

“Cycles of Increasing Effectiveness in Presidential Appointments: Experiential Learning and the Selection of Bureaucratic Leaders in U.S. Federal Government Agencies”

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Abstract

We advance an experiential learning theory of presidential appointments that is premised on presidents becoming more effective at managing the bureaucracy, as reflected by their appointment choices. This theory predicts that as presidents' tenure increases, they increasingly rely on agent competence, at the expense of agent compliance, when making agency staffing decisions. According to this logic, such presidential learning, however, is also conditioned by constraints related to uncertainty in appointee choice, organizational hierarchies involving upper-echelon political executives, and separation of power conflicts. We test empirical propositions generated from the experiential learning theory on a novel set of individual-level data on 1356 Senate-confirmed presidential appointees in leadership positions covering 39 U.S. federal government agencies during the modern administrative presidency era. The statistical evidence provides compelling empirical evidence in support of the experiential learning theory when it comes to explaining presidential appointments to bureaucratic leadership positions. Specifically, presidents become increasingly effective at selecting appointees as their experience grows in office, thus providing a rationale for why they experience a cycle of increasing effectiveness that is rooted in their increasing reliance on administrative policymaking.

Organizations learn, and do so in many different ways. Organizations use innovation, slack resources, and experience as distinct mechanisms for learning (e.g., Cyert and March 1963; Downs 1967; March 1999; March and Simon 1958; Wilson 1989). Experience is the most endemic source of organizational learning since it does not result from technical expertise required for innovation or from external support necessary for obtaining slack resources in the form of budgets, personnel, or information elicitation. Therefore, experiential learning is not only the most commonplace learning mechanism because it is less dependent upon other considerations beyond the direct control of organizations, but is also a normal component of adaptive learning behavior that is part and parcel of all human behavior.

Experiential learning is crucial for understanding principal-agent relations in a dynamic setting. Although principals do suffer from both inherent information limitations and managerial problems that hinder their ability to effectively ensure agents comply with their wishes (Miller 1992; Moe 1984), these constraints can be mitigated the longer principals serve in a particular capacity. This is because principals can become more informed and expert at handling agents as they acquire greater experience through time (e.g., Banks and Sundaram 1998; Murphy 1986). If principals engage in such experiential learning, then they should have less need to be surrounded by faithful agents, while also exhibiting greater need for seeking “skilled” agents, as the principals’ tenure increases. This is because principals, as they “learn on the job” through time (including how to manage agents), simultaneously should rely less on delegating to agents, in whom they can place trust, serving their interests and finds more easily highly competent agents they can effectively oversee. Similarly, principals should need less faithfulness from agents through time as they become more familiar with the production process, and as a result, should

place a greater emphasis on delegating to agents whose skills are a good match for what is needed to effectively perform assigned tasks.

In this study, we advance an experiential learning theory of presidential appointments to government agencies. This theory contains two sets of predictions. First, this theory predicts that presidents (principals) engage in *adaptive selection*, whereby they will increasingly rely on appointee (agent) competence, defined as the quantity and quality of an appointee's (agent's) qualifications, while also reducing their reliance on appointee (agent) compliance, defined as the extent that agents exhibit shared policy preferences with and fealty to the principal. Second, presidents (principals) will become more adept at navigating the constraints under which they operate as they accrue greater experience by "learning" to (1) place a *greater* risk premium on appointee (agent) traits that they observe with uncertainty [*Agent Selection Learning*]; (2) rely *less* on mixing different types of appointees (agents) as a means of mitigating information asymmetries and biases that exist in hierarchical relationships [*Agent Monitoring Learning*]; and (3) rely *more* on appointee (agent) compliance, and *less* on appointee (agent) competence, in response to increasing conflict with another principal [*Common Agency Learning*].

The resulting empirical propositions derived from experiential learning theory are subsequently tested on a sample of presidential appointments to comparable U.S. federal agency leadership positions that are subject to Senate confirmation from the start of the Carter through the end of the George W. Bush presidencies. Because political executives at the upper echelons of government agencies often enjoy disproportional power over policy administration (e.g., Kaufman 1981; Wilson 1989: Chapters 10-12), we focus on appointee leadership positions at the level of agency heads and commission chairpersons and those very close beneath them (e.g.,

deputy secretaries, under and assistant secretaries, and regulatory commissioners).¹ The empirical evidence provides support for the experiential learning theory in the study of presidential appointment choices to manage the bureaucracy. Specifically, these findings reveal that presidents rely *less* on agent compliance, and *more* on agent competence in selecting individuals to serve in top-level agency positions during the “life cycle” of an administration. The findings also shows that presidents become more effective at managing the bureaucracy, as reflected by their appointment choices in relation to the varying constraints that arise from agent selection, agent monitoring, and common agency problems.

This study makes three important contributions to the study of U.S. executive politics. First, this study is an initial effort at offering both a novel theory and corresponding set of empirical tests to analyze the dynamic nature of presidential learning behavior in the realm of appointment politics. This perspective represents a critical departure from existing studies of appointment politics that are grounded in static-oriented spatial theories centered on the current ideological preferences involving both the president and Senate and thus omit experiential learning on behalf of the nominating president (e.g., Chang 2001; Falaschetti 2002; Hammond and Hill 1993; Krehbiel 2007; Moraski and Shipan 1999; Nokken and Sala 2000; Segal, Cameron, and Cover 1992; Snyder and Weingast 2000). Second, this study is an initial foray into the systematic analysis of key agent traits held by executive appointees in terms of both *ex ante* compliance to the nominating president and *ex ante* competence for the leadership positions for which these appointees have been selected. Existing research focuses almost exclusively on

¹ Lewis (2007, 2008, 2009) and Horton and Lewis (2010) aptly note that patronage appointments made in the lower rungs (Schedule C, SES) of U.S. federal government agencies serve a vital political purpose, while also having tangible managerial consequences for executive administration (see also Gilmour and Lewis 2006). Yet, occupants in these lower level patronage positions play a comparatively minor role in executive policymaking vis-à-vis those serving in agency leadership positions.

only one aspect of agent compliance – shared policy preferences or political orientation – and thus fails to consider the “fealty” aspect of agent compliance, not to mention the qualifications of appointees (but see Segal and Cover 1989 for an important exception).² Finally, this study provides a coherent rationale explaining *why* presidents become increasingly more effective at a particular task, specifically managing the bureaucracy – and how this translates into appointment choices that contextually respond to the set of circumstances surrounding how presidents make political appointments for leadership positions in government agencies. This is an important insight for students of both appointment politics and public bureaucracy since it is complementary, yet distinct from Light’s original thesis predicated on presidents furthering their *legislative agenda* by acquiring enhanced managerial and policy skills through time as both their information base and personal expertise expands (Light 1999: 37).

Next, we present experiential learning theory, and how it can enhance our understanding of appointment politics in the realm of the administrative presidency. The third section offers a description of the research design, data, and statistical methods used to test our theoretical hypotheses. The fourth section presents the statistical findings. Finally, the core lessons drawn from this investigation and its relevance to the study of executive politics are discussed.

Managing the Bureaucracy: Experiential Learning Theory and Presidential Appointments

All human organizations engage in mutual learning between the organization itself and the individuals who work within it. As James March (1991: 73) notes: “Organizations store

² Segal and Cover’s scores strictly pertain to a relatively small sample consisting of U.S. Supreme Court nominations dating back to the mid-1930s. Segal and Cover’s method of coding qualifications (*competence*) and ideology (*compliance*) not only rely on a highly restricted set of information (major newspaper editorials), but also require subjective judgments that are equally weighted by default. Our method of measuring appointee compliance and competence uses a wide array of biographical data based on objective behavior of the appointees, and is analytically weighted unequally using generalized latent trait analysis.

knowledge in their procedures, norms, rules, and forms. They accumulate such knowledge over time, learning from their members. At the same time, individuals in an organization are socialized to organizational beliefs.” In turn, this allows “learning” organizations to upgrade their information, draw upon a higher caliber of expertise, and thus make more informed choices that better serve their interests. These benefits are especially potent since experiential learning requires organizational members to engage in repetition-based tasks that are known to offer a competitive advantage to their organizations (Levinthal and March 1993: 96). Such “learning by doing” is a foundational component of presidential administrations since they routinely engage in repeated tasks through time, including, but not limited to, managing the bureaucracy, advocating their legislative program, and running election campaigns.

In the study of executive politics, organizational learning serves as a critical basis for understanding the functioning of both the presidency (Burke 1992; Hess 1988; Hult and Walcott 2004; Walcott and Hult 1995) and administrative behavior (Carpenter 1996; Heimann 1993; Whitford 2003). If presidents do exhibit a cycle of increasing effectiveness in pursuing their policy agenda as Light (1999) suggests, then the caliber of agency leaders charged with managing government agencies should have a direct bearing on presidential effectiveness. Seminal research in the field of public administration demonstrates that a robust link between agency leadership and agency performance has integral consequences for both the functioning and performance of government agencies (e.g., Kaufman 1981; Wilson 1989: Chapters 10-12). For instance, having a competent and respected leader of the Federal Emergency Management Agency in a natural disaster (e.g., hurricanes in the southern U.S.) redounds to the benefit of the president. The *type* of agency leader has particular importance for presidential effectiveness,

given that presidents' political capital begins to rapidly depreciate soon after taking office (Kernell 2007; Light 1999).

In other words, if presidents become more effective at managing the bureaucracy the longer they remain in office, then it naturally follows that they will select agency leaders accordingly by relying more on competence and less on compliance. This is because presidents' information problems and managerial problems with respect to managing the bureaucracy should be inversely related to their experience in office.³ This shift in the type of appointment choices made by presidents is reinforced by this experiential learning process as their institutional powers increasingly recede away from the legislative arena (i.e., lawmaking) and move towards

³ Dewan and Myatt (2010) provide a formal model that predicts the exact opposite of our experiential learning theory's empirical predictions. Specifically, their theory rests upon rising search costs for talent over time, specifically, that it becomes harder to find qualified cabinet ministers later in the prime minister's (PM's) term in office. As a result, their theoretical results predict that cabinet ministers should exhibit greater competence early in the PM's term in office since the search costs of finding competent appointees becomes greater as time goes on. Similarly, the resulting "talent pool drain" moves PMs to appoint "loyalist" (compliant) agents later in their term. Although this theory has intuitive appeal, we think its divergent predictions do not undermine our theory for three reasons. First, Dewan and Myatt's model depends on a small talent pool. Specifically, the talent pool in filling cabinet ministry positions, such as those in the U.K., consists almost exclusively of elected parliamentary members (this empirical fact serves as a critical assumption for their theory). In many settings, including filling top agency jobs in the U.S., the talent pool exhibits *both* greater breadth and depth since bureaucratic leaders are drawn from industry, academia, civil servants, and both current and former elected officials. Indeed, current members of elected assemblies/legislatures constitute a very small fraction of bureaucratic leaders in many governmental settings, most notably the United States. Second, Dewan and Myatt's model assumes fixed resource endowments for the principal (PM) that do not change through their time in office. In reality, chief executives' political capital is generally declining through time, though their skill at managing the bureaucracy is improving with experience. If one believes that certain endowments or skills vary over time, then it follows that presidents (1) have the slack resources to better absorb lower caliber appointees early in their administration than later on when their political capital has been depleted; (2) are less constrained by patronage concerns later in their time in office following a successful election outcomes, thus affording them the opportunity to select more competent, and less compliant, agency leaders; and (3) have a keen incentive to place the greatest emphasis on an administrative politicization strategy – i.e., appointing "loyalists"/ "compliant" agency leaders to handle the substantial information and managerial problems that they encounter early in their tenure, while relying more on "competent" leaders as these principal-related problems attenuate through time. To be certain, there are some countervailing desires; specifically, presidents also desire more competent leaders, all else being equal, in their first term to help their chances of being reelected. We control for (1) and (2) in our subsequent statistical analysis, while (3) is part and parcel of the *Baseline Learning hypotheses (H1 and H2)* derived from the experiential learning theory.

administrative-related tools (Howell and Mayer 2005, Kagan 2001; Krause and Cohen 1997; Nathan 1983). That is, this shift in energy from legislative to administrative channels of policymaking means presidents have to devote more resources to mitigating information and managerial problems encountered in public agencies. This increasing reliance on the administrative presidency has become even more palpable since the 1970s (Nathan 1983; Waterman 1989). Therefore, over the course of their tenure in office, presidents should rely more on agent competence, and successively less on agent compliance, when making appointments to high level agency positions, consonant with a cycle of increasing effectiveness noted by Light (1999). This is because presidents become increasingly aware that not only are they in need of agency leadership that will offer managerial and policy competence in carrying out their policy goals, but also rely less on appointing “loyalists” to critical agency positions given that their information and expertise regarding the bureaucracy is augmented through time. This logic of experiential learning produces the first pair of hypotheses:

*H1: As their tenure in office grows, presidents will **decrease** agent compliance as a criterion for appointing political executives.*

*H2: As their tenure in office grows, presidents will **increase** agent competence as a criterion for appointing political executives.*

Both hypotheses *H1* and *H2* serve as “*Baseline Learning*” propositions nested within our logic of experiential learning in the context of presidential appointments to government agencies. That is, presidents rely less on compliance and more on competence, as a criterion for agent selection as their tenure in office increases. In the following sub-sections, three particular types of experiential learning that arise as rational responses to variable constraints facing presidents when making appointment decisions are examined. Put simply, each of these types of

experiential learning predicts that presidents become better at the task of making appointments to serve their own policy and administrative interests as their tenure in office grows.

The Dynamics of “Agent Selection” Learning in Presidential Appointments

Uncertainty is inherent in decision-making in political organizations (e.g., Carpenter 2002, 2004; Heimann 1993; Krause 2003a, 2003b, 2003c). If presidents exhibit organizational learning, they should become better equipped at coping with decision-making uncertainty. In the context of presidential appointment choices, we posit that presidents become more adept at coping with uncertainty about key appointee traits such as compliance and competence by requiring more of each particular trait in response to greater uncertainty regarding that particular trait as they accrue more experience in office. That is, presidents will require a greater “risk premium” on appointee traits through time when they select bureaucratic leaders. To suggest otherwise is to assume that presidents intentionally make increasingly “riskier” choices as their tenure in office increases. On a more general level, it is implausible to presume that principals (presidents) who are acquiring more task-related experience in the selection of agents (appointees) through time will prefer to increasingly incur risk about the agent’s true type in the presence of information asymmetries if they are truly “learning”, and thus becoming more effective at a particular task (e.g., managing the bureaucracy via the mechanism of appointed bureaucratic leaders). The logical implications of experiential risk learning in the appointment context yield the next testable hypothesis.

H3: As their tenure in office grows, presidents will make agency leadership appointments in a relatively more risk-averse manner by increasing a particular agent trait (compliance or competence) in response to uncertainty regarding the agent trait in question.

Put another way, hypothesis *H3* posits that presidents will improve their appointment decision-making calculus as they obtain greater experience by compensating for greater uncertainty about appointee compliance and competence traits by requiring relatively more of these respective traits the longer that they serve in office.

The Dynamics of “Agent Monitoring” Learning in Presidential Appointments

It is commonly accepted that organizational hierarchies are inherently non-neutral (e.g., Hammond and Thomas 1989; Miller 1992). Past research, however, explains how the non-neutrality of hierarchies within bureaucratic organizations can be ameliorated through the mechanism of “information counterbalancing” between supervisors (e.g., agency heads and commission chairpersons) and subordinates (e.g., deputy, under and assistant secretaries in cabinet level departments, independent commissioners) (Cyert and March 1963: 67-82; Downs 1967: 121-122).⁴ Information counterbalancing provides a principal with a mechanism to mitigate particular policy biases that may exist within government agencies. Specifically, information counterbalancing allows a principal to reduce information asymmetries that naturally arise when an agent possesses both expertise and information advantages, even in the presence of identical preferences among agents in varying subunit environments (see Jordan 2009).

If presidents become both more expert and informed about the bureaucracy during their tenure in office, then they should have less incentive to rely on information counterbalancing between supervisory and subordinate agency leadership positions over time. This is because the expertise and informational benefits derived from counterbalancing decline as presidents become more effective at their job. The net result is that if presidential learning regarding bureaucratic

⁴ In addition, information counterbalancing has the salutary benefit of improving bureaucratic performance by exploiting both breadth (*generalists*) and depth (*specialists*) of expertise used to perform administrative tasks (Aberbach and Rockman 2000: 56; Krause, Lewis, and Douglas 2006).

tasks is increasing in an administration's tenure, both supervisors and subordinates should become more interchangeable through time. In other words, presidents will begin their administrations using an "appointment heuristic" that seeks out more compliant appointees to serve in top leadership positions, and that counterbalances those officials with appointees with greater competence in the lower rungs of agency leadership positions. Specifically, the president may choose a close confidant or party loyalist to head the agency and someone with more experience in the agency as the deputy. For example, when President George W. Bush selected Roderick Paige, a loyalist, to head the Education Department in 2001, he also named William Hansen as the Deputy Secretary. Hansen had prior federal experience in the Department under a previous administration as well as in other agencies and had spent the entire Clinton administration working in the educational field. As presidents' information and expertise on governance expands, presidents will rely less on such information shortcuts when making appointment choices since they possess greater capacity to direct bureaucratic agencies. This experiential learning process of "agent monitoring" shapes presidential appointment choices and produces the following two hypotheses.

*H4a: As their tenure in office grows, presidents will **decrease** agent compliance as a criterion for appointing supervisory political executives vis-à-vis subordinate political executives.*

*H4b: As their tenure in office grows, presidents will **increase** agent competence as a criterion for appointing supervisory political executives vis-à-vis subordinate political executives.*

Put another way, hypotheses *H4a* and *H4b* assert that presidents' need for more compliant (and less competent) appointees in top agency positions decreases as their experience in office grows.

The Dynamics of “Common Agency” Learning in Presidential Appointments

The problem of common agency affects how multiple principals arrive at a collective decision about delegating authority to an agent to act on their behalf (e.g., Bernheim and Whinston 1986; Dixit, Grossman, and Helpmann 1997; see Bertelli and Lynn 2004 for an application to interest groups and human service agencies). In the realm of appointment politics, presidents make appointment choices within a governance structure that separates power among three branches. Specifically, presidents are formally constrained by the Senate, which seeks to counter executive influence through its Advice and Consent powers under Article II, Section 2 of the U.S. Constitution. When the president and Senate have similar policy preferences, the president has considerable latitude in appointing individuals to serve in agency leadership positions (e.g., Gerhardt 2000; Krutz, Fleisher, and Bond; Loomis 2001; Nokken and Sala 2000). Yet, as presidential and Senate policy preferences diverge, presidents become increasingly constrained when making appointment choices both in terms of whom they wish to appointment (e.g., Krehbiel 2007; Moraski and Shipan 1999), and also incur greater transaction costs since it take additional time to fill such positions (e.g., McCarty and Razaghian 1999). Under such circumstances, contentious executive-legislative relations will result in presidents valuing greater compliance in their agency leaders because presidents will seek to limit legislative influence over policy administration. In addition, under separation of powers conflict, presidents will place less value on competency in agency leaders than they would otherwise under experiential learning because presidents not only wish to limit legislative influence over a well-managed agency, but also face less accountability for any bureaucratic failures that may occur.

If presidents do become more effective at the agency appointment process as they obtain both enhanced knowledge and expertise from serving additional years in office, they should be

able to place successively greater weight on agent compliance in the presence of institutional conflict between themselves and the Senate. Similarly, presidents under these conditions will also be increasingly successful in choosing less competent appointees as a means of thwarting legislative attempts to control the bureaucracy. After all, a less competently run agency may be harder for Congress to manage and direct than a more competent counterpart.⁵ This logic produces the final pair of theoretical hypotheses regarding how presidents dynamically adapt to separation of powers conflict consistent with experiential learning in the appointment process.

*H5a: As their tenure in office grows, presidents will **increase** agent compliance as a criterion for appointing political executives in the presence of increasing policy conflict between the president and Senate.*

*H5b: As their tenure in office grows, presidents will **decrease** agent competence as a criterion for appointing political executives in the presence of increasing policy conflict between the president and Senate.*

Alternatively stated, hypotheses *H5a* and *H5b* maintain that presidents are increasingly successful (i.e., more strategic) in the appointment process by insulating themselves from legislative opposition by enhancing agent compliance to the president, while also lowering agent competence, in the selection of political executives in bureaucratic leadership positions as they gain more experience serving in office.

⁵ To be certain, it could be argued that presidents may use particularly competent leaders in the presence of interbranch conflict to make sure that White House policy priorities are pressed. This perspective, however, presumes that competent agency leaders are also loyal to the president's policy interests. Otherwise, a competent bureaucratic leader poses potentially serious problems for presidential administrations since they can be exploited to Congress's advantage.

Data, Variables, and Methods

To assess these empirical predictions derived from the experiential theory logic that we advance in this study, we use a newly constructed database on 1356 Senate-confirmed appointees who served in one of 39 U.S. federal agencies from January 1977 to January 2009. Because the hypotheses focus either on the *ex ante* compliance or competence of presidential appointees in agency leadership positions, we use measures of both characteristics for our dependent variables. In other work, we have constructed original measures of *ex ante* agent compliance and competence for these 1356 federal agency leaders publicly known at the time of nomination. Specifically, using a new comprehensive biographical database we created, we employ the following indicator variables to tap into the latent concept of agent compliance known to the appointing president at the time of nomination: (1) whether the appointee shared the same party affiliation as the nominating president; (2) whether the appointee gave any monetary campaign contributions to the nominating president; (3) whether the appointee served in state government when the nominating president was governor; (4) whether the appointee has previous elective office experience; and (5) whether the appointee had any experience in either a leadership or delegate position in the national party of the president. These measures are proxies for agent compliance reflected through a shared political orientation (inferred from shared partisanship and political investment via pre-nomination presidential campaign contributions), as well as an organizational identity suggesting the ability to be a team player (inferred from past service to a political party organization or elected office).

We employ the following indicator variables to generate a latent measure of agent competence, again each determined at the time of nomination: (1) how many of the four preceding jobs were related to the policy issues of the agency; (2) how many of these previous

positions were related to government managerial needs; (3) whether the appointee lived in the D.C. area at some point in the previous decade (capturing the official's "embeddedness" in the federal government environment); (4) whether the appointee had any civil service experience; (5) whether the appointee had any agency-specific civil service experience; (6) whether the appointee had agency-specific appointed experience; (7) whether the appointee had any non-military federal experience related to either the policy issues of the agency or managerial needs of government; and (8) the temporally detrended number of years of agency experience. These measures are proxies for effective administrators.

To derive statistical measures of compliance and competence for each agency leader, we performed a generalized latent trait analysis estimated using Bayesian MCMC simulation methods. This methodological approach uses "plausible values" for these latent measures by treating the indicator variables as containing missing data on all observations (Asparouhov and Muthen 2010a, 2010b; von Davier, Gonzalez, and Mislevy 2009). The statistical technique involves Bayesian MCMC estimation of a two-factor confirmatory factor model with correlated measurement errors (containing diffuse priors) of a mixture of continuous and discrete (binary and polytomous [ordered and unordered]) indicator variables into two separate continuous latent (factor) concepts: compliance and competence. This method effectively utilizes multiple imputation to generate plausible values consistent with the observed data through 500 draws, which form the basis for the Bayesian posterior sampling distribution for each indicator variable, and more importantly, generate the resulting latent factor estimates. These 500 draws produce an estimated Bayesian factor score corresponding to each appointee observation and latent concept (based on the posterior median of the entire sampling distribution) and corresponding Bayesian 95 percent credibility interval that varies across individual appointees in our sample.

These factor scores make up our dependent variables. *Compliance* is the Bayesian posterior median compliance score for the respective appointee. *Competence* is the Bayesian posterior median competence score for the respective appointee. The *Compliance* variable ranges from -0.869 (minimum) to 1.063 (maximum), with a sample mean equal to 0.004 and sample standard deviation equal to 0.402. The *Competence* variable ranges from -2.987 (minimum) to 5.729 (maximum), with a sample mean equal to -0.002 and sample standard deviation equal to 1.491.⁶

To provide some context for these compliance and competence scores, consider some types of agency officials. One category, high compliance and competence, is the gold standard for a president. Donald Hodel (compliance=0.62; competence=1.80), when President Reagan nominated him as Secretary of Interior in 1985, was a rare example. In the preceding years of Reagan's administration, he had already served as Under Secretary at the Department of the Interior and as Secretary of Energy; he also worked in appointed positions in previous administrations. A Republican, he campaigned for President Reagan and had prior national party experience. Another category, low compliance and competency, is not attractive but is likely less costly to find. When President Reagan nominated Lauro Cavazos (compliance=-0.57; competence=-2.29) as Secretary of Education near the end of his administration in 1988, Cavazos had no federal government experience of any kind, and no real connection to Reagan. He was selected, it appears, because he was Hispanic and was seen as electorally valuable to George H.W. Bush's campaign. When Bush kept him on in the job, he had many more qualifications simply from having been in the position. The mixed categories appear more

⁶ The trimmed sample statistics containing 95% ($\pi_{0.025}$, $\pi_{0.975}$) of the full sample observations are as follows: *Compliance*: -0.723 (minimum), 0.885 (maximum), -0.001 (sample mean), 0.363 (sample standard deviation); *Competence*: -2.617 (minimum), 3.007 (maximum), -0.026 (sample mean), 1.341 (sample standard deviation).

populated, which accords with the intuition that presidents trade off between compliance and competence, at least to some degree.⁷

Figure 1 reveals an annual time series plot (and corresponding Lowess smoothed estimate) of the Appointee Compliance and Competence scores across the lifespan of a presidency during a thirty-two year period, purged of patronage appointees on compliance and a limited number of within-administration reappointments on competence (see definitions below). The univariate data reveal a high level of appointee compliance during the inaugural year of an administration, followed by a sharp drop, and then a subsequent surge in the early component of a second term followed by another sharp drop (**Figure 1A**). Conversely, appointee competence is low at the beginning of an administration, and then subsequently rises most sharply in the first term before leveling off with a late minor surge in Years 7 and 8 (**Figure 1B**). Because these measures rely on the same *public* information through time, they omit the possibility that presidents may be obtaining better private information as they acquire more experience in office. Therefore, these measures of agent traits provide a conservative test of experiential learning behavior in the realm of presidential appointments to administrative agencies.

[Insert Figure 1 About Here]

⁷ One such category, high compliance and low competence, captures loyalists with few apparent qualifications for the position at the time of nomination beyond partisan affinity or ability to be a good team player. Some agencies have multiple examples. For instance, both Richard Riley (compliance=0.47; competence=-1.01) and Roderick Paige (compliance=0.50; competence=-2.51), nominated in the first year of the administrations of Presidents Clinton and George W. Bush, respectively, as Secretary of Education had close connections to their nominating president but no federal education experience. To be sure, Riley did have some prior federal appointed experience and Paige had some state level experience. Several former Secretaries of Commerce show similar profiles. Another such category, low compliance and high competence, covers highly qualified officials who lack attributes of loyalists. Other agencies have multiple examples. For example, several Under Secretaries of State for Political Affairs have been former agency careerists (i.e., foreign service officers) with few political ties who were selected for the position. Thomas Pickering (compliance=-0.22; competence=4.38) nominated in 1997, Marc Grossman (compliance=-0.19; competence= 3.02) nominated in 2001, Nicholas Burns (compliance=-0.78; competence=3.10) selected in 2005, and William Burns (compliance=-0.41; competence=3.43) appointed in 2008 are four such leaders. Several top officials from the Central Intelligence Agency also have similar traits.

Our key independent variables of theoretical interest take account of presidential tenure, uncertainty about appointee characteristics, position level, and conflict between the White House and Senate. *Presidential Tenure* is the most important unconditional explanatory variable in our learning logic. It marks the quarter of the administration (ranging from 1 to 32 to fully account for two-term presidencies) in which the respective appointee was nominated.⁸ The constructed measures of compliance and competence for each appointee have associated measures of uncertainty, also unique to each appointee. *Compliance Uncertainty* is the standard deviation corresponding to the 500 draws that produced the estimated Bayesian factor score for appointee *ex ante* compliance to the president. Similarly, *Competence Uncertainty* is the standard deviation of the 500 draws that produced the estimated Bayesian factor score for competence. To test the *Agent Selection Learning* hypotheses, we interact these measures with the president's tenure in office: *Compliance Uncertainty* \times *Presidential Tenure* and *Competence Uncertainty* \times *Presidential Tenure*.⁹

To distinguish supervisors from subordinates in the agency leadership hierarchy, *Head Supervisory Position* is a binary variable that takes the value 1 if the position for which the respective appointee was selected is the highest level official in an agency and 0 otherwise. For example, the Chairperson of the Federal Trade Commission would be coded as 1, but a Commissioner of the FTC would be coded as 0. Heads of sub-agencies within a cabinet department, such as the head of the Food and Drug Administration, which sits in the Department

⁸ The choice of a quarterly unit of analysis is motivated by the desire to obtain a finer measure of learning than using annual units, while balancing it against that fact that monthly units would have many empty cells or a small number of cases. The core results of presidential learning are robust across these different time units of analysis.

⁹ Because these measures are generated from Bayesian MCMC simulation methods comprised of 500 samples per each individual, the posterior median and standard deviation terms do not constitute fixed parameters. Therefore, such "risk" learning behavior can be tested in a valid manner by assessing the statistical relationship between the *both* median and standard deviation values generated from the Bayesian posterior distribution from the appointee compliance and competence traits, respectively.

of Health and Human Services, are coded as 0. To test the *Agent Monitoring Learning* hypothesis, this covariate is interacted with presidential tenure in office: *Head Supervisory Position* \times *Presidential Tenure*.

We use two measures of policy conflict between the White House and Senate. Our first measure, *Common Space Distance Between President and Senate Committee Median*, is the absolute difference in the common space ideology scores between the president and the relevant Senate committee median member at the time of the respective appointee's nomination. Our second measure, *Divided Government (President and Senate)*, is a binary measure marking whether the White House and Senate were controlled by different parties in the year of the respective appointee's nomination. To test the *Separation of Powers Learning* hypotheses, we interact these variables with presidential tenure in office: *Common Space Distance Between President and Senate Committee Median* \times *Presidential Tenure* and *Divided Government (President and Senate)* \times *Presidential Tenure*.

We also control for the positive (negative) impact that presidential approval and presidential policy priorities may exert on compliance (competence) underlying appointment choices. *Presidential Job Approval in Month of Nomination* is the percentage of respondents approving of the president's performance, taken from national polls during the month in which the respective appointee was nominated. *State of Union Count* is the number of mentions of policy issues directly relevant to agency in which the respective appointee served in the year of nomination.¹⁰ To account for the possibility that appointees to independent regulatory agencies

¹⁰ We first went through each State of the Union address and listed all separate policy issues mentioned. For 1977, because President Carter did not give a State of the Union address, we used his speech to the Democratic Convention accepting the nomination. For each policy issue, we then coded up to three agencies connected to that issue. If an issue involved a sub-agency within an agency (for example, the U.S. Army within the Defense Department), we coded both entities. Each co-author assigned agencies to

will exhibit higher competence and lower compliance traits relative to executive branch appointees, we specify *Independent Regulatory Commission* (IRC) is a binary indicator that equals 1 for independent regulatory commissions or boards and 0 for executive branch agencies. In addition, we control for the differential appointment calculus first term presidents are facing with re-election concerns vis-à-vis second term presidents whom are classified as “lame-ducks” with a binary indicator (*Second Term*) that equals 1 for second term presidents, 0 otherwise. Independent of experiential learning where there is a clear incentive for presidents to care more about loyalty in grappling with information and managerial problems relating to the bureaucracy, first term presidents may have a greater incentive for competent governance to increase their chances at being reelected (e.g., Besley and Case 1995), while the latter type will exhibit a greater willingness for accruing more compliant bureaucratic leaders.

In the “Compliance” models, we control for the selection of patronage appointees that can serve to explain the higher levels of agent compliance immediately following successful election outcomes in Years 1 and 5 (*Patronage Appointee Designation*).¹¹ This variable equals 1 when an appointee exhibits below normal competence (below 25th percentile rank in the median appointee competence distribution) and has also done at least one of the following: (1) held elective office representing the appointing president’s party, (2) served as a national party leader or delegate for the appointing president’s party, or (3) made a campaign contribution to the president’s election campaign prior to being nominated and equals 0 otherwise. In the “Competence” models, we partially control for the fact that bureaucratic leadership

each issue separately and then we discussed cases where we disagreed to come to a consensus on what agencies should be coded.

¹¹ The first year of an administration contains the highest percentage (12.40% based on a total of 431 first year appointees) and absolute number (61) of patronage appointees based on this variable operationalization. The fifth year of an administration has many fewer patronage appointees (12, 6.63% based on a total of 181 fifth year appointees).

reappointments within a given administration may serve to explain higher levels of appointee competence through a president’s tenure in office that is independent of presidential learning hypothesis (*Within-Administration Reappointment*). This variable is coded as 1 for some individuals whom are reappointed by their original appointing president and 0 otherwise.¹² Finally, we incorporate presidential administration fixed effects to account for unobserved heterogeneity in appointment choices across different administration.

Our statistical methods require us to handle the nested features of our data design since we have individuals as our unit of analysis, embedded within particular position types for each agency and subsequently each agency. To address this data design, we use a two-level nested mixed model containing random intercepts at the agency position type and agency levels, respectively. This regression model form appears as follows:

$$Y_{ijk} = X_{ijk}\beta + \mu_{jk} + \mu_k + \varepsilon_{ijk} \quad (1)$$

where $\mu_k \sim N(0, \Sigma_1)$, $\mu_{jk} \sim (0, \Sigma_2)$, and $\varepsilon_{ijk} \sim N(0, \sigma_\varepsilon^2 I)$.¹³ Finally, we also ran each regression model on the full sample of agencies and a 95 percent trimmed sample. The 95 percent trimmed sample for each dependent variable took observations whose values fell in between the 2.5 and 97.5 percentiles, inclusive ($\pi_{0.025}$, $\pi_{0.975}$).

¹² This results associated with this variable should be interpreted with extreme caution since it only properly accounts for this “retread” effect for IRC appointees in the same agency within the same administration. Ideally, we want to know whether any appointee has served in a previous appointed position in any agency in the same administration. In the next iteration of this paper, we will correct/update this measure in the proper manner for both executive branch and independent regulatory appointees.

¹³ It is worth noting that we do not include individual appointees as a separate level of analysis since there is too little variation within this group (mean = 1.2 individuals in our sample). Preliminary robustness checks revealed that these results from specification (1) were robust to alternative nested structures involving random slopes.

Empirical Findings

The statistical estimates appearing in **Table 1** analyze the unconditional effect presidential tenure on the type of political appointees chosen by U.S. presidents from January 1977 to January 2009 (Carter through G.W. Bush administrations). **Models 1** and **2** show strong evidence of hypothesis *H1* insofar that presidents do significantly reduce compliance as a litmus test for appointments made to leadership positions in U.S. federal government agencies over time. Specifically, **Model 1** displays that with each successive quarter in office presidents choose to decrease compliance as an appointee trait by 0.011 units. From their first quarter in office (Quarter 1) through their last quarter in office of a two-term administration (Quarter 32), this effect represents a 0.352 unit decrease for a two-term president, which represents 140.24% of the dependent variable's interquartile (i.e., middle 50%) range [$\pi_{0.75} - \pi_{0.25} = 0.251$]. Similarly, **Model 2** shows that with each successive quarter in office, presidents choose to decrease compliance as an appointee trait by 0.009 units for the trimmed sample, which excludes the extreme 2.5% of the sample observations at each end. From their first quarter in office through the last quarter of a two-term administration, this effect represents a 0.288 unit decrease, which makes up 123.61% of the dependent variable's interquartile range [$\pi_{0.75} - \pi_{0.25} = 0.233$].

Models 3 and **4** display similarly strong support for hypothesis *H2*, which predicts that presidents will significantly raise competence as a criterion for appointments to leadership positions in U.S. federal government agencies over time. Specifically, **Model 3** displays that for each successive quarter in office presidents choose to increase competence as an appointee trait by 0.054 units. For a two-term president, the increase from the quarter 1 to quarter 32 is a 1.728 unit change, which represents 77.84% of this dependent variable's interquartile range [$\pi_{0.75} - \pi_{0.25} = 2.22$]. Similarly, **Model 4** shows that with each successive quarter in office presidents

augment competence as an appointee trait by 0.050 units in the trimmed sample, which (as with the compliance model) excludes the extreme 2.5% of the sample observations. From the first quarter in office through the last quarter of a two-term administration, this effect represents a 1.60 unit increase, which constitutes 75.94% of the dependent variable's interquartile range [$\pi_{0.75} - \pi_{0.25} = 2.107$].

[Insert Table 1 About Here]

The first set of models also suggests some interesting findings about position level, uncertainty in selection of agency leaders, and presidential priorities and presidential job approval. While presidents prefer more compliance (i.e., loyalty) from appointees chosen to serve in head supervisory positions vis-à-vis subordinate appointee positions (**Models 1 and 2**), the evidence for competence valuations depends upon the sampling frame under investigation (**Models 3 and 4**). The negative coefficients associated with the *Compliance Uncertainty* and *Competence Uncertainty* covariates are suggestive of information constraints confronting presidents, whereby, they are better at screening high compliance and competence appointees (lower uncertainty, higher agent traits) than individuals who possess relatively less of these particular traits. Political dynamics between the president and Senate, however, do not seem to shape the type of appointees selected. Ideological divergence between the president and Congress, either in the form of the absolute distance between presidential ideology and the relevant Senate committee's median ideology, or divided control of presidency and Senate, fails to significantly influence the compliance and competence of presidential appointments.

Generally, increases in a president's job approval rating do not appear to embolden presidents to appoint bureaucratic leaders exhibiting greater compliance. Increases in agency salience, as denoted by a count of *State of the Union Address* policy-related mentions, only

enhances the competence of political executives chosen by presidents, but by a numerically modest amount. For example, a one interquartile range change in the agency salience measure for Model 3 increases appointee competence by 0.078 units ($0.039 \times 2 \approx 0.078$), which is 3.7% of the dependent variable's interquartile range [$\pi_{0.75} - \pi_{0.25} = 2.107$]. Independent agency appointees exhibit lower appointee compliance, thus supporting our conjecture that IRC members will exhibit less loyalty to the president than compared to executive branch appointees due to partisan balancing requirements and the insulated nature of these institutions (see Lewis 2003).

Independent of experiential learning effects, second-term presidential appointments to bureaucratic leadership positions are of lower caliber and greater loyalty to the administration compared to first-term appointees. This presumably occurs because re-election seeking presidents possess a greater incentive for effective policymaking and governance compared to a “lame-duck” executive (e.g., Besley and Case 1995). Finally, the control for “patronage”-type appointees reveals that most of these effects occur in the full sample, and not the trimmed sample that eliminates extreme observations from the tails of this observed distribution. We turn next to whether administrative-era presidents “learn on the job” by becoming more effective at making leadership appointments to U.S. federal government agencies. To address this question, we empirically examine theoretical predictions pertaining to three distinct dimensions of presidential learning in the selection of political executives to leadership posts:

Evidence of “Agent Selection” Learning in Presidential Appointments

If presidents are more effective at governing as they gain more experience in the job, then they should do a better job of selecting political executives as well. Specifically, as presidents

become more informed about how to make presidential appointments through the course of their administration, they should require higher levels of *ex ante* compliance and competence from each appointee to offset the presence of increased uncertainty about each type of trait for each bureaucratic agent. The results in **Table 2** indicate that presidents are increasingly demanding a relatively higher risk premium in terms of both agent compliance and competence traits when making appointments to federal agencies. Consistent with hypothesis *H3*, the longer presidents serve in office, they become increasingly skilled at responding to uncertainty about an appointee’s loyalty and qualifications known at the time of nomination as shown by the positive significant coefficients corresponding to the *Compliance Uncertainty × Presidential Tenure* and *Competence Uncertainty × Presidential Tenure* variables (the first variable appears in **Models 5 and 6**, the second variable appears in **Models 7 and 8**).

[Insert Table 2 About Here]

Figures 2A and 2B help illustrate the conditional marginal effects of uncertainty in compliance and competence, respectively, on the relevant appointee trait in presidential selections over the past five completed administrations. **Figure 2A**, which draws from **Model 6** (the trimmed sample), reveals that two-term presidents become less risk acceptant to increasing compliance uncertainty by almost 50% from their first quarter in office to their last quarter (of a two-term administration) in office. Specifically, the conditional marginal effect of compliance uncertainty on appointee compliance moves from -5.39 to -2.57 (47.68%) during this time span. Evidence of “agent selection” risk learning by presidents appears to be more pronounced with respect to competence of leadership appointments to federal government agencies. **Figure 2B**, which pulls from **Model 8** (the trimmed sample), reveals that presidents in their first three months in office overcompensate in the *opposite* direction by 2.74 times as much in response to a

one unit increase in competence uncertainty. By the final quarter of a two-term administration, it reveals that presidents move in the *same* direction in response to such a change by almost 2.23 times. This pattern suggests that presidents become increasingly effective at screening lower competence appointees for agency positions. This comparatively stronger shift for appointee competence vis-à-vis appointee compliance may be attributed to the fact that second term presidents increasingly realize that they require greater competence in agency leaders in order to get things done given that their political influence has waned since their first term in office. In short, presidents over time become better at selecting agency leaders in response to the risk associated with decision-making uncertainty about those leaders' key characteristics.

[Insert Figure 2 About Here]

Evidence of “Agent Monitoring” Learning in Presidential Appointments

Information counterbalancing is a coping strategy for mitigating biases in organizational hierarchies (Cyert and March 1963; Downs 1967; Hammond and Thomas 1989). This is because putting “loyalists” in head supervisory leadership positions and “competents” in subordinate leadership positions allow presidents to exploit the tensions between generalist and expertise skills by allowing the former agent type to monitor the latter agent type. Hence, information counterbalancing can facilitate presidents' desire for facilitating greater responsiveness from bureaucratic appointees (Moe 1985), as well as enhancing policymaking (Krause, Lewis, and Douglas 2006). In turn, this strategy in the executive politics setting can allow less biased and more accurate information from agency leaders to presidents. We posit that presidents will rely heavily on this strategy when making agency appointments at the start of their administration, but then will rely on it less as they become more skilled in managing the federal bureaucracy.

Specifically, as presidents become more informed about the operation of administrative agencies (i.e., face lower informational asymmetries in relation to these agencies) through the course of their tenure in office, they will rely less on this information counterbalancing strategy when making bureaucratic leadership appointments.

The empirical implications of this logic are straightforward. Although presidents will place a *relative* premium respectively on compliance for head supervisory positions (chief executives and commission/board chairpersons) and competence for lower level positions (subordinates) at the beginning of their tenure, this gap will diminish through time as presidents obtain increased knowledge and experience about the government agencies they are staffing. **Table 3** displays the empirical tests of these “information”-based implications, as reflected in the appointee compliance hypothesis *H4a* and the appointee competence hypothesis *H4b*. For compliance, the coefficient on the *Top Level Position* × *Presidential Tenure* coefficient in **Model 9** is significant at $p < 0.10$ (one-tail test) for the complete sample of observations, but loses statistical significance for the trimmed sample in **Model 10**. For competence, the coefficient on the *Top Level Position* × *Presidential Tenure* coefficient in the full sample of **Model 11** is significant at $p < 0.05$ (one-tail test); the same coefficient in the trimmed sample of **Model 12** is no longer significant.¹⁴

[Insert Table 3 About Here]

Figures 3A and **3B** display graphically these conditional relationships. The difference in appointee compliance between head supervisory political executives and subordinate counterparts is consistent with an information counterbalancing strategy insofar that presidents maximize the compliance gap between the highest level political executives vis-à-vis subordinate

¹⁴ In the trimmed sample models analyzing *Agent Monitoring Learning* (**Models 10** and **12**), the additive and multiplicative coefficients are both of smaller magnitude.

political executives (0.155) while maximizing the competence gap between subordinate political executives vis-à-vis head supervisory political executives during their first quarter in office. With each additional quarter of presidential tenure, this compliance gap declines by 0.002 and the competence gap increases by 0.011 in the respective trimmed sample models (**Models 10 and 12**). The declining supervisor-subordinate appointee compliance gap in **Figure 3A** still remains significantly positive even at the end of a two-term administration (0.103, $p < 0.025$ (one-tail test)), suggesting that presidents still rely more on compliance for head supervisory positions in relation to subordinate leadership positions. By contrast, **Figure 3B** shows that presidents' relatively minor premium on subordinate political executives' competence at the beginning of their administration gives way to a notable and marginally significant ($p < 0.10$, one-tail test) relative premium on chief executives' competence vis-à-vis subordinate political executives' competence in their second term in office. Specifically, appointees in head supervisory slots possess a 0.088 advantage vis-à-vis their subordinate counterparts at the beginning of their second term in office while it increases up to a 0.264 advantage when they exit office at the end of their second term. In short, presidents over time rely less on an information counterbalancing strategy to monitor bureaucratic agents at the top rungs of federal government agencies.

[Insert Figure 3 About Here]

Evidence of "Common Agency" Learning in Presidential Appointments

The last form of learning we consider here concerns how principals' selection of agents is conditioned by the problem of common agency. Specifically, because the president and Senate possess shared power over the appointment process we assess the extent to which presidents learn over time to compensate for ideological conflict between themselves and the Senate, which

holds the power of confirmation in the appointment process. According to *H5a*, presidents will increase appointee compliance as they spend more time in office in response to preference divergence between themselves and the Senate. **Models 13 to 16**, which appear in **Table 4**, test this theoretical proposition. The extreme outlying observations seem to be driving the differences in results between the full and trimmed samples. We therefore limit our discussion to the models on the trimmed sample (i.e., **Models 14 and 16**).

Although presidents increasingly select lower levels of appointee compliance as their tenure increases (denoted by the negative coefficient corresponding to *Presidential Tenure* covariates in both models), this pattern is offset by increasing ideological conflict with the Senate, as measured in two ways. **Model 14**'s definition of conflict is the absolute ideological distance between the president and the relevant Senate committee median member's common space ideological scores. **Model 16**'s definition is a binary variable for whether the White House and the Senate are controlled by the same party. Both measures, *Distance Between President and Senate Committee Median* \times *Presidential Tenure* and *Divided Government (President and Senate)* \times *Presidential Tenure*, have positive and significant coefficients. Specifically, **Model 14** reveals that as the absolute ideological distance between the president and relevant Senate committee median member increases, appointee compliance increases by 0.004 units for each additional quarter served in office.

[Insert Table 4 About Here]

Figure 3A graphically shows the conditional relationship over the president's tenure in office. A one-unit increase in the absolute ideological distance between the president and relevant Senate median committee member translates to a 0.186 unit increase in appointee compliance from the first quarter to the last quarter of a two-term administration. Although this

difference represents 79.83% of the interquartile range of the dependent variable, a large substantive outcome, the difference fails to attain statistical significance at conventional levels. The comparable test using the discrete measure of presidential-Senate ideological conflict (*Presidential Tenure* × *Divided Government (President and Senate)*) reflected in **Model 16** reveals a strikingly similar substantive pattern, except that a higher portion of the confidence interval density is positive, compared to **Model 14**.¹⁵

[Insert Figure 4 About Here]

We run similar tests to **Table 4** and **Figure 4A** on agent competence. **Table 5** and **Figure 4B** present these complementary results. Specifically, we test hypothesis *H5b*'s prediction that while presidents increasingly rely on higher levels of appointee competence during their time in office (denoted by the positive *Presidential Tenure* coefficients in all four models), this pattern is counterbalanced by increasing ideological conflict with the Senate, no matter what definition of conflict is used (i.e., absolute ideological distance between the president and relevant Senate committee median member or the existence of split party control between the White House and the Senate). Both coefficients, *Distance Between President and Senate Committee Median* × *Presidential Tenure* and *Divided Government (President and Senate)* × *Presidential Tenure*, are negative and significant in the full and trimmed samples. Unlike the compliance models in **Table 4**, these results are robust to the exclusion of extreme outlying observations of appointee competence, though we limit our discussion to the models on the trimmed sample (**Models 18** and **20**). Specifically, **Model 18** reveals that as the absolute ideological distance between the president and relevant Senate committee median member

¹⁵ For example, in the 32nd quarter in office, the 95% upper confidence limit for this conditional marginal effect is about four times greater than zero vis-à-vis less the 95% lower confidence limit than zero in **Model 16**, but is three times greater in **Model 14**.

increases, appointee competence declines by 0.082 units for each additional quarter they serve in office.

[Insert Table 5 About Here]

Figure 4B graphically portrays the conditional relationship over the president's tenure in office. A one unit increase in the absolute ideological distance between the president and relevant Senate median committee member's common space scores leads to a 2.55 unit decrease in appointee competence from first taking office (quarter 1) to leaving office (quarter 32) of a two-term of an administration, which constitutes 121.03% of the interquartile range impact on this dependent variable. This difference is substantively larger than the corresponding difference for appointee compliance in **Figure 4A**. It is also statistically significant. The distance between the president and the committee median member has a positive relationship to presidential selection of agency leaders based on competence traits during the first two years in office ($p < 0.025$, one-tail test); the relationship becomes negative during the president's second term (Quarters 17 and 18 $p < 0.05$, one-tail test; Quarters 19 and beyond: $p < 0.025$, one-tail test).

The other measure of president-Senate conflict yields similar but more modest results. Specifically, **Model 20** shows that when the White House and Senate are controlled by different parties, appointee competence declines by 0.063 units for each additional quarter in office, which constitutes 3.89% of the interquartile range difference in the appointee competence variable in the trimmed sample per each successive quarter. Over the course of a two-term presidency, the change from unified government to divided government results in a 1.12 unit decline in appointee competence, which represents 53.16% of the interquartile range difference in the appointee competence variable in the trimmed sample. In sum, presidents do seem to learn over their tenure how to deal with conflict with the Senate when it comes to managing the

bureaucracy through the mechanism of agency leadership appointments. Specifically, they prefer greater loyalty and lower qualifications from appointees in agency leadership positions in response to separation of powers conflict. Presidents, in other words, get better at confronting legislative influence over the bureaucracy. This finding, of course, also suggests inter-branch conflict yields agency leadership of lower quality (i.e., higher compliance coupled with lower competence) than would otherwise be the case predicted from the “baseline” learning hypothesis.

Conclusion

Information and expertise are critical to the functioning of the organizational presidency. Although presidents rely on a cadre of advisers to assist them with governing, presidents who also learn from repetitive tasks often perform them with greater effectiveness as they become more seasoned. This type of experiential learning suggests that presidents possess a dynamic decision-making calculus that is not constrained in a static manner by episodes of inter-institutional conflict with Congress, a fixed level of information asymmetry vis-à-vis bureaucratic agencies, and the like. Rather, presidents adapt by learning from their experiences and consequently become more effective at pursuing policy and administrative goals that best serve their own interests.

In this study, we have proposed a theoretical logic to explain how presidential appointment choices in federal agencies dynamically evolve through the course of a given administration. The theory of experiential learning posits that presidents become more effective at choosing agency leaders who will further their interests as their tenure in office grows. As a result, presidents will increasingly rely less on compliance and more on competence as their administration matures. This response is due not only to the fact that “learning” presidents

require less loyal agents over time as they become increasingly more comfortable in their surroundings, but also that they need more increased information and expertise from their agency leaders in order to overcome the shorter window of opportunity and loss of political capital presidents face as their time in office grows longer. Furthermore, our theory predicts that presidents will alter their appointment strategies as they become more experienced managers. As presidents become more experienced, they will do a better job of compensating for uncertainty regarding appointee characteristics by placing a greater (relative) risk premium on such agent traits as their administration evolves (*Agent Selection Learning*). They will also rely less on mechanism design strategies that mitigate information and policy biases through “counterbalancing” loyalty and qualifications within agency organizational hierarchies (*Agent Monitoring Learning*). And they will better handle policy conflict with Congress by placing a greater premium on appointee compliance while preferring less appointee competence as a rational response for insulating government agencies from legislative branch influence (*Separation of Powers Learning*).

This experiential learning theory obtains strong empirical support, which comports with what we already know about the dynamic nature of the presidency. Specifically, “novice” presidents during the administrative presidency are both poorly informed and unprepared when they first become the chief executive of the U.S. federal government. This lack of information and preparation is further exacerbated by the fact that new presidents often do a poor job of making transitions between campaigning and governing modes (e.g., Pfiffner 1988). As presidents become more experienced in managing the bureaucracy, their reservoir of information and expertise expands, and therefore, they become more effective at the tasks of governance (Light 1999: 37). The experiential learning theory advanced in this study offers a novel

systematic theory that explains this type of learning process and its implications for improving the caliber of agency leadership to better serve appointing presidents' policy and administration objectives.

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FIGURE 1

Presidential Appointments to U.S. Federal Agency Leadership Positions: The Dynamics of Appointee Traits During the Life Cycle of Presidential Administrations

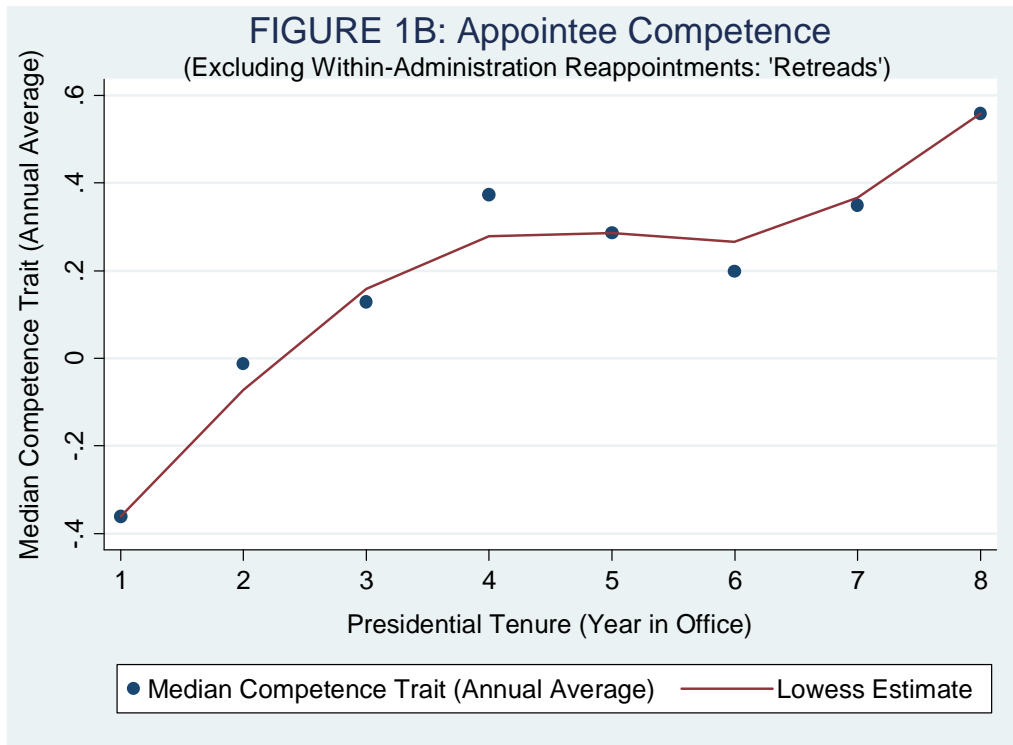
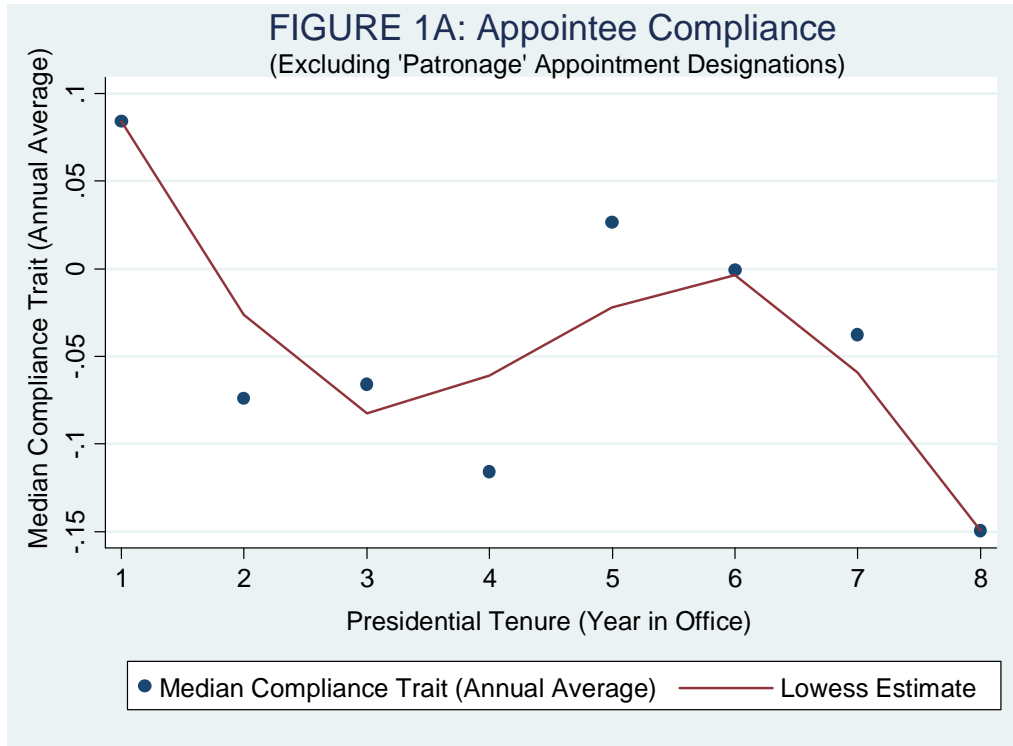


TABLE 1

“Baseline” Learning and Presidential Appointments to Leadership Positions in U.S. Federal Agencies, 1977-2009
Hierarchical Model with Two-Level Nested Random Intercepts (Restricted Maximum Likelihood Estimation)

	Model 1 Compliance [Full Sample]	Model 2 Compliance [Trimmed Sample]	Model 3 Competence [Full Sample]	Model 4 Competence [Trimmed Sample]
	Coefficient	Coefficient	Coefficient	Coefficient
Presidential Tenure (Quarters in Office)	-0.011*** (0.003)	-0.009*** (0.0002)	0.054*** (0.011)	0.050*** (0.010)
Head Supervisory Position	0.174*** (0.024)	0.140*** (0.023)	-0.170* (0.113)	-0.018 (0.100)
Compliance Uncertainty	-4.663*** (0.297)	-4.387*** (0.273)	_____	_____
Competence Uncertainty	_____	_____	-0.109 (0.327)	-1.154*** (0.338)
Common Space Distance Between President & Senate Committee Median	-0.060 (0.088)	-0.071 (0.083)	0.120 (0.368)	0.126 (0.342)
Divided Government (President and Senate)	0.070* (0.048)	0.053 (0.044)	-0.129 (0.197)	-0.133 (0.184)
Presidential Job Approval (Month of Nomination)	-0.002E-01 (0.001)	0.001 (0.001)	0.005 (0.004)	0.006* (0.004)
Agency Policy Saliency (State of Union Agency Policy Mentions Count)	0.006 (0.005)	0.005 (0.005)	0.039* (0.024)	0.029* (0.022)
Independent Regulatory Commission	-0.195*** (0.028)	-0.162*** (0.027)	0.130 (0.201)	0.147 (0.163)
Second Term (“Lame Duck”)	0.132*** (0.044)	0.130*** (0.041)	-0.437*** (0.181)	-0.410*** (0.168)
“Patronage” Appointee Designation	0.047* (0.032)	0.017 (0.030)	_____	_____
Within-Administration Reappointment	_____	_____	-0.123 (0.167)	-0.202* (0.155)
Constant	1.966*** (0.144)	1.809*** (0.131)	-0.759* (0.403)	-0.053 (0.380)
<i>Level 1 Random Effects (μ_i): Agency Random Intercepts</i>	0.035 (0.021)	0.030 (0.021)	0.472 (0.087)	0.361 (0.075)
<i>Level 2 Random Effects (μ_{ij}): Agency Position Type Random Intercepts</i>	0.056 (0.017)	0.056 (0.015)	0.316 (0.076)	0.249 (0.077)
<i>Error Variance Component (ϵ_{ij})</i>	0.332 (0.007)	0.301 (0.006)	1.365 (0.027)	1.244 (0.026)
<i>Likelihood Ratio Test for Nested Random Intercepts: χ^2-(2) & Corresponding Probability Value</i>	9.96*** [0.007]	13.45*** [0.001]	102.49*** [0.000]	64.44*** [0.000]
Model χ^2 Statistic & Corresponding Probability Value	459.74*** [0.000]	431.25*** [0.000]	65.74*** [0.000]	68.80*** [0.000]
Effective Sample Size	1356	1290	1356	1290

Notes: Dependent variable for Models 1 and 2 is the Bayesian posterior median *compliance* score for each appointee. Dependent variable for Models 3 and 4 is the Bayesian posterior median *competence* score for each appointee. Presidential administration fixed effects are included in each model specification (not reported in the table). Trimmed samples comprise of 95% of full sample observations by deleting 2.5% extreme cases on both tails of the distribution of the dependent variables due to excessive kurtosis (but skewness is not present in these data).

*significant at the 0.10 level **significant at the 0.05 level ***significant at the 0.01 level (one-tailed tests).

TABLE 2

“Agent Selection” Learning and Presidential Appointments to Leadership Positions in U.S. Federal Agencies, 1977-2009
Hierarchical Model with Two-Level Nested Random Intercepts (Restricted Maximum Likelihood Estimation)

	Model 5 Compliance [Full Sample]	Model 6 Compliance [Trimmed Sample]	Model 7 Competence [Full Sample]	Model 8 Competence [Trimmed Sample]
	Coefficient	Coefficient	Coefficient	Coefficient
<i>Presidential Tenure (Quarters in Office)</i>	-0.045*** (0.012)	-0.046*** (0.011)	-0.084*** (0.028)	-0.072*** (0.029)
<i>Head Supervisory Position</i>	0.170*** (0.024)	0.136*** (0.023)	-0.163* (0.111)	0.023 (0.098)
<i>Compliance Uncertainty</i>	-5.674*** (0.458)	-5.482*** (0.420)	_____	_____
<i>Compliance Uncertainty × Presidential Tenure</i>	0.084*** (0.029)	0.091*** (0.027)	_____	_____
<i>Competence Uncertainty</i>	_____	_____	-2.055*** (0.492)	-2.901*** (0.515)
<i>Competence Uncertainty × Presidential Tenure</i>	_____	_____	0.179*** (0.034)	0.160*** (0.036)
<i>Common Space Distance Between President and Senate Committee Median</i>	-0.066 (0.088)	-0.077 (0.082)	0.202 (0.365)	0.207 (0.341)
<i>Divided Government (President and Senate)</i>	0.068* (0.048)	0.050 (0.044)	-0.163 (0.196)	-0.170 (0.183)
<i>Presidential Job Approval (Month of Nomination)</i>	-0.001E-02 (0.001)	0.001 (0.001)	0.005 (0.004)	0.005* (0.004)
<i>Agency Policy Saliency (State of Union Agency Policy Mentions Count)</i>	0.005 (0.005)	0.002 (0.004)	0.042** (0.024)	0.031* (0.022)
<i>Independent Regulatory Commission</i>	-0.197*** (0.028)	-0.164*** (0.026)	0.119 (0.197)	0.141 (0.157)
<i>Second Term (“Lame Duck”)</i>	0.135*** (0.044)	0.134*** (0.040)	-0.401*** (0.179)	-0.380*** (0.160)
<i>“Patronage” Appointee Designation</i>	0.044* (0.032)	0.013 (0.030)	_____	_____
<i>Within-Administration Reappointment</i>	_____	_____	-0.102 (0.166)	-0.185 (0.154)
Constant	2.371*** (0.199)	2.235*** (0.183)	0.726* (0.489)	1.267*** (0.479)
<i>Level 1 Random Effects (μ_i): Agency Random Intercepts</i>	0.034 (0.021)	0.029 (0.021)	0.463 (0.086)	0.346 (0.072)
<i>Level 2 Random Effects (μ_{ij}): Agency Position Type Random Intercepts</i>	0.055 (0.018)	0.056 (0.015)	0.304 (0.075)	0.233 (0.077)
<i>Error Variance Component (ε_{ij})</i>	0.331 (0.007)	0.299 (0.006)	1.352(0.027)	1.237 (0.026)
<i>Likelihood Ratio Test for Nested Random Intercepts: χ²-(2) & Corresponding Probability Value</i>	9.60*** [0.008]	13.13*** [0.001]	98.96*** [0.000]	58.40*** [0.000]
<i>Model χ² Statistic & Corresponding Probability Value</i>	473.40*** [0.000]	448.09*** [0.000]	94.59*** [0.000]	89.68*** [0.000]
Effective Sample Size	1356	1290	1356	1290

Notes: Dependent variable for Models 5 and 6 is the Bayesian posterior median *compliance* score for each appointee. Dependent variable for Models 7 and 8 is the Bayesian posterior median *competence* score for each appointee. Presidential administration fixed effects are included in each model specification (not reported in the table). Trimmed samples comprise of 95% of full sample observations by deleting 2.5% extreme cases on both tails of the distribution of the dependent variables due to excessive kurtosis (but skewness is not present in these data).

*significant at the 0.10 level **significant at the 0.05 level ***significant at the 0.01 level (one-tailed tests).

FIGURE 2

Presidential Appointments to U.S. Federal Agency Leadership Positions: “Agent Selection” Learning During the Life Cycle of Presidential Administrations

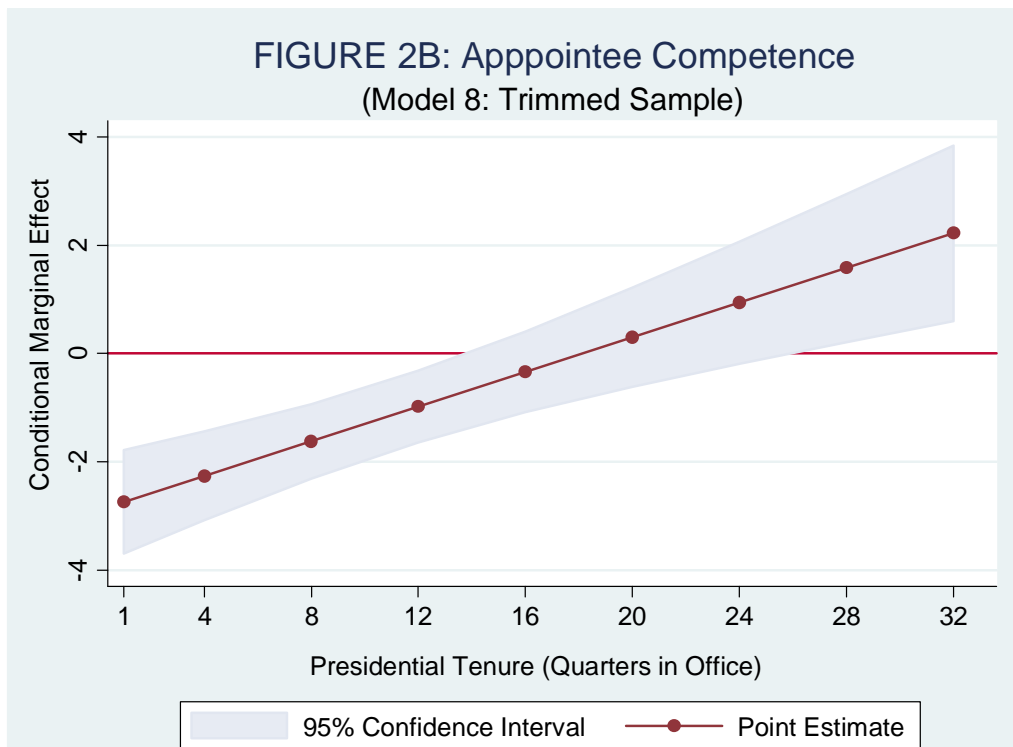
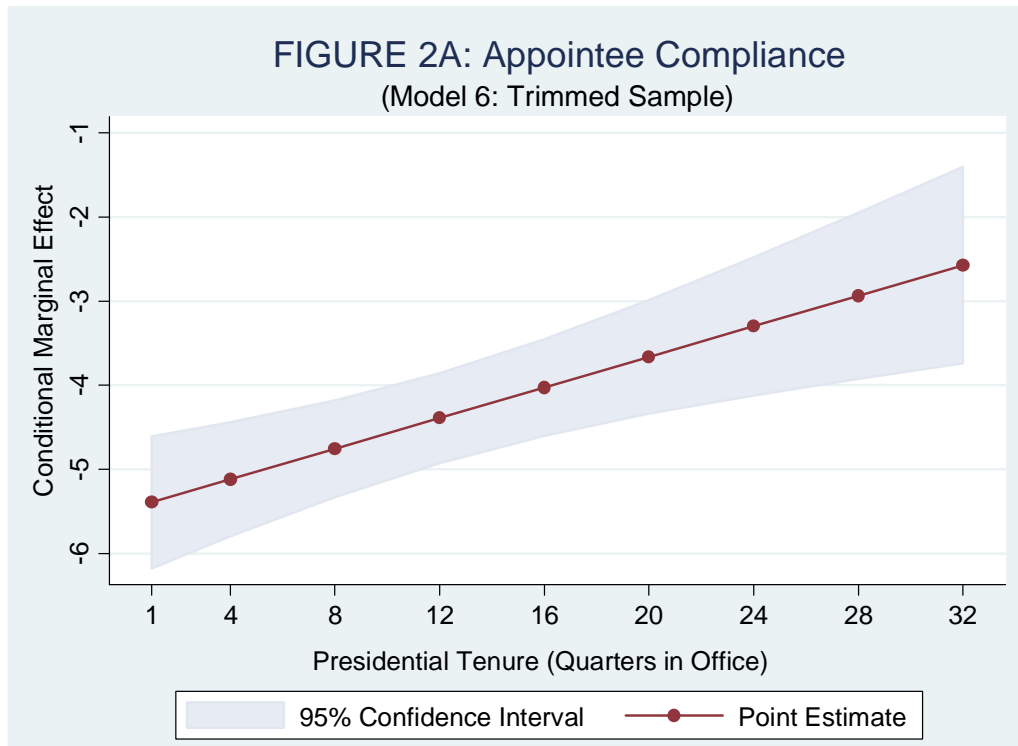


TABLE 3

“Agent Monitoring” Learning and Presidential Appointments to Leadership Positions in U.S. Federal Agencies, 1977-2009
Hierarchical Model with Two-Level Nested Random Intercepts (Restricted Maximum Likelihood Estimation)

	Model 9 Compliance [Full Sample]	Model 10 Compliance [Trimmed Sample]	Model 11 Competence [Full Sample]	Model 12 Competence [Trimmed Sample]
	Coefficient	Coefficient	Coefficient	Coefficient
<i>Presidential Tenure (Quarters in Office)</i>	-0.010*** (0.003)	-0.009*** (0.003)	0.049*** (0.011)	0.046*** (0.011)
<i>Head Supervisory Position</i>	0.208*** (0.034)	0.157*** (0.032)	-0.329** (0.147)	-0.095 (0.134)
<i>Head Supervisory Position × Presidential Tenure</i>	-0.003* (0.002)	-0.002 (0.001)	0.016** (0.009)	0.011 (0.009)
<i>Compliance Uncertainty</i>	-4.650*** (0.297)	-4.382*** (0.274)	—	—
<i>Competence Uncertainty</i>	—	—	-0.093 (0.327)	-1.146*** (0.338)
<i>Common Space Distance Between President and Senate Committee Median</i>	-0.056 (0.088)	-0.068 (0.082)	0.102 (0.368)	0.107 (0.343)
<i>Divided Government (President and Senate)</i>	0.066* (0.048)	0.051 (0.044)	-0.108 (0.198)	-0.118 (0.185)
<i>Presidential Job Approval (Month of Nomination)</i>	-0.002E-01 (0.001)	0.005E-01 (0.009E-01)	0.005 (0.004)	0.006* (0.004)
<i>Agency Policy Salience (State of Union Agency Policy Mentions Count)</i>	0.005 (0.005)	0.005 (0.005)	0.039* (0.024)	0.029* (0.022)
<i>Independent Regulatory Commission</i>	-0.195*** (0.028)	-0.162*** (0.027)	0.125 (0.200)	0.144 (0.162)
<i>Second Term (“Lame Duck”)</i>	0.131*** (0.044)	0.130*** (0.041)	-0.434*** (0.181)	-0.407*** (0.168)
<i>“Patronage” Appointee Designation</i>	0.047* (0.032)	0.017 (0.030)	—	—
<i>Within-Administration Reappointment (“Retread”)</i>	—	—	-0.114 (0.167)	-0.197 (0.155)
Constant	1.949*** (0.142)	1.789*** (0.132)	-0.717* (0.404)	-0.015 (0.381)
<i>Level 1 Random Effects (μ_i): Agency Random Intercepts</i>	0.0364 (0.021)	0.031 (0.021)	0.472 (0.087)	0.361 (0.074)
<i>Level 2 Random Effects (μ_{ij}): Agency Position Type Random Intercepts</i>	0.055 (0.018)	0.056 (0.015)	0.304 (0.077)	0.240 (0.078)
<i>Error Variance Component (ε_{ij})</i>	0.332 (0.007)	0.301 (0.006)	1.365 (0.027)	1.245 (0.026)
<i>Likelihood Ratio Test for Nested Random Intercepts: χ²-(2) & Corresponding Probability Value</i>	10.09*** [0.006]	13.56*** [0.001]	100.65*** [0.000]	63.56*** [0.000]
Model χ ² Statistic & Corresponding Probability Value	463.01*** [0.000]	431.60*** [0.000]	68.52*** [0.000]	70.24*** [0.000]
Effective Sample Size	1356	1290	1356	1290

Notes: Dependent variable for Models 9 and 10 is the Bayesian posterior median *compliance* score for each appointee. Dependent variable for Models 11 and 12 is the Bayesian posterior median *competence* score for each appointee. Presidential administration fixed effects are included in each model specification (not reported in the table). Trimmed samples comprise of 95% of full sample observations by deleting 2.5% extreme cases on both tails of the distribution of the dependent variables due to excessive kurtosis (but skewness is not present in these data).

*significant at the 0.10 level **significant at the 0.05 level ***significant at the 0.01 level (one-tailed tests).

FIGURE 3

Presidential Appointments to U.S. Federal Agency Leadership Positions: “Agent Monitoring” Learning During the Life Cycle of Presidential Administrations

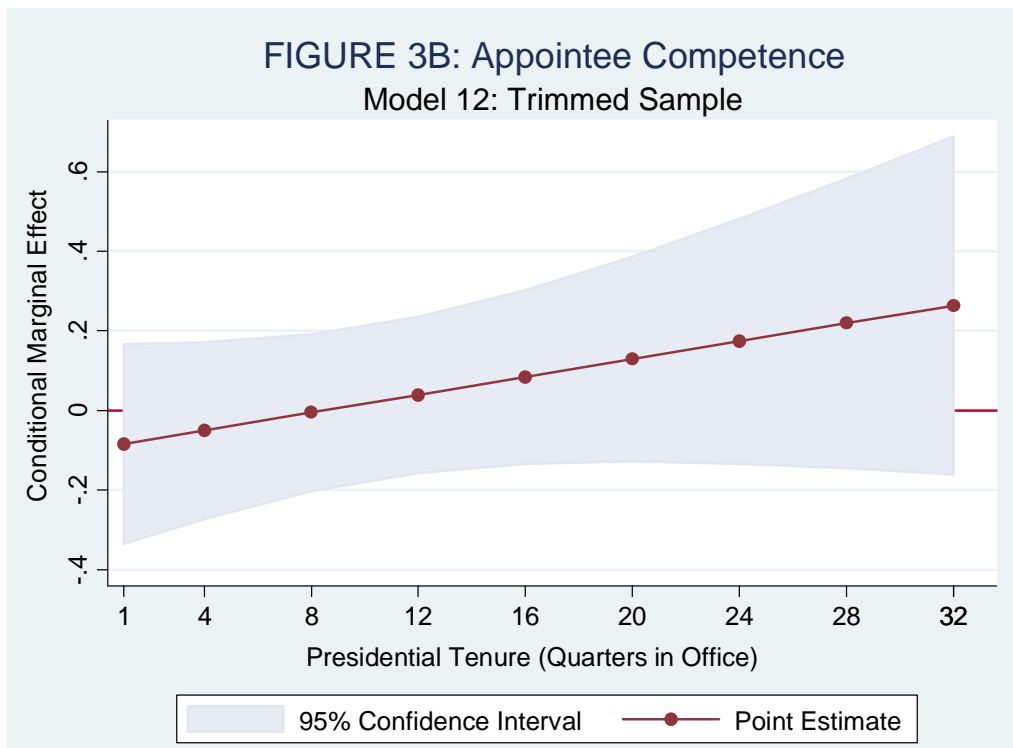
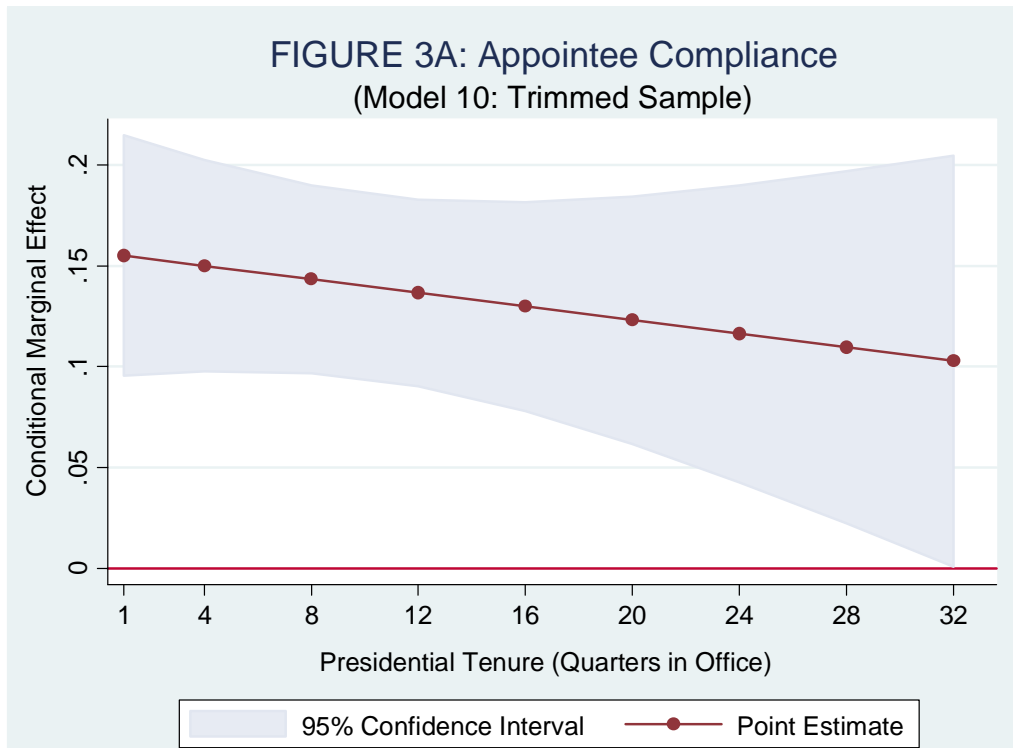


TABLE 4

“Common Agency” Learning and Presidential Appointments to Leadership Positions in U.S. Federal Agencies, 1977-2009: Agent Compliance Hierarchical Model with Two-Level Nested Random Intercepts (Restricted Maximum Likelihood Estimation)

	Model 13 Common Space Distance [Full Sample]	Model 14 Common Space Distance [Trimmed Sample]	Model 15 Divided Government [Full Sample]	Model 16 Divided Government [Trimmed Sample]
	Coefficient	Coefficient	Coefficient	Coefficient
<i>Presidential Tenure (Quarters in Office)</i>	-0.012*** (0.004)	-0.012*** (0.004)	-0.011*** (0.003)	-0.010*** (0.003)
<i>Head Supervisory Position</i>	0.174*** (0.025)	0.139*** (0.023)	0.173*** (0.024)	0.139*** (0.023)
<i>Compliance Uncertainty</i>	-4.644*** (0.297)	-4.381*** (0.273)	-4.660*** (0.297)	-4.382*** (0.273)
<i>Common Space Distance Between President and Senate Committee Median</i>	-0.025 (0.093)	-0.076 (0.087)	_____	_____
<i>Common Space Distance Between President & Senate Committee Median × Presidential Tenure</i>	0.004 (0.006)	0.006 (0.005)	_____	_____
<i>Divided Government (President and Senate)</i>	_____	_____	0.006 (0.090)	-0.061 (0.084)
<i>Divided Government (President and Senate) × Presidential Tenure</i>	_____	_____	0.002 (0.004)	0.004 (0.004)
<i>Presidential Job Approval (Month of Nomination)</i>	0.002E-01 (0.001)	0.006E-01 (0.001)	-0.004E-01 (0.001)	0.004E-01 (0.001)
<i>Agency Policy Saliency (State of Union Agency Policy Mentions Count)</i>	0.006 (0.005)	0.006 (0.005)	0.006 (0.005)	0.005 (0.005)
<i>Independent Regulatory Commission</i>	-0.194*** (0.029)	-0.160*** (0.027)	0.193*** (0.028)	0.160*** (0.027)
<i>Second Term (“Lame Duck”)</i>	0.131*** (0.044)	0.129*** (0.041)	0.135*** (0.043)	0.133*** (0.040)
<i>“Patronage” Appointee Designation</i>	0.048* (0.032)	0.017 (0.030)	0.047* (0.032)	0.017 (0.030)
Constant	1.944*** (0.143)	1.797*** (0.132)	1.954*** (0.140)	1.783 (0.130)
<i>Level 1 Random Effects (μ_i): Agency Random Intercepts</i>	0.035 (0.021)	0.031 (0.021)	0.035 (0.021)	0.031 (0.021)
<i>Level 2 Random Effects (μ_{ij}): Agency Position Type Random Intercepts</i>	0.057 (0.018)	0.057(0.015)	0.057 (0.018)	0.056 (0.015)
<i>Error Variance Component (ε_{ij})</i>	0.332 (0.007)	0.301 (0.006)	0.332 (0.007)	0.300 (0.006)
<i>Likelihood Ratio Test for Nested Random Intercepts: χ²-(2) & Corresponding Probability Value</i>	10.56*** [0.005]	13.82*** [0.001]	10.34*** [0.000]	13.89*** [0.001]
<i>Model χ² Statistic & Corresponding Probability Value</i>	455.00*** [0.000]	430.23*** [0.000]	458.26*** [0.000]	431.35*** [0.000]
Effective Sample Size	1356	1290	1356	1290

Notes: Dependent variable for Models 13-16 is the Bayesian posterior median *compliance* score for each appointee. Presidential administration fixed effects are included in each model specification (not reported in the table). Trimmed samples comprise of 95% of full sample observations by deleting 2.5% extreme cases on both tails of the distribution of the dependent variables due to excessive kurtosis (but skewness is not present in these data).

*significant at the 0.10 level **significant at the 0.05 level ***significant at the 0.01 level (one-tailed tests).

FIGURE 4

Presidential Appointments to U.S. Federal Agency Leadership Positions: “Common Agency” Learning During the Life Cycle of Presidential Administrations

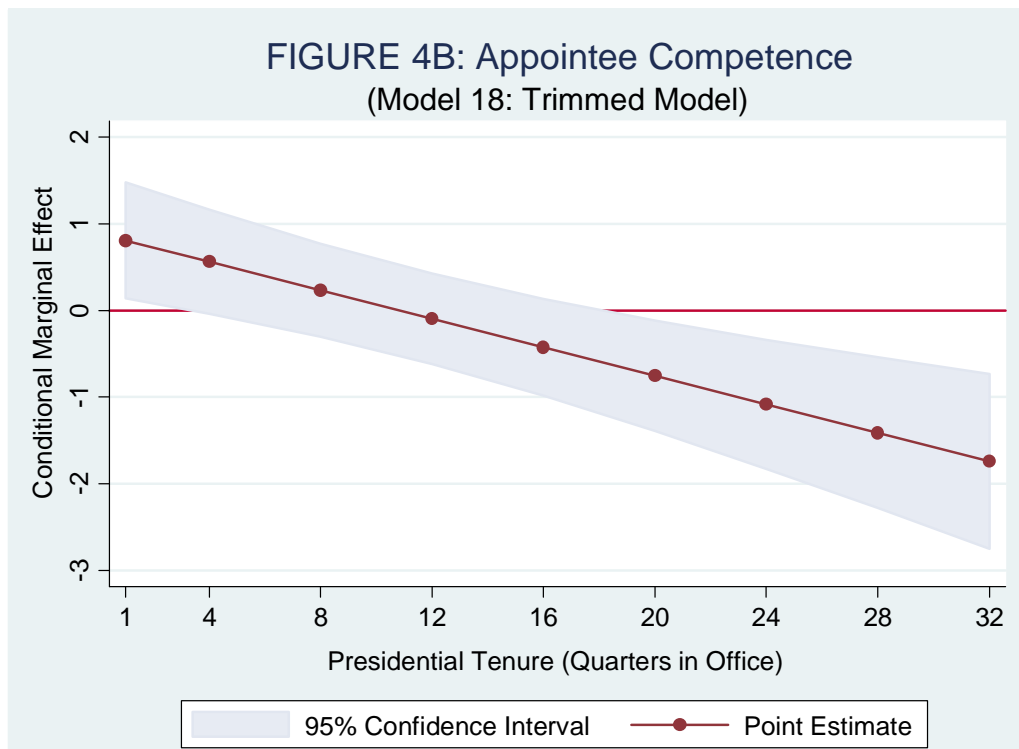
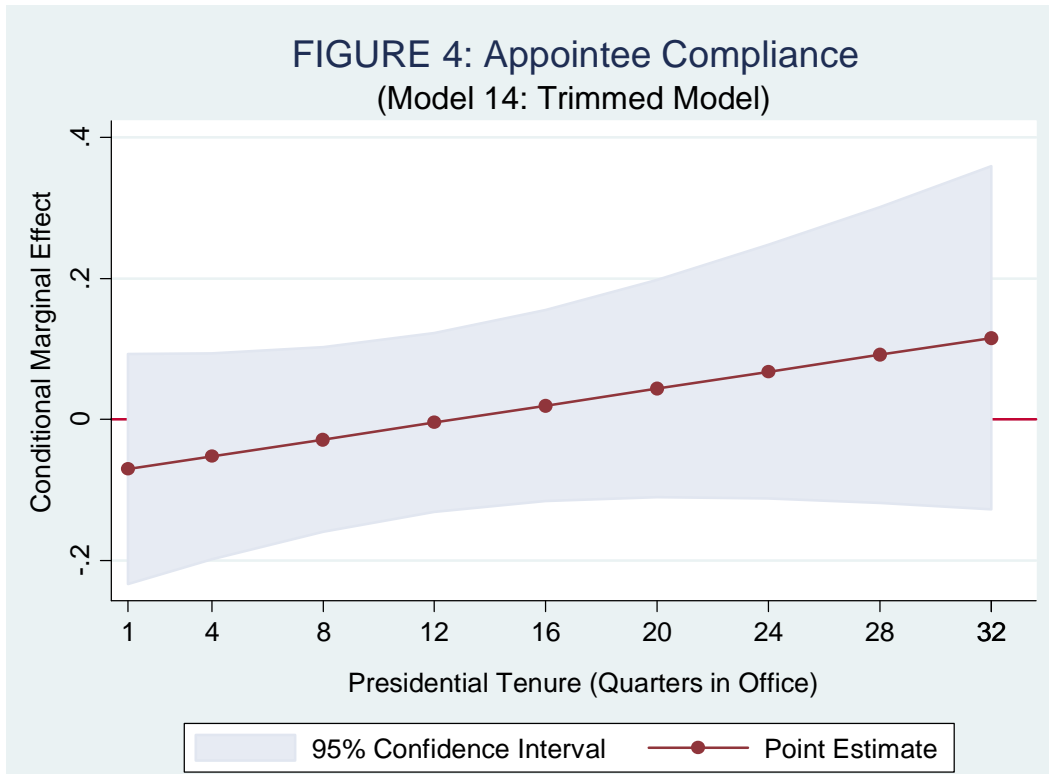


TABLE 5

“Common Agency” Learning and Presidential Appointments to Leadership Positions in U.S. Federal Agencies, 1977-2009: Agent Competence Hierarchical Model with Two-Level Nested Random Intercepts (Restricted Maximum Likelihood Estimation)

	Model 17 Common Space Distance [Full Sample]	Model 18 Common Space Distance [Trimmed Sample]	Model 19 Divided Government [Full Sample]	Model 20 Divided Government [Trimmed Sample]
	Coefficient	Coefficient	Coefficient	Coefficient
<i>Presidential Tenure (Quarters in Office)</i>	0.093*** (0.018)	0.101*** (0.017)	0.059*** (0.011)	0.055*** (0.010)
<i>Head Supervisory Position</i>	-0.165* (0.114)	0.028 (0.100)	-0.165* (0.113)	0.023 (0.100)
<i>Competence Uncertainty</i>	-0.143 (0.325)	-1.201*** (0.336)	-0.091 (0.326)	-1.122*** (0.337)
<i>Common Space Distance Between President and Senate Committee Median</i>	0.676** (0.383)	0.891*** (0.356)	_____	_____
<i>Common Space Distance Between President & Senate Committee Median × Presidential Tenure</i>	-0.063*** (0.023)	-0.082*** (0.021)	_____	_____
<i>Divided Government (President and Senate)</i>	_____	_____	0.652** (0.373)	0.729** (0.345)
<i>Divided Government (President and Senate) × Presidential Tenure</i>	_____	_____	-0.034** (0.016)	-0.038*** (0.014)
<i>Presidential Job Approval (Month of Nomination)</i>	0.004 (0.004)	0.005 (0.004)	0.005* (0.004)	0.006** (0.004)
<i>Agency Policy Salience (State of Union Agency Policy Mentions Count)</i>	0.038* (0.024)	0.028 (0.022)	0.040** (0.024)	0.031* (0.022)
<i>Independent Regulatory Commission</i>	0.114 (0.203)	0.126 (0.163)	0.124 (0.202)	0.140 (0.163)
<i>Second Term (“Lame Duck”)</i>	-0.430*** (0.180)	-0.402*** (0.167)	-0.444*** (0.180)	-0.415*** (0.167)
<i>Within-Administration Reappointment (“Retread”)</i>	_____	_____	-0.117 (0.167)	-0.197 (0.155)
Constant	-0.980** (0.400)	-0.356 (0.377)	-0.793 (0.394)	-0.097 (0.372)
<i>Level 1 Random Effects (μ_i): Agency Random Intercepts</i>	0.476 (0.088)	0.361 (0.075)	0.474 (0.088)	0.362 (0.075)
<i>Level 2 Random Effects (μ_{ij}): Agency Position Type Random Intercepts</i>	0.319 (0.076)	0.251 (0.076)	0.318 (0.076)	0.250 (0.076)
<i>Error Variance Component (ε_{ij})</i>	1.360 (0.027)	1.237 (0.026)	1.362 (0.027)	1.241 (0.026)
<i>Likelihood Ratio Test for Nested Random Intercepts: χ²-(2) & Corresponding Probability Value</i>	104.47*** [0.000]	64.39*** [0.000]	104.34*** [0.000]	65.33*** [0.000]
<i>Model χ² Statistic & Corresponding Probability Value</i>	73.41*** [0.000]	84.16*** [0.000]	70.61*** [0.000]	75.85*** [0.000]
Effective Sample Size	1356	1290	1356	1290

Notes: Dependent variable for Models 17-20 is the Bayesian posterior median *competence* score for each appointee. Presidential administration fixed effects are included in each model specification (not reported in the table). Trimmed samples comprise of 95% of full sample observations by deleting 2.5% extreme cases on both tails of the distribution of the dependent variables due to excessive kurtosis (but skewness is not present in these data).

*significant at the 0.10 level **significant at the 0.05 level ***significant at the 0.01 level (one-tailed tests).