JPP

RESEARCH ARTICLE

Appointee vacancies in US executive branch agencies

William G. Resh[1,*] , Gary E. Hollibaugh, Jr.[2] , Patrick S. Roberts[3] and Matthew M. Dull[3]

[1]Sol Price School of Public Policy, University of Southern California, Los Angeles, CA, USA, [2]Graduate School of Public and International Affairs, University of Pittsburgh, Pittsburgh, PA, USA and [3]School of Public and International Affairs, Virginia Tech, Arlington, VA, USA
*Corresponding author. E-mail: wresh@usc.edu

Abstract

We analyse United States presidential appointee positions subject to Senate confirmation without a confirmed appointee in office. These "vacant" positions are byproducts of American constitutional design, shaped by the interplay of institutional politics. Using a novel dataset, we analyse appointee vacancies across executive branch departments and single-headed agencies from 1989 to 2013. We develop a theoretical model that uncovers the dynamics of vacancy onset and length. We then specify an empirical model and report results highlighting both position and principal–agent relations as critical to the politics of appointee vacancies. Conditional on high status positions reducing the frequency and duration of vacancies, we find important principal–agent considerations from a separation of powers perspective. Appointee positions in agencies ideologically divergent from the relevant Senate committee chair are vacant for less time than in ideologically proximal agencies. Importantly, this relationship strengthens as agency ideology diverges away from the chair and towards the chair's party extreme.

Appointed executives of bureaucratic agencies in the United States (US) federal government are agents of both presidential and congressional power. Connecting the bureaucracy to the political branches of the US Constitution, they can also serve as prominent symbols of government dysfunction, particularly when these positions remain vacant for extended periods of time. Roughly 1,100 such positions require the advice and consent of the Senate, which confers legitimacy and mediates conflict between politics and expertise (Mashaw 1997). As a result, executive appointees often find themselves serving two masters, and this shared influence often manifests in the relative ideological distance they have among key principals, generally falling somewhere between the appointing president and key Senate pivots (Bertelli and

Grose 2011).[1] Indeed, nested among constitutional principles, appointees have become the institutional embodiment of the administrative state (Bertelli and Lynn 2006; Nathan 1983; Stayn 2001). Among the consequences of the expanding reach of appointee politics is a pattern of vacant positions peculiar to American government.

Based on the most comprehensive empirical research on the subject, O'Connell (2009) finds that an average of one-quarter of agency Senate-confirmed, presidentially-appointed positions were vacant between 1979 and 2003.[2] As few as 15% of positions may be vacant during the second year of a presidential administration, while during the final year of an administration that figure may rise to 50% (O'Connell 2009). This can impose potentially serious operational and reputational hindrances for an agency and political costs for a president. For instance, in the months before Hurricane Katrina, more than one-third of Federal Emergency Management Agency's policy positions were vacant (Lewis 2008; O'Connell 2009). In the wake of the COVID-19 epidemic, nearly half of all scientific leadership positions in the Trump administration were vacant (Union of Concerned Scientists, 2020). O'Connell (2009) concludes, "Vacancies, particularly if frequent and lengthy, may have detrimental consequences for the modern administrative state. They contribute to agency inaction, foster confusion among nonpolitical employees and undermine agency legitimacy" (914). While much media coverage and scholarship identify vacancies as a problem, we leave open the possibility that some political actors may prefer vacancies and acting career civil servants to a confirmed appointee, since some actors may benefit from stability and preserving the status quo. Before embarking on a project that explores the consequences of vacancies, however, scholars must first map and analyse the extent of appointee vacancies.

What accounts for the duration of appointee position vacancies? Are certain positions vacant more than others? Answering these questions is difficult, despite mandated reporting of all Presidential appointees requiring Senate confirmation (PAS) vacancies. Haglund and Lewis (2013) examine the influence of appointees on agency performance by measuring performance according to compliance with the Federal Vacancies Reform Act. They find compliance to be spotty, and the U.S. Government Accountability Office came to a similar conclusion; not all agencies are aware of the law's requirements, and in some cases, agencies do not make timely reporting a priority (United States General Accounting Office 2001).

---

[1]The literature on presidential appointments has used a variety of operationalisations of key Senate pivots over the years (Krehbiel 1991). While many use either the Senate median (Moraski and Shipan 1999) or the filibuster pivot (Hollibaugh and Rothenberg 2018), others focus on the relevant committee chair (Bonica et al. 2015) or majority party medians (Shipan and Shannon 2003).

[2]By vacant, we mean PAS positions without a confirmed appointee, during the period following the departure of one appointee, but before the confirmation of the next. In our analysis, "acting" officials temporarily occupying PAS positions still constitute vacancies because we are interested in whether a position is filled with someone who holds the full authority of the office (Dull and Roberts 2009). According to the Federal Vacancies Reform Act of 1998 (hereafter, the "Vacancies Act"), acting officials may serve in a position no longer than 210 days from the date of vacancy onset, unless the vacancy occurs in the first two months of a new administration, at which time the acting official can serve no longer than 300 days (O'Connell 2009). Given these statutory limitations, many positions remain nominally "vacant" while career officials or Schedule C appointees perform the substantive demands of the positions. Evidence suggests that some agencies altogether flout the Vacancies Act's strictures (Haglund and Lewis 2013).

To address the lack of a comprehensive repository for appointee vacancy data, we built our own dataset from a variety of sources for 416 PAS positions to executive branch departments and single-headed agencies from January 1989 to January 2013.[3] The dataset includes periods of Republican and Democratic presidents, and both divided and unified government under both parties. Therefore, the dataset serves as the most complete extant data on Senate-confirmed, presidential appointees in executive positions. In leveraging these data, we find that institutional factors such as position status matter a great deal for determining vacancies in the most important PAS positions, as does ideological conflict between target agencies and key Senate pivots. When agencies are ideologically divergent from the relevant Senate committee chair, vacancy length is shortened as much as half for lower status appointees as agency ideology diverges to the chair's party extreme. This relationship holds across presidencies. In other words, ideological divergence matters most when the agency is to the right (left) of Republican (Democrat) Senate committee chairs.

Vacant by design

Senate-confirmed agency appointees (i.e., PAS) arose as a combination of constitutional design and institutional development (Stayn 2001). The separation of powers limits each branch's influence over bureaucratic agencies. The founders designed the separation of powers as a "means of keeping each other [part of government] in their proper places" (Rossiter 1961, *Federalist Papers*, No. 41, 367). The shared, yet separate, powers of the presidency and Congress over appointments provide multiple avenues for representation, but leave open the possibility of disagreement and vacancy (Bertelli and Lynn 2006). These powers are truly shared, since the confirmation and oversight processes allow the Senate to redirect policy towards its preferences administratively as much as might be assumed of the president through the "administrative presidency" (Bertelli and Grose 2011; MacDonald and McGrath 2016). For example, Bertelli and Grose (2011) locate cabinet appointees in between the president and the Senate majority's ideological preferences, despite them being traditionally seen as responsive to the president.

Importantly, vacancies occur through a three-step revolving process – nomination, Senate confirmation and then departure. Each stage represents a bargain among three actors – the president, Senate and appointee – under the Constitution's design for the separation of powers. Appointee vacancies are byproducts of these bargains that have substantive consequences for administration. Vacancies are rarely observed empirically, in contrast to confirmation and length of tenure, because appointee departure is not in the Senate record and not publicly available (except for coverage during the first year of an administration). Hollibaugh and Rothenberg (2017), Kinane (2019) and O'Connell (2009, 2020) are recent

---

[3]Several PAS positions are omitted, including US attorney and US marshal positions in the Department of Justice; Foreign Service and diplomatic positions in the Department of State; officer corps positions in the civilian uniformed services of the National Oceanic and Atmospheric Administration in the Department of Commerce and of the Public Health Service in the Department of Health and Human Services and the officer corps in the military services.

exceptions to the dearth of empirical scholarship on vacancies. The obscurity of data results from rules governing information about appointee departure and positions vacancies, which are themselves shaped by generations of bargaining.

A delay in either the nomination or confirmation stages can prolong a vacancy. The president may fail to nominate someone because of other business or because of a particularly long search process. On this point, Hollibaugh (2015) reports that nomination delay is extended when a president's vetting process finds that the candidate is relatively incompetent compared to a pool of potential nominees. Kinane (2019) adds that presidents may strategically leave positions vacant, especially when presidents prioritise retrenchment in that agency's policy aegis.

Presidents use nomination and appointment as tools to control the bureaucracy and to ensure that their policy preferences are reflected in administrative agencies (Lewis 2008). However, appointments are made for both patronage and policy, and seldom are the constructs wholly separate considerations, as presidents use patronage to prompt backing for their agenda and to signal policy concurrently (Rose 2005). This is not always an easy balance. Hence, one source of delay and extended vacancies is the length of time it takes to find the right appointee who satisfies a mix of loyalty and competence (Hollibaugh 2015; Krause and O'Connell 2016). Importantly, this balance must also be met to satisfy the Senate majority.

The Constitution's "advice and consent" provisions require that presidents take into account Senate preferences (Article II, Section 2, Clause 2). The second step in the appointment process, Senate confirmation, is a longstanding source of delay and as a result, extended vacancies (Binder and Maltzman 2002; Bond et al. 2009; Dull and Roberts 2009; Dull et al. 2012; McCarty and Razaghian 1999; O'Connell 2009; Nixon 2001; Shipan and Shannon 2003). Most of the literature on Senate confirmation choices and delay focuses on judicial nominees, but the broad findings are similar across appointee types. Senators decided whether nominees are competent and ideologically acceptable. Many models frame this process as bivariate – a successful or failed nomination – and some include delay as a third option (Chiou and Rothenberg 2014; Hollibaugh and Rothenberg 2017). We propose vacancies as another lens through which to view the combined problem of nomination and confirmation delays.

We show vacancies result from a variety of processes beginning when a predecessor departs and extending to when the next appointee arrives. Senate majorities can extend the time between when a nominee departs, and another one is confirmed. They may prefer longer vacancies in order to bring forward appointees who match their preferences, but they may also have a greater preference for stability than the president, regardless of the appointee. Senate staff may have a better relationship with career executives who serve in acting roles than they would expect to have with a new appointee, as is suggested by the metaphor of the iron triangle of Congressional staff, interest groups and the bureaucracy (Jordan 1990; Peterson 1993). Importantly, Senate preferences for an ideological ally or for stability in agency leadership may both contribute to vacancies through confirmation delay or through extending the time it takes for a president to find an acceptable nominee. Because the president may anticipate Senate preferences, the Senate can influence the president for any given position.

In some positions, Congress may prefer the stability of acting appointees to the uncertainty of new nominees. McCarty and Razaghian (1999) hypothesise that careerists' long experience working with congressional oversight and budget procedures makes them more responsive to the wishes of Congress than to presidential administrations that come and go. Others present arguments that vacancies are not as serious of a problem as many perceive. Mendelson (2011) speculates that vacancies may be associated with greater attention to the qualifications of a position and to an agency's decision-making structure. Resh (2014, 2015) argues that vacancies can, in some instances, lead to increased responsiveness to presidential prerogatives. McGarity (1991) argues that average appointee tenure is so brief that appointees "must trust the staff to make the 'right' calls on scores of micro-issues . . . ," vacancy or not (61). Chase Untermeyer was criticised in the press for not filling vacancies quickly enough when he was the director of presidential personnel for George H. W. Bush. Untermeyer went to great lengths to try to explain that vacancies at the beginning of the term "were not literally empty desks" since Reagan appointees continued to serve until positions were filled (Untermeyer 2000). If the new president is of a different party, however, filling vacancies may be a more pressing issue.

Most scholarship on the topic, however, links vacancies to reduced functional authority and democratic accountability. Vacancies might deprive the president of a tool for control as part of the administrative presidency, but more importantly, they deprive the public of one part of the chain of electoral accountability that reaches into the bureaucracy (Aberbach and Rockman 2000; Mendelson 2011; Stephenson 2013). Since extended vacancies result from delays in nomination and confirmation, they may exacerbate problems with finding competent nominees willing to endure an extended appointment process (Hollibaugh 2015).

How serious a problem are vacancies for government? The truth is that some vacancies impede agencies more than others, and a necessary step in analysing their effects is to obtain a complete picture of where they occur. Our analysis advances beyond the simplistic story of vacancies as good or bad by analysing variation in vacancies according to contextual factors.

In the following section, we present a formal theory of vacancies. We focus on three aspects of the appointments process – vacancy onset and duration, the relationship between agencies and political principals (especially the Senate) and the role of hierarchy. Using this model, we derive four empirically testable hypotheses, which we examine using this novel dataset. We distinguish ourselves quite plainly from prior work in that we focus on both vacancy onset and duration separately.

A theory of bureaucratic vacancies

To examine why vacancies are created and how long they persist, we examine a simple model of the appointments process inspired by the one presented by Chiou and Rothenberg (2014), which is itself in a long line of models based on Romer and Rosenthal's (1978) setter model. Like Chiou and Rothenberg (2014), as well as others (e.g. Bond et al. 2009; Hollibaugh and Rothenberg 2018; Krutz et al. 1998; Ostrander 2016), we note very few nominees are rejected outright and instead focus on delay in the process.

Our model has three players – a President, a Senate and an Agency.[4] The game proceeds as follows:

Nature chooses some status quo agency policy and creates an imminent vacancy that will open if it is not immediately filled.[5]

1. The President makes a nomination.
2. Once the President nominates, the Senate has the chance to confirm the nominee.[6]
3. Once the Senate confirms, the Agency implements the policy at its ideal point.[7]

Importantly, the President and the Senate can both delay their actions (potentially indefinitely) by taking some nonnegative amount of time before making a decision.[8] We assume players have quadratic preferences over policy outcomes and are potentially concerned with the effects of stalling. We further assume the Senate is concerned with how the nominee might affect the relative preference divergence between itself and the agency. This is of particular concern for the

---

[4]We use "Senate" generically and, for the purposes of the theory, are agnostic as to which key pivot (i.e. the chamber median, the filibuster pivot, the relevant committee chair or the majority party median) serves as primary gatekeeper for nominations. Empirically, however, the vast majority of failed nominations never receive a floor vote in the Senate (Bonica et al. 2015; Krutz et al. 1998), which suggests the primacy of the relevant committee chair as a gatekeeper.

[5]This can be due to the current officeholder resigning, the President firing the current officeholder, a recess appointment expiring, a new position being created or a number of other possibilities. Given the various data generating processes that underlie each of these possibilities, we abstract away from them for the sake of mathematical tractability and take as given that a vacancy will be imminent if the position is not immediately filled. However, we acknowledge the likelihood that different types of vacancies might imply different equilibrium outcomes in a more complex model (e.g. a vacancy that arises because an appointee resigns due to expected *ex post* retaliation will likely be subject to different nomination/confirmation dynamics than one that arises because an appointee was promoted to a higher-level position). While these distinctions are important – and endogenising the appointee's decision to resign would certainly enrich standard models of appointments – we leave them for future research.

[6]We focus on Senate delay – as opposed to outright rejection –since the vast majority of failed nominations are due to Senatorial delay, as opposed to outright rejection or Presidential withdrawal (e.g. Chiou and Rothenberg 2014; Krutz et al. 1998). Indeed, as Bond et al. (2009) note, nominations in the postBork era are increasingly defeated by delay as opposed to outright rejection. As our data begin in in January 1989, and are thus entirely postBork, focusing on Senate delay and omitting the possibility of Senate rejection allows us to present a more tractable formal model without sacrificing much in terms of empirical reality. Moreover, two other recent "dynamic" formal models of the appointments process (e.g. Hollibaugh and Rothenberg 2017; Jo 2017) allow for both Senate rejection and delay and yet fail to find outright rejection in equilibrium; that is, delay is the only method by which the Senate fails to confirm nominees.

[7]Unlike some other models of the appointments process, we do not assume limited discretion at the agency level, uncertainty in the status quo, the possibility of Presidential retaliationor limits on the agency's ability to observe the state of nature without error. This is to focus on other dynamics in the appointments process.

[8]One benefit of the formal approach taken here is that it allows us to include both Presidential and Senatorial sources of delay and examine their separate influences on overall delay, which is the level at which our empirical observations are measured.

Senate because of its inability to change administrative policy unilaterally.[9] Our solution concept is subgame perfection.[10]

The Senate's decision

We first examine the Senate and consider the decision to delay. As mentioned, we assume the Senate cares about policy outcomes, how the nominee might affect the preference divergence between the Senate and the agency, as well as the ultimate policy outcome. In principle, we assume its utility function to take the general form of

$$U_S = \text{Delay} \times \big(\text{Unfavourable policy shifts} - \text{audience costs}\big) - \text{policy divergence},$$

(1)

which is broadly consistent with Chiou and Rothenberg's (2014) treatment of the appointments process. That is, while the Senate derives positive utility from delaying nominees that will shift agency policy away from itself – either through ideological/ programmatic reorientation, different managerial techniques, or something else – it also incurs negative utility from delay-associated audience costs; we further assume the Senate cares about the ultimate policy outcome in addition to the relative policy shift, in that it wants the ultimate agency orientation to be as ideologically compatible with itself as possible. Written more formally, its utility function can be written as:

$$U_S(t_S | t_P, x_A, x_S, x_N, \gamma) = -\frac{\gamma(t_P + t_S{}^2)}{2} + (t_P + t_S)\big((x_N - x_S)^2 - (x_A - x_S)^2\big) - (x_N - x_S)^2,$$

(2)

where, $\gamma > 0$ is the penalty for delay.[11] To account for ideology, x_A, x_S, x_N are the ideal points of the preconfirmation Agency (hereafter "Agency"), the Senate and the postconfirmation Agency (hereafter "Nominee"), respectively.[12,13] Finally, t_P and t_S indicate how long the President and Senate took to reach their respective decisions; both are weakly greater than zero.

Consistent with Chiou and Rothenberg (2014), we assume higher levels of γ are associated with higher delay-related audience costs, likely correlated with

---

[9]However, depending on the agency in question, even the President might be hindered in her ability to enact administrative policy change (Selin 2015).

[10]Given our interests in the determinants of vacancy length and onset, we focus on solving for equilibrium delay in the pages that follow and eschew a full treatment of the optimal nominees.

[11]While this approach to delay is somewhat unconventional, it is consistent with other recent models of the appointments process (e.g. Chiou and Rothenberg 2014) and is more tractable in this case than the more common geometric discounting approach.

[12]We include both x_A and x_N to account for the possibility that Presidents may place appointees into agencies that do not share their own ideological proclivities in an attempt to reorient the Agency's mission. As such, vacancies in nominally "liberal" agencies might begin to implement more "conservative" policies given the right appointee in a position of power.

[13]Note that we use capital letters when referring to the players in the game.

higher-profile or higher level positions.[14] Further note the Senate derives negative utility from delay and divergent policy outcomes, and positive utility from delaying nominees that will shift the Agency away.

As the Senate's only decision is when to confirm, we take the partial derivative of Equation 2 with respect to t_S and solve for the equilibrium t_S^*. Doing so, we find that

$$t_S^* = \max\left\{0, \frac{(x_N - x_S)^2 - (x_A - x_S)^2}{\gamma}\right\}, \tag{3}$$

since we assume $t_S \geq 0$. Substantively, if the Nominee will move Agency policy towards the Senate, the Senate will confirm immediately. Otherwise, the Senate will delay.

We now analyse the President's decision.

The President's decision

As mentioned, the President's main decision given a vacancy is who and when to nominate. We assume the following utility function:

$$U_P(x_N, t_P | t_S, x_P, \gamma) = -\gamma(t_P^2 + t_S) - (x_N - x_P)^2. \tag{4}$$

We assume the President cares about policy outcomes and delay in and of itself.[15] Inspection of the utility function makes it clear that $t_P^* = 0$ in equilibrium. Given this, we focus on finding the Nominee x_N^* and solve for the optimal level of Senate delay t_S^*.

Case 1

First, suppose $t_S^* = 0$, which implies $(x_N - x_S)^2 \leq (x_A - x_S)^2$. Clearly, the Senate will confirm any Nominee such that $x_N^* \in [\min\{x_A, 2x_S - x_A\},$ $\max\{x_A, 2x_S - x_A\}]$, since this would provide the same utility as the status quo, and set $t_S^* = 0$. In this case, the President will simply nominate the $x_N^* \in \{x_A, 2x_S - x_A\}$ that maximises her own utility. However, when $x_P \in [\min\{x_A, 2x_S - x_A\}, \max\{x_A, 2x_S - x_A\}]$, the President will nominate someone who shares her own ideal point, and the Senate will confirm without delay.

Case 2

Next, suppose $t_S^* = \frac{(x_N - x_S)^2 - (x_A - x_S)^2}{\gamma}$. In this case, given Equation 4, the optimal Nominee is $x_N^* = \frac{x_P + x_S}{2}$, which can be found by examination of $\frac{\partial U_P}{\partial x_N}$. As such, the optimal length of Senatorial delay – when it is nonzero – can be rewritten as

---

[14]As such, Senates (and Presidents) pay greater costs for delaying higher-level nominations. Presidents are often able to "go public" and publicly lobby for the confirmation of high-level nominees (Ostrander 2016), for which the Senate might incur audience costs due to delay. Similarly, Chiou and Rothenberg (2014) argue that the President is concerned with assorted costs of delay including how delay on one nominee affects consideration of other nominees, downstream costs of confirmation delay to policymaking, and how that affects public evaluation of the President's performance, which is likely to be more affected by higher-level nominations.

[15]For the purposes of tractability, we omit additional sources of utility that might be related to increased utility with the passage of time, such as reduced appointee uncertainty due to prolonged vetting (Hollibaugh 2015; Sen and Spaniel 2017).

$$t_S^* = \frac{(x_P - x_S)^2 - 4(x_A - x_S)^2}{4\gamma}. \tag{5}$$

Inspection of this quantity indicates that higher levels of Senate–Agency divergence correspond to lower levels of Senate-induced delay, presumably because the Senate will be keener to confirm nominees who will reorient an agency closer to its own ideal point.[16] Moreover, increases in γ also result in lower levels of delay. Combining these results, and letting $t^* = t_P^* + t_S^*$, which allows us to write t^* in terms of the equilibrium values of x_N^*, we find that

$$t^* = \begin{cases} \frac{(x_P - x_S)^2 - 4(x_A - x_S)^2}{4\gamma} & \text{if } (x_A - x_S)^2 < \frac{(x_P - x_S)^2}{4} \\ 0 & \text{otherwise} \end{cases} \tag{6}$$

and

$$x_N^* = \begin{cases} \frac{x_P + x_S}{2} & \text{if } \left(\frac{x_P + x_S}{2} - x_S\right)^2 > (x_A - x_S)^2 \text{ and } (x_P - x_S)^2 > (x_A - x_S)^2 \\ x_A & \text{if } \left(\frac{x_P + x_S}{2} - x_S\right)^2 \le (x_A - x_S)^2, (x_P - x_S)^2 > (x_A - x_S)^2, \text{ and } (x_A - x_P)^2 \le (2x_S - x_A - x_P)^2 \\ 2x_S - x_A & \text{if } \left(\frac{x_P + x_S}{2} - x_S\right)^2 \le (x_A - x_S)^2, (x_P - x_S)^2 > (x_A - x_S)^2, \text{ and } (x_A - x_P)^2 > (2x_S - x_A - x_P)^2 \\ x_P & \text{otherwise} \end{cases} \tag{7}$$

Given that we assumed higher γ was likely associated with higher profile and higher status positions, as well as the fact that the sole source of delay in our model is due to the Senate, we can derive our main empirical hypotheses:

Hypothesis 1: Conditional on a vacancy occurring, higher status positions will correspond to lower levels of delay.

Hypothesis 2: Conditional on a vacancy occurring, greater Senate–Agency ideological divergence will correspond to lower levels of delay.

Furthermore, under the assumption that an outcome where no delay occurs is equivalent to one where no vacancy occurred, we can derive the following additional hypotheses[17]:

Hypothesis 3: Greater Senate–Agency ideological divergence will correspond to lower vacancy rates.

Hypothesis 4: Higher status positions will have lower vacancy rates.

Overall, our model suggests several important relationships between position status, Senate–Agency divergence, onset and duration. We use these results to inform our empirical analysis.

---

[16]Note that this also implies that the Senate will move more quickly when the President is closer to the Senate than the Agency is, as moving more quickly will enable the Senate to enjoy policy gains sooner.

[17]Note that Hypothesis 4 is based on the limiting condition $\lim\limits_{\gamma \to \infty} \frac{(x_P - x_S)^2 - 4(x_A - x_S)^2}{4\gamma} = 0$.

Data and methods

To evaluate our formally derived hypotheses, we use our data on appointee vacancies across 416 PAS positions from January 1989 to January 2013.[18] We analyse a dependent variable we call *Vacant Days* (*V*), which is the total number of days each position is vacant during each of 12 congressional terms – from the 101st Congress through the 112th Congress. As written, our model focuses on how Senate–Agency ideological divergence and position status relate to vacancy onset (i.e. whether vacancies exist at all) and vacancy length. We also flesh out our empirical model by including other potentially relevant control variables. Alternative models are provided in Appendix B. We employ a zero-inflated negative binomial (ZINB) model that fits both the formal model and the data. In terms of theory, we are the first to propose hypotheses on institutional causes for both vacancy rates (onset) and conditional lengths of vacancies that do occur. As well, the data are indicative of why one needs to consider both stages of vacancies conjointly. In the following paragraphs, we describe this data and how we operationalise our independent variables. We then move to a description of our modelling choice.

Senate–agency ideological divergence

We operationalise this concept using estimates of two critical Senate pivot points: the Senate majority median and the relevant committee chair.[19] First, we measure the ideological divergence between a given agency and the median member of a Senate's majority. We determined this measure using Chen and Johnson's (2015) agency ideology scores that place agency ideology as an ideal point on the 1st dimension of the DW-NOMINATE ideological continuum. Likewise, we measure the ideological divergence between a Senate committee chair handling the nomination and the agency. Hence, *Senate Median–Agency Ideological Divergence* (*S*) and *Chair–Agency Ideological Divergence* (*C*) are positive if divergence occurs away from the principal's preference and towards the opposition party's ideological extreme. *S* and *C* are negative if divergence occurs away from the principal's preference and towards the principal's party extreme. $S = 0$ would represent perfect ideological alignment between the agency and the median member of the Senate majority. *S* ranges from -0.89 to 0.39 ($SD = 0.25$). *C* ranges from -1.09 to 0.84 ($SD = 0.32$).

Per Hypothesis 2, we then expect the relationship between *S* or *C* and *V* to be curvilinear, where $\Pr(V = 0)$ is highest at both extremes. Per Hypothesis 3, we expect a similar curvilinear relationship, where $V = aS^2 + bS$, $V \neq 0$, and *V* highest when $S = 0$. In other words, agencies with nonzero *S* or *C* values should have shorter vacancies and, per Hypothesis 3, the same agencies should have lower rates of vacancy onset.

President–Agency Ideological Divergence

One of the most legitimate constitutional resources for a president to move administrative outputs towards his preferences is presidential appointments (Bertelli and

---

[18]Information on the construction of the vacancy data is included in Appendix A.
[19]See Appendix C for a complete breakdown of relevant committee to PAS position.

Feldmann 2007; Lewis 2008; Resh 2014). Presidents achieve responsiveness through the selection of appointees based on loyalty, ideology and identifiable support of the president's policy prerogatives (Moe 1993). Thus, we include *President–Agency Ideological Divergence* (*P*). At the same time, the apparent need for responsiveness through appointments can be attenuated if careerists' ideological and programmatic proclivities align with the president's without the stimulus of appointed loyalists (Resh 2014) or if presidents seek policy retrenchment (Kinane 2019). Given these differentiating reasons for strategically choosing to leave an appointee position vacant, we did not propose formal hypotheses for *P*.[20] Nonetheless, its consideration is necessary for any model of appointee vacancies. As with *S* or *C*, $P = 0$ represents perfect ideological alignment between the agency and the president's ideal point on the DW-NOMINATE scale. *P* ranges from -1.20 to 0.43 (SD = 0.26).

Position status

We can operationalise the concept of position status in two ways. *High Status* is a dichotomous variable representing Executive Pay Levels I & II, which include higher executive-level appointments such as those appointees who head cabinet-level agencies (secretaries), large bureaus and subagencies independent from the cabinet-level agency (directors, commissioners and administrators).[21] Per Hypothesis 1, *High Status* should be associated with shorter vacancies and, per Hypothesis 4, it should be associated with lower rates of vacancy onset.[22]

Control variables

To these key independent variables, we add several control variables that other scholars have suggested might also be important to the appointments process. Continuing on the theme of ideological conflict, previous research on the confirmation process has noted the importance of ideological divergence between the President and key members of the Senate (Bonica et al. 2015; Chiou and Rothenberg 2014; McCarty and Razaghian 1999; Ostrander 2016). Thus, we include *Committee Conflict*, a continuous measure indicating the Euclidean difference between the committee chair's and the president's 1st dimension DW-NOMINATE scores. Relatedly, previous research has found that partisan warfare increases both the time to confirmation and the probability thereof (Asmussen 2011; Bell 2002; Chiou and Rothenberg 2014; McCarty and Razaghian 1999; Shipan and Shannon 2003). As such, we include *President–Senate Margin*, which represents the number of seats in the Senate controlled by the president's party minus the number of seats controlled by the opposition party. As well, we include

---

[20]It should also be noted that, in equilibrium, our formal model suggests no direct relationship between President–Agency Ideological Convergence and either vacancy onset or delay (see Equation 6).

[21]Examples include the Commissioner of the IRS, the Director of the FBI, and the Administrator of NASA.

[22]A dummy for *Agency Head* was highly correlated (r = 0.49) with *High Status*. Therefore, we modeled both variables separately as well as together. Our main inferential model includes*High Status* only, as it is the most efficient model and presents no multicollinearity issues. Results are not substantively different with *Agency Head*. Alternative models are available in Appendix B.

a dummy variable for whether the majority party in the House of Representatives is in opposition to the president's party (*House Divided*).

Other research (Hollibaugh and Rothenberg 2018) has noted the importance of agency structure in the appointments process. We, therefore, include *Agency Independence*, a latent construct formulated by Selin (2015) through a "thorough review of the provisions of agency authorising statutes and the literature on political control and agency design . . . [confirming] the theoretical argument that agencies are not only structured in ways that can elaborate on the qualifications and characteristics of key individuals at the top of the agency but also are structured in ways that affect the insulation of agency policy decisions from political influence and review" (Supplementary Information, p. i). We use the first of two dimensions of agency independence that Selin constructs – that is, "Decision-maker Independence" – which is generated from a Bayesian latent factor model based on 50 structural features of 321 federal agencies. This variable is positively correlated with structural features such as fixed and longer-term lengths, staggered terms (limiting the ability to change a board or commission's entire membership at once), constraints on the President or other political principals to remove appointees except for cause, expertise and/or partisan balancing requirements, quorum requirements, limits on the number of members and features that otherwise enhance decisionmaker independence or potential appointee pools; conversely, this factor is negatively correlated with features that limit decisionmaker independence via removal powers such as whether an agency/department is located within the Executive Office of the President or the cabinet, whether it has a bureau structure, and if the relevant statute specifies that service is at the President's pleasure.

Additionally, to account for a specific position in our data that might be particularly affected, we include *Inspector General*, which equals 1 when an appointee is an agency inspector general (IG). We also account for the panel nature of our data by including a lag of *V* on each position. Finally, we account for appointment timing. To account for factors relating to new administrations, we include *New Administration* coded as 1 for the congressional term immediately following the inauguration of a new president.

Model estimation

Table 1 presents summary statistics for all variables, and Figure 1 graphs the distribution of the *V*. Many positions are filled throughout one or more full congressional terms, so *V* often equals zero. One benefit of our theoretical model is that it combines two possible sources of vacancies – Presidential and Senatorial – and provides sharp theoretical predictions about aggregate vacancies and their lengths. It suggests that vacancy length is largely driven by the Senate and, as such, ideological concerns by the upper house are largely responsible for delays in filling vacancies. At the same time, lower status positions are more likely to see a vacancy than high status positions. Hence, overdispersion is likely, and the data indeed reflect that. The data are overdispersed and characterised by high within-panel (i.e. position) autocorrelation. There are also many positions that were occupied without pause across a given Congress (39.83%).

Table 1. Model variables and expectations

| Variable	H (logit/ binomial)	Mean (SD)	Min./Max.	Definition
Vacant Days	DV	150.92 (193.44)	0/731	Total days during congressional term position is not occupied by a confirmed appointee
Vacant Days (lagged)	NA	152.36 (190.18)	0/731	Total days in previous congressional term position is not occupied by a confirmed appointee
Majority Median–Agency Ideological Divergence	+/Ω	−0.25 (0.25)	−0.89/0.39	= 0 if agency and Senate majority median voter are perfectly aligned ideologically; negative if divergent towards opposition base; positive if divergent towards party base
Chair–Agency Ideological Divergence	+/Ω	−0.23 (0.32)	−1.09/0.84	= 0 if agency and relevant Senate committee chair are perfectly aligned ideologically; negative if divergent towards opposition base; positive if divergent towards party base
High Status	±	0.17 (0.38)	0/1	= 1 if position is at Executive Pay Levels 1 or 2
President–Agency Ideological Divergence	NA	−0.44 (0.26)	−1.20/0.04	= 0 if agency and president are perfectly aligned ideologically; negative if divergent towards opposition base; positive if divergent towards party base
Inspector General	NA	0.07 (0.25)	0/1	= 1 if position is inspector general
New Administration	NA	0.24 (0.43)	0/1	= 1 if during first congressional term of a new presidential administration
Senate Margin	NA	0.63 (9.69)	−12/18	Senate seats of president's party minus seats of opposition party
Committee Conflict	NA	0.60 (0.39)	0.004/1.19	= Euclidean distance between president and relevant Senate chair DW-Nominate scores
Divided Government	NA	0.66 (0.47)	0/1	= 1 if Senate majority is opposite party of the president
Structural agency independence	NA	−0.27 (0.45)	−0.845/2.24	= latent measure of agency structural "decision-making" independence as f(multimember body, quorum rules, expertise requirements, conflict of interest provisions, fixed terms,0 and for cause protections) (Selin 2015)

Vacant days within any given Congress, 1989–2013
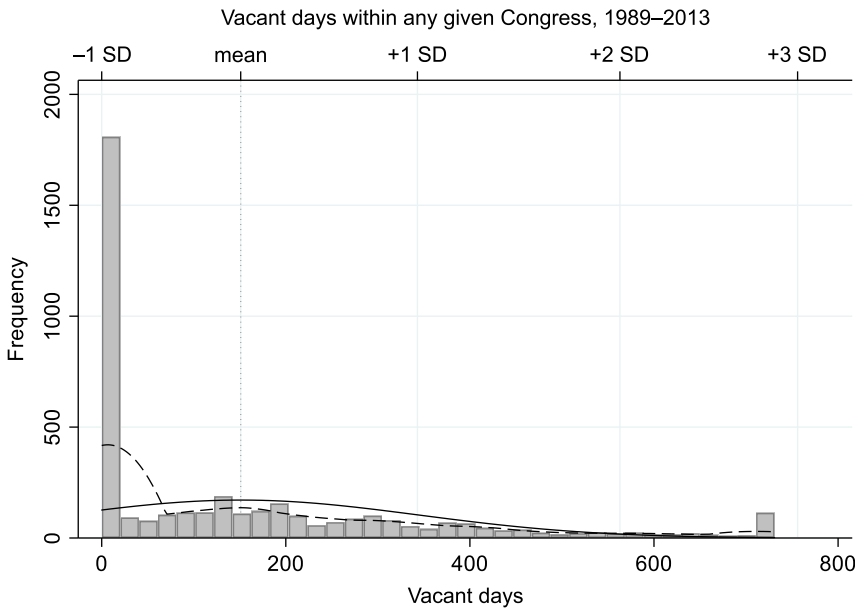
Figure 1. Histogram of vacant days.
Note: Normal distribution = solid black line; Kernel density estimation = dashed line.

As mentioned, to account for overdispersion – and to account for the fact that two of our key hypotheses are related to vacancy onset as opposed to vacancy length – we use a ZINB model, run in two stages.[23] The first stage of the ZINB model predicts whether there is a vacancy at all. In other words, the first stage uses a logistic estimation to predict the probability of seeing a position with no vacancies [i.e. $Pr(V=0)$]. The second stage predicts the number of events (V) using a standard negative binomial model, given that the position will be subject to vacancy ($V \neq 0$). We model V as a polynomial function of *Principal–Agent Ideological Divergence* for relevant principals. Hence a quadratic term is included for the ideological divergence between a given agency and two key Senate pivots – the Senate majority median and the relevant committee chair – for both the logit and count portions of the model.

Model results

We present models here and in Appendix B with both "dynamic" and "static" agency ideology estimates. In other words, the Chen and Johnson (2015) agency ideal point estimates are dynamic in that they are measured via campaign contributions of agency employees for each presidential administration. Hence, they change within agency across presidential administrations. This is important to recognise because some Chen and Johnson (2015) estimates have wide within-agency variance. For instance, the Small Business Administration's ideal preference under

---

[23]Diagnostics indicating that ZINB is the most appropriate model choice are available in Appendix B.

the first Clinton administration is estimated at −0.25 (liberal), whereas it is estimated at 0.21 (conservative) during the first George W. Bush administration and liberal (−0.19) again during the first Obama administration.

While aggregating individual actions to institutional preferences, it may present some challenges, the dynamism of their measure carries some advantages over other agency ideology estimates that are static and based on external perceptions (e.g. Richardson et al. 2018). Nonetheless, using the dynamic estimates means that we lose observations in the George Herbert Walker Bush presidency as Chen and Johnson (2015) measure only for the Clinton through first Obama administrations. By averaging these estimates across time, we are able to leverage a static measure of their estimates that we can place on a common ideological space across all Congresses in our vacancy dataset. Moreover, the static (average) measure of Chen and Johnson's (2015) agency estimates compare reassuringly with the popular static measure estimated by Richardson et al. (2018), correlating to that ideology measure at r = 0.72.[24]

Table 2 reports the results of our analysis. ZINB model coefficients are estimated in two stages. Among the several models we estimated, we present the most complete models that test our theoretical conceits.[25] To address autocorrelation, we estimate robust standard errors clustered on agency. The first two columns in Table 2 report zero-inflation stage logit model estimates. The second two columns report second-stage negative binomial count model estimates. Because interpretation of the coefficients can be less than intuitive for these models, even columns present the predicted change in the dependent variable given a one-unit change in the independent variable. For the zero-inflated portion of the model, this is presented as a percentage change in the likelihood that a position has zero vacancy days. For the negative binomial stage, we present this as the change in the predicted number of days a position stays vacant.[26]

Our hypotheses regarding position status find relatively strong support. For example, a change from 0 to 1 for the dichotomous variable *High Status* will result in an associated 12.2–16.4% increase in the likelihood that there will be zero *V* associated with that position, whereas a *High Status* position is also associated with 37 fewer *V*, on average, than other positions (conditional on a vacancy onset). In line with H1 and H4, these findings hold statistical significance and substantive consistency across both the dynamic and static agency ideology estimate models.

Additionally, Hypothesis 3 appears not to be supported in our analysis. We find that there is a statistically significant negative relationship in the logit portion of the model between *V* and the quadratic term for *Chair–Agency Ideological Divergence*, whereas the positive relationship for *Senate Median–Agency Ideological Divergence* does not hold statistical significance in the static agency

---

[24]See Appendix B for correlations across presidencies for both the dynamic and static estimates.

[25]In the Appendix, we include other (less efficient) specifications with and without additional controls and vacancy day lags. Our findings are generally consistent across models.

[26]It is important to note that while coefficients between these two stages will typically be in opposite directions, neither significance in both stages nor consistency in the opposition of directions is guaranteed. Some characteristics may lead to a decreased likelihood of a position having zero Vacant Days while simultaneously decrease the average number of Vacant Days. As well, due to the interactive effects of the quadratic portion of the equation, we cannot interpret those coefficients in isolation from one another.

Table 2. Zero-inflated negative binomial model of vacant days

	Dynamic agency ideology estimates				Static agency ideology estimates			
	Binomial		Inflated		Binomial		Inflated	
	β	Δ in *Vacant Days* for 1 SD Δ in X	β	% Δ in odds of Pr(V = 0) for SD Δ in X	β	Δ in *Vacant Days* for 1 SD Δ in X	β	% Δ in odds of Pr(V = 0) for SD Δ in X
Chair–Agency Ideological Divergence	0.107 (0.144)	4.68	−1.903** (0.595)	**−46.3%**	0.181 (0.156)	6.8	−1.645** (0.585)	**−35%**
Chair–Agency Ideological Divergence Squared	−0.471** (0.155)	**−13.43**	−1.994*** (0.593)	**−32.6%**	−0.311+ (0.192)	**−7.25**	−1.583* (0.687)	**−22.1%**
Majority Median–Agency Ideological Divergence	0.140 (0.393)	5.89	3.923*** (1.032)	**169.6%**	−0.113 (0.607)	2.27	2.429 (1.564)	54.1%
Majority Median–Agency Ideological divergence Squared	0.775 (0.691)	17.37	5.268*** (1.371)	**110.2%**	0.124 (1.018)	−2.27	2.834 (2.379)	36.5%
President–Agency Ideological Divergence	0.0341 (0.201)	1.21	−0.754* (0.392)	**−17.5**	0.133 (0.181)	4.83	−0.0809 (0.418)	−2.1%
High-Status Position	−0.768*** (0.0831)	**−36.69**	0.411** (0.158)	**16.4%**	−0.758*** (0.0802)	**−36.69**	0.304* (0.154)	**12.2%**
Inspector General	0.130 (0.0881)	5.44	0.989** (0.302)	**31%**	0.123 (0.0926)	5.13	0.947*** (0.285)	**29.4%**
New Administration	−0.171* (0.0835)	**−9.81**	−1.722*** (0.177)	**−49.8%**	−0.189* (0.0860)	**−10.57**	−1.603*** (0.192)	**−46.2%**

(Continued)

Table 2. (*Continued*)

	Dynamic agency ideology estimates				Static agency ideology estimates			
	Binomial		Inflated		Binomial		Inflated	
	β	Δ in *Vacant Days* for 1 SD Δ in X	β	% Δ in odds of Pr(V = 0) for SD Δ in X	β	Δ in *Vacant Days* for 1 SD Δ in X	β	% Δ in odds of Pr(V = 0) for SD Δ in X
President's Partisan Margin in Senate	−0.0128 (0.00826)	−16.31	−0.0570*** (0.0144)	**−40.1%**	−0.0177* (0.00825)	**−23.41**	−0.0717*** (0.0142)	**−49.4%**
Committee– President Conflict	0.107 (0.164)	6.04	0.789 (0.419)	35.9%	0.0567 (0.154)	3.02	0.259 (0.380)	9.8%
Structural Agency Independence	0.0556 (0.0548)	4.38	0.155* (0.0761)	**10.2%**	0.0469 (0.0526)	3.93	0.165* (0.0745)	**10.7%**
House Divided	−0.219+ (0.130)	**−15.4**	−0.006 (0.260)	−0.3%	−0.284* (0.133)	**−19.33**	−0.017 (0.259)	−0.8%
Vacant Days Lagged	0.0851*** (0.0221)	**13.28**	−0.143* (0.0683)	**−13.3%**	0.0948*** (0.0231)	**14.65**	−0.136* (0.0601)	**−12.5%**
Constant	−0.319*** (0.0610)				−0.297*** (0.0592)			
(α)	−0.359*** (−8.18)							
N			2272				2501	
Nonzero Observations			1355				1467	
Zero Observations			917				1034	
AIC			20250.416				21947.245	
AIC/N			8.913				8.775	
BIC			20422.268				22121.978	

Note: Standard errors in parentheses, clustered on agency (31 clusters). Fixed effects for presidents.
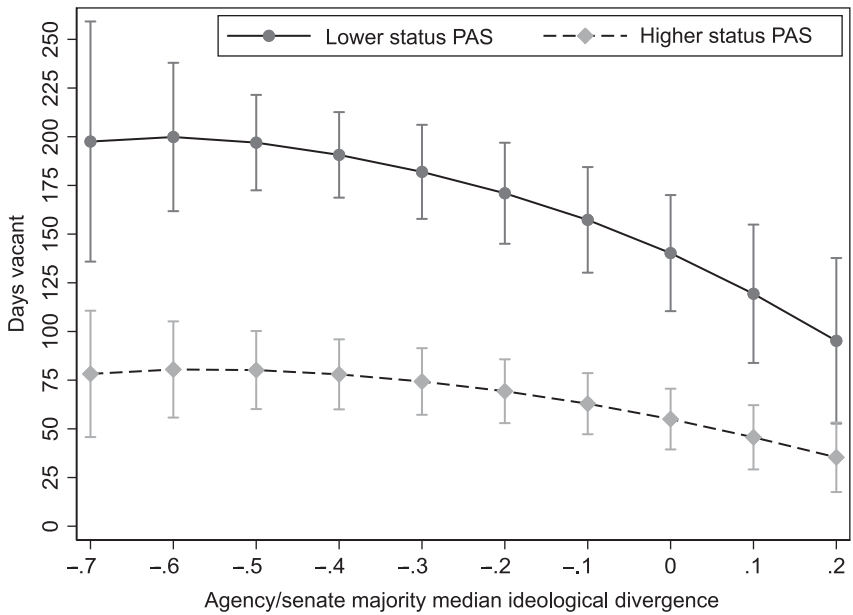+$p < 0.1$, *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$ (two-tailed tests).

Figure 2. Predictive margins of PAS status by agency–senate majority median ideological divergence.
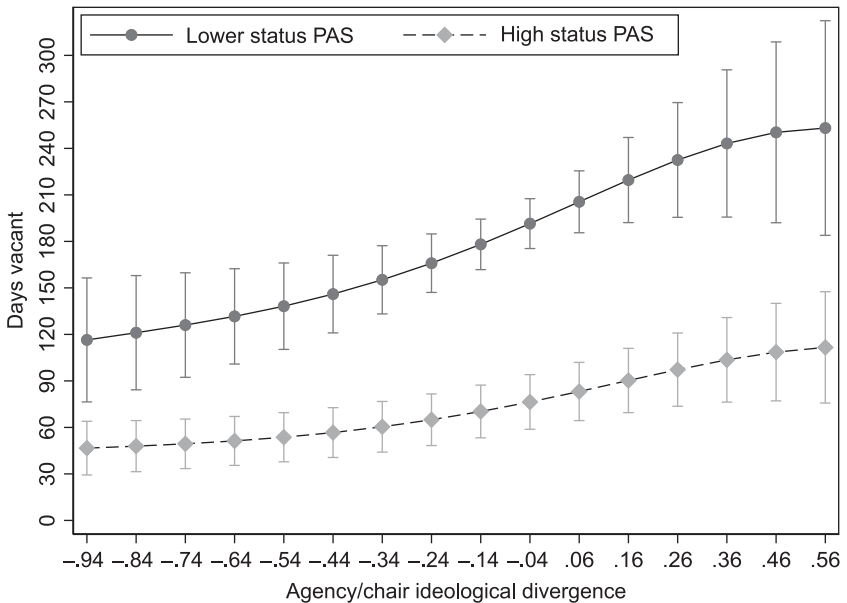

Figure 3. Predictive margins of PAS status by agency–chair ideological divergence.
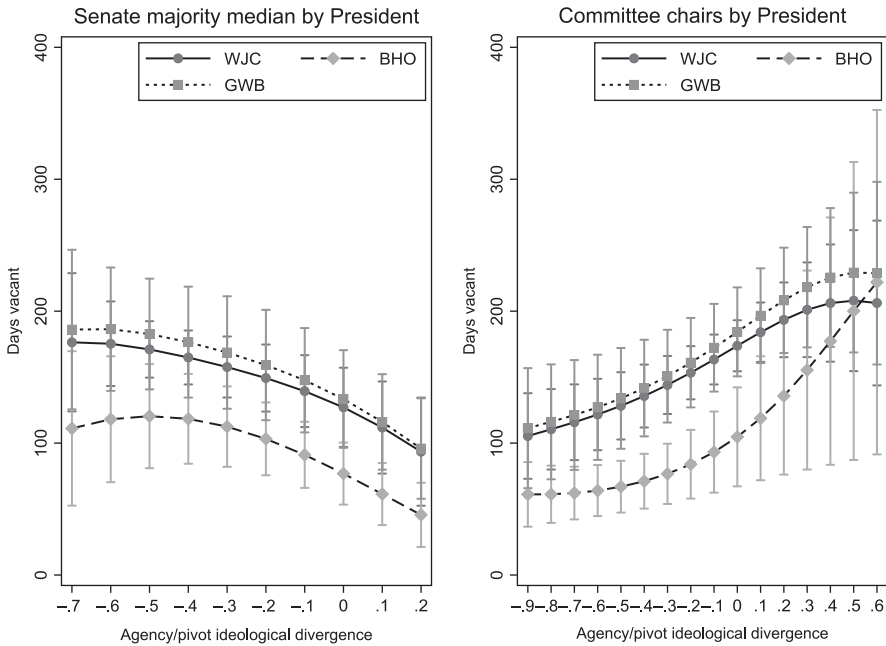
Figure 4. Predictive margins of presidents by agency–pivot ideological divergence.

ideology model. However, we do have some indication from Table 2 that there is support for Hypothesis 2. To consider both the quadratic term and the conditional nature of that hypothesis, we provide Figures 2 & 3 as the clearest way to interpret the model's results.

In assessing the two pivots separately, we find some indication of the curvilinear relationship that we expected. Findings for the majority median voter indicate that there are fewer V as a function of ideological divergence between the Senate majority median and the agency in the direction of the opposition's base. That difference, however, is small and only holds true in comparison with agencies divergent at the party's extreme, therefore forcing us to reject H2 when testing it using the majority party median. This effect washes out when estimating agency ideology on a static basis and including observations from the George H. W. Bush administration.

At the same time, the distribution of ideological divergence is much wider when comparing agencies to their respective committee chairs. In that relationship, as an agency preference diverges from the chair and towards their party's base, there is a dramatic decrease in the length of vacancy. At the extreme, this divergence as much as halves the V per congress in lower-level appointments. This finding holds across both the dynamic and static agency ideology estimates. Hence, we can make the argument that ideological divergence between key Senate pivots and a given agency does lead to a decrease in vacancy days, but on four conditions: (1) this relationship depends on the key Senate pivot (i.e. the committee chair); (2) holds only for agency

divergence towards the party's own extreme preference;[27] (3) holds only for lower status PAS and (4) in respect to whether there is, first, a vacancy at all. As indicated in Figure 4, the relationship for either Senate pivot is consistent substantively across presidencies.

As for the control variables, there are several interesting results. For the purpose of brevity, we focus on the relationship between the president and a given agency and its potential impact on V. It appears by the results that the President's relationship to a given agency has less influence than might otherwise be expected on the onset of a position vacancy. There is no consistent effect on the likelihood of vacancy onset by whether an agency is ideologically opposed to the preferences of a given president. We also find little indication of a relationship between *President–Agency Ideological Divergence* and V (i.e. conditional on vacancy onset).

Together, our findings are consistent with Bertelli and Grose (2011) in that they provide evidence the Senate seeks to exercise more *administrative* influence through the appointment process than previously thought. If an agency is ideologically predisposed against a Senate majority's interests in a given policy domain (as reflected by the relevant committee chair's), then it might behove that majority to install leadership that it has a role in placing in comparison to future coalitions making that placement or maintaining the status quo preferences of an agency that is substantially divergent. At the same time, because a president is likely to suffer from an accrual of nonpolicy penalties, putting an appointee in place in a Senate-opposed agency may likely give the agency a political buffer to advance policy. Though they may provide more nuance than our theoretical model, our empirical results are in line with most of our predictions regarding the roles of position status and Senate–agency conflict.

All that said, our findings regarding the primacy of the committee chair are rather novel and, despite the consistent finding that most nominations die before reaching the floor (Bonica et al. 2015; Krutz et al. 1998), are somewhat distinct from previous findings that have focused on other ideological or partisan mechanics; indeed, Bonica et al. (2015) is one of the very few studies on executive appointments that examines the role of committee chairs. However, the unique institutional power of the chair relative to other key actors, the greater informational advantages possessed by committees (Epstein 1997; Gilligan and Krehbiel 1990; Krehbiel 1991), as well as the possibility that committees are composed of "preference outliers" or "high demanders" relative to the legislature as a whole (Adler and Lapinski 1997; Snyder 1992; Weingast and Marshall 1988) suggest that committees might possess heretofore understudied influence on the advise and consent process, at least relative to other key partisan and/or institutional actors.[28]

---

[27]This particular condition is consistent with Senators engaging in directional – as opposed to proximity – voting.

[28]However, the findings regarding whether committees actually *are* preference outliers are rather mixed (Sprague 2008), and the underlying theory is largely in conflict with an informational parties perspective, which suggests heterogenous and representative committees are best suited to such an informational role (Krehbiel 1991; though see Snyder 1992). Nonetheless, it is clear that committees are institutionally, informationally, and/or ideologically distinct from the Senate floor (or all the above), which suggests that not only are our findings consistent with their role as gatekeeper, but also that the role of committees within the appointments process should be of greater interest, more broadly.

Conclusion

In *Federalist #37*, James Madison acknowledges that "a frequent change of measures from a frequent change of men" may reduce the government's capacity to govern. Madison's Constitution sought to balance what he called energy and stability, noting that "energy in government requires not only a certain duration of power but also the execution of it by a single hand." During the 20th Century, expanding numbers of appointee positions and growing workloads on both ends of Pennsylvania Avenue created new concerns about the tradeoff between energy and stability. No aspect of the appointments process better illustrate the costs and tradeoffs, than the persistence of long-term vacancies.

In this article, we analyse the frequency and duration of appointee vacancies, highlighting two overriding factors: position status and the Senate's efforts to influence the bureaucracy. High-ranking positions and positions responsible for heading an agency are associated with fewer vacancies. Additionally, when Senate and agency preferences are not aligned, our analysis indicates more likely appointee placements and continuity. The word "acting" may erode authority, shorten horizons and create uncertainty that pervades administrative commitments (O'Connell 2009). Conversely, acting officials may be capable experts whose institutional competence enables them to negotiate sensitive issues.

What are the consequences of appointee vacancies for leadership continuity and agency administration? Appointee vacancies may limit the reach of presidential administration and symbolically weaken the chain of electoral accountability binding federal agency bureaucracies to the Constitution (Aberbach and Rockman 2000; Mendelson 2011; Stephenson 2013). From the point of view of Congress, however, they can have a counterbalancing effect.

While vacancies resulting from long delays in nomination and confirmation may exacerbate the recruitment of competent nominees willing to endure an extended appointment process (Hollibaugh 2015), they can also be seen as "[handing] the keys to bureaucrats,"[29] thereby maintaining the status quo and responsiveness to the Senate when agency outputs are ideologically aligned to the preferences of the Senate. Committee and agency staff may prefer working with acting officials they deem more reliable (Mendelson 2011; Resh 2014).

We encourage further attention and work from scholars on the implications that vacancies have on bureaucratic behavior and agency outputs. The first step in understanding the effects of vacancies is to map the dynamics that determine this unique feature of American politics. Here, we present both a novel dataset that helps advance scholarship on the phenomenon of appointee vacancies, generally. From these data, we provide empirical results of a theoretically derived model that is the first to incorporate both vacancy onset and vacancy length as a function of Senate–agency relations.

---

[29]Jay Lefkowitz, OMB's general counsel under President George W. Bush. Quoted in http://www.politico.com/interactives/2017/trump-war-on-regulations/

References

Aberbach JD and Rockman BA (2000) *In the Web of Politics: Three Decades of the U.S. Federal Executive.* Washington, DC: Brookings Institution Press.

Adler ES and Lapinski JS (1997) Demand-Side Theory and Congressional Committee Composition: A Constituency Characteristics Approach. *American Journal of Political Science*, **41**(3): 895–918.

Asmussen N (2011) Female and Minority Judicial Nominees: President's Delight and Senators' Dismay? *Legislative Studies Quarterly*, **36**(4): 591–619.

Bell LC (2002) Senatorial Discourtesy: The Senate's Use of Delay to Shape the Federal Judiciary. *Political Research Quarterly*, **55**(3): 589–608.

Bertelli AM and Feldmann SE (2007) Strategic Appointments. *Journal of Public Administration Research and Theory*, **17**(1): 19–38.

Bertelli AM and Grose CR (2011) The Lengthened Shadow of Another Institution? Ideal Point Estimates for the Executive Branch and Congress. *American Journal of Political Science*, **55**(4): 767–781.

Bertelli AM and Lynn Jr. LE (2006) *Madison's Managers: Public Administration and the Constitution.* Baltimore: Johns Hopkins University Press.

Binder SA and Maltzman F (2002) Senatorial Delay in Confirming Federal Judges, 1947-1998. *American Journal of Political Science*, **46**(1): 190–199.

Bond JR, Richard F and Krutz GS (2009) Malign Neglect: Evidence That Delay Has Become the Primary Method of Defeating Presidential Appointments. *Congress & the Presidency*, **36**(3): 226–243.

Bonica A, Chen J and Johnson T (2015) Senate Gate-Keeping, Presidential Staffing of 'Inferior Offices,' and the Ideological Composition of Appointments to the Public Bureaucracy. *Quarterly Journal of Political Science*, **10**(1): 5–40.

Chen J and Johnson T (2015) Federal employee unionization and presidential control of the bureaucracy: Estimating and explaining ideological change in executive agencies. *Journal of Theoretical Politics*, **27**(1): 151–174.

Chiou F-Y and Rothenberg LS (2014) Executive Appointments: Duration, Ideology, and Hierarchy. *Journal of Theoretical Politics*, **26**(3): 496–517.

Dull M and Roberts PS (2009) Continuity, Competence, and the Succession of Senate-Confirmed Agency Appointees, 1989-2009. *Presidential Studies Quarterly*, **39**(3): 432–453.

Dull M, Roberts PS, Keeney MS and Choi SO (2012) Appointee Confirmation and Tenure: The Succession of U.S. Federal Agency Appointees, 1989-2009. *Public Administration Review*, **72**(6): 902–913.

Epstein D (1997) An Informational Rationale for Committee Gatekeeping Power. *Public Choice*, **91**(1): 271–299.

Gilligan TW and Krehbiel K (1990) Organization of Informative Committees by a Rational Legislature. *American Journal of Political Science*, **34**(2): 531–564

Haglund ET and Lewis DE (2013) Politicization and Compliance with the Law: The Case of the Federal Vacancies Reform Act of 1998. *Presentation at the 2013 Annual Meeting of the Midwest Political Science Association*, Chicago, April.

Hollibaugh GE Jr. (2015) Vacancies, Vetting, and Votes: A Unified Dynamic Model of the Appointments Process. *Journal of Theoretical Politics*, **27**(2): 206–236.

Hollibaugh GE Jr. and Rothenberg LS (2017) The When and Why of Nominations: Determinants of Presidential Appointments. *American Politics Research*, **45**(2): 280–303.

Hollibaugh GE Jr. and Rothenberg LS (2018) The Who, When, and Where of Executive Nominations: Integrating Agency Independence and Appointee Ideology. *American Journal of Political Science*, **62**(2): 296–311.

Jordan G (1990) Sub-governments, policy communities and networks: refilling the old bottles? *Journal of theoretical politics*, **2**(3): 319–338.

Kinane CM (2019) Control without Confirmation: The Politics of Vacancies in Presidential Appointments. Ph.D. Diss., University of Michigan.

Krause GA and O'Connell AJ (2016) Experiential Learning and Presidential Management of the U.S Federal Bureaucracy: Logic and Evidence from Agency Leadership Appointments. *American Journal of Political Science*, **60**(4): 914–931.

Krehbiel K (1991) *Information and Legislative Organization*. Ann Arbor: University of Michigan Press.

Krehbiel K (1998) *Pivotal Politics: A Theory of U.S. Lawmaking*. Chicago: University of Chicago Press.

Krutz GS, Richard F and Bond JR (1998) From Abe Fortas to Zöe Baird: Why Some Presidential Nominations Fail in the Senate. *American Political Science Review*, **92**(4): 871–881.

Lewis DE (2008) *The Politics of Presidential Appointments: Political Control and Bureaucratic Performance*. Princeton, NJ: Princeton University Press.

MacDonald JA and McGrath RJ (2016) Retrospective Congressional Oversight and the Dynamics of Legislative Influence over the Bureaucracy. *Legislative Studies Quarterly*, **41**(4): 899–934.

Mashaw JL (1997) *Greed, Chaos, and Governance: Using Public Choice to Improve Public Law*. New Haven, CT: Yale University Press.

McCarty N and Razaghian R (1999) Advice and Consent: Senate Responses to Executive Branch Nominations 1885-1996. *American Journal of Political Science*, **43**(4): 1122–1143.

McGarity TO (1991) The Internal Structure of EPA Rulemaking. *Law & Contemporary Problems*, **54**(4): 57–111.

Mendelson NA (2011) Rulemaking, Democracy, and Torrents of E-Mail. *George Washington Law Review*, **79**(5): 1343–1380.

Moe TM (1993) Presidents, Institutions, and Theory. In Edwards G. C., Kessel J.H. and Rockman B.A. (eds.), *Researching the Presidency: Vital Questions, New Approaches*. Pittsburgh, PA: University of Pittsburgh Press, 337–385.

Moraski BJ and Shipan CR (1999) The Politics of Supreme Court Nominations: A Theory of Institutional Constraints and Choices. *American Journal of Political Science*, **43**(4): 1069–1095.

Nathan RP (1983) *The Administrative Presidency*. New York: John Wiley & Sons.

Nixon DC (2001) Appointment Delay for Vacancies on the Federal Communications Commission. *Public Administration Review*, **61**(4): 483–492.

O'Connell AJ (2009) Vacant Offices: Delays in Staffing Top Agency Positions. *Southern California Law Review*, **82**: 913–1000.

O'Connell AJ (2020) Actings. *Columbia Law Review*, Forthcoming. Available at SSRN: https://ssrn.com/abstract=3535182.

Ostrander I (2016) The Logic of Collective Inaction: Senatorial Delay in Executive Nominations. *American Journal of Political Science*, **60**(4): 1063–1076.

Peterson MA (1993) Political Influence in the 1990s: From Iron Triangles to Policy Networks. *Journal of Health Politics, Policy and Law*, **18**(2): 395–438.

Resh WG (2014) Appointee–Careerist Relations in the Presidential Transition of 2008-2009. *Presidential Studies Quarterly*, **44**(4): 697–723.

Resh WG (2015) *Rethinking the Administrative Presidency: Trust, Intellectual Capital, and Appointee-Careerist Relations in the George W. Bush Administration*. Baltimore: Johns Hopkins University Press.

Richardson MD, Clinton JD and Lewis DE (2018). Elite perceptions of agency ideology and workforce skill. *The Journal of Politics*, **80** (1), 303–308.

Romer T and Rosenthal H (1978) Political Resource Allocation, Controlled Agendas, and the Status Quo. *Public Choice*, **33**(1): 27–43.

Rose R (2005) Giving Direction to Government in Comparative Perspective. In Aberbach J. D. and Peterson J. D. (eds.), *The Executive Branch*. New York: Oxford University Press, 72–99.

Rossiter C (1961) *The Federalist Papers*. New York: Mentor.

Selin JL (2015) What Makes an Agency Independent? *American Journal of Political Science*, **59**(4): 971–987.

Sen M and Spaniel W (2017) How Uncertainty about Judicial Nominees Can Distort the Confirmation Process. *Journal of Theoretical Politics*, **29**(1): 22–47. https://doi.org/10.1177/0951629815603830.

Shipan CR and Shannon ML (2003) Delaying Justice(s): A Duration Analysis of Supreme Court Confirmations. *American Journal of Political Science*, **47**(4): 654–668.

Snyder JM Jr. (1992) Committee Power, Structure-Induced Equilibria, and Roll Call Votes. *American Journal of Political Science*, **36**(1): 1–30.

Sprague M (2008) The Effects of Measurement and Methods Decisions on Committee Preference Outlier Results. *Political Research Quarterly*, **61**(2): 309–318.

Stayn JL (2001) Vacant Reform: Why the Federal Vacancies Reform Act of 1998 Is Unconstitutional. *Duke Law Journal*, **50**(5): 1511–1539.

Stephenson MC (2013) Can the President Appoint Principal Executive Officers Without a Senate Confirmation Vote? *Yale Law Journal*, **122**(4): 940–979.

Union of Concerned Scientists (2020) *Presidential Recommendations for 2020: A Blueprint for Defending Science and Protecting the Public*. Cambridge, MA: Center for Science and Democracy at the Union of Concerned Scientists (Carter, Jacob, Taryn MacKinney, Genna Reed, and Gretchen Goldman). URL: https://www.ucsusa.org/sites/default/files/2020-01/presidential-recommendations-for-2020_0.pdf.

United States General Accounting Office (2001) Presidential Appointments: Agencies' Compliance with Provisions of the Federal Vacancies Reform Act of 1998.

Untermeyer C (2000) Interview by James Sterling Young, Sidney Milkis, and George C. Edwards III, George H. W. Bush Oral History Project, College Station, TX, July 27-28.

Weingast BR and Marshall WJ (1988) The Industrial Organization of Congress; or, Why Legislatures, Like Firms, Are Not Organized as Markets. *Journal of Political Economy*, **96**(1): 132–163.