

Personnel, Politics, and the Trump Presidency

Brian Libgober ¹ *, Mark Richardson ²

¹ School of Global Policy and Strategy, 9500 Gilman Drive, San Diego, CA 92122

² Department of Government, ICC 681, 37th and O Streets, N.W., Washington, DC, 20007

* Corresponding author: blibgober@ucsd.edu

Abstract

Presidents and executive branch agencies often have adversarial relationships. Early accounts suggest that these antagonisms may have been deeper and broader under Trump than under any prior President. Yet careful appraisals have sometimes shown that claims about what Trump has done to government and politics are over-stated, require greater nuance, or are just plain wrong. In this article, we use federal employment records obtained from the Office of Personnel Management to explore the Trump administration’s approach to personnel politics. We identify the bureaus and departments have faced the most significant turnover using Bayesian Hierarchical models. We show that while some parts of the federal executive have experienced substantial turnover, others have been greatly expanded. We make available detailed estimates of attrition and hiring rates that are useful for researchers and policymakers.

Personnel Politics under the Trump Administration

On September 1, 2019, President Trump tweeted that “one of the largest hurricanes ever” was approaching Florida, Georgia, the Carolinas and “Alabama” [1]. Twenty minutes later, responding to calls from distressed residents, the Birmingham Office of the National Weather Service tweeted that “Alabama will NOT see any impacts from Hurricane Dorian.” Over the next several days, President Trump continued to insist that his forecast was correct, even presenting to reporters a weather map apparently doctored by a Sharpie marker [2]. Days later, the National Oceanic and Atmospheric Administration released a statement saying that the Birmingham Office had spoken in terms that were “inconsistent with probabilities from the best forecasts” available at the time [1]. According to reporting from the *New York Times*, the statement was prompted by threats from Secretary of Commerce Wilbur Ross to fire top officials unless they fixed the “perceived contradiction of the President” [3].

Similarly tense episodes between the President and members of the civil service occurred with surprising frequency during the Trump-era. From Ambassador to the Ukraine Marie Yavonovich [4], to the US attorney in Manhattan Geoffrey Berman, to the lead election security official Chris Krebs, the Trump administration has provoked numerous scandals through the firing of figures visibly frustrating the President’s agenda. Scores of less prominent officials have resigned in protest [5], while others have sought greener pastures rather than persevere through such adversities. Watchdogs have pulled numerous fire alarms warning that agencies are being gutted by the Trump administration [7]. Trump loyalists did little to dispute these claims, instead arguing that they are part and parcel of Trump’s campaign promise to “drain the swamp.”

Many would assume that these examples are only the most glaring instances of Trump undermining the civil service [5]. Yet, there is also reason to believe otherwise. Trump may have done far less to erode the civil service than these stories suggest. Media accounts are only the “first rough draft of history,” and later drafts may look quite different. For example, the Commerce Department’s Inspector General, an Obama appointee, later determined that while “it was reasonable under the circumstances” for some employees to infer that their jobs depended on issuing a statement deferential to the White House, no one was actually fired as a result of Sharpiegate. Even more shockingly, there was actually no “credible evidence that showed that Secretary Ross or anyone else directly threatened to fire .. [any] Department or NOAA employee” [8]. There are many other examples of officials portrayed as working under the Sword of Damocles who did not ultimately lose their jobs, from Rosenstein to Mueller to Fauci and beyond. Recent analyses have found that the federal workforce has *grown* over the course of the Trump years [9].

These paradoxes of the Trump administration are not unique to its relationship with the civil service, but extend to many other domains, from regulation to party politics and beyond. A growing, inter-disciplinary literature has sought to evaluate many of the initial impressions about the impact of Trump, often with a view toward generalizable strategies for evaluating past and future administrations [10–13]. And yet given the importance of the work of the civil service, across so many diverse areas, coming to an understanding of how the Trump era impacted the federal workforce is particularly crucial.

In this article, we use publicly available federal employment records maintained by the Office of Personnel Management to explore the Trump administration’s approach to personnel politics. We identify the bureaus and departments that have faced the most significant losses, gains, and churn in agency employment. A key methodological and interpretive challenge to such a task is that a naive analysis of raw hiring and departure rates will tend to overstate the significance of movements in small agencies. One solution is to largely restrict attention to the story as it pertains to large agencies [15], however it is *ex ante* plausible that smaller agencies are where the most significant action is. Our approach leverages Bayesian hierarchical models to calibrate the uncertainty about turnover in smaller bureaus, while also adding a principled amount of skepticism as to whether small agencies have faced employment pressures significantly different from the mean. We show that while some parts of the federal executive have experienced substantial turnover, others have been greatly expanded. We make available detailed estimates of attrition and hiring rates that are useful for interested researchers and policymakers.

Data and Methods

Since the 1970s, the Office of Personnel Management (OPM) has maintained a unified database of employment records on federal civil servants for nearly all federal agencies.¹ OPM makes two kinds of employment records publicly available. Status files are quarterly snapshots of who works for the federal government. In these tables, each row is a person and the columns detail their background and aspects of their employment. Dynamic files identify the beginning and end of employment for the federal government. OPM calls these “accessions” and “separations,” respectively. Dynamic files are reported by month. In these tables, each row reflects an employee’s onboarding or departure. These tables also include information about the nature of the change in employment status. There is substantial, but not complete overlap in the aspects of

¹The most recent version of the data is available here: <https://www.fedscope.opm.gov/>.

employment provided on each civil servant between the status files and the dynamic files. To focus on the career civil servants who serve across administrations in the following analysis, we subset the data to only non-seasonal full-time civil servants, excluding Schedule C appointees and non-career members of the Senior Executive Service.² Hereafter, we refer to subcomponents of executive departments as bureaus, regardless of whether they are formally described as an administration, office, or some other kind of entity. We refer to independent agencies, executive departments, and agencies in the Executive Office of the President as agencies, unless we are referring only to executive departments. To make this concrete, under this vernacular NOAA is a bureau and its parent the Department of Commerce is an agency.

Model and Assumptions

Our goal is to use rates of separation and accession to make inferences about the work environment at agencies across the executive branch. Yet doing so directly with raw rates is problematic, as the following example illustrates. Suppose a bureau with ten employees loses two people over some period. It will have a separation rate of 20%. If a bureau staffed by a thousand loses one hundred employees over the same period, it will have a separation rate of 10%. The small bureau's raw separation rate is higher than the larger bureau. Yet, it is not unlikely that one of the exiting employees at the smaller bureau left for idiosyncratic reasons unrelated to the common component of the work environment. Federal organizations range in size from 5 employees to 298,487, so some agency's raw rates have a much larger idiosyncratic component than others. Consider the bureaus of the 15 executive departments. Of the bureaus in the top 10% of separation rates, 44% have fewer than 100 employees. Similarly, of the bureaus in the bottom 10% of separation rates, 46% have fewer than 100 employees. However, only 22% of all bureaus have fewer than 100 employees. Small bureaus are thus over-represented in both very low and very high separation rates. Such a statistical artefact is unsurprising given their small size. Even so, it makes naive comparison of percentage changes in employment problematic.

Our approach to addressing such issues relies on Bayesian hierarchical modeling, which formalizes intuitions and assumptions rooted in theories of political science and public administration. For ease of exposition, we will in this section refer primarily to separation rates, but conceptually the approach applies equally to accession rates. We assume that the process generating observed separation counts S_i in agency i is driven by (a) idiosyncratic career decisions related to a civil servants' personal situations (e.g., retirement due to age, geographic relocation of a spouse's job, birth of a child), and by (b) environmental conditions created by Presidents and their appointees. Because of such environmental pressures, each agency is assumed to have a particular separation rate parameter μ_i . The actual number of separations an agency experiences over some time-frame T represents a draw from a probability distribution that depends on (i) the agency's rate μ_i , (ii) the number of employees an agency has N_i , and (iii) the duration

²We also make several other minor and technical adjustments to the OPM data. The OPM data codes the Departments of the Air Force, Army and Navy as separate departments from the Department of Defense. We recode the military branches and treat them as a subagency of the Department of Defense, which they are. The Department of State does not report data on any subcomponents. The Department of Energy reports data on only one subcomponent, the Federal Energy Regulatory Commission. The appendix includes a list of small independent agencies (e.g., scholarship foundations) that we exclude from our analysis because we do not think they share a common work environment with other federal agencies, making the assumption that these agencies' separation and accessions rates are drawn from a common distribution with other agencies inappropriate. See the Model and Assumptions section for further discussion of this assumption. We also exclude the Office of Personnel Management because roughly 50% of it's staff were transferred to the Department of Defense in FY 2019. This transfer moved the National Background Investigation Bureau to the Defense Counterintelligence and Security Agency. We also exclude the Peace Corps because it only has one permanent full-time employee.

T that employment figures are observed across agencies. An agency's separation rate parameter is related to the broader political environment of the executive branch as well as idiosyncratic factors particular to the agency. Therefore, the separation rate is *itself* a draw from some distribution that depends on latent, government-wide factors that are (by assumption) roughly constant throughout the Trump administration.

The following hierarchical model formalizes these notions:

$$\begin{aligned} S_i &\sim \text{Poisson}(T \cdot N_i \cdot \mu_i) \\ \mu_i &\sim \text{Gamma}(\alpha, \beta) \\ \alpha, \beta &\sim \text{Cauchy}(0, 2.5) \end{aligned}$$

To explicate our choices, we assume a Poisson distribution because S_i is count data. The Poisson distribution's rate is the product of T , N_i , and μ_i , the former variables being observed constants and only μ_i being a statistical parameter.³ μ_i is the primary quantity of interest. It is interpretable as an agency's per capita annual rate of separations. In discussion, we will tend to focus on $100 * \mu_i$, which is the annual separation rate per 100 employees. The prior on μ_i is assumed to come from a Gamma distribution with parameters α and β , although in principle any positive continuous distribution might have been used. The Gamma's parameters α and β arise independently from diffuse Cauchy priors. The scale parameter of the Cauchy is set at 2.5, but our estimates are not particularly sensitive to this choice.

We fit this hierarchical model in STAN. In implementing the model, a key ambiguity to resolve is how to treat i when it is a bureau rather than an agency. In particular, when i is a bureau, one could model α and β as parameters referring to the entire federal government or, alternatively, as parameters referring just to the agency in which i sits. We adopt the later approach. In situations where we are interested in comparisons among bureaus, we fit the model separately within each executive department, so for example the Agricultural Marketing Service and the National Agricultural Statistics Service are viewed as sharing the same α and β , which is independent of what has occurred outside USDA. In situations where we are interested in comparisons amongst agencies, we fit the model on the entire federal government after aggregating bureaus to the department-level in which the sit, so the USDA, Treasury, Federal Deposit Insurance Corporation, and the Office of Management and Budget (i.e., executive departments, independent agencies, and agencies in the Executive Office of the President) are viewed as sharing the same α and β . The latter approach gives more confidence that the separation rates sensibly come from the same distribution. Model-based adjustments under the latter approach will push estimated rates of one bureau toward that of other bureaus within a department. Smaller bureaus will be moved farther toward the common rate for the department than larger bureaus and larger bureaus will have more influence on the estimate of the common rate than smaller bureaus. The former approach, or a larger hierarchical model, would push estimated rates toward the average rate of all agencies across the federal government.⁴ They might also produce estimates with less uncertainty about the rates. We regard more uncertainty about the model-based estimates as an acceptable tradeoff given the gains in terms of plausibility of assumptions about which agencies' rates are drawn from a common distribution.

³We adapted this example and the model below from the example estimating cancer rates at the county level in [16].

⁴Bayesian hierarchical models are sometimes referred to as "partial pooling" models because they lie between two limiting cases of "complete pooling" and "no pooling". A complete-pooling model in this case would aggregate individuals to the department level while a no-pooling model would aggregate individuals to the bureau level and not consider the shared environment between bureaus due to their common location in an executive department. The hierarchical model uses the data to estimate hyperparameters - α and β in our model - which allows us to use data from large bureaus to learn about rates in smaller bureaus via the common department-level distribution.

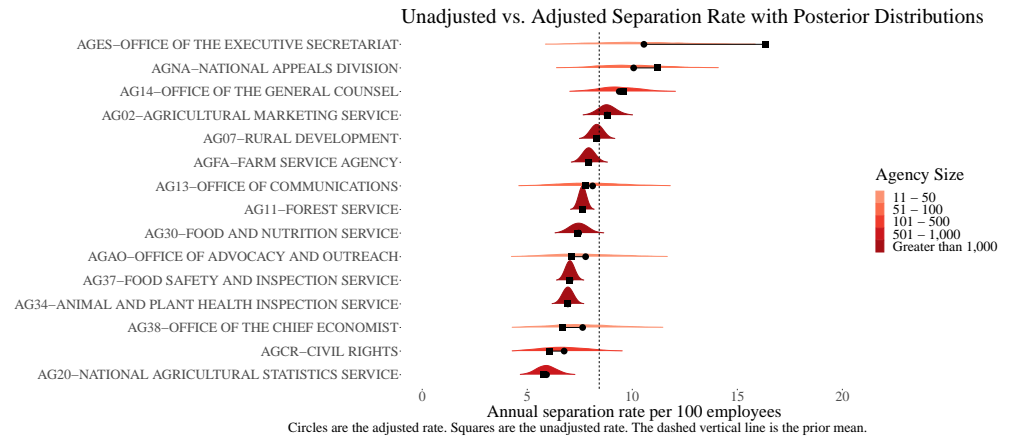


Fig 1. Adjusted vs. Unadjusted Separation Rates at USDA with Posterior Distributions

To be clear, scholars and analysts who are interested understanding changes in the size of the federal workforce across the various agencies and bureaus may prefer to use raw rates and counts because the adjusted rates will not equal the number of people that exited or joined an agency in a given time period. However, scholars and analysts interested in using employment records as a proxy for the environmental pressures on agencies will find that our estimates are better suited to their purposes.

Lastly, a key choice in this modeling approach is which agencies are drawn from the same common distribution. We have assumed there exists a common distribution for all federal agencies for our agency-level analysis. We have assumed there exists a common distribution for each executive department for our bureau-level analysis. Bayesian methods similar to ours could be adapted to other assumptions about the appropriate grouping of agencies and bureaus. For example, agencies could be grouped by policy domain or their location in the executive establishment (e.g., EOP agencies⁵, independent regulatory commissions) to reflect different assumptions about which agencies share a common environment.

Exploring Bayesian Adjustments

Our initial exploratory analysis begins with an investigation into how the Bayesian adjusted separation (accession) rates differ from the raw rates. Figure 1 presents a ridge-plot of the posterior distributions of the separation rate μ_i for bureaus within the Department of Agriculture (USDA). Raw rates and posterior means are indicated to illustrate the size of the Bayesian adjustment. As expected, for small bureaus the adjustment is substantial, while for large bureaus the adjustment is negligible. The Office of the Executive Secretariat (OES) had 20 members prior to the start of the Trump administration and had 9 separations over the 2.75 years of our data. Its raw annual rate is 16.4 separations per 100 employees. A 90% credible interval on the bureau's adjusted separation rate per 100 employees ranges from as low as 6.99 to as high as 15, with an expected rate of 10.6. Substantively, this credible interval is very wide. It goes from below the USDA's average annual separation rate (indicated by the vertical dashed line) to as much as 175% of the USDA's average. Interestingly, the raw rate is outside a

⁵The estimated rates of EOP agencies may be especially sensitive to this assumption because they tend to be small. Therefore, in our analysis they will be pulled rather far from their raw rate and near the common rate for all agencies, when their position in the EOP means that their working environment is not sufficiently similar to executive departments or independent agencies. In other words, rates in EOP agencies are not drawn from a common distribution shared with other federal agencies.

90% credible interval. Indeed, the probability of observing a rate as large or bigger under the model is only 0.0192. While one could argue that the small Bayesian p-value may indicate that OES is truly different from the others, so that the model-based adjustment for OES is inappropriate, one should bear in mind that the chart shows 15 offices. A small number of agencies outside a 90% credible interval is expected.⁶ For small reporting units like OES, one benefit of the model is that it reveals the sensitivity of the raw rates to small changes in individual employment decisions. If just a handful of people had stayed at OES, its raw separation rate would change drastically. The model-based adjustments are also useful in so far as it makes it harder for small agencies to drive large aggregate patterns by pushing them toward the overall mean. The way the model handles larger agencies such as the Agricultural Marketing Service (AMS) is quite different. The AMS had 1,943 employees prior to the start of the Trump administration and lost 471 over the first 2.75 years. Its raw annual separation rate of 8.81 differs little from its adjusted rate of 8.8, with a 90% credible interval ranging from 8.14 to 9.49. These rates were close to the average of all bureaus in USDA, however the fact that the AMS was “typical” is not the major explanation for its small adjustment. A brief inspection of the Figure will reveal that both the size of the common rate adjustment and the amount of uncertainty about the rate are largely determined by the bureau’s size.

Figure @ref(fig:lm-plot) illustrates how the use of model-adjusted annual separation and accession rates changes the relationship between these rates and agency size. The y-axis gives a measure of the extremity of the separation or accession rate for bureaus in every executive department. Specifically, the y-axis is: $|\text{pct. rank of the rate} - 50|$. The measure assigns the median rate a value of 0 with assigned values approaching 50 as the percentile rank approaches 0 or 100.

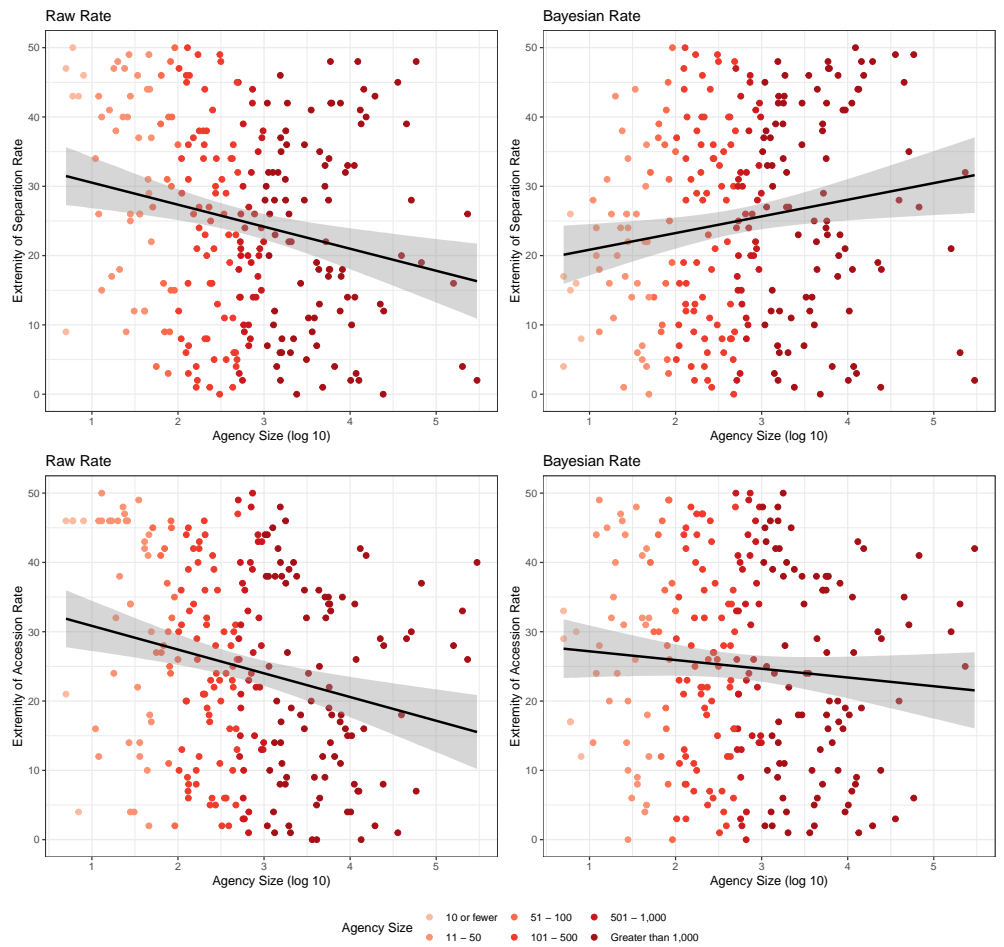
As the scatter plots on the left show, there is a pronounced size trend in the raw rates. The cluster of bureaus near 50 on the y-axis shows that small bureaus experienced both relatively greater raw rates of accessions and separations and relatively lesser raw rates of separations and accessions under Trump. In other words, small bureaus are disproportionately likely to have either very low or very high rates, which we regard as a statistical artifact. The right panel shows the Bayesian adjusted rates. The cluster of small bureaus near 50 has been eliminated in both figures. In both cases, there remains a significant relationship between size and these rates, but in the case of accessions it is much flatter than with the raw rates. In terms of separations, the trend actually reverses. Analysis of the Bayesian rates suggests that larger bureaus on average faced higher separation and lower hiring rates than smaller bureaus.

Employment Trends During the Trump Administration

We now put the Bayesian adjusted separation and accession rates to use characterizing employment trends during the first 2.75 years of the Trump Administration among permanent career civil servants.⁷ Figure 5 shows the accession and separation rates for the government overall, the 15 executive departments, and the Environmental Protection Agency (due to its notable public attention). Accession rates are circles and separation rates are squares. The government overall and the (green) agencies above the horizontal line gained employees (i.e., the accession rate exceeded the separation rate)

⁶Indeed, OES is the only one of 30 bureaus within USDA whose raw rate is outside the 90% credible interval for that agency’s μ_i

⁷As a reminder, we subset the OPM data to permanent non-seasonal full-time civil servants and non-career members of the Senior Executive Service and Schedule C appointees.



Extremity is calculated by subtracting 50 from the percentage of agencies that have a rate less than or equal to each bureau's rate and taking the absolute value. This transformation assigns the median rate a value of 0 and the minimum and maximum rates a value of 50. Each plot includes a fitted line from an OLS regression. The shaded regions around the line give the 95% confidence interval.

Fig 2. Relationship Between Bureau Size and Extremity of Rates

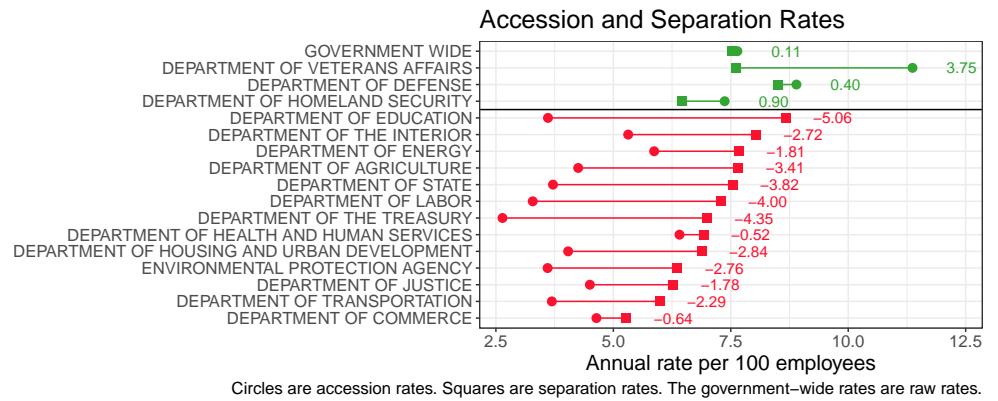


Fig 3. Accessions and Separation During the Trump Administration

while the 13 (red) agencies below the line lost employees. The numbers on the right give the accession rate less the separation rate which we will refer to as the net rate.

Figure 4 provides three key insights about employment trends at these agencies during the period under study. First, while government employment overall grew at an annualized rate of 0.11 percent, most departments lost employees. The gains were driven by increases in three executive departments - Homeland Security, Defense, and Veterans Affairs. Second, while the press has heavily covered employee separations at agencies like the State Department (net rate of -3.82) and the EPA (net rate of -2.76), many agencies have similar or larger net loss rates. (It is important to note that the State Department does not report data on Foreign Service Personnel, therefore, its net loss rate is likely understated given press reports about turnover among these personnel.) In particular, the Department of Education, Department of the Treasury, and the Department of Labor have higher net loss rates and have gotten much less attention. Third, it is necessary to consider both separations and accessions to fully understand employment trends. For example, the Treasury Department has a middling separation rate but the lowest accession rate resulting in the second largest net loss rate (-4.35).

Figure 5 shows the joint distribution of separation and accession rates for bureaus within the 13 executive departments that provide data on their bureaus. The separation rate is on the x-axis, accession rate is on the y-axis, and the plot includes a 45-degree line. Observations below the line are agencies with a net loss (i.e., the separation rate exceeded the accession rate), observations above the line are cases with a net gain, and observations on (or near) the line are cases with equal (or near equal) separation and accession rates. As expected from the department-level analysis above, most of the agencies with a net gain are in the Department of Veterans Affairs (VA, pink dots), the Department of Defense (DOD, green dots), or the Department of Homeland Security (DHS, light blue dots).

The Economic Research Service and National Institute of Food and Agriculture with the Department of Agriculture are two outliers in the lower right portion of Figure 5. The Trump Administration relocated these scientific agencies from Washington, DC, to Kansas City, MO, in October 2019. The employees of these agencies generally opposed the move and many chose to leave the agencies rather than relocate [17]. The other net-loss outliers - Office of the Inspector General and the National Technical Information Service in Commerce, the Special Inspector General for the Troubled Asset Relief Program (SIGTARP) in Treasury, and the Defense Commissary Agency in DOD - are not clearly related to priorities of the Trump Administration. The same is true for agencies that are net-gain outliers.

One priority of the Trump Administration that did have clear effects on personnel is

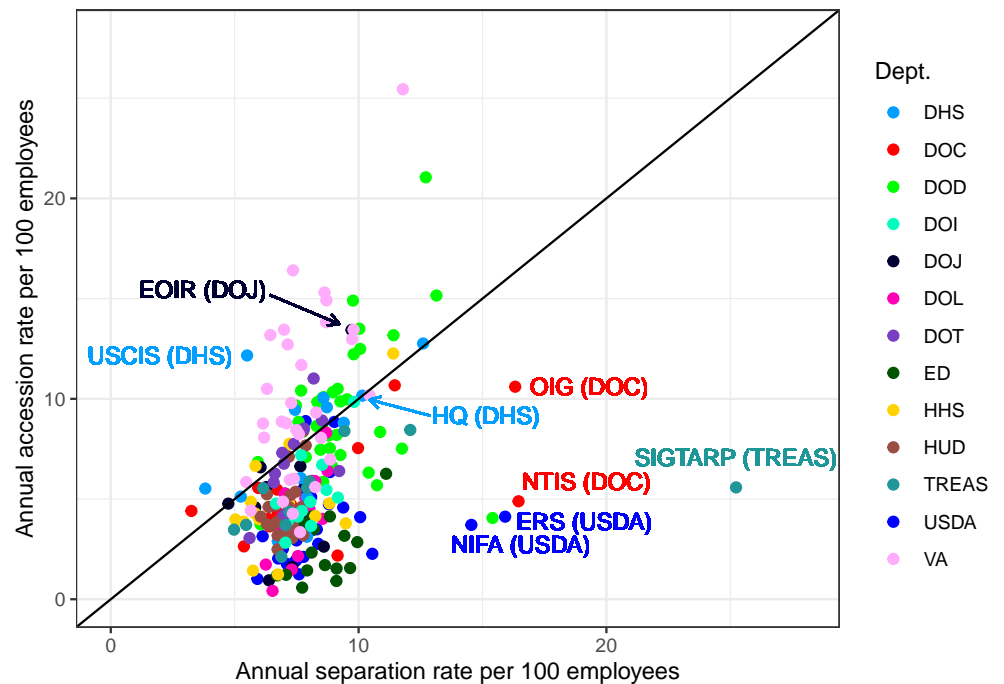


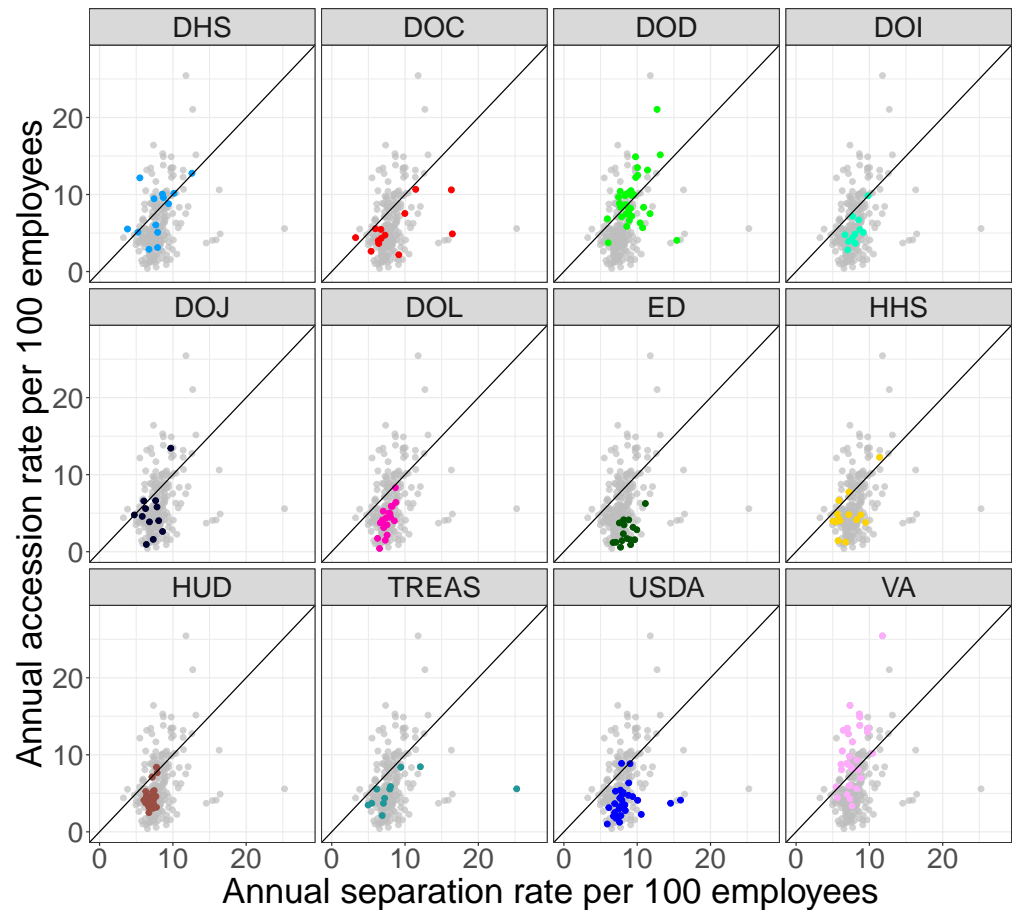
Fig 4. Separations and Accessions within Executive Departments

immigration. The United States Citizenship and Immigration Services (USCIS), the agency in Homeland Security responsible for managing lawful immigration, experienced large net growth. Similarly, the Executive Office for Immigration Review, the agency in the Department of Justice responsible for adjudicating immigration cases, also experienced large net growth. Both of these agencies would have required more employees in response the Trump Administration’s immigration policies. These agencies stand out relative to other agencies within the same department.

A final observation from Figure 5 is that we should focus our attention on agencies with high rates of separations and accessions that are near equal in addition to agencies with high net positive or net negative rates. For example, DHS Headquarters sits on the 45-degree line with a net rate of 0.01. However, its rates of accessions and turnover were 10% of staff per year, which is likely due to frequent leadership changes at DHS during the Trump Administration. Agencies with high but near equal rates of separations and accessions will have stable number of total employees but this stability belies a churn in employees that may reduce capacity as employees learn their new roles and subordinates adjust to new leadership with varying management styles and agency priorities. A high rate of churn is likely to be especially problematic when it occurs among senior leadership.

It is difficult to see variation in Figure 5 among the large mass of points in the lower left quadrant. To elucidate variation in this portion of the plot, Figure 6 contains a plot for executive departments highlighting the points that correspond to bureaus within that department. Figure 6 shows that departments can generally be put into three categories:

1. Departments with a net positive growth rate that contain bureaus with heterogeneous growth rates - VA, DOD, and DHS;
2. Departments with a net negative growth rate that contain bureaus with near net zero growth rates or negative growth rates - DOI, HHS, DOC, DOT, TREAS, and



We omit DOT due to space constraints
because it's bureaus are clustered near the 45-degree line.
See the appendix for this plot including DOT.

Fig 5. Separations and Accessions by Department

DOJ (EOIR notwithstanding)

3. Departments with a net negative growth rate that contain bureaus with mostly large negative growth rates - ED, DOL, and USDA;

When interpreting Figures 4 and 6, it is important to note that Figure 6 does not indicate bureau size which affects the influence of the bureau rates in Figure 6 on the department rates in Figure 4. For example, Treasury has a net department rate of -4.35 which largely reflects the employment trends at the Internal Revenue service (separation rate of 6.88, accession rate of 2.12, and a net rate of -4.77) because the IRS comprises 82% of Treasury's 81,948 employees while SIGTARP (an outlier bureau in Figure 5) comprises 0.16%.

Discussion

Numerous agencies have experienced significant staff reductions during the course of the Trump administration. Members of Congress, the media, and other watchdogs have previously identified some of these agencies as in crisis, notably the State Department and Environmental Protection Agency. Our analysis shows that the loss of employees at

the State Department and Environmental Protection Agency are not outliers. Other agencies have suffered significant loss of staff according to our analysis - in particular the Departments of Agriculture, Labor, and Education - but have received much less attention.

The relocation of the Economic Research Service and the National Institute of Food and Agriculture also received significant attention from the press and Congress [17]. Our analysis shows ERS and NIFA are clear outliers among executive department bureaus, with separation rates indicating they lost 15.84% and 14.57% of their employees during the first 2.75 year of the Trump Administration. The Congressional Research Service reports that 75% of employees affected by the relocation left the agencies rather than relocate [17].

Our analysis also identified agencies that have been subject to intense political conflict which has had minimal effect on staffing. For example, the Federal Bureau of Investigation had a net rate of 0.03

0.03 with separation and accession rates of about 5. Similarly, Immigration and Customs Enforcement had a net rate of -0.12 also with separation and accession rates of about 5. The lack of growth at ICE despite efforts by the Trump Administration that began in 2017 to hire 10,000 additional agents suggest that ICE's stability may indicate that ICE is a bureau without sufficient staff to accomplish its mission during the Trump Administration. Customs and Border Protection, which was paired with ICE in the hiring push for agents, had a net rate of 1.71. Had the hiring push at ICE been successful, the agency would have grown by about 50% (equivalent to a net rate of 50), which may have been unrealistic given the hiring process at ICE⁸ We would have expected growth at ICE to be similar to growth at CBP and USCIS in DHS or EOIR in DOJ.

Our analysis shows that agencies and bureaus working to further civil rights also exhibit stress due to personnel changes. The Equal Employment Opportunity Commission (separation rate of 8.71, accession rate of 7.73) had accession and separation rates near the 60th percentile for all agencies despite have a small net loss rate, indicating a high rate of churn. The Minority Business Develop Agency in DOC (separation rate of 9.13, accession rate of 2.15, net rate of -6.98), the only federal agency solely dedicated to the growth and global competitiveness of minority business enterprises per its website, had a large net loss rate due to a separation rate at the 82nd percentile and an accession rate at the 10th percentile among all bureaus. The Offices, Boards and Divisions reporting unit in DOJ (separation rate of 8.6, accession rate of 2.62, net rate of -5.97), which includes the Civil Rights Division, had a separation rate at the 73rd percentile and an accession rate at the 12th percentile among all bureaus.

In sum, our analysis shows members of Congress, journalists, and scholars have been right to be concerned about turnover in the federal workforce. The federal workforce did grow slightly during the first 2.75 years of the Trump Administration, but that observation belies significant heterogeneity across agencies and bureaus in the executive branch. Observers were also correct to focus attention on the State Department and EPA, but our analysis shows that the net loss rates at these agencies are not uncommon. Agencies like the Department of Education and bureaus like the Minority Business Development Agency experienced larger net loss rates and have received much less attention. Finally, we highlighted that a net rate near zero may mask large, near equal separation and accessions rates indicative of high rates of employee churn that may harm performance. Simply looking at net changes in employee counts will not identify these cases.

⁸It takes more than 200 days to hire an ICE agent. The hiring process includes an entrance exam, physical exam, medical exam, drug test, and background investigation. After hiring, there's a 16-week basic training program, which includes a five-week Spanish language course [Horowitz2017].

Conclusion354

The personnel policies of the Trump Administration have focused public attention on staffing at federal agencies. We explained that using raw counts to calculate separation and accession rates at federal agencies to make inferences about the effect of these personnel policies on working conditions is problematic due to significant heterogeneity in agency size. We presented a method to estimate rates that can be used to make valid interagency comparisons. This method can be applied to any comparisons of rates among agencies varying size, including survey data (e.g., the Federal Employee Viewpoint Survey) or measures of agency politicization based on counts of appointees in an agency. We then used these estimates to characterize the impact of the Trump Administration’s policies on staffing at federal agencies. We are making our Bayesian adjusted separation and accession rates for 17 agencies and 250 bureaus available to others interested in studying employments trends in the Trump Administration.

References367

Appendix368

Bayesian Adjusted Rate for agencies and bureaus.369

Tables 1 and 2 provide the Bayesian adjusted rates for agencies and bureaus, respectively.

Table 1. Bayesian Adjusted Rates in Agencies

Agency	Sep. Rate	Acc. Rate	Net Rate
DEPARTMENT OF AGRICULTURE	7.66	4.25	-3.41
DEPARTMENT OF COMMERCE	5.28	4.64	-0.64
DEPARTMENT OF DEFENSE	8.50	8.90	0.40
DEPARTMENT OF JUSTICE	6.28	4.50	-1.78
DEPARTMENT OF LABOR	7.28	3.28	-4.00
DEPARTMENT OF ENERGY	7.68	5.87	-1.81
DEPARTMENT OF EDUCATION	8.67	3.61	-5.06
DEPARTMENT OF HEALTH AND HUMAN SERVICES	6.92	6.41	-0.52
DEPARTMENT OF HOMELAND SECURITY	6.47	7.37	0.90
DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT	6.88	4.04	-2.84
DEPARTMENT OF THE INTERIOR	8.04	5.32	-2.72
DEPARTMENT OF STATE	7.54	3.71	-3.82
DEPARTMENT OF TRANSPORTATION	5.98	3.69	-2.29
DEPARTMENT OF THE TREASURY	6.99	2.64	-4.35
DEPARTMENT OF VETERANS AFFAIRS	7.62	11.37	3.75
U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT	6.59	2.79	-3.80
NATIONAL CREDIT UNION ADMINISTRATION	7.33	5.33	-2.00
EQUAL EMPLOYMENT OPPORTUNITY COMMISSION	8.71	7.73	-0.98
ENVIRONMENTAL PROTECTION AGENCY	6.36	3.60	-2.76
FEDERAL COMMUNICATIONS COMMISSION	7.08	3.75	-3.33
FEDERAL DEPOSIT INSURANCE CORPORATION	6.62	4.96	-1.66
FEDERAL RESERVE SYSTEM	8.26	3.68	-4.57
FEDERAL TRADE COMMISSION	8.58	7.41	-1.17
GENERAL SERVICES ADMINISTRATION	6.26	5.43	-0.83
BROADCASTING BOARD OF GOVERNORS	6.29	3.02	-3.27
GOVERNMENT PRINTING OFFICE	5.99	4.98	-1.02

Table 1. Bayesian Adjusted Rates in Agencies (*continued*)

Agency	Sep. Rate	Acc. Rate	Net Rate
NATIONAL SCIENCE FOUNDATION	6.89	6.19	-0.70
NATIONAL LABOR RELATIONS BOARD	7.92	1.75	-6.17
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	5.64	5.97	0.33
NATIONAL ARCHIVES AND RECORDS ADMINISTRATION	9.97	6.25	-3.72
NUCLEAR REGULATORY COMMISSION	6.04	0.98	-5.06
SMALL BUSINESS ADMINISTRATION	9.18	7.85	-1.34
SECURITIES AND EXCHANGE COMMISSION	3.84	1.06	-2.78
SMITHSONIAN INSTITUTION	8.82	8.63	-0.19
SOCIAL SECURITY ADMINISTRATION	6.10	5.68	-0.42
NATIONAL FOUNDATION ON THE ARTS AND THE HUMANITIES	11.11	9.91	-1.20
FEDERAL LABOR RELATIONS AUTHORITY	15.05	7.48	-7.56
MERIT SYSTEMS PROTECTION BOARD	8.78	8.55	-0.23
DEFENSE NUCLEAR FACILITIES SAFETY BOARD	1.76	0.59	-1.17
PENSION BENEFIT GUARANTY CORPORATION	7.65	5.32	-2.33
OFFICE OF MANAGEMENT AND BUDGET	14.68	14.26	-0.42
COMMODITY FUTURES TRADING COMMISSION	4.49	2.79	-1.70
EXPORT-IMPORT BANK OF THE UNITED STATES	10.69	4.96	-5.73
OFFICE OF ADMINISTRATION	15.44	16.01	0.57
FARM CREDIT ADMINISTRATION	9.35	10.45	1.10
FEDERAL MEDIATION AND CONCILIATION SERVICE	9.84	9.55	-0.29
OFFICE OF SPECIAL COUNSEL	11.77	11.86	0.09
OVERSEAS PRIVATE INVESTMENT CORPORATION	10.44	10.81	0.37
FEDERAL HOUSING FINANCE AGENCY	5.84	6.11	0.27
CORPORATION FOR NATIONAL AND COMMUNITY SERVICE	16.75	8.51	-8.24
FEDERAL ELECTION COMMISSION	7.43	5.73	-1.69
FEDERAL MARITIME COMMISSION	10.56	10.15	-0.41
MILLENNIUM CHALLENGE CORPORATION	10.19	13.60	3.41

Table 1. Bayesian Adjusted Rates in Agencies (*continued*)

Agency	Sep. Rate	Acc. Rate	Net Rate
FEDERAL RETIREMENT THRIFT INVESTMENT BOARD	9.86	13.59	3.73
RAILROAD RETIREMENT BOARD	7.52	5.60	-1.92
CONSUMER PRODUCT SAFETY COMMISSION	10.42	7.32	-3.11
SELECTIVE SERVICE SYSTEM	18.44	19.12	0.67
NATIONAL TRANSPORTATION SAFETY BOARD	6.49	5.24	-1.26
U.S. INTERNATIONAL TRADE COMMISSION	11.00	10.86	-0.14
OFFICE OF THE U.S. TRADE REPRESENTATIVE	11.09	14.77	3.67
ADMINISTRATIVE CONFERENCE OF THE UNITED STATES	17.19	18.26	1.07
AFRICAN DEVELOPMENT FOUNDATION	15.60	15.69	0.09
COMMISSION ON CIVIL RIGHTS	7.60	10.96	3.36
COUNCIL OF ECONOMIC ADVISERS	13.62	27.32	13.70
COUNCIL ON ENVIRONMENTAL QUALITY/OFFICE OF ENVIRONMENTAL QUALITY	11.42	11.30	-0.12
TRADE AND DEVELOPMENT AGENCY	17.54	18.16	0.62
FEDERAL FINANCIAL INSTITUTIONS EXAMINATION COUNCIL	6.28	3.48	-2.79
CHEMICAL SAFETY AND HAZARD INVESTIGATION BOARD	11.77	7.09	-4.69
FARM CREDIT SYSTEM INSURANCE CORPORATION	8.27	7.18	-1.09
OFFICE OF GOVERNMENT ETHICS	8.07	9.68	1.60
ELECTION ASSISTANCE COMMISSION	11.23	39.36	28.13
INTER-AMERICAN FOUNDATION	10.04	11.01	0.97
NATIONAL SECURITY COUNCIL	9.53	3.72	-5.81
OCCUPATIONAL SAFETY AND HEALTH REVIEW COMMISSION	9.68	5.77	-3.91
OFFICE OF NATIONAL DRUG CONTROL POLICY	9.04	2.06	-6.98
OFFICE OF NAVAJO AND HOPI INDIAN RELOCATION	7.54	1.63	-5.91
FEDERAL MINE SAFETY AND HEALTH REVIEW COMMISSION	8.30	13.22	4.92
OFFICE OF SCIENCE AND TECHNOLOGY POLICY	9.02	3.33	-5.69

Table 2. Bayesian Adjusted Rates in Bureaus of Executive Departments

Dept.	Bureau	Sep. Rate	Acc. Rate	Net Rate
USDA	AG01-OFFICE OF THE SECRETARY OF AGRICULTURE	7.80	8.83	1.02
USDA	AG02-AGRICULTURAL MARKETING SERVICE	8.81	4.74	-4.07
USDA	AG03-AGRICULTURAL RESEARCH SERVICE	6.94	2.51	-4.44
USDA	AG07-RURAL DEVELOPMENT	8.31	3.49	-4.82
USDA	AG08-RISK MANAGEMENT AGENCY	7.49	2.94	-4.54
USDA	AG10-FOREIGN AGRICULTURAL SERVICE	8.08	5.09	-2.99
USDA	AG11-FOREST SERVICE	7.63	4.39	-3.24
USDA	AG13-OFFICE OF COMMUNICATIONS	8.12	3.49	-4.63
USDA	AG14-OFFICE OF THE GENERAL COUNSEL	9.41	4.58	-4.83
USDA	AG15-RURAL UTILITIES SERVICE	7.09	1.77	-5.32
USDA	AG16-NATURAL RESOURCES CONSERVATION SERVICE	7.71	5.43	-2.28
USDA	AG18-ECONOMIC RESEARCH SERVICE	15.84	4.12	-11.72
USDA	AG20-NATIONAL AGRICULTURAL STATISTICS SERVICE	5.93	1.02	-4.91
USDA	AG22-NATIONAL INSTITUTE OF FOOD AND AGRICULTURE	14.57	3.71	-10.86
USDA	AG23-OFFICE OF THE INSPECTOR GENERAL	7.92	4.11	-3.81
USDA	AG30-FOOD AND NUTRITION SERVICE	7.44	1.89	-5.55
USDA	AG32-RURAL BUSINESS-COOPERATIVE SERVICE	8.37	2.75	-5.62
USDA	AG34-ANIMAL AND PLANT HEALTH INSPECTION SERVICE	6.93	3.67	-3.26
USDA	AG37-FOOD SAFETY AND INSPECTION SERVICE	7.03	5.27	-1.76
USDA	AG38-OFFICE OF THE CHIEF ECONOMIST	7.60	3.32	-4.28
USDA	AG42-OFFICE OF BUDGET AND PROGRAM ANALYSIS	7.48	2.01	-5.47
USDA	AG90-OFFICE OF THE CHIEF FINANCIAL OFFICER	7.61	1.24	-6.36
USDA	AGAO-OFFICE OF ADVOCACY AND OUTREACH	7.87	2.14	-5.73
USDA	AGCR-CIVIL RIGHTS	6.77	2.08	-4.69
USDA	AGDA-DEPARTMENTAL ADMINISTRATION	6.13	3.13	-3.00
USDA	AGES-OFFICE OF THE EXECUTIVE SECRETARIAT	10.55	2.27	-8.28

Table 2. Bayesian Adjusted Rates in Bureaus of Executive Departments (*continued*)

Dept.	Bureau	Sep. Rate	Acc. Rate	Net Rate
USDA	AGFA-FARM SERVICE AGENCY	7.93	4.84	-3.09
USDA	AGHL-HOMELAND SECURITY STAFF	9.02	8.83	-0.19
USDA	AGIT-OFFICE OF THE CHIEF INFORMATION OFFICER	8.86	6.33	-2.52
USDA	AGNA-NATIONAL APPEALS DIVISION	9.96	4.09	-5.87
DOC	CM51-OFFICE OF THE SECRETARY	11.45	10.65	-0.81
DOC	CM52-ECONOMIC DEVELOPMENT ADMINISTRATION	6.80	4.27	-2.53
DOC	CM53-BUREAU OF ECONOMIC ANALYSIS	6.72	5.51	-1.22
DOC	CM54-NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION	5.95	5.55	-0.40
DOC	CM55-INTERNATIONAL TRADE ADMINISTRATION	7.26	4.73	-2.52
DOC	CM56-PATENT AND TRADEMARK OFFICE	3.25	4.40	1.15
DOC	CM57-NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY	6.34	4.01	-2.33
DOC	CM59-MINORITY BUSINESS DEVELOPMENT AGENCY	9.13	2.15	-6.98
DOC	CM61-NATIONAL TELECOMMUNICATIONS AND INFORMATION ADMINISTRATION	10.00	7.56	-2.44
DOC	CM62-NATIONAL TECHNICAL INFORMATION SERVICE	16.41	4.92	-11.48
DOC	CM63-BUREAU OF THE CENSUS	5.37	2.63	-2.74
DOC	CM64-OFFICE OF THE INSPECTOR GENERAL	16.29	10.66	-5.63
DOC	CM67-BUREAU OF INDUSTRY AND SECURITY	6.45	3.63	-2.81
DOD	DD01-OFFICE OF THE SECRETARY OF DEFENSE	10.41	6.32	-4.10
DOD	DD02-ORGANIZATION OF THE JOINT CHIEFS OF STAFF	8.86	7.55	-1.32
DOD	DD04-DEFENSE INFORMATION SYSTEMS AGENCY	9.27	9.87	0.60
DOD	DD06-DEFENSE SECURITY COOPERATION AGENCY	12.68	21.09	8.41
DOD	DD07-DEFENSE LOGISTICS AGENCY	8.30	8.65	0.34
DOD	DD08-U.S. COURT OF APPEALS FOR THE ARMED FORCES	9.28	7.20	-2.08
DOD	DD10-DEFENSE CONTRACT AUDIT AGENCY	8.58	10.08	1.50
DOD	DD12-DEFENSE SECURITY SERVICE	10.07	12.51	2.44
DOD	DD13-DEFENSE ADVANCED RESEARCH PROJECTS AGENCY	9.56	10.00	0.44

Table 2. Bayesian Adjusted Rates in Bureaus of Executive Departments (*continued*)

Dept.	Bureau	Sep. Rate	Acc. Rate	Net Rate
DOD	DD15-UNIFORMED SERVICES UNIVERSITY OF THE HEALTH SCIENCES	8.93	6.66	-2.27
DOD	DD16-DEPARTMENT OF DEFENSE EDUCATION ACTIVITY	13.14	15.17	2.03
DOD	DD21-WASHINGTON HEADQUARTERS SERVICES	9.15	10.51	1.35
DOD	DD23-OFFICE OF ECONOMIC ADJUSTMENT	10.87	8.31	-2.56
DOD	DD25-DEFENSE LEGAL SERVICES AGENCY	6.06	3.74	-2.31
DOD	DD26-OFFICE OF THE INSPECTOR GENERAL	9.81	12.21	2.40
DOD	DD27-MISSILE DEFENSE AGENCY	7.68	10.41	2.73
DOD	DD29-DEFENSE TECHNOLOGY SECURITY ADMINISTRATION	8.46	7.48	-0.98
DOD	DD34-DEFENSE COMMISSARY AGENCY	15.41	4.06	-11.35
DOD	DD35-DEFENSE FINANCE AND ACCOUNTING SERVICE	8.34	9.84	1.50
DOD	DD48-DEFENSE HUMAN RESOURCES ACTIVITY	11.41	13.19	1.78
DOD	DD53-DEFENSE POW/MIA ACCOUNTING AGENCY	8.56	10.03	1.47
DOD	DD60-DEFENSE HEALTH AGENCY	5.94	6.85	0.91
DOD	DD61-DEFENSE THREAT REDUCTION AGENCY	8.95	10.32	1.38
DOD	DD63-DEFENSE CONTRACT MANAGEMENT AGENCY	7.74	8.35	0.61
DOD	DD65-PENTAGON FORCE PROTECTION AGENCY	8.79	8.17	-0.62
DOD	DD68-DEPARTMENT OF DEFENSE TEST RESOURCE MANAGEMENT CENTER	8.60	5.84	-2.76
DOD	DD69-NATIONAL DEFENSE UNIVERSITY	11.75	7.52	-4.23
DOD	DD71-DEFENSE MICROELECTRONICS ACTIVITY	10.06	13.49	3.44
DOD	DD74-DEFENSE TECHNICAL INFORMATION CENTER	7.85	7.11	-0.74
DOD	DD80-DEFENSE MEDIA ACTIVITY	10.75	5.70	-5.05
DOD	DD81-DEFENSE ACQUISITION UNIVERSITY	7.59	8.82	1.23
DOD	DD82-NATIONAL RECONNAISSANCE OFFICE	9.77	14.88	5.11
DOD	DDAF-DEPARTMENT OF THE AIR FORCE	8.53	8.66	0.13
DOD	DDAR-DEPARTMENT OF THE ARMY	9.11	8.20	-0.91
DOD	DDNV-DEPARTMENT OF THE NAVY	7.47	9.67	2.19
DOJ	DJ01-OFFICES, BOARDS AND DIVISIONS	8.60	2.62	-5.97

Table 2. Bayesian Adjusted Rates in Bureaus of Executive Departments (*continued*)

Dept.	Bureau	Sep. Rate	Acc. Rate	Net Rate
DOJ	DJ02-FEDERAL BUREAU OF INVESTIGATION	4.74	4.77	0.03
DOJ	DJ03-BUREAU OF PRISONS/FEDERAL PRISON SYSTEM	6.81	3.87	-2.94
DOJ	DJ06-DRUG ENFORCEMENT ADMINISTRATION	6.04	6.58	0.54
DOJ	DJ07-OFFICE OF JUSTICE PROGRAMS	7.31	1.60	-5.71
DOJ	DJ08-U.S. MARSHALS SERVICE	6.27	5.60	-0.67
DOJ	DJ09-EXECUTIVE OFFICE FOR U.S. ATTORNEYS AND THE OFFICES OF THE U.S. ATTORNEYS	8.07	4.02	-4.04
DOJ	DJ10-OFFICE OF THE INSPECTOR GENERAL	7.66	6.64	-1.02
DOJ	DJ11-U.S. TRUSTEE PROGRAM	6.39	0.94	-5.44
DOJ	DJ12-EXECUTIVE OFFICE FOR IMMIGRATION REVIEW	9.70	13.42	3.72
DOJ	DJ14-COMMUNITY RELATIONS SERVICE	7.87	5.85	-2.02
DOJ	DJ15-BUREAU OF ALCOHOL, TOBACCO, FIREARMS, AND EXPLOSIVES	5.82	4.59	-1.23
DOL	DLAA-OFFICE OF THE SECRETARY OF LABOR	8.04	4.50	-3.53
DOL	DLAM-OFFICE OF THE ASSISTANT SECRETARY FOR ADMINISTRATION AND MANAGEMENT	8.74	6.41	-2.33
DOL	DLBL-BUREAU OF INTERNATIONAL LABOR AFFAIRS	8.27	5.86	-2.41
DOL	DLCA-OFFICE OF CONGRESSIONAL AND INTERGOVERNMENTAL AFFAIRS	7.54	3.45	-4.09
DOL	DLCF-OFFICE OF THE CHIEF FINANCIAL OFFICER	8.68	8.28	-0.40
DOL	DLEH-OFFICE OF DISABILITY EMPLOYMENT POLICY	8.16	5.88	-2.28
DOL	DLET-EMPLOYMENT AND TRAINING ADMINISTRATION	6.25	1.73	-4.51
DOL	DLIG-OFFICE OF THE INSPECTOR GENERAL	7.92	4.48	-3.44
DOL	DLLS-BUREAU OF LABOR STATISTICS	7.86	5.03	-2.83
DOL	DLMS-MINE SAFETY AND HEALTH ADMINISTRATION	7.30	1.48	-5.82
DOL	DLOF-OFFICE OF FEDERAL CONTRACT COMPLIANCE PROGRAMS	7.56	2.15	-5.41
DOL	DLOL-OFFICE OF LABOR-MANAGEMENT STANDARDS	6.60	3.76	-2.85
DOL	DLOW-OFFICE OF WORKERS' COMPENSATION PROGRAMS	7.41	4.38	-3.03
DOL	DLPA-OFFICE OF PUBLIC AFFAIRS	7.02	5.28	-1.74

Table 2. Bayesian Adjusted Rates in Bureaus of Executive Departments (*continued*)

Dept.	Bureau	Sep. Rate	Acc. Rate	Net Rate
DOL	DLPE-OFFICE OF THE ASSISTANT SECRETARY FOR POLICY	6.88	4.09	-2.79
DOL	DLPW-EMPLOYEE BENEFITS SECURITY ADMINISTRATION	7.09	3.11	-3.98
DOL	DLSH-OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION	6.83	3.78	-3.05
DOL	DLSL-OFFICE OF THE SOLICITOR	7.96	4.92	-3.04
DOL	DLVE-VETERANS EMPLOYMENT AND TRAINING SERVICES	6.97	3.68	-3.29
DOL	DLWB-WOMEN'S BUREAU	8.59	4.00	-4.58
DOL	DLWH-WAGE AND HOUR DIVISION	6.51	0.42	-6.09
ED	EDEA-IMMEDIATE OFFICE OF THE SECRETARY OF EDUCATION	9.68	1.57	-8.11
ED	EDEC-OFFICE FOR CIVIL RIGHTS	8.13	4.14	-3.99
ED	EDED-OFFICE OF PLANNING, EVALUATION AND POLICY DEVELOPMENT	9.04	0.90	-8.14
ED	EDEE-OFFICE OF THE UNDER SECRETARY	8.71	1.74	-6.97
ED	EDEF-OFFICE OF INSPECTOR GENERAL	7.86	3.77	-4.09
ED	EDEG-OFFICE OF THE GENERAL COUNSEL	9.47	3.17	-6.29
ED	EDEH-OFFICE OF SPECIAL EDUCATION AND REHABILITATIVE SERVICES	8.12	2.31	-5.81
ED	EDEI-OFFICE OF THE CHIEF INFORMATION OFFICER	11.09	6.28	-4.81
ED	EDEJ-OFFICE OF LEGISLATION AND CONGRESSIONAL AFFAIRS	8.77	4.17	-4.60
ED	EDEN-FEDERAL STUDENT AID	7.56	3.74	-3.82
ED	EDEO-OFFICE OF COMMUNICATIONS AND OUTREACH	7.75	0.58	-7.17
ED	EDEP-OFFICE OF POSTSECONDARY EDUCATION	7.07	1.22	-5.85
ED	EDER-INSTITUTE OF EDUCATION SCIENCES	6.74	1.18	-5.56
ED	EDES-OFFICE OF ELEMENTARY AND SECONDARY EDUCATION	9.96	2.85	-7.11
ED	EDET-OFFICE OF ENGLISH LANGUAGE ACQUISITION	9.13	1.52	-7.61
ED	EDEV-OFFICE OF VOCATIONAL AND ADULT EDUCATION	7.91	1.44	-6.47
ED	EDEZ-NATIONAL ASSESSMENT GOVERNING BOARD	8.27	3.44	-4.83
HHS	HE10-OFFICE OF THE SECRETARY OF HEALTH AND HUMAN SERVICES	7.21	7.76	0.55
HHS	HE11-PROGRAM SUPPORT CENTER	8.81	4.77	-4.03

Table 2. Bayesian Adjusted Rates in Bureaus of Executive Departments (*continued*)

Dept.	Bureau	Sep. Rate	Acc. Rate	Net Rate
HHS	HE12-ADMINISTRATION FOR COMMUNITY LIVING	9.45	3.79	-5.66
HHS	HE13-OFFICE OF INSPECTOR GENERAL	5.85	6.67	0.81
HHS	HE32-SUBSTANCE ABUSE AND MENTAL HEALTH SERVICES ADMINISTRATION	8.24	4.15	-4.09
HHS	HE33-AGENCY FOR HEALTHCARE RESEARCH AND QUALITY	5.75	1.43	-4.32
HHS	HE34-HEALTH RESOURCES AND SERVICES ADMINISTRATION	5.83	4.27	-1.56
HHS	HE35-AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY	6.75	1.22	-5.53
HHS	HE36-FOOD AND DRUG ADMINISTRATION	5.03	3.98	-1.05
HHS	HE37-INDIAN HEALTH SERVICE	11.40	12.26	0.86
HHS	HE38-NATIONAL INSTITUTES OF HEALTH	5.65	4.87	-0.78
HHS	HE39-CENTERS FOR DISEASE CONTROL AND PREVENTION	5.99	4.00	-1.99
HHS	HE70-CENTERS FOR MEDICARE & MEDICAID SERVICES	5.37	3.87	-1.50
HHS	HE90-ADMINISTRATION FOR CHILDREN AND FAMILIES	7.19	4.80	-2.40
DHS	HSAA-DHS HEADQUARTERS	10.15	10.16	0.01
DHS	HSAB-CITIZENSHIP AND IMMIGRATION SERVICES	5.50	12.16	6.66
DHS	HSAC-U.S. COAST GUARD	8.58	10.04	1.46
DHS	HSAD-U.S. SECRET SERVICE	6.74	2.89	-3.84
DHS	HSAE-OFFICE OF THE INSPECTOR GENERAL	8.75	9.57	0.83
DHS	HSBB-IMMIGRATION AND CUSTOMS ENFORCEMENT	5.24	5.12	-0.12
DHS	HSBC-TRANSPORTATION SECURITY ADMINISTRATION	9.40	8.80	-0.60
DHS	HSBD-CUSTOMS AND BORDER PROTECTION	3.81	5.52	1.71
DHS	HSBE-FEDERAL LAW ENFORCEMENT TRAINING CENTERS	7.93	5.11	-2.81
DHS	HSCA-CYBERSECURITY AND INFRASTRUCTURE SECURITY AGENCY	7.43	9.45	2.02
DHS	HSCB-FEDERAL EMERGENCY MANAGEMENT AGENCY	7.67	6.05	-1.62
DHS	HSDA-DOMESTIC NUCLEAR DETECTION OFFICE	12.60	12.75	0.15
DHS	HSFA-SCIENCE AND TECHNOLOGY DIRECTORATE	7.91	3.12	-4.79
HUD	HU01-OFFICE OF THE SENIOR COORDINATOR FOR NEW ENGLAND	7.22	3.72	-3.51

Table 2. Bayesian Adjusted Rates in Bureaus of Executive Departments (*continued*)

Dept.	Bureau	Sep. Rate	Acc. Rate	Net Rate
HUD	HU02-OFFICE OF THE SENIOR COORDINATOR FOR NEW YORK/NEW JERSEY	6.80	3.18	-3.62
HUD	HU03-OFFICE OF THE SENIOR COORDINATOR FOR MID-ATLANTIC	6.30	3.73	-2.57
HUD	HU04-OFFICE OF THE SENIOR COORDINATOR FOR SOUTHEAST/CARIBBEAN	7.07	3.35	-3.72
HUD	HU05-OFFICE OF THE SENIOR COORDINATOR FOR MIDWEST	6.68	3.85	-2.84
HUD	HU06-OFFICE OF THE SENIOR COORDINATOR FOR SOUTHWEST	7.39	4.22	-3.17
HUD	HU07-OFFICE OF THE SENIOR COORDINATOR FOR GREAT PLAINS	7.25	4.30	-2.95
HUD	HU08-OFFICE OF THE SENIOR COORDINATOR FOR ROCKY MOUNTAINS	7.33	3.72	-3.61
HUD	HU09-OFFICE OF THE SENIOR COORDINATOR FOR PACIFIC/HAWAII	6.97	3.13	-3.84
HUD	HU10-OFFICE OF THE SENIOR COORDINATOR FOR NORTHWEST/ALASKA	7.25	5.21	-2.04
HUD	HUAA-OFFICE OF THE SECRETARY OF HOUSING AND URBAN DEVELOPMENT	7.10	3.69	-3.41
HUD	HUBB-OFFICE OF THE CHIEF HUMAN CAPITAL OFFICER	7.44	5.38	-2.06
HUD	HUCC-OFFICE OF GENERAL COUNSEL	6.44	3.70	-2.75
HUD	HUDD-ASSISTANT SECRETARY FOR COMMUNITY PLANNING AND DEVELOPMENT	7.65	4.59	-3.06
HUD	HUEE-ASSISTANT SECRETARY FOR FAIR HOUSING AND EQUAL OPPORTUNITY	7.33	3.04	-4.29
HUD	HUFF-OFFICE OF THE CHIEF FINANCIAL OFFICER	7.67	8.39	0.71
HUD	HUGG-OFFICE OF INSPECTOR GENERAL	6.71	2.49	-4.22
HUD	HUJJ-ASSISTANT SECRETARY FOR CONGRESSIONAL AND INTERGOVERNMENTAL RELATIONS	7.17	3.98	-3.19
HUD	HUKA-CENTER FOR FAITH-BASED AND COMMUNITY INITIATIVES	6.88	4.02	-2.87
HUD	HUKK-OFFICE OF FIELD POLICY AND MANAGEMENT	7.13	7.11	-0.02
HUD	HULL-OFFICE OF HEALTHY HOMES AND LEAD HAZARD CONTROL	6.36	4.62	-1.74
HUD	HUMM-ASSISTANT SECRETARY FOR HOUSING—FEDERAL HOUSING COMMISSIONER	6.08	4.11	-1.97
HUD	HUNN-OFFICE OF THE CHIEF PROCUREMENT OFFICER	7.89	7.70	-0.19
HUD	HUPP-ASSISTANT SECRETARY FOR PUBLIC AND INDIAN HOUSING	6.64	4.67	-1.97
HUD	HUQQ-OFFICE OF THE CHIEF INFORMATION OFFICER	7.72	3.20	-4.52

Table 2. Bayesian Adjusted Rates in Bureaus of Executive Departments (*continued*)

Dept.	Bureau	Sep. Rate	Acc. Rate	Net Rate
HUD	HURR-ASSISTANT SECRETARY FOR POLICY DEVELOPMENT AND RESEARCH	6.35	5.26	-1.09
HUD	HUTT-GOVERNMENT NATIONAL MORTGAGE ASSOCIATION (GINNIE MAE)	7.11	4.41	-2.70
HUD	HUUU-OFFICE OF DEPARTMENTAL EQUAL EMPLOYMENT OPPORTUNITY	7.16	7.14	-0.02
HUD	HUWW-ASSISTANT SECRETARY FOR PUBLIC AFFAIRS	7.17	3.56	-3.61
HUD	HUXX-OFFICE OF STRATEGIC PLANNING AND MANAGEMENT	7.16	4.60	-2.56
DOI	IN01-OFFICE OF THE SECRETARY OF THE INTERIOR	8.05	4.86	-3.19
DOI	IN05-BUREAU OF LAND MANAGEMENT	8.52	6.71	-1.81
DOI	IN06-INDIAN AFFAIRS	8.69	5.46	-3.24
DOI	IN07-BUREAU OF RECLAMATION	9.81	9.84	0.04
DOI	IN08-GEOLOGICAL SURVEY	7.55	4.12	-3.43
DOI	IN10-NATIONAL PARK SERVICE	7.71	4.40	-3.32
DOI	IN15-U.S. FISH AND WILDLIFE SERVICE	7.15	3.90	-3.25
DOI	IN21-OFFICE OF THE SOLICITOR	9.17	5.09	-4.08
DOI	IN22-OFFICE OF SURFACE MINING, RECLAMATION AND ENFORCEMENT	8.05	3.68	-4.38
DOI	IN24-OFFICE OF THE INSPECTOR GENERAL	7.69	7.15	-0.54
DOI	IN26-BUREAU OF SAFETY AND ENVIRONMENTAL ENFORCEMENT	7.05	2.82	-4.23
DOI	IN27-BUREAU OF OCEAN ENERGY MANAGEMENT	6.65	4.76	-1.89
DOT	TD01-OFFICE OF THE SECRETARY OF TRANSPORTATION	9.21	6.38	-2.83
DOT	TD03-FEDERAL AVIATION ADMINISTRATION	5.60	3.05	-2.55
DOT	TD04-FEDERAL HIGHWAY ADMINISTRATION	6.99	6.76	-0.23
DOT	TD05-FEDERAL RAILROAD ADMINISTRATION	6.62	6.28	-0.35
DOT	TD06-SAINT LAWRENCE SEAWAY DEVELOPMENT CORPORATION	7.81	8.51	0.70
DOT	TD09-FEDERAL TRANSIT ADMINISTRATION	8.52	8.94	0.42
DOT	TD10-NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION	8.18	11.02	2.83
DOT	TD12-OFFICE OF INSPECTOR GENERAL	7.01	4.20	-2.80
DOT	TD13-MARITIME ADMINISTRATION	7.38	7.74	0.35

Table 2. Bayesian Adjusted Rates in Bureaus of Executive Departments (*continued*)

Dept.	Bureau	Sep. Rate	Acc. Rate	Net Rate
DOT	TD16-PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION	6.92	7.28	0.36
DOT	TD17-FEDERAL MOTOR CARRIER SAFETY ADMINISTRATION	6.56	5.84	-0.73
TREAS	TR36-SPECIAL INSPECTOR GENERAL FOR THE TROUBLED ASSETS RELIEF PROGRAM (TARP)	25.20	5.59	-19.61
TREAS	TR40-ALCOHOL AND TOBACCO TAX AND TRADE BUREAU	4.99	3.47	-1.51
TREAS	TR91-DEPARTMENTAL OFFICES	12.09	8.45	-3.63
TREAS	TR93-INTERNAL REVENUE SERVICE	6.88	2.12	-4.77
TREAS	TR95-OFFICE OF INSPECTOR GENERAL	7.91	5.53	-2.39
TREAS	TRAD-U.S. MINT	8.02	5.88	-2.14
TREAS	TRAF-FINANCIAL CRIMES ENFORCEMENT NETWORK	9.42	8.41	-1.01
TREAS	TRAI-BUREAU OF ENGRAVING AND PRINTING	6.15	5.55	-0.60
TREAS	TRAJ-OFFICE OF THE COMPTROLLER OF THE CURRENCY	7.22	4.36	-2.86
TREAS	TRFD-BUREAU OF THE FISCAL SERVICE	5.46	3.71	-1.75
TREAS	TRTG-OFFICE OF THE INSPECTOR GENERAL FOR TAX ADMINISTRATION	7.05	3.71	-3.34
VA	VAAA-OFFICE OF THE SECRETARY	7.58	8.25	0.66
VA	VAAD-BOARD OF VETERANS APPEALS	11.78	25.45	13.67
VA	VAAE-GENERAL COUNSEL	6.18	8.05	1.87
VA	VAAF-INSPECTOR GENERAL	8.64	15.29	6.64
VA	VABA-IMMEDIATE OFFICE OF THE ASSISTANT SECRETARY FOR HUMAN RESOURCES AND ADMINISTRATION	8.47	8.08	-0.39
VA	VABC-ASSISTANT SECRETARY FOR HUMAN RESOURCES MANAGEMENT	9.76	12.99	3.23
VA	VABD-ASSISTANT SECRETARY FOR DIVERSITY & INCLUSION	7.64	3.34	-4.30
VA	VABE-DEPUTY ASSISTANT SECRETARY FOR ADMINISTRATION	6.16	8.79	2.63
VA	VABF-DEPUTY ASSISTANT SECRETARY FOR OFFICE OF RESOLUTION MANAGEMENT	8.86	6.98	-1.88
VA	VABG-DEPUTY ASSISTANT SECRETARY FOR CORPORATE SENIOR EXECUTIVE MANAGEMENT	8.67	13.85	5.19

Table 2. Bayesian Adjusted Rates in Bureaus of Executive Departments (*continued*)

Dept.	Bureau	Sep. Rate	Acc. Rate	Net Rate
VA	VABH-DEPUTY ASSISTANT SECRETARY FOR LABOR MANAGEMENT RELATIONS	6.96	8.94	1.98
VA	VABK-OFFICE OF ENTERPRISE OPERATIONS	7.27	9.78	2.50
VA	VADA-IMMEDIATE OFFICE OF THE ASSISTANT SECRETARY FOR MANAGEMENT	7.51	8.44	0.94
VA	VADC-DEPUTY ASSISTANT SECRETARY FOR BUDGET	9.90	13.38	3.48
VA	VADD-DEPUTY ASSISTANT SECRETARY FOR FINANCE	6.99	13.42	6.43
VA	VADG-DEPUTY ASSISTANT SECRETARY FOR ACQUISITION AND LOGISTICS	6.30	10.50	4.20
VA	VAEA-IMMEDIATE OFFICE OF THE ASSISTANT SECRETARY FOR INFORMATION AND TECHNOLOGY	6.44	13.19	6.74
VA	VAEB-DEPUTY ASSISTANT SECRETARY FOR INFORMATION AND TECHNOLOGY	5.47	5.84	0.38
VA	VAGA-IMMEDIATE OFFICE OF THE ASSISTANT SECRETARY FOR OPERATIONS, SECURITY, AND PREPAREDNESS	7.41	16.48	9.07
VA	VAGB-DEPUTY ASSISTANT SECRETARY FOR SECURITY AND LAW ENFORCEMENT	7.20	5.94	-1.26
VA	VAGC-DEP ASST SEC FOR EMERGENCY MGT & RESILIENCE	7.34	4.31	-3.03
VA	VAHA-IMMEDIATE OFFICE OF THE ASSISTANT SECRETARY FOR POLICY AND PLANNING	5.64	4.40	-1.24
VA	VAHG-VET CUSTOMER EXPER (VCE)	8.30	5.63	-2.67
VA	VAJA-OFFICE OF THE ASSISTANT SECRETARY FOR PUBLIC AND INTERGOVERNMENTAL AFFAIRS	6.97	4.89	-2.08
VA	VAJB-DEPUTY ASSISTANCE SECRETARY FOR INTERGOVERNMENTAL AFFAIRS	7.39	6.06	-1.33
VA	VAJC-DEPUTY ASSISTANT SECRETARY FOR PUBLIC AFFAIRS	7.15	12.76	5.60
VA	VAKA-IMMEDIATE OFFICE OF THE ASSISTANT SECRETARY FOR CONGRESSIONAL AND LEGISLATIVE AFFAIRS	8.35	9.29	0.94
VA	VAKB-DEPUTY ASSISTANT SECRETARY FOR CONGRESSIONAL AFFAIRS	8.72	14.85	6.13
VA	VALA-VETERANS BENEFITS ADMINISTRATION	7.08	8.78	1.70
VA	VAPA-NATIONAL CEMETERY ADMINISTRATION	10.44	10.19	-0.26
VA	VATA-VETERANS HEALTH ADMINISTRATION	7.69	11.69	3.99

List of Agencies Excluded from the Analysis

Table 3 contains agencies that were excluded from analysis. For all but two agencies, they were excluded because we do not believe that their separation and accession rates do share a common distribution with other federal agencies. The Office of Personnel Management (OPM) was excluded because the National Background Investigation Bureau was transferred from OPM to the Department of Defense, becoming the Defense Counterintelligence and Security Agency. This transfer of staff prevents calculation of a separation rate for OPM that can be used to make an inference about the work environment in the agency. The Peace Corps was excluded because only 1 of its employees is classified as a permanent career civil servant, which is our population of interest.

Table 3. Agencies Excluded from Analysis

Agency
AB-AMERICAN BATTLE MONUMENTS COMMISSION
AP-APPALACHIAN REGIONAL COMMISSION
AW-ARCTIC RESEARCH COMMISSION
BH-COMMISSION FOR THE PRESERVATION OF AMERICA'S HERITAGE ABROAD
BK-JAMES MADISON MEMORIAL FELLOWSHIP FOUNDATION
BT-ARCHITECTURAL AND TRANSPORTATION BARRIERS COMPLIANCE BOARD
BW-NUCLEAR WASTE TECHNICAL REVIEW BOARD
CF-COMMISSION OF FINE ARTS
DG-NORTHERN BORDER REGIONAL COMMISSION
DQ-DENALI COMMISSION
EO-MORRIS K. UDALL AND STEWART L. UDALL FOUNDATION
FQ-COURT SERVICES AND OFFENDER SUPERVISION AGENCY FOR THE DISTRICT OF COLUMBIA
GJ-PRESIDIO TRUST
GM-VALLES CALDERA TRUST
GO-VIETNAM EDUCATION FOUNDATION
GW-INTERNATIONAL BOUNDARY AND WATER COMMISSION: UNITED STATES AND MEXICO
GX-INTERNATIONAL BOUNDARY COMMISSION: UNITED STATES AND CANADA
GY-INTERNATIONAL JOINT COMMISSION: UNITED STATES AND CANADA
HB-COMMITTEE FOR PURCHASE FROM PEOPLE WHO ARE BLIND OR SEVERELY DISABLED
HD-U.S. HOLOCAUST MEMORIAL MUSEUM
HP-ADVISORY COUNCIL ON HISTORIC PRESERVATION
HT-HARRY S. TRUMAN SCHOLARSHIP FOUNDATION
HW-U.S. INTERAGENCY COUNCIL ON HOMELESSNESS
IG-COUNCIL OF THE INSPECTORS GENERAL ON INTEGRITY AND EFFICIENCY
JL-JUDICIAL BRANCH
MA-MARINE MAMMAL COMMISSION
NK-NATIONAL COUNCIL ON DISABILITY
NM-NATIONAL MEDIATION BOARD

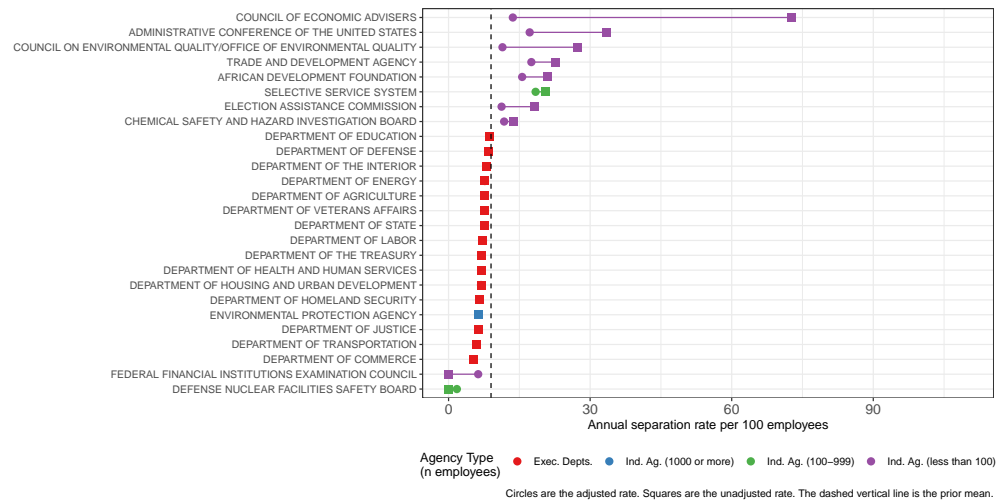


Fig 6. Adjusted vs. Unadjusted Separation Rates

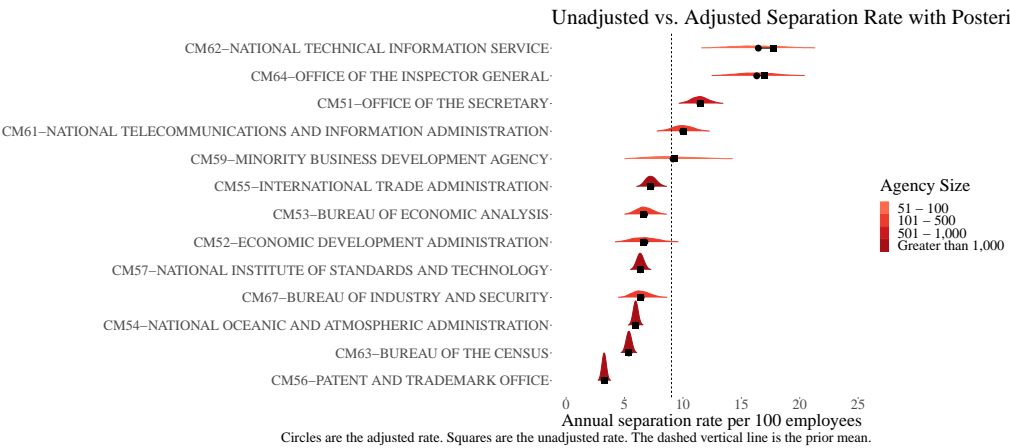
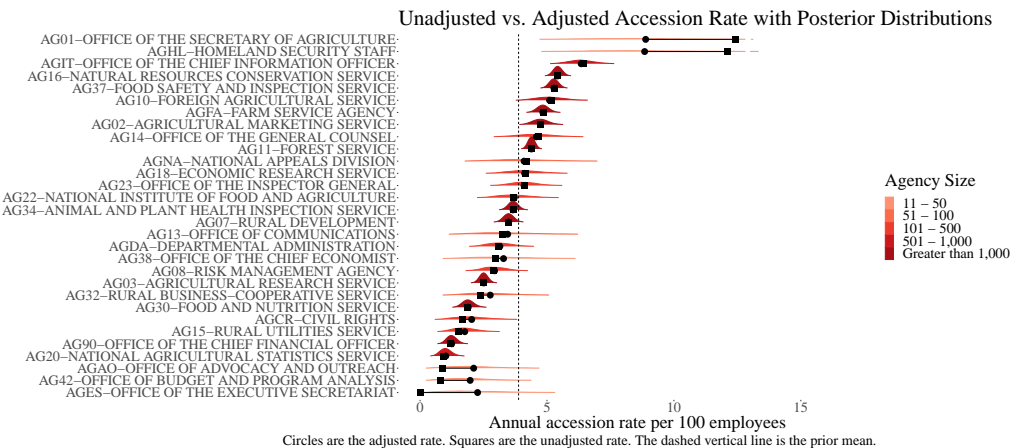
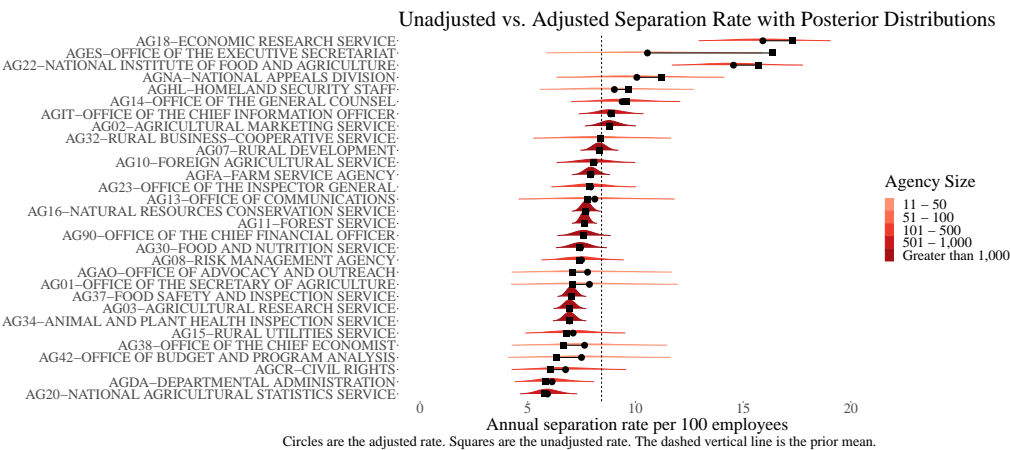
Table 3. Agencies Exlcuded from Analysis (*continued*)

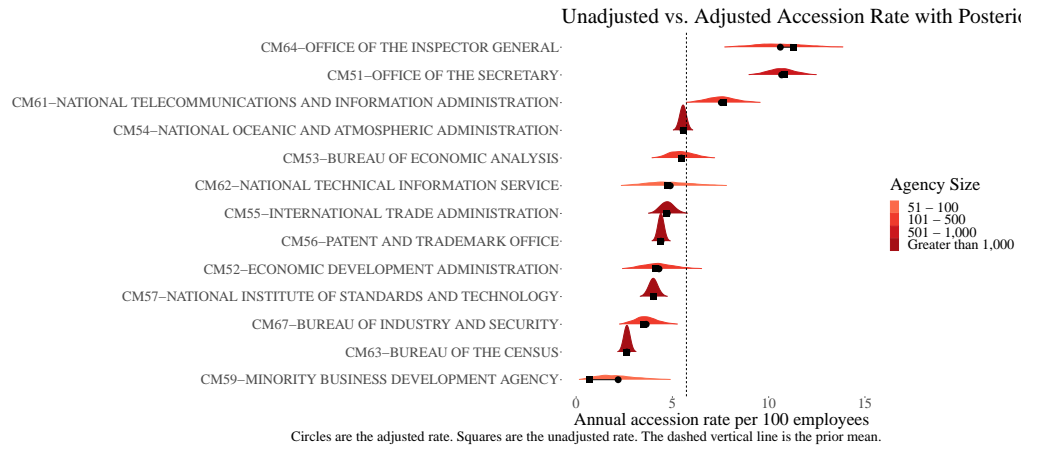
Agency
NP-NATIONAL CAPITAL PLANNING COMMISSION
OM-OFFICE OF PERSONNEL MANAGEMENT
PU-PEACE CORPS
RH-ARMED FORCES RETIREMENT HOME
RO-MEDICAID AND CHIP PAYMENT AND ACCESS COMMISSION
UJ-JAPAN-UNITED STATES FRIENDSHIP COMMISSION
UT-UTAH RECLAMATION MITIGATION AND CONSERVATION COMMISSION
VD-PRIVACY AND CIVIL LIBERTIES OVERSIGHT BOARD
WX-WORLD WAR 1 CENTENNIAL COMMISSION
ZP-U.S. COMMISSION ON INTERNATIONAL RELIGIOUS FREEDOM
ZU-DWIGHT D. EISENHOWER MEMORIAL COMMISSION

Comparison of Raw and Adjusted Agency Rates

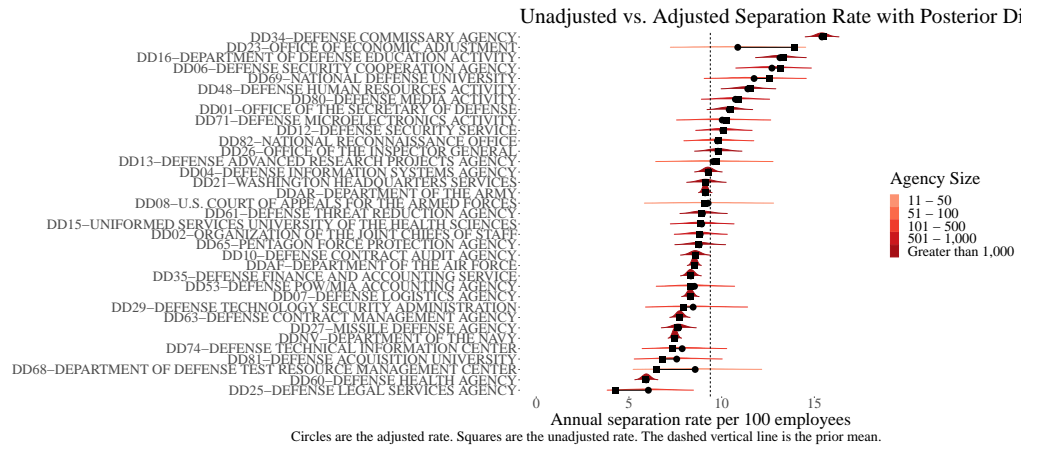
Figure 6 plots the raw and adjusted separation rates for the 15 executive departments and the agencies with the 10 largest differences between the raw and adjusted rate. As described in the main text, the agencies with the largest adjustment are small agencies will the rates for the departments are essentially unchanged.

Ridge Plots of Accession and Separations for Each Executive Department

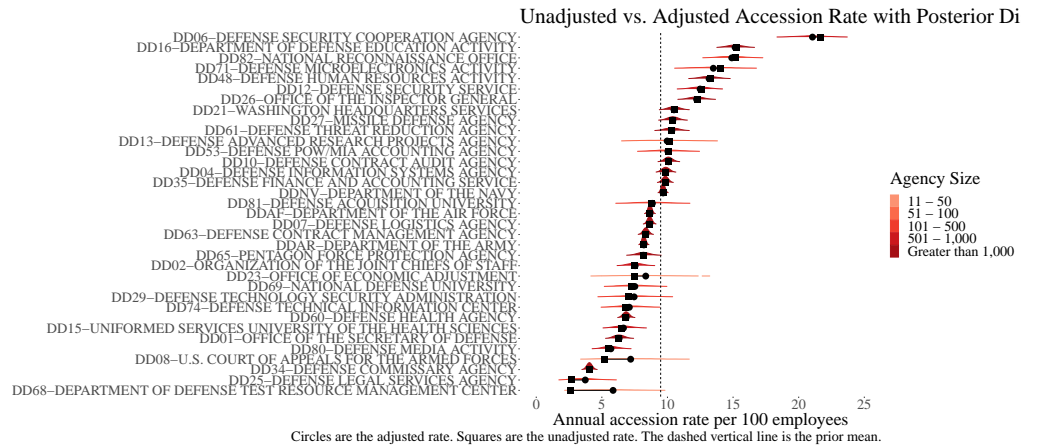




393

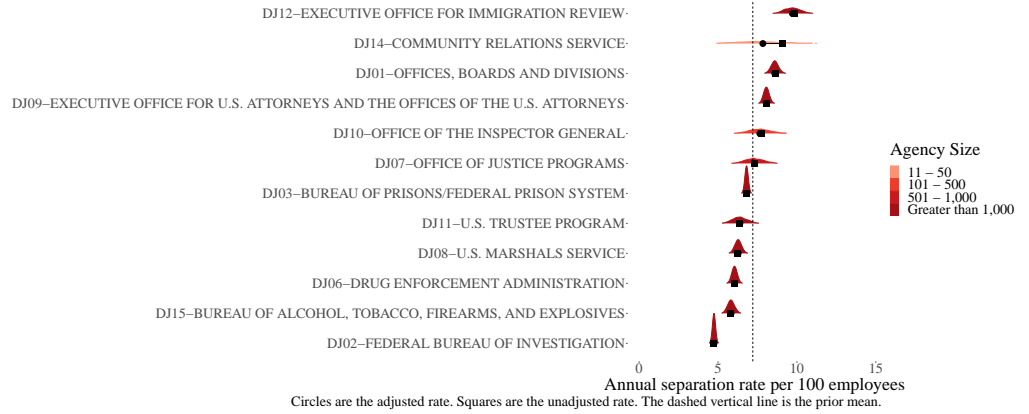


394



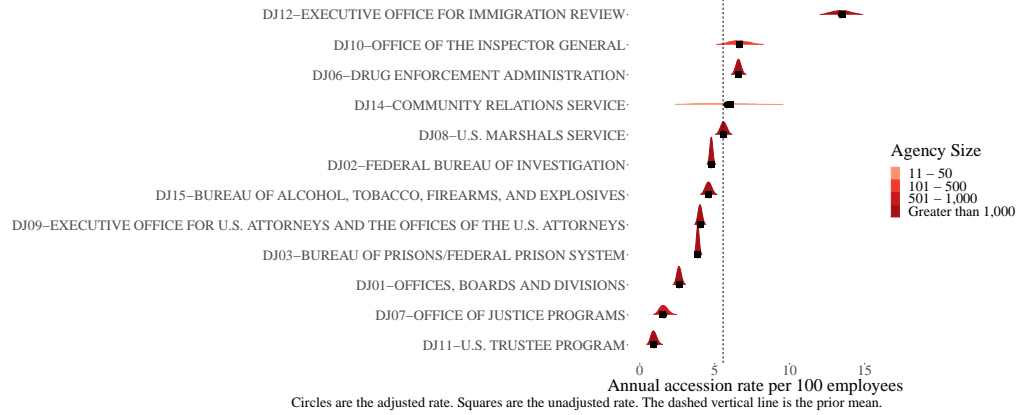
395

Unadjusted vs. Adjusted Separation Rate with



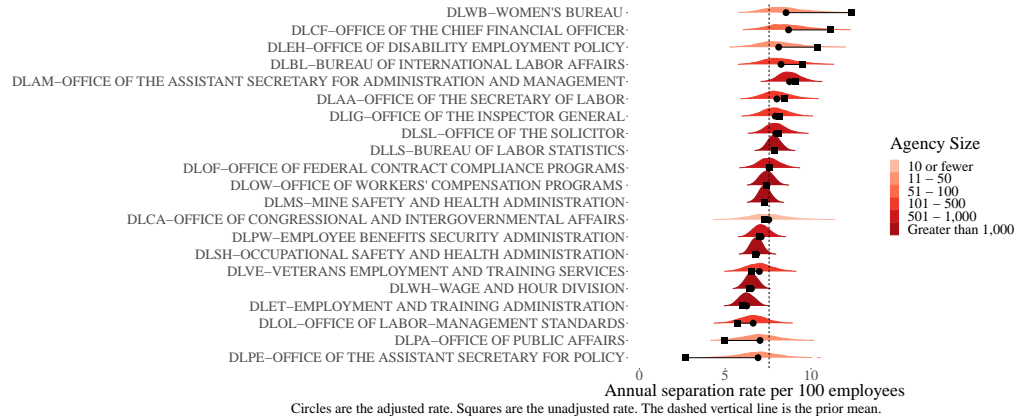
396

Unadjusted vs. Adjusted Accession Rate with

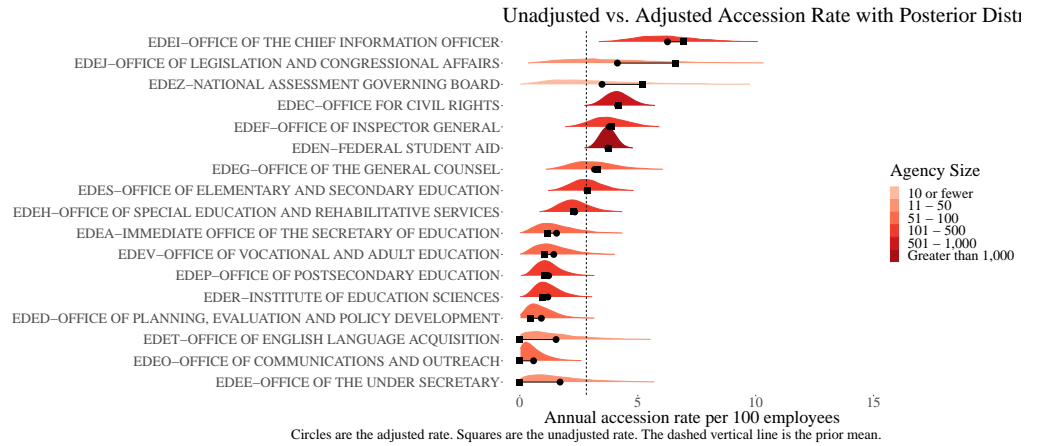
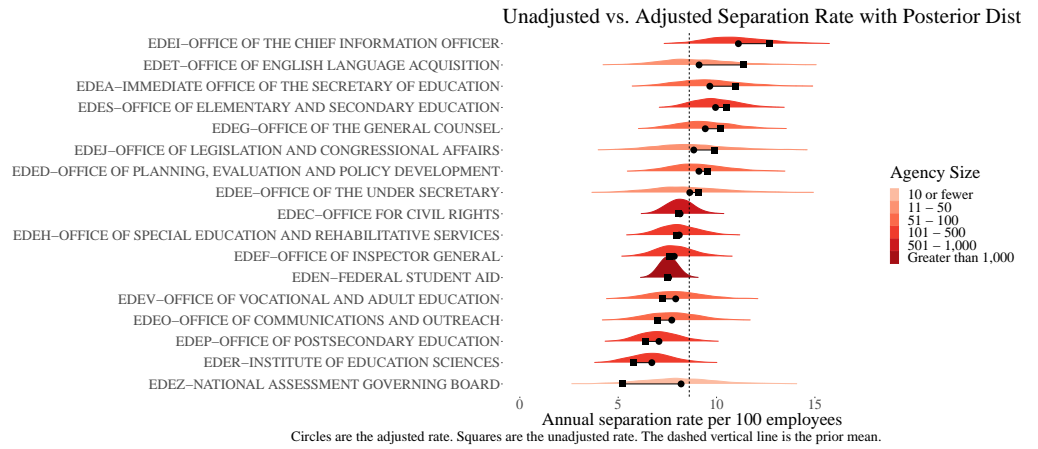
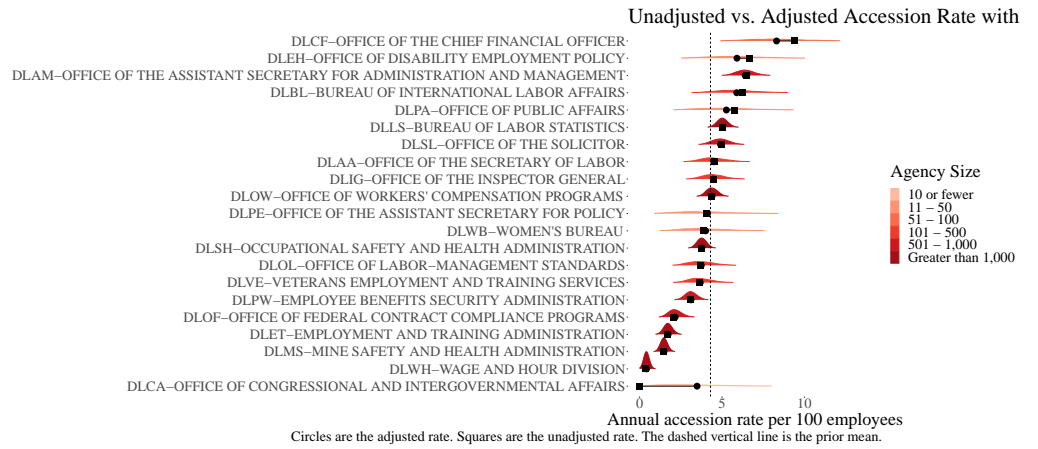


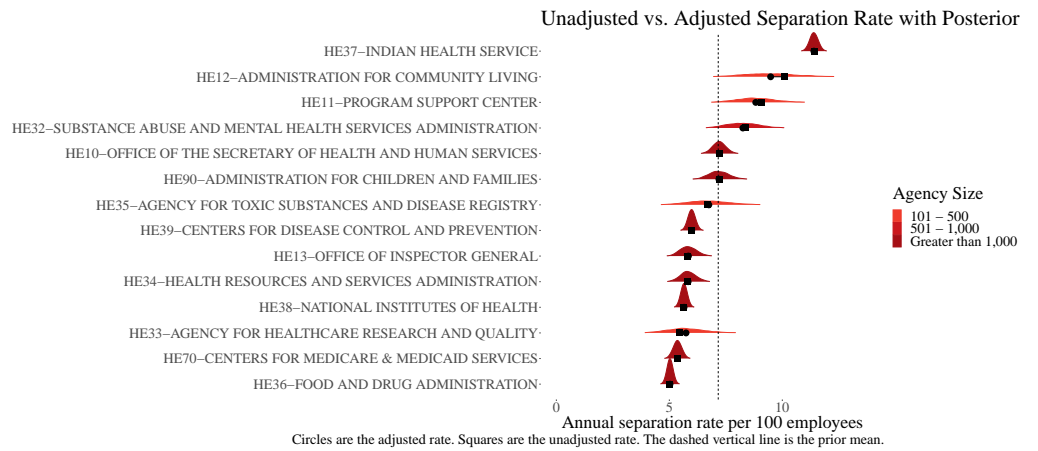
397

Unadjusted vs. Adjusted Separation Rate with

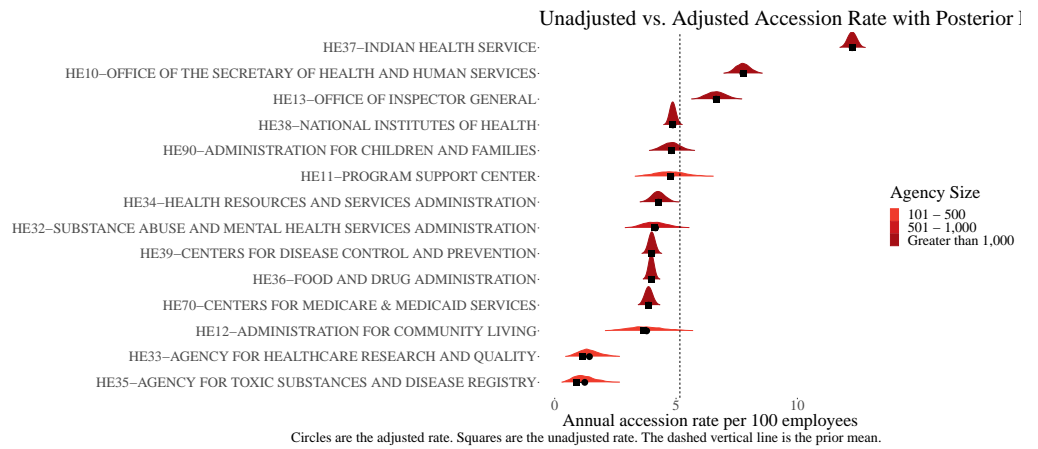


398

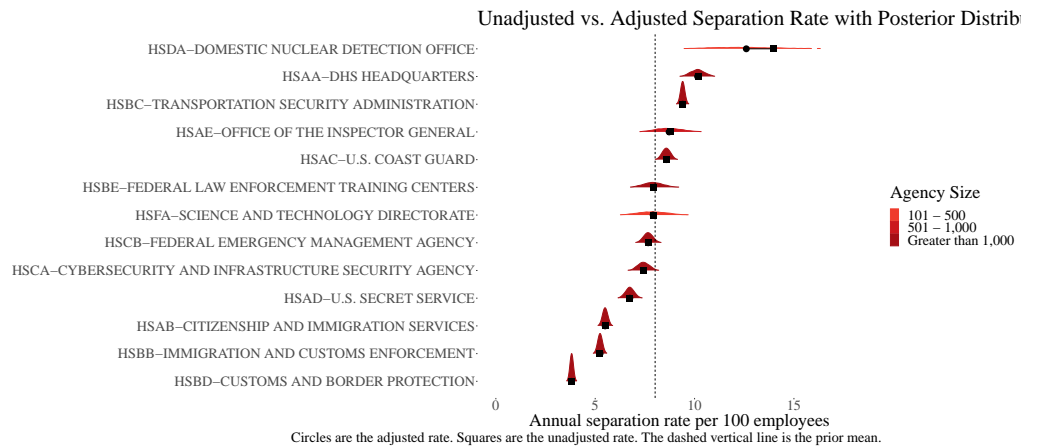




402

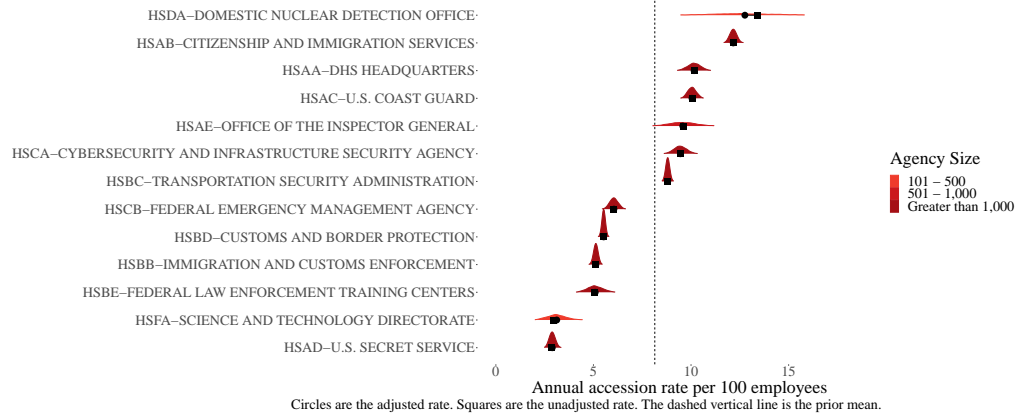


403



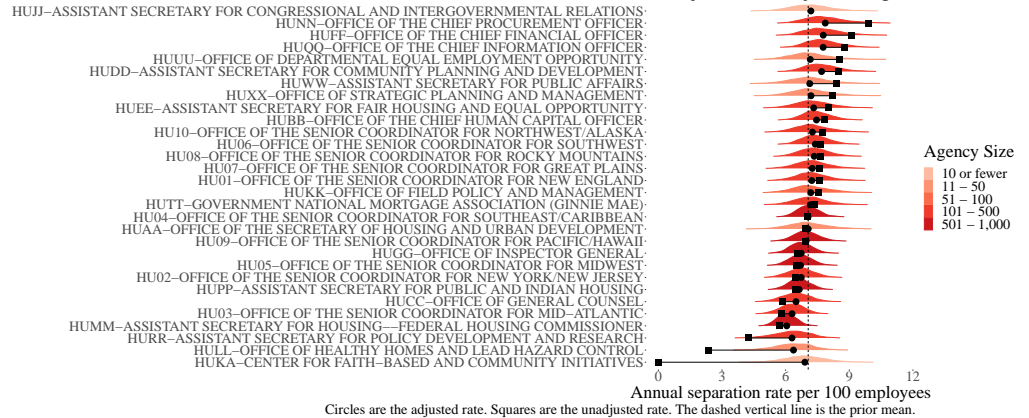
404

Unadjusted vs. Adjusted Accession Rate with Posterior Distrib



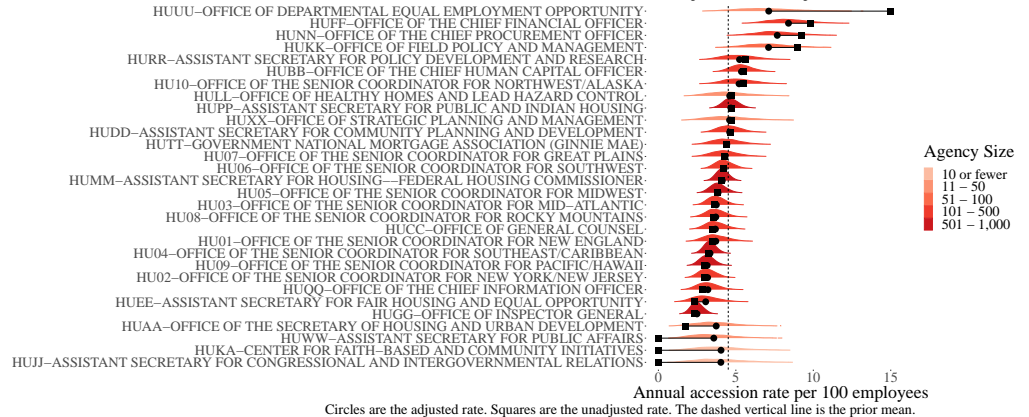
405

Unadjusted vs. Adjusted Separation Rate wi

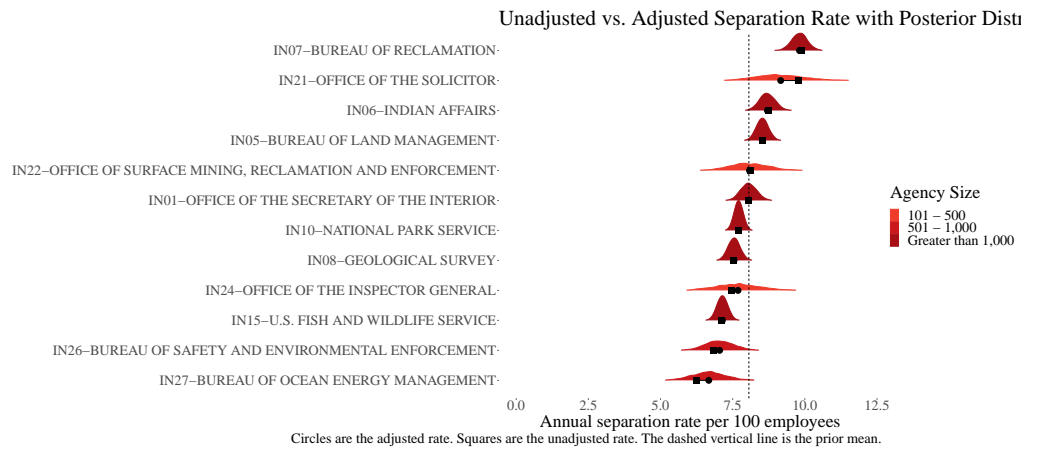


406

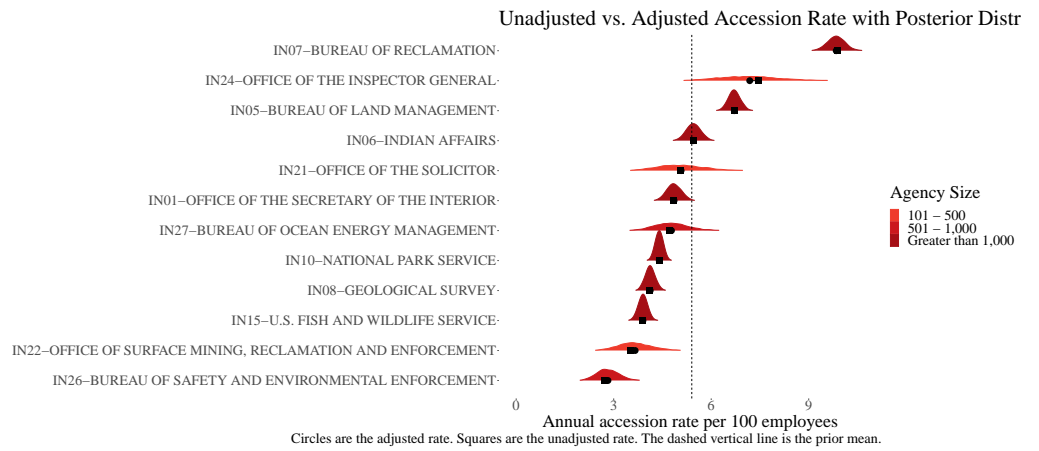
Unadjusted vs. Adjusted Accession Rate wi



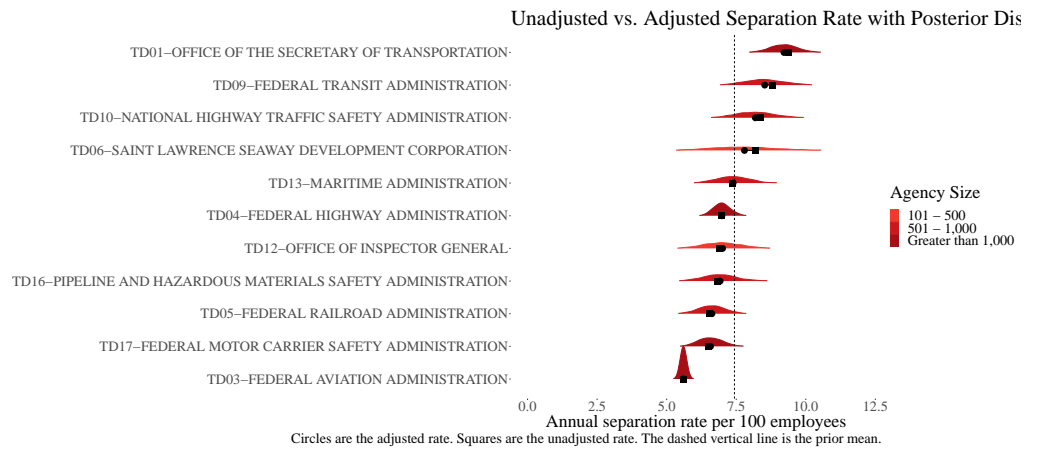
407



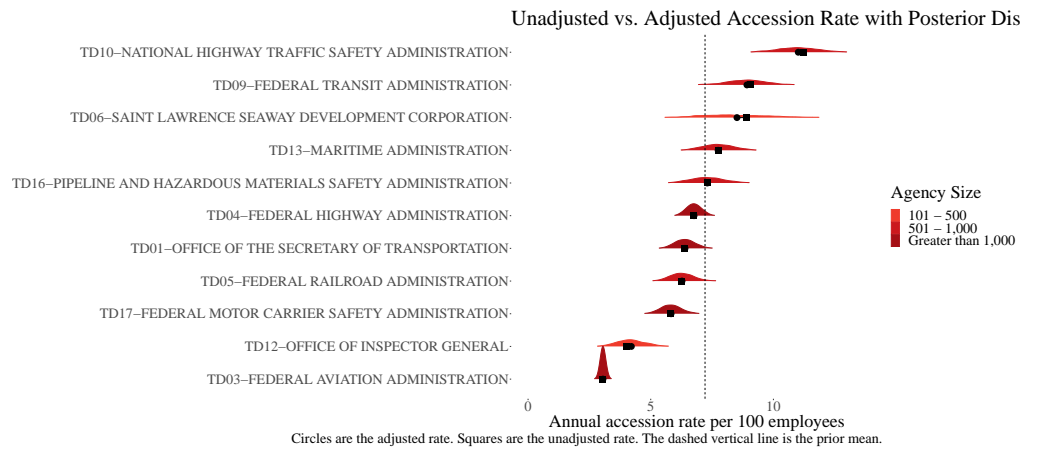
408



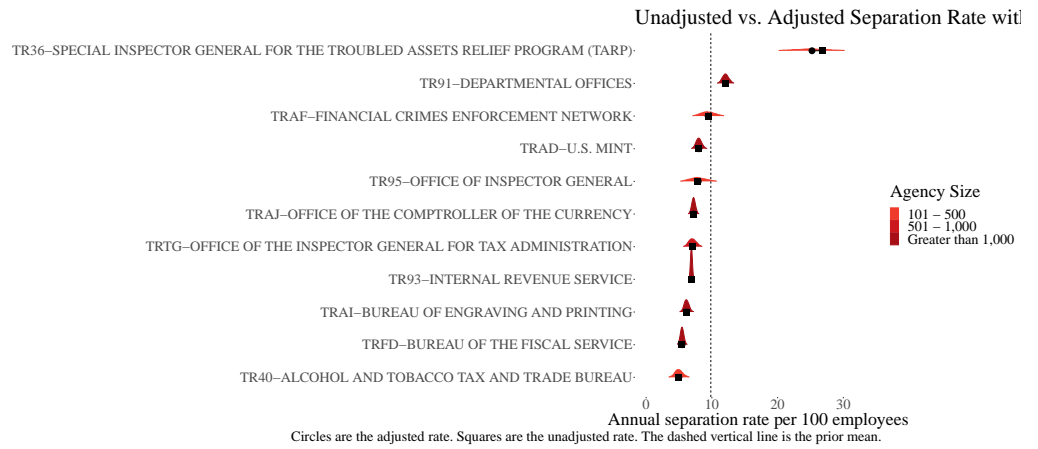
409



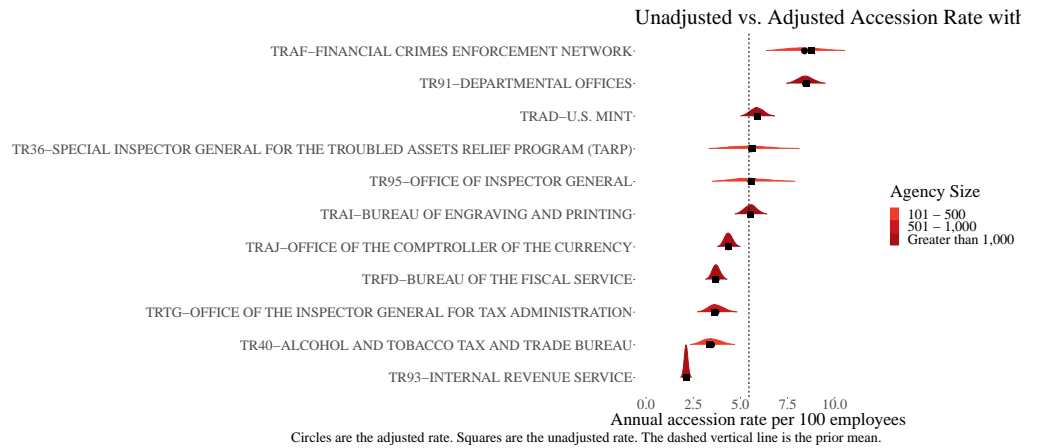
410



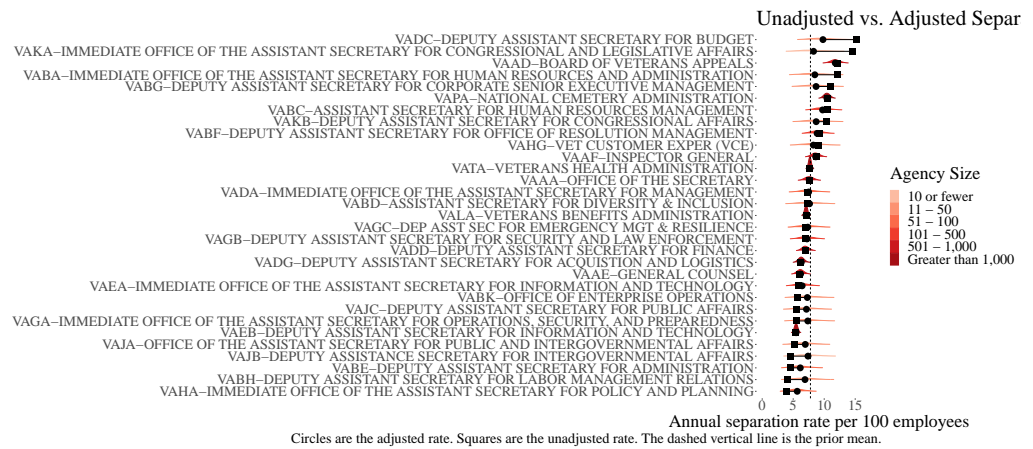
411



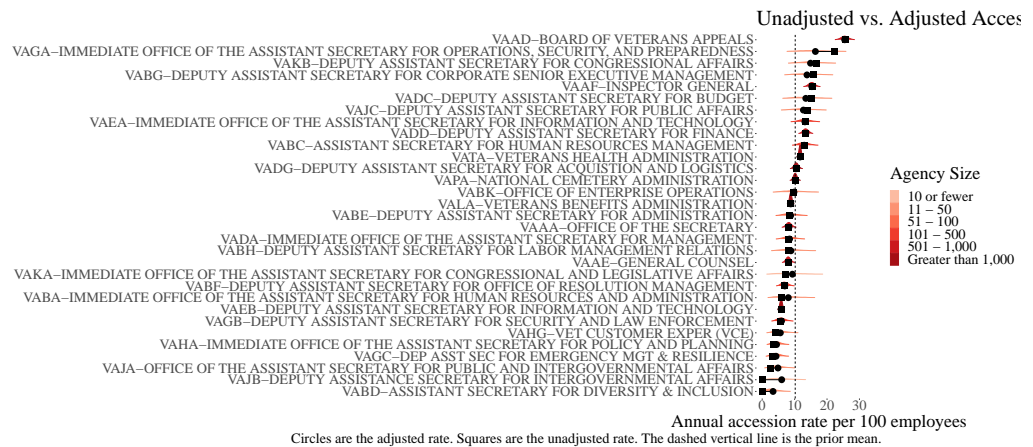
412



413



414



415

1. Allen T, Agrawal S, Fealing KH, Robinson E. An Independent Assessment of Allegations of Scientific Misconduct filed under the National Oceanic and Atmospheric Administration Scientific Integrity Policy. National Academy of Public Administration; 2020.
2. Baker P, Mervosh S. A presidential storm leaves forecasters rebuked [Internet]. 2019. Available: <https://www.nytimes.com/2019/09/06/us/politics/trump-alabama-dorian.html>
3. Flavelle C, Friedman L, Baker P. Commerce chief threatened firings at NOAA after Trump's Dorian tweets, sources say [Internet]. 2019. p. A1. Available: <https://www.nytimes.com/2019/09/09/climate/hurricane-dorian-trump-tweet.html>
4. Stolberg SG. Who Is Marie Yovanovitch ? Former Ambassador Testifies in Impeachment Hearing. 2019.
5. Packer G. The President Is Winning His War on American Institutions. The Atlantic. 2020;
6. Nakamura D. 'Morally repugnant': Homeland Security advisory council members resign over immigration policies. pp. 11–14.
7. Mccausland P. Gutting of two USDA research agencies is warning to all federal agencies, ex-employees say. 2019.
8. No FR. Evaluation of NOAA's September 6, 2019, Statement About Hurricane Dorian Forecasts. 2020;
9. Light PC. The true size of government is nearing a record high. 2020.
10. Coglianese C, Sarin N, Shapiro S. Deregulatory Deceptions: Reviewing the Trump Administration's Claims About Regulatory Reform. 2020.

438

11. Carnegie A, Carson A. Reckless rhetoric? Compliance pessimism and international order in the age of trump. *Journal of Politics*. 2019;81: 739–746. doi:10.1086/702232
12. Potter RA, Rudalevige A, Thrower S, Warber AL. Continuity Trumps Change: The First Year of Trump’s Administrative Presidency. *PS - Political Science and Politics*. 2019;52: 613–619. doi:10.1017/S1049096519000520
13. Drezner DW. Present at the destruction: The trump administration and the foreign policy bureaucracy. *Journal of Politics*. 2019;81: 723–730. doi:10.1086/702230
14. Bartels LM. Partisanship in the Trump era. *Journal of Politics*. 2018;80: 1483–1494. doi:10.1086/699337
15. Badger E, Bui Q, Parlapiano A. The Government Agencies That Became Smaller, and Unhappier, Under Trump [Internet]. 2021. p. A14. Available: <https://www.nytimes.com/2021/02/01/upshot/trump-effect-government-agencies.html>
16. Gelman A, Carlin JB, Stern HS, Dunson DB, Vehtari A, Rubin DB. *Bayesian data analysis*. 3rd ed. Boca Raton, FL: CRC Press; 2013.
17. Croft GK. Relocation of the USDA Research Agencies: NIFA and ERS. Congressional Research Service; 2020. Report No.: May.