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STATE REGULATORY REVIEW: A 50 State Analysis of Effectiveness

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Abstract

This paper provides the first systematic empirical study of how differences in the regulatory review processes across the 50 U.S. states affect the level of regulation. Inefficient regulations that create costs exceeding their benefits can significantly lower economic growth and dampen entrepreneurial activity. While some inefficient regulations are genuine mistakes arising from unforeseen outcomes of well-intentioned policies, some are the result of politically powerful interest groups seeking to gain at the expense of the general public. Attempts to constrain state regulatory processes have ranged from outright moratoriums on new regulations to varying requirements for regulatory review. We examine whether rules for regulatory review, such as types of cost-benefit analysis, as well as who is responsible for conducting the review, matter in terms of lowering the overall level of regulation in states. Our findings suggest that sunset provisions are by far the most effective means of constraining state regulatory systems. Requirements for reviewing the fiscal impacts of new regulations on state government budgets and to present alternative lower-cost policies for achieving the same policy goals also appear to be somewhat effective. There is limited evidence that a regulatory review process housed in the state legislative branch or an independent agency leads to fewer new regulations.

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I. Introduction

Efficient government regulations create benefits exceeding costs and thereby improve economic efficiency. Regulations that correct for market failures or better define property rights and legal liabilities are examples of efficient government regulations. Inefficient regulations are those that create costs exceeding benefits and thereby reduce economic efficiency and prosperity. There are many reasons inefficient regulations may be enacted or remain in place despite their harmful effects on economic efficiency. Regulations may be passed for political reasons—to cater to interest groups, for example—with little regard for efficiency. Even well-intended, seemingly efficient, regulations can create unforeseeable outcomes, unintended consequences, or secondary effects that are only known once the regulation is in force.

Many U.S. states and the federal government have attempted to enact regulatory reforms to reduce the amount of inefficient regulations [see, for examples and discussion, Hahn (2000), Shapiro (2010), and Shapiro and Borie-Holtz (2011b)]. Some of these reforms require more stringent constraints on the initial enactment stage, while others create a process for reviewing existing regulations. In some states, the regulatory process is viewed as so onerous that moratoriums on new regulations have been adopted. In January 2009, for example, newly elected Governor Jan Brewer of Arizona made her first official act as governor a moratorium on all rulemaking activities [Schwartz (2010)].

Most of the literature examining the effectiveness of state regulatory process constraints and rules are case studies that evaluate the actions of one state before and after a rule-process change or are anecdotal and/or narrative examinations only and so their findings may not be generalizable. Even more problematic is that these studies have found mixed results. There is no

clear evidence about whether these rules help to curtail the amount of total regulation or to eliminate inefficient regulations.

The purpose of this paper is to undertake the first systematic empirical study, using data on all 50 U.S. states, to see how these state procedural rules regarding constraints both on the enactment of new regulations and the review of existing regulations affects the level of regulation in a state. We begin with a literature review and discussion of the economic theory of regulation. The paper continues by using these theories and models to hypothesize about which regulatory constraints might be expected to work or not work. We then present our main empirical results. Overall, our findings suggest that several procedural safeguards lead to a reduction in both regulatory creation and enforcement. Specifically, we find that sunset provisions and, interestingly, cost-benefit analysis based on the impact that a proposed regulation will have on government revenue appear to reduce a state's regulatory burden most consistently.

II. The Economic Theory of Regulation

Private businesses make decisions based on profitability—that is, expected benefit (or revenue) versus expected cost. When a business's revenue is an accurate reflection of the value of the good or service to consumers, and the business's cost is an accurate reflection of the value of the resources consumed, then decisions reached based on profitability will be economically efficient. Goods and services will be supplied only when consumers value what is produced more than other goods and services that could have been produced with those resources.

Government regulations imposed on businesses, by definition, are attempts to move firms away from these profit-maximizing outcomes. In some cases, regulations force a business to supply a good or service that was not profitable—and therefore would not have been produced apart from government directives. Regulations requiring handicapped ramps or imposing

smoking bans are examples. In other cases, regulations prohibit an existing or potential business from supplying a good or service that would have been profitable and therefore produced otherwise.

The standard economic rationale for regulation is that in some cases the private profit and loss signals will not accurately reflect the true costs or benefits to society from the production of a particular good or service. In a world with *no* externalities or spillover effects (i.e., costs or benefits that affect non-consenting third parties as a by-product of the production or exchange of some good or service), all proposed regulations would fail a cost-benefit test as all efficient activities would already be undertaken (and no inefficient ones would be). But in the presence of market failures, there is the theoretical potential for government regulations to improve economic efficiency.

The economic theories of regulation can be grouped into two distinct approaches: the "public interest" approach and the "public choice" approach. The public interest approach, following the seminal work of authors such as Pigou (1938), assumes that government agents and regulators design regulations to correct market failures. Public interest models view the political actors involved in the regulatory process as benevolent individuals whose purpose is to maximize social welfare through the identification and enactment of policies that increase economic efficiency. These social-planner models assume political decision makers have full information on the costs and benefits of policies and consciously enact only those that maximize social welfare.

Even if this public interest view of political action were correct in the real world where information and foresight is not perfect, there would be cases where seemingly efficient regulations create unforeseeable outcomes, unintended consequences, or secondary effects that

become known only once the regulation is in force. The state of West Virginia, for example, imposed a maximum 8-hour operating restriction on taxi drivers. The law was intended to reduce driver fatigue and accidents involving taxis. Policymakers, however, failed to anticipate all the consequences of changing the incentives faced by cab drivers. With fewer hours to drive in a given day, drivers started driving faster and took fewer breaks. The result was that even though there were fewer cabs on the road, the total number of accidents committed by cab drivers actually increased [see Corey and Curott (2007)]. In addition, because the regulation resulted in a reduction in the number of cabs operating in the state, it also increased the incidence of drunk driving, which reduced road safety even more.

Similarly, the employment provisions of the Americans with Disabilities Act (ADA) were passed with the intention of lowering barriers to employment for disabled persons. The legislation prohibits discrimination based on disability status and further requires employers to make reasonable accommodations for employees with disabilities. DeLeire (1997, 2000), however, empirically estimated the impact that the ADA had on levels of employment and wages and found that in practice the ADA significantly reduced both for disabled Americans. By increasing the cost of hiring disabled workers and making it harder to fire them, this legislation has resulted in a reduction in employment among disabled individuals. Although prior to the ADA 60 out of every 100 disabled men were able to find jobs, after the law went into effect employment fell to less than 50 per 100 disabled men. After adjusting for other factors, DeLeire concludes that 80 percent of this decline was caused by the unintended incentives created by the ADA. While the stated purpose of this legislation was to increase the employment opportunities for the disabled, the ADA seems to have made it more difficult and costly for employers to hire

disabled workers, resulting in reduced job opportunities for those individuals. Again, a more stringent process for regulatory review may have helped to avoid this negative outcome.

Environmental regulations offer similar examples of unintended consequences. Under the Endangered Species Act, for example, large areas around the nesting grounds of the red-cockaded woodpecker can be declared "protected habitats" with stringent restrictions on the surrounding property owners. When the Federal Fish and Wildlife Service put Boiling Springs Lakes, North Carolina on notice that birds were nesting near the town, landowners applied for lot-clearing permits en masse to prevent the imposition of restrictions on use of their property (Associated Press 2006). After removing the trees, the land would no longer be in danger of being declared an environmentally protected habitat because no future nests could form on the property. In this case, a regulation intended to help protect a species actually resulted in the destruction of its habitat.

Thus, even if regulations are passed with the best of social intentions and careful consideration, there will be mistakes. This creates a need for a regulatory review process to identify and remove regulations that have unintended consequences, do not live up to their stated goals, or do accomplish their desired goals but in such a costly way that it does not justify the benefit (i.e., they are ex post economically inefficient). More stringent regulatory review procedures, the subject of our current study, may help to avoid cases like these as they can either help policymakers better foresee these consequences or at least can help to identify them once a regulation is in place.

Another important matter that needs to be considered is that the process through which regulations are *actually* created and enacted is fundamentally not a careful economic calculus by benevolent politicians and bureaucrats. Regulatory policy is conducted within a political process

influenced by voters, special interest groups, lobbyists, government agencies (or bureaus) and their employees, and legislators and other political decision makers, among others.

In this light, the "public choice" approach, following the seminal work of Buchanan and Tullock (1962) suggests that individuals react to the incentives and constraints they face in both their private, market actions and their public, political actions. Thus, voters, regulators, and legislators have their own personal, self-interested goals and reasons for their actions that may differ from or even be at odds with the public interest. A legislator may pass a regulation, for example, to gain political contributions or support for his or her re-election. Because of the political nature of regulatory policy, in many cases new regulations are passed because they benefit well-defined, concentrated interest groups, even when they are clearly inefficient [see, for example, Ekelund and Tollison (2001) and Weingast, Shepsle, and Johnsen (1981)]. Similarly, a regulatory agency may attempt to broaden its powers and scope through new regulations simply to increase the budget or personal prestige of the bureaucrats heading the agency [see Niskanen (1968, 1971, 1975) and Breton and Winetrobe (1975)]. Thus, the reasons why new regulations are passed are generally not purely based on benevolent concerns over whether the regulation is economically efficient.

Broadly, this public choice view suggests that in some cases regulation, paradoxically, benefits both the industries being regulated as well as political and regulatory actors [Djankov, La Porta, Lopez-de-Silanes, and Shleifer (2002)]. A number of scholars have suggested that regulation is implemented in order to create certain economic benefits, or "rents," for the industry being regulated [Tullock (1967, 1975), Stigler (1971), Posner (1974), Peltzman (1976)]. Here it is suggested that the concentrated efforts of the business sector being regulated leads to

regulations that actually reduce competition in the industry and simultaneously increase the profitability of, and profit opportunities for, those firms that remain.

Even if interest groups do not push for regulations initially, they often become active once a regulation is proposed. In 2008, for example, the U.S. Congress imposed new testing requirements for children's toys after several toy recalls, six of which involved products made or imported by Mattel and its subsidiary Fisher Price. After spending over one million dollars on lobbying efforts, Mattel was able to gain an exemption from the new regulations through language placed in the bill that required that all companies implement testing procedures almost identical to the in-house testing already used by Mattel [see Mangu-Ward (2009)]. Thus, smaller toy makers now face increased compliance costs due to this regulation and Mattel won a significant cost advantage in the toy industry.

The public choice literature also suggests that, once enacted, regulations and the very agencies in charge of imposing or enforcing them can become "captured" by the businesses and industries they are supposed to regulate. Once captured these agencies impose regulations that are no longer in the public interest but in the interest of the industry itself [Stigler (1971)]. Similar literature suggests that regulation is implemented so as to increase opportunities for politicians and regulators to "rent extract" [McChesney (1987), Shleifer and Vishny (1998), and Frye and Shleifer (1997)]. If regulatory policy creates excess profits, or rents, for the industry or firms being regulated, regulators and politicians can extract some of those private rents through campaign contributions, votes, or even outright bribes [Djankov, La Porta, Lopez-de-Silanes, and Shleifer (2002)]. Overall, this benefits both political actors and business interests but leads to less-than-desirable outcomes for consumers and the general public.

Returning to a broader perspective, maximizing economic efficiency would require both enacting only efficient regulations (those for which the benefits exceeds the costs) and rejecting proposed inefficient regulations (those for which the costs exceed the benefits). Therefore, there are two types of errors that can manifest themselves in the regulatory process: (1) failing to adopt an efficient regulation, or (2) wrongly enacting an inefficient regulation. If the errors of the first type dominate, the overall level of regulation will be too small, while if errors of the second type dominate the overall levels of regulation will be too large. Evidence from the economics literature suggests the latter in that as the total level of regulation is marginally increased, economic growth, prosperity, and the level of entrepreneurial activity marginally decrease [see Hale, Borys, and Adams (2011), Ardagna and Lusardi (2008), Klaper, Laeven, and Rajan (2006), and van Stel, Storey, and Thurik (2007), for examples]. Whether certain types of regulatory review processes can lower the overall level of regulation or weed out inefficient regulations is the key question we focus on in this study. We continue with a discussion of the previous literature on the impact of regulatory review processes.

III. The Regulatory Review Process

Although the economics literature has analyzed at length the economic impact and implications of regulation, far less economic scholarship has been undertaken regarding how the procedural checks and balances created to oversee regulators affects regulatory outcomes. However, a growing body of literature within political science has partially explored these issues. The seminal work of McCubbins, Noll, and Weingast (1987, 1989) opened a door to a theoretical understanding of this phenomenon. They discuss how oversight procedures on regulatory agencies may ensure that the preferences of the legislative body that initially empowered the agency are carried forward through time. Ferejohn and Shipan (1990) also find theoretical

evidence that the presidential veto as well as judicial review of regulatory actions may have a significant impact on regulatory outcomes. These analyses spurred other scholars to test not only these conjectures but also to evaluate the impact that procedural safeguards may have on regulatory rule making by a given agency within the U.S. federal government [Golden (1998), Croley (2003), Yackee (2006)].

There is also a growing literature that analyzes procedural checks and balances at the state level. However, given the diverse nature of state procedural safeguards, most of these works only involve a small subsample of states or are case studies of a single state. Overall, this line of research attempts to understand how different procedural rules and safeguards across states, or even within states, impact regulatory and economic outcomes. For instance, Shapiro and Borie-Holtz (2011a) use data on regulatory procedures across 28 states to test the impact of these procedures on the total number of regulations as well as to determine their economic impact. This literature finds little evidence that procedural safeguards had any significant impact on regulatory output within a state.

Similar work at the state level has also found mixed results for a number of regulatory procedures and oversight. For example, Clingermayer and West (1992) find little systematic explanation as to why one state may adopt some procedural oversight rule but other states do not. Daley, Haider-Markel, and Whitford (2007) analyzed certain aspects of regulatory review across 48 states. Overall, they found that the only procedure having any significant effect was legislative review, which reduced the overall compliance costs of regulation. Woods (2004) conducted a survey of regulatory review procedures across 15 states. He found that legislative review had little impact on regulation, but that gubernatorial review did seem to influence

regulatory rule making by enhancing a governor's influence on a bureaucratic agency's rule-making capability.

Other research has studied both gubernatorial and legislative review over regulatory agencies. Again, much of this work has yielded at best mixed results regarding the overall impact that this oversight has on regulatory stringency [Ethridge (1984), Koski (2007), Poggione and Reenock (2009)], how the strength of given veto players (both gubernatorial and legislative rejections) in state government affects regulatory outcomes [Gerber, Maestas, and Dometrius (2005)], and how procedural safeguards themselves are shaped by the makeup of state government [Grady and Simon (2002), Hahn 2000)].

However, using the insights from the public choice theory of regulation, it is possible to hypothesize as to why some of these regulatory review processes may be expected to be more effective than others in constraining the regulatory process. To do so requires differentiating two decision nodes, the initial enactment stage for new regulations and then the process for reviewing existing regulations. At the "creation/enactment" stage of regulations, constitutional rules or legal constraints can be enacted either to restrict the scope of activities that can be regulated by government or to require some type of cost-benefit study or economic impact analysis prior to a new regulation's being approved.

Thus, at the enactment stage, constitutional rules (like the Commerce Clause of the U.S. Constitution) are the primary check on (or determinant of) what can and cannot be regulated. These constitutional constraints are then generally enforced through the judicial branch of government. Differences in the regulatory climates across states—at least at this enactment stage—may thus be more determined by the structure of state constitutions and the effectiveness of state courts in enforcing these constitutional rules. Therefore, both a state's constitution and

the quality of its court system influence the regulatory climate. However, new constitutional rules are hard to enact, and attempting to change regulatory policy based on constitutional amendments is not an easy process. Therefore, while differences in constitutions and courts across states may help to explain why some states have more efficient regulatory climates than others, it is a much less promising area for regulatory reform policies to target.

At the enactment stage, requirements for cost-benefit analysis for new regulations may provide policymakers with a better approximation of the true economic effect of a proposed regulation. There are, however, important shortcomings associated with such requirements at the enactment stage. First, the true costs and benefits of a regulation are often hard to estimate prior to the regulation going into effect within the market. Forecasting how prices and economic actors will respond is an imperfect science. In retrospect, what may have appeared as an efficient regulation based on forecasts can turn out not to be, or vice versa. For example, in the process of adopting the 1990 Clean Air Act, both the Environmental Protection Agency (EPA) and the utility industry forecasted costs per ton to reduce sulfur dioxide emissions under the new regulatory scheme of tradable permits [see Washington Post (1994)]. The utility industry estimated the cost at up to $1,500 per ton, while the EPA estimated approximately $600. By 1994, the tradable permit mechanism embodied in the bill created strong incentives for firms to innovate with the result that the permits were selling for $150 a ton—reflecting the *true* cost per ton. Neither the agency imposing the regulation nor the industry itself came close to estimating the true cost in advance because it was impossible to foresee all of the entrepreneurial discoveries and adjustments that would unfold after the regulation was implemented.

The second problem with attempting to base regulatory reform on cost-benefit requirements at the enactment stage is that the procedure for undertaking the analysis can itself

be subject to political failures. For instance, the very groups who influence the political process can also attempt to influence the process that estimates the costs and benefits. By doing so, the cost-benefit analysis merely becomes a rubber-stamp approval for whatever is politically desired, regardless of the true efficiency of the regulation. Individuals and groups with a lot at stake will most certainly attempt to influence empirical estimates and the information stream flowing into the political decision process, even when it is subject to cost-benefit rules [see, for example, Holcombe's (1998) application of this idea to tax policy based on elasticity estimates]. In practice, estimates are often obtained from other public employees, such as university researchers, who may have strong incentives to support the proposed policies to ensure their own future government funding and contracts. The selection of who will do the cost-benefit analysis is endogenous, and regulators or politicians may simply select individuals to perform the estimates who they know will provide the answers they desire [see Holcombe (2010)]. For the reasons discussed above, we cannot simply expect a cost-benefit requirement will preclude the enactment of some inefficient regulations.

In addition to requirements for *economic* cost-benefit analysis, some states mandate a *government* cost-benefit analysis that only requires an estimation of how the regulation will affect the expenditures and revenues of the government itself. Because regulations require enforcement, they do increase government expenditures, and because regulations may reduce economic activity, they may also reduce tax revenue. Rather than pointing out the net costs of regulations to private actors in the economy, these cost-benefit tests point out the net costs of these regulations to the government itself. When a regulation results in reduced tax revenue, and requires expenditures that cannot be spent on other government programs that please interest groups, the regulation may not be in the best interest of the political actors in charge of deciding

on the enactment of the regulation. Because government cost-benefit analysis points out how the regulations impact the self-interested activities of government actors, rather than simply appealing to how the regulation affects the social welfare, public choice theory predicts it would likely be a more useful tool to prevent some regulations from being imposed than to overturn existing regulations.

Another area where regulatory review may have effects is in the process of after-the-fact review of existing regulations. Some states have review processes for new or existing regulations that focus only on a "legality review," asking simply whether the regulation accords with the state constitutional and statutory law. However, even for review processes that examine more than just the legality of a regulation, previous evidence from the literature suggests that most review rules are either ineffective or unenforced [Hahn (2000) and Schwartz (2010)]. The entity or source performing the review may matter, as some states have independent agencies doing reviews while others have reviews internal to the legislative or executive branch.

One additional process that forces some type of recurring review is the presence of a "sunset" provision. Sunset provisions require periodic renewal of new regulations or agencies; without renewal, they expire. Anecdotal evidence regarding sunset provisions has suggested they may not be very effective. Tennessee's sunset provision, adopted in 1982, requires that all newly enacted rules sunset after one year. However, it is often circumvented by the state legislature. According to Hahn (2000, pp. 882-3), in Tennessee "the legislature routinely votes to eliminate the expiration date of the sunset provision, defeating its original purpose." Hahn notes that in one year the legislature only allowed seven rules adopted in the previous year to expire, and all seven were minor issues or rules. Schwartz (2010, 371) notes that "Tennessee has not aggressively used its power to sunset rules. In the 1990s, the legislature voted to extend nearly all rules

beyond the expiration date of the sunset provision." He continues, from "2005 through 2010, only one rule has not been extended by the annual legislation on sunsetting rules."

From a public choice perspective, it should not be surprising that cost-benefit or sunset requirements are ineffective. While the public interest view would suggest that when these processes point out costly or inefficient regulations the government will act quickly to remove them, the public choice view recognizes that there are political reasons for the passage or maintenance of these regulations, despite their inefficiency. The regulations are in place because they may benefit the interest groups and politicians who enact them and, as long as these political incentives remain, simply pointing out the inefficiency of a proposed or existing regulation will do little to lead to its defeat or repeal.

One final aspect of state policy worth discussing is the process of voter initiatives. In states with voter initiatives, citizens can collect signatures to put a proposed law on the ballot. By doing so, citizens can circumvent the normal state political process and the legislature. Many of the major reforms constraining government, such as term limits and tax/expenditure limits, for example, have come from voter initiatives. The literature suggests that states with voter initiatives have smaller government sectors and that the voter initiative can be an effective tool for constraining government and the regulatory process within a state [see Matsusaka (1995)].

In the next section, we contribute to this literature by an empirical analysis of the regulatory procedures across all 50 states and simultaneous analysis of all of the procedural safeguards that each state has in place. To the best of our knowledge, such analyses have never been undertaken by any other study. While other studies have attempted to see how the total level of regulation in a state impacts state economic activity, we turn this question on its head by asking what factors determine the level of regulation in a state. That is, why do some states have

more regulations than others, and do the procedural rules have a significant impact on the overall level of regulation in a state?

IV. Data and Empirical Analysis

In order to study empirically the impact that procedural rules have on regulatory outcomes we have compiled data from a number of sources on all 50 states. In order to measure the level of regulation in each state we use six unique measures; the *Forbes* magazine ranking for each state's regulatory climate; per capita regulatory enforcement expenditures; the number of regulations per capita that are challenged in each state's supreme court; the number of regulations per capita that are reversed or overturned by a state supreme court; the number of regulatory rules per capita issued per year by each state's regulatory agencies; and the number of regulatory rules per capita that have an economic impact issued per year by each state's regulatory agencies.

While there is no one perfect measure of the amount of regulation in each state, these six unique variables are all clearly correlated with the total level of regulation and some more directly measure "bad" regulations (appendix 1 provides a correlation matrix). Four of these regulatory measures directly aim at capturing the total amount of regulation in a state (the *Forbes* ranking, enforcement expenditures, and the two based on counts of rules). Further, the measures of regulations being challenged (or overturned) in state courts would seem to be more closely related to measuring inefficient, undesirable, or contradictory regulations, although we also think it is positively related to the overall level of regulation (in the same way illegal drug use can be measured to some degree by arrests). Four of these measures of the regulatory climate that we employ as dependent variables are available for all 50 U.S. states, while two (the number of regulatory rules per capita issued per year by each state's regulatory agencies, and the number of

regulatory rules per capita which have an economic impact issued per year by each state's regulatory agencies) are from Shapiro and Borie-Holtz (2011a), who were able to calculate the rule counts only for a subsample of 28 states. A full list of the variables we employ, with their full descriptions, and sources can be found in appendix 2.

As variables to explain the level of regulation, we use a set of 14 procedural safeguards drawn from Schwartz (2010) and one procedural safeguard drawn from The Council of State Governments (2010). These include a number of regulatory review procedures: various measures of cost-benefit analysis, sunset provisions, as well as whether the state has a voter initiative. Our variables measure both the types of regulatory reviews required as well as which branch of government or source conducts the review. The specific powers of review from Schwartz (2010) we consider first are *who* does the review:

- whether a state attorney general has the authority to review regulations,
- whether the power to review exists in some other office of the executive branch,
- whether a state legislature has formal review powers,
- whether or not a state government has granted an independent agency review powers, or,
- whether an agency is required to review its own regulatory impacts.

We also include variables drawn from Schwartz (2010) to indicate the *type* of review:

- whether some branch of a state government is required to review the legality of a proposed regulation,
- whether some branch must determine if a regulatory agency has the authority to issue a proposed regulation,
- whether or not some branch of state government reviews a proposed regulation based on "reasonableness or effective" application, and,
- whether or not some branch of state government reviews a proposed regulation based on its "consistency and conformity to state code" (which we term "any factor review").

Finally, we also include cost-benefit analysis requirements based on:

- whether or not there is a requirement to give a detailed report of a proposed regulation's impact on government funds and revenues,
- whether or not there is a requirement to give a detailed report of a proposed regulation's impact on economic outcomes to private or regulated parties impacted by the proposed regulation, and,

- whether or not an agency must propose alternatives to the regulation that would provide a lower-cost means of achieving the same policy goal as the regulation.

In order to study formally the impact that each of these variables may have on the regulatory outcomes listed above, we ran OLS regressions using each of the six indicators of a state's regulatory environment against these procedural safeguards. Our empirical results are presented in table 1. A negative coefficient on an independent variable suggests that that variable lowers the total amount of regulation in a state.

Table 1: OLS Regression Results for State Regulatory Climate – Per Capita Versions

Independent Variables	Dependent Variable					
	Forbes Regulatory Rank	State Regulatory Enforcement Expenditures Per Capita	Number of Regulations in Court Per Capita	Number of Regulations Reversed by Court Per Capita	Total Number of Regulatory Rules Per Capita	Number of Economic Rules Per Capita
Source of Review:						
Attorney General Review	7.195 (0.016)	-1.326 (0.299)	29.839 (1.284)	8.741 (1.281)	12.361 (0.426)	17.621 (1.080)
Other Executive Review	1.697 (0.438)	-2.688 (0.660)	-11.823 (0.544)	-5.303 (0.800)	29.160 (1.004)	-15.272 (0.948)
Legislative Review	-15.786** (2.588)	-10.189 (1.494)	7.677 (0.423)	-1.370 (0.230)	23.105 (0.432)	-31.322 (1.204)
Independent Review	2.399 (0.670)	6.860 (1.494)	-14.389 (1.105)	-4.605 (1.206)	-21.346 (0.750)	-4.533 (0.250)
Type of Review:						
Legality Review	3.011 (0.581)	0.614 (0.111)	4.749 (0.284)	2.335 (0.440)	-3.717 (0.078)	-29.339 (1.112)
Authority Review	5.381 (1.112)	0.445 (1.491)	11.632 (0.469)	1.463 (0.191)	-87.747** (2.519)	-16.969 (0.907)
Efficiency Review	-4.717 (1.339)	-14.848*** (3.472)	20.767 (1.232)	7.474 (1.382)	1.547 (0.570)	0.582 (0.034)
Any Factor Review	-0.679 (0.140)	-6.523 (1.202)	8.397 (0.437)	3.706 (0.621)	-50.821 (1.639)	-18.314 (1.237)
Government Cost-benefit	-12.245** (2.545)	-1.862 (0.343)	-46.566* (2.019)	-12.718* (2.011)	-156.231*** (3.818)	-91.699*** (4.211)
Economic Cost-benefit	4.667 (0.842)	-1.482 (0.332)	2.412 (0.120)	1.367 (0.206)	10.398 (0.277)	31.006 (1.421)
Alternative Cost-benefit	-10.582** (2.256)	-0.499 (0.118)	-19.787 (1.576)	-8.355* (1.880)	-82.874 (1.571)	-55.139* (1.848)
Periodic Review:						
Agency Review	-1.479 (0.405)	1.636 (0.491)	-24.916** (2.468)	-4.148 (1.217)	7.625 (0.232)	0.275 (0.016)
Non-Agency Review	5.524 (1.280)	3.211 (0.930)	8.076 (0.443)	3.762 (0.662)	29.013 (1.024)	17.247 (1.003)
Sunset Provision	-9.219** (2.652)	-6.855* (2.021)	-30.246* (1.788)	-10.028* (1.880)	-85.249** (2.324)	-65.268** (2.976)
Other Variables:						
Voter Initiative	-3.112 (0.796)	-1.872 (0.535)	0.829 (0.060)	-0.484 (0.111)	-33.818 (1.176)	-22.235 (1.369)
Constant	47.813*** (11.154)	46.250*** (6.496)	61.771*** (3.177)	21.377*** (3.372)	345.508*** (8.144)	235.372*** (9.677)
Observations	50	50	50	50	28	28
R-Squared	0.386	0.419	0.325	0.276	0.722	0.770

Notes: Statistical significance as follows: *** = 1%; ** = 5%; * = 10%. Absolute value of t-statistics in parentheses. All models employ White's heteroscedasticity-consistent standard errors.

The first four independent variables, under the heading *Source of Review*, measure the "who does it" question in regulatory review requirements across states. The variables reflecting the presence of review by the state attorney general, other executive branch review, and independent review, are statistically insignificant in all specifications, suggesting that they have no discernible impact on the amount of regulation within a state. Legislative review is negative and is statistically significant in one of the six specifications (the *Forbes* rank), but is insignificant in all others. Overall, these results do not seem to suggest that the source of the review matters, in that a state's total level of regulation is not significantly and robustly correlated with whom is doing the regulatory review. While legislative review is significant in one specification, the fact that it is insignificant in the other five specifications means the result is weak at best and that there is little robust evidence in favor of a true impact.

The next seven independent variables, under the heading *Type of Review*, measure the metrics by which regulations are judged in the review process. The first of these, legality review, is the requirement that each new regulation be reviewed to ensure that the power to regulate the activity is legal under state constitutional and statutory law. The variable is never statistically significant. Authority review is whether new regulations are subject to a review for consistency with legislative intent or determination of whether the agency actually has the authority to issue such a regulation. In one of the models (number of regulatory rules per capita), it is negative and statistically significant. Efficiency review is whether new regulations are subject to a review based on reasonableness, efficiency, or effectiveness. Similar to authority review, it is statistically significant and negative in only one of these cases (state regulatory enforcement expenditures per capita). Any factor review is a code for if the review can be done based on any factor and does not specifically mandate one type of criterion to be used or considered. It is never

statistically significant. Thus, for these first four factors, there is weak evidence at best that they matter in terms of lowering the total amount of regulation in a state.

Continuing with the next three independent variables under the heading *Type of Review*, these measure whether the review process specifically mandates cost-benefit testing and of what type. Government cost-benefit is when a regulation must be studied for its effect on the government budget through increased expenditures or lower tax revenue that may result from passage of the regulation. Unlike the other variables so far, government cost-benefit requirements appear to be robustly statistically significant. The variable is negative and statistically significant in five of the six cases. Some of the coefficients are sizeable as well, implying that the impact is not only statistically significant but economically significant. Requiring a budgetary analysis of regulations does appear to reduce the total level of regulation in a state. Interestingly, whether a cost-benefit analysis must be done to determine the overall private economic efficiency of the regulation is never significant; this implies that the requirement of a cost-benefit analysis has no discernible impact on the level of regulation.

That government cost-benefit matters but economic cost-benefit does not seem counterintuitive. However, this result is precisely what would be predicted by public choice theory. Self-interested political actors do care about how these regulations impact their budgets, but have less concern for the overall public interest. Alone these findings seem to support the public choice view of regulation over the public interest view. The final cost-benefit variable codes whether the cost-benefit review must also present alternatives to the regulation for achieving the same policy goals (for example, a tax that could be imposed be used in place of the regulation to produce the same outcome). This is statistically significant and negative in half (three) of the specifications. Thus, for these three cost-benefit factors, there is evidence that

requiring government cost-benefit analysis and the presentation of alternatives does matter in terms of lowering the total amount of regulation in a state.

The next three independent variables, under the heading *Periodic Review*, examine not the process by which new regulations are subjected to review but rather the process for reviewing existing rules and regulations. The first two of these variables reflect whether a requirement for periodic review is present and done either internally by the regulatory agency itself or by some other entity (non-agency). Agency review is statistically significant and negative in only one specification (the number of regulations challenged in the state supreme court per capita). Non-agency review is never statistically significant. Thus, there is little robust evidence that the "who" in periodic review matters.

The final independent variable in the periodic review section, the presence of a sunset provision, is robustly statistically significant—in fact, the most significant finding in our initial results. Sunset provisions are negative and significant in all six different measures of state regulatory climates. The coefficients are sizeable as well, implying that the impact is not only statistically but economically significant. Sunset provisions do appear to reduce the total level of regulation in a state significantly, despite the anecdotal evidence from Tennessee discussed earlier. This appears to hold both for the measures that reflect the flow of new regulations (the final two specifications of rule counts) as well as the remaining measures that more closely reflect the total stock of existing regulations in a state.

The final two independent variables, under the heading *Other Variables*, are the constant and a variable reflecting whether the state has a process for voter initiatives. Voter initiative is never statistically significant; this suggests there is no discernible correlation between the presence of a voter initiative and the level of regulation in a state.

V. Robustness Checks

In this section we attempt to see if the results reported above are robust to changing the way the regulatory variables are measured and to including additional control variables. We first begin by performing our same regressions above but this time including several other variables for each state to control for demographic and political factors that may impact the level of regulation in a state. We now include the state's rate of unemployment, median household income (in thousands), the percent of the population in the state with a bachelor's degree, and the percent of the state voting for the Democratic party in the 2008 election. The results of these regressions are presented in table 2.

Table 2: OLS Regression Results for State Regulatory Climate – Per Capita with Control

Independent Variables	**Dependent Variable**					
	Forbes Regulatory Rank	State Regulatory Enforcement Expenditures Per Capita	Number of Regulations in Court Per Capita	Number of Regulations Reversed by Court Per Capita	Total Number of Regulatory Rules Per Capita	Number of Economic Rules Per Capita
Source of Review:						
Attorney General Review	-1.278 (0.291)	-0.993 (0.205)	20.592 (0.974)	4.651 (0.699)	21.243 (0.604)	29.051 (1.739)
Other Executive Review	2.701 (0.700)	-3.127 (0.763)	-18.082 (0.865)	-6.602 (1.042)	-25.242 (0.638)	-28.801 (1.508)
Legislative Review	-13.226* (2.002)	-11.823 (1.600)	-23.836 (1.152)	-8.186 (1.257)	-28.383 (0.581)	-32.086 (1.475)
Independent Review	-2.742 (0.696)	7.853* (1.695)	-28.174* (1.778)	-11.450** (2.269)	-19.221 (0.496)	8.285 (0.439)
Type of Review:						
Legality Review	3.289 (0.661)	0.676 (0.119)	9.290 (0.540)	3.189 (0.627)	-32.952 (1.085)	-31.890* (2.185)
Authority Review	2.177 (0.417)	11.045* (1.700)	24.768 (1.160)	3.341 (0.499)	-24.357 (0.649)	2.909 (0.164)
Efficiency Review	-2.700 (0.806)	-15.537*** (4.019)	22.821* (1.707)	9.598* (2.177)	11.203 (0.405)	-1.970 (0.149)
Any Factor Review	-0.035 (0.007)	-5.976 (1.053)	29.990 (1.655)	9.934 (1.617)	-28.995 (0.694)	-21.954 (1.090)
Government Cost-benefit	-8.692 (1.583)	-2.587 (0.485)	-48.828** (2.212)	-10.272* (1.744)	-169.480*** (4.055)	-82.363*** (4.817)

Economic Cost-benefit	2.251 (0.369)	-0.612 (0.127)	2.201 (0.126)	0.052 (0.010)	73.863 (1.523)	52.261* (2.204)
Alternative Cost-benefit	-7.158 (1.462)	-1.471 (0.314)	-15.183 (1.399)	-4.802 (1.232)	-86.406 (1.734)	-55.044* (2.284)
Periodic Review:						
Agency Review	-2.613 (0.753)	2.373 (0.634)	-19.172 (1.646)	-3.969 (1.082)	9.326 (0.282)	9.885 (0.560)
Non-Agency Review	1.612 (0.310)	4.080 (1.125)	13.834 (0.984)	2.260 (0.512)	41.412 (1.240)	-1.413 (0.081)
Sunset Provision	-8.606** (2.644)	-6.977* (1.994)	-39.976** (2.297)	-9.472** (2.270)	-97.402** (2.778)	-67.124*** (3.768)
Other Variables:						
Voter Initiative	-0.644 (0.156)	-2.524 (0.702)	2.168 (0.180)	1.703 (0.467)	-69.361* (2.222)	-19.832 (1.297)
Unemployment Rate	-1.214 (0.712)	-0.473 (0.258)	-12.928 (1.221)	-4.843 (1.479)	-26.491 (1.258)	-19.717* (1.932)
Median Household Income (thousands)	0.478 (1.098)	-0.151 (0.360)	1.713 (0.954)	0.816 (1.349)	-4.932 (1.400)	-3.693* (2.164)
Percent with Bachelor Degree	-1.435* (1.930)	0.220 (0.295)	-4.216* (1.742)	-1.809** (2.186)	-1.061 (0.214)	-1.339 (0.571)
Percent Voting Democrat	0.419 (1.330)	-0.113 (0.479)	-1.412 (1.212)	-0.129 (0.364)	-0.426 (0.191)	2.041* (2.034)
Constant	46.682** (2.365)	55.665*** (3.275)	239.919*** (3.168)	63.487*** (2.922)	751.650*** (5.518)	403.089*** (5.657)
Observations	50	50	50	50	28	28
R-Squared	0.459	0.424	0.453	0.427	0.781	0.848

Notes: Statistical significance as follows: *** = 1%; ** = 5%; * = 10%. Absolute value of t-statistics in parentheses. All models employ White's heteroscedasticity-consistent standard errors.

Because we are mostly interested in whether and how our results change, the discussion below will be in terms of a comparison to our results from table 1. First, the only two variables that show significance in a large number of the specifications are again the presence of sunset provisions and government cost-benefit review. Sunset provisions remain statistically significant and negative in all specifications, and government cost-benefit is now significant in four of the six specifications (it was significant in five originally). These two findings remain robust. The requirement for presenting alternatives in the cost-benefit analysis was significant in three

specifications originally but falls to being significant in only one after the controls are included. Thus, the evidence in favor of this having a robust impact is weakened. Some variables now become significant that were not in our original model; however, most are only significant in one specification or, if they are significant, have the opposite sign of what would be expected (being positive instead of negative, which would suggest that they increase rather than decrease the level of regulation). In particular, independent review and efficiency review both are now negative and significant in two specifications, but strangely positive and significant in one specification each. Four other review structure variables become significant in just one isolated specification, and three of these are negative.

Using the standard that any variable must be significant in a large number of the specifications to be considered a robust statistical finding, we find no major changes to the conclusions we reached based on the findings presented in table 1 that sunset provisions and the requirement of government cost-benefit analysis do reduce the level of regulation. However, there is much weaker evidence that requiring alternative policies to be presented in a cost-benefit analysis has a discernible effect on the level of regulation to the point where it is no longer a robust finding.

Our next robustness check is to redefine some of the dependent variables that measure the level of regulation in a state. Based on our examination of the data, we believed that the proper way to define these variables were in per capita terms to adjust for the differing sizes of the states. In the raw data, the most populous states clearly have the highest levels of regulatory spending and number of regulatory rules and regulations going to court. For example, the two most populous states contained in the rule count data, New York and Illinois, have 681 and 381 total rules (or 514 and 183 when looking only at economic rules) respectively, while the two

least populous states in the data, Wyoming and South Dakota, have 194 and 78 total rules (or 80 and 45 when looking only at economic rules) respectively. Regulatory enforcement expenditures are also greater in more populous states for obvious reasons, as enforcement costs increase even under a fixed under of rules as the population increases.

However, there may be arguments that measures of the number of regulations should not be defined on a per capita basis. If any given regulation, for example a regulation pertaining to air quality, applies to everyone, it would seem that a state should only have one of these rules regardless of the size of its population. The total regulatory burden a business faces may depend on the total number of regulations regardless of how many people live in the state. Nonetheless, it is clear that larger states simply have more diverse types of industries and areas, so a larger state with many different industries would likely have more rules and it would not be the case that all rules apply to all businesses. Further, states with larger populations might be more likely to have full-time legislatures or more professional governments in general.

While we believe our original specifications using the per capita values are the correct specifications, it is worth exploring what changes when we restore our per capita measures of regulation into their total form and attempt to control for population by also including it as an additional control variable. Table 3 presents results similar to those in table 2 with the exception that population is now included as an independent variable and all dependent variables that were in per capita terms are instead measured as their total values (not divided by population).

Table 3: OLS Regression Results for State Regulatory Climate – Levels with Controls

Independent Variables	**Dependent Variable**					
	Forbes Regulatory Rank	State Regulatory Enforcement Expenditures	Number of Regulations in Court	Number of Regulations Reversed by Court	Total Number of Regulatory Rules	Number of Economic Rules
Source of Review:						
Attorney General Review	-3.464 (0.808)	-86,583.580 (1.075)	16.545 (1.086)	7.238 (1.408)	-41.448 (0.496)	66.431 (1.669)

Other Executive Review	0.851 (0.240)	-24,907.958 (0.539)	7.087 (0.442)	-2.559 (0.536)	-162.467 (1.204)	-148.446* (2.206)
Legislative Review	-16.355** (2.595)	-286,684.17** (2.435)	14.171 (0.768)	3.634 (0.585)	-27.420 (0.160)	-135.978 (1.576)
Independent Review	0.381 (0.099)	60,854.355 (0.739)	10.359 (0.835)	1.226 (0.287)	-93.192 (0.885)	13.135 (0.246)
Type of Review:						
Legality Review	4.332 (0.790)	18,179.042 (0.264)	9.663 (0.619)	0.306 (0.061)	-273.242* (2.335)	-246.414*** (3.855)
Authority Review	5.639 (1.027)	100,121.855 (1.131)	-0.305 (0.018)	-3.117 (0.495)	-1.747 (0.013)	26.180 (0.387)
Efficiency Review	-3.134 (0.935)	-167,367.98** (2.749)	13.608 (1.281)	8.236** (2.145)	-86.620 (1.565)	-73.307* (2.273)
Any Factor Review	2.538 (0.579)	-74,256.178 (0.925)	-2.329 (0.192)	2.468 (0.548)	-259.183** (2.425)	-179.774** (3.451)
Government Cost-benefit	-7.174 (1.289)	-4,952.789 (0.071)	-0.907 (0.087)	3.170 (0.816)	-111.181 (1.121)	-48.753 (0.985)
Economic Cost-benefit	2.015 (0.358)	-75,378.351 (0.934)	15.725 (1.088)	2.899 (0.558)	179.408 (1.165)	113.291 (1.531)
Alternative Cost-benefit	-7.247 (1.615)	89,679.055 (1.138)	-34.841*** (3.329)	-12.558** (3.517)	18.401 (0.162)	-56.865 (1.034)
Periodic Review:						
Agency Review	-1.112 (0.372)	-106,211.733 (1.487)	-12.015 (1.191)	0.175 (0.053)	49.804 (0.427)	46.218 (0.764)
Non-Agency Review	2.662 (0.515)	70,872.652 (1.315)	16.954 (1.312)	4.573 (1.029)	85.655 (0.915)	18.885 (0.414)
Sunset Provision	-7.828*** (2.789)	-167,204.38** (2.257)	-11.503 (0.896)	-5.132 (1.345)	-169.055 (1.268)	-248.153*** (3.750)
Other Variables:						
Voter Initiative	0.269 (0.071)	18,747.143 (0.338)	-8.662 (0.764)	0.589 (0.178)	-243.959** (2.412)	-111.845** (2.138)
Unemployment Rate	0.211 (0.150)	-11,764.607 (0.445)	1.645 (0.255)	0.397 (0.198)	38.279 (0.586)	-6.383 (0.212)
Median Household Income (thousands)	0.513 (1.327)	12.958** (2.089)	0.142 (0.147)	0.566 (1.490)	-9.671 (1.382)	-7.877** (2.435)
Percent with Bachelor Degree	-1.423** (2.096)	-16,174.610 (1.385)	-1.523 (1.047)	-0.995* (1.813)	-4.188 (0.279)	-7.797 (1.114)
State Population (hundred thousands)	-0.845*** (3.804)	49,718.010*** (4.603)	-0.016* (1.983)	-0.589** (2.662)	27.758* (1.989)	33.055*** (4.610)
Percent Voting Democrat	0.444 (1.388)	-5,351.619 (1.607)	0.379 (0.490)	0.419* (1.730)	-5.176 (0.885)	-0.897 (0.301)
Constant	38.984* (2.001)	466,381.238 (1.388)	45.760 (0.779)	-7.321 (0.421)	1,340.726** (2.381)	1,185.909*** (4.172)
Observations R-Squared	50 0.549	50 0.829	50 0.392	50 0.441	28 0.719	28 0.834

Notes: Statistical significance as follows: *** = 1%; ** = 5%; * = 10%. Absolute value of t-statistics in parentheses. All models employ White's heteroscedasticity-consistent standard errors.

In the specifications presented in table 3, the variable that is again robustly negative and significant in the largest number of regressions is the presence of sunset provisions. It remains negative and statistically significant in three of the specifications, and in two additional ones it is just slightly short of statistical significance. Again, however, it is the most robust finding in the results. For the final two columns of rule counts, three additional variables are now significant in both of those specifications (although they are still insignificant in all four other specifications). These are the voter initiative, legality review, and any factor review. Just as in table 2, efficiency review has odd results with one result positive and significant, and two negative and significant.

The evidence in favor of requiring alternatives is presented in the cost-benefit analysis, which was significant in three of the six original regressions in table 1, but fell to only one of six in table 2 with controls, now becomes stronger again, with two of the six results negative and significant. The only source of review variable that was significant in our original specifications in table 1 was legislative review, but it was so in only one specification (and it was also significant in one of the specifications in table 2), and in table 3 it is now significant in two of the six specifications. This is stronger, but again we would hope for it to be significant across a greater number of models in order to reach a more concrete conclusion. The one major change from previous results is in the robust significance of the government cost-benefit variable. While it was significant and negative in five of the six specifications originally, and four of the six with controls, it is now never significant in any specification.

Thus, when we redefine our variables as levels (not in per capita terms) and control for population and the other additional control variables, the strongest remaining robust result is that sunset provisions do seem to be correlated with lower levels of regulation in a state. The

correlation of lower levels of regulation with the source of review being the legislature and with the requirement for alternatives to be presented in the cost-benefit analysis would be the next most robust results; however, these results not clearly as strong or uniformly significant. Finally, there are some results only present in these forms of the model, such as voter initiative, legality review, and any factor review, that are significant in the two rule count specifications that were not generally significant in our previous results.

We also considered whether endogeneity or reverse causality could be affecting our results. This would be the case if states with high levels of regulation are the ones that adopt more stringent review requirements, creating a relationship where states with stringent review were also the ones with high levels of regulation. This is clearly not an issue in our results because not only would that have produced positive signs on the coefficients (the opposite of what we find) but also because state regulatory review procedures are relatively unchanging and constant in states rather than constantly changing in response to regulatory levels. Thus, there appears to be no evidence that this is affecting our results.

Another check of robustness involves considering some of the regulatory review variables on a case-by-case or group basis to address the concern that including all of the regulatory review variables at the same time introduces problems of multicollinearity if the states more likely to have any one given rule are the same states more likely to have one of the other rules. Running the regressions using only one regulatory variable at a time, or a subset of them, can eliminate this problem, However, this may cause omitted variable bias as we would be throwing out other variables that clearly mattered in other specifications. Nonetheless, we ran each of our regulatory review measures individually against both the levels and per capita versions of the dependent variables and repeated this using subsets of the regulatory review

measures, including only one group at a time (e.g., including only the source of review variables). This required an additional 38 regressions, and given space requirements, we present only a discussion of how these results compare to our prior results.

First, in the source of review variables, previously we had found that legislative review would be significant in only one or two of the specifications, but it was so across all three of our previous tables. When run individually, or as part of a group, it was again significant and negative in either one or two of the models each time. So the weak evidence that was present before that legislative review may matter remains when the variable is considered individually or as part of a subset of the variables. Other source variables remain insignificant or not robust with two exceptions. The variable for independent review, when included alone or as part of a subgroup including only source variables, does sometimes become negative and significant. In the per capita versions it was significant in four of the six specifications when included as the only variable in the regression (other than a constant) and was significant in five of the six when included as part of the group subset using only source of review variables and excluding the other variables. In the versions using the levels (not per capita), independent review was negative and significant in two of the six specifications both when included individually and as part of the source subgroup. Attorney general review, which has been insignificant across the board in our previous specifications, does become negative and significant, but only when included alone or in the group, and only in the rule count regressions performed in levels (and is not significant in the per capita versions). Because these specifications do not include the other variables, we are reluctant to reach a strong conclusion without these two variables having been significant in any of our main models that control for other statistically significant factors that are omitted in these regressions. However, taken as a whole, for the variables reflecting the source of the review,

across all regressions performed here individually and also those presented earlier, we believe the strongest of the results is that legislative review may weakly matter and that independent review and attorney general review may weakly matter. Other executive branch review is robustly insignificant. Therefore, we believe our results suggest that regulatory review is best performed either through the legislative branch or through an independent agency.

Moving on to the set of variables reflecting the type of review, in our previous results we found virtually nothing of robust significance but did find that in the final two specifications using the rule counts in level (not per capita) terms that any factor review and legality review were significant in just those two measures and only when performed in non-per capita terms. When these type of review variables are included individually or as part of subgroups but omitting all other variables, the legality review result is clearly not robust as it changes signs and is rarely significant across these regressions. Any factor review, however, does tend to be significant in a larger number of specifications (one of six when run individually using the levels of the dependent variables, and four of six when run on the per capita measures or as part of a group in either per capita or levels versions). Taken as a whole, for the variables reflecting the type of review, across all regressions performed here individually and also those presented earlier, we believe the strongest of the results is that any factor review may matter, although it we would be reluctant to make firm conclusions on its impact without having found it to be more robust as it is not significant in a majority of our regression models.

Turning to the variables reflecting cost-benefit analysis, our earlier results seemed to suggest that government cost-benefit analysis did have a robust negative and significant effect, economic cost-benefit analysis never seemed to have a significant effect, and the requirement to present alternatives was significant and negative in some but not a preponderance of the

specifications. These two general conclusions remain in our 38 specifications using these variables individually and as part of the subgroup regression that only includes the cost-benefit variables, as they were the only ones to be negative and significant in two or three of the specifications.

For the variables reflecting periodic review, the individual and subgroup regressions again confirm our main findings. Agency and non-agency review are never robustly negative and significant, while sunset provisions tend to be negative and significant (or on the verge of significance) in the largest number of specifications (generally two to four of the six). Finally, in the other variables category, voter initiative was not significant in our main results in table 1, but was significant in one of the six specifications in table 2, and in two of the six in table 3 (the two rule count specifications). Of the 38 specifications, voter initiative is significant in only one of the 38. This diminishes the evidence in favor of voter initiative having a robust impact on regulatory levels in a state.

As yet another check for robustness, we consider whether multicollinearity among our independent variables may be leading to problems in our results. Although the majority of our independent variables measuring regulatory structure are largely uncorrelated, there are a few pairs that have correlation coefficients of 0.50 or greater. The variable pairs that have a correlation of 0.50 or greater are attorney general review and legality review, authority review and legality review, authority review and efficiency review, and finally, economic cost-benefit analysis and government cost-benefit analysis. In order to examine whether the correlations among these pairs of variables may have impacted our results we ran each of the dependent variables against each of the correlated variables individually, along with each of the remaining independent variables that were statistically significant from the initial results in table 1.

For example, when we initially regressed the *Forbes* rank against each of the independent variables, the significant variables were legislative review, government cost-benefit, alternative cost-benefit, and sunset provisions (see table 1). Given this, our new specifications run each of the correlated variables mentioned above first on an individual basis then grouped with one of legislative review, alternative cost-benefit, and sunset provisions. In so doing, we can see if any of the coefficient signs or statistical significance levels change substantially. In summary, our results are fairly robust in these alternative specifications. The only notable changes were that, in some of the specifications using per capita state regulatory expenditures and the number of regulations in court per capita as dependent variables, the significance level of sunset provisions is reduced but it still retains a uniformly negative coefficient when run separately with legality review and agency review, then authority and agency review, and finally with efficiency review and agency review. However, when running sunset provisions along with economic cost-benefit analysis and agency review, as well as sunset provisions and government cost-benefit and agency review, then finally each of the correlated variables together along with agency review and sunset provisions, sunset provisions return to having a consistent statistically significant negative coefficient. In the specifications using the number of regulatory rules per capita as a dependent variable, sunset provisions become statistically insignificant except when run with government cost-benefit. However, when all of the correlated variables are run together along with sunset provisions, sunset provisions are again statistically significant.

Overall, it would appear that issues of multicollinearity have little effect on our results. In a few specifications, when certain other variables are omitted, the results for sunset provisions tend to become less statistically significant. However, these are only in a few limited cases, and generally the sunset provisions variable retains statistical significance. The negative sign on the

coefficient is uniformly robust. While it is possible to find some specifications where sunset provisions fall below the conventional ten percent threshold for statistical significance, one almost needs to scour the data to find these few cases, and the overwhelming proportion of regression results support the conclusion that sunset provisions have a statistically significant negative effect on regulatory levels. We purposely selected what is a relatively low threshold (0.50) to consider the correlation between independent variables to be large enough to run specifications excluding one or more of the variables and, even when using this low threshold, the results still generally appear to remain robust.

Our final robustness check is a set of forward stepwise regressions in order to again check for issues of multicollinearity. These stepwise regressions add each variable one at a time into the analysis and then provide the results that best fit each dependent variable. The threshold employed was a cutoff at the ten percent significance level. We perform the stepwise regressions simply to help identify any issues with multicollinearity but do not place much weight on these results given the controversy over the stepwise regression framework.

The stepwise regression results suggest that, for the dependent variables in per capita terms, legislative review was significant for two dependent variables (for the *Forbes* rank with a negative coefficient and the number of regulatory rules per capita with a positive coefficient); alternative cost-benefit analysis was significant for two variables (for the *Forbes* rank with a negative coefficient and the number of economic rules per capita also with a negative coefficient); sunset provisions was significant for two variables (for the *Forbes* rank and the number of economic rules per capita, both resulting in negative coefficients); authority review was significant for one variable (for the *Forbes* rank with a positive coefficient); government cost-benefit was significant for three variables (the number of regulatory rules per capita, the

number of economic rules per capita, and the per capita number of regulations reversed in court all of which had a negative coefficient); independent review was significant for three variables (the number of regulatory rules per capita, the number of regulations in court per capita, and the per capita number of regulations overturned in court, again all with a negative coefficient); efficiency review was significant for one variable (for per capita state regulatory expenditures with a negative coefficient); legality review was significant for two variables (for the per capita number of regulations in court and the number of regulations overturned in court, both with positive sign coefficients); and, finally, agency review was significant for one variable (for per capita regulations in court, with a negative sign coefficient). Again these results are largely supportive of our previous results.

Given the large number of regressions performed, we believed it might be helpful to summarize the general findings for each of our variables in table form. Based on the percentage of all regressions in which the variable was robustly significant, cases where it was at least always significant in the count regressions, or generally for one entire subset of regression versions, we have for each measure of regulatory review classified our findings as either "strong evidence," "some evidence," "inconsistent evidence," or "no evidence" that the variable has a negative impact on the level of regulation in a state. We have done this for each set of regressions and then attempted to present an overall finding. While attempting to summarize the results in this way is admittedly somewhat subjective, the number of times each was significant and in which specifications is clearly discussed in the paper as the results were presented so readers can check back through our discussions if they wish to know which results are behind each of our classifications. We present this summary in table 4.

Table 4: Generalized Findings on the Strength of the Evidence on which Regulatory Review Process Factors Matter in Reducing State Regulatory Levels

Regulatory Review Variable:	Per Capita Versions of Models	Levels (non-per capita) Versions of Models	Models with Each Measure Separately and Using Subgroups of Measures	Overall General Finding
Source of Review:				
Attorney General Review	no evidence	no evidence	some evidence	inconsistent evidence
Other Executive Review	no evidence	no evidence	no evidence	no evidence
Legislative Review	some evidence	some evidence	some evidence	some evidence
Independent Review	some evidence	no evidence	some evidence	some evidence
Type of Review:				
Legality Review	no evidence	no evidence	some evidence	inconsistent evidence
Authority Review	no evidence	no evidence	no evidence	no evidence
Efficiency Review	no evidence	inconsistent evidence	inconsistent evidence	inconsistent evidence
Any Factor Review	no evidence	some evidence	some evidence	some evidence
Government Cost-benefit	strong evidence	no evidence	some evidence	some evidence
Economic Cost-benefit	no evidence	no evidence	no evidence	no evidence
Alternative Cost-benefit	some evidence	some evidence	some evidence	some evidence
Periodic Review:				
Agency Review	no evidence	no evidence	no evidence	no evidence
Non-Agency Review	no evidence	no evidence	inconsistent evidence	no evidence
Sunset Provision	strong evidence	strong evidence	some evidence	strong evidence
Other:				
Voter Initiative	no evidence	some evidence	no evidence	inconsistent evidence

The columns in the table show these generalized conclusions for the variable for each major groups of regressions we perform (per capita versions, levels versions, versions where they are included individually or in subgroups), and a final column attempts to draw a conclusion across all specifications. The generalized findings are as follows:

(1) who does the review may matter, with some evidence that legislative review and independent review reduces the level of regulation in a state;

(2) the type of review may matter, with some evidence that any factor review, government cost-benefit (fiscal impact statements), and requiring alternatives to be presented in cost-benefit analysis reduces the level of regulation in a state;

(3) periodic review may matter, with fairly strong evidence that the presence of sunset provisions reduces the level of regulation in a state.

Overall our results have clear implications for policies targeting regulatory reform. The single most important policy in a state is the presence of a sunset provision. Requiring new regulations to be studied for their impact on government expenditures and revenues (government cost-benefit analysis) and requiring the presentation of alternative, lower-cost policies to achieve the same regulatory goals may also improve state regulatory systems. Finally, the review process should be housed in either the legislature or an independent agency to be most effective. While there were other review processes that were significant on occasion, the findings listed here tended to be the most robust determinants of the level of regulation across the U.S. states.

VI. Conclusion

In this paper we have provided the first systematic empirical study of how differences in the regulatory review processes across all 50 U.S. states affect the level of regulation. While previous literature has examined how the level of regulation impacts economic activity, none has

systematically attempted to explain the level of regulation as the dependent variable. The few studies that have attempted to study the impact of regulatory reform or review have been case studies limited to specific states and some provide anecdotal evidence at best.

Economic theories of regulation have ranged from a public interest view to a more critical public choice view. Even under the public interest view, knowledge problems and unintended consequences can result in the presence of inefficient regulations that should be repealed through a regulatory review process. The public choice view suggests a much more widespread presence of inefficient regulations deliberately enacted so that powerful special interest groups can gain concentrated benefits, or passed through coalitions of interest groups such as "Baptist and bootlegger" coalitions [see Yandle (1983)]. Regardless of the underlying cause, state regulatory climates are often viewed as having many inefficient regulations in need of repeal, and calls are repeatedly made to enact stronger constraints on the process by which new regulations are adopted.

Our empirical results, based on six different measures of state regulatory climates, have clear implications for the types of regulatory reforms that are likely to improve the efficiency of state regulatory policy. The most important of these is the presence of a sunset provision on all new regulations. By making regulations fight to stay in place, even if it is just to put them through the political battle necessary to be re-enacted individually instead of being pork-barrel legislated, sunset provisions force a re-evaluation of all regulations and tend to lessen the degree of regulation within a state. This was the only variable both statistically and economically significant in all of our models and is our most robust result. Our second-most-robust finding is the benefit of either a requirement to present alternative policies that may accomplish the same policy goal at lower cost or a requirement to review the overall cost-benefit impact to a state

government's finances (meaning the increases in spending necessary to administer and enforce the regulation and the possible reductions in tax revenue due to the regulation lowering business activity). When legislators become aware of the impact of proposed regulations on their own budgets they apparently tend to regulate less. We also find some limited evidence that reviews done through the legislative branch or an independent agency tend to also be more effective.

Overall, our empirical results seem to provide a much clearer picture of the effectiveness of different regulatory review processes and point the direction through which a more rational and efficient regulatory environment within a state may emerge through regulatory reform.

References

Ardagna, Silvia, and Annamaria Lusardi. 2008. Explaining International Differences in Entrepreneurship: The Role of Individual Characteristics and Regulatory Constraints. Working Paper 14012, *National Bureau of Economic Research*.

Associated Press. 2006. Rare Woodpecker Sends a Town Running for its Chain Saws. *New York Times*, September 24.

Breton, Albert, and Ronald Winetrobe. 1975. The Equilibrium Size of a Budget Maximizing Bureau. *Journal of Political Economy* 83 (1): 195–207.

Buchanan, James M., and Gordon Tullock. 1962. *The Calculus of Consent: Logical Foundations of Constitutional Democracy.* Ann Arbor, MI: University of Michigan Press.

Clingermayer, James C., and William F. West. 1992. Imposing Procedural Constraints on State Administrative Agencies: An Empirical Investigation of Competing Explanations. *Review of Policy Research* 11 (2): 37–56.

Corey, Joab N., and Nicholas A. Curott. 2007. Lower Business Regulation: Costs and Unintended Consequences. In *Unleashing Capitalism: Why Prosperity Stops at the West Virginia Border and How to Fix It*, ed. Russell S. Sobel, 131–43. Morgantown, WV: The Public Policy Foundation of West Virginia.

Council of State Governments. 2010. *The Book of the States*. Lexington, KY: Council of State Governments.

Croley, Steven. 2003. White House Review of Agency Rulemaking: An Empirical Investigation. *University of Chicago Law Review* 70 (3): 821–85.

Daley, Dorothy M., Donald P. Haider-Markel, and Andrew B. Whitford. 2007. Checks, Balances, and the Cost of Regulation. *Political Research Quarterly* 60 (4): 696–706.

DeLeire, Thomas. 1997. *The Wage and Employment Effects of the Americans with Disabilities Act*. Ph.D. diss., Stanford University.

DeLeire, Thomas. 2000. The Unintended Consequences of the Americans with Disabilities Act. *Regulation* 23 (1): 21–4.

Djankov, Simeon, Rafael La Porta, Florencio Lopez-de-Silanes, and Andrei Shleifer. 2002. The Regulation of Entry. *Quarterly Journal of Economics* 117 (1): 1–37.

Ekelund, Robert B., and Robert D. Tollison. 2001. The Interest-group Theory of Government. In *The Elgar Companion to Public Choice*, ed. William F. Shughart II and Laura Razzolini, 357–78. Cheltenham, UK: Edward Elgar.

Ethridge, Marcus E. 1984. Consequences of Legislative Review of Agency Regulations in Three U.S. States. *Legislative Studies Quarterly* 9 (1): 161–78.

Ferejohn, John, and Charles Shipan. 1990. Congressional Influence on Bureaucracy. *Journal of Law, Economics, and Organization* 6: 1–20.

Frye, Timothy, and Andrei Shleifer. 1997. The Invisible Hand and the Grabbing Hand. *American Economic Review* 87 (2): 354–58.

Gerber, Brian J., Cherie Maestas, and Nelson C. Dometrius. 2005. State Legislative Influence Over Agency Rulemaking: The Utility of Ex Ante Review. *State Politics and Policy Quarterly* 5 (1): 24–46.

Golden, Marissa Martino. 1998. Interest Groups in the Rule-Making Process: Who Participates? Whose Voices Get Heard? *Journal of Public Administration Research and Theory* 8 (2): 245–70.

Grady, Dennis O., and Kathleen M. Simon. 2002. Political Restraints and Bureaucratic Discretion: The Case of State Government Rule Making. *Politics and Policy* 30 (4): 646–79.

Hahn, Robert W. 2000. State and Federal Regulatory Reform: A Comparative Analysis. *Journal of Legal Studies* 29 (S2): 873–912.

Hale, Andrew, David Borys, and Mark Adams. 2011. Regulatory Overload: A Behavioral Analysis of Regulatory Compliance. Working Paper 11-47, Mercatus Center, George Mason University, November.

Holcombe, Randall G. 1998. Tax Policy from a Public Choice Perspective. *National Tax Journal* 51 (2): 359–71.

Holcombe, Randall G. 2010. Policy Errors in Executive and Legislative Decision-Making. *Public Choice* 144 (1): 37–51.

Klapper, Leora, Luc Laeven, and Raghuram Rajan. 2006. Entry Regulation as a Barrier to Entrepreneurship. *Journal of Financial Economics* 82: 591–629.

Koski, Chris. 2007. Regulatory Choices: Analyzing State Policy Design. *Law and Policy* 29 (4): 407–34.

Mangu-Ward, Katherine. 2009. Plastic Politics. *Reason* 41 (7): 8.

Matsusaka, John G. 1995. Fiscal Effects of the Voter Initiative: Evidence from the Last 30 Years. *Journal of Political Economy* 103 (3): 587–623.

McChesney, Fred S. 1987. Rent Extraction and Rent Creation in the Economic Theory of Regulation. *Journal of Legal Studies* 16 (1): 101–18.

McCubbins, Matthew, Roger Noll, and Barry Weingast. 1987. Administrative Procedures as Instruments of Political Control. *Journal of Law, Economics, and Organization* 3 (2): 243–77.

McCubbins, Matthew, Roger Noll, and Barry Weingast. 1989. Structure and Process, Politics and Policy: Administrative Arrangements and Political Control. *Virginia Law Review* 75 (2): 431–82.

Niskanen, William A. 1968. Nonmarket Decision Making: The Peculiar Economics of Bureaucracy. *American Economic Review* 58 (2): 293–305.

Niskanen, William A. 1971. *Bureaucracy and Representative Government*. Chicago: Aldine-Atherton.

Niskanen, William A. 1975. Bureaucrats and Politicians. *Journal of Law and Economics* 18 (3): 617–43.

Peltzman, Sam. 1976. Toward a More General Theory of Regulation. *Journal of Law and Economics* 19 (2): 211–40.

Pigou, Arthur C. 1938. *The Economics of Welfare*. 4th ed. London, UK: MacMillan and Co.

Poggione, Sarah J., and Christopher Reenock. 2009. Political Insulation and Legislative Interventions: The Impact of Rule Review. *State Politics and Policy Quarterly* 9 (4): 456–85.

Posner, Richard A. 1974. Theories of Economic Regulation. *Bell Journal of Economics and Management Science* 5 (2): 335–58.

Schwartz, Jason A. 2010. *52 Experiments with Regulatory Review: The Political and Economic Inputs into State Rulemakings*. New York: The Institute for Policy Integrity, New York University School of Law.

Shapiro, Stuart, and Deborah Borie-Holtz. 2011a. *Does Process Matter: Regulatory Procedure and Regulatory Output in the States*. New York: Institute for Policy Integrity, New York University School of Law.

Shapiro, Stuart, and Deborah Borie-Holtz. 2011b. Regulatory Reform: Lessons from New Jersey. *Regulation* 34 (1): 14–9.

Shapiro, Stuart. 2010. Regulatory Reform in the States: Lessons from New Jersey. Working paper, BEPress.

Shleifer, Andrei, and Robert W. Vishny. 1998. *The Grabbing Hand: Government Pathologies and Their Cures*. Cambridge, MA: Harvard University Press.

Stigler, George J. 1971. The Theory of Economic Regulation. *Bell Journal of Economics and Management Science* 2 (1): 3–21.

Tullock, Gordon. 1967. The Welfare Costs of Tariffs, Monopolies, and Theft. *Western Economic Journal* 5 (3): 224–32.

Tullock, Gordon. 1975. The Transitional Gains Trap. *Bell Journal of Economics* 6 (Autumn): 671–78.

van Stel, Andre, David J. Storey, and A. Roy Thurik. 2007. The Effects of Business Regulations on Nascent and Young Business Entrepreneurship. *Small Business Economics* 28: 171–86.

Washington Post. 1994. Selling Pollution Rights Cuts Cost of Cleaner Air. August 25.

Weingast, Barry R., Kenneth A. Shepsle, and Christopher Johnsen. 1981. The Political Economy of Benefits and Costs: A Neoclassical Approach to Distributive Politics. *Journal of Political Economy* 89 (4): 642–64.

Woods, Neal D. 2004. Political Influence on Agency Rule Making: Examining the Effects of Legislative and Gubernatorial Review Powers. *State and Local Government Review* 36 (3): 174–85.

Yackee, Susan Webb. 2006. Sweet-Talking the Fourth Branch: Assessing the Influence of Interest Group Comments on Federal Agency Rulemaking. *Journal of Public Administration Research and Theory* 16 (1): 103–24.

Yandle, Bruce. 1983. Bootleggers and Baptists—The Education of a Regulatory Economist. *Regulation* 7 (3): 12–6.

Appendix 1: Correlation Matrix of All Dependent Variables

Variable	Number of Rules Passed Per Capita	Economic Rules Passed Per Capita	Forbes Rank	State Regulatory Enforcement Expenditure Per Capita	Regulations Before State Supreme Court Per Capita	Number of Regulations Overturned by State Supreme Court Per Capita
Number of Rules	1.0000					
Economic Rules	0.9459	1.0000				
Forbes Rank	0.5893	0.5973	1.0000			
Enforcement Expenditures	0.572	0.6041	0.5175	1.0000		
Regulations in Supreme Court	0.6478	0.5008	0.5196	0.1993	1.0000	
Regulations Overturned by Supreme Court	0.6650	0.5951	0.6175	0.2722	0.9077	1.0000

Appendix 2: Full Description and Sources for All Variables

Variable Name (source)	Description
Dependent Variables	
Forbes Regulatory Rank[(a)]	Ranking by state based on its regulatory environment from *Forbes* Magazine's *The Best States for Business and Careers* 2010. The Index is based on (1) an index from Pollina Corporate Real Estate; (2) The Tort Liability Index from the Pacific Research Institute; (3) the Regulatory index from the Pacific Research Institute's U.S. Economic Freedom Index; (4) Moody's bond rating on each state's general obligation debt; (4) transportation infrastructure including air, highway, and rail; and (5) Whether a state is right-to-work.
State Regulatory Enforcement Expenditures Per Capita[(b)]	Data includes total expenditures on "protective inspection and regulation" for the year 2008.
Number of Regulations in Court Per Capita[(c)]	This variable represents the average number of regulatory actions that received prior regulatory agency scrutiny before being challenged within a state Supreme Court between 1995 and 1998. (Variable "agency" in codebook)
Number of Regulations Reversed by Court Per Capita[(c)]	This variable represents the number of regulations in court per capita that were overturned by a state Supreme Court between 1995 and 1998.
Total Number of Regulatory Rules Per Capita[(d)]	These are the total number of regulatory rules passed by each of a sample of 28 states in 2007.
Economic Rules Per Capita[(d)]	These are the total number of regulatory rules passed by each of a sample of 28 states in 2007 which have a direct economic impact. Specifically, this variable eliminates all budgetary rules, administrative rules, and regulations which set rules for an individual state government but not the public at large contained in "Total Number of Regulatory Rules Per Capita."
Independent Variables	
Attorney General Review[(e)]	A dummy variable representing whether a state attorney general has the power to approve all regulatory rules for legality.
Other Executive Review[(e)]	A dummy variable representing whether some other member of the executive branch (exclusive of the attorney general) has the power to review new regulatory rules.
Legislative Review[(e)]	A dummy variable representing whether the state legislature has the power to review new regulatory rules.
Independent Review[(e)]	A dummy variable representing whether a third party, outside reviewer has the power to review new regulatory rules.
Legality Review[(e)]	A dummy variable representing whether one branch of government (either executive or legislative) or an independent reviewer has the authority to review the legality of a new regulatory rule.
Authority Review[(e)]	A dummy variable representing whether one branch of government has the power to review a proposed regulation for its consistency with legislative intent or whether an agency has the authority to issue such a regulation.

Appendix 2: Continued

Variable Name (source)	Description
Efficiency Review[e]	A dummy variable representing whether at least one branch of a state's government has the ability to review a proposed regulation based on its reasonableness as well as its efficient and effective application and result.
Any Factor Review[e]	A dummy variable representing whether or not some branch of a state's government has the authority to review a proposed regulation based on consistency or conformity to state code or its economic impact.
Government Cost-benefit Analysis[e]	A dummy variable representing whether or not a state requires an analysis of the impacts to government funds and revenues that will result from a proposed regulation.
Economic Cost-benefit Analysis[e]	A dummy variable representing whether or not a state requires an analysis of the economic costs and benefits to the private or regulated parties impacted by a proposed regulation.
Alternative Cost-benefit Analysis[e]	A dummy variable representing whether or not a state requires an analysis of relevant alternatives to achieve a least-cost means of implementing a proposed regulation, or an assessment of the broader distributional effects that a proposed regulation might have.
Agency Review[e]	A dummy variable representing whether or not a state requires an internal review by an agency of a given regulation periodically.
Non-Agency Review[e]	A dummy variable representing whether or not a state requires an internal review by an outside agency of a given internal agency's regulations periodically.
Sunset Provision[e]	A dummy variable representing whether or not a state requires some form of sunset provision to new regulatory rules.
Voter Initiative[f]	A dummy variable representing whether citizens of a given state have the constitutional right to bring forth constitutional amendments through popular initiative.
Unemployment Rate[g]	Average unemployment rate by state between 2002 and 2007.
Median Household Income[b]	Average four-person household income by state between 2002 and 2007.
Percent with Bachelor Degree[b]	Average percentage of the population with a Bachelor degree by state between 2002 and 2007.
Percent Voting Democrat[h]	The percentage of the population that voted for President Barack Obama in the 2008 general election by state.

Sources:

(a) Data is available at http://www.forbes.com/special-report/2011/best-states-11_land.html.
(b) U.S. Department of Commerce, Census Bureau, *Census 2010*, Washington, D.C.
(c) Brace, Paul and Melinda Gann Hall. "The State Supreme Court Data Project." This data is available at http://www.ruf.rice.edu/~pbrace/statecourt/.
(d) Shapiro, Stuart and Deborah Borie-Holtz. (2011a). "Does Process Matter: Regulatory Procedure and Regulatory Output in the States." The Institute for Policy Integrity. New York University School of Law.
(e) Schwartz, Jason A. (2010). "52 Experiments with Regulatory Review: The Political and Economic Inputs into State Rulemaking." *Institute for Policy Integrity*. New York University School of Law.
(f) From *The Book of the States (2010).* Council of State Governments. Lexington, KY.
(g) Data available from the *Bureau of Labor Statistics* for each of the various years.
(h) Data available from www.cnn.com/Election/2008/results/president/.