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ELECTIONS, IDEOLOGY, AND TURNOVER IN THE U.S. FEDERAL GOVERNMENT

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**ABSTRACT**

A defining feature of public sector employment is the regular change in elected leadership. Yet, we know little about how elections influence public sector careers. We describe how elections alter policy outputs and disrupt the influence of civil servants over agency decisions. These changes shape the career choices of employees motivated by policy, influence, and wages. Using new Office of Personnel Management data on the careers of millions of federal employees between 1988 and 2011, we evaluate how elections influence employee turnover decisions. We find that presidential elections increase departure rates of career senior employees, particularly in agencies with divergent views relative to the new president and at the start of presidential terms. We also find suggestive evidence that vacancies in high-level positions after elections may induce lower-level executives to stay longer in hopes of advancing. We conclude with implications of our findings for public policy, presidential politics, and public management.

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During the 2016 election year, one quarter of federal employees indicated they would consider quitting if Donald Trump were elected president (Katz 2016a). On the other hand, a prominent public sector union publicly endorsed Trump and worked actively for his election (Katz 2016b). This was the union's first ever endorsement of a presidential candidate. To one set of federal employees the prospect of a Trump presidency was an inducement to leave government and to another set a reason to stay. For both groups of civil servants, the election itself is a key career event, systematically influencing employee career choices.

One of the defining features of public sector employment is the regular change in executive leadership that coincides with the electoral cycle. Elections can bring dramatic changes in the work environments of federal employees, from changes in the mission of the organizations to which federal employees give their time and labor to the basics of personnel policy (e.g., size of cost-of-living increases, new civil service rules). The public sector consequences of electoral politics are very important since significant departures can diminish the expertise in administrative agencies and damage the government's ability to carry out key functions.<sup>1</sup>

Given the ubiquity of elections and their impact on the goals and mission of public sector workplaces, it is surprising how little is understood about the impact of elections on turnover among career civil servants.<sup>2</sup> Indeed, the feature of public sector work that arguably

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<sup>1</sup> There is a large literature on this relationship in the private, not-for-profit, and public sectors (see, e.g., Bolton, Potter, and Thrower 2016; Boylan 2004; Hancock et al. 2013; Hausknecht and Trevor 2011; Heavy et al. 2013; O'Toole and Meier 2003; Park and Shaw 2013; Shaw 2011).

<sup>2</sup> There is, however, a robust literature on the causes and consequences of political appointee turnover in the public sector (see, e.g., Boyne et al. 2010; Dull and Roberts 2009; Dull et al. 2012; Hahm et al. 2014; O'Connell 2009; Wood and Marchbanks 2008).

distinguishes it most from work in other sectors is the presence of politics and elections. While important work has examined the influence of different administrative factors on turnover in the civil service (e.g., work-life balance, communication, engagement), scholars have paid less attention to the influence of politics on turnover among public sector employees in the United States (see, however, Bertelli and Lewis 2013; Doherty et al 2016).<sup>3</sup> Fewer still have examined how elections influence the career choices of federal employees. While there is widespread acceptance of the role of elections in the careers of political appointees (see, e.g., Dickinson and Tenpas 2003; O’Connell 2009; Wood and Marchbanks 2008) and an important literature examining the relationships between appointees and career civil servants (Aberbach and Rockman 1976; Michaels 1997; Golden 2000; Hecl 1977; Resh 2015), little work examines how these career events shape the choices of civil servants.

There is a tension in modern democracy since civil service hiring, promotion, and departure are supposed to be insulated from politics, but civil servants may respond to politically determined developments in these areas. So while politicians have little direct influence on the careers of civil servants, they do indirectly shift the utility certain civil servants receive from serving in their jobs. In this paper we describe how elections alter public sector policy outputs and reorder patterns of influence within agencies. These disruptions predictably shape the career choices of civil servants that care about public policy and agency influence. We use new Office of Personnel Management data on the careers of federal employees between 1988 and 2011 to evaluate these effects. The results demonstrate that presidential elections increase the departure rates of senior federal employees, particularly in agencies whose views diverge from those of the

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<sup>3</sup> For works exploring civil service turnover after government changes in other contexts see Akhtari et al. n.d.; Boyne et al. 2010; Christensen et al. 2014, Enns-Jedenastik 2014a.

new president. This effect is largest at the start of presidential terms. These empirical findings validate the importance of elections for public sector personnel and have important implications for our understanding of public policy, presidential politics, and public management.

### **Politics and Employee Turnover**

Given the importance of turnover to the implementation of public policy, scholars have carefully studied its causes and consequences. In particular, past research has focused on a number of organizational factors, features of employee job contexts, and individual characteristics that predict turnover. The organizational factors include characteristics of agencies themselves such as agency prestige, structure, management practices, and culture (Borjas 1982; Gailmard and Patty 2007; Kellough and Osuna 1995; Pitts et al. 2011; Wilson 1994). Scholars argue that organizational features influence the non-monetary compensation employees receive from working in an agency (Grissom 2015).

Looking inside organizations, scholars have examined a number of features of the employee's job, including aspects of the work environment—e.g., training, diversity of the workforce, engagement, clarity of goals, accountability—that influence departure choices (Bertelli 2007; Kim and Fernandez N.d.; Moynihan and Pandey 2007). Perhaps most visibly, they have examined how wage differentials, the structure of the labor contract (e.g., pay for performance; Bertelli 2007), unionization (Chen and Johnson 2014), and employee-agency fit in the larger labor market influence career choices (Bertelli and Lewis 2013; Cameron et al. 2015). Turnover choices are influenced by the expected stream of compensation inside and outside the agency. The gap between expected public and private sector wages is determined partly by whether employees' expertise is valued differentially in the public or private sector (Bertelli and

Lewis 2013; Borjas 1982; Boylan 2004; Grissom et al. 2015; Ippolito 1987). Non-monetary forms of compensation controlled by the agency, such as group affinity or work-life balance, can also influence the choice to stay or leave.

The propensity to stay or leave varies by individual and is correlated with characteristics of employees themselves. Researchers have explored the influence of a variety of demographic factors on turnover, including age or experience (e.g., retirement eligibility, pension vesting), gender, and race (Ippolito 1987; Lewis 1991; Lewis and Park 1989; Moynihan and Landuyt 2008; Pitts et al. 2011). Scholars have also evaluated the impact of different individuals' public service motivation on factors related to turnover and turnover directly (see, e.g., Bright 2008; Caillier 2011; Gamassou 2015; Morrison 2012). These works provide a rich and complex picture of the different factors that influence turnover decisions across agencies, work groups, and individuals.

Fewer studies explore the ways in which politics itself influences turnover in the U.S. civil service. Important work examines how political intervention into administration and policy disagreement between career employees and the administration influences turnover (Bertelli and Lewis 2013; Brehm and Gates 1997; Cameron et al. 2015; Gailmard and Patty 2007; Golden 2000; Richardson 2016; Wilson 1994). What remains unclear, however, is how elections and the presence of a new administration influence career choices (Doherty et al. 2016). Examining the influence of elections on turnover has been difficult because observational data on individual employee careers has been limited and the existing survey data on employee careers and turnover intention is cross-sectional. In this paper, however, we make use of unique new observational data on all civilian employees working in non-defense agencies between 1988 and 2011 to examine this question systematically.

## **How Do Elections Influence Turnover Decisions?**

The advent of a new presidential administration can lead to significant policy changes and alterations in employee influence within agencies. Major party candidates run on platforms promising policy changes. Candidates bolster their case with promises of governing with teams that will take power away from bureaucrats. Almost all candidates promise to improve economy and efficiency in government, cutting expenses and improving performance. The actions that follow these promises have predictable effects on the stay or leave choices of federal employees. We delineate how elections influence these choices below and more formally in Appendix A.

### *What Civil Servants Want*

To begin, it is important to remember that in addition to wages and benefits, federal employees care about policy choices. In this way civil servants are similar to other citizens except that working in government gives policy issues an imminence and salience rarely shared by other voters. Bureaucrats have policy views themselves, particularly about issues in their own agencies. Federal employees often self-select into agencies on the basis of their own support for an agency's mission (Clinton et al. 2012). For example, environmentalists are more likely to seek employment in the Environmental Protection Agency than the Office of Surface Mining. It is important to employees in these agencies that the leadership makes choices that help the organization fulfill its mission. On the other side of the hiring decision, federal agencies have incentives to hire, promote, and retain employees whose views about the agency align with the agency's mission. This selection effect can systematically influence the composition of the workforce and the views of agency employees (Kaufman 1960, 1981). This is rarely an explicit

effort to hire Republicans or Democrats. Rather, agencies that prefer hiring engineers vs. ecologists or economists vs. sociologists are hiring in ways that are correlated with policy views and partisanship. They also engender support for agency mission over any change a new administration might bring.

Federal employees also value the ability to influence their workplace and its choices, particularly since agency actions involve the exercise of public authority. Indeed, a large body of research explores whether public sector employees are distinctive in the extent to which they are motivated by pro-social concerns or what scholars refer to as public service motivation (Perry and Wise 1990). The choices of federal employees become increasingly influential in their organizations as they advance in their careers and this provides them some utility. Whether they agree or disagree about the direction of the agency, both liberal and conservative public sector employees value their involvement in agency decisions and a key part of their work enjoyment comes from the exercise of authority.

### *Elections Predictably Affect Employee Utility*

Elections, particularly elections that bring a party change in the White House, lead to both policy changes and disruptions in the allocation of influence within agencies. New presidents translate their electoral mandate into policy by asserting control of the executive establishment through agency review teams established during the transition and by bringing new decision makers into government. These individuals, whether White House staff or political appointees in the executive branch, must decide whether to delegate important authority to continuing professional personnel. Allowing continuing professional personnel to make important decisions can be difficult for new administrations, particularly when career



professionals worked closely with a previous administration. After elections, presidents or their appointees can marginalize some federal employees and favor others (Nathan 1975). Some presidential appointees shut careerists out of key policy decisions while others invite career professionals to participate in the top-level decisions. Career professionals on the receiving end of suspicion or marginalization by a new administration experience a dramatic change in their work life in a relatively short period of time. Career executives accustomed to deference and respect and empowered with authority are suddenly bypassed and excluded. For some agencies, the new administration will take these actions to stop existing policies and initiate new ones more congruent with the administration's preferences. The dramatic effects of a new administration on both policy and influence will increase departures after elections.

**H1—Elections: The election of a new president will increase departures among career executives.**

The effect of a new administration will not be felt equally across the executive establishment. The impacts of transitions are most perceptible in agencies where the new administration wants to alter policy dramatically. There is significant variation across the government in the policy views of different agencies. The election of a new liberal or conservative president will influence the policy choices of agencies differently depending upon the policy views of the agency. For example, a new Republican president may instruct the Environmental Protection Agency to reduce regulatory burdens and rely on voluntary programs to reduce emissions or the release of pollutants. For other agencies, a new president may simply emphasize some agency priorities over others. A new Democratic president, for example, might instruct U.S. attorneys to be more attentive to election law violations that keep voters from the

polls rather than violations that suggest fraudulent access to the polls. When there is a mismatch between the policy views of the continuing personnel in the agency and the new president, this will increase departure rates.

**H2—Agency Mismatch: A mismatch between the ideology of the agency and the president will increase departures among career executives.**

If new administrations decrease the policy influence of career professionals or dramatically change policies in ways civil servants do not prefer, this should increase departures. Of course, the vast majority of bureaucrats have little influence over the policy choices of their agency. The effects of an administration change will be most felt by bureaucrats with the greatest influence over and proximity to policy making, particularly those at the top of the agency hierarchy. Note that this effect should be evident across agencies that share and do not share the president's policy views. Any loss of influence should increase the propensity of careerists to depart.

**H3—Hierarchy: The effect of elections on departures will be increasing in levels of the hierarchy.**

The importance of elections as career events for government employees is determined by the magnitude of the change brought by the election and characteristics of the employee herself. While employee decisions to stay or leave after an election are determined by whether policy moves in a direction they prefer and changes in employee influence on agency decisions, how these factors influence employee choices varies from employee to employee. Like other employees, public sector employees important value their wages and compensation. Employees

that value wages more than policy influence may be able to tolerate policy disagreement between themselves and the new administration but employees that value policy or influence may not.

### **Data, Measurement, and Modeling**

In order to evaluate these empirical hypotheses, we use data from the Office of Personnel Management's Central Personnel Data File (CPDF) and Enterprise Human Resources Integration system (EHRI) from 1988-2011. This dataset includes the personnel records from 3,511,824 employees that served in the federal government during the period of our study.<sup>4</sup> The comprehensiveness of the data allows for the estimation of effects within relatively small segments of the government with confidence. The dataset includes important demographic indicators (including race, gender, and age) as well as human capital information. Information about an individual's work, including their occupation, salary, supervisory status, and their organization, is also in the dataset. Further, the records are longitudinal, allowing us to characterize an individual's career dynamics, and importantly, when they exit the federal government.

The key dependent variable that we examine in this analysis is turnover. We define an employee as turning over in a given year if it is the last one in which they appear in the CPDF-EHRI data. In the vast majority of cases, this corresponds to employee exit from the federal government. One caveat, however, is that if an employee transitions into a sensitive occupation

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<sup>4</sup> Note that this dataset does not include the Department of Defense, Navy, Army, and Air Force. Additionally, individuals that work in classified roles, sensitive agencies, and sensitive occupations (as defined by OPM) are excluded. We also exclude all political appointees from the analyses in this paper.

as defined by OPM or to an agency that is not included in our dataset (e.g. the Central Intelligence Agency or the Postal Service), they may be mistakenly coded as turning over. Unfortunately, there is no way for us to distinguish these cases. However, there is not a clear reason to believe that this type of career transition is correlated with the key independent variables that we examine in this analysis or is a widespread enough phenomenon to merit concern about its potential to confound the results we report.

To examine H1, we create a dummy variable that takes the value “1” in the first year of a presidential administration (i.e. 1989, 1993, 2001, and 2009) and is coded as “0” otherwise. One might also think that administration changes may vary in terms of their impacts on employees. In particular, changes in the party of the administration may be more likely to have the effects discussed above if appointees from a new party are more suspicious of careerists that were in government during the previous administration. Because of this, we also examine these partisan transitions (that is, 1993, 2001, and 2009) in an alternative analysis (Table B1).

We use the agency ideology scores developed by Clinton and Lewis (2008) to evaluate H2. They surveyed experts on the federal bureaucracy and asked them to rate the ideology of a wide range of federal agencies as liberal, conservative, or neither during the period 1988-2005, which overlaps substantially with the period of our study. These ratings were then used in a multirater item response model to create ideology scores for each agency on a unidimensional scale. Following other work that uses these scores (e.g. Lewis 2008), we segment agencies into three groups – conservative (where the entire 95% credible interval of the ideology estimate is greater than zero), moderate (where the 95% credible interval includes zero), and liberal (where the 95% credible interval is wholly less than zero). Agencies are coded as being “ideologically

mismatched” if they are conservative during a Democratic presidency or if they are liberal during a Republican presidency.

H3 requires us to separate out employees that have differential levels of policy influence. In order to do this, we consider four different groups of employees in all of the analyses below: the career Senior Executive Service (SES), individuals in supervisory roles,<sup>5</sup> General Schedule (GS) employees in grades 13-15, and all employees. We expect the career SES to have the most policy influence and work in closest proximity to political appointees and members of the president’s administration. Therefore, we anticipate that they will evince the greatest levels of sensitivity to ideological mismatch and transitions. GS 13-15 employees as well as those in supervisory roles are less likely to have policy influence relative to the career SES, but they still may be involved in policy decisions and sometimes interface with administration officials. We expect that the final group, all employees, to be least sensitive to elections and ideology.

In addition to the key independent variables discussed above, we also include a number of control variables in our analyses that could also impact the propensity of employees to leave the government. First, we use the geographic location information in the OPM data to merge in data on the seasonally adjusted September unemployment rate in the states where employees work. We collected this data from the Bureau of Labor Statistics’ Local Area Unemployment Statistics Reports for 1988-2011.<sup>6</sup> Here, we use unemployment as a proxy for the strength of the local economy and labor demand in the area where an employee works. We expect that turnover

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<sup>5</sup> The supervisor category is fairly broad and definitions have changed over time. We code individuals that are designated as “supervisor or manager,” “supervisor (CSRA),” “management official (CSRA),” “leader,” or “team leader” in the OPM dataset as supervisors in our analyses.

<sup>6</sup> <http://www.bls.gov/lau/>

is decreasing in this variable. We have also estimated models with other ways of accounting for the strength of the private sector labor market and wages, including fixed effects for combinations of more than 800 occupation codes with hundreds of geographic locations (see Tables B3 - B5 in Appendix B). The results in these specifications are similar to what is reported in the main text.

We control for demographic factors that have been shown or hypothesized to increase public sector turnover rates (e.g. Moynihan and Landuyt 2008). In all of the regression models reported below, we included the employee's age as well as its square. Additionally, all models include a dummy variable for whether or not an employee is a woman to capture any potential gender-based differences in turnover. We also include indicators for four racial groups identified by the Office of Personnel Management over time: American Indian/Alaska Native (reported as A.I./A.N. in the tables below); Asian; Black; and Hispanic.<sup>7</sup> The omitted category is White.

In addition to demographics, we also control for the level of education that an employee has attained in a given year. The original OPM CPDF-EHRI data divides education level into twenty-two different categories. In the analyses reported below we create a single, continuous measure of educational attainment that corresponds to the number of years past 12th grade completed by employees. This simplifies interpretations, but we also note that including these 22 categories as indicator variables or in a somewhat more aggregated form (e.g. high school, B.A., M.A., etc.) does not substantively alter the results that we report below. Finally, all of the models incorporate two additional sets of dummy variables in the analysis for the agency in which an

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<sup>7</sup> Note that we use these categories in order to capture consistent racial categories over time. This requires us to aggregate some racial categories during some periods because of inconsistencies in how racial data has been collected by the federal government over time.

employee works as well as their four-digit occupation code.<sup>8</sup> These fixed effects account for time invariant occupation and agency characteristics that may impact turnover, such as private-public wage differentials for given occupations or the premium placed on government experience in a given policy area or occupation.

To evaluate our hypotheses, we estimate a series of linear probability models, where the outcome variable is whether or not an employee chooses to leave in a given year.<sup>9</sup> In order to account for duration dependence, we include a set of dummy variables for the number of years that an individual has been in government (i.e. tenure fixed effects). The estimates for these effects are akin to a baseline hazard rate in a survival model. Additionally, to capture any global time trends in departure rates, we include a cubic polynomial in time in all model specifications.<sup>10</sup> Finally, in order to account for the correlated error structure and dependence that exists when observing the same employees in many different years, we cluster all standard errors at the individual employee level. We now turn to describing the results of these analyses.

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<sup>8</sup> This is the most disaggregated occupation code that OPM uses. There are 803 unique occupations in our dataset.

<sup>9</sup> We focus on the results of linear probability models given estimation difficulties associated with computing coefficients from logistic regressions or Cox proportional hazards models using such a large dataset and large numbers of fixed effects for, in some cases, relatively small groups. These factors make the convergence of maximum likelihood estimators difficult and require substantial computing power for estimation.

<sup>10</sup> The results we report are robust to other functional forms for the time trend, including a linear trend or quadratic trend. The results are also not affected by excluding the time trend variable.

## Results

Table 1, below, includes the results of the turnover models described above. All of the results are separated into four groups of employees – all employees, GS 13-15, supervisors, and career SES employees. We include coefficient estimates and t-values for all variables. Overall, the results show support for the three hypotheses although with some interesting nuance. The career choices of civil servants at the highest levels appear most responsive to changes in policy and influence stemming from elections. Civil servants at lower levels are more insulated from changes brought by elections as expected. In fact, some changes may work to their benefit if the departure of their superiors opens up new job opportunities for them.

We begin with the results of our analyses relevant to testing H1. The estimated coefficients for the Year 1 variable provide the key test for this hypothesis. Recall, we predict that individuals will be more likely to depart during the first year of a new administration. We find support for this idea in two groups of employees – individuals in supervisory roles as well as career SES employees. Both are estimated to have higher levels of turnover in the first year of a new administration. Career SES employees seem to be most sensitive to a new president with an average increase of 1.6 percentage points in the first year of a new administration relative to other years. The number is significantly less for supervisory employees, though still in the expected direction – a 0.2 percentage point increase in the probability of turning over in transition years. To put this in perspective, this would mean the departure of an additional 528 supervisors and 100 members of Senior Executive Service. These are officials at the very highest levels of government, filling roles such as Deputy Assistant Secretary, Chief Information Officer, and Administrator of the Foreign Agricultural Service.



We see results in the opposite direction for the other two groups of employees that we examine – all and GS 13-15. In particular, turnover propensity is estimated to decrease by 0.1 percentage points for all employees, and by 0.4 percentage points for employees in GS grades 13-15. These latter two results are not consistent with our theoretical predictions, though for all employees the effect is very small. The Year 1 effect for GS 13-15 employees is substantively larger and gestures toward one possibility that is not captured by the theory. With high levels of churn in the career SES during the beginning of a new administration, there may be new opportunities for promotion for individuals directly below the Senior Executive Service level, leading GS 13-15 employees to stay in the government to vie for these new openings.

[Insert Table 1 about here.]

In addition to testing whether or not the first year of an administration is associated with increased turnover, we also examined whether partisan changes in administration had similar effects. The results of this analysis are reported in Table B1 (in Appendix B) and are substantively identical to the ones that we report here. Indeed, the estimates for the effect of a change in presidential administration are larger for career SES members.

Now, we turn our attention to the results for the test of H2. Across all four groups, there is a positive and statistically significant estimated coefficient for the ideological mismatch variable. This is consistent with the hypothesis, suggesting that individuals' propensity for turnover is increased for employees in agencies with ideological orientations that differ from that of the presidential administration. In particular, the estimated increase in turnover propensity is 0.4 percentage points for all employees; 0.1 percentage points for employees in GS grades 13-15;

0.3 percentage points for employees that serve in supervisory capacities; and 0.6 percentage points for career senior executives in any given year of ideological mismatch relative to employees in agencies where there is no such mismatch. While seemingly small, these effects should be considered relative to baseline turnover propensities, which are not large. The average levels of turnover for each of the four groups of employees in a given year from 1988-2011 is 6.2%, 4.4%, 5.5%, and 8.0% for all employees, GS 13-15, supervisors, and the career SES, respectively. Thus, for example, the 0.6 percentage point increase for career SES employees is a 7.5% increase in the baseline propensity for turnover. Furthermore, one must also consider that these effects are for any given year. Increased turnover propensities will compound over time to create much larger differential effects over the course of a four or eight-year administration. Overall, then, the results in Table 1 provide strong support for H2.

While the results in Table 1 give a sense of the mismatch effect averaged over the course of a president's term, they do not necessarily capture the temporal aspects of the mismatch effect that we would expect in the case that elections are playing a central role in structuring employee decisions about turnover. In particular, we expect that the mismatch effect is most prominent in beginning years of a new administration and that it lessens over the course of a president's term. In order to assess this hypothesis, we interacted the mismatch variable with indicator variables for the year of president's term --i.e., 1 through 8--and the estimates are included in Table 2.

[Insert Figure 1 about here.]

[Insert Table 2 about here.]

Figure 1 plots the estimated effect of mismatch in a given year of a presidential administration based on the interaction models. As can be seen, the effect is concentrated at the beginning of presidential administrations. In particular, we observe the positive mismatch effect for all four groups being the greatest during the first three years of a president's administration, indicating that the temporal dynamics surrounding elections and transitions are driving behavior. Furthermore, these effect sizes are significantly larger in some cases than the average effect estimated in Table 1. For example, in the third year of a presidential administration, there is an increase of 1.85 percentage points in the probability a career SES employee will leave the federal government if they are in a mismatched agency relative to one who is not. This is a 23% increase from the baseline departure rate. After the first three years of an administration, however, the mismatch effect tends toward zero for all groups of employees that we examine. For two groups of employees, supervisors and career SES employees, the mismatch effect actually reverses somewhat substantially at least in some years during the second term. Though our theory does not shed light on this result, it could suggest that, in some cases, career employees are more empowered by political appointees the longer they remain with an administration. As before, career SES employees appear to be the most responsive to ideological mismatch, with the other three groups showing less pronounced effects, though still positive.

Turning now to Hypothesis 3, we do find hierarchy effects in our analysis of the turnover decision. In particular, career SES employees are most responsive to both ideological mismatches between their agency and the administration as well as to changes in administrations. This is strongly in line with our theoretical expectations. Career SES employees tend to serve at the upper echelons of the agency hierarchy and are the career employees that are most likely to

interact with political appointees in terms of the substance of their work on a regular basis (see, for example, Resh 2015).

The effects are less pronounced when examining the other three groups. In particular employees in grades 13-15 of the GS show the lowest sensitivity to ideological mismatches and are more likely to stay in government in the first year of a new administration. While slightly at odds with our theoretical expectations, both factors may be explained by the promotion-seeking conjecture discussed above. Supervisory employees have approximately equal sensitivity to mismatches as employees as a whole but are more likely to leave in the first year of administration, while all employees actually are more likely to stay in government after an administration transition. Thus, we find significant support for the hierarchy hypothesis, with career SES employees appearing extremely sensitive to the political dynamics in the theory. Further down the leadership ladder of the agency, things tend to converge much more. This may suggest that the political effects we explore in this paper are less perceptible to these employees and/or there are other career concerns at play that cause employees to act differently than career SES employees in order to obtain promotions.

Finally, we turn to discussing some of the control variables in our analyses. First, we examine the extent to which economic concerns structure employee decision-making with respect to turnover. As discussed above, we proxy for the labor demand and wages that an employee could expect to earn with the local unemployment rate in the place where they work in a given year. As unemployment increases, we expect decreasing turnover propensity. For three of the four groups that we analyze we see results in line with this expectation. In particular, all employees, supervisors, and career SES employees are less likely to leave government as the unemployment rate in the state where they work increases. These effects are substantively large

relative to the other ones that we estimate. For example, an increase of 1% in the unemployment rate in a given state decreases the probability of a career SES employee that state leaving the government by 0.2 percentage points. The unemployment variables ranges from 2.2% (Connecticut, September 2000) to 14% (Michigan, September 2009) in our dataset, so these effects can be quite substantively large. The results for GS 13-15 group of employees are out of line with our expectation. We estimate a positive correlation between unemployment and turnover for this group, though the effect size is significantly smaller in magnitude than what we estimate for the other three groups of employees.

We also find that federal employees with higher levels of education and minority employees are generally less likely to depart in any given year than Whites. One exception, however, is American Indian/Alaska Native employees, who we find are more likely to leave government than white employees in three of the four groups of employees we analyze. Further, we find that younger employees are less likely to depart.

More central to our purposes here, however, the estimates substantially confirm expectations. They reveal that presidential elections increase the departure rates of federal employees, particularly in agencies whose views diverge from those of the new president and for employees higher in the hierarchy. Not surprisingly, compensation differentials between the public and private sectors also influence the probability of departure among federal employees.

In Appendix B, we include the results from a number of robustness checks and alternative model specifications that account for partisan dynamics in administration changes (Table B1); more flexible accounting for age using age fixed effects (Table B2); and different ways of capturing the effects of local labor markets on turnover propensity (Tables B3, B4, and

B5). Across all of these alternative models, we find results that are substantively similar to those reported in Table 1.

## **Discussion and Conclusion**

Elections and partisan transitions are a central feature of American administration. They can bring about new policy directions and cast aside old ideas, lending dynamism and uncertainty to public policy. While presidents and their appointees cycle in and out of leadership roles in the executive branch, career officials are thought to play a stabilizing role, supporting new leaders but also providing continuity for agencies and their missions. This, in theory, allows for organizational effectiveness even in the face of changing policy priorities, giving new leaders the opportunity to implement their programs.

However, these career employees are not necessarily ideologically neutral actors, mechanically carrying out the will of their appointed leaders. Rather, they often have well-developed policy preferences and can select into agencies that have missions congenial with their views. Thus, when presidents from parties opposed to an agency's ideological orientation come into office, there can be significant policy losses associated with implementing policy from the perspective of the employee. These dynamics are likely to be especially acute for employees higher in the administrative hierarchy and those who value policy and influence significantly. This reduced utility from their work in the government creates situations in which private sector employment (or other options, such as retirement) become more attractive to career employees. In this way, elections and partisan changes can have important impacts on the career concerns of federal employees and potentially affect the capacity of organizations. These ideas form the backbone of the theoretical framework that we advance in this paper.

Our analysis confirms many of these empirical hypotheses. Indeed, employees working in agencies where there is a significant divergence from the ideological outlook of the administration are more likely to leave in any given year. This effect is particularly large in the first three years of an administration and for the group of employees that has the most direct contact with the administration – career senior executives. This suggests that political disagreements can lead to churn at the top of the career civil service. Additionally, the first years of an administration are associated with higher average levels of turnover for employees across all agencies for career SES and supervisory employees, which is in line with the theoretical notion that civil servants from a previous administration are often viewed with suspicion by new political appointees and thus cut out of the policy process. Further, we find some evidence that these effects are different for different groups of employees. In particular, the political dynamics we describe appear most perceptible to career Senior Executives, for whom we estimate the largest magnitude effects.

Overall, this paper makes a number of contributions to our understanding of politics and administration in the United States. First, it brings elections and ideology to the fore, demonstrating ways in which they can powerfully influence employee career concerns and decision-making about their labor. Second, we demonstrate that employees situated throughout the agency hierarchy may be differentially responsive to these political factors. Finally, our analyses use administrative records to systematically study actual turnover, an improvement over work that has been forced to rely on turnover intention in surveys or small groups of employees due to data limitations.

The results in this paper also raise a number of questions that could be profitably pursued in future work. First, as discussed above, the results for GS 13-15 employees raise a number of interesting issues surrounding hierarchy and the potentially different incentives that this group of

workers faces. In particular, if career SES employees increase their turnover propensity in response to political factors, then this potentially opens up opportunities for other employees to advance. In that case, these two groups of employees could potentially behave in different ways in equilibrium. A more general theory of overall organizational dynamics and career concerns would be required to illuminate this possibility and would be a fruitful avenue of research.

Another area of potential interest concerns how elected officials and appointees might respond to negative reactions by careerists in order to stem personnel losses. If turnover, particularly at top levels of an organization, negatively impacts performance (at least in the short-term) then actors may employ some management strategies to mitigate the utility losses associated with turnover. Exploring how employee behavior affects administration incentives and how appointees respond in this context would be an important contribution to our understanding of the administrative presidency and public management.



**Table 1: Regression Models of Turnover for Four Groups of Employees**

Variable	Model 1	Model 2	Model 3	Model 4
Year 1	-0.001 (-8.28)	-0.004 (-12.42)	0.002 (6.95)	0.016 (7.12)
Ideological Mismatch	0.004 (21.96)	0.001 (3.39)	0.003 (9.20)	0.006 (2.73)
Unemployment Rate	-0.001 (-20.62)	$2.71 \times 10^{-4}$ (2.99)	-0.001 (-9.51)	-0.002 (-3.53)
Female	-0.003 (-23.79)	0.001 (2.97)	0.001 (2.96)	$4.52 \times 10^{-4}$ (0.24)
A.I./A.N.	0.003 (6.75)	0.003 (2.81)	0.003 (2.71)	$-2.02 \times 10^{-4}$ (-0.02)
Asian	-0.010 (-31.82)	-0.009 (-17.68)	-0.009 (-11.05)	-0.011 (-1.86)
Black	-0.006 (-40.84)	-0.011 (-28.39)	-0.009 (-22.84)	-0.016 (-5.64)
Hispanic	-0.004 (-17.37)	-0.002 (-3.97)	-0.004 (-6.47)	-0.006 (-1.24)
Age	-0.016 (-280.13)	-0.014 (-87.12)	-0.015 (-77.53)	-0.011 (-6.79)
Age <sup>2</sup>	$1.99 \times 10^{-4}$ (304.65)	$1.70 \times 10^{-4}$ (93.83)	$1.92 \times 10^{-4}$ (91.11)	$1.39 \times 10^{-4}$ (8.78)
Education	$-3.94 \times 10^{-4}$ (-11.55)	$-1.49 \times 10^{-4}$ (-2.12)	-0.002 (-21.51)	-0.002 (-3.75)
Tenure FE	Yes	Yes	Yes	Yes
Occupation FE	Yes	Yes	Yes	Yes
Agency FE	Yes	Yes	Yes	Yes
Cubic Trend	Yes	Yes	Yes	Yes
Group	All Employees	GS 13-15	Supervisors	Career SES
N	17,529,543	2,618,289	2,788,868	103,346

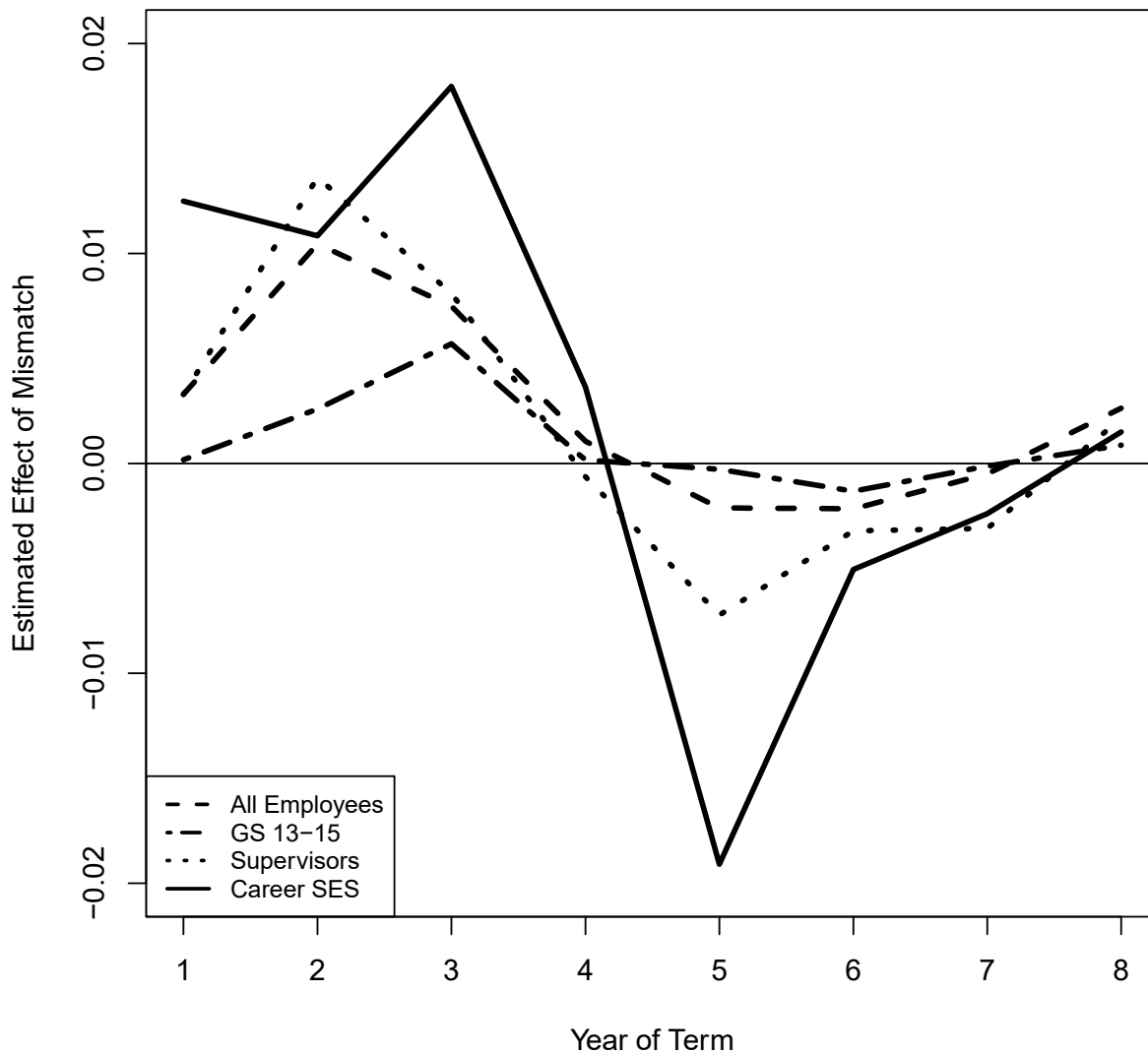
This table includes the estimated coefficients from turnover models for four groups of employees – all, GS 13-15, employees in a supervisory role, and career Senior Executive Service employees. T-ratios based on robust standard errors clustered by employee are reported in parentheses.

**Table 2: Conditional Mismatch Effects**

Variable	Model 1	Model 2	Model 3	Model 4
Ideological Mismatch	0.003 (10.42)	$1.75 \times 10^{-4}$ (0.26)	0.003 (4.51)	0.013 (2.79)
Mismatch x Year 2	0.007 (16.26)	0.002 (2.61)	0.010 (10.17)	-0.002 (-0.27)
Mismatch x Year 3	0.004 (8.86)	0.006 (5.37)	0.005 (4.52)	0.005 (0.88)
Mismatch x Year 4	-0.002 (-4.69)	$-1.23 \times 10^{-5}$ (-0.01)	-0.004 (-3.60)	-0.009 (-1.39)
Mismatch x Year 5	-0.005 (-9.94)	$-4.57 \times 10^{-4}$ (-0.41)	-0.011 (-8.09)	-0.032 (-4.10)
Mismatch x Year 6	-0.005 (-10.22)	-0.002 (-1.39)	-0.007 (-5.04)	-0.018 (-2.28)
Mismatch x Year 7	-0.004 (-7.18)	$-3.05 \times 10^{-4}$ (-0.29)	-0.006 (-5.01)	-0.015 (-1.95)
Mismatch x Year 8	-0.001 (-1.41)	0.001 (0.71)	-0.001 (-1.06)	-0.011 (-1.68)
All Controls	Yes	Yes	Yes	Yes
Tenure FE	Yes	Yes	Yes	Yes
Occupation FE	Yes	Yes	Yes	Yes
Agency FE	Yes	Yes	Yes	Yes
Cubic Trend	Yes	Yes	Yes	Yes
Group	All Employees	GS 13-15	Supervisors	Career SES
N	17,529,543	2,618,289	2,788,868	103,346

This table includes the estimated coefficients from the interaction between the mismatch variable and the indicators for the year of term for four groups of employees – all, GS 13-15, employees in a supervisory role, and career Senior Executive Service employees. All other variables that are used in Table 1 are also included in these specifications. T-ratios based on robust standard errors clustered by employee are reported in parentheses.

### Ideological Mismatch Effect by Year of Term



**Figure 1. Ideological Mismatch Effect by Year of Term.** This figure plots the interaction effects that we estimate in Table 2. The mismatch effect appears to be concentrated in the beginning of new administrations. In particular, the mismatch effect appears to be concentrated mostly in the first three years of a new administration, further demonstrating the role that elections and transitions have on employee turnover decisions.

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## Appendix A. Formal Representation of Departure Decision

In this Appendix, we outline a slightly more formal approach that underlies the theory found in the paper. We begin by assuming that individuals value wages and policy outcomes so that the utility of an individual is given by:

$$u_{ij} = \lambda_i \omega_{ij} - (1 - \lambda_i)(\hat{x}_a - x_i)^2 \quad (1)$$

where  $u_{ij}$  is the utility of individual  $i$  in her job  $j$  where  $j \in \{b, p\}$  where  $b$  is a job as a bureaucrat and  $p$  is a job in the private sector,  $\lambda_i$  is the weight an individual places on wages (vs. policy outcomes) such that  $0 \leq \lambda_i \leq 1$ ,  $\omega_{ij}$  is the wage of individual  $i$  in job  $j$ ,  $\hat{x}_a$  is the (induced) ideal point of the agency, and  $x_i$  is the individual's ideal policy where  $\hat{x}_a, x_i \in \mathfrak{R}$ . Individuals have single peaked and quadratic preferences over policy outcomes in a unidimensional policy space. The first term of Equation 1 is the utility the individual receives from wages. The second term is the utility she receives from policy outcomes—the closer the agency's policy outcome is to her ideal point, the better off she is. If the individual only values wages,  $\lambda_i = 1$ , then the utility she receives is derived from just the wage; if the individual only values policy ( $\lambda_i = 0$ ), then the utility function depends only upon the difference in the (induced) ideal points of the individual and the agency.

Individuals may have influence over agency induced ideal points. In particular, the induced ideal point of the agency is:

$$\hat{x}_a = \alpha_{ij} x_i + (1 - \alpha_{ij}) x_a \quad (2)$$

where  $\hat{x}_a$  is the induced ideal point of the agency as before,  $x_i$  is the ideal point of the individual as before, and  $x_a$  is the agency ideal point of agency presidential appointee or administration,

$x_a \in \mathfrak{R}$ . An individual's  $i$  influence in job  $j$  over agency policymaking is characterized by  $\alpha_{ij}$ , which we will characterize further momentarily.

For notational simplicity going forward, let  $(x_a - x_i) = X$ . Substituting equation 2 into equation 1 and simplifying, we generate the general utility function:

$$u_{ij} = \lambda_i \omega_{ij} - (1 - \lambda_i)(1 - \alpha_{ij})^2 (X^2) \quad (3)$$

We can now consider two cases. In the first case, consider the individual choosing to work in government as a bureaucrat ( $j = b$ ). In this case, the utility function of a bureaucrat can be characterized very similar to equation 3 as:

$$u_{ib} = \lambda_i \omega_{ib} - (1 - \lambda_i)(1 - \alpha_{ib})^2 (X^2) \quad (4)$$

The bureaucrat receives weighted utility from the government wage  $\omega_{ib}$  (first term) and from her preference relative to the induced agency preference (second term). The influence a bureaucrat exerts over policy,  $\alpha_{ib}$ , is assumed to be inversely related to the distance between the ideal points of the presidential appointee and the bureaucrat. There are a number of ways to model such a relationship. We choose here an example that mirrors how careerist influence works in practice, namely that the influence of the bureaucrat reaches a maximum when the ideal points are very close, and then the influence stays at that same level as the ideal points of the bureaucrat and political appointee continue to converge zero. To characterize such an effect we let the

influence  $\alpha_{ij} = 1/X^4$  if  $X^2 \geq \left(\frac{2}{3-\sqrt{5}}\right)^{1/2} \approx 1.618$ , and  $\alpha_{ij} = 1$  otherwise. We call this

constraint C1. This means for all permissible values of  $x_i$  and  $x_a$ , it will be the case that

$0 < \alpha_{ib} \leq 1$  and the bureaucrat will have some influence over agency induced ideal points. As a

general matter, it is important to choose from a class of functional forms that constrain the

influence of the individual over policy to decline faster than the individual's utility of the policy (in this case a quadratic utility function) in  $X$ . Intuitively, we need to assume that a careerist's influence decreases as the ideological distance between the careerist and the appointee/administration increases. That is, a careerist is increasingly marginalized as their views diverge from the administration.

The second case is if the individual instead chooses to go to the private sector. In that case the utility function is:

$$u_{ip} = \lambda_i \omega_{ip} - (1 - \lambda_i)(1 - \alpha_{ip})^2 (X^2) \quad (5)$$

where the  $p$  subscript is for a private sector job. Note, however, that by choosing a private sector job, the individual obtains the private sector wage, but loses her ability to influence the agency's ideal point. Said differently, private sector workers have  $\alpha_{ip} = 0$ .<sup>11</sup> This then reduces the private sector utility function to:

$$u_{ip} = \lambda_i \omega_{ip} - (1 - \lambda_i)(X^2) \quad (6)$$

An individual will choose to work for the government iff  $u_{ib} \geq u_{ip}$ .

We can now conduct comparative statics. It may be useful at this point to note that the difference in utility of an individual working in the government and the private sector, using equations 4 and 6, can be written as:

$$u_{ib} - u_{ip} = \lambda_i (\omega_{ib} - \omega_{ip}) + [1 - (1 - \alpha_{ib})^2] (1 - \lambda_i) (X^2) \quad (7a)$$

simplifying we obtain:

$$u_{ib} - u_{ip} = \lambda_i (\omega_{ib} - \omega_{ip}) + (1 - \lambda_i) (2\alpha_{ib}^{\frac{1}{2}} - \alpha_{ib}^{\frac{3}{2}}) \quad (7b)$$

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<sup>11</sup> We assume that in the absence of this individual, the induced policy outcome will be  $x_a$ . One way to interpret this result is that when a senior person leaves the government, the political appointee has no one to rely on for expertise and just chooses a policy close to his ideal point. Another way to interpret this is that the second term of the utility of the function is the utility that the bureaucrat obtains from actually making policy  $\hat{x}_a$ .

For notational simplicity, we suppress the  $i$  subscript where not needed and substitute for substituting  $\alpha_{ib}$  as noted earlier. The first comparative static (first and third hypotheses in the paper) is to examine how changes in the ability of a bureaucrat to influence the agency's induced ideal point affects the bureaucrat's utility. In particular:

$$\frac{\partial(u_b - u_p)}{\partial\alpha_b} = (1 - \lambda) \left( \frac{2X^4 - 3}{2X^2} \right) \quad (8)$$

Equation 8 is weakly positive across all ranges of the function with the constraint C1. Said differently, as a bureaucrat's influence over policy outcomes increases, her utility rises and reaches a peak, where her influence stays. This means a bureaucrat is induced to (weakly) stay in her government job (reducing departure rates) as the bureaucrat's influence increases.

The second comparative static (second hypothesis in the paper) considers changes in the distance between the ideal points of the administration and the individuals. We can examine this by taking the derivative of the utility difference with respect to the squared-distance between the ideal points of the actors.<sup>12</sup> Using the chain rule and implicit function theorem, we can show:

$$\frac{\partial(u_b - u_p)}{\partial(X^2)} = (1 - \lambda) \left( \frac{3 - 2X^4}{X^8} \right) \quad (9)$$

The derivative in equation 9 is weakly negative for all values of  $X^2$  with the constraint C1. This means as  $x_i$  and  $x_a$  move apart, that is the distance between the individual's ideal point and the administration's ideal point rises, bureaucrats receive weakly less utility from the policy component of their utility function and are more likely to leave the government.

A final comparative static examines how changes in private sector wages affect the willingness of the bureaucrat to stay in the government. To analyze this we take:

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<sup>12</sup> We use  $X^2$  instead of  $X$  as a distance measure to ensure the distance measure is always positive.

$$\frac{\partial(u_b - u_p)}{\partial \omega_p} = -\lambda < 0 \quad (10)$$

Equation 10 shows as private sector wages rise, the utility to staying in the government declines and bureaucrats will tend to leave government and move into the private sector. This final result is a theoretically heartening check of the model, consistent with the basic tenets of labor economics.

## **Appendix B. Additional Empirical Results and Robustness Checks**

In this appendix, we provide additional empirical results that employ alternative measurements of some variables of interest as well as alternative model specifications that are referenced throughout the paper. A description of each of the additional analyses is provided below, and the tables are included in the pages following:

In Table B1, we examine an alternative way to measure administration change. In particular, the most salient type of administration change for career decisions may be those where the new administration is of a different party. This was the case in 1993, 2001, and 2009. In order to assess whether there are differences in the Year 1 result when examining party changes, in this table, we include an indicator for party change in administration rather than the general administration change variable used in the main text. As can be seen in Table B1, the results are substantively the same as those reported in Table 1. The results for supervisors and career SES employees follow the empirical hypotheses derived from the theory (higher departure rates during administration changes), while the results for all employees and GS 13-15 employees are in the opposite direction. In the main text, we offer one plausible explanation for these divergent results grounded in the idea that career SES departures open up opportunities for advancement for other employees lower in the managerial hierarchy in an agency.

Table B2 offers the results of analyses where we include fixed effects for each observed age in the dataset instead of the quadratic polynomial in age that is included in the results reported in the main text. While in our main specifications we followed the previous literature by including both age and its square, in Table B2, we relax any assumptions about functional forms of the relationship between age and turnover. This, for instance, should alleviate any concerns about ages where there may be non-monotonicities or big spikes or declines in turnover (e.g. massive increase in turnover at age 65). As can be seen, the substance of the results reported in



the main text are unaffected by this alternative method of accounting for an employee's age in a given year. The magnitudes and precision of the estimates are nearly identical to those reported in Table 1.

Tables B3, B4, and B5 all take different approaches to modeling how the local labor market might impact the turnover decisions of bureaucrats. In the main text, we use the unemployment rate in an individual's location to proxy for the relative labor demand in the area, which has an impact on decisions about leaving the government for the private sector.

First, Table B3 includes occupation category-state fixed effects. There are six occupational categories (administrative, blue collar, clerical, professional, other white collar, and technical) and 51 "states" (including Washington, DC), which leads to 306 total additional categories. Including this additional set of fixed effects allows us to estimate the effect of unemployment within these categories given that changes in labor demand may be differentially felt by individuals in different types of occupations. Even after including these additional fixed effects, the results from the main analyses hold and are similar again in terms of both magnitude and precision. Across all groups of employees, ideological mismatches between the administration and the agency are associated with greater turnover propensities. The first year of a new administration is associated with higher turnover for career SES employees and supervisors but not for the other two groups that we examine, consistent with the results reported in the main text.

In a similar vein, Table B4 includes the estimated coefficients from models in which we include occupation-specific effects of unemployment in the local area. These effects are created by including interaction terms between the unemployment variable and each of the 803 specific occupation codes in our dataset. This allows us to estimate separate effects of unemployment for

every occupation type given that some occupations may be more or less sensitive to changes in labor demand overall in the economy. Fortunately, the results of these analyses do not appear to change any of the substantive conclusions that we reach in the paper.

Finally, the results of the specifications reported in Table B5 include occupational category-year-state fixed effects. There are 7,028 possible categories (6 occupational categories x 23 years x 51 “states”). These thousands of additional effects in the model are meant to capture labor demand and expected wages in an employee’s area without using a proxy variable (i.e. unemployment rate). We no longer include unemployment rate or the indicator for the first year or a new administration in the model because of perfect collinearity with this set of fixed effects. Therefore, this particular robustness check only interrogates the mismatch results from the main text. As can be seen, the results of this analysis are generally supportive of those reported in Table 1. Most reassuringly, all of the estimated coefficients for the mismatch variable are in the same direction as those reported in the main text; that is, employees in mismatched organizations are more likely to leave the federal government in any given year. The addition of these fixed effects do, however, lead to somewhat smaller effect sizes, and are, unsurprisingly, less precisely estimated given the smaller amounts of variation within these thousands of cells. This is particularly true in the analyses with smaller numbers of observations. However, the results do point to similar substantive conclusions about the effect of ideological mismatch on turnover propensity.

Overall these results lend additional credence to those presented in the main text. Across a number of alternative ways of operationalizing key variables, alternative specifications, and different strategies for accounting for local economies, the results remain consistent with those reported in Table 1.

**Table B1: Party Change Models**

Variable	Model 1	Model 2	Model 3	Model 4
Party Change	-0.003 (-15.89)	-0.006 (-15.38)	0.002 (4.93)	0.019 (6.94)
Ideological Mismatch	0.004 (22.03)	0.001 (3.39)	0.003 (9.25)	0.006 (2.77)
Unemployment Rate	-0.001 (-18.07)	$3.89 \times 10^{-4}$ (4.24)	-0.001 (-9.60)	-0.002 (-4.22)
Female	-0.003 (-23.77)	0.001 (2.96)	0.001 (2.96)	$4.93 \times 10^{-4}$ (0.26)
A.I./A.N.	0.003 (6.72)	0.003 (2.81)	0.003 (2.71)	$-2.48 \times 10^{-4}$ (-0.03)
Asian	-0.010 (-31.92)	-0.009 (-17.70)	-0.009 (-11.05)	-0.011 (-1.85)
Black	-0.006 (-40.97)	-0.011 (-28.44)	-0.009 (-22.83)	-0.015 (-5.63)
Hispanic	-0.004 (-17.45)	-0.002 (-3.97)	-0.004 (-6.47)	-0.006 (-1.24)
Age	-0.016 (-280.12)	-0.014 (-87.12)	-0.015 (-77.53)	-0.011 (-6.78)
Age <sup>2</sup>	$1.99 \times 10^{-4}$ (304.63)	$-1.51 \times 10^{-4}$ (93.83)	$1.92 \times 10^{-4}$ (91.11)	$1.38 \times 10^{-4}$ (8.77)
Education	$-3.95 \times 10^{-4}$ (-11.59)	$-1.51 \times 10^{-4}$ (-2.14)	-0.002 (-21.50)	-0.002 (-3.75)
Tenure FE	Yes	Yes	Yes	Yes
Occupation FE	Yes	Yes	Yes	Yes
Agency FE	Yes	Yes	Yes	Yes
Cubic Trend	Yes	Yes	Yes	Yes
Group	All Employees	GS 13-15	Supervisors	Career SES
N	17,529,543	2,618,289	2,788,868	103,346

This table includes the estimated coefficients from turnover models for four groups of employees – all, GS 13-15, employees in a supervisory role, and career Senior Executive Service employees. Instead of modeling changes in administration, here we use an indicator for years in which there is a party change. T-ratios based on robust standard errors clustered by employee are reported in parentheses.

**Table B2: Fixed Effects for Age**

Variable	Model 1	Model 2	Model 3	Model 4
Year 1	-0.001 (-8.39)	-0.004 (-12.38)	0.002 (6.87)	0.016 (7.12)
Ideological Mismatch	0.003 (21.76)	0.001 (3.31)	0.003 (9.00)	0.006 (2.78)
Unemployment Rate	-0.001 (-20.16)	$2.84 \times 10^{-4}$ (3.14)	-0.001 (-9.34)	-0.002 (-3.57)
Female	-0.003 (-23.61)	0.001 (3.60)	0.001 (2.95)	0.001 (0.40)
A.I./A.N.	0.002 (6.41)	0.003 (2.70)	0.002 (2.58)	-0.001 (-0.13)
Asian	-0.010 (-32.92)	-0.009 (-17.59)	-0.009 (-11.31)	-0.011 (-1.99)
Black	-0.007 (-42.54)	-0.011 (-28.85)	-0.010 (-23.31)	-0.015 (-5.65)
Hispanic	-0.005 (-18.17)	-0.003 (-4.07)	-0.004 (-6.43)	-0.006 (-1.20)
Education	$-3.77 \times 10^{-4}$ (-11.08)	$-1.85 \times 10^{-4}$ (-2.64)	-0.002 (-21.58)	-0.002 (-4.10)
Age FE	Yes	Yes	Yes	Yes
Tenure FE	Yes	Yes	Yes	Yes
Occupation FE	Yes	Yes	Yes	Yes
Agency FE	Yes	Yes	Yes	Yes
Cubic Trend	Yes	Yes	Yes	Yes
Group	All Employees	GS 13-15	Supervisors	Career SES
N	17,529,543	2,618,289	2,788,868	103,346

This table includes the estimated coefficients from turnover models for four groups of employees – all, GS 13-15, employees in a supervisory role, and career Senior Executive Service employees. T-ratios based on robust standard errors clustered by employee are reported in parentheses.

**Table B3: Occupation Category x Duty Station Fixed Effects**

Variable	Model 1	Model 2	Model 3	Model 4
Year 1	-0.002 (-10.10)	-0.004 (-11.27)	0.002 (6.92)	0.017 (7.48)
Ideological Mismatch	0.002 (12.91)	0.001 (2.55)	0.003 (7.90)	0.006 (6.54)
Unemployment Rate	-0.001 (-24.67)	$-4.35 \times 10^{-4}$ (-3.65)	-0.001 (-12.30)	-0.005 (-5.85)
Female	-0.004 (-27.46)	0.002 (6.51)	0.001 (4.02)	-0.001 (-0.46)
A.I./A.N.	-0.001 (-2.31)	0.002 (1.50)	$3.25 \times 10^{-4}$ (0.34)	-0.004 (-0.45)
Asian	-0.011 (-34.56)	-0.010 (-18.90)	-0.010 (-12.90)	-0.011 (-1.87)
Black	-0.003 (-20.72)	-0.010 (-26.09)	-0.008 (-20.02)	-0.013 (-4.89)
Hispanic	-0.007 (-24.16)	-0.002 (-3.98)	-0.005 (-7.97)	-0.005 (-0.99)
Age	-0.017 (-281.87)	-0.014 (-87.33)	-0.015 (-76.98)	-0.010 (-6.17)
Age <sup>2</sup>	$2.03 \times 10^{-4}$ (-281.87)	$1.69 \times 10^{-4}$ (94.24)	$1.92 \times 10^{-4}$ (90.33)	$1.30 \times 10^{-4}$ (8.14)
Education	-0.001 (-23.81)	$-5.60 \times 10^{-5}$ (-0.88)	-0.002 (-29.88)	-0.002 (-5.20)
Tenure				
Tenure FE	Yes	Yes	Yes	Yes
Occupation FE	Yes	Yes	Yes	Yes
Occ Cat x DS FE	Yes	Yes	Yes	Yes
Agency FE	Yes	Yes	Yes	Yes
Cubic Trend	Yes	Yes	Yes	Yes
Group	All Employees	GS 13-15	Supervisors	Career SES
N	17,529,027	2,618,289	2,788,849	103,340

This table includes the estimated coefficients from turnover models for four groups of employees – all, GS 13-15, employees in a supervisory role, and career Senior Executive Service employees. T-ratios based on robust standard errors clustered by employee are reported in parentheses.

**Table B4: Occupation-Specific Unemployment Rate Effects**

Variable	Model 1	Model 2	Model 3	Model 4
Year 1	-0.001 (-8.23)	-0.004 (-12.54)	0.003 (7.12)	0.016 (7.00)
Ideological Mismatch	0.004 (21.71)	0.001 (4.05)	0.003 (8.73)	0.006 (3.03)
Female	-0.003 (-23.95)	0.001 (2.96)	0.001 (2.81)	$3.56 \times 10^{-4}$ (0.19)
A.I./A.N.	0.003 (6.88)	0.003 (2.83)	0.003 (2.73)	$-4.69 \times 10^{-4}$ (-0.06)
Asian	-0.009 (-31.14)	-0.009 (-17.63)	-0.009 (-10.80)	-0.011 (-1.80)
Black	-0.006 (-40.22)	-0.011 (-28.56)	-0.009 (-22.91)	-0.016 (-5.84)
Hispanic	-0.004 (-17.21)	-0.003 (4.03)	-0.004 (-6.25)	-0.007 (-1.38)
Age	-0.016 (-279.74)	-0.014 (-87.09)	-0.015 (-77.59)	-0.011 (-6.83)
Age <sup>2</sup>	$1.99 \times 10^{-4}$ (304.33)	$-1.57 \times 10^{-4}$ (93.81)	$1.92 \times 10^{-4}$ (91.16)	$1.39 \times 10^{-4}$ (8.82)
Education	$-3.88 \times 10^{-4}$ (-11.36)	$-1.57 \times 10^{-4}$ (-2.23)	-0.002 (-21.70)	-0.002 (-3.71)
Occupation-Specific Unemp	Yes	Yes	Yes	Yes
Tenure FE	Yes	Yes	Yes	Yes
Occupation FE	Yes	Yes	Yes	Yes
Occupation x Unemployment	Yes	Yes	Yes	Yes
Agency FE	Yes	Yes	Yes	Yes
Cubic Trend	Yes	Yes	Yes	Yes
Group	All Employees	GS 13-15	Supervisors	Career SES
N	17,529,543	2,618,289	2,788,868	103,346

This table includes the estimated coefficients from turnover models for four groups of employees – all, GS 13-15, employees in a supervisory role, and career Senior Executive Service employees. T-ratios based on robust standard errors clustered by employee are reported in parentheses.

**Table B5: Occupation x Duty Station x Year Fixed Effects**

Variable	Model 1	Model 2	Model 3	Model 4
Ideological Mismatch	0.002 (13.35)	0.001 (2.21)	0.002 (4.82)	0.002 (0.83)
Female	-0.003 (-23.10)	0.001 (3.28)	0.001 (2.58)	-2.93 x 10 <sup>-4</sup> (-0.15)
A.I./A.N.	-0.002 (-4.32)	0.001 (0.44)	-0.001 (-1.43)	-0.001 (-0.09)
Asian	-0.011 (-35.60)	-0.009 (-17.36)	-0.008 (-10.34)	-0.011 (-1.88)
Black	-0.005 (-32.99)	-0.010 (-27.21)	-0.009 (-22.05)	-0.015 (-5.38)
Hispanic	-0.007 (-25.08)	-0.003 (-5.38)	-0.005 (-8.21)	-0.006 (-1.07)
Age	-0.016 (-279.52)	-0.014 (-87.41)	-0.015 (-78.01)	-0.011 (-6.70)
Age <sup>2</sup>	1.98 x 10 <sup>-4</sup> (303.56)	1.70 x 10 <sup>-4</sup> (94.12)	1.93 x 10 <sup>-4</sup> (91.52)	1.38 x 10 <sup>-4</sup> (8.69)
Education	-2.17 x 10 <sup>-4</sup> (-9.22)	-9.12 x 10 <sup>-5</sup> (-1.29)	-0.002 (-19.27)	-0.002 (-3.76)
Tenure FE	Yes	Yes	Yes	Yes
Occupation FE	Yes	Yes	Yes	Yes
Occ. Cat x Duty Station x Year	Yes	Yes	Yes	Yes
Agency FE	Yes	Yes	Yes	Yes
Group	All Employees	GS 13-15	Supervisors	Career SES
N	17,529,027	2,618,289	2,788,849	103,340

This table includes the estimated coefficients from turnover models for four groups of employees – all, GS 13-15, employees in a supervisory role, and career Senior Executive Service employees. Unlike those reported in the main text, these models include occupation category-state-year fixed effects in order to account for local labor market effects in the broadest way possible. Including these additional variables, however, leads us to remove the unemployment rate and Year 1 variables from the analysis because they are perfectly collinear with the fixed effects in the analysis. T-ratios based on robust standard errors clustered by employee are reported in parentheses.