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DOES ELECTORAL ACCOUNTABILITY  
AFFECT ECONOMIC POLICY CHOICES?  
EVIDENCE FROM GUBERNATORIAL  
TERM LIMITS

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ABSTRACT

This paper uses data from U.S. states to investigate whether electoral accountability affects economic policy choices. We set up a model in which the possibility of being re-elected may curtail opportunistic behavior by incumbent governors. We find that facing a binding term limit affects choices on taxes, expenditures, state minimum wages and mandates on workers' compensation. Such effects are found also to vary with the party affiliation of the incumbent. The Democratic party also appears to suffer at the polls following the term of a lame-duck, Democratic incumbent.

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# 1. Introduction

Can purely economic models of policy choice characterize the outcome of actual policy decisions? Answering this question is central to developing satisfactory positive models of policy choice. Two broad, contrary perspectives can be discerned. The first characterizes the “optimal” policy from economic fundamentals and tests its predictions. Barro (1979) on the determination of government debt is a good example of this. This approach goes hand-in-hand with a political economy in which there are sufficient forces to ensure that optimal policies are indeed chosen. Wittman (1990) offers the purist statement of this view. Stigler (1971) and Becker (1983) have developed analyses of specific institutional contexts where the adoption of efficient policies is implied. The implications for the theory of public finance of such views are profound. For example, Ramsey’s tax rules become a positive model of tax policy and Samuelson’s rule for the provision of public goods, and its generalizations, becomes a prediction about what *will* be done in practice.<sup>1</sup>

At the other end, political economy begins with institutions and a presumption that these matter for the adoption of policies regardless of whether the policies are efficient. Voters are modeled as poorly informed, possibly deluded and even sometimes irrational. Analyzing policy choice then requires a detailed understanding of the exact institutional set-up. The role of economics (especially the theory of optimal policy choice) is at best marginal and, at worst, irrelevant. In a public finance context, the various “fiscal illusion” hypotheses reviewed in Oates (1988) are perhaps the best evidence that such views are pervasive in certain quarters. These views are most often associated with public choice analyses of policy.<sup>2</sup>

Given uncertainty about the role of political institutions in the determination of public policies, there is a clear need for empirical research. This paper is not the first to attempt this. Researchers have previously attempted to see whether the

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<sup>1</sup>In the most extreme version of this position, politics is about the distribution of resources, but should not affect the form of policy used to achieve that end, which should be Pareto efficient. Thus politics dictates the choice of “welfare function”, assigning weights to different groups or individuals in the society. Policy choices can be characterized by a move around the (possibly information constrained) Pareto frontier.

<sup>2</sup>See Mueller (1992) for a general survey of work in this tradition. It should be acknowledged that he makes plain the diversity of views and approaches that are carried out under the broad heading of public choice.

line item veto, divided government and balanced budget amendments, to name but three political institutions, affect particular policy choices.<sup>3</sup> Here, we study the effect of gubernatorial term limits on a broad array of economic policy choices: taxes, expenditures, minimum wages and workers' compensation mandates. One attractive feature of term limits for such an exercise is that they can reasonably be taken to be exogenous.<sup>4</sup> Our analysis also considerably broadens the array of policies over those that are conventionally studied. Finally, the incentive effects of term limits are relatively easy to study in theory and the type of effects that we find in the data have a satisfying theoretical interpretation in a world of rational voters and incumbents.<sup>5</sup>

The literature on political business cycles is also a close cousin of the analysis presented here. It forges a theoretical and empirical link between macro-economic performance and electoral patterns.<sup>6</sup> A review and extension of this literature is available in Alesina and Roubini (1992). They find evidence of election effects on GNP and unemployment. The main difference between our analysis and work in this tradition is that we are using data on policy variables on the left hand side. In addition, by distinguishing between elections where incumbents can run again from those where they cannot, we can see whether it is elections alone that matter or only those where incumbents can run again. For our data the difference between these two situations is striking.

There are a number of theories that might predict that term limits affect policy choices. We focus on two here. The first is a political agency model.<sup>7</sup> Since term limits affect a governor's time horizon, they might affect the ability of voters

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<sup>3</sup>Poterba (1993) is a good example of this. He also gives detailed references to the existing literature.

<sup>4</sup>Only five states adopted term limits during the period of 1950 to 1986. More generally, term limits go back to the nineteenth century and require significant majorities to be overturned. We return to the question of potential endogeneity below.

<sup>5</sup>We are not the first to explore the impact of gubernatorial term limits on variables of interest. Crain and Tollison (1977) discuss the effect of term limits on the campaign spending behavior of gubernatorial candidates. Adams and Kenny (1989) discuss the impact of living in a state with term limitations on governors' re-election odds. Neither study differentiates between points in time when term limits are binding and those when they are not. States with term limits differ on observable characteristics from those without (see below), and for this reason it is difficult to distinguish the independent effect of term limitation without controlling for state fixed effects.

<sup>6</sup>See, for example, Nordhaus (1975) and Rogoff (1991).

<sup>7</sup>Previous models of this kind are Austen-Smith and Banks (1989), Besley and Case (1992), Coate and Morris (1993) and Rogoff (1990).

to overcome political agency problems, associated with incomplete control over politicians. The second is a model of redistributive politics. If governors have to serve special interests when seeking re-election, then they can abandon them when the term limit binds.<sup>8</sup> Below, we formalize both of these views. We believe that our data provide some evidence that both may be important.

Our empirical analysis of the effect of term limits on policy fits into wider debates about the design of incentive schemes in principal agent problems. There is a large body of theoretical work on how deferred rewards can help to deal with problems of hidden action. For two good examples, see Holmstrom (1982) and Stiglitz and Weiss (1983). Moreover it has been argued, for example in Tirole (1992), that career concerns are a particularly important incentive device in the public sector, where monetary reward schemes are less likely to be high powered than those in the private sector. The kind of exogenous change in the discount rate represented by a term limit provides a way of seeing whether reputation building models appear consistent with the evidence. Thus, finding that term limits matter would make us more sanguine about the relevance of such models for understanding the real world.

The remainder of the paper is organized as follows. The next section sets out a simple dynamic public finance model assuming that an infinitely lived social planner implements the outcome. This gives us a benchmark against which to compare our political economy models. These are introduced in section three. They relax the assumption that policies are enacted by an impartial planner. The incumbents are members of the population with real interests. We present two political economy models. In the first, the incumbent must put in unobservable effort. In the second, the incumbent may attempt to redistribute towards those whom he favors. In both cases the electoral mechanism will affect policy choices. Section four presents our empirical analysis. Consonant with the theory, there appear to be significant effects of term limits on policy choices. Section five concludes.

## 2. Dynamic Public Finance

We begin by considering a standard purely economic model of public finance in which to embed our discussions of the positive economics of policy. The model is a

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<sup>8</sup>These two approaches have analogs in the political business cycles literature. Alesina and Roubini (1992) refer to agency models as "opportunistic models" and redistributive politics models as "partisan models".

dynamic economy without capital of the kind analyze in Lucas and Stokey (1983) *inter alia*. We assume for simplicity that consumer preferences are quasi-linear. It should be clear nothing essential to our results follows from this.

In the basic model, the government faces a sequence of exogenously given expenditure requirements that vary through time. It has the choice of two financing instruments: tax and debt. The sequence of revenue requirements is denoted by  $\{g_t\}_{t=1}^{\infty}$ . A representative individual has quasi-linear preferences:  $\phi(x) + y$ , where  $x$  is a vector of goods and  $y$  is a numéraire. As in the standard Ramsey tax framework (see, for example, Mirrlees (1986)), the government is assumed unable to tax the numéraire, effectively precluding lump-sum taxation in this representative consumer economy. The government can issue one period debt, with its sequence of choices denoted  $\{b_t\}_{t=1}^{\infty}$ , with  $b_0$  taken as given. The representative consumer discounts the future with discount factor  $\beta$ .

In a competitive equilibrium, the relative consumer prices will equal their marginal rates of substitution. However, since the marginal utility of the numéraire equals one, this just yields  $\frac{\partial \phi(x)}{\partial x_j} = q_j$  where  $q_j$  is the  $j$ th consumer (i.e. tax-inclusive) price. Making use of our quasi-linearity assumption, the inter-temporal equilibrium is easy to characterize. The representative individual is willing to hold public debt provided that the interest rate is at least  $(1/\beta - 1)$ . Assuming that the endowment in each period consists of one unit of a numéraire that can be transformed into other goods at rates of transformation  $p_j$ , there are two constraints on allocations selected by the planner. First, it must respect the consumer's budget constraint, given the fact that the consumer is optimally allocating resources across available goods. We write this as

$$\sum_{j=1}^n \frac{\partial \phi(x_t)}{\partial x_{tj}} x_{tj} - \frac{b_{t-1}}{\beta} + b_t - 1 + y_t \leq 0, \quad (2.1)$$

where we have used the fact that consumer prices are  $\phi_j(x_t)$  and that the interest payment depends upon  $\beta$ . Second, the government must respect the aggregate feasibility constraint:

$$1 - \sum_{j=1}^n p_j x_{jt} - y_t - g_t \geq 0. \quad (2.2)$$

The optimal tax problem, given a particular realization of government expenditures and an initial debt level is now easy to characterize. The government chooses  $(x_t, y_t)$  to maximize the representative individual's utility at each date subject to

(2.1) and (2.2). We denote the solution to this problem as  $V(b_t, b_{t-1}, g_t)$ . In fact it is straightforward to see that under the assumption of quasi-linear preferences, we can write the optimal consumption of the non-numéraire goods as a function of the sum of government expenditures and the difference in the value of debt  $\frac{b_{t-1}}{\beta} - b_t$ .

In this case, we can write the solution to the static optimal tax problem as:

$$V(b_t, b_{t-1}, g_t) = 1 - g_t - C\left(\frac{b_{t-1}}{\beta} - b_t + g_t\right) \quad (2.3)$$

for some increasing function  $C(\cdot)$ . To see this, let  $\lambda_t$  denote the Lagrange multiplier on the consumer's budget constraint and  $\mu_t$  be that on the aggregate feasibility constraint, then the first order conditions for the government's optimal tax problem are:

$$\phi_j(x) + \lambda_t \left\{ \sum_{i=1}^n \frac{\partial^2 \phi(x)}{\partial x_i \partial x_j} x_i + \phi_j \right\} - \mu_t p_j \quad (2.4)$$

and

$$1 + \lambda_t - \mu_t = 0. \quad (2.5)$$

Putting these together, we can write  $x_{it}^* = h^i(\mu_t, p)$ , where  $p$  is the vector of producer prices. Substituting this into the feasibility constraint, solving for  $y$  and substituting this into the budget constraint gives us the following equation determining  $\mu_t$ .

$$\sum_{i=1}^n \frac{\partial \phi(h(\mu_t, p))}{\partial x_i} h^i(\mu_t, p) - \sum_{i=1}^n p_i h^i(\mu_t, p) = g_t + \frac{b_{t-1}}{\beta} - b_t. \quad (2.6)$$

Solving this for  $\mu_t$  and suppressing dependence on  $p$ , for the sake of notational brevity, yields the result.

The dynamic choice problem for the government which determines its choice of debt can now be set up in the following recursive form:

$$W_t(b_{t-1}, g_t) = \underset{b_t}{Max} \{V(b_t, b_{t-1}, g_t) + \beta E\{W_{t+1}(b_t, g_{t+1})\}\}, \quad (2.7)$$

given  $b_0$ . We will refer to the debt sequence that satisfies (2.7) as an efficient policy choice.

Debt is used by the government to smooth temporary changes in government expenditures.<sup>9</sup> Taxes are changed so that they are levied optimally given the revenue requirements. The model is the simplest direct extension of the theory of optimal taxation to dynamic economies.

### 3. Political Economy

Above, we characterized the efficient outcome for a group of identical individuals. In this section we consider a couple of simple ways of embedding policy choice in a political economy framework. A natural way to do this is to suppose that policies must be carried out by politicians. We present two models. In the first of these, policies are enacted by a self-interested incumbent who must be relied upon to put in unobservable and costly effort while in office. Thus a potential moral hazard problem arises. The second considers the possibility that the agent may need to gain the support of certain groups in society to get re-elected and will offer transfers to certain voting groups in exchange for being voted back into office. We argue that, in either model, we would expect to find that the introduction of term limits will have an effect on policy choices.

#### 3.1. Political Agency

The above model assumed that a benevolent social planner chose the time path of debt and taxes. In this section, we consider instead the case where a political agent must be elected to run the government. This individual may be farsighted, but we drop the assumption that he or she is benevolent.<sup>10</sup> We augment the model above by supposing that the incumbent can put in effort at the beginning of each period that affects the distribution of government expenditures and which is both costly and unobservable. This can be interpreted as the effort put in by the incumbent to make government work efficiently. Each incumbent also receives an “ego rent”, denoted by  $\Delta$ , during each period that he is in office.<sup>11</sup> From the

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<sup>9</sup>If we allowed the government to issue state contingent securities as in Lucas and Stokey (1983), then the model would display an extreme form of Barro’s (1979) tax smoothing result. Since consumers have quasi-linear preferences, then they would be willing to offer the government complete insurance. The government behaves in a risk averse way since taxes have a dead-weight loss associated with them. More generally, efficient risk sharing would require some element of state contingency to optimally share risk between the government and its citizens.

<sup>10</sup>The first formal analysis of this kind that we aware of is Barro (1970).

<sup>11</sup>This is basically the modeling strategy employed in Rogoff (1990).



point of view of the whole economy, effort put in by the incumbent is a public good and, unless the incumbent cares about the utility of all the voters, he will be inclined to shirk. This shirking is mitigated by rewarding the incumbent for low levels of public expenditures, which are indicative of high effort. Thus the probability of getting next period's ego rents can sustain increased effort and lower public expenditures.<sup>12</sup>

We denote the incumbent's effort at time  $t$  by  $e_t$ . We suppose that this belongs to the interval  $[\underline{e}, \bar{e}]$ . The government's revenue requirement at time  $t$ , denoted by  $g_t$ , is equal to  $\epsilon_t - e_t$ , where  $\epsilon_t$  is an *iid* random variable whose density function is denoted by  $f(\cdot)$ . We assume that the lower bound on  $\epsilon$  exceeds  $\underline{e}$  so that revenue needs are always positive. Effort is assumed to be costly, with cost of effort function  $\psi(e)$ , which is smooth, increasing and convex.

As we discussed above, voters may discipline incumbents by voting them out of office. In general, there could be quite complex incentive schemes imposed on an incumbent, that could be described by an infinite sequence of probability of re-election functions  $\{P_t(g_t, (b_t, x_t), d_t)\}_{t=1}^{\infty}$ , where  $d_t$  denotes the history of all past choices by voters and incumbents. This specification is quite general; it can depend upon time and history as well as observable current policy choices. Investigating the implications of both optimally determined and real world rules for policy is an important on-going research agenda (see, for example, the work of Coate and Morris (1993)). We describe some special cases of interest:

- $P_t(g_t, d_t) = 1$  for all  $(t, d_t)$  - guaranteed re-election.
- $P_t(g_t, d_t) = P(g_t)$  for all  $(t, d_t)$  - time invariant and history independent re-election.
- $P_t(g_t, d_t) = P_t(g_t, d_t) \in [0, 1]$  for  $s$  periods after election and zero, thereafter - statutory term limits of  $s$  terms. This is an example of a history dependent incentive mechanism that we observe in reality.

Many different incentive schemes are possible. We will conduct our analysis here under the assumption of stationary incentives, which are memoryless. This is extreme and more research is needed on general schemes and their implications for public finance. However, given our focus here on testing for political agency, we feel that this serves as an adequate motivation for our analysis.

We assume that the population consists of  $N$  individuals, each of whom is equally competent at running the government. Each, however, is self-interested.

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<sup>12</sup>The formal model here is reminiscent of Stiglitz and Weiss (1983).

After an incumbent is thrown out of office, we assume that each has an equal chance  $\frac{1}{N}$  being elected to office again. In fact, it is most convenient to work with the case where  $N \rightarrow \infty$  so that incumbents face a zero probability of coming back after defeat. An election takes place each period, at the beginning of which effort is committed. The random shock  $\epsilon_t$  is then realized, after which choices about tax and debt are made.

We are now in a position to characterize the value function of an individual who is voted into office. We focus on the stationary solution in all cases. The payoff to an incumbent upon taking office is

$$W^I(b_{t-1}) = \underset{e}{Max} E\left\{ \underset{b_t}{Max} (\Delta + V(b_{t-1}, b_t, \epsilon - e) - \psi(e) + \beta (P(\epsilon - e)W^I(b_t) + (1 - P(\epsilon - e)W^O(b_t))) \right\} \quad (3.1)$$

The surplus from being in office is  $\Delta - \psi(e)$ . It should be clear from this formulation that our model predicts that incumbents would use Ramsey taxes to raise revenues during each period, i.e., there is no tax policy inefficiency conditional on revenues raised. The payoff to a voter at time  $t$  (their “value function” given policy functions  $\{e^*(b_{t-1}), b^*(\epsilon, b_{t-1})\}$ ) is

$$W^O(b_{t-1}) = E\{V(b_{t-1}, b_t^*(\epsilon, b_{t-1}), \epsilon - e^*(b_{t-1})) + \beta W^O(b_t^*(\epsilon, b_{t-1}))\} \quad (3.2)$$

The social planning optimum would take account of the benefits of effort to the whole population. We assume for simplicity that it assigns the ego rents randomly to one member of the population at the beginning of each period. Hence, the social planning optimum which maximizes average utility is characterized by

$$W^S(b_{t-1}) = \underset{e}{Max} E\left\{ \underset{b_t}{Max} (V(b_{t-1}, b_t, \epsilon - e) + \beta W^S(b_t)) \right\} \quad (3.3)$$

It is clear that that effort in the social planning solution is set equal to  $\bar{e}$ , since the cost of effort is now shared over the entire population.<sup>13</sup> Hence any time that an

<sup>13</sup>In (3.3), we have used the fact that

$$\lim_{N \rightarrow \infty} \frac{\Delta - \psi(e)}{N} = 0.$$

incumbent fails to put in maximal effort we will have shirking and a deviation from the social optimum. We shall say that a particular effort level is *implementable* if it is consistent with incumbent behavior given incentives provided by the function  $P(\cdot)$  and solves (3.1). Without a very large value of  $\Delta$ , the first best will not generally be achieved.

We will make two preliminary observations about this model of political agency. The first, somewhat obvious, point is that incentives are worst in situations where either the incumbent is guaranteed re-election or else is never re-elected, i.e. where  $P(\cdot)$  is either zero or one throughout its range. This corresponds to either an entrenched monarch or an agent facing a term limit. In these cases, effort is minimized. The public finance of these situations is, however, quite interesting. The problem solved in either case looks rather similar to the social planning problem, except for the fact that government expenditures are consistently higher than under social planning. The marginal decisions affecting tax and debt finance, however, are quite similar. It is as if the citizens are making a transfer of utility to incumbents financed by higher taxes.

Second, the model is somewhat restrictive in only allowing electoral accountability to help solve the political agency problem.<sup>14</sup> One further possible mechanism, rarely observed in practice, would be monetary incentives, i.e. a governor could be paid an efficiency wage. An analogous function to this may be served by the possibility of running for future office. We present some evidence on this below. Also important in practice is the function of political parties whose time horizons transcend those of incumbents. We also return to this below. Finally, we observe independent mechanisms on incumbent control. For example, in the US states, from where we draw our data, state debt increases often require balloting of the whole electorate before they can be implemented. We would expect such other disciplinary measures to be most at work when incumbents face a term limit, thus weakening the impact of term limits, as predicted in our simple model. If these disciplinary mechanisms, worked well, as is claimed by Wittman (1990), then changing the shape of the  $P(\cdot)$  should have no effect on effort levels.

Since effort is not readily observable, we test for effects of changing the probability of election function on policy variables. According to our model, such effects should affect public finance if shirking is incompletely controlled. The mechanism is indirect. If term limits affect effort levels, then our model predicts effects on expenditures, debt and taxes. Effort will be lower when a term limit binds if  $P(\cdot)$

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<sup>14</sup>The multifarious sources of incumbent discipline are stressed in Wittman (1990).

is decreasing over some part of its range.<sup>15</sup> To see this, it suffices to note that without a term limit the marginal incentive to put in effort includes a term

$$\beta E \left\{ P'(\epsilon - e) \left( W^I(b_t(\epsilon, e)) - W^O(b_t(\epsilon, e)) \right) \right\}$$

which is positive for decreasing probability of re-election functions. Thus the marginal value of effort is lower in the case of a term limit. This implies higher public expenditures on average. According to our model, it also implies higher taxes, although these will be distributed across goods optimally, i.e. there is no incentive for an incumbent to behave inefficiently. Since expenditures are higher, the marginal value of public funds is also higher and we should expect debt to be higher too. There might also be a *strategic* effect on issuing debt of the kind analyzed by Alesina and Tabellini (1990). Bequeathing more debt to future incumbents raises the cost of public funds in the future and encourages effort in later periods. This effect would be enhanced when incumbents know that they will not be in office next period for sure. All-in-all, a political agency model suggest some empirical predictions on observable policy variables that we will test below.<sup>16</sup>

#### 4. Redistributive Politics

Our model of distributive politics is extremely simple. It serves, however, to illustrate why policies that have significant redistributive effects might respond to gubernatorial term limits. Our empirical examples are minimum wages and workers' compensation. One might argue that these also correct market failures. However, viewing these as predominantly redistributive instruments makes sense.<sup>17</sup> We will build a model here where redistribution comes out of government revenue. This is strictly speaking inaccurate, since the kinds of regulation that we study are

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<sup>15</sup>Re-election incentives of this kind are consistent with empirical evidence in Peltzman (1992) and Besley and Case (1992). Our model of agency presented here would justify a finding that voters were fiscally conservative.

<sup>16</sup>Our model has illustrated this effect for the case of costly unobservable effort. There are however many aspects to political agency that might be studied, such as rent seeking behavior.

<sup>17</sup>Of course, this raises the questions of why such an inefficient redistributive instrument is being used. Here is not the place to rehearse such arguments in detail. The only analysis that we are aware of that analyzes this issue rigorously is Coate and Morris (1993). We have in mind the possibility that it would be hard to target accurately the groups who benefit from minimum wages and workers' compensation using cash transfers.

off-budget. However, it will be clear to the reader that our basic argument is unaffected by this observation.

Consider therefore a world in which government revenue needs are known and generated by observable expenditures on public goods. There are three groups in society and we suppose that they each like only one kind of public good.<sup>18</sup> We also assume that no group constitutes a majority of the population. We use  $(z_1, z_2, z_3)$  to denote the public goods vector and  $\xi(z_i)$  to be the valuation function of the group which likes public good  $i$ . Politicians can represent any or all of these groups depending on the policies that they choose. However, since they belong to only one group, they only value one of the public goods intrinsically. The reason for spending on the other public good is that they can appeal to the other types of voters and get re-elected. We take it for granted that they get votes from their own type of voter.

Without loss of generality, we consider the decision problem of a type 1 incumbent. The probability of his being re-elected is a function of the amounts of public good that he provides to the other two groups,  $P(z_2, z_3)$ . We assume that this function is weakly increasing in both of its arguments. This might crudely capture the idea that voters are uncertain about the politician's type as in Coate and Morris (1993). There might be some politicians who do not favor any group in particular, i.e. are impartial with respect to different interests. Spending on all types of public goods might occur if the politicians wanted to signal their type.

We begin the analysis by considering the choice of public goods by a type 1 incumbent who faces no prospect of being re-elected. We assume that the taxes that are levied to finance public goods are the same on all members of the population, i.e. the incumbent cannot favor type 1 individuals by levying taxes only on type 2 and 3's. The problem solved by a type 1 incumbent (for a given choice of debt) would then be

$$\underset{z_{t1}}{\text{Max}} (\xi_1(z_{t1}) + V(b_{t-1}, b_t, z_{t1})) \quad (4.1)$$

We denote the solution to this equation as  $z_1^*(b_t)$ . This is the level of public provision that the incumbent would choose if there was no chance that he would be re-elected. Our model would predict that  $z_2$  and  $z_3$  would be set to zero in this case. The optimal path of debt would then solve the usual first best recursive

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<sup>18</sup>This is similar to the set up in Alesina and Tabellini (1990). The main difference here is that we allow the mix of public goods to affect the chance of being re-elected. In their model the probability of re-election is exogenous.

with probability weights attached to who would take office next. As Alesina and Tabellini have already observed, there may be distortions in the choice of debt in this model since this will affect future incumbents' flexibility to spend, i.e. higher debt raises the future marginal cost of public funds.<sup>19</sup>

We want to contrast this model with one in which public goods provision can affect the probability that an individual can remain in office by "buying" votes. In this case, the decision problem faced by the incumbent is

$$\begin{aligned} \underset{\{z_{it}\}_{i=1}^3}{Max} \quad & \left( \xi_1(z_{t1}) + W(z_{t1} + z_{t2} + z_{t3} - \frac{b_{t-1}}{\beta} + b_t) \right) \\ & + \beta \left\{ P_t(z_{t2}, z_{t3}) W_{t+1}^I(b_t) + [1 - P_t(z_{t2}, z_{t3})] W_{t+1}^O(b_t) \right\} \end{aligned} \quad (4.2)$$

The public goods liked by consumers 2 and 3 will now have some value because of their effect on electoral success. This will serve to crowd out public good 1 since the marginal cost of funds will be higher. Hence, we have the result that the pattern of spending on public goods which are favored by particular groups would be affected by the imposition of a term limit.<sup>20</sup>

The modeling here is very specific. However, we believe the idea to be quite general, that choices about public expenditures which favor particular groups may be affected by the existence of term limits if the electoral process leads individuals to favor other groups for electoral purposes. If there are term limits then we would predict individuals to pursue more of those policies which favor their own type.

The specific redistributive instruments we look at below are not actually operating through the government budget constraint. However, the idea is quite similar. The minimum wage may benefit workers and harm employers. The costs are potential effects on employment and dead-weight losses. Our theory would lead us to predict that the policy instrument would be used to affect re-election chances and that when incumbents came up against a term limit, there would be differences in incentives to raise minimum wages. This would, of course, depend upon whether the incumbent favored low income groups. Similar arguments

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<sup>19</sup>See also Glaser (1989).

<sup>20</sup>A model such as Alesina and Tabellini (1990), in which the choice of public goods enters a re-election function assumed to be independent of the policy choice, would yield a conclusion that term limits mattered to policy choice. However, the effect would come through term limits affecting the probability that the type of politician who was in office subsequently was different. This is conceivable. However, we find our model where policy choices affect policy outcomes through the election mechanism to be a more plausible story for our empirical evidence.

would apply to discussion of workers' compensation. Such effects appear likely to depend upon party affiliation, with Democrats more likely to put through policies favoring labor in their last term and Republicans less likely to do the same. When re-election incentives are faced, we would predict that such effects might be muted by having to build more extensive electoral coalitions.

Before moving on to the empirical evidence, we should also point out that the distinction between political agency models and redistributive politics is more blurred than we might have suggested from the presentation so far. For example, there is a political agency version of why minimum wages might be affected by term limits. This would be a model more in the spirit of Becker (1983) where pressure groups compete for resources. The governor could be viewed as the focus of competing lobbying interests that require effort to resist. However, if he cared solely about efficiency, the incumbent would resist demands to implement inefficient redistributive policies such as minimum wages. However, such efforts would have a lower value when the incumbent faces a binding term limit.

In summary, our model of redistributive politics predicts that we should observe differences in the use of redistributive instruments when a term limit is faced. There is no prediction about the effect on public revenues and taxes from this model. However, the strategic role of debt in binding the hands of future incumbents, as demonstrated by Alesina and Tabellini (1990), implies that governors facing term limits should issue excessive debt if it changes the probability that a politician of a different type will succeed them. With redistributive politics and strong parties, we might expect the effect of term limits to be weakened if the incumbent cares about the party's chance of being re-elected next period. Hence, our test of whether term limits affect certain off-budget redistributive instruments is also a test of whether parties are able to control incumbents in their last period (assuming that party interests line up unambiguously on such issues).

#### **4.1. The Role of Parties**

The model above neglected any role for parties, focusing exclusively on incumbents as individually self-regarding agents. However, such institutions are an important feature of the political landscape and may affect the impact of term limits on behavior. In a dynamic political agency model, parties serve potentially to extend the time horizon of officials. The party may have a reputation that it wishes to preserve and which transcends the career of any particular incumbent.

Formally, one could allow the incumbent's future payoff to depend upon his

or her party's success in future elections and allow the party's future success to depend in turn on current policy choices. Party loyalty arises naturally if the incumbent cares about the party's political or social agenda. However, unless the individual is motivated purely by party success, this may be insufficient to overcome the effect of term limits. Party loyalty may nonetheless act to mitigate the effect of term limits. Parties might also take active steps to protect their chances in future elections, after the incumbent steps down. Such actions might include party honor systems that reward past incumbents who remain in favor. Future sinecures might also be used as carrots. The party might protect itself by selecting candidates who are more likely to be servile and/or respect the party's mission. There might also be mechanisms limiting an incumbent's freedom to maneuver. These may work through the legislature or through political appointees with longer term ambitions. All of these effects suggest a more general model in which parties play an overarching role in disciplining incumbents, forcing them to take the long view.

In the extreme, one could move to a model where the incumbent is completely subservient to the party so that a binding term limit does not affect the time horizon of a political agent (which is a collective rather than an individual). In our model above, we go to the other extreme, modeling the behavior of individual agents. The relevance of the latter case is, we believe, borne out in our empirical results. Anyone who wanted to subsume individual political behavior and focus entirely on a party-based model would have to explain the results presented below, all of which are suggestive of incomplete party discipline.

## 5. Empirical Evidence

We present empirical evidence on the effect of term limits on taxes, expenditures, minimum wages and workers' compensation using data for the 48 continental U.S. states from 1950 to 1986.<sup>21</sup> Table I provides information on sitting governors during this period. Democrats held office in roughly half the states in each year of our sample, with the exception of the mid to late 1970s, which saw a swell in the number of Democratic governors in the wake of Watergate. In every year of

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<sup>21</sup>Given the theoretical model presented above, we might also have used data on debt. We could not, however, locate a consistent data series on debt issued by state governments for this period. There was significant growth in private activity state debt during the later years of our sample. Using available data on state debt, we do find effects of term limits, but we are reluctant to report them here because of the inadequacies of the data.



our sample, a significant fraction of all sitting governors (roughly a third) were ineligible to stand again for office. Of these, on average two thirds were Democrats and one third were Republicans.

We provide more detailed information on gubernatorial term limits in Table II. Roughly half of all states had no term limitations during this 37 year period. These states help us to identify year effects and the impact of state economic and demographic variables on state policy choices. Only five states adopted term limits during this period: Kansas, Maine, Nebraska, Nevada, and Ohio. Such changes may signal that decisions on term limits and state policies are made simultaneously, in which case it would be inappropriate to condition on the presence of term limits. For this reason, we carried out the analysis below with and without these five states. The results were virtually identical with and without these states and we present results here for the full sample.

Table III provides means and standard deviations of the variables in our analysis, with information provided separately for states that had a term limit at some point from 1950 to 1986 and for states that did not. In those states in which governors' terms are limited by law, the limitation leads to a lame duck governor in office in roughly half of the years in our sample (51 percent of all years). States with term limits are significantly more likely to be governed by democrats (63 percent of all years versus 51 percent for states without term limits).

We include as explanatory variables state income per capita, the proportion of the population between the ages of 5 and 17, the proportion of the population over age 65, and state population. States without term limits are significantly larger on average. In addition, these states are significantly wealthier, as measured by income per capita. States without term limits have higher income taxes, corporate taxes and total taxes per capita<sup>22</sup> than states with term limits and have higher state spending levels as well. Given the economic and demographic differences between states with and without term limits, we will control for state level fixed effects in all of the results presented below. In this way, the effect of having a governor in place who cannot run for re-election is identified from the differences in that state's fiscal behavior when an incumbent can run again, and when one cannot. In addition, in all estimation, we allow for year specific effects in order to avoid convoluting shocks to the macro economy or national political mood with decisions made by incumbents who cannot stand for re-election.

The empirical results are presented in four parts. In the first, we present results of conditioning state policy choices on whether the incumbent faced a binding

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<sup>22</sup>Total taxes are the sum of sales, income and corporate taxes.

a term limit. We also present results that condition on state demographic and economic variables, although we note that these controls are potentially endogenous. (State income and state population, for example, may be both functions of taxes and determinants of taxes.) The second set of results will add information on party affiliation to the analysis. As we argued in Section 4, this may be an important consideration. Here, we add an indicator for the governor's party and variables interacting party affiliation with whether or not a term limit is faced. Our third set of empirical results investigates the possibility that transitions from Democratic to Republican control of the governor's chair, and those from Republican to Democratic, might be affected by the existence of term limits. This speaks to the possibility that party choice may be endogenous. In our fourth set of results, we explore whether the behavior of governors who choose to retire is distinguishable from that of governors who are forced out by term limits.

Our first results, presented in Table IV, consider the effect of term limits on taxes. We find a positive and significant effect of a governor working under a term limit on the level of state sales taxes (columns 1 and 2), a result that is robust to the addition of controls for state income and demographics. When a governor faces a term limit, sales taxes rise between \$7 and \$8 per capita in each year of this final term. Over the course of a four year term, sales taxes in a state governed by a lame duck would be expected to increase by roughly \$30, (10% of the mean state sales tax).<sup>23</sup>

Income taxes also rise significantly in states led by governors ineligible to stand for re-election. On average, income taxes per capita increase nearly \$9 in each year of a lame duck's term. This is roughly 7% of the average income tax collected in states that have income taxes (\$127). There appears to be no effect on corporate taxes which may explain why we get only weak positive results when we look at total taxes in the last columns. Overall, the results in Table IV support the predictions of our political agency model.

Results presented in Table V suggest that term limits have significant effects on other policy variables as well. Term limits have a positive and significant effect on total government expenditures per capita. We expect that when a governor faces a term limit, state spending per person will rise by roughly \$15 per year. State demographic variables, added in column 2, also have significant effects on

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<sup>23</sup>These effects appear to be equally strong in all four years of an incumbent's final term in office. We find no general electoral cycle effects in our data. That is, total taxes and government expenditures are not significantly higher or lower in the fiscal year that ends just prior to the gubernatorial election, or the year before that, or the year before that.

state spending, which rises with the proportion young in the population and falls with increases in the proportion elderly. However, the link between term limits and state spending is robust to the presence of these controls.

We observe a negative and significant effect of a binding term limit on state minimum wages. Having a governor in his or her last term in office yields a *reduction* of the hourly minimum wage of between \$0.12 and \$0.14 (equivalent to roughly 8% of the mean wage for states with term limits). The effects on maximum weekly workers' compensation benefits is less robust. Without controls, there appears to be a significant positive effect. However, this finding is not robust to the presence of controls for state income and demographics.

In summary, term limits do appear to affect policy choices. For taxes and expenditures we find positive effects in line with our political agency theory. For minimum wages, we also find that redistributive policies are affected by binding term limits.

Our next step is to add information on the party affiliation of the governor. We do so at two levels. We add an indicator variable which equals one if the incumbent is a Democrat. We also interact the party of the governor with the term limit variable. Results for taxes are given in Table VI. We find positive and significant effects of term limits on all taxes if the incumbent is a Democrat. When a democrat faces a term limit, sales taxes rise by over \$9; income taxes rise by roughly \$10; and corporate taxes by roughly \$2, on average. All three increases are robust to the presence of state income and demographic controls. Total taxes increase by more than \$10 on average when an incumbent Democrat is ineligible to stand for re-election. In stark contrast, Republicans ineligible to stand for re-election do not raise taxes significantly in their last term. This suggests that the results observed earlier, in Table IV, were being driven by Democratic governors ineligible for re-election. This is indeed the case: re-running the regressions in Table IV, restricting the sample to Democratic governors, we find that governors facing a binding term limit significantly increase sales, income, corporate and total taxes. The results in Table VI suggest that the reason we found only weak effects of term limitations on total taxes in Table IV was because we were grouping heterogeneous governors: Democrats, who raise taxes in the face of term limits, and Republicans, who do not. Results in Table VI also suggest that when the governor is a Democrat, income taxes rise significantly, independent of term limitations.

In Table VII, we add party affiliation to our study of other policies. Again, we find much larger effects on expenditures when a Democrat is in office and faces a binding term limit. On average, spending per capita rises by between \$15 and

\$20 when a Democratic governor faces a term limit. We also find an effect of having a Democratic governor on the level of government expenditures, regardless of whether a term limit is faced. Republicans facing term limits do not change state spending levels significantly, consistent with the results observed for taxes in Table VI.

Republicans in their last term change state policy on minimum wages. This result is much stronger than that presented in Table V, where all lame ducks were grouped together. When a Republican faces a binding term limit, real minimum wages in the state fall by \$0.47 on average. The level effect from a having a Democratic incumbent is negative (about \$0.10), but there is no additional effect on minimum wages of having a Democrat in office who cannot run again. Putting in party controls now gives us significant effects on maximum weekly workers' compensation benefits. Democrats in their last term in office raise maximum weekly benefits by almost \$1 a week (or 7% of the state average). The significance of this effect is robust to the inclusion of state income per capita and demographic variables as controls.

Our discussion of Tables VI and VII leads us to conclude that party affiliation may be an important part of the story. Democratic incumbents are responsible for most of the effect that we find from term limits, the only exception being our results on the minimum wage. This suggests that Democratic party organizations are potentially much weaker at controlling incumbent behavior. A further indication of this would be that, when a Democratic incumbent steps down because of a term limit, the Democratic party is punished by voters who watched taxes rise during the lame duck's term. We test this idea in Table VIII, where we present the effect of term limits on the probability of a transition in party control. The first two columns report this for transitions from Democratic to Republican control. There is a significant increase in the likelihood of a Democrat being replaced by a Republican when an election follows a term where a Democrat faced a binding term limit. Moreover, columns five and six of Table VIII show that there is no such effect for Republicans in elections after term limits. The end-game effects of lame duck Democrats suggest weak party control; the party appears to be punished for the sins of the Democratic incumbent.

We also looked for evidence of forward-looking behavior by voters. If voters understood the results presented here, then they might respond to an impending term limit by voting in more Republicans. Hence, we look for an anti-Democrat bias when re-election would imply electing a to-be lame duck. Thus we use whether, if elected, the incumbent would be ineligible to run again as a right hand side vari-

able in columns 3, 4, 7 and 8 in Table VIII. These results are not encouraging to the forward-looking voter model; the only case where transitions are significantly more likely (and even then only marginally so) is for transitions from Republican to Democratic control. Hence, voters do not appear to be trying to combat potential end-game effects in their pre-term limit voting. Of course, that could be because the coalition in favor of higher taxes and expenditures is strong enough to put Democrats into office. However, this would contradict other evidence on the fiscally conservative nature of voting patterns in Peltzman (1992) and Besley and Case (1992). Moreover, it would be hard to reconcile this with the earlier evidence that democrats do get punished for their last term performance. Perhaps voters do not yet have access to the kind of evidence presented in this paper which might allow them to anticipate the future a little better.

It is interesting also to examine the behavior of governors who retire voluntarily. Since they too are in their last term, perhaps they behave as those who face binding term limits. In fact, much of the existing literature on term limits has used *announced* retirements to identify term limit effects.<sup>24</sup> It is also interesting to think about life after governorship. Some individuals run for other offices after they step down. Since this extends their time horizons, we would predict that these governors would try to build their reputations even though they actually retire.

These issues are investigated in Table IX, for total taxes and expenditures per capita. As well as the usual term limit indicator, we also include retirements separately. The latter are divided into two groups, those who do and do not run for congress. Interestingly, we do not find any retirement effect among those who retire and do not run for Congress. This is consonant with the congressional literature, as reviewed for example in Lott and Davis (1992), and shows that our results are in no way inconsistent with the congressional literature. The absence of a retirement effect is usually attributed to the effects of sorting, i.e., the fact that over time there is sorting with only the good politicians surviving to retirement age (see Lott and Reed (1989)). Such effects could explain the lack of a retirement effect in the gubernatorial data too. As we conjectured, incumbents who will run for Congress at the end of their current gubernatorial term significantly hold taxes and spending down.<sup>25</sup> This is consistent with the results in Peltzman (1992) and

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<sup>24</sup>For a review and extension of the literature on legislators see Lott and Davis (1992). Standard practice in that literature is to look at the effect of announced retirements on congressional voting records as published by such Congress watchers as Americans for Democratic Action.

<sup>25</sup>Care should be taken in interpreting this coefficient. We cannot measure intentions to run

Besley and Case (1992) in which voters penalize incumbents who are big taxers and spenders. Besley and Case (1992) builds a model in which it is rational for voters to impose these penalties because of an adverse selection effect from higher taxes; the latter are more likely to be set by rent-seeking incumbents. Thus our finding on governors who run for Congress is quite consonant with the idea that incumbents are trying to build reputations as good political agents. Finally, as above, we continue to get positive effects from those who face a binding term limit even when we break out retirements in this way.

One important observation based on the results in Table IX concerns the usefulness of the earlier evidence on announced retirements for conjecturing what would happen if a term limit were introduced in Congress. Our findings suggest that evidence from retirements may not provide an accurate guide to what would happen if term limits were introduced.

## 6. Concluding Remarks

This paper has shown that gubernatorial term limits have a significant effect on economic policy choices. We take this as evidence that economic considerations alone cannot characterize economic policy choices at the state level. The underlying political mechanism does appear to have some effect. When incumbents are subject to electoral discipline they do appear to behave differently. This is consistent with a number of theories; we put forward one model of political agency and one where votes can be "bought" by incumbents, via public spending decisions. The implications for the positive economics of policy choice is, we believe, significant.

Predicting which policies actually get chosen requires an understanding of how enacting them enters the incumbent's probability of re-election function. This suggests a research agenda in which such things are studied empirically. State level data are a major source of information for this endeavor. Some research in this direction is already available for expenditures and taxes in Peltzman (1992) and Besley and Case (1992). However, the domain of policies over which the link between implementation of economic policies and electoral success can be studied is ripe for expansion.

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again, only whether the incumbent *actually* ran. There may a bias towards our finding if only those who hold down taxes are actually able to run, even though many other incumbents may have harbored such intentions.

Our analysis also suggests the importance of studying individuals and party reputations together. Parties may have some control over incumbents that can lengthen the effective time horizon of incumbents. However, our results suggest that this may be rather incomplete. The Democratic party does appear to suffer in the wake of an incumbent who faces a binding term limit. The same is not true for Republicans.

Politics can matter for many reasons. One possibility is that our results are about redistribution and that our observed political effects arise because electoral discipline puts constraints on this. We could explain all of our results in this way. However, our results may also speak to economic efficiency. Interpreting our empirical results through the lens of a political agency model suggests a role for political shirking, arising because incumbent control is limited. When effort is incompletely controlled, we have an inefficiently low level of effort put into curbing public expenditures when a term limit is faced. The fact that taxes rise and fall through time in states with term limits, depending on whether the incumbent is in his or her first or second term, is also inconsistent with the normative models of inter-temporal public finance put forward by Barro (1979) and elaborated in Lucas and Stokey (1983). We do not wish to claim that no model of efficiency is consistent with our results. However, we do find our results to be quite suggestive.<sup>26</sup>

Our analysis also raises the question of why term limits exist at all. At least in the case of our political agency model, they were socially costly. One possibility, not modeled here, is that term limits reduce the entrenchment problem in politics. Long-lived incumbents might entrench themselves by amassing certain kinds of political capital that subverts the efficacy of electoral discipline. In this case, the introduction of term limits is beneficial in the long run, reducing the accumulation of certain kinds of political capital.<sup>27</sup> Term limits might also encourage political agents to do the right thing in the face of crises. A third possibility is that the effect of term limits is imperfectly understood by voters and others. We

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<sup>26</sup>An alternative response is that the notion of efficiency defined by the benchmark of an impartial social planner is too strong. One needs a notion of constrained policy efficiency analogous to the idea of constrained efficiency used in identifying market failures. The outcome observed should be compared with one where the best possible attempt is made to solve the political agency problem given information and other constraints on the political system. Considering whether political institutions are efficient in this sense is an important research question for the future.

<sup>27</sup>See Shleifer and Vishny (1989) for discussion along these lines in the case of corporate managers.

were certainly unaware that there were significant policy effects from term limits before we undertook this research. It is this lesson from this paper which, perhaps, deserves most serious attention.



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Table I

Gubernatorial Elections, Party Affiliation and Term Limitations  
1950 - 1986

Year	Party in Office  =1 if Democrat	Incumbent Cannot Run  =1 if term limit binds	Incumbent Democrat Cannot Run	Incumbent Republican Cannot Run
1950	.60	.33	.25	.08
1951	.48	.31	.25	.06
1952	.48	.33	.27	.06
1953	.38	.33	.21	.13
1954	.40	.31	.21	.10
1955	.54	.29	.25	.04
1956	.54	.29	.25	.04
1957	.58	.38	.27	.10
1958	.58	.40	.29	.10
1959	.69	.35	.29	.06
1960	.67	.35	.29	.06
1961	.60	.33	.29	.04
1962	.58	.31	.23	.08
1963	.58	.38	.25	.13
1964	.65	.38	.29	.08
1965	.65	.31	.25	.06
1966	.48	.33	.21	.13
1967	.46	.27	.17	.10
1968	.35	.27	.13	.15
1969	.31	.27	.13	.15
1970	.56	.25	.17	.08
1971	.58	.27	.19	.08
1972	.60	.27	.15	.13
1973	.63	.25	.15	.10
1974	.77	.25	.13	.11
1975	.77	.33	.26	.09
1976	.79	.35	.32	.04
1977	.79	.33	.28	.06
1978	.65	.35	.19	.17
1979	.63	.21	.13	.08
1980	.54	.19	.13	.06
1981	.54	.23	.15	.08
1982	.67	.21	.17	.04
1983	.69	.35	.23	.13
1984	.67	.35	.21	.15
1985	.67	.31	.21	.10
1986	.50	.33	.15	.18
Mean	.58	.31	.21	.09

Table II  
Term Limitations By State 1950-86

State Law:	
States with no term limits	AZ, AR, CA, CO, CT, ID <sup>a</sup> , IL, IA, MA, MI, MN, MT, NH, NY, ND, RI, TX, UT, VT, WA, WI, WY
States limiting governors to 1 term in office	KY, MS, VA
States limiting governors to 2 terms in office	DE <sup>b</sup> , MD, NJ, OR, SD
State law changed from no limit to 2 term limit (year of change)	KS(1974), ME(1966), NE(1968), NV(1972), OH(1966)
State law changed from allowing 1 term to allowing 2 terms in office (year of change)	AL(1970), FL(1970), GA(1978), IN(1974), LA(1968), MO(1966) <sup>b</sup> , NC(1978) <sup>b</sup> , OK(1968), PA(1972), SC(1982), TN(1980), WV(1972)
State law changed from 2 term to 1 term limit (year of change)	NM(1972)

Notes:           a. No term limitation after 1956.  
                   b. Two term limit over a lifetime. Enacted in DE(1968), MO(1968),NC(1978)

Table III  
State Policy and Economic Variables 1950-1986\*

(standard deviations in parentheses)

	All States All Years	States with Term Limits	States without Term Limits
Number of Observations	1776	1073	703
Sales Tax	276.26 (127.43)	275.60 (127.59)	277.27 (127.27)
Income Tax*	96.93 (110.04)	89.68 (105.21)	108.00 (116.24)
Corporate Tax*	32.43 (29.07)	30.81 (25.93)	34.87 (33.11)
Total Tax*	405.33 (198.00)	395.63 (187.97)	420.14 (211.67)
State Spending*	849.74 (392.60)	811.59 (367.88)	907.97 (421.23)
Minimum Wage* (n=1769)	1.85 (1.48)	1.59 (1.48)	2.26 (1.36)
Maximum Weekly Benefits* (n=1650)	177.99 (77.99)	162.53 (64.66)	201.83 (89.93)
State Income*	8588.87 (2476.72)	8366.10 (2517.57)	8928.89 (2374.80)
Proportion Elderly (65+) (n=1728) <sup>b</sup>	0.099 (0.020)	0.099 (0.022)	0.100 (0.018)
Proportion Young (5-17) (n=1728)	0.238 (0.030)	0.239 (0.030)	0.236 (0.029)
State Population (millions)*	4.080 (4.210)	3.542 (2.673)	4.902 (5.726)
Party of Governor (=1 if Dem)* (n=1772) <sup>c</sup>	0.584 (0.493)	0.633 (0.482)	0.509 (0.500)
Governor Cannot Stand for Re-election	0.308 (0.462)	0.510 (0.500)	0

Notes: \*Stars denote that the mean of this variable is significantly different in states with and without term limits (p-value < 0.01).

a. All taxes, income and expenditure are per capita, 1982 dollars.

b. Information on proportion elderly and proportion young was not available for 1959.

c. In 1974, an independent (Longley) won the governor's race in Maine. We exclude this from party indicator variables.

Table IV  
The Impact of Term Limits on State Taxes\*  
1950 - 1986

	Dep Var: Sales Taxes	Income Taxes <sup>b</sup>	Corp. Var: Corporate Taxes	Dep Var: Total Taxes
Incumbent Cannot Stand for Re-election	7.06 (2.23)	8.84 (2.44)	0.73 (0.82)	7.97 (1.83)
State Income Per Capita (1000s)	--	17.46 (4.58)	9.96 (2.52)	6.60 (5.27)
Proportion State Population Elderly	--	980.78 (5.38)	20.68 (0.08)	8.36 (0.13)
Proportion State Population Young	--	229.57 (2.08)	1564.84 (9.39)	221.38 (5.92)
State Population (millions)	--	-0.99 (1.04)	7.68 (5.02)	2.61 (8.39)
R <sup>2</sup>	0.8888	0.8495	0.8049	0.8253
Number of Observations	1776	1358	1327	1364
				1776
				1728

Notes: a. See notes to Table III for sample information.

All taxes and income are per capita, 1982 dollars.

All regressions include year and state effects. Huber standard errors.

b. Income tax regressions restricted to states that have an income taxes. Corporate taxes treated analogously.

Table V  
The Impact of Term Limits on State Spending and Mandates\*  
1950 - 1986

(t-statistics in parentheses)

	Dep Var: State Expenditure Per Cap	State Minimum Wage <sup>b</sup>	Dep Var: Maximum Weekly Benefits <sup>c</sup>
Incumbent Cannot Stand for Re-election	17.98 (2.60)	14.38 (2.10)	-0.14 (2.57)
State Income Per Capita (1000s)	--	3.52 (0.46)	-0.04 (0.88)
Proportion State Population Elderly	--	-1143.34 (2.21)	-9.22 (3.69)
Proportion State Population Young	--	1293.53 (4.00)	0.18 (0.10)
State Population (millions)	--	-16.70 (4.07)	-0.05 (4.39)
R <sup>2</sup>	0.9374	0.9397	0.7584
Number of Observations	1776	1728 <sup>d</sup>	1721
		1650	1604

a. See notes to Table III for sample information.  
All expenditures and income in per capita, 1982 dollars.  
All regressions include year and state effects. Huber standard errors.

b. State minimum wages in 1982 dollars.

c. Maximum worker compensation weekly benefits, 1982 dollars.



Table VI  
Term Limits, Party Affiliation and State Taxes<sup>a</sup>  
1950 - 1986

(t-statistics in parentheses)

	Dep Var: Sales Taxes	10.10 (3.00)	10.50 (2.57)	Dep Var: Income Taxes <sup>b</sup>	9.57 (2.56)	2.12 (2.11)	1.58 (1.61)	Dep Var: Corporate Taxes	13.49 (2.82)	10.35 (2.18)
Democratic Incumbent Cannot Stand for Re-election	9.19 (2.69)	10.10 (3.00)	10.50 (2.57)	9.57 (2.56)	2.12 (2.11)	1.58 (1.61)	13.49 (2.82)	10.35 (2.18)	0.83 (0.14)	5.80 (1.52)
Republican Incumbent Cannot Stand for Re-election	3.41 (0.74)	4.03 (0.94)	4.84 (0.95)	6.24 (1.23)	-0.99 (0.75)	-0.61 (0.49)	-1.18 (0.19)	0.83 (0.14)	5.72 (1.44)	25.54 (4.87)
Governor's Party (=1 if Democratic)	3.16 (1.15)	4.49 (1.66)	10.09 (3.04)	7.62 (2.45)	-1.49 (1.59)	-1.60 (1.75)	5.72 (1.44)	5.80 (1.52)	25.54 (4.87)	721.00 (2.82)
State Income Per Capita (1000s)	--	17.64 (4.62)	--	10.07 (2.55)	--	6.57 (5.24)	--	25.54 (4.87)	721.00 (2.82)	1552.55 (9.61)
Proportion State Population Elderly <sup>c</sup>	--	1005.61 (5.53)	--	36.56 (0.15)	--	3.83 (0.06)	--	721.00 (2.82)	1552.55 (9.61)	-1.12 (0.50)
Proportion State Population Young	--	201.63 (1.82)	--	1525.17 (9.06)	--	223.90 (5.93)	--	1552.55 (9.61)	-1.12 (0.50)	0.9108
State Population (millions)	--	-0.75 (0.78)	--	7.81 (5.00)	--	2.59 (8.06)	--	-1.12 (0.50)	0.9108	1772
R <sup>2</sup>	0.8889	0.8942	0.8519	0.8735	0.8061	0.8263	0.9108	0.9108	1772	1724
Number of Observations	1772	1724	1354	1323	1392	1360	1772	1724		

Notes:

a. See notes to Table III for sample information.

All taxes and income are per capita, 1982 dollars.

All regressions include year and state effects. Huber standard errors.

b. Income tax regressions restricted to states that have an income taxes. Corporate taxes treated analogously.

Table VII  
Term Limits, Party Affiliation and State Spending\*  
1950 - 1986

(t-statistics in parentheses)

	Dep Var: State Expenditure Per Cap	State Minimum Wage <sup>b</sup>	Dep Var: Maximum Weekly Benefits <sup>c</sup>
Democratic Incumbent Cannot Stand for Re-election	21.69 (2.63)	0.08 (1.30)	0.92 (3.12)
Republican Incumbent Cannot Stand for Re-election	12.62 (1.38)	-0.47 (6.41)	-2.38 (0.67)
Governor's Party (=1 if Democratic)	22.72 (3.53)	-0.10 (2.21)	-3.25 (1.11)
State Income Per Capita (1000s)	-- (0.44)	-- (0.74)	-- (3.93)
Proportion State Population Elderly	-- (2.08)	-- (3.78)	-1382.73 (6.67)
Proportion State Population Young	1231.24 (3.77)	-0.89 (0.49)	637.05 (6.50)
State Population (millions)	-- (3.94)	-- (4.51)	-- (5.87)
R <sup>2</sup>	0.9382	0.7635	0.7187
Number of Observations	1772	1765	1646

Notes:

a. See notes to Table III for sample information.

Expenditures and income in per capita, 1982 dollars.

All regressions include year and state effects. Huber standard errors.

b. State minimum wages in 1982 dollars.

c. State maximum worker compensation weekly benefits, 1982 dollars.

Table VIII  
The Impact of Term Limits on Gubernatorial Elections\*  
1950 - 1986

	(t-statistics in parentheses)			
	Dep Var. = 1 if Governor's Chair transferred from Republican to Republican control	Dep Var. = 1 if Governor's Chair transferred from Democratic to Democratic control	Dep Var. = 1 if Governor's Chair transferred from Republican to Democratic control	Dep Var. = 1 if Governor's Chair transferred from Republican to Democratic control
Current Incumbent Cannot Stand for Re-election	0.21 (2.92)	0.20 (2.84)	--	0.11 (1.09)
Incumbent, if re-elected, would be ineligible to run again for office	--	--	0.12 (1.35)	0.23 (1.89)
State Income Per Capita (millions)	--	9.23 (0.16)	--	75.40 (0.99)
Proportion State Population Elderly	--	-3.56 (0.90)	--	6.22 (1.63)
Proportion State Population Young	--	-5.46 (1.82)	--	1.76 (0.42)
State Population (millions)	--	-0.10 (3.33)	--	-0.03 (1.23)
R <sup>2</sup>	0.3574	0.3801	0.3455	0.3703
Number of Observations	295	293	290	288
				227
				222
				222

Notes:  
a. See notes to Table III for sample information.  
Income in per capita, 1982 dollars.  
All regressions include year and state effects. Huber standard errors.

Table IX  
Term Limits, Retirements and Congressional Bids\*  
1950 - 1986

	(t-statistics in parentheses)		Dep Var:		Dep Var:	
	Total State Taxes Per Cap		State Expenditure Per Cap		State Expenditure Per Cap	
Governor Cannot Stand for Re-election	7.97 (1.83)	--	8.21 (1.87)	17.98 (2.60)	--	18.52 (2.68)
Governor Retires, and does not run for Congress	--	3.13 (0.59)	3.83 (0.72)	--	7.27 (0.75)	8.83 (0.92)
Governor Retires, and does run for Congress	--	--	-9.27 (1.65)	--	--	-25.07 (2.49)
R <sup>2</sup>	0.9102	0.9101	0.9102	0.9104	0.9374	0.9372
Number of Observations	1776	1776	1776	1776	1776	1776

Notes:  
a. Taxes and income in per capita, 1982 dollars.  
All regressions include year and state effects. Huber standard errors.