

The Tenure of Political Appointees*

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Abstract

Turnover among political appointees can dramatically influence the performance of administrative agencies. This paper examines turnover with a formal model that focuses on two determinants of turnover: comparative wages and the political preferences of the president, Congress, and appointees. From the model, we derive a set of testable hypotheses about job tenure that we test with a new data set on the tenure of secretaries, deputy secretaries, under secretaries, and assistant secretaries during the period 1789-2000. Principal among our conclusions is that low relative salaries for appointees and policy conflict between the president and Congress increase turnover among political appointees.

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I. Introduction

A large disjunction between public perception and academic wisdom concerns the role of the president's office in the American political system. While the public generally views the president as the powerful personification of our national government, political scientists have emphasized the inherent weaknesses of his office, often reducing the "Leader of the Free World" to a mere agent in a scheme of congressional dominance.

Undoubtedly, the near-exclusive academic focus on areas such as legislative influence reinforce this derogation of the president since he is constitutionally weakest in such areas. While the president's role in legislative politics is obviously an important issue, an exclusive focus downplays the policy impact that the president exercises in his primary constitutional role as the head of the executive branch. In particular, equivalent attention is rarely paid to how the president's powers of appointment and removal affect agency decision-making. Given the increased importance of administrative policymaking relative to legislation over the past century, this inattention may generate a distorted image of the distribution of powers among our national institutions.

While the presidential powers of appointment and removal are formidable, many roadblocks exist in using them to control the bureaucracy. The president must identify, recruit, and retain talented individuals committed to his programmatic and political goals. First, in the identification and recruitment of candidates, the president must accommodate his partisan and electoral coalitions. Second, because of the confirmation process, the president must take into account the preferences of the Senators and of their constituents. Finally and perhaps most importantly, the president must retain appointees; once an appointee is in office, she must stay long enough to transmit the president's program competently into the bureaucracy.

Often the failure to achieve this final imperative most undermines presidential leadership in the bureaucracy. Reining in the national government's massive administrative apparatus requires time on

the job by the presidential appointees. Not only does a new administration face the inherent inertia of prior administrative practices, but also job-specific experience for political appointees is crucial for their informed decision-making.

American presidents face numerous obstacles in retaining the “best and brightest” in the service of their administrations. One important obstacle is the service of many masters by the political appointee. Members of Congress, interest groups, and the agency itself may try to influence the appointee in a way that conflicts with the administration’s goals. Navigating this minefield can make service for the president quite unattractive. A second obstacle is the appointee’s numerous outside opportunities in both the private and public sectors that may make their service on behalf of a president transitory at best.

In this paper, we seek to systematically explore these influences on turnover among political appointees. Our point of departure is a game-theoretic model that produces predictions about the duration of an appointee’s service. We present evidence for two of the model’s main predictions. First, we test whether inter-branch policy conflict between the president and Congress leads to greater turnover among political appointees. Second, we test whether low public sector wages increase the attractiveness of outside economic options, leading to greater turnover. The results show support for both hypotheses.

II. The Literature on Turnover Among Political Appointees

A number of different works have addressed political appointments. Some explain presidential goals and strategies in the nomination of public officials (Cohen 1995, Fenno 1959, Mackenzie 1981, Moe 1985b, Nathan 1975, 1983, Waterman 1989, Weko 1995). Others focus on the confirmation of executive branch appointees by examining legislative preferences and appointment outcomes (e.g. Chang 2000, Hammond and Hill 1993, Harris 1953, Nokken and Sala 2000, Snyder and Weingast 2000, Weingast and Moran 1983). Still others have focused on how political appointments affect administrative policy (Clayton 1992, Derthick 1990, Moe 1982, Randall 1979, Stewart & Cromartie 1982, Wood 1990, Wood & Anderson 1993, Wood & Waterman 1991, Wood & Waterman 1994), how political appointees

differ from civil servants, and the difficulty of political appointees in orchestrating policy change (Downs 1967, Heclo 1977, Mackenzie 1987, Michaels 1997). In general, the research has explained the approval or rejection of some appointees, the varying confirmation times, and the appointment of some types of individuals rather than others.

However, of particular interest is whether and why political appointees remain in public service – the problem of turnover. Turnover is important because it can dramatically influence the performance of administrative agencies by creating leadership vacuums (Fesler and Kettl 1991, Heclo 1977, Mann and Doig 1965, Stanley, Mann, and Doig 1967). For example, a recent report by the President’s Foreign Intelligence Advisory Board (PFIAB) named turnover among top political appointees as a cause of grave national security lapses at the Department of Energy (DOE).¹ With high turnover, agencies are left with inexperienced newcomers or acting directors who lack authority with career civil servants. The result may be resistance from the careerists who outserve their superiors and consequently, ineffective policy implementation. Indeed, it was precisely resistance from career employees to numerous administrative reform efforts that created the security lapses within the DOE.²

Government officials,³ practitioners,⁴ and academics⁵ have all studied turnover and found that increasing turnover is the trend; since the 30’s, tenure in the top executive positions has decreased (Brauer 1987, Mann 1965, Mackenzie 1997). Between 1933 and 1960, assistant secretaries served an average of 2.7 years while they served 2.3 years between 1964 and 1984 (Stanley, Mann, Doig 1967, Mackenzie

¹ For a summary of the classified and unclassified reports, see President’s Foreign Intelligence Advisory Board. 1999. *Science at its Best, Security at its Worst: A Report on Security Problems at the U.S. Department of Energy*. June, 1999.

² Ibid.

³ Commission on the Organization of the Executive Branch of Government. 1955. *Personnel and Civil Service*. Washington: Government Printing Office. Pp. 25-36; Commission on the Organization of the Executive Branch of Government. 1955. *Task Force Report on Personnel and Civil Service*. Washington: Government Printing Office. pp. 1-47; U.S. Congress. Senate. 1960. *Congressional Record*. 1960. 86th Cong., 2nd Sess., vol. 106, Pt. 12, pp. 15704-15705.; U.S. Congress. Senate. Committee on Government Operations. Subcommittee on National Policy Machinery. *Organizing for National Security*. 86th Cong., 2nd Sess., February 23-25.

⁴ See, for example, Murphy, Nuechterlein, and Stupak 1978; National Academy of Public Administration. 1985. *Leadership in Jeopardy: The Fraying of the Presidential Appointment System*. Washington, DC: National Academy of Public Administration.

⁵ See, for example, Ban and Ingraham (1990), Cohen (1995), Heclo (1977), Joyce (1990), Mackenzie (1987), Macmahon (1926a,1926b), MacMahon and Millett (1939), Mann (1965), and Stanley, Mann, and Doig (1967).

1997, Brauer 1987: 175). Mackenzie (1997) reports that the Federal Aviation Administration employed 11 different administrators in 15 years (7 appointed, 4 acting), the Federal Housing Administration 13 commissioners over 14 years, and the General Services Administration 18 appointees in 24 years. Although several high profile Clinton appointees had long tenures, considerable turnover remained within departments at the subcabinet level, independent agencies, and regulatory commissions.

When surveyed, appointees identify a number of reasons for leaving public service. Most prominently the reasons include low public sector wages and job-related stress. Of those surveyed in 1987, 34% stated that a salary increase would have induced them to stay longer in their positions, and 55% replied that they had made a financial sacrifice to serve (Brauer 1987). Among the foremost causes of job-related stress were dealings with Congress and the White House.⁶

Not everyone weights each factor equally. Some emphasize low public sector wages as a problem in retaining appointees (Brauer 1987, Fisher 1987, Tomlinson and Anderson 1999, Joyce 1990, Mann 1965).⁷ In contrast, others argue that wages do not play a pivotal role in appointees' decisions to leave public service (Cohen 1995, Fesler and Kettl 1991).⁸

Similarly, some argue that policy disagreements between the president and Congress can make an appointee's job incredibly difficult, resulting in increasing turnover rates (Hecló 1977, Young 1966). Others argue, however, that policy disagreement among multiple principals can increase the freedom of political appointees to set the policy they prefer (Dodd and Schott 1979, Hammond and Knott 1996). In the next section, we attempt to engage these controversies with a formal model of appointee tenure.

⁶ See, e.g., Young (1966, ch. 11) for early examples and Hecló (1977) generally.

⁷ For an analysis of federal government employee turnover generally see U.S. Merit Systems Protection Board. 1989. *Who is Leaving the Federal Government? An Analysis of Employee Turnover*. Washington: Government Printing Office.; U.S. Merit Systems Protection Board. 1990. *Why are Employees Leaving the Federal Government?* Washington: Government Printing Office.; U.S. Merit Systems Protection Board. 1990. *Working for America: A Federal Employee Survey*. Washington: Government Printing Office.; U.S. Merit Systems Protection Board. 1994. *Working for America: An Update*. Washington: Government Printing Office.

⁸ For example, Fesler and Kettl (1991, 206) argue, "Departures do not seem to stem from dissatisfaction with pay, even though many of those who leave do improve their incomes." They suggest that low pay is more likely to cause turnover at lower level political appointments since most top-level appointees are well off prior to appointment.

III. A Simple Model of Appointee Tenure

The debates of the existing literature form the starting point for our preliminary theoretical model and data analysis. In this section, we present a simple game-theoretic model that stresses the effects of inter-branch political conflict and the appointees' outside options. This model generates a number of testable propositions about the patterns of appointee turnover. In the following section, we present some preliminary evidence based on our current data that includes the tenure of secretaries, and (non-random) samples of deputy, under, and assistant secretaries during the period 1789-2000. These data support two important hypotheses. First, we find that during periods of high inter-branch policy conflict, the rate of turnover is higher. Second, we find that the rate of turnover is also higher during periods in which inflation generates low real public sector wages.

In our formal model, the president selects an appointee who cares both about policy goals and her remuneration. The appointee decides whether to stay in office by weighing the economic, political, and policy opportunities of her office against those of other political or private sector positions. In order to avoid being fired, the appointee must implement policies that are satisfactory to the president and, to some extent, the legislature. When deciding whether or not to fire the appointee, the president and legislature weigh the costs of removing an appointee with policy positions divergent from their own against the benefits of retaining an appointee who implements policy more effectively as she gains experience in office.

More formally, we develop a dynamic agency model in which two principals, a president (P) and a legislature (L) interact with a political appointee (A) for three periods, $t = 1, 2, 3$. Each of the actors has policy preferences provided by a quadratic utility function over policy outcomes x , given an ideal point i : $u_i(x) = -(x - i)^2$. We assume that the ideal points of the president and legislature are fixed at p and l while the appointee's ideal point is a_t in period t . With no loss of generality, we assume that $l > p$.

In each period, the appointee may elect to stay or leave to pursue outside opportunities. In either instance, she receives a fixed salary, \bar{w} .⁹ If she leaves, she receives the outside offer of salary w , which is drawn from a continuous distribution function, $G(w)$, which we assume is independent and identical across time.¹⁰ We assume that A discounts future wages by a factor δ so that the present discounted value of accepting w is $\frac{w}{1-\delta}$. We assume that if the agent serves the full three periods in office she must accept a draw from G immediately after leaving office.

In each period, either principal may exercise her prerogative to fire the appointee. This action is consistent with the president's formal powers for many positions,¹¹ but assuming the same power for Congress requires some justification. Essentially, we argue that Congress can use its powers of appropriation and oversight to pressure the appointee from office or to force the president to make the removal himself.¹² However, because Congress' powers of removal are more indirect than those of the president, we assume that the legislature must pay a political cost, $k_l > 0$ to terminate an appointee, while the cost to the president is zero. We interpret k to be a function of several institutional variables that affect Congress' ability to bring sufficient pressure for a removal or resignation.¹³

If an appointee resigns or either principal terminates her, a new appointee with ideal point a_t is chosen as a draw from a continuous distribution function, $F(a)$, with density $f(a)$ which is positive for

⁹ This is consistent with the fact that monetary incentives are not used to control appointees. We have very little to say why this is the case.

¹⁰ An extension would be to allow the outside wage distribution to shift to the right as a function of the duration in government service. Such an assumption would be appropriate for those appointees who seek to "cash in" on government service. This "salary" may also reflect the appointees' policy utility in some other political job.

¹¹ The exceptions are those positions in which appointees exercise quasi-judicial or quasi-legislative powers (*Humphrey's Executor v. United States*, 295 U.S. 602 (1935)). Below we sketch an alternative model for these positions that we hope to use as a benchmark for drawing inferences about the efficacy of the president's formal removal powers for executive positions.

¹² However, for simplicity we ignore the effect that the harassments might have on the activities of the appointee while in office.

¹³ The assumption that it is impossible for Congress to engineer an ouster ($k = \infty$) is a special case that produces a prediction in which inter-branch conflict plays no role in appointee turnover. Thus, we can ultimately rely on the data to guide us as to what assumptions about the informal removal power of Congress are more appropriate.

all $a \in \mathbf{R}$.¹⁴ This distribution has mean μ_a and variance σ_a^2 . We assume that both the president and legislature observe the new appointee's ideal point, a_t , only after the appointee has begun to serve. The assumption is realistic given that it is often difficult for the president and legislature to assess an appointee's policy preferences in advance since many appointees have backgrounds other than politics and may have limited records on most public policy issues. Some appointees may not even know their *own* views on a number of issues before confronting such issues on the job. Finally, for simplicity, we ignore any information that might be revealed during the confirmation process.¹⁵

Insert Figure 1 Here

In each period that A is in office, she chooses a policy π_t , which translates probabilistically into policy *outcomes* x , due to the uncertainties of implementing policy. We posit that more experienced appointees implement policy choices with less error such that π is closer to x on average for such appointees. Formally, we assume $x = \pi + \varepsilon_s$, where s is A 's number of periods of experience in the appointed position, and ε_s is a random variable with distribution and density, H_s and h_s , respectively; this distribution has mean zero and variance σ_s^2 . The experience effects are in the assumption $\sigma_s^2 > \sigma_{s+1}^2$; the variance in implementation is smaller for more experienced appointees. Since the president and legislature are risk averse (as they are assumed to have quadratic preferences), they will both attach a premium to the experience the appointee gains from her tenure in office.

Since the ideal point of the agent is perfectly observed by both principals, we prove in the following lemma that she never has an incentive to choose a policy other than her ideal.

Lemma 1: $\pi_t^* = a_t$

¹⁴In future extensions, we will allow the president to choose certain parameters of this distribution. However, for now, we assume that the distribution of appointee ideal points is exogenous.

¹⁵As we outline below, one of the important extensions of this model will be to incorporate a confirmation process that partially reveals this information. However, prior work by McCarty and Razaghian (1999b) shows that the evidence for learning during the confirmation process is weak.

proof: In period 3, there are no retention concerns so $\pi_3^* = a_3$ will be optimal. At time 2, both principals will base their retention decisions prospectively on $\pi_3^* = a_3$, so that π_2^* has no effect on this decision. Thus, $\pi_2^* = a_2$ is optimal. Induction through $t = 1$, establishes the result. *QED*

This lemma simplifies the analysis tremendously. It reduces the decisions of P and L to a question of retaining an agent who will implement a_t with experience s or replacing her with a new agent who implements μ_a (in expectation) with experience 0.

Formally, we can use standard results about quadratic utilities to compute the one period expected utility for principal i of replacing an agent:

$$u_i^D = \int_{-\infty}^{\infty} \int_{-\infty}^{\infty} u_i(a + \varepsilon) f(a) h_0(\varepsilon_0) da d\varepsilon = u_i(\mu_A) - \sigma_A^2 - \sigma_0^2 - k_i. \quad (0.1)$$

Similarly, we can compute the one period utility of retaining an agent with ideal point a and experience s :

$$u_i^R(a, s) = \int_{-\infty}^{\infty} u_i(a + \varepsilon) h_s(\varepsilon_s) = u_i(a) - \sigma_s^2. \quad (0.2)$$

Given this framework, we now characterize the equilibrium behavior of P , L , and A .

Last Period

Since we wish to solve for a subgame perfect Nash equilibrium to this game, we begin the analysis of the decision of P and L just prior to period 3 about retaining A with ideal point a_2 and experience s . Since there is but one period remaining, each principal will wish to retain the agent so long as $u_i^R(a_2, s) \geq u_i^D$, or the utility of retaining is greater than the utility of firing the agent and drawing a new one. Given the strictly concave utility functions, there will be a single region of agent ideal points

that satisfy this inequality given $s \in [a'_{i,2}(s), a''_{i,2}(s)]$. If a_2 is located in this region, principal i will elect to retain her. If not, the agent will be fired by principal i . This result is stated formally in Lemma 2.

Lemma 2: Principal i will wish to retain $\{a_2, s\}$ if and only if

$a_2 \in [a'_{i,2}(s), a''_{i,2}(s)]$ where

$$a'_{i,2}(s) = i - \sqrt{(i - \mu_A)^2 + \sigma_A^2 + \sigma_0^2 - \sigma_s^2 + k_i}$$

$$a''_{i,2}(s) = i + \sqrt{(i - \mu_A)^2 + \sigma_A^2 + \sigma_0^2 - \sigma_s^2 + k_i}$$

proof: The cutpoints follow directly from the two solutions of the quadratic equation

$$u_i^R(a_2, s) = u_i^D. \quad QED$$

We refer to the set $[a'_{i,2}(s), a''_{i,2}(s)]$ as principal i 's retention rule at time 2. Some simple comparative statics reveal that each principal, i , is more likely to retain if her ideal point is far from the expected ideal point of a new agent (μ_a) or the position of the new agent is highly uncertain (large σ_a^2). In addition, both P and L are more likely to retain the appointee if the value of experience, $\sigma_0^2 - \sigma_s^2$, is high. Finally, not surprisingly, L is less likely to terminate the agent when its costs of doing so are higher.

Since both principals must elect to retain the agent, the set that will actually be retained is the intersection $[a'_{p,2}(s), a''_{p,2}(s)] \cap [a'_{i,2}(s), a''_{i,2}(s)]$ that we denote as $[a'_2(s), a''_2(s)]$. The next lemma establishes that in period 2 the set of agents retained will be non-empty.

Lemma 3: $[a'_2(s), a''_2(s)]$ is non-empty.

proof: Since $l > p$, we need only show that $a''_{p,2}(s) > a'_{l,2}(s)$ or

$$p + \sqrt{(p - \mu_A)^2 + \sigma_A^2 + \sigma_0^2 - \sigma_s^2} > l - \sqrt{(l - \mu_A)^2 + \sigma_A^2 + \sigma_0^2 - \sigma_s^2 + k_l}$$

which may be re-written as

$$\sqrt{(p - \mu_A)^2 + \sigma_A^2 + \sigma_0^2 - \sigma_s^2} + \sqrt{(l - \mu_A)^2 + \sigma_A^2 + \sigma_0^2 - \sigma_s^2 + k_l} > l - p.$$

This inequality must be true if $\sqrt{(p - \mu_A)^2} + \sqrt{(l - \mu_A)^2} > l - p$ which can be re-written

as $|\mu_A - p| + |l - \mu_A| > |l - \mu_A - p + \mu_A|$. By the triangle inequality -- $|x| + |y| \geq |x + y|$, the

desired result is obtained.

QED

Since this set is non-empty, a new agent will always be retained with positive probability. In addition, as a non-empty intersection expands or contracts as each of its constituent sets does, the effects σ_a^2 , $\sigma_0^2 - \sigma_s^2$, and k_l on total retention set are the same as those on the individual retention sets. However, legislative-executive policy disagreement has an effect on the overall retention sets. The set of retained agents shrinks as p and l get further apart. In other words, the number of political appointees who will remain from period to period decreases as the policy preferences of P and L diverge. However, this effect is mitigated when the L 's costs of termination (k_l) are high.

We can convert these predictions about retention rules into predictions about the observed survivability of a new agent drawn in period 2. Since this agent will only be retained to period 3 if $a_2 = [a'_2(1), a''_2(1)]$, its survival probability is given by $F(a''_2(1)) - F(a'_2(1))$. Conversely, the initial hazard rate, or probability that a *new* appointee will not be retained, is $1 - F(a''_2(1)) + F(a'_2(1))$. This leads to some interesting predictions about the initial hazard rate. For instance, the initial hazard rate (at $t = 2$) is lower when the expected policy preferences of a new agent are far from each of those of the principals or when the actual policy preferences are highly uncertain. Similarly, the initial hazard rate is

lower when the costs of firing, k_l , are high and when the value of experience, $\sigma_0^2 - \sigma_1^2$, is high. Most importantly for this paper, however, is the following prediction:

H1: The initial hazard rate is higher when the policy preferences of the president and legislature, p and l , diverge.

In other words, when the president and Congress disagree over policy, political appointees are more likely to be removed.

For more senior agents (i.e. those drawn in period 1), the *continuing hazard rate*, the probability of leaving *conditional* on surviving period 1, is either 1 or 0 depending on whether or not $a_2 = [a'_2(2), a''_2(2)]$.

Resignation

Now we turn to the agent's decision to resign after observing her outside option w at the end of period 2. Clearly, A will resign if she expects to be fired. Second, she will resign if her outside wage offer is better than the utility of \bar{w} for one more period and taking a new wage draw at the end of her term. Simple algebra reveals that she will prefer to resign if $w > w_2^* = (1 - \delta)\bar{w} + \delta E(w)$. So the probability that an agent who would have been retained resigns is simply $1 - G(w_2^*)$. Thus, we can write the total hazard rates for agents drawn in period 1 and period 2.

The continuing hazard rate for an agent drawn in period 1 is one if $a_2 \neq [a'_2(2), a''_2(2)]$ and $1 - G(w_2^*)$ otherwise. The initial hazard rate for a 2nd period draw is $1 - F(a''_2(1)) + F(a'_2(1)) + [F(a''_2(1)) - F(a'_2(1))][1 - G(w_2^*)]$. Not surprisingly the hazard rate is decreasing in the real wage \bar{w} .

H2: The initial hazard rate of resignation is higher when real public sector wages are lower.

First Period Decisions

We now turn to the decisions that L and P will make after the first period given their optimal firing decisions in period 2 and the resignation strategy of the agent. As above, we seek to characterize the set of agent ideal points that the principals can agree to retain. We denote this retention rule by $[a'_1, a''_1]$.¹⁶

Our next result characterizes the relationship between the retention rules in periods 1 and 2.

Proposition 2: $[a'_1, a''_1] \subseteq [a'_2(1), a''_2(1)]$

proof: The proposition can be established by showing that it cannot be an equilibrium to retain an period 1 agent who is expected to be terminated in period 2. It follows that the retained agents in period 1 must be a subset of those retained in period 1. Suppose that the proposition were not true because $a'_1 < a'_2(1)$. Then, if a_i were retained in period 1, she would be fired in period 2. Thus, the utility from retaining is given by

$u_i(a'_1) - \sigma_1^2 + u_i^D$. However, the utility of termination is

$$u_i^D + \int_{a'_2(1)}^{a''_2(1)} \left[\hat{G} [u_i(\alpha) - \sigma_1^2] + (1 - \hat{G}) u_i^D \right] f(\alpha) d\alpha + [F(a'_2(1)) + 1 - F(a''_2(1))] u_i^D \text{ where}$$

$\hat{G} = G(w_2^*)$. By definition, a_i is the critical value at which L is indifferent to retaining and rejecting. Thus, it solves

$$u_i(a'_1) - \sigma_1^2 + u_i^D = \left\{ \int_{a'_2(1)}^{a''_2(1)} \left[\hat{G} [u_i(\alpha) - \sigma_1^2] + (1 - \hat{G}) u_i^D \right] f(\alpha) d\alpha + [F(a'_2(1)) + 1 - F(a''_2(1))] u_i^D \right\}$$

¹⁶ We can suppress s since all agents come from the first period with one period of experience.

Note that in the last period $u_i(\alpha) - \sigma_1^2 \geq u_i^D$ for all $\alpha \in [a'(1), a''(1)]$. Thus, the bracketed term must be larger than u_i^D so that we must have $u_i(a'_1) - \sigma_1^2 > u_i^D$. However, we know from lemma 1 that $u_i^D = u_i(a'_2(1)) - \sigma_1^2$ so that we require $u_i(a'_1) > u_i(a'_2(1))$. But this contradicts $a'_1 < a'_2(1)$. Similarly, we can rule out $a''_1 > a''_2(1)$. *QED*

Essentially, the set of agent ideal points retained at time 1 are a proper subset of those that would be retained at time 2. The intuition behind this result is that the expected utility of drawing a new agent is declining over time, because any “successful” draw in later periods serves for a shorter period of time. Thus, each of the principals is willing to tolerate an agent with divergent preferences in the later periods of the game.

Again, we can compute the initial hazard rates due to political factors as $1 - F(a''_2) + F(a'_2)$.

Given the results of proposition 1, this hazard rate is weakly greater than the initial hazard rate for those whose service begins in the second period. Therefore, proposition 1 predicts that the initial hazards due to political factors declines over time. Those appointed later in a president’s term should have a lower initial hazard rate than those appointees who assume office earlier in a president’s term.

Second, since $[a'_1, a''_1] \subseteq [a'_2(1), a''_2(1)] \subseteq [a'_2(2), a''_2(2)]$, all agents retained in period 1 will be retained in period 2. Thus, the continuing political hazard in period 2 for an agent drawn before period 1 is 0 while the total hazard is just $1 - G(w_2^*)$.

First Period Resignation Decisions

In the first period, the agent no longer simply compares its salary offer with its current salary when deciding whether to resign. She must also factor in the fact that by remaining in office she will get additional offers in period 2. Now let w_1^* be the critical wage offer at which the agent is indifferent about resigning.

Proposition 2: $w_1^* > w_2^*$ so that the probability of resignation in period 1 is lower than in period 2.

proof: Let ω_t be the utility of remaining in office in t and define $w_t^* = (1-\delta)\omega_t$ as the wage offer that the agent is indifferent to accepting. Since the agent remains in office with probability $G(w_t^*)$, we can write

$$w_t^* = (1-\delta)\bar{w} + \delta \left[G(w_{t+1}^*)w_{t+1}^* + (1-G(w_{t+1}^*))E(w|w > w_{t+1}^*) \right].$$

From above, we know that $w_2^* = (1-\delta)\bar{w} + \delta E(w)$. Thus, through substitution we get that

$$w_1^* = w_2^* + \delta \left[G(w_2^*)w_2^* + (1-G(w_2^*)) \left[E(w|w > w_2^*) - E(w) \right] \right]. \text{ Since}$$

$$E(w|w > w_2^*) > E(w), \text{ then } w_1^* > w_2^*. \quad QED$$

Proposition 2 suggests that unlike the political hazard function, the “economic” hazards are increasing since agents would rather “jump” at an above average opportunity in the outside labor market than be “pushed” into whatever is available at the end of her term in office.

Combining propositions 1 and 2, the total initial hazard for those drawn before period 1 is $1 - F(a_1'') + F(a_1') + [F(a_1'') - F(a_1')] [1 - G(w_1^*)]$. Since the two distinct types of hazards move in opposite directions, no prediction can be made for the total hazard rate. This suggests the need to be careful to distinguish between the economic and political hazards in empirical work.

IV. Data and Methods

The model produces a number of empirical predictions both about the initial hazard rate of

leaving public service and the continuing hazard rate. We focus our attention on the predictions about the initial hazard rate. We plan to test the model's predictions about the continuing hazard rate in the next iteration of the project.¹⁷

We tested the first two hypotheses with a new dataset. Specifically, we tested the following predictions: (1) the higher the degree of policy disagreement between the president and Congress, the greater the turnover among appointees (H1), and (2) the lower the level of public sector salaries, the greater the turnover among appointees (H2).

We collected data on all cabinet secretaries, and a sample deputy, under and assistant secretaries for the period 1789-2000. The samples are not completely random as we included only those for which we could easily determine dates of departure from office.¹⁸

Table 1 provides the descriptive statistics of appointees' job tenure -- the length of time between an appointee's confirmation and the nomination of the next appointee.¹⁹ For the 1263 appointees in our sample, the average tenure in office was 33 months. Data from Table 1 and Figure 3 demonstrate that deputy and under secretaries have the shortest average tenure. Since all deputy and under secretary positions were created in the 20th century, however, it is difficult to tell whether the shorter tenure is due to the specifics of the position or shorter tenure rates in the modern era (see Figure 4).

Insert Table 1 Here

Insert Figure 3 Here

Insert Figure 4 Here

The general structure of the data is a series of observations for each appointee's term of service in six-month increments. Thus for an appointee who serves one year, there are three sets of observations -- one for the first six months, one for the second six months, and one for the third six months in which she

¹⁷ The primary hindrance to testing the predictions about the shapes of the survival and hazard functions is the problem of separately identifying the economic and political hazards.

¹⁸ The ease of this determination varies greatly across time and departments.

¹⁹ Since data on the exact exit dates is sketchy, in most cases we had to rely on this measure as it could be obtained easily through the *Senate Executive Journal*. Obviously, this measure will be slightly off for those positions that

does not serve.

The dependent variable, job tenure, measures the probability that an appointee stays in office. More precisely, it is an indicator variable that is a “1” for each six-month period that an appointee remains in office. Thus for an appointee that serves one year, there are three observations – a “1” for the first six months, a “1” for the second six months, and a “0” for the third six months.

There are two main independent variables – one for each of the two hypotheses. The first is disagreement between the president and Congress for which we use the difference between DW-NOMINATE scores for the president and the House median.²⁰ We expect that the hazard rate, or the probability an appointee will leave office given she has not left already, will be higher during periods of divided government and periods when the preferences of the president and the House median diverge the most.²¹

The second independent variable is the real CPI-adjusted salary of the appointee. An increase in salaries (decrease in salary-related opportunity costs) should increase the probability an appointee stays in office. Figure 5 graphs the real salaries of political appointees over time. The top of the figure demonstrates an increase in real salaries at the end of the 19th Century and substantial variability in the 20th Century. We have also estimated models use the ratio of appointee salaries to the median wage of white-collar workers in real estate, finance, and banking to capture the impact of outside offers. This measure produces similar results but has the disadvantage of being a shorter time series. To capture different outside opportunities of appointees at different positions as well as different responsiveness to economic factors, we interact the real salary with the hierarchical level of the appointee.

remain vacant for some time. The exception to this general rule is the data for cabinet secretaries for which we could get very precise job tenure information. We continue our search for reliable data about exits.

²⁰ For a full exposition of DW-NOMINATE scores, see McCarty, Poole, and Rosenthal (1997). The presidential DW-NOMINATE scores from Eisenhower to Clinton are from McCarty and Poole (1995). McCarty computed the scores for previous presidents using the data on presidential positions collected by Michael Malbin and Robert Brookshire as part of the Historical Congressional Statistics Project (NSF Award #9308686). Using simple measures such as “divided government” generate substantively similar results.

²¹ We measure the preferences of the president relative to the House because the presidential NOMINATE scores are only comparable to NOMINATE scores from the House, but not the Senate.

Insert Figure 5 Here

We also used a number of sets of control variables. First, indicator variables for the secretaries and under and deputy secretaries (base category -- assistant secretary) provided controls for the level of office.

Second, the majority party percentage in the House was meant to capture the congressional costs of firing. Our expectation is that the costs of firing decrease when the majority is larger. Large majorities have better agenda control, can hold better-targeted hearings and make more credible threats to withhold appropriations. We have also used an indicator for the period prior to the Legislative Reorganization Act of 1946 with similar results.

Third, since the model predicts that the president and the legislature are less likely to fire an agent later in the term, we include a variable that indicates when in the president's term an observation takes place. An observation in the 1st six-month period is coded with a 1, the 2nd six-month period a 2, and so forth up to 8. The coefficient on this variable will provide information on how the probability of survival trends over time. We expect the coefficient to be positive, indicating that the probability of continuing to serve will be higher as a term progresses. We also include an indicator for observations taking place in a president's second (or more) term. Again, our expectation is that the later it is in a president's administration, the higher the survival probability (controlling for when the appointee was confirmed and how long they have served).

Fourth, an indicator for when in the president's term the appointee took office (cohort variables) captures any possible effects of being appointed earlier or later in a president's term. The cohort variables indicate when someone was appointed while part-of-term variables indicate when an observation takes place. It is important to remember that there are multiple observations on each appointee. So, for example, an appointee who served 4 years will have 8 observations. Their cohort indicator will always be the same but the values of the observations will vary based upon where they occur in a president's term.

Fifth, indicators for historical era (i.e., Jeffersonian, Jacksonian, etc.) are included to capture any historical differences in executive politics and executive-legislative relations.

Finally, indicator variables for the department capture any department-specific effects. There are several reasons that job tenure may vary substantially from department to department. First, Congress and the president value expertise more in some departments than in others, because the technical nature of its jurisdiction. Second, some department jurisdictions are more political salient than others and therefore more vulnerable to intra-branch conflict.

Methods

We estimate a duration model to analyze job tenure. More precisely, we estimate a logit model of the probability that an appointee continues from one six-month interval to the next.²² We needed to control for the effects of duration dependence – how the probability of an appointee serving six more months depends on the length of time the appointee has served to date. Thus we included a final set of variables which captures duration; eight indicator variables take “1” as their values for each consecutive six-month period.

The formal model actually makes competing predictions about the form of duration dependence. On the one hand, the political hazards are predicted to decline over time. That is, an appointee is less likely to be fired for policy reasons over time. Thus the longer they serve; the longer they are likely to serve. On the other hand, the economic hazards are predicted to increase over time. An appointee is more likely to leave for a higher paying job the longer they serve so their survival probability decreases over time (and their hazard rate increases).

Our indicator variables measure the length of tenure prior to an observation. Of the eight total indicators of duration, the duration indicator for 6 months of service is coded “1” if an appointee has only served 6 months or less at the time of an observation and “0” otherwise. The duration indicator for 12

²² See Beck, Katz, and Tucker (1998) for justification of this approach.

months of service is coded “1” if an appointee has served 6 months to 1 year and 0 otherwise, and so forth.

Since we cannot distinguish between appointees who leave office at the end of a term and those who quit at the beginning of a new term, we consider those observations censored.²³ In addition, since some appointees died in office or are still serving at the time we write this paper, we do not know when they would have left office or will leave office. These cases are also censored. We account for this in the estimation by eliminating them from the estimation.²⁴

Finally, we use a robust estimator of variance to adjust for correlation of the errors on observations on the same appointee since the data set has multiple observations on each subject.²⁵

V. Results

Table 2 presents the results. The results support both hypotheses. First, the coefficient on the difference in DW-NOMINATE scores between the President and House median is significant and negative, indicating a lower probability of survival during periods of preference divergence between the president and Congress. Figure 6 graphs the impact of preference divergence over a standard 4 year presidential term for assistant secretaries. Since the probability of serving 3 years is contingent on the probability of serving 2.5 years, the impact of preference divergence multiplies over time. Those appointees who serve during periods of ideological difference between the president and Congress have a lower probability of continuing to serve.

Insert Table 2 Here

Insert Figure 6 Here

Second, the results for the real salary are also encouraging. We split the effect depending on the level of office by interacting the salary with level of office. Thus the coefficient on the log of real salary

²³ Specifically, we exclude the observations on appointees that begin at the beginning of a new term and indicate that an appointee left office. This is equivalent to considering them censored after the previous period.

²⁴ A similar model can be derived directly from assumptions about the baseline hazard rate (see, e.g., Katz and Sala 1996). In future work, we will adopt this more direct approach.

is for the base category, assistant secretaries. The effect is as predicted – significant and positive. The higher the real salary, the higher the probability is of survival. The effects are smaller for secretaries. However, for deputy and under secretaries, the effect is the opposite of what we expect. This peculiar result is somewhat specification specific. When we estimate models using the ratio of appointee salaries to white collar workers, there is no such effect.

Insert Figure 7 Here

The cohort indicators seem to suggest that those appointed later in a president's term have a lower probability of survival than those appointed at the beginning of a president's term. Most of the coefficients are significant and trend downward; the fourth, the sixth, and the seventh are not significant. Some care must be taken when interpreting these coefficients, however, since the probability of survival also depends upon the year of the term the observation is taken and how long an appointee has served.

Figure 8 graphs the survival probabilities of appointees based upon when they are appointed in a president's term. In all cases, the probability of survival decreases over time. The longer an appointee serves, the lower their probability of continuing. However, if we want to predict who has the highest probability of continuing to serve from the 6th year to the 7th year, those appointed later will have a higher probability. Still, the initial survival probabilities of those appointed later in the president's term are not significantly higher than those appointed early in a president's term, contrary to our expectations.

Insert Figure 8 Here

The duration dependence indicators are significant and decreasing the longer an appointee has served. These results suggest that the longer an appointee serves, the less likely they are to continue. In other words, the hazard rate of political appointees is increasing over time and thus, there is some preliminary evidence for increasing economic hazards. In the future, a more proper analysis would include the age of the appointee and growth in real wages. In the next iteration we will also separate out

²⁵ That is, we adjust for clustering on appointees within one appointment not across appointments.

the economic and political hazards for appointees since they work in competing directions. Economic hazards increase as the term progresses while political hazards decrease.

Appointees in modern cabinet departments have the lowest probability of continuing. Turnover is highest in the Energy, Education, Transportation, and Veterans Affairs departments. It is lowest in the historically expertise-driven departments like Agriculture and the State Department. This gives at least preliminary evidence that expertise does alter the firing decision of political actors.

VI. Conclusion

The job tenure of political appointees is important to the functioning of American democracy. Political appointees are the conduits of public control over unelected bureaucrats and therefore, they are at the very heart of the democratic legitimacy of the bureaucracy. Through appointments, presidents have a potentially powerful avenue of influence on the bureaucracy. But for influence to be effective, political appointees must serve long enough to be effective. The preliminary results of this project have provided some evidence that preference divergence between the two branches and low salaries are part of the job tenure problem.

But there is much that we do not yet know. First, do the results extend downwards through the ranks and across different agencies? Second, what are the effects of the initial decision to enter, the confirmation process, fixed terms, and agency design? With future research, we hope to answer these important questions – important since appointees are crucial policymakers in our bureaucratized national system of government.

The model and data can be useful to scholars in many fields. Scholars studying American politics, the historical development of the administrative state, and comparative political appointments may make use of our theory and data. For example, a large body of research on American political development and the development of the administrative state (see, e.g., Carpenter 2001, John 1995, Morone 1997, Pierson 1994, Skocpol 1992, Skowronek 1982) has focused predominantly on particular

policy areas and trajectories of social policy development. More broadly, our research on administrative structures and political appointments provides a means of systematically analyzing the development of the administrative state over time. The work on the growth, development, and change of political parties also stands to benefit from this research (see e.g., Aldrich 1995, James 2000, Johnson and Libecap 1994). The compilation of a complete list of administrative agencies over time along with their staffing should provide invaluable resources for scholars who want to systematically track and study patronage, the growth of the civil service, and appointment norms like senatorial courtesy.

Research on political appointees is essential to an understanding of both administrative policy outputs and executive-legislative politics in the United States. Ultimately, we hope that our research and the theoretical and empirical resources it will provide will lead to a better understanding of research questions on the appointments process as well as a better understanding of its role in the broader American political system.

Table 1. Tenure Statistics of Political Appointees, 1789-2000

	N	Median Tenure in Months	Average Tenure in Months	Standard Deviation
Secretaries	612	30	34.7	27.3
Deputy/Under Secretaries	266	22.5	26.3	16.6
Assistant Secretaries	385	32	35.6	24.3

Table 2. Logit Model of Job Tenure of Political Appointees, 1789-2001

Variables	Coefficient	S.E.	z-stat
<i>Principal Variables</i>			
Log of Real Salary (Asst.)	0.88	0.42	2.10
Secretary*Log of Real Salary	-0.82	0.50	-1.63
(Deputy or Under)*Log of Real Salary	-1.42	0.62	-2.30
Secretary	9.15	5.83	1.57
Deputy or Under Secretary	15.91	7.18	2.22
Difference in NOMINATE scores	-0.42	0.20	-2.08
<i>Controls</i>			
Size of House Majority	-0.89	0.65	-1.35
Second Term	0.77	0.11	6.79
Part of Term (6 Month Intervals)	0.27	0.02	13.92
Jefferson Era (1789-1828)	0.87	0.35	2.47
Jackson Era (1828-1860)	-0.34	0.19	-1.83
Lincoln Era (1860-1896)	-0.23	0.16	-1.41
McKinley Era (1896-1932)	0.35	0.15	2.34
Roosevelt Era (1932-1945)	0.02	0.21	0.93
Cohort 1	1.28	0.27	4.73
Cohort 2	1.06	0.28	3.83
Cohort 3	0.75	0.28	2.64
Cohort 4	0.46	0.32	1.42
Cohort 5	0.28	0.30	0.96
Cohort 6	0.31	0.33	0.97
Cohort 7	0.16	0.32	0.51
<i>Duration Dependence and Constant</i>			
Served 6 months	3.35	0.22	15.07
Served 12 months	2.07	0.16	12.86
Served 18 months	1.37	0.15	9.17
Served 24 months	1.13	0.14	7.93
Served 30 months	0.74	0.15	4.85
Served 36 months	0.54	0.16	3.42
Served 42 months	0.47	0.17	2.74
Served 48 months	0.17	0.18	0.98
Constant	-10.50	4.82	-2.18

Note: Dependent variable is surviving a 6 month interval of job tenure.

Coefficient estimates of agency controls omitted. Number of observations =6882.

$\chi^2(6882, 47 \text{ df})=530.22$. Robust standard errors reported.

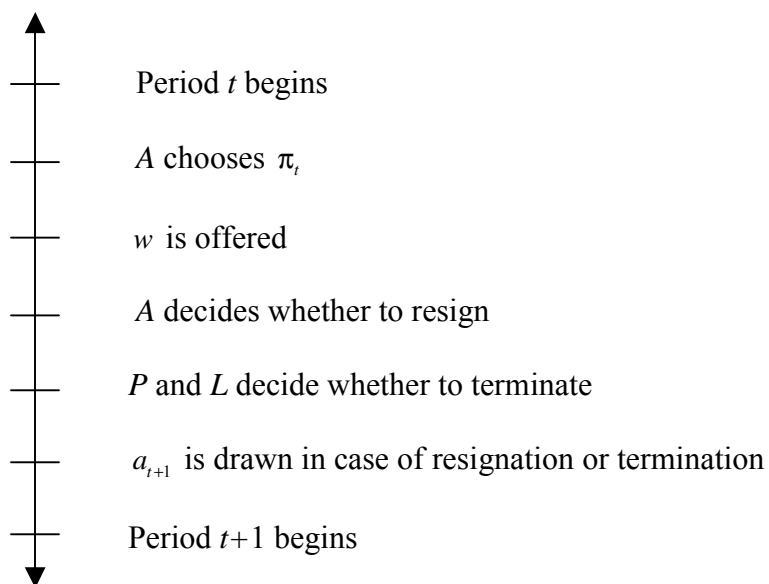
Figure 1**Timeline**

Figure 2

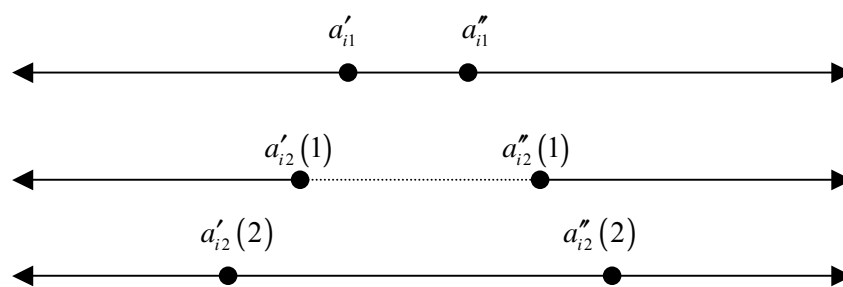


Figure 3. Political Appointee Job Tenure in Months by Position, 1789-2000

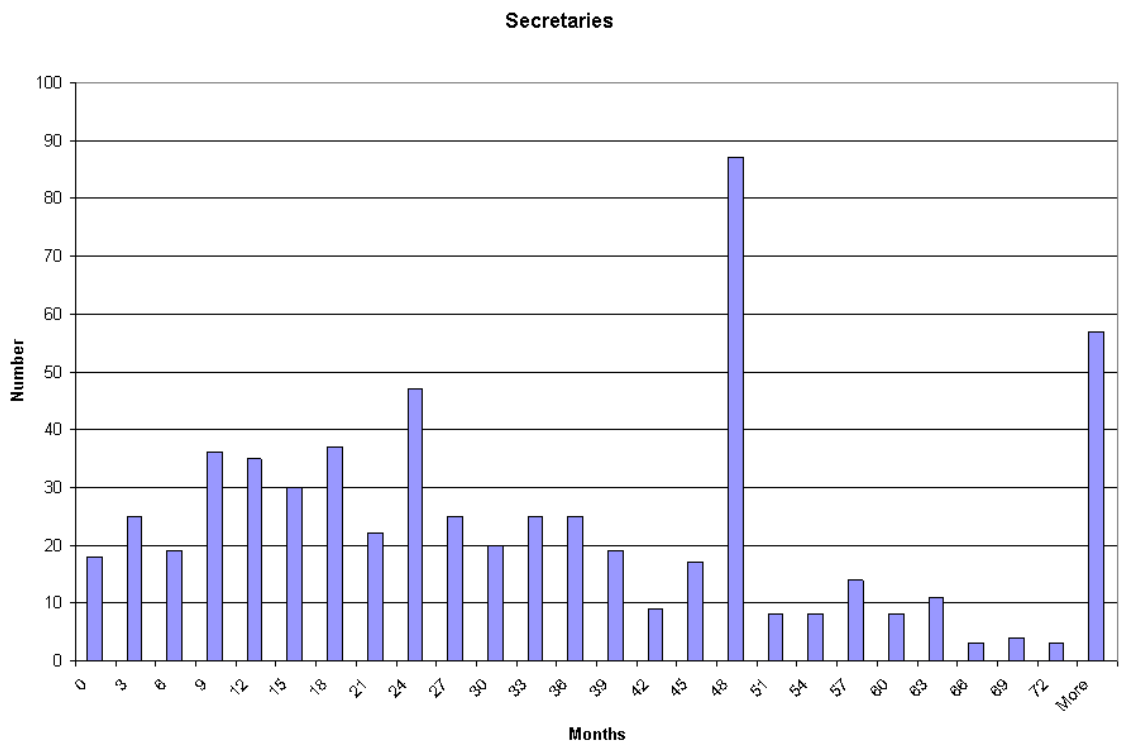
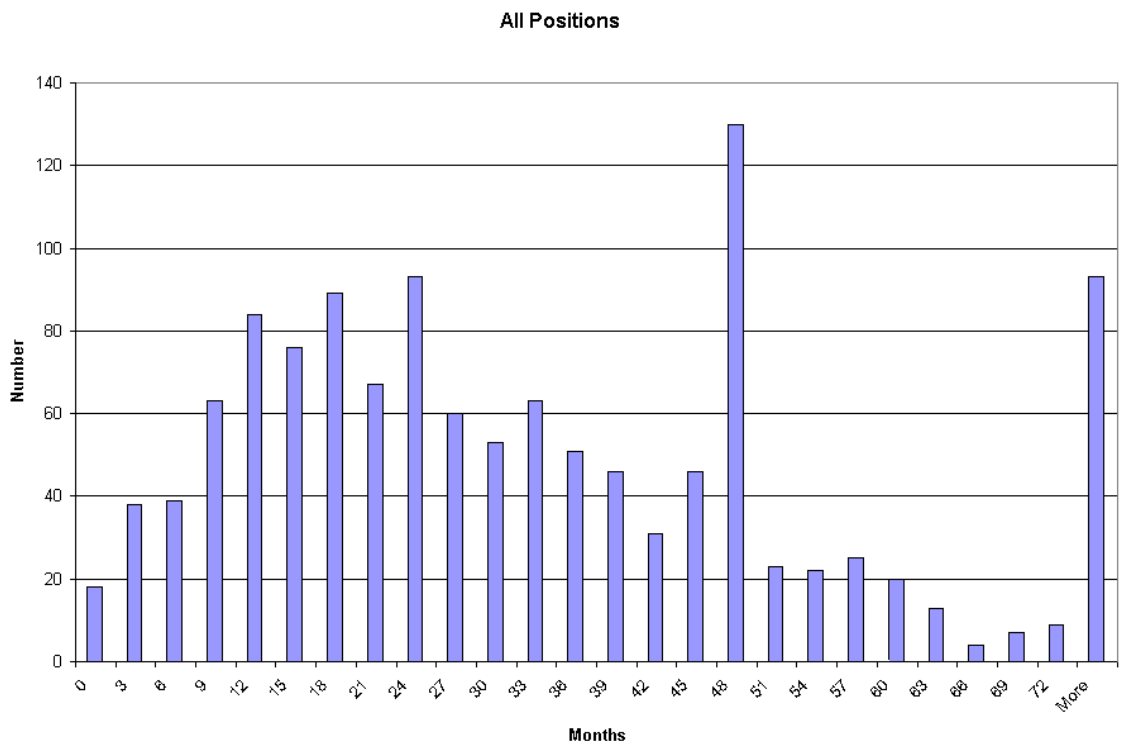


Figure 3. Political Appointee Job Tenure in Months by Position, 1789-2000 (cont)

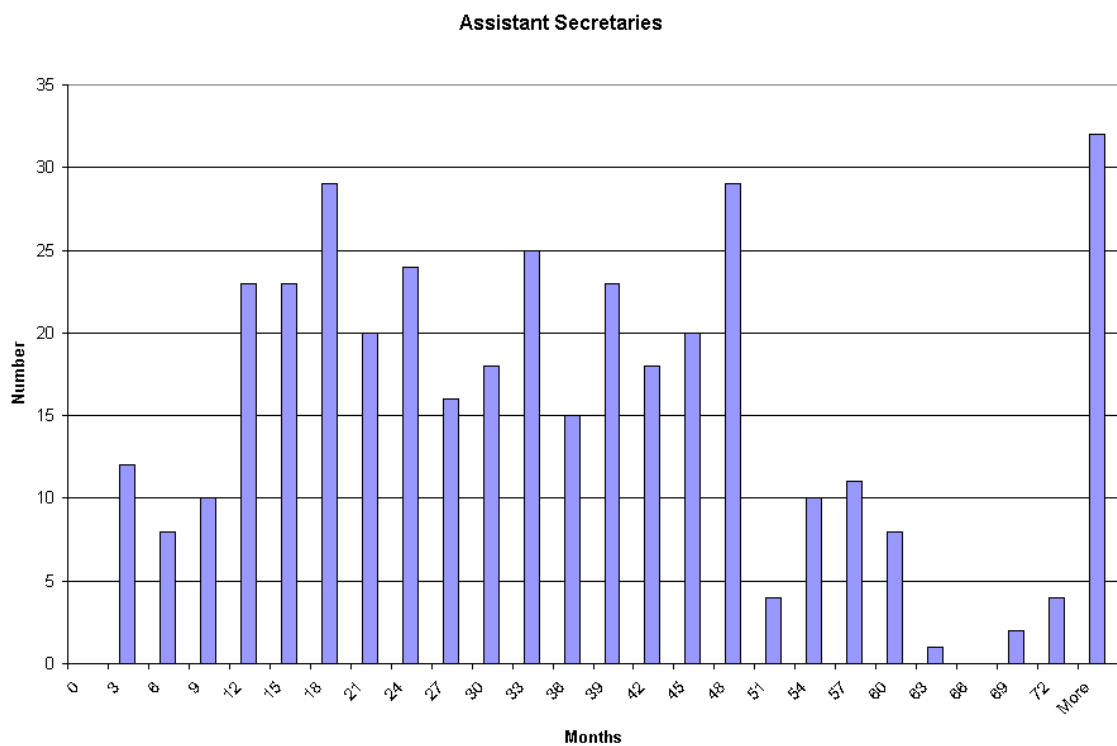
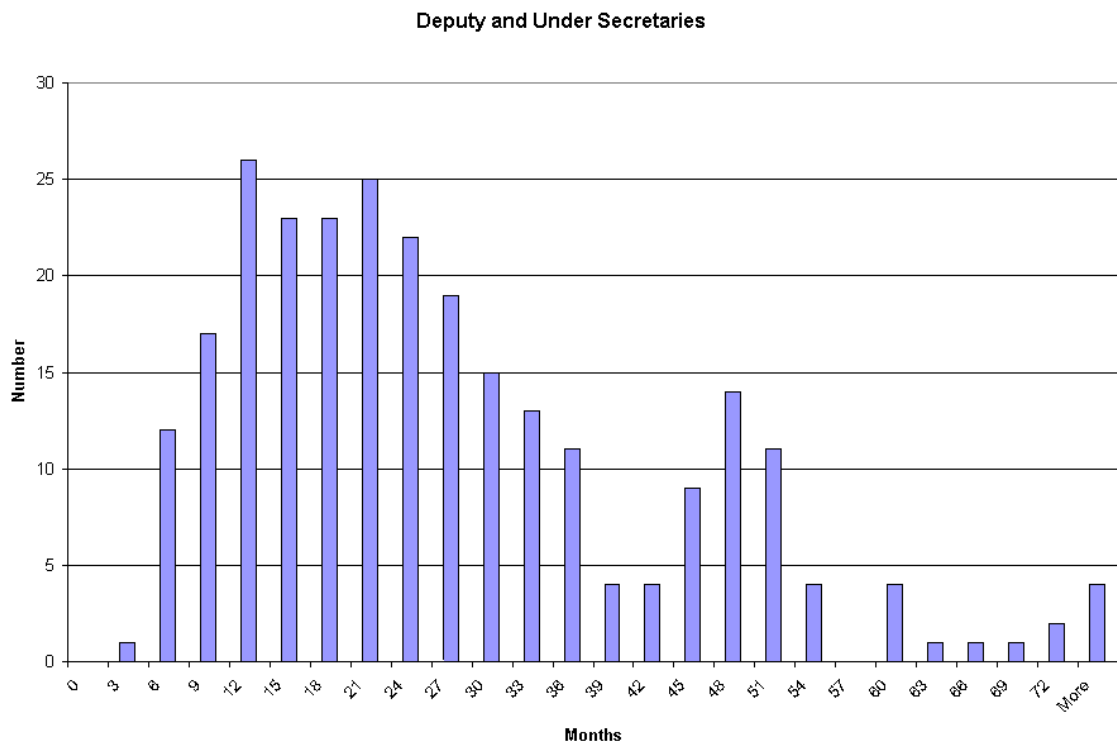


Figure 4:

Average Job Tenure by Historical Period, 1789-2000

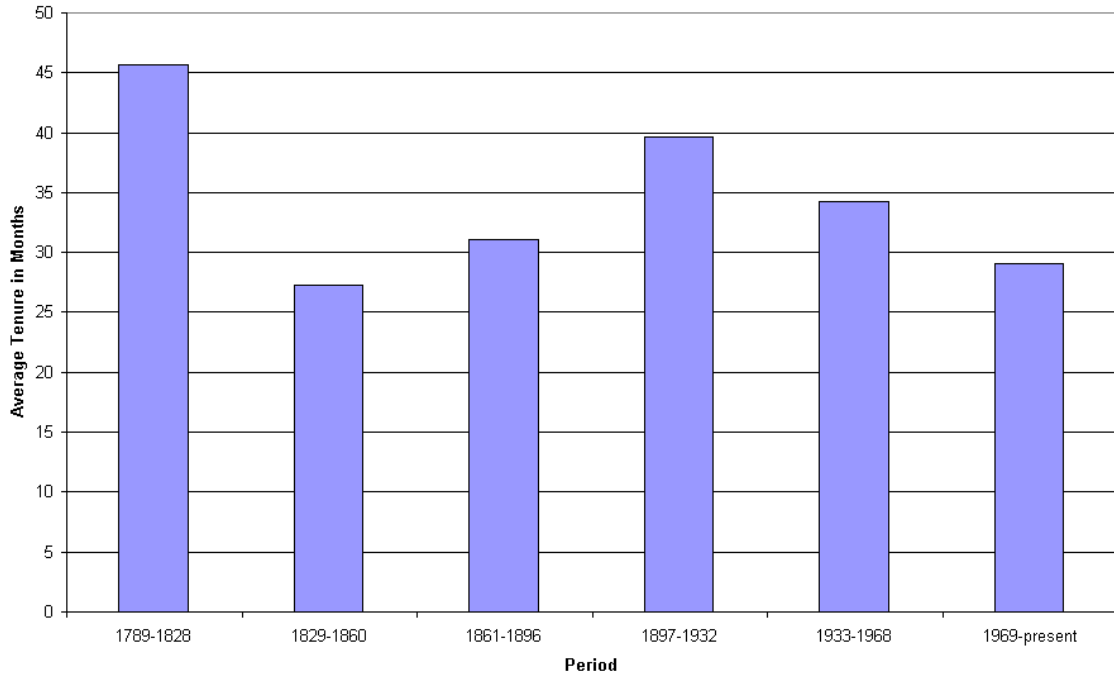


Figure 5

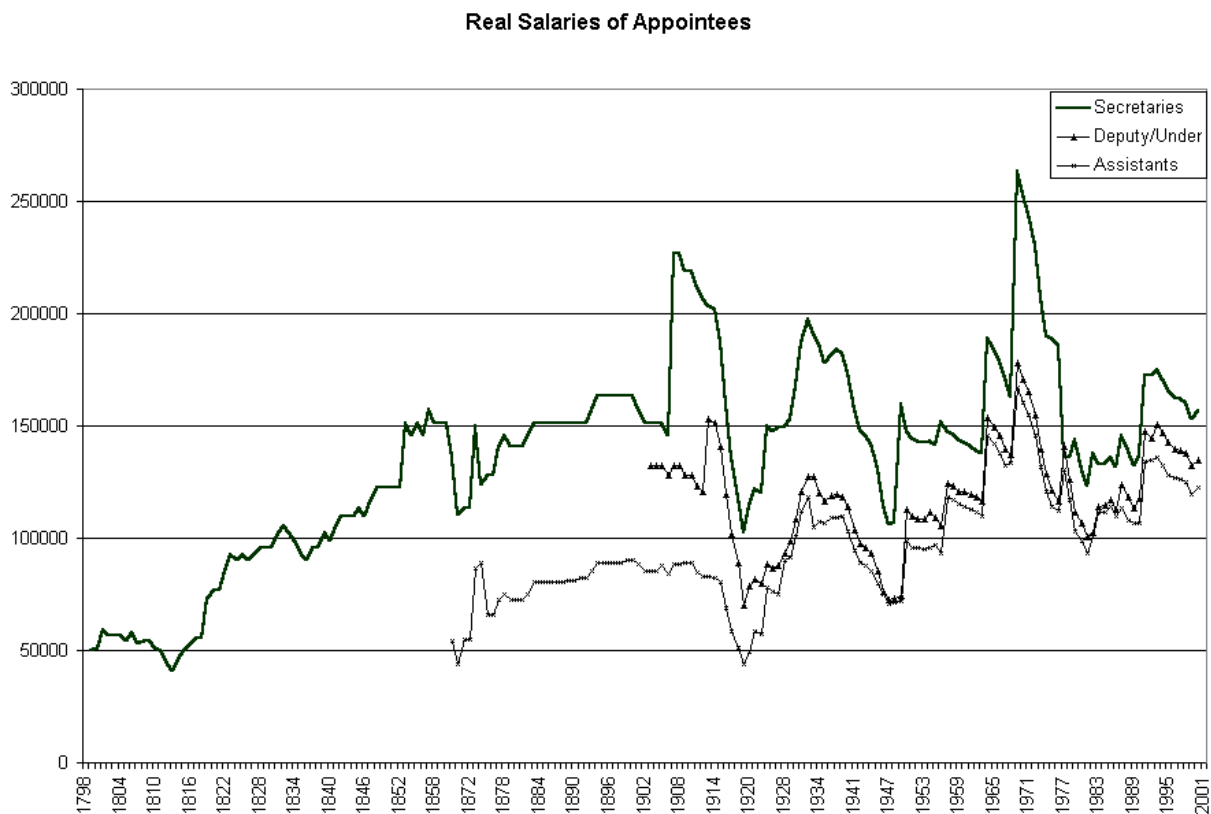


Figure 6. Job Tenure Probabilities by Preference Divergence Between President and House, 1789-2000

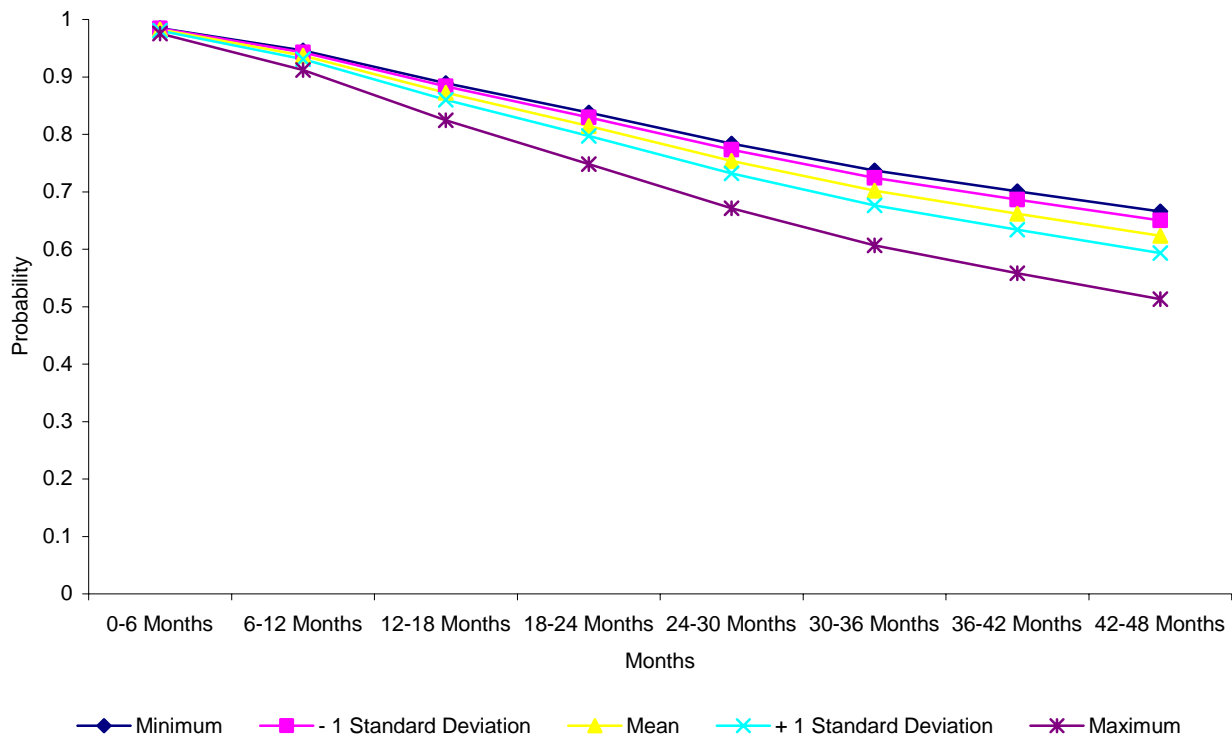


Figure 7. Impact of Real Salary on Job Tenure Probabilities for Assistant Secretaries

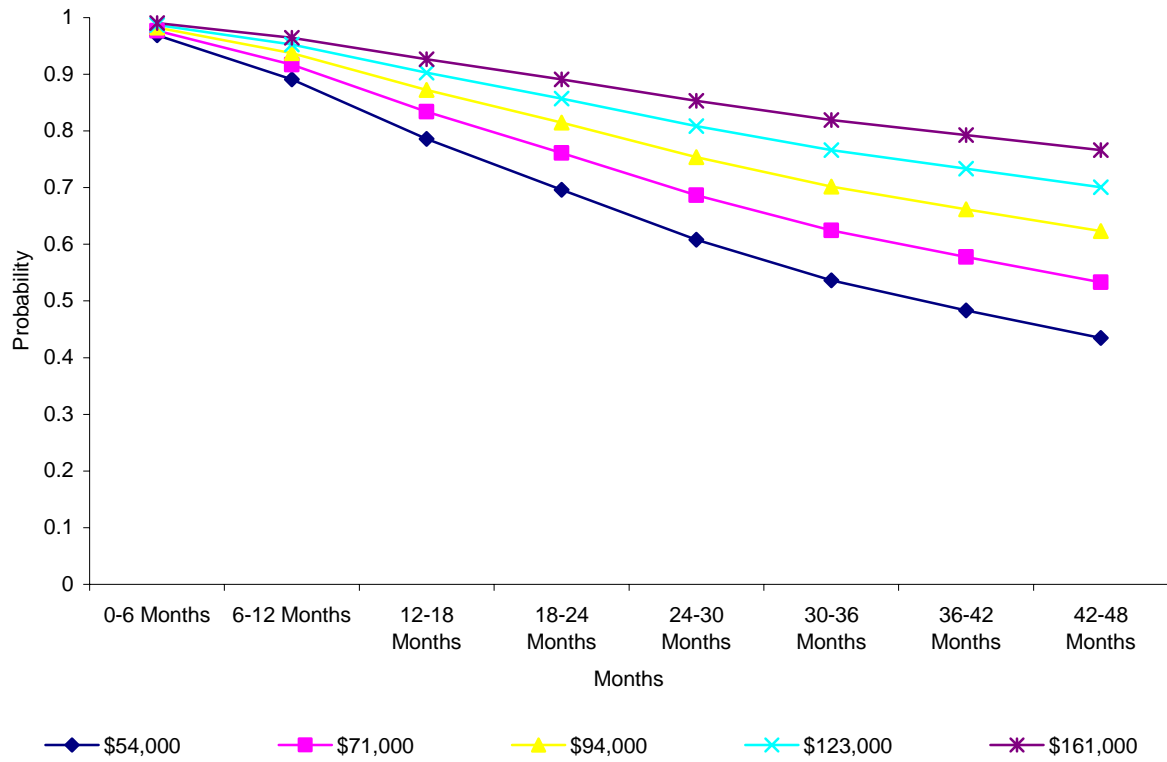
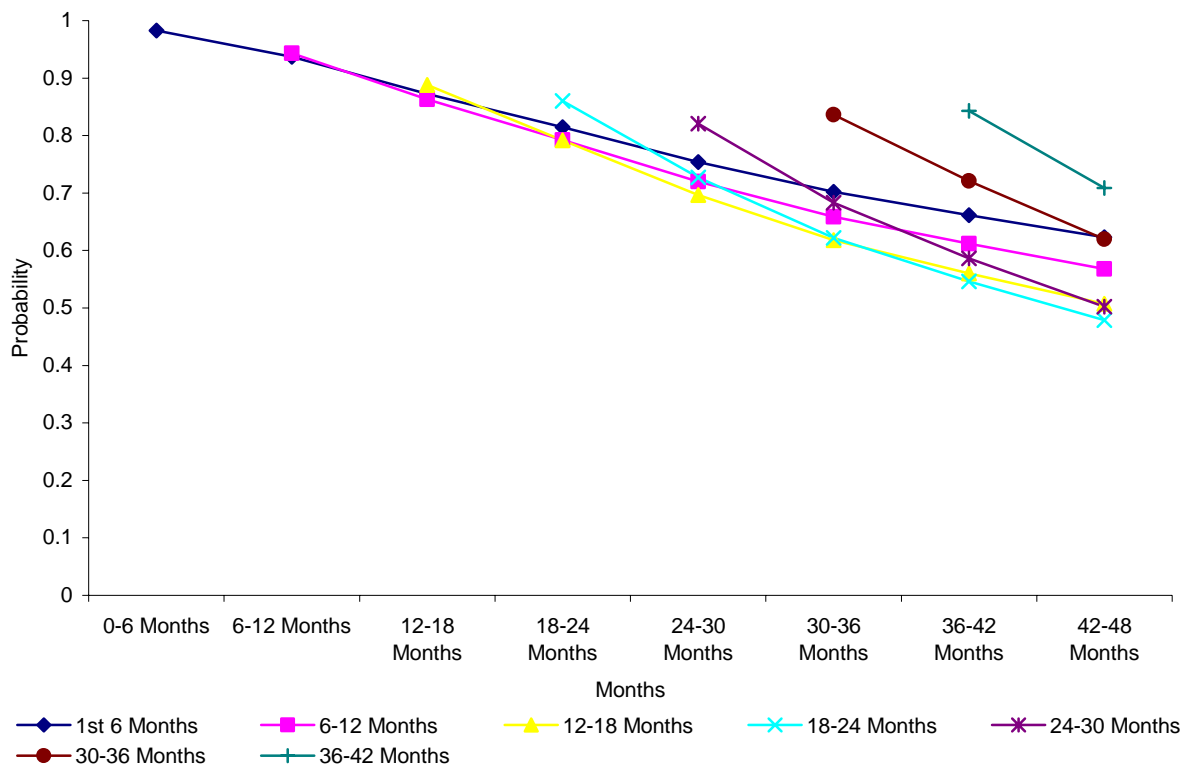


Figure 8. Job Tenure Probabilities by Time of Appointment Within Term



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