

Presidents and the Politics of Centralized Control: Regulatory Auditing at the Office of Information and Regulatory Affairs*

ALEX ACS

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The Office of Information and Regulatory Affairs (OIRA), in the Office of Management and Budget, is the locus for centralized presidential efforts to control agency rule-making. To do so, OIRA selectively audits and then revises the regulations proposed by agencies. We distinguish two possible modes for the agency-OIRA auditing game. Both treat OIRA as an efficiency advocate directed by a partisan principal. But the first treats liberal and conservative agencies as, respectively, eager or reluctant regulators. The second treats agencies as serving liberal or conservative constituencies. Auditing strategies for conservative presidents are similar in both cases but differ for liberal presidents. We then study OIRA's auditing choices during the administrations of William Clinton and George W. Bush. We assemble data on 15,547 proposed rules promulgated by 35 agencies from 1996-2007. Under Bush, OIRA's 1,827 audits disproportionately targeted regulations from liberal agencies, particularly intrusive regulations from those agencies. Under Clinton, OIRA's 1,581 audits did not display ideological targeting. Rather, OIRA focused particular attention on regulations from bureaus with low levels of professional personnel.

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VERY PRELIMINARY AND INCOMPLETE FOR DISCUSSION PURPOSES.

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I. INTRODUCTION

The emergence of a vast administrative state is a hallmark – arguably *the* hallmark – of modern government. As was quickly understood by Woodrow Wilson and other early students of American political development, the presence of gigantic standing bureaucracies with enormous scope and power presents not merely a problem in public administration; it presents a problem in brute politics. The crux of the matter, as a leading scholar of public management rather dryly notes, is that "whoever controls the bureaucracy controls a key part of the policy process" [Lewis 2008]:6.

The problem of political control is acute for Congress. Not surprisingly, It became an analytical focus of the "new institutionalist" revolution in scholarship on Congress and the administrative state [McNollgast 1987], [Ferejohn and Shipan 1990], [Epstein and O'Halloran 1999]. But the problem of control is equally if not more acute for America's chief executive officer, the President: How can one man, aided by a relative handful of confederates, exert effective control over rule making in the agencies?

Presidents, working diligently and with considerable ingenuity, have responded to the challenge by developing a remarkable set of tools for controlling policy making in the administrative state. Perhaps the most important is "politicization," the systematic placement of loyal subordinates into supervisory positions within the agencies [Lewis 2008]. But others include:

- Centralized budgeting [Tomkin 1998],
- Direct command through executive orders [Howell 2003],
- Centralized review and direction of the agencies' legislative programs [Rudalevige 2002], [Neustadt 1954], and
- Reorganizing or terminating agencies [Lewis 2003].

One of the newest tools, and potentially a puissant one, is *direct centralized review and revision of the agencies' proposed rules*. This tool – innovated by the Nixon Administration but solidly institutionalized during the Reagan Administration, and then retained by every subsequent president – can be seen as the apotheosis of the centralizing tendencies of the American presidency, noted so crisply in Moe's classic analysis [Moe 1985].

The locus for the President's centralized review and revision of agency rules is the Office of Information and Regulatory Affairs (OIRA) in the Office of Management and Budget (OMB). In a very real sense, OIRA is the point of the spear in the President's battle to exert direct centralized control over agency rules.

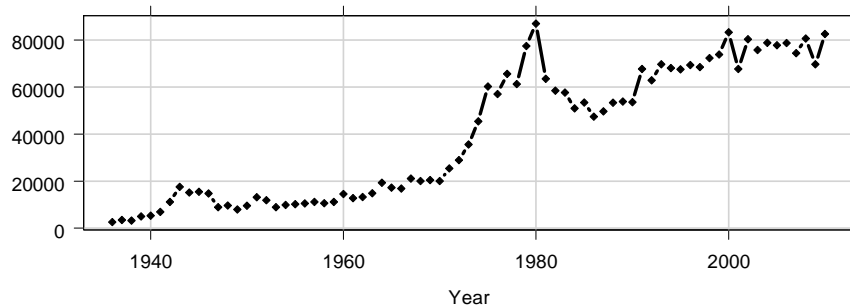


FIGURE I: NUMBER OF PAGES ANNUALLY IN THE *Federal Register*, 1936-2010

The magnitude of the task facing OIRA – and the President – is well conveyed in Figure I, which displays the annual number of pages in the *Federal Register* since its inception in 1936.¹ The impact of the Great Society and Nixon-era regulatory programs was dramatic, with the number of pages of regulation rising from under 20,000 in 1960 to over 80,000 in 1980. Since 1980, federal agencies have issues at least 50,000 pages of new regulations every year. Since 2000, the annual number of pages of rules has been about 80,000. Simply to be clear: If issued properly, using the procedures specified in the Administrative Procedures Act and then sustained in court against legal challenges (if any), the agency rules in the pages of the *Federal Register* have *the force of law*. Figure I thus reveals a tsunami of lawmaking by agencies, dwarfing the statutes enacted by Congress and the executive orders issued by the President. Of course, many of these bureaucratically written laws are of minor significance (as is true of statutes and executive orders). But many are enormously consequential [[carbon regulation from EPA]].

Centralized review of every proposed rule would require an Executive Office of the President nearly as large as the federal bureaucracy itself. A small but elite cadre of presidential analysts can inspect and revise only a relative handful of regulations – at best. A critical question then becomes: *Which regulations should the President’s central analysts target for review?* From this perspective, the rule selection problem facing OIRA is similar to the audit problem facing the Internal Revenue Service [Graetz et al 1986], or the case

1. The source of these data is the Office of the Federal Register, see __.

selection problem facing the U.S. Supreme Court [Cameron et al 2000].

In this paper, we study OIRA’s actual selection decisions: Which rules did OIRA pick to audit, from the plethora of available ones? How did this change with the shift from a Democratic president to a Republican one? We also consider (within the limitations of our data) OIRA’s revision of rules: Conditional on an audit, which rules did OIRA revise? Which rules simply died in the face of OIRA auditing? We treat the interaction between OIRA and the agencies as deeply strategic: the agencies sometimes propose regulatory efforts (which they perceive as worthy) that a partisan president will oppose as insufficiently supported by evidence. And, the agencies may fail to propose efforts that a partisan president would support despite inconclusive evidence. In proposing regulations that an informed president would oppose, the agencies hope their rules will evade centralized scrutiny. In turn, OIRA, serving its presidential principal, attempts to catch and correct agency rules that deviate from what the principal would desire. To do so, OIRA relies upon strategic auditing. The empirical patterns in regulatory auditing and rule revision reveal the contours of the strategic interaction between the President and the agencies.

To examine OIRA’s strategy we first examine the auditing interaction formally. We present two models. Both assume OIRA is an advocate of regulatory efficiency, but an advocate directed by a partisan principal. The first model assumes regulation is in some sense inherently liberal. From this perspective, liberal agencies tend to regulate zealously even in the face of some uncertainty about the value of the effort, while conservative agencies tend to regulate lightly in the face of uncertainty. The second model assumes regulation is merely another form of partisan activity. Thus, liberal agencies tend to regulate zealously to benefit liberal constituencies even in the face of some uncertainty about the social value of the effort, while conservative agencies tend to regulate zealously to benefit conservative constituencies even in the face of some uncertainty about the social value of the effort. The two models make similar predictions about the auditing strategy of a conservative-directed OIRA but make quite different predictions about the auditing strategy of a liberal-directed OIRA.

We then analyze OIRA’s actual treatment of 15,547 regulations during twelve years in the the Clinton and Bush Administrations (1996-2007), resulting in 3,408 audits. We first examine agency audit rates, to provide a simple over-view of patterns in the data. We then model audit probabilities per regulation, exploiting the multi-level structure of the data. The shift from a liberal to a conservative president affords the opportunity to examine critical comparative static predictions about the relative ideological position of the President and the agencies. //DISCUSS RESULTS REVISE NEXT SENTENCES In both administrations, audit probabilities were affected by the professionalism or task complexity of the agency, as measured by the percentage of professional employees in the agencies. In both administrations, markers for larger, more intense regulations served as strong cues for regulatory audits. But, the data also display distinctive political

patterns. In particular, Bush's OIRA disproportionately targeted liberal agencies, especially large and intrusive regulations from those agencies. This targeting appears to be the fingerprints left by a conservative president attempting to exert centralized control of rule making within a vast administrative state. In contrast, however, the Clinton administration did not target regulations from conservative agencies. Its evident failure to do so stands as something of a puzzle.//

OIRA is a controversial agency. Not surprisingly, it has sparked a considerable literature among legal scholars and political scientists. Broadly speaking, this literature has three streams: normative, positive, and empirical. Within the normative branch, scholars have noted OIRA's potentially revolutionary impact on administrative procedures and the operation of government agencies [Kagan 2001], [Cooper and West 1988]. Within this line of scholarship, conservative legal scholars have offered a variety of public interest justifications for OIRA, some drawing on notions from positive political theory (citation, Ginsburg). In turn, liberal legal scholars have debunked those justifications while sometimes noting the possible benefits of centralized regulatory review by liberal presidents [Bagley and Revesz 2006].

A handful of studies use positive political theory to examine different aspects of OIRA. [Jordan 2008] suggests that presidents might discipline the heads of agencies whose regulations frequently flunk OIRA audits. [Bueno de Mesquita and Stephenson 2007] examine how oversight by a supervisor with veto power may distort an agency's regulatory efforts. [Wiseman 2009] focuses on the delegation decision of Congress, raising the possibility that joint oversight of an agency by OIRA and Congress might benefit both overseers, as the agency seeks to curry favor with one overseer or the other. Although regulatory auditing by the Executive is implicit in these studies, none examines OIRA's targeting problem in much detail.

As several scholars have noted, empirical analysis of OIRA's decisionmaking has been limited. Indeed, systematic empirical analysis of agency rule making is surprisingly rare.² Using data from the General Services Administration's Regulatory Information Services Center [the RISC data], as well OIRA's log of ex parte contacts for each reviewed regulation, [Croley 2003] provides a useful descriptive overview of the rules audited by OIRA between 1981 and 2000. [Dragu 2010], also employing the RISC data, models the empirical probability of revisions conditional on selection for auditing. [Jordan 2008], also employing the RISC data, examines the impact of OIRA rule revisions on the tenure of agency heads. He finds longer tenures for agency heads whose audited regulations were treated favorably by OIRA. None of these studies identifies the universe of regulations at risk of auditing nor estimates audit probabilities for regulations.

The paper is organized in the following way. In the next section, we provide some basic information about OIRA. Section III presents two game-theoretic models of the OIRA-agency interaction focusing on

2. [O'Connell 2008] uses data from the published Unified Agenda of regulations to provide an empirical portrait of agency rule-making; the paper also reviews the empirical literature in both legal scholarship and political science.

OIRA's targeting decision. Section IV reviews the data, indicating sources, measurement issues, and basic descriptive features of the data. Section V uses the data to investigate OIRA's auditing strategy. // Section VI examines rule revisions by OIRA. NOT INCLUDED IN THIS VERSION// Section VII concludes.

II. BACKGROUND

II.A. The History of Regulatory Central Clearance

Attempts by presidents to exert systematic, centralized control of agency rule making began during the presidency of Richard Nixon [Conley 2006]. John Ehrlichman, Nixon's close aide, initiated a program of "Quality of Life" reviews within OMB. The reviews specifically targeted the new regulatory agencies, such as OSHA and EPA, whose proposed rules could impose huge costs on business. To conduct the regulatory reviews, Nixon aide H.R. Haldeman recruited a group of systems analysts from the Department of Defense. Beginning in 1971, these professional analysts brought cost-benefit analysis to bear on proposed regulations, particularly those from EPA. At this early stage, participation by the agencies was at least nominally voluntary, and OMB did not impose explicit benchmarks for passing a cost-benefit scrutiny (ibid). The Ford Administration continued the Quality of Life reviews, requiring agencies to prepare inflation impact statements on proposed rules.

Perhaps surprisingly, the Carter Administration continued OMB's regulatory review. In fact, in 1978 Carter issued Executive Order 12044, "Improving Government Regulations," requiring agencies to provide a regulatory analysis for large-ticket regulations. A handful of regulations were then selected for intense review by an inter-agency task force, staffed by economists from the Council on Wage and Price Stability. Thus, regulatory review reflected the President's commitment to reducing inflation.

The Reagan administration created OIRA through Executive Order 12291 in early 1981. The move surely reflected Reagan's deregulatory approach to government and his desire to constrain the growth of government. OIRA represented the most muscular mandate for regulatory review yet.

The contemporary era of OIRA's regulatory review began in 1993 when President Clinton issued Executive Order 12866. The new order significantly reduced the number of pending regulations in OIRA's review docket. Prior to EO 12866, OIRA reviewed all regulations, irrespective of their costs, resulting in over 2,000 audits per year. Clinton's new order developed a more focused approach toward regulatory review by allowing the administration to select which regulations to devote their resources to review. Under the new rule, agencies were required to submit a list of their planned regulatory actions to OIRA detailing some information about the regulation, including whether it imposed over \$100 million in annual costs. From the list

of submitted regulations, OIRA selected regulations for agencies to submit for detailed review, irrespective of costs. According to the administrator's implementing memorandum when EO 12866 was introduced, a central purpose of the new order was "greater selectivity in the regulations reviewed by OIRA" [Croley 2003].

When the second Bush administration took office in 2001, it continued to operate under EO 12866 through July 2007, at which point EO 13422 took effect.³ The focus of our study is on how OIRA used its review-and-revise authority under EO 12866.

II.B. Centralized Review of Agency Rule-Making

//ADD A MORE DETAILED DISCUSSION OF THE REVIEW PROCESS// OIRA's role as a reviewer of pending regulations does not give it authority to reject a regulation outright—only an agency head can do so. But it does empower OIRA to change the scope of a regulation or flag a regulation so that a department head can reject a regulation.

The following figure presents a schematic of the process. First, an agency proposes a regulation. OIRA may then review or decline to review the regulation. In either case, the Agency may withdraw the regulation. For audited, non-withdrawn regulations, OIRA may force revisions of the regulation. The regulation then becomes a final regulation.

// Picture of the regulatory process//

Withdrawals of a regulation following the audit decision can be seen as "death by review."

III. AGENCY RULE-MAKING AND CENTRALIZED REVIEW: A THEORY

Our point of departure is the following insight: the results of a cost-benefit analysis sometimes speak clearly, pointing definitely to a decision; but sometimes, the results of a cost-benefit analysis are ambiguous or hinge delicately on unverifiable assumptions. If so, reasonable people may draw different conclusions about the best choice of action, depending on the credence or weight they place on different parts of the analysis. In the model, the tension between OIRA and an agency arises exactly in these ambiguous situations and leads to a auditing game with particular properties.

The model presented here focuses on the interaction of the President and the agencies; it ignores the role of Congress. In particular, it ignores the possibility that Congress might side with an activist agency against the President, and reverse the President's modification of a proposed rule. Of course, the OIRA-Agency Game is played within the context of the separation of powers system. But, we see the SOP considerations as likely to

3. 13422 made an Regulatory Policy Officer RPO position in each agency a requirement, plus OIRA review of regulatory guidance documents published by agencies. The changes under 13422 are generally considered to increase the burden on the regulatory process.

be minor. During unified party government, Congress is apt to approve of the President's revisions of agency regulation. During divided party government, it may not. But, effective action requires coordination across two chambers, securing very expensive floor time, and then beating filibusters and presidential vetoes. So it is, at a minimum, extremely costly for Congress to act, and in many cases impossible to do so. While these arguments may not hold for every regulation, we choose to focus on the understudied auditing/rule-setting interaction that does affect every regulation.

The OIRA-agency game has some similarities to the tax compliance and settlement games analyzed by Reinganum and coauthors ([Graetz et al 1986], [Reinganum and Wilde 1986]), and an agency budget game analyzed by Banks [Banks 1989], and Banks and Weingast [Banks and Weingast 1992]. But those models feature separating equilibrium, in which the agency's (or tax payers') report actually reveals its private information. The audit schedule is set to induce the revelation but implicitly, the models assume a commitment by the potential auditor not to use the revealed information absent an audit. This cannot be sequentially rational in the Agency-OIRA game. In a situation in which an agency's and OIRA's preferred response to ambiguous cost-benefit studies differ, if OIRA knew the agency was acting "badly" on the basis of ambiguous information, OIRA would simply order the agency to re-set policy without the audit. This precludes the separating equilibrium identified in those papers and implies only pooling or partial pooling equilibria can exist in situations of conflict.

III.A. Sequence of Play, Actions, and Strategies

There are two players, OIRA (denoted P for president) and Agency A .

Here is the sequence of play. The Agency, parameterized by a preference or bias parameter $\beta \in B = \mathbb{R}_+$, carries out a cost-benefit analyses that generates a signal t about the state of the world $\theta \in \Theta = \{h, l\}$. The state of the world affects the benefits from a level of regulation (the details are given momentarily). With probability π , $t = \theta$ but with probability $1 - \pi$ $t = \emptyset$, meaning that the Agency's cost-benefit analysis does not reveal the state of the world. Thus, the type-space for the agency is $T = \{l, h, \emptyset\}$. The Agency then announces a proposed rule, a level of regulation $x_A \in X_A = \mathbb{R}_+$. OIRA sees the Agency's proposed level of regulation x_A . However, absent an audit OIRA does not know t and hence the benefits from the regulation (the cost of regulation level x , $c(x)$, is known). At this point OIRA may decline to audit the agency ($a = 0$). If so, it may accept x_A ; or OIRA may re-set policy to x_P , but without knowing t . If OIRA accepts Agency's proposed rule, the final level of regulation $x_F = x_A$. On the other hand, OIRA may audit the regulation ($a = 1$), paying audit cost k . If it audits, t is revealed with certainty and OIRA can order the Agency to re-set x_A to another level, x_P , now knowing t . In this case, $x_F = x_P$. A re-set order from OIRA also carries

a penalty κ for Agency, e.g., degraded career concerns, loss of favor with the President, and so on.

It will be seen that this is a signaling game, in which the Agency's proposed level of regulation may reveal information about the benefits of regulation. In the equilibrium considered below, Agency type $t = l$ and $t = h$ separate; but Agency type $t = \emptyset$ pools with types l or h . And, OIRA never audits after $x_A = l$ but sometimes audits after $x_A = h$. If OIRA does not audit, it accepts Agency's policy; but if it audits, it re-sets $x_A = h$ to $x_F = l$ unless $t = h$.

A strategy for Agency is a regulation level function $s : B \times T \rightarrow X_P$, or $s : B \times T \rightarrow \Delta(X)$. Here, $\Delta(\cdot)$ denotes the set of probability distributions over a set. So in the former case, the function $s(t; \theta)$ yields a proposed level of regulation x_P . In the latter case, the function $s(t; \theta)$ yields a probability distribution over proposed levels of regulation. Note that different agencies, as parametrized by β , may employ different distributions for drawing from X for the same t .

A strategy for OIRA is, first, an auditing strategy, and second, a re-set strategy. The audit strategy has the form $r_1 : B \times X_P \rightarrow \Delta(A_P)$, where $A_P = \{0, 1\}$. Thus, the function $r(x_P; \beta)$ yields an audit probability conditional on the proposed level of regulation and Agency bias. A re-set strategy depends on whether OIRA audited, and what it learned if it did audit. If OIRA did not audit, it has the form $r_2 : B \times X_P \rightarrow A_P$. If OIRA did audit, it has the form $r_3 : B \times T \rightarrow A_P$.

III.B. Utilities and Preferred Rules

The objective of both OIRA and the Agency is to maximize the net benefits of regulation.

A level of regulation x brings benefits $b_P(x; \theta)$ to OIRA, $b_A(x, \theta; \beta)$ to the Agency, and costs $c(x)$ to both parties. For both parties, we assume for simplicity and ease of exposition $c(x) = cx$, $c > 0$. The state-contingent benefit function has following form:

$$b(x, \theta) = \begin{cases} \bar{b}x & \text{if } x \leq \theta \\ \bar{b}\theta & \text{if } x > \theta \end{cases}$$

where $\bar{b} > c$. In words, regulation brings positive marginal benefits (which exceed marginal costs) but only up to level $x = \theta$. Beyond that level, regulation brings zero marginal benefits. This function is rather stark but captures in a very tractable way the essential idea of state-contingent, declining marginal benefits. The marginal benefit (and marginal cost) curves are shown in Figure II

OIRA's utility is:

$$u_p(x_F, \theta, a_P) = b(x_F, \theta) - c(x_F) - a_p k$$

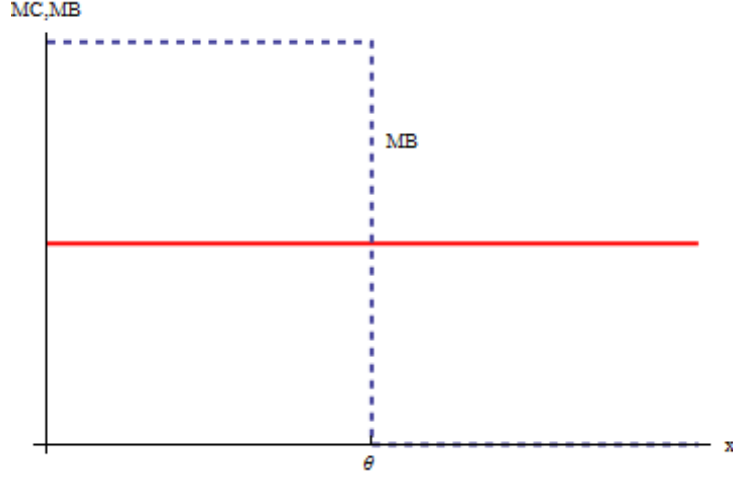


FIGURE II: MARGINAL BENEFIT AND MARGINAL COST CURVES

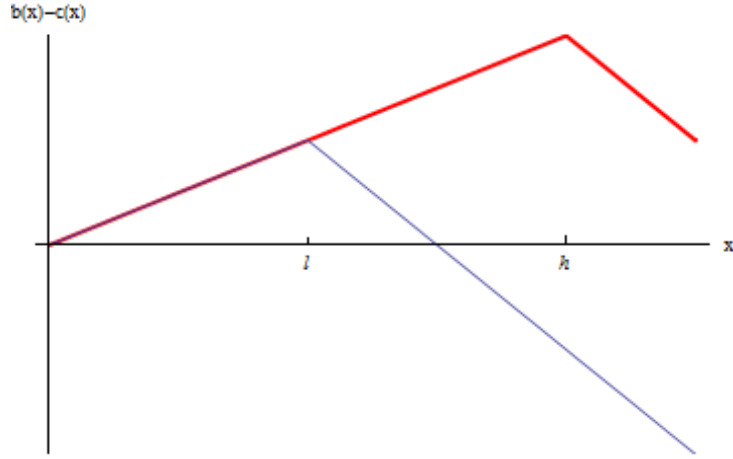


FIGURE III: NET BENEFITS REGULATION TO OIRA AT DIFFERENT REGULATION LEVELS

That is,

$$u_p(x_F, \theta, a_P) = \begin{cases} (\bar{b} - c)x_F - a_p k & \text{if } x_F \leq \theta \\ \bar{b}\theta - cx_F - a_p k & \text{if } x_F > \theta \end{cases}$$

Figure III displays $u_p(x_F, \theta, a_P = 0) = b(x_F, \theta) - c(x_F)$, that is, the total net benefit of regulation. the red line in the figure indicates the net benefit function when $\theta = h$; the blue line indicates net benefits when $\theta = l$. As shown in the figure, OIRA's utility to the left of θ is $(\bar{b} - c)x_F$. To the right of θ , it is $\bar{b}\theta - cx_F$. It is easily seen that OIRA's most-preferred level of regulation is simply $x_F^* = \theta$, which brings utility level $(\bar{b} - c)\theta - a_p k$. Note that the value of $x_F = l$ does not depend on the state of the world, but the value of $x_F = h$ most certainly does.

The Agency's utility is:

$$u_A(x_F, \theta, I; \beta) = \beta b(x, \theta) - c(x) - I\kappa$$

That is,

$$u_A(x_F, \theta, a_P) = \begin{cases} (\beta\bar{b} - c)x_F - I\kappa & \text{if } x_F \leq \theta \\ \beta\bar{b}\theta - cx_F - I\kappa & \text{if } x_F > \theta \end{cases}$$

where I is an indicator function that takes the value of 1 if OIRA re-set the Agency's proposed rule and a value of 0 if it did not. The bias parameter $\beta > 0$ is thus a measure of the Agency's *policy bias* relative to the President and OIRA. "Liberal" agencies (relative to the President) have $\beta > 1$. These agencies are more sensitive to the benefits of regulation than is the President and OIRA. "Conservative" agencies have $0 \leq \beta < 1$. These agencies are less sensitive or more skeptical about the the benefits of regulation than is OIRA. One may rationalize Agency policy bias as reflecting distributional concerns, interest group pressures, agency culture, identification with agency mission, or philosophical commitment embodied in different discount rates, but we take it as a basic fact of bureaucratic politics.

Reference to Figure II may be helpful. The Agency perceives the marginal cost curve exactly as does OIRA; but for levels of regulation less than $x = \theta$, the Agency perceives larger benefit than does OIRA, that is, that portion of the dotted line shifts upward somewhat.

A key fact to note, however, is that for all $\beta > \frac{c}{\bar{b}}$, the Agency's most-preferred level of regulation $x_A^* = \theta$. In other words, given a state of the world, *there is no conflict between OIRA and the Agency*, for liberal and moderately conservative agencies. (Ultra-conservative agencies, those with $\beta < \frac{c}{\bar{b}}$, prefer $x_A^* = 0$ rather than $x_A^* = \theta$).

Suppose, however, that there is uncertainty about the state of the world. In that case, $x_F = l$ definitely brings $b(x, \theta) - cx = (\bar{b} - c)l$ for OIRA. And, it definitely brings $(\beta\bar{b} - c)l$ for Agency. But $x_F = h$ induces a lottery over two very different possible net benefits. For OIRA, if the state of the world is actually h , then setting $x_F = h$ yields $(\bar{b} - c)h$, which is quite good. But if the state of the world is actually l , then setting $x_F = h$ yields $\bar{b}l - ch$, which is quite bad. Let μ indicate the probability that the state of the world is " h ". Then for OIRA, the value of the lottery is $\mu((\bar{b} - c)h) + (1 - \mu)(\bar{b}l - ch) = \mu\bar{b}(h - l) + \bar{b}l - ch$. Consider the critical value of μ_P such that for OIRA the value of this lottery is equal to the "sure-thing" value of $x_F = l$:

$$\mu_P\bar{b}(h - l) + \bar{b}l - ch = (\bar{b} - c)l$$

$$\Rightarrow \mu_P^* = \frac{c}{\bar{b}}$$

where $0 < \frac{c}{\bar{b}} < 1$. In other words, if OIRA is sufficiently pessimistic about the unknown value of high regulation, it prefers the "sure thing" of a low level of regulation. But if it is sufficiently optimistic, it is willing to gamble on a high level of regulation.

//Add another Figure – some intuition on the lottery But just note the two different possibilities in Figure III//

A similar calculation for Agency yields

$$\mu_A^* = \frac{c}{\beta b}$$

Critically, for liberal agencies ($\beta > 1$), $\mu_A < \mu_P$. This does not necessarily imply conflict between OIRA and the Agency: If both are "pessimistic" and have a belief less than μ_A , both prefer low levels of regulation. If both are "optimistic" and have a belief greater than μ_P , both are willing to gamble on high regulation. But for "intermediate" levels of belief, in the interval (μ_A, μ_P) OIRA prefers low level of regulation while the Agency prefers to gamble on the high level. The greater the policy bias of the Agency, the wider is this interval.

// Figure – some intuition on why agency's threshold is different: basically increasing differences. Both view the bad realization about the same way. But a good realization for Agency is much better than for OIRA. Creates increasing differences in size of regulation.//

Dominant Strategies. An extremely useful fact is that Agency types l and h have dominant strategies.

LEMMA 1. Agency type- l and agency type- h have dominant strategies, to wit, $x_A(t = l) = l$ and $x_a(t = h) = h$.

Proof. Comparison of utilities. ■

The lemma implies that in all equilibrium strategy profiles, those two agency types play their dominant strategy. This simplifies the analysis considerably.

III.C. Equilibria

Here, we focus liberal agencies (so as to avoid detailed consideration of ultra-conservative ones). We also restrict attention to the seemingly natural equilibria in which Agency's proposal strategy includes $x_A(t = l) = l$ and $x_A(t = h) = h$.⁴

We first detail two straight-forward "no-audit" equilibria. The first is based on "shared pessimism": absent definitive information to the contrary, both the Agency and OIRA believe a high level of regulation is not profitable.

PROPOSITION 2. (No-auditing due to shared pessimism.) Suppose $p \leq \mu_A^*$. Then the following constitutes

4. In this version of the paper, we make this move somewhat arbitrarily. But it should be possible to show that candidate equilibria in which this are not true, are vulnerable to standard equilibrium refinements (e.g., the intuitive criterion).

a no-audit equilibrium:

$$\begin{aligned}
 s(t) &= \begin{cases} x_A = l & \text{if } t = l \\ x_A = l & \text{if } t = \emptyset \\ x_A = h & \text{if } t = h \end{cases} \\
 r_1 &= 0 \forall x_A \\
 r_2 &= \begin{cases} x_F = x_A & \text{if } x_A \in \{l, h\} \\ x_F = l & \text{otherwise} \end{cases} \\
 r_3 &= \begin{cases} x_P = l & \text{if } t = l \\ x_F = l & \text{if } t = \emptyset \\ x_A = h & \text{if } t = h \end{cases}
 \end{aligned}$$

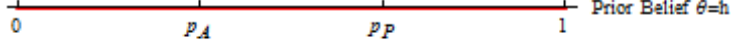
Beliefs are determined by Bayes' Rule wherever possible. If $x_A \notin \{l, h\}$, $\mu_P(t = \emptyset; x_A) = 1$.

Proof. Agency always takes the same action that OIRA itself would. Hence, no auditing. Note that if $t = \emptyset$, $\mu_A(\theta = h) = p$. Since $p \leq \mu_A^*$, Agency sets policy to l ; but so would OIRA since $\mu_A^* < \mu_P^*$. Although Agency has no incentive to deviate from its signaling strategy, the equilibrium must specify OIRA's beliefs in the even of an out-of-equilibrium message. As indicated, OIRA believes that Agency's received $t = \emptyset$ and without auditing re-sets policy to $x_F = l$. ■

A similar equilibrium involves "shared optimism": Here, absent definitive information to the contrary, both Agency and OIRA believe a high level of regulation is warranted.

PROPOSITION 3. (No-auditing due to shared optimism.) Suppose $p \geq \mu_P^*$. Then the following constitutes a no-audit equilibrium:

$$\begin{aligned}
 s(t) &= \begin{cases} x_A = l & \text{if } t = l \\ x_A = h & \text{if } t = \emptyset \\ x_A = h & \text{if } t = h \end{cases} \\
 r_1 &= 0 \forall x_A \\
 r_2 &= \begin{cases} x_F = x_A & \text{if } x_A \in \{l, h\} \\ x_F = h & \text{otherwise} \end{cases} \\
 r_3 &= \begin{cases} x_P = l & \text{if } t = l \\ x_F = h & \text{if } t = \emptyset \\ x_A = h & \text{if } t = h \end{cases}
 \end{aligned}$$



Beliefs are determined by Bayes' Rule where ever possible. If $x_A \notin \{l, h\}$, $\mu_P(t = \emptyset; x_A) = 1$.

Proof. Again, the Agency always takes the same action that OIRA itself would. Hence, no auditing. Note that if $t = \emptyset$, $\mu_A(\theta = h) = p$. Since $p \geq \mu_P^*$ it must also be the case that $p \geq \mu_A^*$. Thus Agency sets policy to h ; but so would OIRA. ■

The two propositions yield an obvious corollary, on the impact of similar preferences.

COROLLARY 4. The closer $\beta = 1$, the more likely a "shared beliefs" no-auditing equilibrium holds.

Proof. Recall $\mu_A^* = \frac{c}{\beta b}$ while $\mu_P^* = \frac{c}{b}$. Hence, as $\beta \rightarrow 1$, $\mu_A^* \rightarrow \mu_P^*$. In turn, for any prior belief about θ , it must lie on the same side of both μ_A^* and μ_P^* . This is the critical condition for a shared beliefs no-auditing equilibrium. ■

Figure XX illustrates the Corollary.

In the figure, if prior beliefs for both Agency and OIRA fall below p_A , both agree that – absent definitive evidence to the contrary – a low level of regulation is the prudent course of action. And, when priors fall about p_P , they both agree – again, absent definite evidence – that a gamble on a high level is warraented. But when prior beliefs fall in the intermediate range, the two disagree on the proper action, when definitive evidence is not available. In such a situation, OIRA favors the prudent course of low reguation while the Agency is willing to gamble. The conflict region shrinks to zero length as Agency's bias (relative to OIRA) goes to zero.

Though hardly surprising, the result indicates that President's will rarely want to audit ideologically proximate agencies and may want to audit distant ones.

We now turn to a more interesting equilibrium, and our central theoretical result. In this equilibrium, there is potentially a degree of tension between OIRA and the Agency because, absent a convincing cost-benefit report, OIRA prefers the "safe" course of $x_F(\emptyset) = l$ while Agency prefers to gamble with $x_F(\emptyset) = h$.

PROPOSITION 5. (Auditing equilibrium) Suppose $\mu_A^* < p < \mu_P^*$. Then the following constitutes an audit

equilibrium:

$$s(t) = \begin{cases} x_A = l \text{ if } t = l \\ x_A = h \text{ with probability } \sigma \text{ if } t = \emptyset \\ x_A = h \text{ if } t = h \end{cases}$$

$$r_1 = \begin{cases} 0 \text{ if } x_A = l \\ \rho \text{ if } x_A = h \end{cases}$$

$$r_2 = \begin{cases} x_F = x_A \text{ if } x_A \in \{l, h\} \\ x_F = l \text{ otherwise} \end{cases}$$

$$r_3 = \begin{cases} x_P = l \text{ if } t = l \\ x_F = l \text{ if } t = \emptyset \\ x_A = h \text{ if } t = h \end{cases}$$

Beliefs are determined by Bayes' Rule where ever possible. If $x_A \notin \{l, h\}$, $\mu_P(t = \emptyset; x_A) = 1$.

An outstanding empirical implication of the equilibrium is the following.

COROLLARY 6. Auditing probabilities increase with the magnitude of regulatory effort in the agency's proposed rule.

The principal issue in the equilibrium is the calculation of OIRA's auditing rate ρ when confronted with a high level of regulation in the proposed rule, and the calculation of Agency type $t = \emptyset$'s "cheating" probability σ (that is, the rate at which $x_A(t = \emptyset) = h$). //Finish typing up, work out comparative statics on auditing and cheating. //

ADD: Poor auditing ability (high prob of no revelation of t) leads to more auditing. This is an important comparative static !

IV. DATA

IV.A. Sources

Our empirical study focuses on OMB central clearance under EO 12866. The data cover 12 years, 1995 to 1996, six years each from the Clinton and Bush administrations.

We rely primarily on two data sources. The first is the Semi-Annual Unified Agenda of Federal Rule-making (UA), which is a record of all agency rulemaking activities in the federal government that agencies find to be substantive. Clinton's EO 12866 required agencies to report all of their substantive rulemaking

activities in the UA.⁵ Our second data source is the Regulatory Information Service Center's database of OIRA activity (the RISC data), which keeps a record of all the regulations audited by OIRA.

We merged the two datasets together using each regulation's Regulation Identification Number (RIN number) as follows. We first took the entire UA database and determined the first time a RIN number was mentioned. Oftentimes, a regulation first appears in the UA at the proposed rule stage or pre-rule stage. However, it is not uncommon for a regulation to first appear as a final rule (in most instances, this is probably because the final rule is a direct or interim final rule, and therefore agencies can provisionally proceed directly to the final rule stage). Regardless, we took the first instance of each RIN in the UA and coded whether the first mention occurred during the Clinton administration or the Bush administration. We treat the resulting populations of regulations associated with each administration as the universe of regulations from which an administration could audit. We then took the OIRA database and selected the first instance of OIRA review for each regulation. Similar to the UA, OIRA can review a regulation during the pre-rule, proposed and final stages. Most commonly, OIRA reviews a regulation first during the proposed rule stage, and then again at the final rule stage.⁶ We then coded whether the first instance of OIRA review for each RIN number occurred under Clinton or Bush.

Under EO 12866, OIRA does not review regulations from independent regulatory commissions. Therefore, we removed these regulations from the UA database. Figures IV - VIII indicate the agencies included in our analysis.

From the Unified Agenda, we were also able to collect some information specific to each regulation. In particular, agencies must note whether they believe the rule is (1) "economically significant," (2) requires a "regulatory flexibility" analysis, (3) imposes unfunded costs on state and local government, and (4) whether the agency issued a Advanced Notice of Proposed Rulemaking (ANPRM) for that particular rule. Each of these four variables is a plausible marker for an intense, high impact regulation, and thus a cue for regulatory auditing.

Under EO 12866, there is some flexibility as to what constitutes an economically significant regulation. In general, EO 12866 defines regulations with annual economic costs in excess of \$100 million annually to be economically significant. Yet, the order also allows rules to be designated as economically significant — regardless of cost — if they "adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities." Thus, agencies may designate a regulation as economically for a variety of reasons. EO

5. In fact, there are a small number of regulations (about 200) which we have been unable to find in the UA, but which nonetheless were reviewed by OIRA. Absent the covariates available for the other regulations, we must exclude them from our statistical analysis.

6. Sometimes OIRA will review a regulation many times, e.g., repeatedly reviewing a regulation at the proposed stage

12866 requires OIRA to review economically significant regulations but OIRA can re-classify a regulation's economic significance. In practice, OIRA reviews a considerable number of regulations that agencies do not report to be economically significant. Conversely, OIRA declines to review some regulations that agencies report as economically significant. Note that we employ the agency's designation, not OIRA's, as the latter can be seen as a post hoc justification for OIRA's auditing decision rather than a pre-auditing cue of regulatory intensity.

The Regulatory Flexibility Act of 1980 requires agencies to assess whether new federal regulations will have an effect on small enterprises. If agencies indicate that the regulation will affect small business, agencies must complete a regulatory flexibility analysis to determine whether the best available regulatory options have been chosen. Similarly, the Unfunded Mandates Reform Act of 1995 requires agencies to estimate the costs of any regulation that will result in an economic burden for lower levels of government.

We create a corresponding indicator variable for each of these four pieces of information for all regulation entries in the UA.

For each agency and sub-agency, we were able to determine the number of career bureaucrats employed and the proportion of those employees that were classified by the Office of Personnel Management (OPM) as "professional" employees. According to OPM's *Introduction to the Position Classification Standards*, examples of professional employees are engineers, chemists and accountants, while examples of non-professional employees include investigator, examiner, operator, clerk and aid. In this version of the paper, the data are from 2004 but it is unlikely that these measures change appreciably over time.

To measure the ideology of agencies, we used the measures developed in [Bertelli et al 2011]. The data are derived from a large survey of federal bureaucrats in 2007. The bureaucrats were asked their views on roll call votes taken in Congress; hence, the bureaucrats and their agency can be scaled in the same fashion as congressmen. The data are quite similar to those reported in [Clinton and Lewis 2008], which were based on the perceptions of agencies by a group of expert respondents. The measures in [Bertelli et al 2011] are more plausibly seen the ideologies of the personnel staffing an agency; the measures in [Clinton and Lewis 2008] might be seen as a measure of the liberal/conservative nature of the agency's mission.

IV.B. Number and Intensity of Regulations by Agency

Figure IV shows the total number of regulations issued by agency (recall that the data cover six years of the Clinton Administration and six years of the Bush Administration). As shown in the figure, several agencies were extremely heavy issuers of regulations; many other agencies issued far fewer regulations. The heavy issuers included the Commerce Department, the Treasury Department, the Department of Transportation,

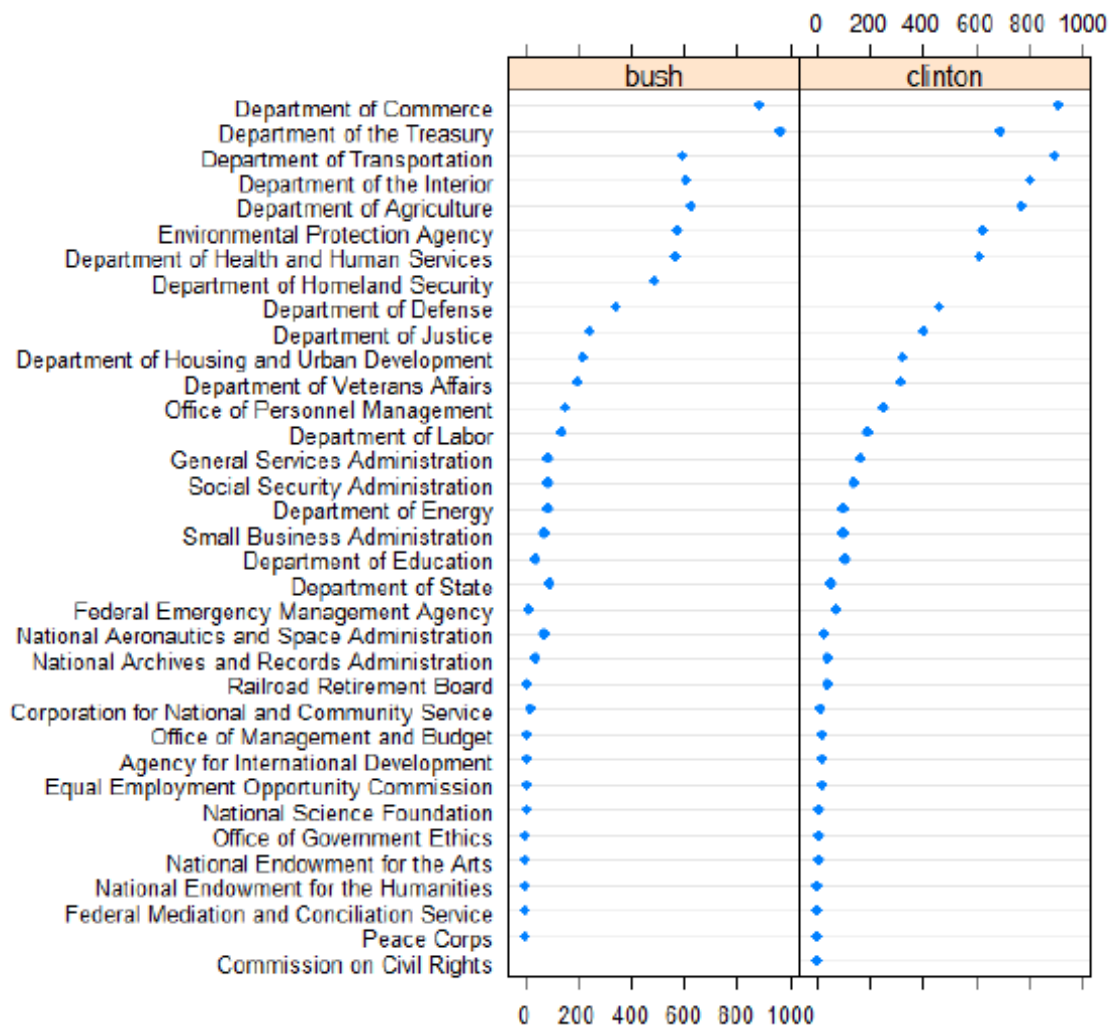


FIGURE IV: NUMBER OF REGULATIONS BY AGENCY

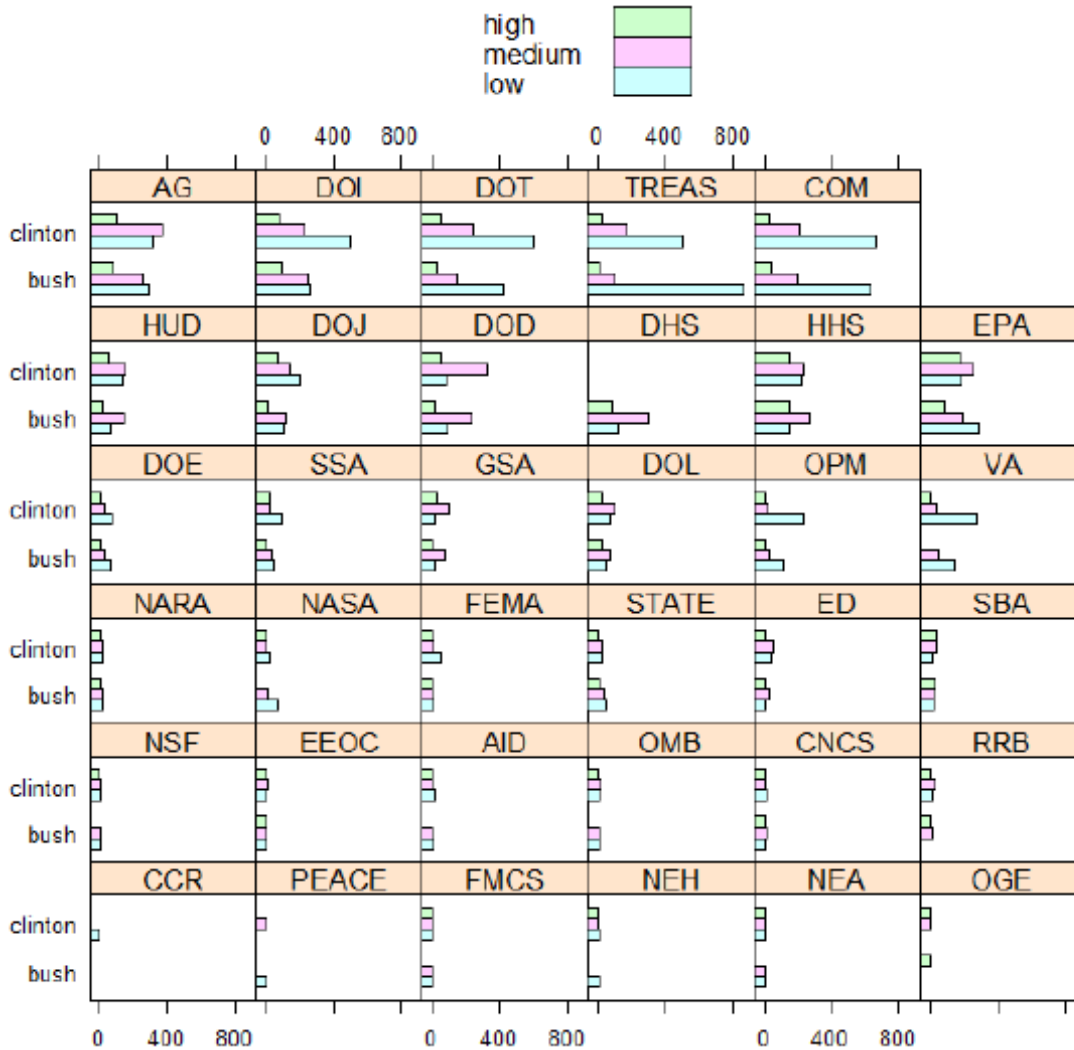


FIGURE V: DISTRIBUTION OF REGULATIONS BY REGULATORY INTENSITY, BY AGENCY

the Department of the Interior, the Agriculture Department, the Environmental Protection Agency, the Department of Health and Human Services, and the Department of Homeland Security. Light issuers, among those we study, included the Energy Department, the Education Department, and the Small Business Administration.

Perhaps even more important than the total number of regulations issued was the number of "big ticket" or relatively intense regulations issued. Here, largely for summary purposes, we examine the four measures of regulatory intensity – "economically significant," "regulatory flexibility," "governments affected," and "early notice of proposed rule-making" – in an effort to identify "high intensity" regulations. Straightforwardly, we factor analyze the four variables. The first three load approximately equally on the uncovered factor; the fourth does not load at all. We then divided the factor score into the top quarter (high intensity), the bottom quarter (low intensity), and the remained (medium intensity). Figure V displays the number of regulations

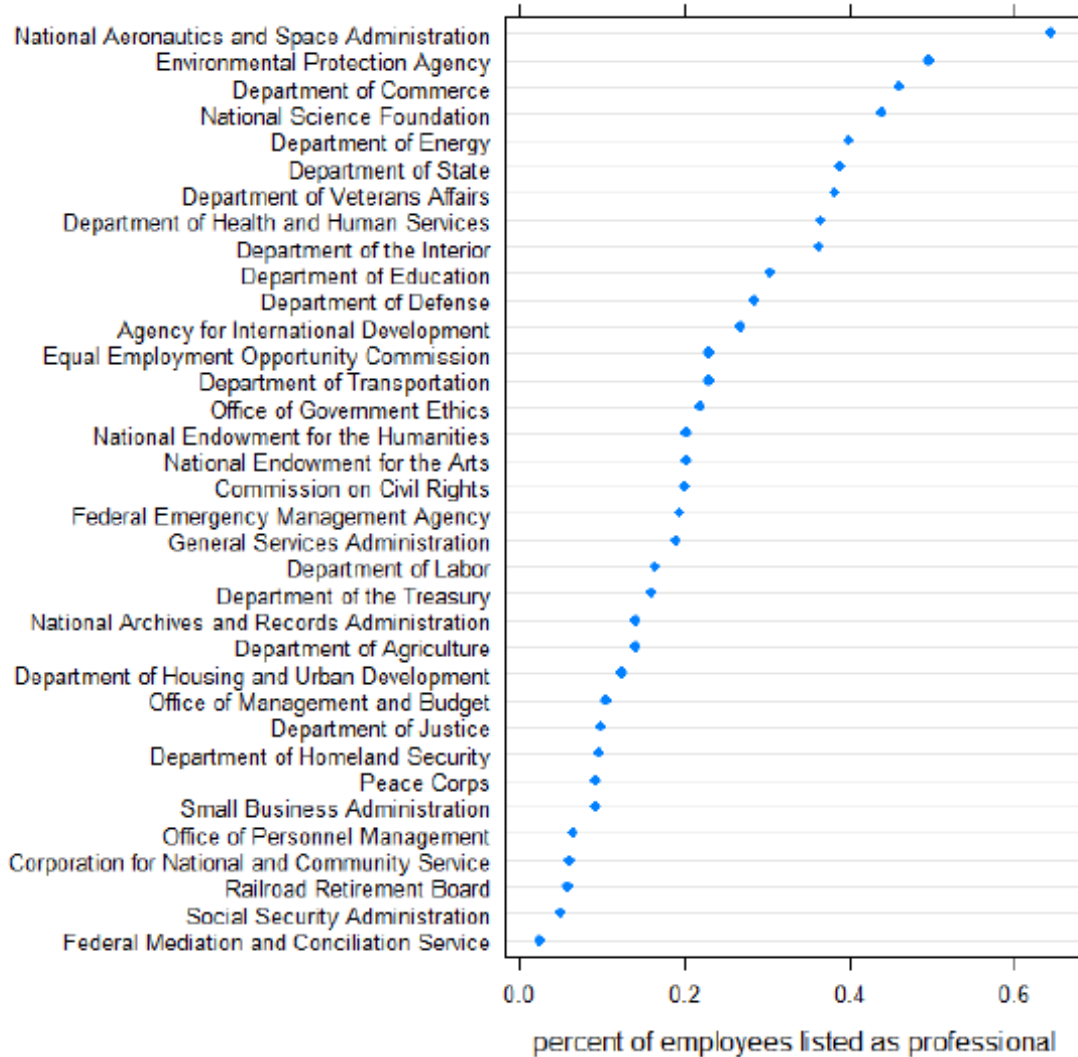


FIGURE VI: PERCENTAGE OF EMPLOYEES LISTED AS PROFESSIONAL

by agency in the three categories. This measure paints a somewhat different picture than does the simple number of regulations issued. For example, while Commerce, Treasury, and Transportation issued many regulations, relatively few of these score at high intensity, using the factor score. In contrast, EPA, DHHS, and DHS not only issued many regulations; they issued many high intensity ones as well.

IV.C. *Percent of Professional Staff by Agency*

Figure VI displays the percentage of professional staff by agency (in fact, in the analysis below, we employ the percentage of professional staff in the bureau issuing the regulation). The percentage of staff in professional categories can be seen as a measure of task complexity for the agency, a measure of the likely quality or credibility of analysis supporting a regulation, or a proxy for the analytical difficulty of

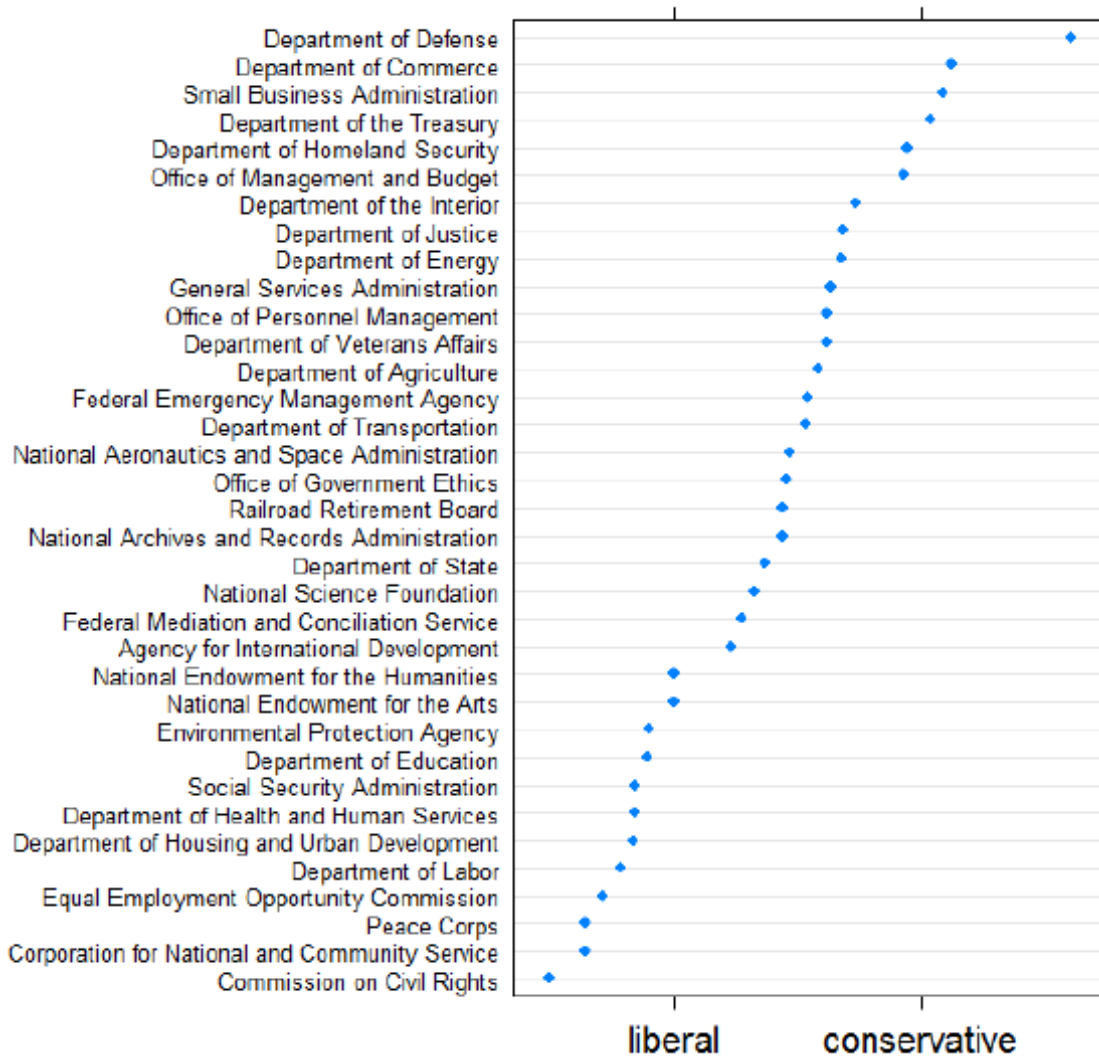


FIGURE VII: AGENCY IDEOLOGY

understanding and evaluating the rules issued by the agency. Agencies like NASA, EPA, and DOE employ a high percentage of professional staff. Others, such as the Social Security Administration, the Small Business Administration, or the Office of Personnel Management, employ a very low percentage of professional staff.

IV.D. Agency Ideology

The Clinton-Lewis data reveal several distinct ideological clusters or groupings, as shown in Figure VII. About a dozen agencies stand out as particularly liberal. These include such "likely suspects" as the Commission on Civil Rights, the EEOC, and the National Endowment for the Arts. Among this group, heavy regulators include the Labor Department, HUD, the Department of Health and Human Services, the Department of Education, and the Environmental Protection Agency. Five agencies (aside from OMB

itself) stand out as particularly conservative: the Department of Defense (in a class by itself), the Commerce Department, the Small Business Administration, the Treasury Department, and the Department of Homeland Security. The remainder of the agencies fall into an intermediate, moderate spectrum, ranging from the Agency for International Development (on the more liberal side) to the Interior Department (on the more conservative). In our view, the Clinton-Lewis estimates have a high degree of face plausibility.

V. OIRA'S TARGETING DECISIONS

We now turn to OIRA's targeting decisions. We are primarily concerned with per-regulation auditing probabilities, as a reflection of the strategic interaction between OIRA and the agencies. However, to provide a simple overview of the OIRA-agency interaction, we briefly example agency audit rates. For this overview, we emphasize simple visualizations using highly flexible non-parametric methods. We then turn to a more detailed, parametric estimation of per-regulation auditing probabilities.

In the per-regulation analysis, several of the key variables vary only across agencies (for example, agency ideology). Others, notably the four measure of regulatory intensity, vary by regulation. This multilevel structure suggests two analytical strategies, and we undertake both. The first approach employs a two-stage procedure. In the first stage, we estimate an audit probability equation using data on the 8,253 Clinton era regulations and the 7,294 Bush-era, including fixed effects for each agency and fixed effects for each year. The agency fixed effects control for all regulation-invariant influences on OIRA's targeting across agencies. Of course, inclusion of agency fixed effects precludes adding agency ideology, volume of regulations, and professional staff in the estimated auditing equation. In the second stage, we "decompose" the 35 estimated fixed effects using the variables that vary across agencies. This analysis reveals how a variable, like agency ideology, operates by shifting the intercept of the auditing equation. We conduct this analysis in the Appendix; it yields results virtually identical to those reported here. // Not shown in current version but done //

The second strategy employs a multi-level model (a random effects model) to gauge the impact of the regulation-specific variables and the agency co-variates simultaneously, incorporating random effects to control for all other time-invariant influences. This approach is arguably superior, in that estimates of agency effects reflect the varying number of observations for each agency. In agencies with few observations, the estimated agency effects borrow heavily from the overall effect estimated across all agencies [Gelman and Hill 2007]. In other words, the estimation uses information about the audit probabilities across all agencies in order better to estimate audit probabilities in agencies that promulgate few rules.

In this version of the paper we focus on varying intercepts model with agency-level predictors.

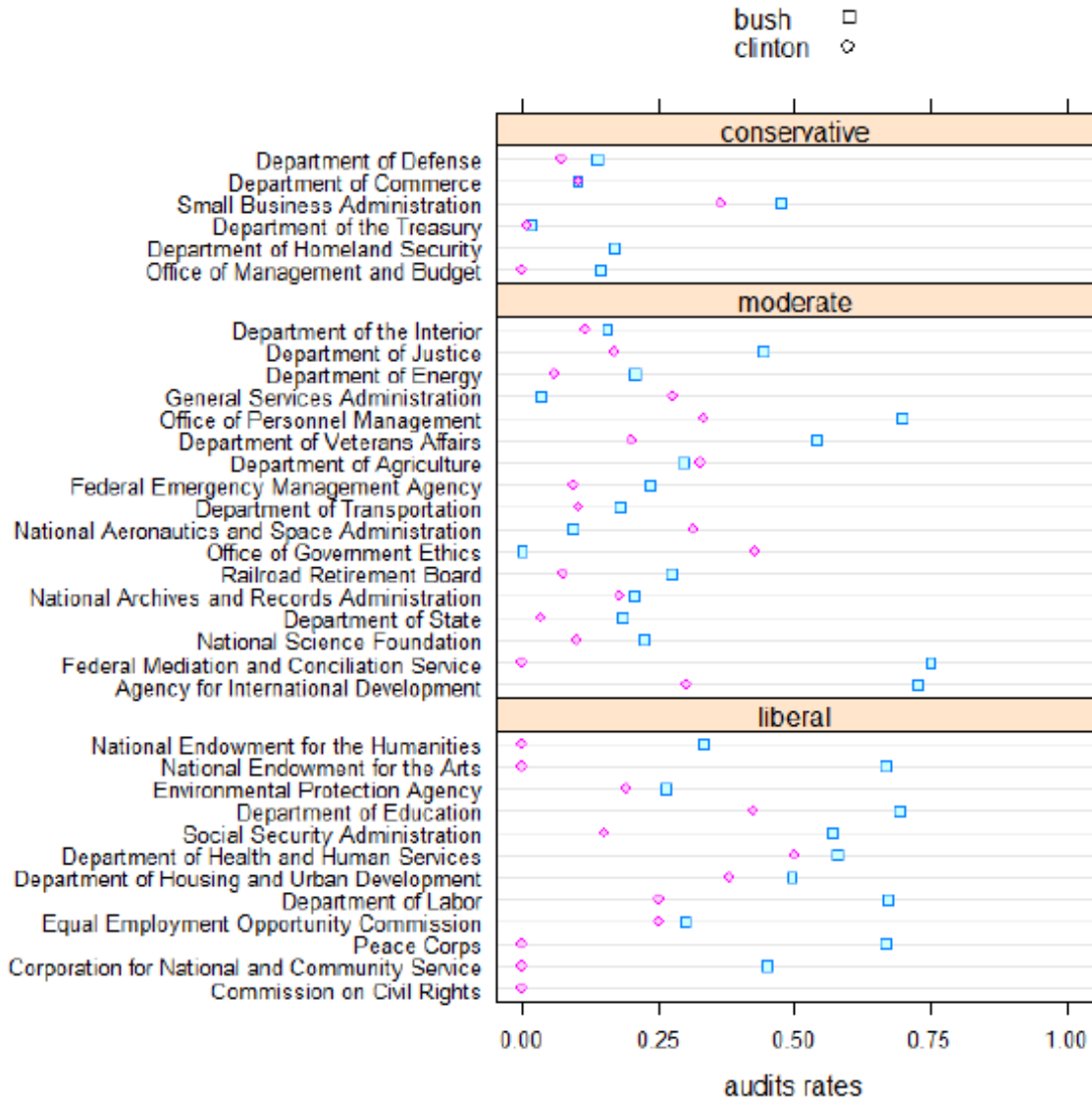


FIGURE VIII: AUDIT RATES BY AGENCY

V.A. Agency Audit Rates

Figure VIII indicates for 35 agencies during the Clinton and Bush administrations the percentage of issued regulations that OIRA oped to review – the agency audit rate. Agency audit rates varied widely across agencies, and often varied dramatically across the two administrations. Agency audit rates were near zero during the Clinton Administration for such liberal agencies as the Commission on Civil Rights and the Peace Corps. But rates were about 75% during the Bush Administration for the Federal Mediation and Conciliation Service, and nearly that high for a variety of other liberal agencies. The Clinton Administration’s overall audit rate of 19% was about one-quarter lower than the overall audit rate during the Bush Administration, 25%.

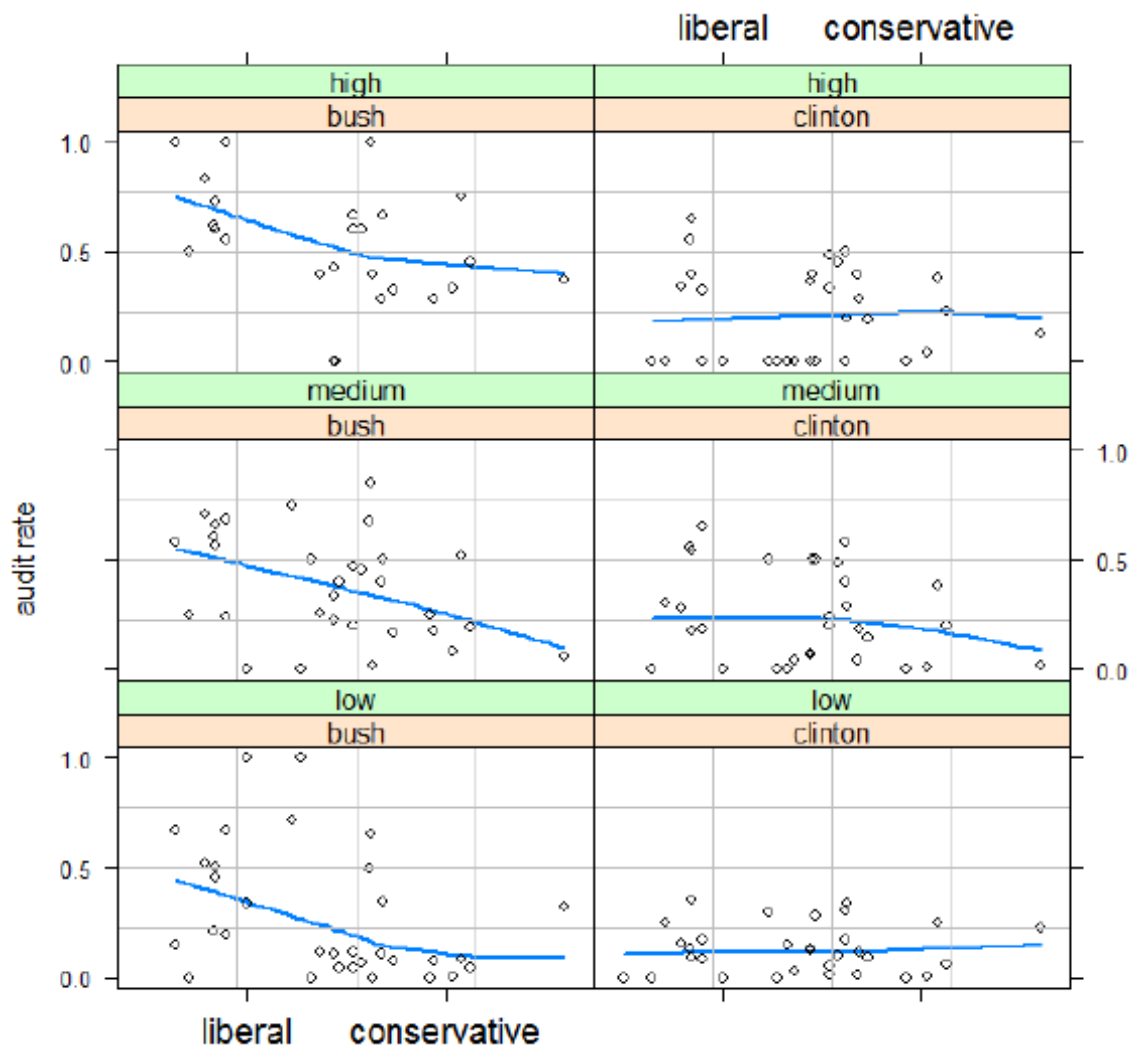


FIGURE IX: AGENCY AUDIT RATES, AGENCY IDEOLOGY, AND REGULATORY INTENSITY

Figure IX indicates important structure in the agency auditing data. Shown in each panel is the agency auditing rate as a function of agency ideology, estimated using a highly flexible non-parametric regression (a loess regression, span = 1, degree = 1). The left-hand panels concern the Bush Administration; the right-hand panels the Clinton Administration. The top panel focus on audit rates for highly intensive regulations; the middle panel, moderately intensive regulations, and the bottom panels focus on regulations that were not intrusive. As shown, at all levels of regulatory intrusiveness, the Bush Administration audited liberal agencies much more heavily than it did conservative agencies. It tended to audit more intrusive regulations more heavily than it did less intrusive ones, and did so for all agency ideologies. Thus, its highest agency audit rates were associated with intrusive regulations from liberal agencies. In contrast, the Clinton Administration did not appear to key agency audit rates to agency ideology. It appears to have audited less intensive regulations slightly less heavily than moderate and highly intensive regulations, but the difference is quite small.

V.B. Parametric Modeling of OIRA’s Targeting of Regulations

In order to study OIRA’s auditing strategy we estimate the following multi-level model:

$$(1) \quad \Pr(y_i = 1) = \text{logit}^{-1} (\alpha_{j[i]} + \beta_1 \text{economic} + \beta_2 \text{flex} + \beta_3 \text{govt} + \beta_4 \text{anprm}, \sigma_y^2)$$

$$a_j \sim N(\gamma_0 + \gamma_1 \text{ideology}_j + \gamma_2 \text{prof}, \sigma_\alpha^2)$$

where the probability that OIRA will review regulation i from agency j is a function of four regulation-level covariates: whether the agency recorded the regulation as economically significant (*economic*), whether the agency was required to complete a regulatory flexibility analysis for the regulation indicating large impacts on small business (*flex*), whether the agency recorded that the regulation would impose economic costs on lower levels of government (*govt*), and whether the regulation was introduced first through an advanced notice of proposed rulemaking (*anprm*). Equation (1) also shows that the probability of review is a function of the percent of professional personnel in the agency (*prof*) and the ideology of the agency (*ideology*) that promulgated the regulation.

Equation (1) takes advantage of the multi-level structure of our data, which has regulations nested within agencies. Note that the influence of γ_1 , the parameter we estimate for the effect of agency ideology on the probability that a regulation will be audited, works through the group-level intercept a_j .

We begin by estimating Equation (1) separately for the Clinton observations and the Bush observations. The results can be seen in Table I in Models 1 and 2, respectively. Recall that the variable *ideology* is coded so that liberal agencies have negative scores and conservative agencies have positive scores. Model 1 shows that

TABLE I

PER REGULATION AUDITING MODELS (LOGIT, MULTI-LEVEL)

	Clinton (1)	Bush (2)	Both (3)
Intercept	-1.97*** (0.21)	-1.56*** (0.21)	-1.96*** (0.16)
Ideology	-0.22 (0.18)	-0.63*** (0.18)	-0.40** (0.14)
Pct. Prof.	-1.39*** (0.24)	-0.47 (0.26)	-0.93*** (0.18)
Econ Sig	1.81*** (0.07)	1.91*** (0.07)	1.85*** (0.05)
Flex	-0.05 (0.11)	0.25 (0.14)	0.03 (0.09)
Govt	0.13 (0.13)	0.10 (0.10)	0.08 (0.08)
Anprm	0.45* (0.18)	0.59** (0.22)	0.50*** (0.14)
Bush			0.43*** (0.12)
Bush x Ideology			-0.10* 0.05
Log-likelihood	-3194	-3011	-6273
Deviance	6388	6023	12547
AIC	6406	6041	12569
BIC	6469	6103	12653
N	8253	7294	15547
Group 1	agency (34)	agency (34)	agency (35)
Group 2	year (6)	year (6)	year (12)

for the Clinton observations, agency ideology had no effect on the probability that a particular regulation was audited. Conversely, Model 2, which estimates per-regulation audit probabilities in the Bush years, has a parameter estimate on ideology that is strongly statistically significant and negative, indicating that regulations from liberal agencies were much more likely to be audited while regulations from conservative agencies were much less likely to be audited. This comports well with the model of strategic auditing presented earlier. The failure of the Clinton OIRA to target conservative agencies is an obvious puzzle.

The two administrations also look distinct with respect to the impact of agency professionalism on audit probabilities. For the Clinton observations, increased professionalism at the agency level was associated with lower auditing probabilities. For the Bush observations, increased professionalism was not associated with a statistically significant change in audit probabilities. An obvious implication is that the Clinton administration directed OIRA to target regulations from agencies that were not staffed by scientists and other technical experts. Plausibly, regulations from less professional agencies were subjected to more intense OIRA scrutiny because these regulations were considered relatively less reliable. Alternatively, regulations with less complex regulatory missions simply might have been easier for OIRA to review. One might interpret Clinton's OIRA as allocating its resources so as to review regulations where it could most easily improve regulatory quality. By contrast, the Bush years show no evidence of an association between agency professionalism and audit probabilities.

Both the ANPRM and economic significance indicators are strongly associated with a higher probability of auditing under both administrations. This finding is not surprising: OIRA is supposed to audit regulations that are reported by the agencies to be economically significant. Similarly, regulations that begin the rulemaking process with an ANPRM send a strong signal to OIRA that the rule is likely to be complex, involve a number of stake-holders and potentially be politically contentious. ANPRMs are used by agencies to solicit early-stage feedback on the rule from interest groups, as well as from political principals like the White House. It would certainly be surprising to discover that OIRA was not responding to such an obvious signal of regulatory impact.

On the other hand, the results from Models 1 and 2 show that OIRA did not use regulatory flexibility analysis or unfunded mandates as an audit trigger, in either the Clinton or Bush administrations. One possibility for this is that there are common features across rules that are both economically significant, utilize an ANPRM and have regulatory flexibility and unfunded mandate requirements.

Model 3 in Table I pools the observations across both administrations but allows differential impact from the ideology variable. Not surprisingly, the coefficients appear as weighted averages of those in the separate regressions. Here, the coefficient on the ideology variable suggests that both administrations audited regulations from liberal agencies more intensely, though the Bush administration clearly did so with much

TABLE II

PER REGULATION AUDITING MODELS (SHORTER VERSION)

	Clinton (4)	Bush (5)	Both (6)
Intercept	-1.78*** (0.22)	-1.16*** (0.21)	-1.73*** (0.17)
Ideology	-0.31 (0.20)	-0.72*** (0.19)	-0.47** (0.15)
Pct. Prof.	-1.55*** (0.23)	-1.06*** (0.25)	-1.27*** (0.17)
Intensity	1.77*** (0.14)	2.62*** (0.16)	2.06*** (0.10)
Bush			0.57*** (0.09)
Bush x Ideology			-0.12* 0.05
Log-likelihood	-3468	-3259	-6825
Deviance	6936	6518	13649
AIC	6948	6530	13665
BIC	6990	6572	13727
N	8253	7294	15547
Group 1	agency (34)	agency (34)	agency (35)
Group 2	year (6)	year (6)	year (12)

greater vigor. We tend to see the estimates from the separate estimations as more plausible.

As an alternative specification, we estimated the following somewhat terser multi-level model:

$$(2) \quad \Pr(y_i = 1) = \text{logit}^{-1}(\alpha_{j[i]} + \beta_1 \text{intensity} + \beta_2 \text{anprm}, \sigma_y^2)$$

$$a_j \sim N(\gamma_0 + \gamma_1 \text{ideology}_j + \gamma_2 \text{prof}, \sigma_\alpha^2)$$

where intensity is the factor score estimated from the three separate variables, *economic*, *flex*, and *govt*. The results are shown as Models 4-6 in Table II. The coefficients across the two specifications are extremely stable, though the fit of the second, more parsimonious model is not quite as good.

To better assess the substantive significance of the results, Figure X displays the predicted probabilities of an audit in three agencies. HUD is a very liberal agency, Agriculture is moderate agency, and Commerce is a very conservative agency. estimated varying intercepts by agency, plotted against the agency's ideology. As shown, the effect of regulation size is rather modest. The illustrative plots may suggest that ideology has a considerable impact on audit probabilities.

To investigate this point further, Figure XI displays estimated agency intercepts, with ± 1 standard error bars, plotted against agency ideology. Also shown is the multi-level regression line $\gamma_0 + \gamma_1 \text{ideology}_j$.

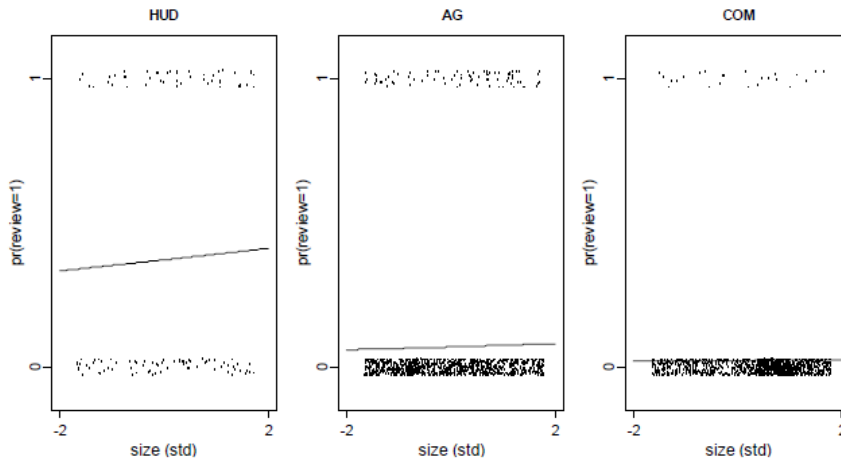


FIGURE X: AUDITING: ESTIMATED AUDIT PROBABILITIES IN THREE AGENCIES

The agency coefficients roughly follow the line but not exactly, reflecting the random component in the intercepts. Nonetheless, one sees rather clearly the effect of agency ideology on the intercepts for the Bush observations, e.g., the intercept for the Commerce Department is much lower than that of the Social Security Administration. The relationship is much weaker for the Clinton observations.

Agency ideology has a considerable impact on the intercept coefficients, suggesting the systematic contribution of agency ideology to audit probability. The office of Personal Management stands out as an outlier: its regulations were audited at an unusually high rate. agencies stand out as outliers

VI. REVISING RULES

// Remains incomplete in this version of the paper //

VII. DISCUSSION AND CONCLUSION

Regulatory auditing by Bush’s OIRA strongly resembles what one might expect if liberal agencies committed to their mission sometimes pushed forward even in the face of uncertain evidence, and a conservative president used OIRA as a means to restrain them.

The patterns under Clinton’s OIRA – in particular, the evident failure to target regulations from conservative agencies, either to encourage more vigorous regulation or to shift the conservative agency’s regulatory focus – are harder to understand. However, in 2003 an evaluation of OIRA auditing conducted by the General

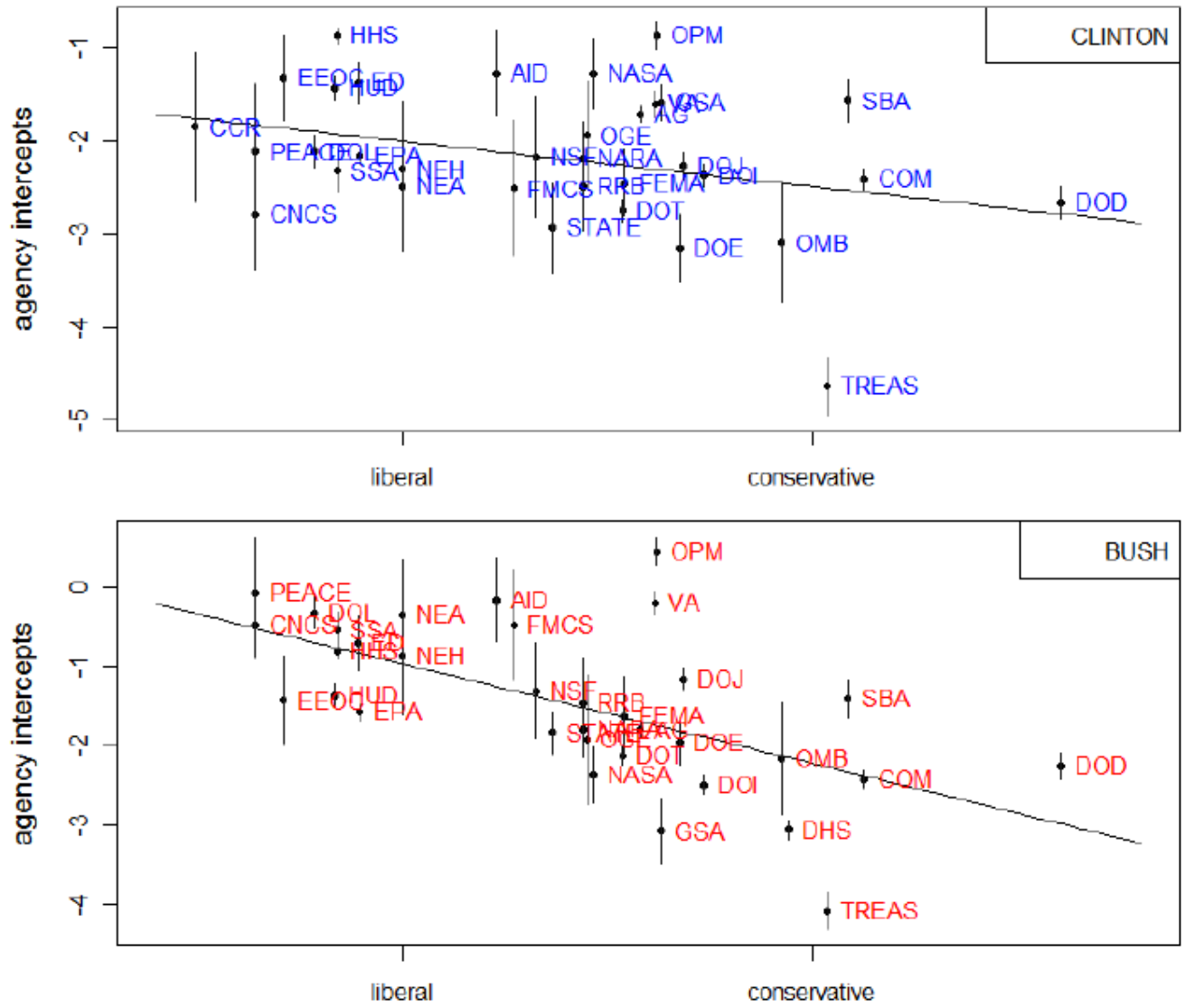


FIGURE XI: ESTIMATED AGENCY INTERCEPTS PLOTTED AGAINST AGENCY IDEOLOGY

Accounting Office reported "a shift in how OIRA's administrators view the office's role in the rule-making process – from 'counselor' to the agencies to regulatory 'gatekeeper.'" [General Accounting Office 2003] Elaborating on this point, a recent CRS study of OIRA notes

In September 1996, the then-administrator of OIRA testified that "we have consciously changed the way we relate to the agencies," and described OIRA's relationship with the rulemaking agencies as "collegial" and "constructive." She also said she agreed with an article that said OIRA functioned during that period "more as a counselor during the review process than as an enforcer of the executive order." [?]

On this account, the patterns we find may suggest a failure by President Clinton's agents in OMB to serve his interests as aggressively as one might have expected.

APPENDIX I

//Decomposition of fixed effects.//

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