of parameters estimated in the SUR framework relative to the number of observations, we also utilize equation-by-equation Tobit and OLS models. Results are substantially similar to those presented here and are presented in Supplementary Appendix 3.

\(^{21}\) Because of the weighting, the effective sample size for each individual equation is 1,290. While information on 1,307 appointees was collected, only 1,290 are used in the estimation process, due to the lack of an Agency Ideology measure for two agencies.

\(^{22}\) Since the properties and derivation of the SUTR model are described in Amemiya (1974, 1979), Nelson and Olson (1978), Yen and Lin (2002), Roodman (2011), and elsewhere, we do not replicate them here.
less demonstrated competence and greater political connections but the evidence here is less robust.\textsuperscript{23}

\[\text{Insert Table 2 about here.}\]

\textit{H1: Expertise Requirements and Patronage}

Table 2 provides some evidence that presidents appoint more competent appointees to agencies with the highest degrees of professionalism. In two of the five equations with an expertise-related dependent variable, the coefficient on \textit{Professionalism} is positive and

\textsuperscript{23} We have also examined survey data from the Bush Administration asking federal executives whether "\textit{Political appointees in my agency tend to be selected more for competence and experience than campaign or political experience/connections.}" When we average agency responses across respondents and examine agreement or disagreement with this statement we find some interesting results. First, agencies that shared President Bush's views about policy (conservative agencies) were significantly more likely to report that appointees in their agency had been selected for connections rather than competence. Second, respondents in more professional agencies were generally no more likely to report that their appointees were selected for competence. Third, respondents in agencies on the president's agenda were more likely to report that appointees had been selected for competence except in the very largest agencies. Finally, respondents in large agencies were generally \textit{more} likely to report that appointees had been selected for competence. We are cautious in our interpretation of these results since they rely on the perceptions of agency executives of White House motivations. In addition, appointees in different agencies are likely referring to different types of appointees when answering the questions. Full results of this analysis are available in Supplementary Appendix 5.
significant, and in no equation is it negative and significant, indicating that the higher the degree of professionalism, the greater the probability that an appointee has one of the background features listed. Substantively, they indicate that an agency with a workforce with the mean level of professionalism will have a proportion of employees with previous agency experience that is eight percentage points lower (higher) than an agency with a level of professionalism one standard deviation higher (lower) than average. Similarly, it will have a proportion of employees with PhDs two percentage points lower (higher) than an agency with a level of professionalism one standard deviation higher (lower) than average. This provides some evidence that appointees with higher skill levels are necessary to manage agencies with complex tasks. Whether or not an appointee is well qualified arguably can have a much greater visible impact on performance in agencies such as these. Additionally, while the coefficient estimates suggest that fewer persons with political backgrounds are selected for more professional agencies, we could not reject the null that the professional nature of such agencies had no influence on this aspect of their appointees’ backgrounds.

_H2: Priority Agencies and Patronage_

Model estimates in Table 2 indicate that agencies responsible for policies on the president’s agenda are more likely to be staffed with appointees with background characteristics we reasonably associate with competence. Substantively, an agency’s placement on the agenda is estimated to increase the average proportion of an agency’s staff with a given competence-related characteristic by between four and eight points (Figure 1). Of course, we cannot disentangle whether appointees with these background characteristics are truly more competent or simply credentialed but it is noteworthy that appointees with more background experience and education are generally more likely to work in agencies on the president’s agenda. These results
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add credence to the argument that presidents need appointees who not only support their initiatives but also have the skills to push for and execute new policies.

[Insert Figure 1 about here.]

However, the qualification of appointees is only one side of the story. Appointees with less competence are selected for another reason, namely campaign experience or connections. Agencies on the president’s agenda are statistically significantly less likely to have high proportions of employees whose last job was in politics or who worked on the campaign. Ceteris paribus, agencies on the president’s agenda will have rates of appointees selected for campaign experience or connections between four and six percentage points lower than those agencies on the president’s agenda.

H3: Positions with Less Influence and Patronage

Model estimates also suggest that larger agencies are more likely to have higher proportions of appointees with campaign experience or previous political experience, perhaps because individual appointees in these agencies will be less influential on overall agency policy and outcomes than appointees in smaller agencies. While the estimates do not reveal any relationship between workforce size and characteristics we associate with expertise, they do reveal a positive relationship between workforce size and a background in politics. All else equal, a one-standard deviation increase in Workforce Size is associated with a three-to-five percentage point increase in the average proportion of an agency’s staff with campaign experience or previous political experience. Persons from the campaign or with a political claim on the administration may be easier to place in larger agencies where their influence is smaller and their presence is easier to accommodate.

H4: Agencies that Share the President’s Policy Views and Patronage
A notable feature which influences the qualifications of appointees is the ideological character of the agency and its work. As expected, during the Obama Administration, liberal agencies are estimated to be significantly less likely to have appointees with the background characteristics associated with competence. In three of the five equations where an expertise-related characteristic is the dependent variable, more conservative agencies are associated with background characteristics we associate with competence at a statistically significant level. Indeed, a one-standard deviation increase in *Agency Conservatism* is associated with a two-to-seven percentage point increase in the average proportion of an agency’s staff with a given competence-related characteristic (Figure 2).²⁴

Similarly, liberal-leaning agencies will, on average, have higher proportions of appointees with characteristics reflecting campaign experience or political connections. In both equations with patronage-related dependent variables, higher levels of *Agency Conservatism* are associated with lower rates of appointees with campaign experience or previous political experience at conventional levels of statistical significance. A one-standard deviation increase in *Agency Conservatism* is associated with a three-to-five percentage point decrease in the average proportion of an agency’s staff with campaign experience or previous political experience.

These findings seem to confirm that when presidents confront an agency that has policy views different from their own, they need appointees competent enough to bring change. In agencies that share the presidents views on policy, such as liberal-leaning agencies in the Obama

²⁴ Note that in Figure 2, both *Bush or Clinton Experience* and *Subject Knowledge* have approximately the same marginally negative slope.
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Administration, career professionals are less likely to resist the direction of the White House. The president’s management task is easier and the competence of appointee management less crucial to the accomplishment of the president’s policy goals.

These results, when combined with the results about appointee experience, expertise, and education above, indicate that agencies on the president’s agenda, conservative agencies, more professional agencies, and smaller agencies tend to have staffs with more qualifications and fewer connections to the campaign or politics. Conversely, agencies that are not central to the president’s agenda, larger agencies with few expertise requirements, and agencies that already share the president’s views on policy are estimated to be the most likely to receive patronage-type appointments. Additionally, while the substantive effects may seem small on their face (standard deviation shifts in the independent variables result in two-to-eight percentage shifts in the dependent variables), they should be considered in the context of the dependent variables, the values of which range from approximately six percent (the average agency-level percentage of appointees with campaign experience) to approximately forty-five percent (the average agency-level percentage of appointees with government experience). In this context, the effects of agency characteristics on appointee characteristics are striking.

Underlying Dimensions of Expertise and Patronage

The preceding analysis, while generally supportive of all our hypotheses, is imperfect in one major respect. In particular, all seven dependent variables chosen to test our hypotheses are merely proxies for the underlying rates of expertise and patronage-type appointments. We thus perform three principal components analyses (PCA) on the dependent variables—one on just the set of expertise-linked variables, one on the set of patronage-linked variables, and one on the entire set. The resulting estimates comport reasonably well the underlying notions of expertise
and patronage. They indicate that all of the variables used in the expertise and patronage PCA analyses correlate with the first principal component. Perhaps more interesting is that they suggest that expertise and patronage may be at odds with one another; all of the expertise-related variables correlate positively with the first principal component, and all of the patronage-variables exhibit negative correlations.

Using the first dimensions from these analyses, we replicate the analyses presented in Table 2; the separate patronage and expertise dimensions are jointly examined within a SUR framework, while the combined patronage-expertise dimension is examined within an OLS framework (Table 3).

[Insert Table 3 about here.]

The results from the latent dimension analyses generally comport with those presented in the aggregate agency characteristic analysis. All three models suggest that agencies high on President Obama’s agenda were staffed with appointees displaying high levels of latent expertise, and low levels on the patronage dimension. Conversely, more liberal agencies were staffed with appointees displaying lower levels of latent expertise, and higher values on the latent patronage dimension. Larger agencies displayed higher rates of appointees selected for

\[\text{Insert Table 3 about here.}\]

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\[^25\] Plots of the different components and summary statistics are in Supplementary Appendix 4.

\[^26\] Importantly, since we are no longer estimating LDV models, the usage of a SUR framework will provide no efficiency gains and identical point estimates (though allowing errors to vary across equations will often result in slightly different standard errors compared to equation-by-equation OLS estimation); however, estimating the system will still allow us to examine the cross-equation error correlation (\textit{e.g.}, Greene 2003; Wooldridge 2002).
patronage reasons, though as in Table 2, we cannot say anything about the relationship between workforce size and expertise. Finally, the coefficients on *Professionalism* are all in the hypothesized direction, though not significant at conventional levels in any model ($p \approx 0.16$, $p \approx 0.44$, and $p \approx 0.19$ in model order; one-tailed tests). Nonetheless, all of these results complement those presented in Table 2, and support our hypotheses to varying extents. Moreover, they are substantively significant as well. For example, an agency on the president’s agenda will, in expectation, have a workforce that scores approximately one half of one standard-deviation higher (lower) on the latent expertise (patronage) dimension. Similarly, moving from one standard deviation below the mean value of *Agency Ideology* to one standard deviation above the mean increases an agency’s expected value on the latent expertise dimension by half of one standard deviation, and decreases its expected value on the latent patronage dimension by a comparable amount. Similar effects are found when the combined expertise-patronage dimension is examined.

Notably, the results from the SUR estimation indicate that the errors are negatively correlated across equations ($\rho \approx -0.401$), suggesting that the same unobservables that make agencies more attractive for those with political connections make them less attractive to those with expertise, a fact not picked up by simple tests of significance on the regression coefficients. Moreover, a Breusch-Pagan (1979) test of independence rejects the null hypothesis that the residuals from the two equations are independent ($\chi^2_1 \approx 9.156; p \approx 0.003$), suggesting that when competence (patronage) is highly valued in a particular agency, the result is an undervaluing of patronage (competence). This provides further evidence that expertise and political goals may be at odds with each other when presidents are tasked with staffing their administrations.
Discussion and Conclusion

Alexander Hamilton’s hope was that the new Constitution would provide for effective administration through the selection of persons based upon “intrinsic merit.” The evidence provided in this paper suggests that Hamilton’s vision has been fulfilled in some presidential choices more than others. President Obama placed appointees with fewer demonstrated credentials and more political connections into agencies off his agenda and liberal agencies (agencies that shared his policy views). There is also some evidence that the president placed appointees with greater background experience and lesser political experience or connections in smaller agencies, conservative agencies, and those with higher expertise requirements.

These findings have important implications for our understanding of political appointments and presidential leadership. Presidency scholars most commonly view presidential appointments through the lens of political control. The president is viewed as the principal and selects personnel that will increase the chances that agencies produce the policy outputs he or she prefers. While this characterization of the personnel process is true for part of the process, presidents are also constrained by the need to repay campaign debts and induce more work for the president and party. The president is not at liberty to select all personnel on the basis of loyalty and competence. The increase in the depth and penetration of appointees into the administrative state does not necessarily enhance presidential control since the additional appointees imperfectly share the president’s views and may hinder efforts at control because they lack management acumen (Huber and McCarty 2004; Gallo and Lewis 2012; Lewis 2008).

Because of these limitations, presidents are forced to be selective in choosing the types of agencies they target for increased political control. Our analysis here suggests that President Obama, when making appointments to those agencies high on his agenda and potentially
resistant to his policy preferences, tended to focus on expertise and prior experience in addition to ideology. Interestingly, these same agencies—high-priority and conservative—received fewer appointees with demonstrated political credentials. Together, these findings suggest that appointing those with demonstrated or presumed competence—and not necessarily political experience—may be the method by which presidents seek to gain control over agencies and induce them to produce the policy outputs they prefer. Of course, future research is needed, particularly research which differentiates among appointees with regard to loyalty and ideology.

President Obama, like President Bush and other presidents, campaigned partly on his ability to govern effectively, to deliver to the American public what he promised during the campaign. The president’s success or failure depends in large part on the actions of the thousands of people managing day-to-day operations in the Department of Defense or managing the economy in the Treasury Department. If the personnel process, influenced by patronage pressures, diminishes the loyalty or competence of this team, this can have dramatic consequences for a presidency. Many of those selected primarily for campaign or political experience serve faithfully and well in obscurity but others end up causing significant damage to the country and the administration that appointed them. The results are potentially catastrophic for the president and the nation and, ultimately, undercut Hamilton’s justification for the constitutional mode of presidential appointment.
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References


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Krause, George A., David E. Lewis, and James W. Douglas. 2006. 'Political Appointments, Civil Service Systems, and Bureaucratic Competence: Organizational Balancing and
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Table 1: Summary Statistics – Agency Characteristics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Median</th>
<th>Std. Dev.</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>% with agency exp.</td>
<td>0.26</td>
<td>0.20</td>
<td>0.23</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>% with Ph.Ds</td>
<td>0.07</td>
<td>0</td>
<td>0.16</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>% with gov’t exp.</td>
<td>0.45</td>
<td>0.43</td>
<td>0.25</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>% working in Clinton or Bush Admins.</td>
<td>0.14</td>
<td>0.12</td>
<td>0.16</td>
<td>0</td>
<td>0.67</td>
</tr>
<tr>
<td>% with subject knowledge</td>
<td>0.44</td>
<td>0.41</td>
<td>0.26</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>% whose last job was in politics</td>
<td>0.21</td>
<td>0.17</td>
<td>0.22</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>% with campaign experience</td>
<td>0.06</td>
<td>0</td>
<td>0.11</td>
<td>0</td>
<td>0.67</td>
</tr>
<tr>
<td>Priority Agency</td>
<td>0.26</td>
<td>0</td>
<td>0.44</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Agency Conservatism</td>
<td>-0.05</td>
<td>0.07</td>
<td>0.93</td>
<td>-2.01</td>
<td>2.21</td>
</tr>
<tr>
<td>Professionalism</td>
<td>0.17</td>
<td>0.15</td>
<td>0.16</td>
<td>-0.17</td>
<td>0.49</td>
</tr>
<tr>
<td>Workforce Size</td>
<td>7.43</td>
<td>7.40</td>
<td>2.82</td>
<td>2.30</td>
<td>13.44</td>
</tr>
</tbody>
</table>

N=57
### Table 2: Seemingly Unrelated Regression Model – Aggregate Agency Characteristics (Tobit Models)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Expertise Variables</th>
<th>Patronage Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% with agency experience</td>
<td>% with Ph.Ds</td>
</tr>
<tr>
<td></td>
<td>(E-1)</td>
<td>(E-2)</td>
</tr>
<tr>
<td>Professionalism</td>
<td>0.505***</td>
<td>0.162**</td>
</tr>
<tr>
<td></td>
<td>(0.161)</td>
<td>(0.097)</td>
</tr>
<tr>
<td>Priority Agency</td>
<td>0.047*</td>
<td>0.061***</td>
</tr>
<tr>
<td></td>
<td>(0.035)</td>
<td>(0.021)</td>
</tr>
<tr>
<td>Workforce Size</td>
<td>0.006</td>
<td>-0.005</td>
</tr>
<tr>
<td></td>
<td>(0.009)</td>
<td>(0.005)</td>
</tr>
<tr>
<td>Agency Conservatism</td>
<td>0.063***</td>
<td>0.032***</td>
</tr>
<tr>
<td></td>
<td>(0.021)</td>
<td>(0.013)</td>
</tr>
<tr>
<td>Constant</td>
<td>0.106</td>
<td>0.055</td>
</tr>
<tr>
<td></td>
<td>(0.093)</td>
<td>(0.058)</td>
</tr>
</tbody>
</table>

| N          | 57 |
| Log-Likelihood | 331.622 |
| $\chi^2_{28, df}$ | 77.44*** |

Notes: Standard errors in parentheses.
One-tailed tests of significance: *p < 0.1; **p < 0.05; ***p < 0.01
Each agency-level observation is weighted by the number of appointees to that agency in the data. Effective sample size is 1,290.
Table 3: Latent Agency Characteristics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Seemingly Unrelated Regressions</th>
<th>OLS Both Expertise and Patronage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Latent Expertise Only</td>
<td>Latent Patronage Only</td>
</tr>
<tr>
<td>Professionalism</td>
<td>1.864 (1.835)</td>
<td>-0.208 (1.442)</td>
</tr>
<tr>
<td>Priority Agency</td>
<td>1.003*** (0.403)</td>
<td>-0.779*** (0.316)</td>
</tr>
<tr>
<td>Workforce Size</td>
<td>-0.061 (0.098)</td>
<td>0.128** (0.077)</td>
</tr>
<tr>
<td>Agency Conservatism</td>
<td>0.534*** (0.243)</td>
<td>-0.430** (0.191)</td>
</tr>
<tr>
<td>Constant</td>
<td>-0.278 (1.045)</td>
<td>-0.744 (0.821)</td>
</tr>
<tr>
<td>N</td>
<td>57</td>
<td>57</td>
</tr>
<tr>
<td>$F_{4,52}$</td>
<td>2.52**</td>
<td>2.59**</td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.151</td>
<td>0.154</td>
</tr>
<tr>
<td>$\rho$</td>
<td>-0.401</td>
<td>-</td>
</tr>
<tr>
<td>Breusch-Pagan Test</td>
<td>9.156**</td>
<td>-</td>
</tr>
</tbody>
</table>

Notes: Standard errors in parentheses.  
One-tailed tests of significance:  * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$  
Each agency-level observation is weighted by the number of appointees to that agency in the data. Effective sample size is 1,290.
Figure 1: Estimated Effects of Agency Priority on Agency Characteristics
Figure 2: Effects of Agency Ideology on Agency Characteristics

Dependent Variable:
Percentage of Appointees with...
- Agency Experience
- PhDs
- Government Experience
- Bush or Clinton Experience
- Subject Knowledge

Dependent Variable:
Percentage of Appointees with...
- Political Experience
- Campaign Experience

Standard Deviation Shift in Agency Conservatism
(Expertise-Related Dependent Variables)

Standard Deviation Shift in Agency Conservatism
(Patronage-Related Dependent Variables)
Appendix 1 – Formalization of Model

Setup:

The executive appointment model consists of two players—the Executive and the Agency. Both players are assumed to have quadratic preferences over policy outcomes on a single dimension, represented as $u_i(x) = -(x - x_i)^2$ for all $x \in X \subseteq \mathbb{R}$ and $i \in \{E, A\}$. We assume that decisions are delegated to agencies because of agencies’ superior information and expertise regarding policy decisions and consequences. Formally, the outcome of agency decision making is $x = p + \omega$, where $p \in \mathbb{R}$ is the policy chosen by the agency and $\omega \sim U[-\Omega, \Omega]$—where $\Omega \in \mathbb{R}^{++}$—represents factors unobserved when statutes are written and agency staffers are chosen, but observed by the agency before policy implementation. Similar to the model of Huber and McCarty (2004), $\omega$ corresponds to the benefits of agency expertise in a particular policy area. However, in contrast to previous models, and to account for the possibility that different types of appointees may have differing levels of expertise, we relax the assumption that agencies can discern the true value of $\omega$ without error. Rather, an arbitrary agency $A$ observes $\omega$ with probability $c_A$, and observes no shock whatsoever with probability $1 - c_A$, thus acting as if $\omega = 0$, due to the symmetry of the distribution from which $\omega$ is drawn.27 We denote this observed value of $\omega$ to be $\hat{\omega}$.

27 Given this operationalization, “competence” almost by necessity refers strictly to informational competence, where the ability of agencies to discern the true state of the world $\omega$ is of prime importance. Other conceptions of competence—such as political competence (Maranto 1998, 2005) and policy competence (Callander 2008, 2011)—might be of interest to readers, but are beyond the scope of this paper.
Next, in order to analyze the conditions that might prompt an executive to prioritize non-policy factors in personnel selection, we assume executives face the choice of which type $\tau$ of appointment to make; in particular, executives can choose to make either a professional ($\tau = PR$), patronage ($\tau = pa$), or no ($\tau = Q$) appointment. We assume the competence and ideal point of a potential type $\tau$ appointee are exogenously set to $c_\tau$ and $x_\tau$ respectively.

To capture the notion that professional appointees are highly skilled, we make the simplifying assumption that they are always able to observe $\omega$ without error, effectively assuming $c_{PR} = 1$. However, for any given agency, the pool of patronage appointees that are competent is assumed to be less deep and more heterogeneous than the pool for professional appointees. Thus, we assume patronage appointees are equal to or less competent than professional appointees, with $c_{pa} \in (0, 1]$ determined by Nature prior to any appointment.

Next, we account for the fact that certain agencies may be higher or lower priorities on the executive's agenda. When agencies and their policies are low on the executive’s agenda, agency policy is unlikely to exert much influence in the executive’s decision-making process. To account for these variations in executive priorities, we multiply the executive's utility function by a strictly positive salience term, $\alpha$, which captures the relative weight that the executive places on a particular policy area.

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While this assumption is made to simplify the math involved, all of the results hold so long as $c_{PR} \in \left[\max\{c_{pa}, c_Q\}, 1\right]$. While the assumption of a nonzero $c$ is made for reasons of mathematical tractability, it can be substantively justified by the notion that, in any agency, there will be enough career service workers to ensure that the agency is never completely incompetent.
We further assume the agency’s post-appointment ideal point is a convex combination of the status quo and the ideal point of the new appointee, as individual positions differ in their abilities to influence overall agency outputs. Formally, we define $x_{A,\tau}$ as the induced ideal point of the agency after a successful appointment of type $\tau$, where $x_{A,\tau} = \psi x_\tau + (1 - \psi) x_Q$. We define $c_{A,\tau}$ in an analogous manner—$c_{A,\tau} = \psi c_\tau + (1 - \psi) c_Q$.\(^{30}\) Informally, $\psi \in (0,1)$ represents the influence an individual position has over agency outcomes.

Finally, to reflect the fact that presidents name some appointees for electoral or political reasons, we allow for nonpolicy patronage benefits. Thus, if a patronage appointment is made, we assume the executive derives some additional non-policy benefit $\rho \geq 0$ from doing so.\(^{31}\)

Given these assumptions and some additional notational simplifications, the executive’s expected utility functions are:

$$
Eu_E(\text{Professional Appt.}) = -\alpha \left( (x_{A,PR} - x_E)^2 + \sigma^2_{A,PR} \right),
Eu_E(\text{Patronage Appt.}) = -\alpha \left( (x_{A,pa} - x_E)^2 + \sigma^2_{A,pa} \right) + \rho,
Eu_E(\text{No Appointment}) = -\alpha \left( (x_Q - x_E)^2 + \sigma^2_{A,Q} \right),
$$

where $x_{A,\tau}$ is as described above, and $\sigma^2_{A,\tau} = \frac{\omega^2(1-(\psi c_\tau + c_Q(1-\psi)))}{3}$.

After Nature draws $\omega$, the executive can choose which type of appointment to make, if one is to be made at all.\(^{32}\) Appointees of type $\tau$ induce an *ex post* agency ideal point $x_{A,\tau}$ and an

\(^{30}\) Thus, $x_{A,Q} = x_Q$ and $c_{A,Q} = c_Q$.

\(^{31}\) While the model as described and the following analyses are framed in terms of patronage benefits, the model as designed is general enough to capture a wide array of nonpolicy benefits, including those not directly relating to patronage as traditionally conceived (e.g., Senatorial courtesy).
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ex post level of agency competence $c_{A,r}$, both of which are as described above. If no appointment is made, then the status quo agency $(x_Q, c_Q)$ stays in effect. Following executive action (or inaction), the agency observes $\tilde{\alpha}$ and chooses a policy $p$. Payoffs are then allocated to both players.

As the informed player moves last, we employ the sequential equilibrium solution concept and solve the game via backwards induction (Kreps and Wilson, 1982). After observing $\tilde{\alpha}$, the agency sets a policy $p \in \mathbb{R}$, which it chooses in order to maximize $EU_E(p|\tilde{\alpha}) = -(p + \tilde{\alpha} - x_A)^2$. Clearly, the agency will set $p^*(\tilde{\alpha}) = x_A - \tilde{\alpha}$. Given that $\tilde{\alpha}$ is, in part, determined by $c_A$, the executive must take this into account and determine her expected utilities accordingly. Proposition 1 and Corollary 1 summarize the executive's equilibrium decisions.

**Proposition 1.** A patronage appointment will occur in equilibrium if and only if one of the following occurs:

1. The potential patronage appointee is sufficiently close to the executive's ideal point and the agency's expertise requirements are sufficiently low, or

2. The potential patronage appointee is sufficiently far from the executive's ideal point, will not decrease agency competence, and the agency's expertise requirements are neither too high nor too low.

**Corollary 1.** A professional appointment will occur in equilibrium if and only if the agency's expertise requirements are sufficiently high.

A few aspects of Proposition 1 are worth noting. First, it is important to remember that what we refer to as patronage and professional appointments are types of appointees with

---

32 We assume that if the executive is indifferent between making an appointment and maintaining the status quo, she will make an appointment. We further assume that if the executive is indifferent between making a professional appointment and making a patronage appointment, she will make a patronage appointment.
different backgrounds. What we call professionals are experts that have at least as much expertise as patronage appointees and what we call patronage and professional appointees can each have ideologies similar to or different from the executive. Second, professional appointments are more attractive in agencies with high expertise requirements. This has been true in high expertise positions from throughout the nation’s history, even during the spoils period (White 1954). Second, so long as a patronage appointment does not move the agency's ideal point away from the executive with respect to the status quo, condition (2) of Proposition 1 will never be a factor. When condition (2) is not a factor, then low expertise requirements are associated with patronage appointments. That is, agencies with simple tasks are more likely to be populated with patronage appointees. Second, if the executive makes a patronage appointment that sufficiently increases the ideological divergence between herself and a given agency, then condition (2) may come into play; in this case, the benefits of agency expertise cannot be sufficiently high (otherwise a professional appointment will be preferred to a patronage appointment, ceteris paribus), nor can it be too low (otherwise the benefits of increased agency competence will not be enough to counter the increase in ideological divergence). Nevertheless, under either condition, higher benefits of agency expertise will be associated with higher rates of professional appointments.

Not surprisingly, it can be shown that as the non-policy benefits of patronage increase—or the priority an executive places on an agency decreases, assuming a potential professional appointee is sufficiently close to the preferences of the executive—patronage appointments will become more attractive relative to professional ones. As agency policies become more important to the executive, professional appointees become more attractive—provided they are minimally loyal—due to their greater ability to implement policies effectively with minimal error.
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Presidents need personnel that not only have the “right” views but those that can see these views realized in the agency. These results are reflected in the next proposition.

**Proposition 2.** *Ceteris paribus, if professional appointees are minimally loyal, the utility of professional appointments increases relative to patronage appointments as an agency becomes more high-priority to the executive.*

Next, we examine how changes in the status quo affect the executive's choice of patronage appointees vis-à-vis professional appointees. Once again, rewriting the conditions under which a patronage appointment will be preferred to a professional one, if the ability to affect agency outputs is sufficiently low and the benefits of agency expertise are sufficiently small, patronage appointments will be preferred to professional ones when the status quo agency's preferences are sufficiently close to those of the executive. This insight is summarized in Proposition 3.

**Proposition 3.** *When the benefits of agency expertise and the ability of individual appointments to affect agency outputs are both sufficiently low, patronage appointments are preferred to professional ones, provided the status quo agency's preferences are sufficiently close to those of the executive.*

When individual appointments have little influence over agency outputs, either because individual appointees have little influence or agency tasks are easy, patronage appointees become more attractive. Of course, if an agency’s preferences are quite far from those of the executive, the executive may still prefer a professional appointee in order to rein it in as much as possible.

Proposition 4 and Corollary 2 summarize how the relative utilities of the executive's possible choices are affected by the ability of individual appointments to affect agency outputs.

**Proposition 4.** *If a potential patronage nominee is sufficiently competent (incompetent), the relative benefits of patronage appointments compared to professional appointments and/or retaining the status quo are weakly increasing (decreasing) in the ability to influence agency outcomes.*
Corollary 2. If the benefits of agency expertise are sufficiently high (low), the relative benefits of professional appointments relative to patronage appointments and/or maintaining the status quo is weakly increasing (decreasing) in the ability to affect agency outcomes.

Simply said, if a patronage appointment will reduce agency competence, the executive will be best served by placing him or her in a position where he or she will be relatively limited in his or her ability to influence agency outcomes. Conversely, if a patronage appointment will also improve agency competence, the executive might be better off by putting him or her in a position where he or she will have more sway. Professionals, so long as the benefits of agency expertise are sufficiently high, will be placed in positions where they have high influence.

Expected Utility Functions:

\[
E_{u_e}(x_{A,c}) = \frac{c}{2\omega} \left( \int_{-\omega}^{\omega} -\alpha(x_E - x_A)^2 d\omega \right) + \frac{1 - c}{2\omega} \left( \int_{-\omega}^{\omega} -\alpha(x_E + \omega - x_A)^2 d\omega \right) + 1_{\{\tau=pa\}}\rho \\
= -\alpha(x_E - x_A)^2 - \frac{\alpha(1-c)}{3} + 1_{\{\tau=pa\}}\rho.
\]

Proof of Proposition 1/Corollary 1: By assumption, patronage appointments will occur in equilibrium if

\[-\alpha \left( (x_{A,pa} - x_E)^2 + \sigma_{A,pa}^2 \right) + \rho \geq \max \left\{ -\alpha \left( (x_{A,PR} - x_E)^2 + \sigma_{A,PR}^2 \right), -\alpha \left( (x_Q - x_E)^2 + \sigma_{A,Q}^2 \right) \right\}, \]

which can be rewritten as

\[-(x_{A,pa} - x_E)^2 - \sigma_{A,pa}^2 + \frac{\rho}{\alpha} \geq \max \left\{ -(x_{A,PR} - x_E)^2 - \sigma_{A,PR}^2, -(x_Q - x_E)^2 - \sigma_{A,Q}^2 \right\}. \]

Focusing on comparing the status quo utility with potential patronage utility, we rewrite

\[-(x_{A,pa} - x_E)^2 - \sigma_{A,pa}^2 + \frac{\rho}{\alpha} \geq -(x_Q - x_E)^2 - \sigma_{A,Q}^2 \text{ as } (x_{A,pa} - x_E)^2 \leq (x_Q - x_E)^2 + \frac{\rho}{\alpha} + \sigma_{A,Q}^2 - \sigma_{A,pa}^2. \]

We now proceed by cases.
Presidents and Patronage

Case 1: Suppose \( (x_{A,pa} - x_E)^2 \leq (x_Q - x_E)^2 + \frac{\rho}{\alpha} \) and \( c_{pa} \geq c_Q \). Since \( \sigma_{A,pa}^2 = \frac{\Omega^2(1-(\psi c_{pa}+c_Q(1-\psi)))}{3} \) and \( \sigma_{A,Q}^2 = \frac{\Omega^2(1-c_Q)}{3} \), it must necessarily be true that \( (x_{A,pa} - x_E)^2 \leq (x_Q - x_E)^2 + \frac{\rho}{\alpha} + \sigma_{A,Q}^2 - \sigma_{A,pa}^2 \).

Case 2: Suppose \( (x_{A,pa} - x_E)^2 \leq (x_Q - x_E)^2 + \frac{\rho}{\alpha} \) and \( c_{pa} < c_Q \). In this case, we have to directly check \( (x_{A,pa} - x_E)^2 \leq (x_Q - x_E)^2 + \frac{\rho}{\alpha} + \sigma_{A,Q}^2 - \sigma_{A,pa}^2 \). Given the definitions of \( \sigma_{A,pa}^2 \) and \( \sigma_{A,Q}^2 \), we rewrite the first inequality as \( (x_{A,pa} - x_E)^2 \leq (x_Q - x_E)^2 + \frac{\rho}{\alpha} - \frac{\Omega^2(c_Q-c_{pa})}{3} \). Clearly, so long as \( \Omega \) is sufficiently small, this condition will hold.

Case 3: Suppose \( (x_{A,pa} - x_E)^2 > (x_Q - x_E)^2 + \frac{\rho}{\alpha} \) and \( c_{pa} \geq c_Q \). In this case, we have to directly check \( (x_Q - x_E)^2 + \frac{\rho}{\alpha} < (x_{A,pa} - x_E)^2 \leq (x_Q - x_E)^2 + \frac{\rho}{\alpha} + \Omega^2\psi(c_{pa}-c_Q) \). Clearly, the second inequality will be true if \( \Omega \) is sufficiently large (all others are either assumed or preserved via transitivity).

Case 4: Suppose \( (x_{A,pa} - x_E)^2 > (x_Q - x_E)^2 + \frac{\rho}{\alpha} \) and \( c_{pa} < c_Q \). Since \( \sigma_{A,pa}^2 = \frac{\Omega^2(1-(\psi c_{pa}+c_Q(1-\psi)))}{3} \) and \( \sigma_{A,Q}^2 = \frac{\Omega^2\psi(1-c_Q)}{3} \), it can never be true that \( (x_{A,pa} - x_E)^2 \leq (x_Q - x_E)^2 + \frac{\rho}{\alpha} + \sigma_{A,Q}^2 - \sigma_{A,pa}^2 \).

The comparison between patronage appointments and professional appointments proceeds in a much simpler fashion. Indeed, \(-{(x_{A,pa} - x_E)^2 - \sigma_{A,pa}^2 + \frac{\rho}{\alpha} \geq -{(x_{A,PR} - x_E)^2 - \sigma_{A,PR}^2}\) can be rewritten as \( \frac{\Omega^2\psi(1-c_{pa})}{3} \leq (x_{A,PR} - x_E)^2 - (x_{A,pa} - x_E)^2 + \frac{\rho}{\alpha} \), which clearly shows that the benefits of agency expertise must be sufficiently small in order for a patronage appointee to be preferred over a professional one.
Thus, if \((x_{A,pa} - x_E)^2 \leq (x_Q - x_E)^2 + \frac{\mu}{\alpha}\), which can be rewritten as \(x_{A,pa} \in \left[ x_E - \sqrt{(x_E - x_Q)^2 + \frac{\mu}{\alpha}}, x_E + \sqrt{(x_E - x_Q)^2 + \frac{\mu}{\alpha}} \right]\), a patronage appointment will be preferred to the status quo if the patronage appointee is more competent than the status quo, or if the patronage appointee is less competent but the benefits of agency expertise are sufficiently low.

Conversely, if \(x_{A,pa} \notin \left[ x_E - \sqrt{(x_E - x_Q)^2 + \frac{\mu}{\alpha}}, x_E + \sqrt{(x_E - x_Q)^2 + \frac{\mu}{\alpha}} \right]\), then a patronage appointment will be preferred to the status quo if and only if the patronage appointee is more competent than the status quo and the benefits of agency expertise are neither too low (otherwise there will be no incentive to make an out-of-step patronage appointment) nor too high (otherwise a professional appointment will be preferred).

The conditions under which professional appointees arise in equilibrium proceed in a similar—albeit much simpler—fashion, with the end result being that professional appointments will arise if and only if the benefits of agency expertise are sufficiently high.

**Proof of Proposition 2:** Consider \(Eu_E(\text{Professional Appt.}) - Eu_E(\text{Patronage Appt.})\). Note that increases in this quantity correspond to increases in the utility of professional appointments relative to patronage appointments. Take the partial derivative of this quantity with respect to \(\alpha\):

\[
\frac{\partial}{\partial \alpha} = (x_{A,pa} - x_E)^2 - (x_{A,PR} - x_E)^2 + \sigma_{A,pa}^2 - \sigma_{A,PR}^2.
\]

This quantity is increasing in \(\alpha\) when \((x_{A,PR} - x_E)^2 < (x_{A,pa} - x_E)^2 + \sigma_{A,pa}^2 - \sigma_{A,PR}^2\). Thus, when professional appointments will result in agencies sufficiently close to the preferences of the executive, increases in agency salience will serve to make professional appointments more
attractive; otherwise, increases in agency salience will serve to make patronage appointments more attractive.

**Proof of Proposition 3:** Recall that patronage appointments will be preferred to professional ones if 

\[-(x_{A,pa} - x_E)^2 - \sigma_{A,pa}^2 + \frac{\rho}{a} \geq -(x_{A,PR} - x_E)^2 - \sigma_{A,PR}^2.

This can be rewritten as

\[\left(\psi x_{pa} - (1 - \psi) x_Q - x_E\right)^2 \leq \left(x_{A,PR} - x_E\right)^2 + \sigma_{A,PR}^2 - \sigma_{A,pa}^2 + \frac{\rho}{a}.

Equivalently, \(x_Q \in \left\{\frac{x_E - \psi x_{pa}}{1 - \psi} - \sqrt{\left(x_{A,PR} - x_E\right)^2 + \sigma_{A,PR}^2 - \sigma_{A,pa}^2 + \frac{\rho}{a}}, \frac{x_E - \psi x_{pa}}{1 - \psi} + \sqrt{\left(x_{A,PR} - x_E\right)^2 + \sigma_{A,PR}^2 - \sigma_{A,pa}^2 + \frac{\rho}{a}}\right\}

Importantly, this interval only exists if

\[\Omega^2 \leq \frac{3(x_E - x_{A,PR})^2 + 3\rho}{\alpha \psi (1 - c_{pa})}.

Importantly, when \(\psi\) is small, this interval is closely centered around \(x_E\).

Thus, when both \(\psi\) and \(\Omega\) are sufficiently low, patronage appointments are preferred to professional ones when the status quo preferences are sufficiently close to those of the executive.

**Proof of Proposition 4/Corollary 2:** Once again consider \(Eu_E(\text{Professional Appt.}) - Eu_E(\text{Patronage Appt.})\). Note that increases in this quantity correspond to increases in the utility of professional appointments relative to patronage appointments. Take the partial derivative of this quantity with respect to \(\psi\) and substitute \(x_{A,PR}\) and \(x_{A,pa}\) where possible:

\[
\frac{\partial}{\partial \psi} = \frac{\alpha \left(6 \left(x_{A,pa}(x_Q - x_{pa}) - x_{A,PR}(x_Q - x_{PR}) + x_E(x_{pa} - x_{PR})\right) - \Omega^2 (1 - c_{pa})\right)}{3}
\]

Set this quantity to be greater than zero and solve for \(\Omega^2\):

\[\Omega^2 < \frac{6 \left(x_{A,pa}(x_Q - x_{pa}) - x_{A,PR}(x_Q - x_{PR}) + x_E(x_{pa} - x_{PR})\right)}{1 - c_{pa}}.

50
Thus, the utility of a patronage appointment relative to a professional one is increasing in $\psi$ if $\Omega$ is small enough. Now, solve for $c_{pa}$:

$$c_{pa} > 1 - \frac{6 \left( x_{A,pa}(x_Q - x_{pa}) - x_{A,PR}(x_Q - x_{PR}) + x_E(x_{pa} - x_{PR}) \right)}{\Omega^2}.$$ 

Thus, the utility of a patronage appointment relative to a professional one is increasing in $\psi$ if $c_{pa}$ is sufficiently high. Similar steps can be undertaken to show that the utility of a patronage appointment relative to the status quo is increasing in $\psi$ if $c_{pa}$ is sufficiently high and that the utility of a professional appointment relative to the status quo is increasing in $\psi$ if $\Omega$ is large enough.
Supplementary Appendix 1 – Data Collection Procedures

Data collection proceeded in three stages. In the first stage a single researcher gathered the names and positions of all political appointments in the Obama Administration as of June 24, 2009 using the Washington Post’s Head Count and WhoRunsGov.com websites as well as information from the Federal Leadership Directory and the White House website. Along with information on the names, titles, and appointment information for each appointee, this researcher also collected biographical information from the Federal Leadership Directory.

In the second stage, the biographical information was coded by the initial researcher and two other researchers. Each of the three researchers was given a subset of appointee biographical entries to code. One researcher was responsible for all PAS and PA appointees. Another was responsible for all NA appointees. The final researcher was responsible for all SC appointees. Coders agreed upon coding rules prior to the start of coding. When problems arose regarding the proper coding of certain biographical information, researchers quickly discussed and made a decision as a group, so that the coding was executed as uniformly as possible. One example of such a question might be whether to categorize an appointee’s last job as a congressional staffer as “politics” or “other.” As soon as a questionable instance arose, we agreed to classify this as “politics,” and proceeded to correct any misclassifications in our individual lists. After coding was complete, the researcher who compiled the initial list randomly selected 10 entries from each researcher’s coded entries to ensure the coding was conducted consistently. When systemic discrepancies were found, the researcher adjusted the coding to be uniform across the lists.

In the final stage, two researchers added additional information on appointees and their agencies from a variety of sources (detailed below). Specifically, they added information on a variety of agency characteristics, including agency ideology, whether or not the agency or its
activities was mentioned in President Obama’s first televised speech before Congress, details about agency programs, and agency employment data.

Biographical information was drawn from the *Federal Leadership Directory* (online at [http://www.leadershipdirectories.com/products/fldo.html](http://www.leadershipdirectories.com/products/fldo.html)) unless otherwise indicated. The biographical information for appointees is more expansive the higher someone is in the hierarchy. Information on PAS appointees and appointees in the White House is the most expansive followed by NA appointees, Schedule C appointees, and other PA appointees. For many of the variables the coding indicates the presence of positive information compared to no information, rather than definitive information for a “yes” or “no” coding. In effect, all appointees are coded with a 0 or the lowest category to start and only changed out of that category in the presence of concrete information. For example, if someone is coded with a 1 on the Campaign (0,1) indicator, this implies that some information was in the bio about their work on the Obama campaign. If their biographical information has no information about their campaign work they are coded with a 0. Generally, the biographical information for higher-level appointees (e.g., PAS appointees) is quite detailed since most people appointed to these positions are public officials with public records. When higher-level appointees are announced or nominated the White House often provides biographical information along with their announcement. Top-level officials also have publicly available biographies that accompany their public speeches, appearances, and roles. The further down the hierarchy, however, the less information there is. This is due to the fact that lower level appointees have shorter resumes, but also because biographical information on these appointees is harder to obtain.

In order to address any concerns arising from the fact codings of ‘0’ reflect the lack of positive information rather than the presence of negative information, we have replicated the
models presented in the main text with only the cases where biographical information was listed (N=957); the results confirm what is reported there with four exceptions. In the equation where the percentage of appointees with subject knowledge is the dependent variable, the coefficient on Professionalism is negative and significant, contrary to our theoretical expectations, and contrary to the results in the equations where the percentage of appointees with previous agency experience or PhDs are the independent variables. Conversely, Workforce Size is now negative and significant in the equations where the dependent variables are the percentages of appointees with PhDs and government experience, in support of our theory. Moreover, in the latent equations SUR model where the latent expertise dimension is the independent variable, the coefficient on Professionalism is positive and significant, in contrast to the positive but statistically insignificant result presented in the main text.
## Table SA1-1 – Alternative Data – Complete Individual Observations Only (N=957)

Robustness Checks – Aggregate Agency Characteristics (SUTR Model; Complete Individual-Level Observations Only)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Expertise Variables</th>
<th>Patronage Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% with agency experience</td>
<td>% with Ph.Ds</td>
</tr>
<tr>
<td></td>
<td>(E-1)</td>
<td>(E-2)</td>
</tr>
<tr>
<td>Professionalism</td>
<td>0.689***</td>
<td>0.209**</td>
</tr>
<tr>
<td></td>
<td>(0.208)</td>
<td>(0.115)</td>
</tr>
<tr>
<td>Priority Agency</td>
<td>0.076**</td>
<td>0.078***</td>
</tr>
<tr>
<td></td>
<td>(0.045)</td>
<td>(0.025)</td>
</tr>
<tr>
<td>Workforce Size</td>
<td>0.007</td>
<td>-0.008*</td>
</tr>
<tr>
<td></td>
<td>(0.011)</td>
<td>(0.006)</td>
</tr>
<tr>
<td>Agency Conservatism</td>
<td>0.082***</td>
<td>0.039***</td>
</tr>
<tr>
<td></td>
<td>(0.028)</td>
<td>(0.015)</td>
</tr>
<tr>
<td>Constant</td>
<td>0.140</td>
<td>0.088</td>
</tr>
<tr>
<td></td>
<td>(0.119)</td>
<td>(0.068)</td>
</tr>
</tbody>
</table>

| N                      | 57                  |
| Log-Likelihood         | 262.940             |
| $\chi^2_{28 df}$       | 75.02***            |

Notes: Standard errors in parentheses.

One-tailed tests of significance: * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Each agency-level observation is weighted by the number of appointees to that agency in the data.
<table>
<thead>
<tr>
<th>Variable</th>
<th>Seemingly Unrelated Regressions</th>
<th>OLS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Latent Expertise Only</td>
<td>Latent Patronage Only</td>
</tr>
<tr>
<td>Professionalism</td>
<td>2.563*</td>
<td>0.078</td>
</tr>
<tr>
<td></td>
<td>(1.579)</td>
<td>(1.423)</td>
</tr>
<tr>
<td>Priority Agency</td>
<td>1.204***</td>
<td>-0.901***</td>
</tr>
<tr>
<td></td>
<td>(0.344)</td>
<td>(0.310)</td>
</tr>
<tr>
<td>Workforce Size</td>
<td>-0.074</td>
<td>0.118*</td>
</tr>
<tr>
<td></td>
<td>(0.083)</td>
<td>(0.075)</td>
</tr>
<tr>
<td>Agency Conservatism</td>
<td>0.560***</td>
<td>-0.317*</td>
</tr>
<tr>
<td></td>
<td>(0.212)</td>
<td>(0.191)</td>
</tr>
<tr>
<td>Constant</td>
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<td>-0.644</td>
</tr>
<tr>
<td></td>
<td>(0.897)</td>
<td>(0.809)</td>
</tr>
<tr>
<td>N</td>
<td>57</td>
<td>57</td>
</tr>
<tr>
<td>$F_{4,52}$</td>
<td>4.49***</td>
<td>2.66**</td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.239</td>
<td>0.157</td>
</tr>
<tr>
<td>$\rho$</td>
<td>-0.579</td>
<td>-</td>
</tr>
<tr>
<td>Breusch-Pagan Test</td>
<td>19.132***</td>
<td>-</td>
</tr>
</tbody>
</table>

Notes: Standard errors in parentheses.
One-tailed tests of significance: * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$
Each agency-level observation is weighted by the number of appointees to that agency in the data.
Supplementary Appendix 2 – Description of the SUTR Model

As mentioned, our data consists of seven different outcome variables, each collected for appointees to 57 different agencies during the first six months of the Obama administration. Each outcome variable reflects the percentage of an agency’s appointees that possess a particular characteristic; as percentages, they are constrained to lie within the [0,1] interval. Thus, we assume a latent-variable specification for each observed outcome variable \( i = 1, 2, ..., 7 \) for each agency \( j = 1, 2, ..., 57 \):

\[
y_{i,j} = \begin{cases} 
0 & \text{if } y_{i,j}^* < 0 \\
y_{i,j}^* & \text{if } y_{i,j}^* \in (0,1), \\
1 & \text{if } y_{i,j}^* > 1 
\end{cases}
\]

where \( y_{i,j}^* \) is the unobserved latent variable we are trying to estimate using the following regression specification:\(^1\)

\[
y_{i,j}^* = \beta_i^0 + \beta_i^1 \text{Priority}_j + \beta_i^2 \text{Ideology}_j + \beta_i^3 \text{Professionalism}_j + \beta_i^4 \text{Workforce}_j + \epsilon_{i,j}.
\]

Since we are operating within the SUR framework, we assume the error terms are correlated such that \( \epsilon_{i,j} \sim N(0, \Sigma) \), where

---

\(^1\) Importantly, since we are estimating limited dependent variable models with identical regressors, estimation of the system as a whole results in efficiency gains over equation-by-equation estimation (Bhattacharya 2004).
Given this setup, the system-level likelihood is

\[
L = \prod_{j=1}^{57} \int_{c_{i,j} \times c_{i,j}} \phi(e_j; \Sigma) \, de_j,
\]

where \([c_{i,j} \times c_{i,j}]\) defines the region of possible values (that is, the region of integration) for observation \(j\)'s error vector \(e_j = y_j^* - \beta^{i'}_j x_j\), where \(y_j^*\) denotes the vector of latent unobserved values for observation \(j\), and where \(y_j\) denotes the vector of observed outcome variables for the same observation, all of which take values within the [0,1] interval; \(\beta^{i'}_j x_j\) is defined analogously.

Thus, if \(y_{i,j} = 0\), \([c_{i,j} \times c_{i,j}] = (-\infty, -\beta^{i'}_j x_j]\); if \(y_{i,j} = 1\), \([c_{i,j} \times c_{i,j}] = [1 - \beta^{i'}_j x_j, \infty)\); and if \(y_{i,j} \in (0,1)\), \([c_{i,j} \times c_{i,j}] = y_{i,j} - \beta^{i'}_j x_j\). ² To put this in context, consider the case where an observation’s outcome vector consists of \(y = (0, 0, 0, 0.2, 0.4, 1, 1)\); in this case, the corresponding observation-level likelihood would be

\[\Sigma = \begin{bmatrix}
\sigma^2_1 & \sigma^2_2 \\
\rho_{1,2}\sigma_1\sigma_2 & \sigma^2_3 \\
\rho_{1,3}\sigma_1\sigma_3 & \rho_{2,3}\sigma_2\sigma_3 & \sigma^2_4 \\
\rho_{1,4}\sigma_1\sigma_4 & \rho_{2,4}\sigma_2\sigma_4 & \rho_{3,4}\sigma_3\sigma_4 & \sigma^2_5 \\
\rho_{1,5}\sigma_1\sigma_5 & \rho_{2,5}\sigma_2\sigma_5 & \rho_{3,5}\sigma_3\sigma_5 & \rho_{4,5}\sigma_4\sigma_5 & \sigma^2_6 \\
\rho_{1,6}\sigma_1\sigma_6 & \rho_{2,6}\sigma_2\sigma_6 & \rho_{3,6}\sigma_3\sigma_6 & \rho_{4,6}\sigma_4\sigma_6 & \rho_{5,6}\sigma_5\sigma_6 & \sigma^2_7 \\
\rho_{1,7}\sigma_1\sigma_7 & \rho_{2,7}\sigma_2\sigma_7 & \rho_{3,7}\sigma_3\sigma_7 & \rho_{4,7}\sigma_4\sigma_7 & \rho_{5,7}\sigma_5\sigma_7 & \rho_{6,7}\sigma_6\sigma_7 & \sigma^2_8
\end{bmatrix}, \text{ such that } \sigma_i
\]

are standard deviations of \(\epsilon_{i,j}\) and \(\rho_{i,i'}\) denotes the correlations between \(\epsilon_{i,j}\) and \(\epsilon_{i',j}\) for all \(i' > i\).

² This final relation holds because when \(y_{i,j} \in (0,1)\), we assume \(y_{i,j} = y^*_{i,j}\).
Maximization of the system-level log-likelihood is computed via version 5.4.5 of Roodman’s (2011) `cmp` module for Stata, which relies on the GHK algorithm (Geweke 1989; Hajivassiliou and McFadden 1998; Keane 1994) and maximum simulated likelihood methods to numerically approximate cumulative normal densities of more than two dimensions.
## Supplementary Appendix 3 – Alternative Model Specifications

Table SA3-1: Robustness Checks – Aggregate Agency Characteristics (Tobit Models; Individually Estimated)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Expertise Variables</th>
<th>Patronage Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% with agency</td>
<td>% with Ph.Ds</td>
</tr>
<tr>
<td></td>
<td>experience</td>
<td></td>
</tr>
<tr>
<td>Professionalism</td>
<td>0.634***</td>
<td>0.202*</td>
</tr>
<tr>
<td></td>
<td>(0.203)</td>
<td>(0.154)</td>
</tr>
<tr>
<td>Priority Agency</td>
<td>0.055</td>
<td>0.080***</td>
</tr>
<tr>
<td></td>
<td>(0.043)</td>
<td>(0.033)</td>
</tr>
<tr>
<td>Workforce Size</td>
<td>0.014</td>
<td>0.004</td>
</tr>
<tr>
<td></td>
<td>(0.011)</td>
<td>(0.008)</td>
</tr>
<tr>
<td>Agency Conservatism</td>
<td>0.069***</td>
<td>0.034**</td>
</tr>
<tr>
<td></td>
<td>(0.026)</td>
<td>(0.020)</td>
</tr>
<tr>
<td>Constant</td>
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<td>-0.066</td>
</tr>
<tr>
<td></td>
<td>(0.118)</td>
<td>(0.094)</td>
</tr>
</tbody>
</table>

| N                    | 57                  | 57                  | 57              | 57              | 57              | 57              |                  | 57               | 57              |
| Log-Likelihood       | -3.761              | -1.779              | -7.578          | -5.715          | -0.868          | -17.027         | -5.878           |                  |                  |
| $\chi^2$            | 14.03**             | 9.74**              | 8.31*           | 4.13            | 4.92            | 5.27            | 11.20**          |                  |                  |
| Pseudo-$R^2$         | 0.651               | 0.733               | 0.354           | 0.265           | 0.739           | 0.134           | 0.488            |                  |                  |

Notes: Standard errors in parentheses.
One-tailed tests of significance: * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$
Each agency-level observation is weighted by the number of appointees to that agency in the data.
Table SA3-2: Robustness Checks – Aggregate Agency Characteristics (OLS Models; Individually Estimated)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Expertise Variables</th>
<th>Patronage Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% with agency</td>
<td>% with Ph.Ds</td>
</tr>
<tr>
<td></td>
<td>experience</td>
<td>(E-1)</td>
</tr>
<tr>
<td>Professionalism</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.483*** (0.164)</td>
<td>0.129* (0.084)</td>
</tr>
<tr>
<td>Priority Agency</td>
<td>0.046 (0.036)</td>
<td>0.051*** (0.019)</td>
</tr>
<tr>
<td>Workforce Size</td>
<td>0.004 (0.009)</td>
<td>-0.009** (0.005)</td>
</tr>
<tr>
<td>Agency Conservatism</td>
<td>0.063*** (0.022)</td>
<td>0.029*** (0.011)</td>
</tr>
<tr>
<td>Constant</td>
<td>0.131 (0.093)</td>
<td>0.108 (0.048)</td>
</tr>
<tr>
<td>N</td>
<td>57</td>
<td>57</td>
</tr>
<tr>
<td>$F_{A\text{df}}$</td>
<td>3.51**</td>
<td>3.65**</td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.213</td>
<td>0.219</td>
</tr>
</tbody>
</table>

Notes: Standard errors in parentheses.  
One-tailed tests of significance: *p < 0.1; **p < 0.05; ***p < 0.01  
Each agency-level observation is weighted by the number of appointees to that agency in the data.
Table SA3-3: Robustness Checks – Including Interaction Term (SUTR Model)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Expertise Variables</th>
<th>Patronage Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% with agency</td>
<td>% whose last job</td>
</tr>
<tr>
<td></td>
<td>experience</td>
<td>was in politics</td>
</tr>
<tr>
<td></td>
<td>(E-1)</td>
<td>(P-1)</td>
</tr>
<tr>
<td></td>
<td>% with Ph.Ds</td>
<td>% with campaign</td>
</tr>
<tr>
<td></td>
<td>(E-2)</td>
<td>experience</td>
</tr>
<tr>
<td></td>
<td>% with gov’t</td>
<td>(P-2)</td>
</tr>
<tr>
<td></td>
<td>experience</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(E-3)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>% working in Bush</td>
<td></td>
</tr>
<tr>
<td></td>
<td>or Clinton Admins.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(E-4)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>% with subject</td>
<td></td>
</tr>
<tr>
<td></td>
<td>knowledge</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(E-5)</td>
<td></td>
</tr>
<tr>
<td>Professionalism</td>
<td>0.501***</td>
<td>-0.107</td>
</tr>
<tr>
<td></td>
<td>(0.156)</td>
<td>(0.182)</td>
</tr>
<tr>
<td>Priority Agency</td>
<td>0.024</td>
<td>-0.024</td>
</tr>
<tr>
<td></td>
<td>(0.036)</td>
<td>(0.041)</td>
</tr>
<tr>
<td>Workforce Size</td>
<td>0.006</td>
<td>0.015*</td>
</tr>
<tr>
<td></td>
<td>(0.011)</td>
<td>(0.010)</td>
</tr>
<tr>
<td>Agency Conservatism</td>
<td>-0.004</td>
<td>-0.058*</td>
</tr>
<tr>
<td></td>
<td>(0.038)</td>
<td>(0.044)</td>
</tr>
<tr>
<td>Agency Conservatism x Priority Agency</td>
<td>0.085**</td>
<td>0.137***</td>
</tr>
<tr>
<td></td>
<td>(0.040)</td>
<td>(0.047)</td>
</tr>
<tr>
<td>Constant</td>
<td>0.120*</td>
<td>0.147*</td>
</tr>
<tr>
<td></td>
<td>(0.090)</td>
<td>(0.105)</td>
</tr>
</tbody>
</table>

N  57
Log-Likelihood  348.07
\(\chi^2_{35 df}\)  110.17***

Notes: Standard errors in parentheses.
One-tailed tests of significance:  *p < 0.1;  **p < 0.05;  ***p < 0.01
Each agency-level observation is weighted by the number of appointees to that agency in the data.
Supplementary Appendix 4 – Additional PCA Information

Table SA4-1: Summary Statistics – Latent Dimensions of Expertise and Patronage

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Median</th>
<th>Std. Dev.</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Latent Expertise</td>
<td>0.12</td>
<td>0.36</td>
<td>2.35</td>
<td>-4.41</td>
<td>9.30</td>
</tr>
<tr>
<td>Latent Patronage</td>
<td>-0.67</td>
<td>-1.04</td>
<td>1.64</td>
<td>-2.26</td>
<td>4.56</td>
</tr>
<tr>
<td>Both</td>
<td>0.48</td>
<td>0.65</td>
<td>2.28</td>
<td>-5.49</td>
<td>8.93</td>
</tr>
</tbody>
</table>

Figure SA4-1: Correlation Circle Plots

(a) Expertise Components Only

(b) Patronage Components Only

(c) Joint Estimation
Figure SA4-2: Principal Component Plots of Agency Characteristics

(a) Expertise Components Only

(b) Patronage Components Only

(c) Joint Estimation
**Supplementary Appendix 5 – Bush Administration Analyses**

To evaluate the predictions from the model we have also examined the opinions of thousands of top executives across the federal government during the Bush Administration. We use data from a 2007-8 survey of 7,448 federal administrators and program managers during the Bush Administration (Clinton et al. 2012). The survey includes responses from 2,225 career (1,953) and appointed (266) federal program managers and administrators across the various departments and agencies of the federal government. Respondents were asked a variety of questions about their backgrounds, political views, and work experiences. Importantly, the survey asked respondents to indicate their level of agreement with the following statement:

“Political appointees in my agency tend to be selected more for competence and experience than campaign or political experience/connections.” (mean 3.28; SD 0.77; Min 1; Max 4)

The question assesses the extent to which competence, as opposed to connections influenced the selection of appointees in each agency. We analyze whether respondents strongly agree (1; 3%), agree (2; 10%), disagree (3; 41%), or strongly disagree (4; 46%) with the claim that appointees are selected more on the basis of competence as opposed to campaign experience or political connections by agency. Since competence and patronage factors have been set up in opposition to each other in the question, it is reasonable to interpret “disagree” and “strongly disagree” answers as support for the claim that appointees are selected at least as much for campaign experience and political connections as competence and we interpret such answers in this manner. Answers are recoded so that higher values indicate that appointees were selected more for political experience and connections rather than competence.
Caveats

There are a few limitations associated with using this data that we acknowledge up front. First, the phrasing of the question forces respondents to suggest whether appointees were selected for “competence” or “connections” when it is entirely possible that persons were selected for both. The question may force a false division. Second, responses to the survey are perceptions of persons who may or may not know why someone was selected. Finally, when the question asks about appointees in the respondent’s agency we do not know what appointees they are thinking about. This may vary by agency since agencies have different distributions of types of appointees. In some agencies all appointees are high level Senate-confirmed appointees. In other agencies, appointees in the Senior Executive Service and lower level Schedule C appointees work alongside career executives.

Independent Variables

We estimate models using the same measures of the key concepts as in the paper with a few exceptions. First, in calculating the measure of professionalism and agency size we use Office of Personnel Management data from September, 2007 to correspond with the timing of the survey. In the paper we use data concurrent with the Obama Administration. Second, to measure whether an issue was on Bush’s agenda we use the president’s 2007 State of the Union Speech and a 2006 evaluation of his agenda by the New York Times. We coded all agencies mentioned in the Times article or were responsible for a policy or issue raised in the speech with a 1 and all other agencies with a 0 (40%).

Finally, we estimate some models with additional controls to account for perceptual biases from respondents, including frequency of contact with appointees, years of experience working in the agency, whether respondents work in Washington, D.C. or a regional office, and
appointment authority. We include the agency average of respondents’ self-reported frequency of contact with agency appointees (Never (1)-5%; Rarely (2)-16%; Monthly (3)-14%; Weekly (4)-20%; Daily (5)-45%). The survey also asks respondents how many years they have worked in their current position (mean 6.76; SD 6.12; min 0; max 45) and whether they work in Washington, DC or a regional office (0,1; 21%). Respondents with more experience and contact should also be able to give a better evaluation of the factors influencing appointment. Finally, some respondents are career executives and others are appointees themselves (0,1; 10%). The position of respondents may influence their own perceptions of what factors are influential in selection. We include agency averages for these variables.

We have responses from executives working in 72 agencies, although we lack personnel data from OPM or agency ideology measure for a few of these agencies which explains why models are estimated with 52 agencies. We estimate tobit models on the average agency responses to the question about competence vs. connections since responses are censored at 4 and a number of agency averages are 4. We also estimate ordered logit models on the median agency response. All models are weighted by the number of respondents in each agency.

**Results**

The models provide some interesting results. One result that is robust across models is that respondents in conservative agencies were significantly more likely to report that appointees in their agencies were selected for connections rather than competence. This is consistent with the Obama Administration finding that liberal agencies were more likely to receive appointees with political experience. In general, it appears that agencies that share the president’s policy views are more likely to receive patronage appointees based upon both the content of their resumes and the perceptions of their colleagues.
While professional agencies were estimated to be less likely to receive appointees with lower levels of demonstrated expertise in the Obama data, here the evidence is less clear. While the coefficient estimates are generally negative, suggesting professional agencies get fewer appointees selected for connections, the estimates are small and we can only reject the null in models of median responses (Model 5).

Similarly, agencies that are presidential priorities are estimated to be no less likely to receive patronage appointees on average. When we dig a little deeper, however, it appears that agencies on the president’s agenda are always less likely to receive appointees selected for connections except in very large agencies (agencies above the 75th percentile in employment). The interaction on agency size and priority agency is positive, substantively large, and significant, reversing the effect of priority agency except for the largest agencies. For most agencies, then, being on the President Bush’s agenda meant that respondents were more likely to be selected for competence. Only in the largest agencies did being a priority agency not decrease the influence of connections in finding a job.

Contrary to what we found in the Obama Administration, survey respondents in larger agencies were less likely to report that appointees in their agencies were chosen because of connections rather than competence. Our expectation was that appointees with less direct influence on agency outputs would be less likely to be chosen for competence. We do not know what appointees come to respondents’ minds when surveyed. It is possible that in larger agencies respondents were more likely to think of senior appointees rather than those that fill public affairs offices or staff positions which reflects one of the drawbacks of this data.
Table SA 5-1. Perceptions of Whether Appointees are Selected for Competence or Campaign Experience or Political Connections

<table>
<thead>
<tr>
<th>Variable (Standard errors in parentheses)</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professionalism</td>
<td>-0.01</td>
<td>-0.15</td>
<td>0.01</td>
<td>-0.12</td>
<td>-7.94**</td>
</tr>
<tr>
<td></td>
<td>(0.20)</td>
<td>(0.18)</td>
<td>(0.19)</td>
<td>(0.18)</td>
<td>(4.09)</td>
</tr>
<tr>
<td>Priority Agency</td>
<td>0.03</td>
<td>0.08*</td>
<td>-0.78**</td>
<td>-0.44</td>
<td>1.57</td>
</tr>
<tr>
<td></td>
<td>(0.06)</td>
<td>(0.06)</td>
<td>(0.39)</td>
<td>(0.37)</td>
<td>(1.38)</td>
</tr>
<tr>
<td>Workforce Size</td>
<td>-0.03*</td>
<td>-0.04**</td>
<td>-0.04**</td>
<td>-0.05***</td>
<td>-0.57*</td>
</tr>
<tr>
<td></td>
<td>(0.02)</td>
<td>(0.02)</td>
<td>(0.02)</td>
<td>(0.02)</td>
<td>(0.37)</td>
</tr>
<tr>
<td>Agency Conservatism</td>
<td>0.11***</td>
<td>0.11***</td>
<td>0.08***</td>
<td>0.09***</td>
<td>2.01***</td>
</tr>
<tr>
<td></td>
<td>(0.03)</td>
<td>(0.03)</td>
<td>(0.03)</td>
<td>(0.03)</td>
<td>(0.62)</td>
</tr>
<tr>
<td>Workforce Size*Priority Agency</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average Frequency of Contact w/ Appointees</td>
<td>-0.23**</td>
<td></td>
<td>-0.21***</td>
<td></td>
<td>-4.22**</td>
</tr>
<tr>
<td></td>
<td>(0.07)</td>
<td></td>
<td>(0.07)</td>
<td></td>
<td>(1.81)</td>
</tr>
<tr>
<td>Years Worked in Agency</td>
<td>0.01</td>
<td>0.02</td>
<td>1.31**</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.02)</td>
<td>(0.02)</td>
<td>(0.66)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage in Regional Office</td>
<td>-0.54</td>
<td>-0.44</td>
<td>-47.58***</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.48)</td>
<td>(0.47)</td>
<td>(18.09)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage of Appointee Respondents</td>
<td>0.77**</td>
<td>0.58*</td>
<td>5.24</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.39)</td>
<td>(0.40)</td>
<td>(7.15)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(\sigma)</td>
<td>0.18***</td>
<td>0.16***</td>
<td>0.17***</td>
<td>0.16***</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.02)</td>
<td>(0.02)</td>
<td>(0.02)</td>
<td>(0.02)</td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>3.55***</td>
<td>4.49***</td>
<td>3.69***</td>
<td>4.51***</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.18)</td>
<td>(0.44)</td>
<td>(0.18)</td>
<td>(0.43)</td>
<td></td>
</tr>
</tbody>
</table>

Number of agencies                        | 52      | 52      | 52      | 52      | 52      |
Log-Likelihood                            | -6.83   | -0.67   | -4.65   | 0.32    | 20.35   |
\(X^2\)                                   | 16.46** | 28.79***| 20.82***| 30.76***| 43.73***|

Notes: One-tailed tests of significance: *\(p<0.1\); **\(p<0.05\); ***\(p<0.01\).

Question wording: “Please indicate your level of agreement with each of the following statements about your work and job setting [strongly disagree, disagree, agree, strongly agree, don’t know]: “Political appointees in my agency tend to be selected more for competence and experience than campaign or political experience/connections.” Answers are recoded so that higher values indicate that appointees were selected more for political experience and connections rather than competence. Cut points in model 5 omitted.