

Can Bureaucrats Manipulate Policy Outcomes?

Steven G. Craig^a, Edward C. Hoang^b & Janet E. Kohlhase^a

^aDepartment of Economics
University of Houston
Houston, TX 77204-5019
scraig@uh.edu or jkohlhase@uh.edu

^bDepartment of Economics
University of Colorado, Colorado Springs
Colorado Springs, CO 80918
ehoang@uccs.edu

Abstract

This paper empirically tests whether the theoretically established concern that bureaucrats can affect policy outcomes is justified, using US state government directed Unemployment Insurance (UI) policies. We show that Overpayment rates from policy audits proxy for bureaucratic tastes. This allows us to estimate regression-discontinuity models based on changes in Governor. We test for three possible underlying bureaucratic motivations- Niskanen (1971) bureaucrats that maximize budgets, Alensina (2007) bureaucrats have a preferred policy, and Prendergast (2007) bureaucrats that maximize clients' welfare. We find strong evidence of bureaucratic manipulation consistent with Pendergrast, as bureaucracies appear to work to increase benefits per recipient, do not respond to policy changes, nor do they maximize bureaucratic demand through increased recipients.

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I. Introduction¹

This paper develops an empirical test of whether government administrative bureaucracies are able to alter public policy. The standard theory suggests that politicians only hire bureaucrats when the rate of return to better policy implementation overcomes the potential loss of control over policy outcomes, in part through the manipulation of information by the bureaucracy (Alensina and Tabellini, 2007, 2008). Following this logic would imply that bureaucrats may be able to change policy outcomes by manipulating information. For bureaucrats to do so successfully requires that they would be motivated to do so. Therefore, any expression of policy tastes by bureaucrats needs to be consistent with their objectives. An essential step for determining whether bureaucrats have influence is to ascertain the policy direction the bureaucracy would push the political policy-makers. We develop in this research an empirical test that provides one of the few opportunities to fully explore both parts of this process. That is, our examination allows us to not only test whether bureaucracies are motivated to express preferences for public policy, but based on the alternative manifestations of that influence it allows us to discern the underlying policy motivation.

There are three extant theories about the motivation of bureaucrats for attempting to manipulate policy outcomes. Probably the first direct expression of bureaucratic tastes comes from Niskanen (1971), who posits that workers within the government will desire to maximize total public expenditure, as this will increase the demand for workers in the bureaucracy. A second theoretical expression of bureaucratic tastes is contained within the Alensina and Tabellini (2007,

¹ The work in this paper has benefitted from comments received at the Regional Science Meetings, the Public Choice Meetings, and the Western Regional Science Meetings.

2008) theories. They essentially argue that bureaucrats have an optimal policy, although it may not be identical to that preferred by policy-makers.² If this is the case, the implication is that when policy moves toward that desired by the bureaucracy, the bureaucracy will respond differently than when policy moves in the opposite direction of the preferred policy.

In our work we are going to reject both of these theories. Instead, we find evidence consistent with the recent hypothesis advanced in Prendergast (2007). The Prendergast model suggests that politicians will select administrators in part based on the tastes of the administrative workers. In the empirical example we outline below, we believe that consistent with the program content, administrators will be selected that have sympathies for recipients, and thus the bureaucrats will advocate for greater benefits per recipient in all states of the world.

These three very distinct theories suggest that the search for evidence of bureaucratic influence depends on their objectives. It also suggests, however, that the alternatives in any exploration of bureaucratic ability to influence policy outcomes will simultaneously reveal the bureaucratic objectives. Thus, our search for bureaucratic influence will examine all three potential dimensions of how policy impacts are revealed. Of course, a final possibility is that bureaucrats do not have sufficient ability to alter policies that are under the purview of politicians, in which case we will observe neither influence nor bureaucratic objectives.

The empirical test we develop below is based on the Unemployment Insurance Program in the U.S. (UI). The UI program is a state level program operated under a federal policy umbrella, where states have significant discretion in both benefits paid to recipients as well as in the

² A slightly different approach is that of McFadden (1975, 1976), who empirically discerns the tastes of the bureaucracy, but does not compare those tastes to those of the policy makers.

eligibility criteria used to determine reciprocity (Craig and Palumbo, 1999; US DOL, 2012). The basic design of the program is that if an employee is laid off from their job due to “lack of demand,” then they are eligible for insurance payments from the UI pool. Policy preferences can arise due to many dimensions of policy outcomes. While eligibility for the program would seem to be straightforward for long time full time workers, the eligibility criteria for people with short work spells, who are seasonal, and/or who are part-time workers can vary widely between states. But, even for workers well attached to the labor force a determination of the motivation for separation has many potential dimensions. Further, benefit amounts are predicated on the wage paid to workers before unemployment. Again, however, this amount can vary widely because of how incentive compensation (including tips) is calculated, overtime, or other even non-monetary benefits. Finally, the state UI programs are used to fund the first 26 weeks of an unemployment spell.³ For workers with a short work history or who are part-time, however, duration is often less than 26 weeks, and again there can be considerable variation in the length of time recipients are eligible to receive payments.^{4 5}

It has been difficult in the past to study whether government bureaucrats are able to express their preferences through policy outcomes, because it is difficult to find independent observations

³ Federal extended benefits for states with “high” unemployment are paid 50% of the federal government, emergency unemployment benefits are paid 100% by the federal government.??

⁴ This discussion does not do full justice to the variety of potential policy differences between states, including the range of training and search activities required of former workers to maintain their eligibility.

⁵ State UI programs are entirely financed by an earmarked tax on firms based generally on the first \$9,000 in annual wages. While the tax rate on each firm varies depending on the extent to which states use experience ratings based on past unemployment, UI taxes generally amount to a lump sum tax per full time annual worker.

of bureaucratic tastes. Our research here exploits a unique opportunity to test for tastes. Specifically, the US Department of Labor (DOL) has been conducting annual performance audits of state UI programs since 1996.⁶ The audits use each state's policy prescriptions to test whether the amounts actually paid out to recipients correspond to the administratively correct level according to the state's own rules. We define the difference between the actual amount paid, and the administratively correct amount as bureaucratic error. About 10.3% of UI claims have Overpayments where more is paid out than should have been allowed, which payments amount to about 3.5% of the total expenditure.⁷ These amounts vary considerably, however, across states and over time.

We propose to use the administrative errors?? as indicators of policy tastes by bureaucrats. We test the necessary condition for this assumption in three ways. First we use the Overpayment information to construct three alternative measures of potentially intentional bureaucratic error. First we use the basic data itself. Second we use error rate residuals from a regression on unemployment rates to suggest that the non-symmetrical distribution ?? of errors is an indicator of bureaucratic policy preferences. Finally, assuming that actual mistakes would be a symmetric process, we subtract Underpayments from Overpayments to build a third measure of bureaucratic policy preferences.⁸ All three specifications of policy preferences are found to yield similar qualitative results in our empirical work. Second, we show that all three of the measures

⁶ While the number of cases audited is small, the DOL claims that they are representative of each state's caseload.

⁷ Asymmetrically, underpayments impact just 1.2% of UI claims, and amount to 0.7% of total benefits.

⁸ This is possible because underpayments are much more rare than overpayments. About 10.3% of UI claims have Overpayments, amounting to around 3.5% of total benefits.

correspond to the residual of a function of UI expenditures on the unemployment rate. Finally, we find that all three measures are correlated with changes in public policy. Specifically, we find that errors cause future increases in benefits per UI recipient, consistent with the motivation advanced in Predergrast (2007). The errors are not found to cause greater recipients per capita conditional on the unemployment rate, contradicting the implication of Niskanen (1971). And, we find that errors do not respond to changes in public policy, contradicting the optimal policy hypothesis implicit in Alesina and Tabellini (2007, 2008).

The empirical test uses a panel data set of UI policy outcomes and error rates by state from the start of the availability of the policy audit data in 1996 until 2011. We estimate the impact of error rates on policy outcomes using a regression-discontinuity (RD) design over the election of governors. Specifically, we show that a change in the party of the state governor is found to cause a discontinuous change in UI error rates, even though there is no observed change in policy outcomes.

Our paper proceeds by outlining the three characterizations of bureaucratic preferences in Section II. In part III we discuss the data used to test for bureaucratic influence on UI policy outcomes. The panel data uses all 50 US states, but uses the panel of UI audit results which runs from 1996 to 2011.⁹ Part IV presents our empirical results in two broad sections. Part one shows alternate approaches to measuring bureaucratic tastes. The second part shows results from regression discontinuity designs using our most-preferred measure of bureaucratic tastes. We find that bureaucratic tastes have positive and statistically significant impacts on UI benefits per recipient. Results from the other two measures of bureaucratic tastes as well as some alternative

⁹ There are seven missing observations in the UI audit data for benefits.

specifications further reinforces the finding that bureaucrats can influence UI policy, particularly benefits per recipient.

II. Alternative Specifications of Bureaucratic Tastes and Objectives

The role of a politician in the state government is to aggregate preferences of the population. Of course, this preference aggregation is a function of many forces, including constituencies important to the politician as well as preferences of other politicians. Our question is whether, in addition, the preferences of the bureaucracy will impact the policy chosen by the politicians.

One theory of bureaucracy is advanced by Niskanen (1971), who posits that the bureaucracy will want to maximize expenditure consistent with rent seeking by the policy administrators. While the motivation is different, this theory is broadly consistent with the work by Ting (2012), who develops a more explicit model to describe the allocation of the supply of public goods. He suggests that the quality of a program or policy enacted by the legislature matters for the bureaucrat. If the policy is of high quality, it is more efficient for the legislature to allow the bureaucrat to implement the program because inefficiencies associated with the extraction of rents in legislative bargaining are removed by the bureaucrats' endorsement of the policy. In the UI policy context, we interpret both of these works as saying that the bureaucrats would be supportive of an expansion in the number of UI recipients, as this would result in a high demand for program administrators.

These works are generally consistent with recent work by Alesina and Tabellini (2007,2008), who assert that bureaucrats are motivated by career advancement and, therefore, desire to endorse programs of high quality. Perhaps in a stretch, however, we interpret their work as suggesting that there is an optimal UI policy. If so, we would expect variation in how bureaucrats would respond to UI policy changes. That is, if government policy moved towards the preferred policy of bureaucrats then the error rate would moderate, and conversely if policy moved away from the preferred policy position. Further, if bureaucrats are pushing a preferred policy, we would expect that their influence would wane over a governor's term. That is, either the bureaucrats would be successful and policy would move in the intended direction, or bureaucrats would be less successful and would pursue an alternative to pushing error rates.

Leaver (2009) builds a model where bureaucrats minimize errors in the supply of public goods to avoid complaints made by the clients they serve.¹⁰ This is a precursor to the more nuanced approach suggested in Prendergast (2016). There the model of how the politician and bureaucrat interact depends on how the goals of the bureaucrat align with those of the politician. Depending on the program, bureaucrats whose interests either align, or are antithetical, to those of the program recipients will maximize the utility of the politicians. In that model it would seem that bureaucrats that are more aligned with interests of UI recipients are more likely.

Empirical papers such as Chang and Turnbull (2002), Dahlberg and Mork (2006), and Gains and John (2010) have explored bureaucratic preferences in the context of maximizing public spending, increasing the size of the bureaucracy, and the tasks and jobs which bureaucrats would

¹⁰ See Gailmard and Patty (2012) for a review of the effect of bureaucratic behavior on political and economic outcomes.

like to perform. These papers generally find evidence consistent with potential bureaucratic influence over policy.

The unique contribution of the work here is that the UI audited error rate offers a window on actual tastes by the bureaucracy. In the context of the theoretical work above, this taste variable allows distinction between the straightforward theoretical prediction of maximizing expenditure, and an alternative theory that suggests that if bureaucrats empathize with their clients, they will place much more emphasis on benefits per recipient at the expense of eligibility requirements that impact the number of recipients. Further, the lack of bureaucratic response to policy changes suggests that bureaucrats do not hold an idea for a most preferred policy prescription.

III. Data

We construct a panel data set for the 50 US states for the years 1996-2011. UI information is published by the U.S. Department of Labor (annual). Total UI expenditures can be decomposed into two components: the number of recipients and annual benefits per recipient.¹¹ Both of these variables are choice variables for individual state UI programs (see DOL, 2012). We deflate the dollar values by the CPI with 2011 as the base year, and use the Census population estimates to construct per capita values. The political variables come from the *Book of the States*.

In our estimation, we include other state level control variables such as the unemployment rate which is taken from the Bureau of Labor Statistics; Gross State Product is taken from the Bureau of Economic Analysis; and the poverty rate is taken from the Census Bureau. Also

¹¹ The number of recipients is called the number of first payments, and means that a worker has initiated a new unemployment spell.

collected from the Census Bureau are demographic variables such as the share of the population which is white, the share of the population which is under 18 years old and the share of the population which is over 64. Finally, the share of the population at least 25 years old with a high school degree is obtained from Current Population Survey. We use the share of the public sector workforce which is unionized as a control or as an instrument; this variable is taken from www.unionstats.com, which is a website developed by Barry Hirsch and David Macpherson. Our other control variables are the share of manufacturing workers, and the share of government workers; these variables which reflect the structure of the workforce and, specifically, the economic environment are taken from Bureau of Labor Statistics.

Table 1 presents the mean of the variables we use in the analysis over the full sample of the 50 US states during the years 1996-2011. The start year is dictated by the beginning of the error rate postings by state, we drop seven observations due to missing error rate data. The Table also presents the cross-sectional means at both ends of our sample. The overpayment rate is about 10% of the total UI benefits paid out, so is substantial with considerable cross state and cross time variation. The important element for the analysis below is that we define UI expenditures as the “policy level” of UI expenditures, because we subtract Overpayment from actual UI expenditures. This allows us to use benefits per recipient as the level of expenditures enacted by the legislature, rather than the amount that is actually paid out.

***Finally, an important technical change has occurred, which is that state governments now allow recipients to apply on-line, rather than in person using state UI offices. The adoption of on-line applications has varied widely across states, and we therefore have collected data on the share of applicants that occur in-person within offices. We believe it possible that bureaucratic

tastes can still be expressed through oversight of the on-line applications. Nonetheless, the relationship may change between Overpayments and UI policy outcomes, so we control for the share of UI applications performed in offices.¹²

***To the extent that state governments pick the size and quality of the UI bureaucracy, the state government could be construed to influence the error rate through the production function. In the case of UI, however, this likelihood is minimized because there are no financial incentives for state governments to limit administrative expenditures. This is because the federal government, as part of the policy oversight over the UI program, pays all of the approved administrative costs. Thus, there are regulatory limits to the number and quality of workers in the bureaucracy, but there is little incentive for state governments to choose to be below the federal limits.¹³

IV. Estimation Results Showing Bureaucratic Influence on Policy

Our empirical work proceeds in two broad steps. First, we attempt to establish that it is reasonable to use Overpayments as an expression of bureaucratic tastes. Second, we attempt to show that politicians are responding to the taste expressions of bureaucrats. What is interesting, however, is that we do not find that bureaucrats respond to changes in policy. To us, this indicates

¹² In fact, an interesting finding is that in-person administrators cause lower UI program errors than when recipients apply on-line. Whether this is the result of unions resisting the creation of the on-line systems, or the potential avarice of the applicants without bureaucratic scrutiny, is not yet certain.

¹³ Most states would choose to maximize the flow of federal dollars into their state, and thus would have an administration of the UI program at the regulatory limits.

support for the Prendergast model suggesting that bureaucrats have empathy for their clients, rather than a preferred policy.

The demonstration of Overpayments as an indicator for preferences is to study the residuals from a regression of UI policy outcomes on the unemployment rate. We find that the residuals, which can reasonably be called surprises in policy outcomes, are highly correlated with Overpayments.

The analysis of policy interaction between bureaucrats and politicians exploits our Regression Discontinuity (RD) strategy over Governor elections. The Governor generally appoints the head of the state Labor agency that administers UI. Further, they will also make and/or approve policy proposals from the legislature on UI policy. Because of various lags in decision making and its variation across states, we analyze the decision framework over two-year intervals.

A. Overpayments As Bureaucratic Policy Preferences

To investigate the extent to which Overpayments by the bureaucracy to UI recipients might express policy preferences, we examine the extent to which Overpayments are correlated with the residuals from UI policy outcomes. The three policy outcomes are benefits per recipient, recipients per capita, and taxes per capita.¹⁴ We run a regression of each policy outcome as a function of the unemployment rate plus state and year fixed effects as shown in Equation 1.

$$\ln Outcome_{it} = \alpha_i + \delta_t + \beta_1 UR_{it} + \varepsilon_{it} \tag{1}$$

¹⁴ Benefits per recipient times Recipients per capita is not strictly taxes per capita because there are savings accounts associated with UI. Thus properly the product is total expenditures per capita. We estimate taxes per capita since it is an important policy choice for UI.

where i indicates state and t year, *Outcome* is one of three possible policy outcome measures, benefits per recipient, number of recipients per-capita and UI taxes, UR is unemployment rate, α_i are state fixed-effects, δ_t are year fixed-effects and ε_{it} is the error term.

We use the residual from Equation (1) as a measure of “surprise” outcomes over and above what is expected due to the unemployment rate. We interpret the residual as an indicator of bureaucratic intentional behavior. We run a second regression, Equation (2), expressing *Overpayments* as a function of the residual

$$\ln \text{Overpayments}_{it} = \alpha_i + \delta_t + \beta_1 \text{Resid}_{it} + \varepsilon_{it} \quad (2)$$

where *Overpayments* are the actual overpayments as reported by the Department of Labor audits of each state’s unemployment insurance program, *Resid* is the residual from Equation (1) computed as observed minus predicted outcome for each of the three outcomes *benefits per recipient*, *number of recipients* and *taxes*.

We estimate three sets of Equations (1) and (2), one for each of the unemployment insurance program policy outcomes. For example, Table 2 Panel A, shows results from estimating Equation (1) for the outcome *benefits per recipient*. We then use the residual from that regression, and find in Panel B of Table 2 that the residual is highly correlated with the *Overpayments* variable. Table 3 presents the same procedure for recipients per capita, and again finds that the residual from the equation is highly correlated with *Overpayments*. Finally, Panel A in Table 4 shows UI taxes per-capita as a function of the unemployment rate. Again, we show that the residual from the equation is highly correlated with *Overpayments* in Panel B.

The above discussion provides suggestive evidence that *Overpayments* are correlated with UI benefit payments in addition to what might be expected from the unemployment rate itself. The

residuals may contain information on UI benefits outside of the program's function as purely unemployment insurance, for example Craig and Palumbo (1999) find there are aspects of UI that serve other purposes. On the other hand, we do not perceive an obvious production-function-of-errors reason to expect that Overpayments would be represented by the residual. Thus we conclude that it is not unlikely that some of these extra payments represent Overpayments by bureaucrats who perceive failings in the UI policy prescription from policy-makers. Hence, we use *Overpayments* as a measure of bureaucrat tastes. This is our preferred measure and we use it to report our results below.

We also experiment with two other approaches to measure bureaucratic tastes, both also using the Department of Labor state audits of the Unemployment insurance programs. Approach two is closely related to our preferred approach, but instead of just focusing on Overpayments per recipient, it looks at net overpayments, defined as overpayments minus underpayments.¹⁵ Because there are so few measured underpayments, approach one and two yield measures very close to each other. The third approach to measuring bureaucratic tastes as more nuanced, and involves estimating bureaucratic tastes as a residual from a "production function" for error rates. While the results from the third approach are also not reported here, it would be useful to present an outline of how we developed our specification.

Based on our results reported in Tables 2, 3 and 4, we concluded that *Overpayments* are positively related to the residuals from regressions of the policy outcomes on the unemployment rate and state and time fixed effects. In an effort to model bureaucratic tastes as a deviation from

¹⁵ If the production of errors were normally distributed, the Underpayments would be expected to be approximately equal to the Overpayments.

policy outcomes as prescribed by politicians, we then tried using the residuals from the estimation of Equation (3) reported below as the third measure of bureaucratic tastes.

$$\ln \text{Overpayments} = \alpha_i + \delta_t + \beta_1 UR + \varepsilon_{it} \quad (3)$$

where UR is unemployment rate, α_i are state fixed-effects, δ_t are year fixed-effects and ε_{it} is the error term. Let us name the residuals from Equation (3) \overline{BurBeh} , bureaucratic behavior. Sometimes we will use this measure as a measure for the bureaucrats taste instead of the reported *Overpayments* or *net Overpayments* used in our other two measures of bureaucratic tastes.

B. Basic Model Results

Using our preferred measure of bureaucratic tastes, *Overpayments*, the basic model uses a both a Regression Discontinuity (RD) and fuzzy Regression Discontinuity designs. The regression discontinuity comes about because of the potential change in political party of the governor. Specifically, governors are important for UI policy because they appoint the administrative heads of state employment agencies. We use a bandwidth of 7.5% for our main results, although our results are not sensitive to the bandwidth chosen (we also look at bandwidths of 10% and 25%).

Our first question to explore is whether or not bureaucrats can influence UI policy. To do so we estimate the determinants of policy outcomes by estimating Equation (4) in a regression discontinuity framework:

$$\ln \text{Outcome}_{it} = \alpha_i + \delta_t + (\text{Governor} \square \ln \text{Overpayments})_{it} \beta_1 + \beta_2 \ln \text{Union}_{it} + \beta_3 \ln UR_{it} + \mathbf{X}_{it} \beta_4 + \varepsilon_{it} \quad (4)$$

where *Governor* is the party of the state governor, *Outcome* is benefits per-recipient, number of recipients per-capita or UI taxes per-capita, *Union* is percent of the public sector workforce that is unionized, *UR* is state unemployment rate in percentages, \mathbf{X} is a vector of demographic and

economic variables. Note the interaction term of Governor party times the outcome measures is a vector of interactions further nuanced by two-year intervals for up to eight years of a Governor's time in office.

Table 5 presents the results of how UI policy outcomes respond to bureaucratic tastes as measured by *Overpayments*. Each of the three columns shows the UI program outcomes, benefits per recipient, recipients per capita, and taxes per capita. The right-hand side variables represent how UI policy outcomes respond to *Overpayments*. We segment the responses by the political party of the governor. If bureaucrats have a preferred policy prescription, it is likely that they will be more aligned with one political party or the other.¹⁶ In fact, however, the results do not support this view. Rather, we find that *Overpayments* are associated with higher outcomes, primarily on benefits per recipient, and are not sensitive to the governor's political party. The finding that the coefficients on the interaction terms of Democratic governors' term segments with *Overpayments* are indistinguishable from those coefficients on Republican governors' terms is suggestive against Alesina-type bureaucrats. That the results also do not show significant impacts on recipients suggests that bureaucrats are not trying to maximize the administrative budget. What we conclude from our results, therefore, is that the Prendergast (2016) hypothesis that UI workers sympathize with their clients is more empirically relevant. Moreover our finding that bureaucratic preferences appear to be empirically important to subsequent government policy choices suggests that this line of research merits further attention.

A caveat to rejecting the administrative budget maximization argument is certainly possible. That the bureaucratic tastes arise in the context of benefits per recipient may be

¹⁶ Certainly in Washington, DC, most of the program administrators vote Democratic.

understandable given the tools by which bureaucrats can alter outcomes. For example, increases in duration of eligibility as well as what parts of compensation are counted are possible, and would result in higher overall payments over an unemployment spell. It may be more difficult to declare that someone is eligible, since the criteria may be measured with more certainty. Further, potentially eligible people that do not apply cannot receive assistance.

It is important to report that our findings in Table 5 hold true qualitatively when we use the other two measures of bureaucratic tastes, (*Overpayments-Underpayments*) and \overline{BurBeh} (the residual from the estimated error-rate function conditioned on the unemployment rate). Though not reported here, the coefficients on the interaction terms of governors' party and time segment for *benefits per recipient* were positive and statistically significant. These coefficients were negative and virtually never statistically significant for *recipients per capita*. Thus we reproduce the same qualitative results for bureaucrats influence on UI policy using our alternate measures of bureaucratic tastes.

The final piece of evidence that supports a finding consistent with the Prendergast theory is presented in Tables 6 through 8. Here we test, this time using a fuzzy RD framework, whether the Overpayment rate responds to changes in the UI policy outcome variables. If bureaucrats have a preferred policy, it would be natural for the Overpayment rate to respond, in the sense that policies closer to the position preferred by the bureaucrats would cause the error rate to drop. Similarly, policy changes that increased the distance between the preferred policy and the actual policy would result in an increased error rate. We employ a fuzzy RD design because programmatic outcomes, namely benefits per recipient, recipients per capita, and taxes per capita,

are potentially simultaneously chosen with the Overpayment rate.¹⁷ Our model is essentially assuming that Overpayments are chosen by the bureaucrats, and UI policy outcomes are chosen by politicians. Nonetheless, to the extent they respond to each they will be simultaneously chosen. The IV on *Outcomes* we use in this framework is the share of total unemployment claims that are made in-person in UI offices rather than on-line, or by telephone.¹⁸ Our estimating equation is expressed in Equation (5) below

$$\ln \text{Overpayments}_{it} = \alpha_i + \delta_i + (\text{Governor} \times \ln \text{Outcome})_{it} \beta_1 + \beta_2 \ln \text{Union}_{it} + \beta_3 \ln \text{UR}_{it} + \mathbf{X}_{it} \beta_4 + \varepsilon_{it} \quad (5)$$

where *Governor* is the party of the state governor, *Outcome* is benefits per-recipient, number of recipients per-capita or UI taxes per-capita, *Union* is percent of the public sector workforce that is unionized, *UR* is state unemployment rate in percentages and **X** is a vector of demographic and economic variables. Note the interaction term of Governor's party times the outcome measures is a vector of interactions further nuanced by two-year intervals for up to eight years of a Governor's time in office .

Tables 6-8 show, for all three UI policy outcomes, that *Overpayments* do not significantly respond to UI policies. For bandwidths of both 7.5% and 10%, we find that for neither Democratic

¹⁷ Because the Overpayments residual may depend on the policy outcomes, we instrument outcomes using as an IV the share of UI applications that were in-person. The first stage estimates show that the IV is important for benefits per recipient and for UI taxes, although not for recipients per capita.

¹⁸ See Craig, Hoang and Kohlhase (2017) who discuss how the new on-line technologies change UI applications.

nor Republican governors, and for neither early or late periods in their time of service, that *Overpayments* respond to policy changes after controlling for the unemployment rate and percent of the public sector that is unionized. Almost all interaction terms are insignificant in all of the three tables for both 7.5% and 10% bandwidths. So it appears that bureaucrats do not have some sort of “optimal” policy that they are trying to attain, because policy outcomes seem to have no feedback effects on *Overpayments*.

Again, our findings in Tables 6-8 hold true qualitatively when we use the other two measures of bureaucratic tastes, (*Overpayments-Underpayments*) and \overline{BurBeh} (the residual from the estimated error-rate function conditioned on the unemployment rate) for the dependent variable. Though not reported here, the coefficients on the interaction terms of governors’ party and time segment were statistically insignificant for both reported bandwidths in all three tables.

We believe our findings show important evidence that the view proposed in Prendergast is most consistent with the evidence found here. That is, bureaucrats act as if they want to improve payments to the unemployed irrespective of current policies. Further, we believe there is significant evidence that they do so using the policy error rates that result in *Overpayments*.

C. Alternative Specifications

Here we discuss some alternative specifications that use other expressions for *Overpayments* and other econometric techniques than regression discontinuity designs. The first specification uses OLS on lagged values of *Overpayments* and the second specification uses an instrumental variable approach to defining *Overpayments*.

The first alternative specification to the contemporaneous model presented above is to assume that *Overpayments* to recipients do not influence policy immediately, but instead only

operate with a lag. Table A1 in the appendix presents the results of an OLS model using *lagged Overpayments* rather than the specification with them contemporaneously determined. The results show an estimated coefficient on *lagged Overpayments* for *Benefits per recipient* that is still positive and significant, but only about one-half of the size as in the contemporaneous model reported in Table 5. Again we find no significant influence of *lagged Overpayments* on eligibility as measured by recipients, and a surprising negative coefficient on taxes given the two positive coefficients on its components, although the point estimate is very small.

The other alternative specification we report is to use an IV on *Overpayments* in a regular regression framework rather than use the regression discontinuity approach. Here in the first stage we estimate *Overpayments* using as the instrument % of the public sector that is unionized. We allow for state and time fixed effects. Control variables include the demographic controls used in the other tables (*%Office claims*, *%manuf*, *unemployment rate*, *GSP*, *poverty rate*, *% grad HS*, *%white*, *%under 18*, *%over 64*), and political variables, *DemGov* and *Elect*, where *DemGov* and *Elect* are dummy variables indicating whether or not the governor was a Democrat and the year of the election. Again we find the estimated coefficient on *instrumented Overpayments* for *Benefits per recipient* is positive, but this time slightly greater in magnitude than what we found in table 5. Again we find no significant influence of *instrumented Overpayments* on eligibility as measured by recipients, also no significant influence of *instrumented Overpayments* on taxes.

In summary our finding that *Overpayments* positively influence policy outcomes in terms of *benefits per recipient* holds true in other specifications. So we are encouraged that our empirical findings carry-over to other reasonable specifications.

V. Summary and Conclusions

Our paper has attempted to discern the validity of the assumption that administrative bureaucrats are able to influence actual policy. We test this idea because we are able to use data on the UI program in US states which differentiates policy outcomes as assigned by policy makers from “mistakes” as determined by DOL audits. We thus differentiate state UI spending into benefits per recipient net of mistakes, and the level of mistakes. We perform our empirical test using a panel of UI states from 1996, the start of the audit program, though 2011. We conduct two tests. First, we find evidence in a regression discontinuity framework that state government policies are affected by bureaucratic preferences. These preferences suggest bureaucrats are sympathetic towards their recipients, and attempt to improve especially benefit levels for recipients. It is interesting that bureaucrats seem much less interested in expanding the recipient base, which might be consistent with an expansion of work opportunities for bureaucrats. Also in our regression discontinuity framework where unemployment insurance policies are the dependent variable, we find that coefficients on the Democratic Governor terms are of the same sign as the coefficients of the Republican Governor terms, thus rejecting Alesina-type bureaucrats looking for an optimal policy. Further evidence that bureaucrats do not have an “optimal” policy is that we do not find evidence that policy outcomes feed-back upon *Overpayment* rates. We thus conclude that the theory offered by Prendergast is the most consistent with our empirical findings about bureaucratic behavior in the context of unemployment insurance.

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Table 1: Summary Statistics

VARIABLES	Full Sample		1996		2011	
	Mean	Std	Mean	Std	Mean	Std
Overpayments \$	67,300,000	94,000,000	33,000,000	41,500,000	115,000,000	128,000,000
Error Rate %	10.31	6.50	8.65	4.51	12.83	8.87
Office claims %	34.85	39.35	85.83	21.97	9.94	20.34
Benefits \$ Per Recipient	3,456	5,154	2,299	1,177	4,449	1,207
Recipients Per Capita %	3.12	1.26	3.04	1.15	3.35	1.02
Taxes \$ Per Capita	90.85	53.03	74.25	44.20	157.86	61.68
%Union	33.43	17.69	34.44	18.04	33.74	18.78
%Manuf workers	11.17	4.55	13.79	5.17	8.85	3.38
Election yr dummy %	26.13	43.96	22.00	41.84	6.00	24.00
Dem gov dummy %	43.25	49.57	34.00	47.85	40.00	49.49
GSP \$ per capita	38,157	9,460	28,096	4,681	47,413	9,259
Poverty Rate %	12.27	3.29	12.85	3.96	14.20	3.12
Pop > 24 w/ HS Educ %	85.52	4.09	83.16	4.32	89.09	2.87
White %	76.40	15.19	79.32	14.09	77.56	16.19
Pop Under 18 %	25.25	1.90	26.14	1.95	25.14	2.15
Pop over 64 yrs %	12.67	1.85	12.75	2.03	12.81	2.04

Table 2: Overpayments Reflect “Suprises” in UI Outcomes: Benefits

Panel A	
Dependent Variable: ln (UI Benefits)	
log (<i>Unemployment Rate</i>)	0.81*** (0.11)
Observations	793
R-Squared	0.92
State Fixed Effects	YES
Year Fixed Effects	YES

The residuals from this equation are UI benefits that are a “surprise” given unemployment.

Panel B	
Dependent Variable: ln (<i>Overpayments</i>)	
Residual	1.00*** (0.06)
Observations	793
R-Squared	0.93
State Fixed Effects	YES
Year Fixed Effects	YES

This panel shows *Overpayments* as a function of the “surprise” UI benefits.
Significance levels: * 10%; ** 5%; ***1%

Table 3: Overpayments Reflect “Suprises” in UI Outcomes: Recipients

Panel A	
Dependent Variable: (ln <i>Recipients per capita</i>)	
ln(<i>Unemployment Rate</i>)	0.44*** (0.04)
Observations	800
R-Squared	0.99
State Fixed Effects	YES
Year Fixed Effects	YES
The residual from this equation measures “surprise” UI Recipients given Unemployment	

Panel B	
Dependent Variable: (ln <i>Overpayments</i>)	
<i>Residual</i>	0.58*** (0.17)
Observations	793
R-Squared	0.86
State Fixed Effects	YES
Year Fixed Effects	YES
This equation shows <i>Overpayments</i> as a function of the “surprise” UI Recipients. Significance levels: * 10%; ** 5%; ***1%	

Table 4: Overpayments Reflect “Surprises” in UI Outcomes: Taxes

Panel A	
Dependent Variable: $\ln(\text{UI Taxes per-capita})$	
$\ln(\text{Unemployment Rate})$	0.32*** (0.06)
Observations	800
R-Squared	0.96
State Fixed Effects	YES
Year Fixed Effects	YES
The residual from this regression measures “surprise” UI Taxes given Unemployment	

Panel B	
Dependent Variable: $\ln(\text{Overpayments})$	
<i>Residual</i>	0.23*** (0.07)
Observations	800
R-Squared	0.86
State Fixed Effects	YES
Year Fixed Effects	YES
This regression shows <i>Overpayments</i> as a function of the “surprise” UI Taxes. Significance levels: * 10%; ** 5%; ***1%.	

Table 5: Evidence of Bureaucratic Influence on UI Policy Outcomes: The Role of Overpayments

<i>Regression Discontinuity on Governor Elections</i>			
	RD Bandwidth 7.5% Dep. Var is	RD Bandwidth 7.5% Dep. Var is	RD Bandwidth 7.5% Dep. Var is
X= overpayments per recipient	<i>UI benefits per recipient</i> with demog controls	<i>UI recipients per capita</i> with demog controls	<i>UI taxes per capita</i> with demog controls
	S FE	S FE	S FE
VARIABLES	Y FE	Y FE	Y FE
Dem[1,2]*X	0.594*** (0.090)	-0.075 (0.051)	0.100 (0.062)
Dem[3,4]*X	0.579*** (0.087)	-0.085* (0.051)	0.106* (0.062)
Dem[5,6]*X	0.682*** (0.087)	-0.068 (0.044)	0.148*** (0.053)
Dem[7,8]*X	0.671*** (0.090)	-0.058 (0.043)	0.116* (0.058)
Rep[1,2]*X	0.594*** (0.085)	-0.092* (0.052)	0.157** (0.062)
Rep[3,4]*X	0.631*** (0.097)	-0.083 (0.054)	0.134* (0.067)
Rep[5,6]*X	0.696*** (0.155)	-0.136* (0.073)	0.192** (0.073)
Rep[7,8]*X	0.808*** (0.130)	-0.122 (0.077)	0.116 (0.072)
Unionization	0.004 (0.008)	-0.003 (0.003)	-0.002 (0.007)
Unemployment rate	0.093* (0.051)	0.142*** (0.034)	-0.130*** (0.044)
Observations	246	246	246
R-squared	0.793	0.939	0.867

notes: Significance levels: * 10%; ** 5%; ***1%. Dem*X is the interaction of Overpayments (X) with Democratic Governors (Dem). [1, 2] means the first two years of a Governor's term, through [7, 8] the seventh and eighth years of a Governor's term.

Rep*X is the interaction of Overpayments (X) with Republican Governors (Rep).

Unionization is the overall public sector unionization rate.

Unemployment rate is the share of the work force looking for work.

Table 6: Evidence that Overpayments are not Responding to Public UI Policies:

The Role of Benefits per Recipient

Fuzzy Regression Discontinuity on Governor Elections

X is Benefits per Recipient (instrumented)	RD Bandwidth of 7.5%	RD Bandwidth of 10.0%
	Dependent Variable is: <i>Overpayments per recipient</i> with Demographic Controls State Fixed Effects Year Fixed Effects	Dependent Variable is: <i>Overpayments per recipient</i> with Demographic Controls State Fixed Effects Year Fixed Effects
Dem[1,2]*X	-1.117 (0.882)	0.070 (0.154)
Dem[3,4]*X	-1.080 (0.880)	0.091 (0.154)
Dem[5,6]*X	-1.095 (0.860)	0.073 (0.152)
Dem[7,8]*X	-1.145 (0.868)	0.049 (0.155)
Rep[1,2]*X	-1.067 (0.889)	0.128 (0.166)
Rep[3,4]*X	-1.107 (0.894)	0.125 (0.168)
Rep[5,6]*X	-1.238 (0.945)	0.085 (0.161)
Rep[7,8]*X	-1.678 (1.225)	-0.096 (0.124)
Unionization	-0.014 (0.012)	-0.010 (0.010)
Unemployment rate	-0.029 (0.097)	-0.033 (0.068)
Observations	246	337
R-squared	0.696	0.641

notes: Significance levels: * 10%; ** 5%; ***1%. Dem*X is the interaction of Benefits (X) with Democratic governors (Dem). [1,2] means the first two years of a Governor’s term, through [7, 8] the 7th & 8th years of a term. Rep*X is the interaction of Benefits (X) with Republican governors (Rep). X was instrumented with % in-person UI applications. Unionization is the overall public sector unionization rate. Unemployment rate is the share of the work force looking for work.

Table 7: Evidence that Overpayments are not Responding to Public UI Policies:

The Role of Recipients per Capita

Fuzzy Regression Discontinuity on Governor Elections

	RD Bandwidth of 7.5%	RD Bandwidth of 10.0%
	Dependent Variable is: <i>Overpayments per recipient</i>	Dependent Variable is: <i>Overpayments per recipient</i>
X is Recipients per Capita (instrumented)	with Demographic Controls State Fixed Effects Year Fixed Effects	with Demographic Controls State Fixed Effects Year Fixed Effects
Dem[1,2]*X	3.198 (2.087)	-0.373 (0.236)
Dem[3,4]*X	3.092 (2.069)	-0.420* (0.222)
Dem[5,6]*X	3.194 (2.088)	-0.356 (0.259)
Dem[7,8]*X	3.289 (2.086)	-0.309 (0.263)
Rep[1,2]*X	3.074 (2.096)	-0.496* (0.256)
Rep[3,4]*X	3.179 (2.104)	-0.478* (0.260)
Rep[5,6]*X	3.545 (2.262)	-0.371 (0.238)
Rep[7,8]*X	4.693 (2.950)	0.160 (0.343)
Unionization	-0.008 (0.010)	-0.011 (0.009)
Unemployment rate	-0.304 (0.201)	0.001 (0.070)
Observations	246	337
R-squared	0.713	0.656

notes: Significance levels: * 10%; ** 5%; ***1%. Dem*X is the interaction of Recipients (X) with Democratic Governors (Dem). [1, 2] means the first two years of the term, through [7, 8] the 7th & 8th years of a Governor's term. Rep*X is the interaction of Recipients (X) with Republican Governors (Rep). X was instrumented with % in-person UI applications. Unionization is the overall public sector unionization rate. Unemployment rate is the share of the work force looking for work.

**Table 8: Evidence that Overpayments are not Responding to Public UI Policies:
The Role of Taxes per Capita
Fuzzy Regression Discontinuity on Governor Elections**

X is Taxes per Capita (instrumented)	RD Bandwidth of 7.5%	RD Bandwidth of 10.0%
	Dependent Variable is: <i>Overpayments per recipient</i> with Demographic Controls State Fixed Effects Year Fixed Effects	Dependent Variable is: <i>Overpayments per recipient</i> with Demographic Controls State Fixed Effects Year Fixed Effects
Dem[1,2]*X	-0.076 (0.201)	0.138* (0.077)
Dem[3,4]*X	-0.071 (0.199)	0.157** (0.075)
Dem[5,6]*X	-0.030 (0.191)	0.168** (0.078)
Dem[7,8]*X	-0.061 (0.199)	0.159** (0.075)
Rep[1,2]*X	-0.025 (0.206)	0.163** (0.073)
Rep[3,4]*X	-0.046 (0.208)	0.145* (0.073)
Rep[5,6]*X	-0.011 (0.224)	0.137* (0.072)
Rep[7,8]*X	-0.099 (0.227)	0.143* (0.074)
Unionization	-0.004 (0.007)	-0.003 (0.007)
Unempl. rate	-0.144** (0.063)	-0.122*** (0.041)
Observations	247	338
R-squared	0.858	0.833

notes: Significance levels: * 10%; ** 5%; ***1%. Dem*X is the interaction of Taxes per capita (X) with Democratic Governors (Dem). [1,2] means the first two years of the Governor's term, through [7, 8] the seventh and eighth years of the term. Rep*X is the interaction of Taxes per capita (X) with Republican Governors (Rep). X was instrumented with % in-person UI applications.

Unionization is the overall public sector unionization rate.

Unemployment rate is the share of the work force looking for work.

Appendix Table A1: The Influence of Lagged Overpayments on Policy Outcomes

Variable	Dependent Variable		
	ln(<i>Benefits/Recipient</i>)	ln(<i>Recipients per capita</i>)	ln(<i>Taxes per capita</i>)
lagged ln(<i>Overpayments</i>)	0.32*** (0.03)	0.01 (0.01)	-0.02* (0.01)
Observations	793	800	800
State and Year Fixed Effects	Yes	Yes	Yes
Additional Controls:	Yes	Yes	Yes
% Office claims, % manuf, unemployment rate, GSP, poverty rate, % grad HS, % white, % under18, % over64			
Observations	744	744	744
R-squared	0.73	0.41	0.89

notes: Estimates are based on panel data which includes 50 US states and covers the period 1997-2011. There are 6 missing observations.
Robust standard errors in parenthesis. Significance levels: * 10%; ** 5%; ***1%.
Monetary variables are deflated using the Consumer Price Index (2011=100).

**Appendix Table A2: The Influence of Overpayments on Policy Outcomes:
Instrumental Variable Estimation**

First Stage

	Dependent Variable
	ln(<i>Overpayments</i>)
Variables	
ln(<i>public sector unionization</i>)	0.30* (0.18)
State and Year Fixed Effects	Yes
Additional Controls:	Yes
%Office claims, %manuf, unemployment rate, GSP, poverty rate, % grad HS, %white, %under18, %over64, DemGov, Elect	

Second Stage

	Dependent Variable		
	ln(<i>Benefits/Recipient</i>)	ln(<i>Recipients per capita</i>)	ln(<i>Taxes per capita</i>)
Variables			
ln(<i>Overpayments</i>)	0.98** (0.47)	-0.14 (0.18)	0.53 (0.49)
Observations	793	800	800
State and Year Fixed Effects	Yes	Yes	Yes
Additional Controls:	Yes	Yes	Yes
% Office claims, % manuf, unemployment rate, GSP, poverty rate, % grad HS, % white, % under18, % over64, DemGov, Elect			
Observations	793	793	793
R-squared	0.78	0.43	0.92

notes: Estimates are based on panel data which includes 50 US states and covers the period 1996-2011.

There are 7 missing observations.

Robust standard errors in parenthesis. Significance levels: * 10%; ** 5%; ***1%.

Monetary variables are deflated using the Consumer Price Index (2011=100).