

INTER-AGENCY LEARNING IN UNITED STATES REGULATORY POLICYMAKING

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While a number of scholars have evaluated the strategies driving congressional decisions to delegate regulatory authority to administrative agencies, the literature has been largely restricted to evaluating the relationship between Congress and its administrative agent. I argue that this presents an incomplete picture of implementation given that it is typically carried out by multiple administrative actors that interact in multiple contexts and that share political principals. Such arrangements for overlapping jurisdiction and interagency organizations provide opportunities for agencies to learn from one another about the constraints of the political environment within which they are operating. This paper provides a preliminary examination of the extent to which administrative agencies can learn *from other agencies* the preferences of shared political principals and use that information to reshape their regulatory strategies. Using original data on Court of Appeals litigation directed at administrative agencies from the 93rd to the 113th Congress, as well as congressional delegation to administrative agencies within the text of the Statutes at Large, I provide preliminary evidence that when an agency observes a closely-linked agency facing legal constraints, it reshapes its own regulatory strategy so as to provoke less costly litigation. The results pave the way toward further, more in-depth examination of the spillover effects of bureaucratic punishment and the ways in which this inter-agency learning takes place over time.

Within Section 3012 of the Patient Protection and Affordable Care Act (2010), Congress called for the creation of an Interagency Working Group on Health Care Quality to facilitate the collaboration, consultation, and coordination on making progress toward national goals on health quality improvement, as well as to avoid inconsistency or duplicative work among agencies engaged in implementation in this domain. In addition to those agencies traditionally engaged in healthcare regulation (*e.g.*, Department of Health and Human Services (working group chair), Centers for Medicare and Medicaid Services, Centers for Disease Control and Prevention), also included in this working group were the Department of Commerce, the Federal Trade Commission, the Department of Labor, the Federal Bureau of Prisons, and the Department of Education, to name just a few. The congressional provision of such institutions highlights the complexity of contemporary policymaking – drawing on multiple and diverse sources of expertise – and provides a wealth of opportunities for agencies to be influenced by one another in the development of rules and enforcement strategies in a complex and often conflictual political environment.

The strategies underlying congressional delegation to administrative agencies has occupied the scholarly agendas of political scientists for decades. Such avenues of inquiry have produced valuable insights as to the utilization of procedural tools with which to manage agencies (*e.g.*, McNollgast 1987, 1989; Bawn 1995; Epstein & O’Halloran 1999), the utilization of the more efficient model “fire alarm oversight” of agencies (McCubbins & Schwartz 1984), appropriations politics (Kiewiet & McCubbins 1991; McDonald 2010), the development of bureaucratic autonomy (Carpenter 2001), the specificity with which legislatures draft the legislation delegating to those whom they want to constrain (Huber & Shipan 2002), and the trade-offs between delegation to agencies versus mobilization of private litigants (Farhang 2010). However, an important limitation in all of this important scholarship is its restriction to models of Congress working to constrain *an agency*, when in practice, agencies rarely operate in isolation. Indeed, from joint rulemaking to interagency working groups, agency interactions seem to be frequent and ever-increasing.

A number of legal and political science scholars have acknowledged the fragmented nature of the American administrative state, with James Q. Wilson referring to American policy implementation as a “barroom brawl” with “many participants” and “no referee” (1989: 297-301). Such a fragmented system of governance stands in contrast with a more centralized and hierarchical sys-

tem governed by only a few key authoritative actors, as is more characteristic of European policy implementation, which Wilson characterizes as a centralization in executive affairs that “facilitated the process of controlling the administrative agencies and bending them to some central will” (1989: 377). The extensive division of responsibility among institutional actors in the United States, he argues “insures, if not causes, clumsy and adversarial regulation; there the unification of powers permits, if not causes, smooth and consensual regulation” (Id).

Such a characterization of the structure of the American political system is apt. With over a dozen cabinet posts – not to mention numerous subdivisions within executive cabinets – as well as dozens of independent agencies and government-owned corporations, the eleven Courts of Appeals along with the Federal Circuit and the DC Circuit, district courts, and state-level agencies and courts, United States policy implementation is scattered both horizontally (federal-level) and vertically (federal, state, and local) across innumerable sources of institutional authority in the American regulatory state. And when these different institutions each holds some measure of autonomy but also acts in interaction with – or even relying on – other institutions, there is ample opportunity for efficiency-enhancing information transmission and productive competition, but also the potentially more detrimental competition over “turf” as well as coordination challenges in making policy.

Despite the assumption of this complex implementation structure – with a number of administrative actors and agencies involved in a statute’s enforcement, and an increasing amount of overlapping jurisdiction, with multiple agencies tasked with the same enforcement responsibilities over the same policy provisions (e.g., joint rulemaking) – scholars have addressed its causes from normative more so than empirical perspectives (e.g., Gersen 2006; Freedman & Rossi 2012) and had not until recently formulated a measure of this administrative fragmentation. Such a measure is needed to answer such questions as the factors explaining fragmentation’s patterns and persistence over time as Congress continues to delegate authority to the executive branch to varying degrees and with the constraints of fragmented authority (Moe 1989; Farhang & Yaver 2016), statutory specificity (Huber & Shipan 2002), the mobilization of private litigants (Farhang 2010), and procedural constraints (McNollgast 1987, 1989; Epstein & O’Halloran 1999).

Farhang & Yaver (2016) provide the first systematic measure of fragmentation – a composite

indicator incorporating the number of actors, agencies, and instances of overlapping jurisdiction over particular policy provisions – and find that divided government and electoral uncertainty are powerfully associated with congressional decisions to fragment authority across multiple actors and agencies and to create overlapping jurisdiction among those actors, with the goal of guarding policy against bureaucratic drift from the executive branch and against coalition drift from future congressional coalitions. They find that these fragmented policymaking designs have been particularly common since the late 1960s with the onset of prevalent divided government. Within this domain of significant regulatory legislation – defined as that which contains commands or proscriptions of domestic entities (*e.g.* no employer may discriminate) – they find that laws contain implementation from an average of approximately four administrative actors within approximately three separate agencies.¹

But while this study provides new insights into the *causes* of such legal designs, we do not yet know the *consequences* of these congressional choices with respect to the policies we ultimately observe. Yet a range of consequences can emerge from the complexity of such institutional arrangements, from the difficulty of determining *to which agency* to defer in the midst of competing statutory interpretations, to evaluating the extent to which overlapping jurisdiction produces shirking or productive competition among agencies, to understanding the nature and extent of information spillovers among those interacting agencies. After all, by looking only at the “treatment” of funding rescission against a given agency that interacts frequently with other administrative actors who are risk averse and seek to avoid themselves facing funding rescission, there may be thus far unaccounted-for implications of congressional and judicial constraints on agencies’ regulatory latitude. That is precisely what this project takes up, evaluating the following core questions: To what extent, and under what conditions, will agencies be best equipped to learn from one another and adapt their implementation behavior accordingly? When will agencies invest in learning about other agencies’ policies and interactions with shared principals, and what statutory designs are most conducive to that learning taking place? And given agencies’ ability to observe these institutional interactions and thus the potential for spillover effects, what are the broader policy ramifications

¹Administrative actors/agencies were coded as being engaged in statutory implementation if they played a core regulatory function: rulemaking, administrative adjudications/hearings, administrative sanctions, and the prosecution of lawsuits.

of bureaucratic punishment by Congress and courts?

The answers to these questions have important implications for the scope of state capacity over time as Congress, courts, and agencies continue to interact and battle over the policy location. As congressional coalitions craft legislation that delegates implementation power to administrative agencies, it has a number of tools at its disposal to help it to manage *drift*, often by way of instituting procedures that constrain the range of actions available to the implementing agents and that allow for interest groups and others to raise “fire alarms” when violations are suspected (McCubbins & Schwartz 1984). When violations are detected, the DC Circuit and congressional coalitions are both able to intervene, whether by striking invalid the agency’s action or revising the statutory delegation, both instances of which Yaver (2016) finds with great frequency with respect to the Environmental Protection Agency. Such institutional interventions in agency policymaking can impose important constraints on that agency’s subsequent capacity to carry laws into effect. However, what we do not yet know, and what this project seeks to evaluate, is the broader effect of that bureaucratic punishment in shaping larger swaths of administrative action *by multiple agencies* who observe those signals from the shared political principals of Congress, courts, and interest groups. That is the subject of this paper’s inquiry.

Defining Agency Learning

By *agency learning*, I refer to the adaptation of regulatory strategy based on information gathered from observing other administrative agencies. I expect that litigation and legislative challenges against an agency will provide other agencies with valuable information about other institutions’ propensity to intervene in regulatory decisions. I expect also that agencies will prefer to operate without constraints and interference by Congress and courts, and thus will act to avoid such intervention when possible. Thus, it is rational for agencies to seek to take cues from the broader political environment in which they and other agencies operate, and to update their strategies when appropriate.

Learning as discussed here thus involves the acquisition of information about the political environment that the agency would not otherwise obtain through its *direct* interactions with the other political institutions. I draw on May’s (1992) characterization of this phenomenon of political learn-

ing, whereby “[a]ny observation of experience – trial-and-error or systematic; direct or indirect – provides a basis for, but does not guarantee, learning,” which is distinct from merely copying or mimicking behaviors and instead “implies improved understanding, as reflected by an ability to draw lessons about policy problems, objectives, or interventions” (1992: 333). That information acquisition can shape to what extent a policy choice is still viewed as preferable to available alternatives. Thus, whether better informing an institution (*e.g.*, administrative agency) about the nature of a policy problem or about the political feasibility of a solution to that problem, learning allows an entity, through observation of other institutional interactions in the political environment, to update its beliefs and apply that new information to future policy choices.

While learning is arguably valuable to the institution in question, providing it with better information about effective policy interventions and likely interactions with other institutions, it is not a costless act on the part of the institution given the effort required to obtain the necessary information. Moreover, the costs are not distributed evenly for different agencies, given the greater ease with which some agencies may acquire information from one another given their extent of interaction with one another in the congressionally-designed statutory framework within which the agencies implement, and given the complexity of the policy within which the agency is operating.

In the context of policy diffusion, Shipan and Volden (2008) characterize in the process of learning as enabling states to serve as laboratories of democracy, with observations about policy adoptions and their impact enabling policymakers to learn from the experiences of other governments (2008: 841). In the absence of direct interactions thus far with potential litigants, an agency may apply information gleaned through regulatory strategies proving successful or unsuccessful in other relevant contexts. Shipan and Volden’s (2008: 842) characterization of spillovers of information regarding policy and competition across political jurisdictions, as well as their characterization of policy imitation, thus mirrors well my characterization of administrative agencies learning about the risk of litigation in their regulatory environments. Moreover, the fact that administrative agencies routinely cite one another in their promulgated rules provides at least some preliminary evidence that agencies are not merely *observing* the behaviors of one another, but also *incorporating* that information into their own regulatory choices through this learning process.

The Incentive to Learn

Outside of the literature specific to bureaucratic politics, the literature on policy diffusion has centered on the following incentives for diffusion: imitation, emulation, and competition (Karch 2007: 59). When states – or in this case, agencies – view themselves as similar in some key feature and observe a given policy adoption, they believe that they themselves should adopt the policy as well. Such might be the case in evaluating policy adoptions across distinct financial regulation agencies, which are distinct entities but clearly share policy domains and thus fields of expertise. Additionally, with the goal of emulation, sometimes referred to as “social learning,” the successful policy adoption in one case can lead others to seek to copy its success (Id at 61). Finally, policy adoption can come by way of competition, with actors fearing that the failure to adopt a policy will put them at a comparative disadvantage if the given policy is viewed as successful.

In the proceeding analysis, I assume that administrative agencies will have dual incentives to learn from one another, with one pertaining to an *informational* advantage, and the other pertaining to *risk aversion* with respect to constraints from other actors.

A central argument in favor of congressional delegation to administrative agencies, as well as in favor of judicial deference to administrative agencies, is that of administrative expertise. In the landmark administrative law holding of *Chevron v. Natural Resources Defense Council* (1984), the Supreme Court held in its majority opinion that “[j]udges are not experts in the field, and are not part of either political branch of the Government... In contrast, an agency to which Congress has delegated policymaking responsibilities may, within the limits of that delegation, properly rely upon the incumbent administration’s views of wise policy to inform its judgments.” That administrators possess greater expertise than do judges is not controversial, and questions instead center on the proper degree of deference afforded those administrators, and the best ways for Congress to manage the competing interests of capitalizing on that expertise while also maintaining political control (Bawn 1995; Epstein & O’Halloran 1999; Gailmard & Patty 2012).

If delegation is more common within domains that are more technically complex and thus more costly for Congress to monitor itself (and more rational to draw on agency expertise for implementation), there is reason to expect that there efficiency gains in agencies drawing on additional

sources of expertise in promulgating rules under those conditions. Expertise can rightly be viewed as central to an agency's ability to give policy advice and carry laws into effect, and that expertise with which they operate can create notable information asymmetries with their political principals, which Congress can work to mitigate through procedural controls such as reporting and consultation requirements. Addressing the influence of interest groups over agencies, Yackee argues that interest group comments made through the notice-and-comment rulemaking process provide important new sources of information and expertise in the rulemaking process (2006: 105), holding that agency responsiveness to comments suggest that bureaucrats are not relying simply on their existing expertise but incorporating new information into their decisionmaking. While this is in no small part strategic for reasons of risk aversion, it suggests nevertheless a motivation on the part of agencies to acquire new information with which to make better informed regulatory choices. And while that information may well come from an agency's direct interactions with those interest groups and with Congress, within the domain of greater technical complexity such that there are more agencies involved to some degree, valuable information can also be obtained by observing *other* agencies' behaviors.

I argue also that agencies will seek to avoid suffering the costs of punishment for their regulatory actions, whether in the form of funding rescissions or in the form of forcing the agency to engage in costly litigation. Such a process is consistent with the notion of policy emulation by way of avoiding punishments observed in other agencies, or following in the footsteps of agencies successfully regulating without interference from other political actors. The dominant models of congressional delegation to administrative agencies assume compliance with legislative dictates given the costs that would be incurred for deviating (however, see Gailmard 2002, Huber & McCarty 2004). This rational preference for avoiding punishment thus shapes the agencies' regulatory strategy with respect to Congress, as well as with respect to interest groups whose preferences are voiced in the notice-and-comment rulemaking process and who may threaten legal challenges to the agency if concerns are not addressed in the final rules (Yackee 2006: 105). Given the finding of the frequency with which agencies do in fact adjust rules to better match preferences, one can make the reasonable conjecture that agencies will seek to avoid punishment from the other political actors with which they interact. While notice-and-comment rulemaking is a process that provides one source

of valuable information about interest group preferences and the potential grounds for future legal challenges, observing the broader set of institutional interactions with other administrative agencies can likewise prove valuable.

Moreover, such learning can advantage agencies in two respects: by informing the agency of when it must be vigilant in its enforcement so as to avoid punishment, as well as when exerting costly effort toward enforcement will *not* likely be necessary in order to escape that punishment. While I argue that there is important information conveyed if the Environmental Protection Agency is challenged for dragging its feet with respect to rulemaking, should the Environmental Protection Agency fail to face consequences for that foot-dragging, agencies seeking to shirk or otherwise focus efforts elsewhere may use that information to justify adapting their regulatory strategies accordingly.

Opportunities to Learn

While this project has the ultimate goal of evaluating the conditions under which agencies do successfully learn from one another in going about their regulatory agendas, I begin by evaluating the conditions under which such learning would be most likely to occur. Such an opportunity for interagency learning can be seen quite aptly in the joint rulemaking endeavors between the Department of Transportation and the Environmental Protection Agency, which have not only developed joint and consistent standards pertaining to fuel economy and emissions, but also drafted common preambles to comment dockets, shared research, and jointly solicited comments through the notice and comment rulemaking process, through which interested parties may convey their support or opposition to the agency’s proposed rulemaking activity. Such substantive information conveyed through comments, as well as additional information conveyed through the signaling of opposition, can valuably inform an agency as to both current and future reception to its activities.

Congress’s increased reliance on fragmenting authority across different institutional actors – as well as constructing implementation in ways so as to force interaction among agencies – can be seen plainly in the trend of congressional provision for interagency working groups, tracked in Figure 1. To identify this, I conducted word searches for “interagency task force” and “interagency working group” within the Statutes at Large (all public laws) from the 73rd to the 113th Congress

(1933-2013), which produced a total of 2,781 interagency provisions over the course of the data.

Figure 1 plots the time series of the number of times such interagency groups were mentioned in the statutes. While the early period of the data going back to the Roosevelt Administration exhibit few if any such references, with the first interagency reference appearing in the 78th Congress (1943-44), such organizations become more common beginning in the Nixon Administration, with a marked increase under President George H.W. Bush, and reached their peak in the 111th Congress (2009-10). Indeed, while the average number of interagency provisions per Congress under the Ford Administration was 28, it rose to 88 per Congress under Reagan, 169 per Congress under Bush 41, 132 per Congress under Clinton, and 194 under Bush 43. While the most recent years demonstrate a decline relative to the 108th to the 111th Congresses, their frequent usage over recent decades provides support for the salience of this matter of inter-agency interactions and the need for greater scholarly attention to the mechanisms through which agencies adapt their regulatory behavior as a consequence of these interactions in policymaking.

Such interagency groups span a number of different policy domains, often with both multiple cabinet departments as well as independent agencies joining forces toward a given policy goal. For example, the Counterfeit Pharmaceutical Inter-Agency Working Group is comprised of the Department of Agriculture, Department of Commerce, Department of Health and Human Services, Department of Homeland Security, Department of Justice, Department of State, and the Executive Office of the President. However, the Interagency Working Group on Youth Programs is comprised not only of all cabinet-level posts including the Environmental Protection Agency, but also of the Social Security Administration, the Small Business Administration, the National Science Foundation, the Corporation for National and Community Service, and the Office of National Drug Policy. The Interagency Working Group for the Consistent Enforcement of Federal Labor, Employment, and Immigration Laws, however, is comprised only of the Department of Labor, Department of Homeland Security, Department of Justice, the Equal Employment Opportunity Commission, and the National Labor Relations Board. From the example of these three interagency working groups, we see that the Departments of Labor, Justice, and Homeland Security engaged together in all three groups; the Departments of Agriculture, Commerce, Health and Human Services, and the State Department engaged together in the former two groups; and the remaining agencies were

only in one such group. Thus, there is both extensive interagency interaction as well as variation in the extensiveness of particular agency ties.

Likewise, one can see in Figure 2 that Congress has, using other language, increasingly provided for some measure of shared responsibility among federal agencies. I conducted in the Statutes at Large word searches for whether a Secretary, Administrator, Commissioner, or Agency “shall jointly” enforce or carry out some statutory provision, and whether Congress was making reference not to a Secretary or Administrator but rather to Secretaries, Administrators, or Commissioners – that is, implying collaboration among multiple administrative actors. I then normalized both variables to fall between the values of 0 and 1 so as to facilitate easy comparison graphically. Figure 2 demonstrates that while there have been ebbs and flows over time, there is, using this additional metric, a greater overall use of such language of shared implementation responsibility in recent decades. Such is also the case when evaluating the patterns in Congress combining other administrative actors, such as “Secretary” and “Administrator” or “Commissioner” and “Administrator” falling within the same sentence. These cursory evaluations of the statutory language provide reason to believe that given this increased congressional tendency toward overlapping jurisdiction, there should be increased opportunity for administrative agencies to learn not simply from their interactions with their political principals (*e.g.*, Congress) but also from one another given observations of other agencies’ interactions with shared political principals. Thus, if two agencies share authority over a statute and one is dragged into court repeatedly due to lax rulemaking, there is the potential that *even absent any direct punishment*, the second agency might, upon observing that increase in lawsuits, become more vigilant in its regulation so as to avoid facing costly litigation in future periods.

The frequency with which different agencies operate in isolation versus being discussed in the context of joint enforcement is quite varied. Indeed, while “Secretaries” is never used within a sentence of the Secretary of Housing and Urban Development, the Department of Health and Human Services is mentioned in conjunction with Secretaries as many as 10 times within a Congress (average of 2.5), the Department of Interior is mentioned in conjunction with Secretaries as many as 34 times within in Congress (average of 9.4), and the Department of Defense is mentioned in conjunction with Secretaries as many as 81 times within a Congress (average of 16.7). Thus, these

different administrative agencies appear to, at least by this measure, have their regulatory authority discussed in light of other secretaries and cabinets to highly varied degrees both in total and over time.

The extensiveness of these interagency interactions can be seen further in agency citations to rules within the Code of Federal Regulations. While it is to be expected that an agency would cite its own rules, one finds in fact a diversity of agency citations, with, for example, C.F.R. Title 47 on Telecommunications including citations to rules from Title 12 (Banks and Banking), Title 13 (Business Credit and Assistance), Title 16 (Commercial Practices), and Title 17 (Commodity and Securities Exchange), to name a few. While this does not necessarily imply learning, it does suggest familiarity with and attention to other agencies' regulatory behavior, which may be construed as a necessary condition for learning to take place.

To determine the closeness of particular agencies with respect to statutory design, I conducted word searches within the Statutes at Large for when a given pair of agencies (or its Secretary or Administrator) was mentioned within one sentence of each other (that is, the frequency of the Secretary of Transportation and the Secretary of Labor as opposed to the Secretary of Transportation and the Secretary of Education being paired). I expect that when the statutory language is structured in this way, the agencies will be sharing some authority or engaging in some regulatory activity that is related to one another such that there will be greater opportunity for those agencies to learn from one another. This was confirmed when reading a random sample of fifty codes, and identifying statutory provisions such as, "The Interstate Commerce Commission, in consultation with the Secretary of Transportation, the Secretary of Labor, the Secretary of Agriculture, and representatives of independent owner-operators, the motor carrier industry, shippers, receivers, consumers, and other interested persons, shall study, and report to the Congress, not later than 18 months after the date of enactment of this Act..." (P.L. 96-296, Sec. 15). This congressional structuring of joint regulatory authority is precisely what I hope to capture in these original data.

Figure 3 plots the distribution of agency pairings across all of the public laws for each of the thirteen administrative agencies at which I looked: Department of Transportation, Department of Interior, Department of Commerce, Department of Defense, Department of the Treasury, Department of Agriculture, Department of Energy, Department of Justice, Department of Education,

Department of Health and Human Services, Department of Labor, Department of Housing and Urban Development, and the Environmental Protection Agency. For the counts of each of these agency pairings, see Figure A1.

To evaluate this measure in light of existing measures of agency preferences, I examined the correlation between the absolute value of the ideological distance between agencies using the Clinton and Lewis (2008) ideal point estimates based on expert surveys, and the frequency with which Congress structures interactions between those agencies.² While the association between these metrics was low for some agencies (*e.g.*, Department of Justice, Health and Human Services), it was higher (> 0.6) for others (*e.g.*, Department of Defense, Department of Treasury).

While some agencies are often mentioned in conjunction with others, other agencies appear to act relatively autonomously, at least with respect to the involvement of other administrative agencies according to this measure. The Department of Health and Human Services and the Department of Housing and Urban Development are two such agencies with only minimal engagement with other agencies, according to this metric. Moreover, in the case of some agencies, agency interactions are largely with respect to one or two other agencies, while others frequently engage with numerous different agencies in different capacities.

One can see, for example, that the level of interaction between the Department of Interior and the Department of Agriculture stands out as by far the most significant across these agencies (534 instances), while the Department of Agriculture appears to interact only sparingly with the Department of Transportation, the Department of Education, the Department of Health and Human Services, the Department of Housing and Urban Development, and the Environmental Protection Agency. Such marked variation suggests that there is meaningful variation in the extent of opportunity for agencies to observe the actions of other agencies and the responses that they provoke from shared political principals (whether Congress, courts, or interest groups). It is these frequent interactions, or opportunities for interactions, that I expect will provide conditions ripe for interagency learning. Thus:

²The ideal point estimates provided by Clinton and Lewis (2008) provide time-invariant estimates based on an expert survey, with lower scores associated with a more liberal ideology attributed to the agency, and higher values associated with more conservative ideology.

H_1 : Agencies will be more likely to learn from one another when they share close statutory links to one another.

Dolowitz and Marsh characterize ideological and resource similarities as being necessary preconditions to the diffusion of policies across state boundaries (1996: 353), thus supporting this notion. While sharing regulatory authority at all should create conditions under which learning can occur, I expect that such learning will be most prevalent under those conditions in which the agencies share *the same statutory authority* with respect to the *same statutes*, as opposed to operating in more separate spheres with respect to the same statutes. That is, given the interrelatedness of statutory authority, agencies should likely be attuned to one another if carrying out various different aspects of a transportation law, such as with the Department of Transportation administering the bulk of the statute but the Department of Labor promulgating rules pertaining to the transportation workers' protections and the Environmental Protection Agency promulgating rules pertaining to the vehicles' emissions. However, the provision for joint enforcement or joint rulemaking forces a greater degree of collaboration among administrative actors and thus should force the highest level of attention to one another's regulatory actions. I expect further that learning will be most likely to take place when agencies share regulatory authority with greater frequency as opposed to in an isolated instance:

H_2 : Agencies will be more likely to learn from one another when they share regulatory authority in multiple statutes.

Such frequent overlapping authority should facilitate ongoing interaction among the agencies, in turn producing better information about the extent of the political constraints in which the agencies are operating. This degree of proximity in statutory implementation is hardly uncommon either, with Farhang and Yaver (2016) finding 180 instances of overlapping authority with respect to the exact same regulatory provisions in post-war significant regulatory legislation. The frequency of overlapping jurisdiction with respect to the same statutory provisions is the greatest in the case of joint rulemaking, though the provision for multiple actors engaging in administrative adjudications, sanctions, and the prosecution of lawsuits also occurs over the course of the time series, suggesting a wealth of opportunity for interagency interactions.

While congressional structuring of these institutional interactions should be the most direct way in which the agencies are exposed to one another's regulatory behavior, agencies' operation in the same or similar policy domains may in itself facilitate inter-agency learning taking place. For example, even outside of the domain of statutes over which the Environmental Protection Agency and the Department of Interior share authority, both agencies focus on environmental policy and thus interact with the same or similar pools of interest groups (*e.g.*, Sierra Club, Natural Resources Defense Council), with many common plaintiffs in the litigation directed at the EPA and Department of Interior in the D.C. Circuit Court of Appeals, as well as some of the same congressional committees (*e.g.*, Senate Committee on Environment and Public Works).

Indeed, congressional committees typically have jurisdiction over multiple administrative agencies – with, for example, the Senate Environment and Public Works committee having jurisdiction over the Department of Interior as well as the Department of Energy – and thus transmit signals to multiple agencies through their hearings and their passage or defeat of legislation. Moreover, surveys of agencies in recent years produced the finding that agencies are overseen by an average of four separate congressional committees (Clinton, Selin & Lewis 2014), providing greater reason to suspect a multitude of sources through which agencies may gain valuable insights as to the reach of their regulatory capacity in the confines of their present political environment. And while there is limited substantive overlap among cabinet-level agencies, among independent agencies one can find multiple agencies focused on housing, energy, labor, and monetary policy, to name a few. And while there may indeed be few statutorily-imposed requirements that those agencies coordinate in their policymaking efforts, I argue that their operating in similar policy spheres may suffice:

*H*₃: Agencies will be more likely to learn from one another when they regulate in the same or similar policy domains.

I turn now to a specific case of learning between administrative agencies in recent decades.

Learning in Environmental Policy

As a preliminary evaluation of this learning process, I estimate the extent to which bureaucratic punishment of the Environmental Protection Agency has effects that spill over and reshape the

behavior of the Department of Interior. These agencies share authority over at least some portion of the following 11 statutes: the Emergency Planning and Community Right-to-Know Act, the Clean Air Act, the Clean Water Act, the Endangered Species Act, the Energy Policy Act, the National Environmental Policy Act, the Oil Pollution Act, the Pollution Prevention Act, the Resource Conservation and Recovery Act, the Safe Drinking Water Act, and the Superfund Amendments and Reauthorization Act. While some of these statutes fall more within the jurisdiction of the EPA (*e.g.*, the Clean Air Act), others are more within the authority of Interior (*e.g.*, the Endangered Species Act), and others with implementation authority more evenly divided between the agencies. Given this high degree of overlapping jurisdiction in the delegating legislation – with a number of shared statutes, some shared authority within statutes, and highly similar policy substance such that they interact with similar congressional committees and interest groups – I expect conditions to be ripe for inter-agency learning to take place.

I conducted THOMAS searches for the names of each of the statutes from the 93rd (or first relevant Congress, if the law was passed later) to the 111th Congress and hand-coded the CRS summaries to identify whether or not there were agency curbing provisions, which I defined as *requirements*, *prohibitions*, and new *oversight* provisions. I coded as a *requirement* a bill whose summary compelled new action from the Department of Interior (or its Secretary) or the subunit(s) within it (*e.g.*, Bureau of Land Management, Fish and Wildlife Service, National Park Service), whether that mandated action was tied to enforcement or rulemaking. Because unlike with the Environmental Protection Agency, there are a number of different units within the cabinet agency of the Department of Interior, rather than looking for simply “the Department of Interior” or “the Secretary,” I also counted mandates, prohibitions, and oversight of the DOI’s subunits, such as the Bureau of Land Management or the Fish and Wildlife Service and the directors of those administrative bodies. Requirements took the form of such language as “A bill to require the Secretary of Interior to convey, without consideration, certain lands in Lane County, Oregon.”

I coded as a *prohibition* a bill that prohibited action of the Department of Interior or any of its subunits, or that otherwise sought to strip regulatory latitude from them such as by eliminating funding or shifting regulatory authority to a different entity. Such prohibitions took the form of such language as “Prohibits the Secretary of the Interior from acquiring specified lands by

condemnation in Carteret County, North Carolina, for purposes of the Cape Lookout National Seashore” (S. 1071, 96th Congress). I coded as *oversight* a bill that imposed on the agency one or more new oversight provisions such as requirements that the agency report to Congress or consult with other administrative agencies, the imposition of appointment limits, public hearings, or sunset provisions.

When a bill’s CRS summary contained a requirement, a prohibition, or oversight measures, or any combination of those three efforts, it was considered an agency curbing bill. While such bills are not necessarily indications of whether the agency was in fact stepping outside of its discretionary window, it reflects the willingness of coalitions in Congress to punish agency behavior that is out of step with the current Congress’s preferences over statutory implementation. A congressional requirement that the agency take a regulatory action may not appear as a constraint, though it is important to emphasize that these are *non-discretionary* provisions – that is, they are not authorizing administrative action but rather *compelling* it – and very few bills both curbed the agency’s authority *and* granted some discretionary authority. Thus, I argue that even with respect to the *requirements* variable, these bills indicate at least some degree of congressional micromanagement of agency regulation indicative of a willingness to intervene in an agency’s decisionmaking, and to strip the agency of flexibility if sufficiently dissatisfied with its implementation choices.

These THOMAS searches produced a pool of 5,378 total bills introduced on the subject of these statutes, 2,475 of which were introduced by the president’s co-partisans in Congress, and 745 of which sought to curb the Department of Interior’s capacity. I then conducted factor analysis, with the requirements, prohibitions, and oversight variables loading heavily on a single factor with an eigenvalue of 2.23 and individual factor loadings of .90, .84, and .84. This suggests that the three variables all appear to be strongly associated with the underlying factor, and at fairly comparable levels. I then produced the *agency curbing* composite measure for the Department of Interior. Averaging the standardized scores produced a Cronbach’s alpha of 0.88, which is considered excellent for scale reliability (DeVellis 2012), providing further support for these measures being used as a composite measure. The *agency curbing* factor score constitutes the dependent variable, and it is a continuous value ranging from 0 to 6.108.

Because the goal of this study is to ascertain the extent to which the Department of Interior

adjusts its behavior (in this case, its willingness to act in ways that may provoke Congress) in response to the Environmental Protection Agency’s interactions with Congress and courts, the main independent variables are the Environmental Protection Agency *agency curbing* and *lawsuit loss* measures from the previous Congress, drawn from Yaver (2015). The lawsuit measure constitutes the rate at which the EPA lost cases in which it was the defendant in the DC Circuit Court of Appeals, captured both as an average by Congress across all statutes as well as specific to the statutes in which the EPA and the Department of Interior share regulatory authority over at least some statutory provisions. These specifications are presented in models 1 and 2.

Each DC Circuit case was hand-coded to determine whether the agency won (or the case was otherwise dismissed, such as for issues pertaining to ripeness or standing), whether the agency lost on procedural grounds (*e.g.* having too short a notice-and-comment period with respect to a given rule that it promulgated), or whether the agency lost on substantive grounds (*e.g.*, the promulgation of a rule that was contrary to the delegating statute and/or the legislative intent. 145, or 26.2%, of the 554 cases against the EPA resulted in substantive losses by the EPA. 438 of these cases were mixed panels – that is, panels with at least one Democratic-appointed judge and at least one Republican-appointed judge, as opposed to unified Democratic (Republican) panels of judges. Despite the high rate of bipartisan panels, 458 of the 554 cases resulted in unanimous holdings, a finding that is consistent with prior work demonstrating a considerable norm of unanimity on the Court of Appeals. Further, there were very few cases that contained dissenting opinions despite the large number of bipartisan panels.³ In effort to reduce the effect of judicial ideology, I relied on strict textual analyses of the agency’s authority and the extent of compliance with statutory authority, thus placing a heavy burden on the judges to demonstrate whether the agency was in the wrong.

The EPA agency curbing measure follows the same procedure as that discussed above, and I provide estimations both with the EPA curbing by Congress averaged across all statutes as well as specific to the statutes in which the EPA and the Department of Interior share authority. THOMAS searches for the EPA legislation produced 11,272 bill introductions referencing the 26 statutes implemented in whole or in part by the EPA, with 2,535 of those bills (1,361 by the

³Exclusion of cases involving dissents did not substantively affect the results.

president’s co-partisans) working to curb the EPA’s latitude by way of *requirements, prohibitions,* and/or *oversight provisions*. These specifications are presented in models 3 and 4. These models collectively will allow one to gauge the extent to which the EPA’s provoking of constraints from the DC Circuit and from Congress leads the Department of Interior to act in a manner more risk averse such that it does not incite those same statutory constraints in the next period of the game.

I provide for a small number of additional controls in the fairly sparse specifications presented here. I include the dummy variable *citizen suit*, which takes the value of 1 if Congress provided for citizen suit litigation in the given statute and 0 otherwise. Citizen suit litigation is particularly salient in this context of environmental policy in that while most litigation requires that one be personally harmed in order to have standing to bring a suit, citizen suits allow individuals and interest groups to sue any violator *as well as the Secretary* for her action or inaction. Thus, it vastly expands the pool of potential litigants and thus monitors of agency actions, such that the agency may act in a manner more constrained and risk averse than it might otherwise. I include the dummy variable *divided government*, which takes the value of 0 if the party of the president controls both chambers of Congress and 1 otherwise.⁴ I control for the *chamber distance*, which is the absolute value of the NOMINATE distance between the House and the Senate medians, with the expectation that greater ideological divergence between the chambers will compromise Congress’s ability to provide effective oversight of the agency, thus expanding the agency’s range of latitude in policymaking.⁵ I control for the degree of *electoral uncertainty*, which utilizes a measure developed in Yaver (2016), which is the percentage of seats won in the previous federal election by a margin of five percentage points or less. While such a margin is not razor thin, it is vastly narrower than the average congressional race, which is often uncontested or otherwise won by double digit margins, and thus provides an incumbent party with a diminished sense of security in office. Amid greater uncertainty, congressional coalitions may be more inclined to continue to micromanage the Department of Interior’s range of implementation latitude should the present congressional coalition lose power in the next election. I include the *Congress* to account for a linear time trend. Finally, I include *bureau fixed effects* for the subunits within the Department of Interior, which are not

⁴Thus, cases of a divided Congress are treated as divided government and are not distinguished from cases of a unified Congress with divided government.

⁵Evaluating party medians rather than chamber medians performs similarly.

displayed.

The dependent variable is the extent to which congressional coalitions intervene in the latitude of the Department of Interior. The data are measured by Congress by statute, with 19 Congresses (the 93rd to the 111th) and the 22 statutes that are under the Department of Interior's jurisdiction to at least some degree (11 of which share authority with the EPA). Given this data structure, it is appropriate to use a time series cross-sectional model, whereby the data consist of comparable time series data observed on different units (statutes), allowing one to test theories of both cross-sectional and cross-temporal variation.

The dependent variable, *agency curbing* of the Department of Interior, is continuous between the values of 0 and 6.11. Performing the Wooldridge test for autocorrelation in panel data produced a highly significant test statistic, indicating the presence of first-order autocorrelation, for which PCSEs do not correct. After examining the autocorrelations across panels, I specify that there is AR(1) correlation within the panels and that the coefficient of the AR(1) process is panel-specific. Because performing statistical analysis on nonstationary time series can yield spurious results, I perform a Fisher-type test to confirm whether the data contain a unit root, and nonstationarity was ruled out with respect to all variables in the models. Because the models being analyzed here are OLS, the results can be interpreted directly. Results from the four specifications are presented in Table 1.

I find that while congressional curbing of the EPA's latitude in the prior Congress is not associated with the Department of Interior provoking those same statutory constraints from Congress in the current period, the extent of EPA losses in the prior period does appear to powerfully impact Interior's propensity to provoke Congress. A standard deviation increase in EPA losses during the prior Congress is associated with a .19 standard deviation decline in Department of Interior curbing in model 1 (looking at losses specific to the agencies' shared statutes) and a .11 standard deviation decline in curbing in model 2 (looking at losses averaged by Congress across all statutes). Such results are robust to using GLS with an AR(1) disturbance and law random effects to account for unit heterogeneity, which can in some cases be preferred to the use of PCSEs (Kristensen & Wawro 2003).

This finding does not remain with respect to looking at agency curbing against the EPA in the

prior Congress. That is, EPA provocation of Congress in one period does not appear to be associated with a difference in the likelihood that the Department of Interior will provoke constraints from Congress in the next period. However, the findings from models 1 and 2 provide some preliminary evidence in support of the Department of Interior reshaping its behavior vis-à-vis Congress in the aftermath of a closely related agency (the EPA) experiencing constraints from their shared political principals (that is, environmental interest groups and the court in which those cases are resolved). There is also evidence in support of the hypothesis that congressional provision for citizen suit litigation should have a constraining effect on an administrative agency given the higher probability of facing litigation, with the agency less likely to act in ways that provoke constraints and Congress itself potentially relieved from the role of engaging in as much of that ongoing oversight given the expanded role of courts. While this effect does not appear in model 1, the effect of *citizen suits* is significant and negative in models 2, 3, and 4, with a move from a non-citizen suit to a citizen suit law being associated with marked declines in Department of Interior provocation of congressional constraints. The extent of polarization in Congress, as indicated by the *chamber distance*, does not appear to impact the Department of Interior's likelihood of provoking curbing actions, though it is difficult to disentangle to what extent that result is reflective of congressional polarization shaping the bills the potential for such bills to enter the sample at all.

Learning Beyond Environmental Policy

To determine the extent to which administrative agencies were provoking interest group litigation, I conducted Lexis searches of all federal Court of Appeals litigation in which the following agencies were the defendant: Department of Agriculture, Department of Commerce, Department of Defense, Department of Education, Department of Energy, Department of Health and Human Services, Department of Housing and Urban Development, Department of Interior, Department of Labor, Department of Transportation, Department of the Treasury, and the Environmental Protection Agency. While the DC Circuit is often the focus in the context of administrative law cases, litigation was dispersed widely across the circuits. I restricted analysis to those cases that produced published decisions, both because those are the only ones on which one can rely for precedent and because I expect that those cases will be more likely to garner attention from other agencies. This

produced a total of 1,801 Court of Appeals cases.

There was wide variation in the extent of appellate litigation over the time series, with the Department of the Treasury producing the fewest published cases (27) and the Environmental Protection Agency producing the most (495), followed by the Department of Housing and Urban Development (323). Within a given year, there are as few as 0 cases and as many as 28. Figure 4 plots the time series of lawsuits by agency, and one can see marked variation in the patterns and persistence of litigation against the different agencies. Thus, it does not appear to be the case that common shocks produce spikes in litigation directed across wide numbers of actors in the federal bureaucracy, but rather a high level of variation among agencies with respect to their propensity to be brought to court, potentially due to the salience of the issues that they regulate, but potentially due to changes in strategy as a result of learning from the environment in which they operate. Future work will evaluate with greater care the extent to which interest group litigiousness with respect to other agencies in the prior year is associated with an agency being more risk averse with respect to provoking lawsuits itself, in addition to disentangling not just litigation rates but also the *outcomes* of that litigation.

Tables 2, 3, and 4 present simple Prais Winsten specifications evaluating the extent to which the volume of other agencies' litigation in the previous year is associated with changes in an agency's own litigation rate. I present here the models with respect to the Environmental Protection Agency, the Department of Labor, and the Department of Agriculture, simply to preview some of the findings. The dependent variables are the number of suits against the agency per year over the course of 42 years. The main independent variable is the number of lawsuits for the second agency, lagged by one year to allow time for the agency to respond. Given my assumption that agencies will, all things being equal, seek to avoid costly litigation and facing constraints on their regulatory latitude, I expect that if observing signals of litigation pertaining to other agencies, they will act in ways so as to reduce the extent to which they themselves are punished. I thus expect the coefficients to be significant and negative if learning is taking place.

While the Department of Interior is the agency with which the EPA interacts most, there is not in these sparse model specifications an association between Interior's litigation and that against the EPA. Thus, not controlling for other factors related to litigation, higher rates of litigation against

the Department of Interior or its bureaus does not appear to be associated with a change in the extent to which the Environmental Protection Agency is sued in the next period. However, as Figure 3 indicates, the Department of the Treasury is the agency with which the EPA is mentioned in conjunction with a high frequency as well, and Department of Treasury litigation in the prior year has a significant and powerful negative effect on the EPA's subsequent provoking of litigation, as does litigation against the Department of Education in the previous year (see Table 2).⁶ Figure 3 indicates no association, by that metric, between the Department of Labor and the Department of Housing and Urban Development, and interestingly, HUD litigation in the prior year is significantly and *positively* associated with subsequent litigation against the Department of Labor, as is also the case with respect to the prior year's litigation against the Department of Health and Human Services, while the effects of the Department of Agriculture and Department of Education litigation are statistically insignificant (see Table 3). Positive effects can also be found with respect to predicting litigation against the Department of Agriculture given the extent of litigation against the Department of Treasury and the Department of Energy (see Table 3), both agencies often cited in conjunction with the Department of Agriculture. Such positive and significant findings are deserving of further inquiry.

I then evaluated the findings in a time-series cross-section structure by agency by Congress such that the dependent variable is the number of suits against each of the 12 agencies per Congress (N=12) from the 93rd to the 113th Congress (T=21). The dependent variable of *agency suits* ranges here from 0 to 39 lawsuits against each of the given agencies within a given Congress, with an average of 7 suits per Congress. Because the Departments of Education and Energy were created in 1979 and 1977 respectively, there were fewer observations for those agencies, though the rest exist for the full 21 Congresses accounted for in these data.

Here, I evaluate two potential predictors of learning: the rate at which another agency was sued in the previous Congress, as well as the extent to which the agencies were discussed in conjunction with one another. Thus, if looking at the Department of Education, to take an example, the dependent variable is each agency's rate of litigation in the current period, while the independent

⁶A limitation to this measure is the highly varied lengths of litigation cycles and thus time to reach the Court of Appeals decision.

variables are the extent of litigation against the Department of Education in the previous Congress, and the cumulative number of times that the Department of Education was named within one sentence of each of the given 12 agencies. I use the cumulative number of instances because congressional delegations accumulate over time, and thus congressional inattention to a policy domain in a given period (Congress) does not necessarily mean that the agencies do not continue to issue joint rules or otherwise share regulatory authority to some degree. Because I expect that the effect of the signal of the litigation against an agency will be conditional upon some degree of interaction between the agencies, I interact the *lagged lawsuits* and *joint delegation* variables, with the expectation that higher rates of litigation against an agency will be particularly informative when against an agency to which it is also jointly delegated with high frequency.

I expect that if an agency is learning effectively based on these observations and interactions, the coefficient on the interaction term will be negative – that is, that given extensive joint delegation and extensive litigation directed at the other agency, the given agency will act so as to incite less litigation in the next period. Conversely, I do not expect the signal of another agency’s litigation rate to necessarily be highly informative in the absence of interagency interaction, nor do I expect that frequent interaction between agencies will necessarily induce risk aversion if the other agency is not experiencing adverse interactions with shared political principals. I include also the *Congress* to account for a linear time trend. All of the variables reported are standardized.

The models are time-series cross-section, with agency-by-Congress levels of litigation as the dependent variable. While the dependent variable could aptly be construed as a count, the wide range of values is such that ordinary least squares may still be appropriate for the data.⁷ The performance of a Wooldridge test produced a significant test statistic, indicating the presence of first-order AR(1) autocorrelation. I thus combine panel-corrected standard errors (PCSEs) with Prais Winsten to account for the autocorrelation. I present in Table 5 the results with respect to the Departments of Defense, Education, Energy, and Transportation.

Consistent with expectation, in each of these four cases, the coefficient on the interaction term is negative, and while only significant at the .05 level with respect to the Departments of Defense

⁷Similar results were produced with respect to a number of the agencies when alternatively using a panel negative binomial specification with random effects.

and Education, all four are significant at the .10 level. I find that a standard deviation increase in the interaction term is associated with a 0.12-standard deviation decline in the number of lawsuits directed at the Department of Defense, a 0.07-standard deviation decline in the number of lawsuits directed at the Department of Education, a 0.13-standard deviation decline in lawsuits directed at the Department of Energy, and a 0.03-standard deviation decline in the number of lawsuits directed at the Department of Transportation. While the results do *not* hold across all twelve agencies (though all effects remain in the same direction), and the effect sizes are not all large, there is nevertheless preliminary evidence in support of agencies engaging in some measure of cue-taking from those other agencies with which they interact to greater degrees in regulating.

Discussion

The above findings are merely preliminary and given the sparseness of the models and the limited number of observations, the results must be interpreted with great caution. However, the striking variation in the degree to which Congress statutorily structures these inter-agency interactions lends support for the claim that agencies have ample opportunity to learn from one another. While further work will explore the effect of lawsuit *losses* as opposed to raw counts of lawsuits, the variation in the extent of litigation as well as in the discussion of agencies in conjunction with one another both point to opportunities for agencies to obtain signals about others' inclination to intervene in agency implementation. Of course, what remains to be seen is *what* precisely these agencies are learning through these inter-agency observations and interactions, and the ways in which new information leads the agencies to adapt their regulatory strategies.

While prior scholarship on administrative agencies provided important insights into the strategies underlying congressional delegation to agencies – whether to delegate authority, to whom, and to what degree – it has largely restricted attention to congressional control of *an agency* as opposed to controlling *agencies*, and thus has under-appreciated the broader ramifications of litigation toward agencies and of congressional constraints directed at those agencies. By examining inter-agency learning and thus the spillover effects of bureaucratic punishment, we can see the broader set of cues that agencies incorporate when making regulatory decisions.

Future work will evaluate the extent to which agencies incorporate other agencies' rulemaking

into their own rules, as well as the nature of their interactions in interagency working groups over time, thus extending beyond the narrow scope of triggering lawsuits that may have a number of different possible causes. Additional work will evaluate the role of agency ideology in shaping the extent to which agencies appear to be attuned to different cues from their political environment. Expanding to include additional executive branch agencies, including independent agencies, will allow for further testing of the roles of overlapping jurisdiction, as well as the effect of policy domain (and in turn interest group and congressional committee interactions) in shaping these agencies' behaviors. This paper provided a preliminary investigation into the numerous opportunities that Congress has created for administrative agencies to meaningfully interact with one another in carrying laws into effect, and the incentives that agencies have to learn from one another so as to acquire better information and to avoid costly punishment from other political actors.

Table 1: Department of Interior Learning

	(1)	(2)	(3)	(4)
EPA Losses (law)	-0.913*			
	(0.391)			
EPA Losses (avg)		-0.556**		
		(0.204)		
EPA Curbing (law)			0.285	
			(0.446)	
EPA Curbing (avg)				-0.864
				(1.841)
Citizen Suits	-0.783	-0.349*	-1.147*	-0.375*
	(0.588)	(0.165)	(0.522)	(0.176)
Divided Government	-0.579**	-0.410**	-0.452**	-0.309**
	(0.123)	(0.075)	(0.128)	(0.081)
Chamber Distance	-1.411	-0.642	-0.836	-0.165
	(0.743)	(0.470)	(0.872)	(0.613)
Electoral Uncertainty	-3.233	-1.518	-1.928	-0.887
	(1.988)	(0.976)	(2.134)	(1.016)
Congress	0.025	0.013	0.049*	0.028
	(0.023)	(0.015)	(0.025)	(0.016)
Bureau FEs	✓	✓	✓	✓
R^2	0.26	0.20	0.24	0.19
N	167	345	167	345

** $p < .01$, * $p < .05$

Table 2: Predictors of EPA Litigation

	(1)	(2)	(3)	(4)
Interior Cases $_{t-1}$	-0.094 (0.401)			
Treasury Cases $_{t-1}$		-1.665* (0.757)		
Agriculture Cases $_{t-1}$			-0.195 (0.440)	
Education Cases $_{t-1}$				-0.900* (0.439)
Year	-0.016 (0.118)	-0.022 (0.118)	-0.027 (0.114)	-0.020 (0.119)
Intercept	42.989 (235.788)	55.067 (235.538)	66.101 (227.424)	52.950 (236.800)
N	42	42	42	42

** $p < .01$, * $p < .05$

Table 3: Predictors of Labor Litigation

	(1)	(2)	(3)	(4)
HUD Cases $_{t-1}$	0.129* (0.053)			
HHS Cases $_{t-1}$		0.126* (0.055)		
Agriculture Cases $_{t-1}$			0.063 (0.127)	
Education Cases $_{t-1}$				0.038 (0.129)
Year	-0.065* (0.025)	-0.109** (0.023)	-0.027 (0.114)	-0.098** (0.025)
Intercept	130.446** (49.595)	219.368** (46.565)	195.099 (50.572)	196.863** (50.467)
N	42	42	42	42

** $p < .01$, * $p < .05$

Table 4: Predictors of Agriculture Litigation

	(1)	(2)	(3)	(4)
Treasury Cases _{t-1}	0.512* (0.176)			
Commerce Cases _{t-1}		-0.265 (0.225)		
Energy Cases _{t-1}			0.376** (0.109)	
EPA Cases _{t-1}				0.068 (0.044)
Year	0.001 (0.019)	0.007 (0.021)	-0.017 (0.019)	0.004 (0.019)
Intercept	-0.453 (37.503)	-11.271 (42.781)	36.182 (37.835)	-5.426 (38.760)
N	42	42	42	42

** $p < .01$, * $p < .05$

Table 5: Evaluating Inter-Agency Learning

	Defense	Educ	Energy	Transport
Lagged Lawsuits	0.00 (0.03)	0.05 (0.04)	0.04 (0.03)	0.00 (0.04)
Joint Delegation	0.15 (0.10)	-0.09 (0.06)	0.09 (0.10)	-0.15** (0.04)
Lawsuits x Delegation	-0.12* (0.05)	-0.07** (0.02)	-0.13 [†] (0.07)	-0.03 [†] (0.02)
Congress	0.00 (0.09)	-0.15 (0.10)	-0.17 [†] (0.10)	0.03 (0.09)
N	244	204	204	244

** $p < .01$, * $p < .05$, [†] $p < .10$

Figure 1: Statutory References to Interagency Working Groups

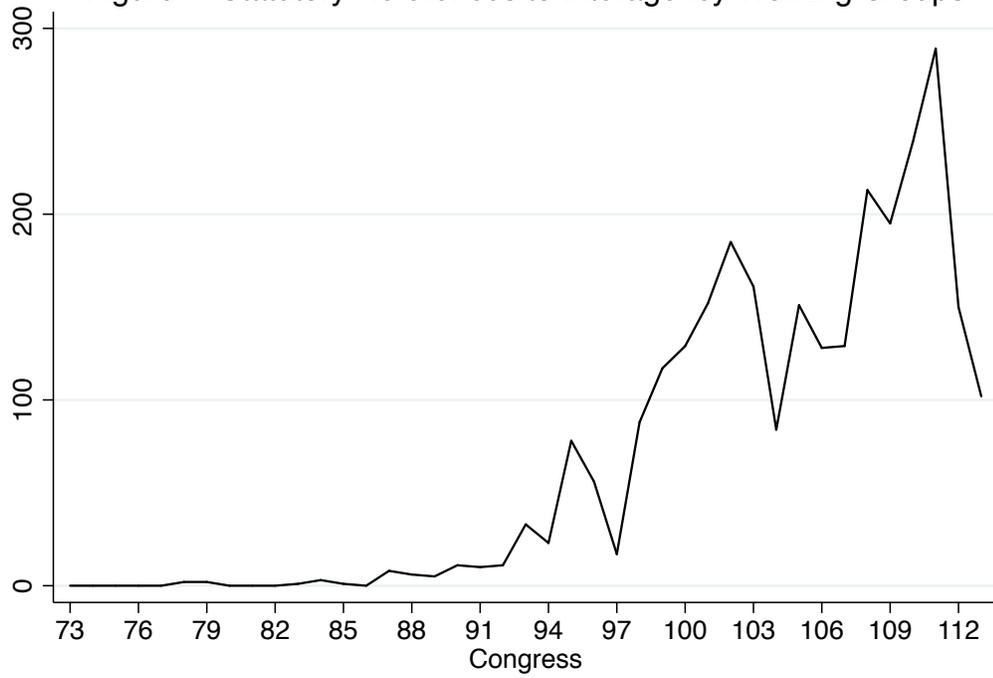


Figure 2: Congressional Provision for Overlapping Enforcement

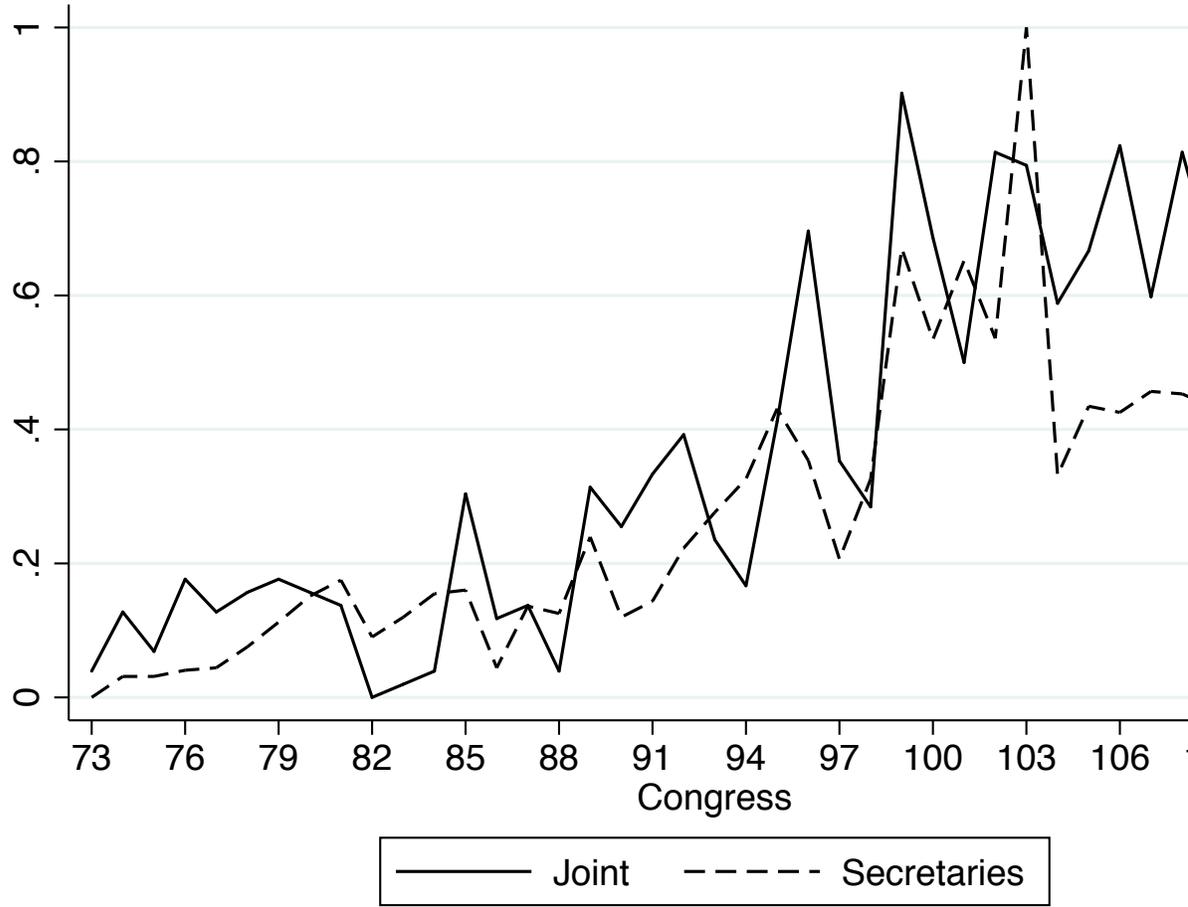


Figure 3: Frequencies of Agency Pairings Across Statutes

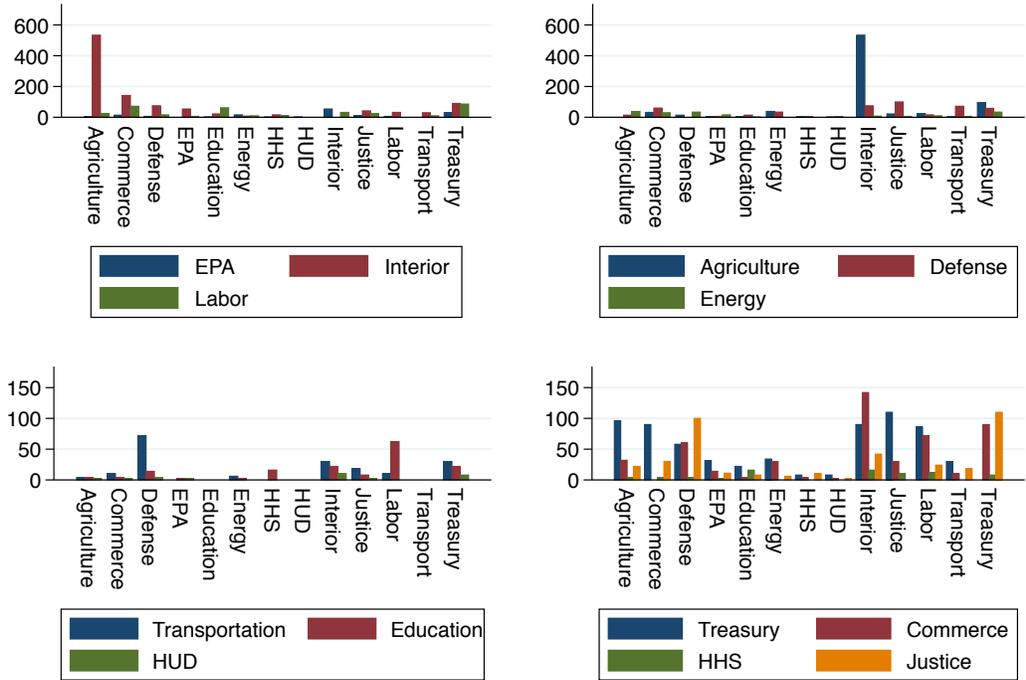
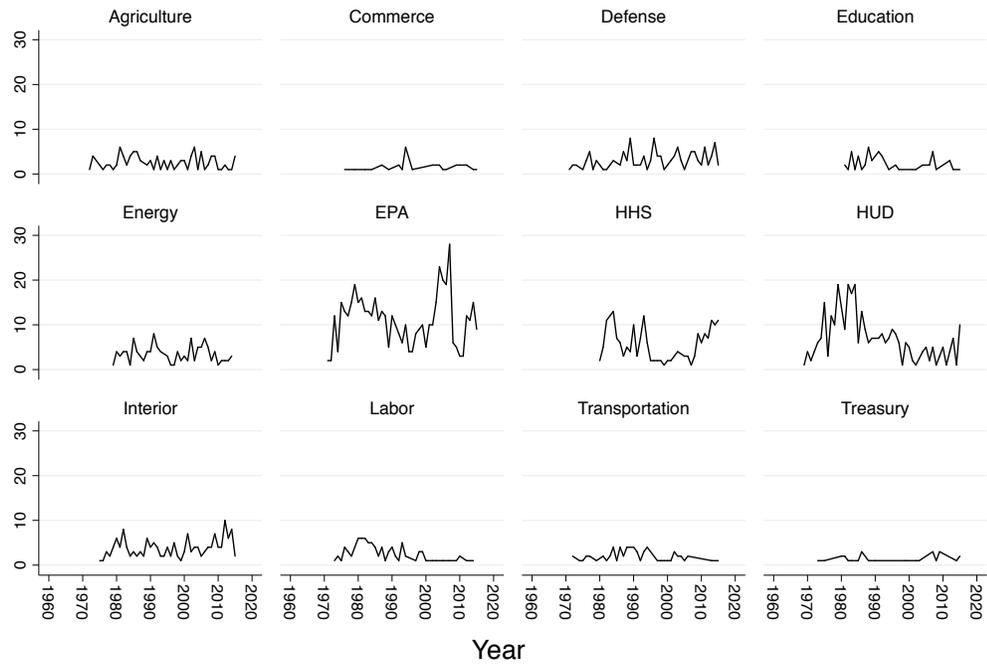


Figure 4: Volume of Appellate Litigation by Agency



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Figure A1: Frequency of Agency Interactions Across All Public Laws

AGENCY	Transport	Interior	Commerce	Defense	Treasury	Agriculture	Energy	Justice	Education	HHS	Labor	HUD	EPA
Transport		30	10	72	30	4	6	18	0	0	10	0	0
Interior	30		142	75	90	534	8	42	22	16	32	10	54
Commerce	10	142		60	90	32	30	30	4	4	72	2	14
Defense	72	75	60		58	14	34	100	14	4	16	4	6
Treasury	30	90	90	58		96	34	110	22	8	86	8	31
Agriculture	4	534	32	14	96		38	22	4	4	24	2	4
Energy	6	8	30	34	34	38		6	2	0	10	0	16
Justice	18	42	30	100	110	22	6		8	10	24	2	11
Education	0	22	4	14	22	4	2	8		16	62	0	2
HHS	0	16	4	4	8	4	0	10	16		12	0	2
Labor	10	32	72	16	86	24	10	24	62	12		0	6
HUD	0	10	2	4	8	2	0	2	0	0	0		2
EPA	0	54	14	6	31	4	16	11	2	2	6	2	

Figure A2: Average Number of Actors Sharing Enforcement Role

