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PRESIDENTIAL LEADERSHIP AND THE REFORM OF FISCAL POLICY: LEARNING FROM REAGAN'S ROLE IN TRA 86

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ABSTRACT

The institutions of federal fiscal-policy making seem incapable of confronting the central domestic issues of the day. This paper presents a model of congressional decision-making in which legislators' incentives are contrary to fiscal efficiency. In such an environment, a "strong" president may be able to lead congress away from inefficient budgets. The paper specifies a model of what constitutes a strong president, namely a president with resources to build congressional coalitions and a credible veto to force "all-or-nothing" choices between reform and the inefficient status quo. President Reagan's role in the passage of the Tax Reform Act of 1986 is detailed in the light of this model; the analysis reveals the role of executive resources and the importance of the veto strategy to major fiscal reform.

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Presidential Leadership and the Reform of Fiscal Policy:

Learning from Reagan's Role in TRA 86

The institutions of federal fiscal policy seem locked in a stalemate, unable to confront with substantive reforms the major domestic issues of the day: the national deficit, rising health care costs, falling savings and investments, urban poverty and declining central cities. It is not uncommon for our best fiscal economists to return from their years of service in Washington to call for a deeper understanding of the political process which considers fiscal policy.[1] Why do good policy ideas sometimes get lost in the legislative process while at other times emerge as successful reforms? This paper offers one explanation, based upon a microeconomic model of the legislative process and presidential leadership, and uses that explanation to illuminate one recent fiscal reform: The Tax Reform Act of 1986 (TRA 86).

Section II first outlines a model of congressional decision-making and identifies congress's allocation behavior for an important class of public goods technologies. That behavior produces an inefficient over-provision of the public goods involved, where the source of the inefficiency is an institution-based common pool resource problem. The common pool resource is our national tax base. The model then specifies what is required to control the natural tendency of the legislature to overutilize this common property and argues that a president, with appropriate formal (veto) and informal (money) powers, can be successful in achieving significant fiscal reforms in this environment. Section III offers the passage of TRA 86 as one example when congress, with the help of President Reagan, did overcome its natural propensity to exploit the national tax base. Section IV suggests possible extensions of the analysis.

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[1] See Auerbach (1992), Gramlich (1992), and Rivlin (1987) as examples.

II. Fiscal Reform in a Decentralized Congress

A. Budgeting in Congress

That 435 members of the House and 100 Senators representing constituents with conflicting and privately known economic interests can agree on anything might at first seem remarkable. Economic policies generally, and fiscal policies in particular, are multidimensional. If members of congress act as agents for the economic interests of their constituents as revealed through running for election -- an underlying premise of the analysis which follows -- then we know from the new political economy of majority rule processes that voting over such policies is inherently unstable. Policies are first approved and then defeated and the legislative process cycles from one tentative outcome to another.

To avoid the paralysis or the uncertainties of constant cycling over policies, the U.S. Congress has developed a system of formal and informal rules for the consideration of legislation which restrict the ability of the members to continually respecify the content of proposed policies. The formal devices of established legislative committees with restricted policy domains and agenda-setting powers plus rules of germaneness to limit floor amendments offer a more controlled legislative setting, one less prone to the vagaries of voting cycles; see Shepsle (1979). In this structure, of course, cycling within committees and then among committee agenda-setters remains a possibility. To minimize voting instability between committees, congress has evolved informal rules of deference and reciprocity across committees -- rules enforced when needed by a committee's ex post veto at the conference stage to block unwanted changes. The consequences of these rules are to give committees agenda-setting control in their areas of policy expertise. To minimize voting instability within committees, individual members of congress are allowed to select the committee on which they will serve. Typically they select, and are assigned to, those committees whose policy domain is most important to their constituents. Coincident interests result and cycling in committees is thereby minimized. Together these formal and informal rules of legislative behavior provides a stable process of collective decision-making, one which allows legislators to pursue

their constituents interests with purpose and certainty.[2]

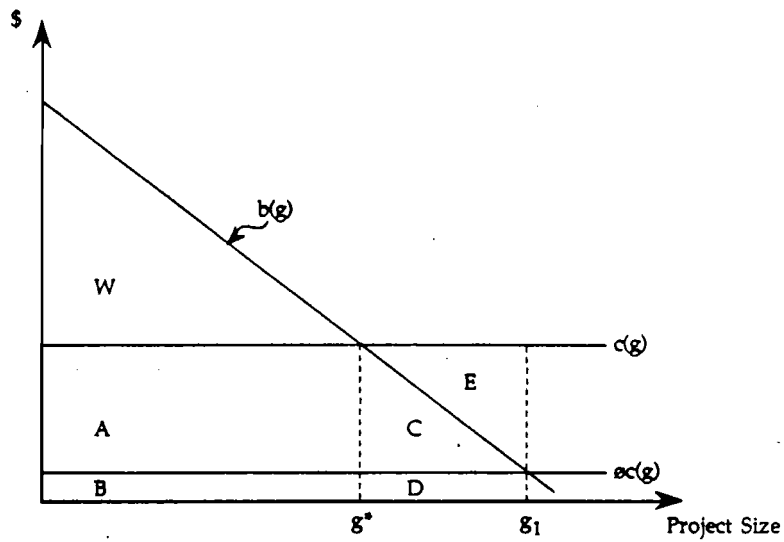
As useful as this legislative structure might be to overcoming the central problem of voting instability, it has its own problems. One price of achieving stable voting outcomes is a bias towards policies which are economically inefficient for an important public goods technology – called "particularistic" public goods. These goods provide uniform public benefits to the legislators' constituents but are private (i.e., excludable and not shared) between constituencies. The legislator's constituents may be defined geographically by congressional district -- in which case the particularistic public good is the more familiar "local" public good -- or by a non-geographic economic interest such as an industry or an income class. The model's structure and its predictions for reform apply to either specification. Common examples of particularistic public goods include water projects, military bases, agricultural or industry subsidies, urban aid, and as argued below, targeted subsidies paid through the income tax code.

Figure 1 illustrates the resulting economic inefficiencies when members of congress act as agents for the economic interests of their constituents and economic benefits are particular to constituents. The downward sloping schedule b(g) in Figure 1 measures the marginal benefits to constituents of a project of type and size g. Constituent benefits are private information; only the constituents and their representative know these benefits. The schedule b(g) can be discovered by those outside the constituency at a non-trival cost. The horizontal curve c(g) of Figure 1 measures the (constant) marginal social costs of providing g to constituents. These costs include production costs as well as the excess burdens associated with raising taxes required to finance the project. I assume that c(g) is public knowledge. The socially efficient project size for each constituent group is g^*, where $b(g^*) = c(g^*)$. Project types, the schedules b(g) and c(g), and g^* are allowed to differ by constituent group.

Unfortunately project sizes larger than g^* typically will be chosen. Within the current

[2] See Weingast and Marshall (1988) for a detailed summary of this view of congressional structure and decision-making.

FIGURE 1: Budgeting in Congress



congressional structure which allows members to select their committees, where committees have agenda control, and where deference and reciprocity across committees are the functioning norms of behavior, individual members or like-minded coalitions of members will be able to choose their preferred project types and levels. Because congress uses our national tax system to finance its chosen projects, each member's constituents will share the costs of any project with all other taxpayers. Each dollar spent on a project is financed by one dollar of national taxation, towards which the constituents contribute only the fraction $\phi < 1$. With proportional taxation, for example, ϕ equals the constituents' share in the national tax base defined as: $\phi = (y/\bar{y})(Pop/\overline{Pop})(1/N)$, where y is tax base per constituent, $\bar{y}$ is the average tax base per capita nationally, Pop is the population in the constituent group, $\overline{Pop}$ is the average constituent population nationally, and N is the national number of constituent groups. When constituent groups are organized by congressional districts, as seems likely, then N = 435.[3] The marginal costs to constituents of project spending therefore becomes $\phi c(g)$; see Figure 1.

Finally, if we assume that each member of congress plays the Nash strategy when selecting his constituents preferred project type and size -- i.e., selecting his project taking as given the choices of all other members of congress -- then each member will select that project type and level which equates constituents' marginal benefits to constituents' marginal costs: $b(g) = \phi c(g)$. The final budget outcome will be g_1 in Figure 1, where $g_1 > g^*$. An excess burden equal to area E in Figure 1 results.

Further, if this Nash equilibrium occurs, it will be a stable equilibrium, representing the best each member can do on his own given the behavior of all other members of congress; see Niou and Ordeshook (1985). This is true even though the final outcome is economically inefficient. No member will increase spending beyond g_1 since constituents' marginal costs are greater than their marginal benefits beyond g_1.

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[3] Having constituents groups represented by single congressional representatives so that N = 435 does not mean that particularistic projects have to be limited to one district. Tobacco subisidies or urban grants-in-aid affect several congressional districts. Each district has its own benefit curve and its own value of ϕ for its own particularistic good.

Members will not reduce own spending either. Even though there is an inefficiency equal in value to area [E] imposed by a project of size g_1, constituents do not bear that burden. For spending beyond the efficient level g^* to g_1, constituents pay only the added economic costs of area [D], enjoy benefits of area [C + D], and reap a net economic surplus of area [C]. Taxpayers from outside the constituent group pay the extra economic costs of area [C + E]. The resulting excess burden of area [E] is therefore shifted onto others. While all members of congress would like to control these inefficiencies, individual members of congress have neither the ability nor the incentive to do so within the current institutional structure.

The economic consequences of this decentralized institutional structure for domestic fiscal policies can be significant. Particularistic technologies are pervasive in federal spending, from tax and spending subsidies to industries and governments, to public capital projects, to defense spending. Numerous studies detailing the inefficiencies of such spending are available in the tax and project evaluation literature; see Aaron and Galper (1985) and Quigley and Rubinfeld (1985) for reviews.

If this model of domestic project spending as a common property resource game and the resulting excess burden estimates are correct, then it is easy to understand the often cited anamoly of constituent polling: we support our individual representatives but just as vigorously oppose the performance of congress as an institution. Our complaints are not with the individually rational strategies of our elected representatives, but with a structure of congressional institutions which encourages the collective exploitation of the national tax base. To solve this common property resource problem, additional political institutions will be required.

B. Achieving Reform Through Presidential Leadership

What must these additional political institutions do to achieve reform? The economics literature on the cooperative allocation of common property resources is instructive; see Weitzman (1974). A reform institution must provide: 1) a means to reveal privately held information about project benefits and costs; 2) a means to impose the efficient (i.e., cooperative) allocation and to distribute the resulting

economic surplus from reform; 3) a means to monitor member behavior and to discourage cheating to insure all members perform according to the requirments of the cooperative allocation; and 4) a means to compensate those who invest resources to find, impose, and enforce efficient reforms. A failure to meet these four requirements will mean a failure to achieve the cooperative allocation.

Fitts and Inman (1992) outline a theory of presidential influence in congressional budgeting which satisfies these four conditions. In their model, presidential resources are sufficient to reveal privately known constituent benefits, to fashion reform coalitions, and to discourage defection from reform. The economic surplus from reform is allocated as general tax relief; the dollars involved and their distribution are sufficient to insure the reform's passage. Finally, the incentive for the president to pursue reform lies in the facts that the president is elected nationally, the nation as a whole values such reforms, and the president can claim political credit for making reform possible.

In the Fitts-Inman model, fiscal reform moves through five sequential steps. First, the president discovers the privately known benefit curves of legislators and then using this information negotiates a reform coalition through a series of individualized side-agreements with each coalition member. Second, given his reform coalition, the president proposes a reform policy and announces his veto strategy, if any. Third, the legislature votes to accept or reject the reform policy. If the reform proposal is rejected, the legislature may approve a modified reform proposal based upon the project reforms listed in the president's budget. Fourth, the president either accepts or vetoes the legislature's approved proposal. Fifth, the pay-offs are awarded. If the proposal is accepted, each constituent group receives its pay-off from legislative reform. In addition, constituents whose members belonged to the president's coalition receive their pay-off from any presidential side-agreements. If the proposal is vetoed, the legislative outcome returns to the status quo and the allocations in Figure 1; however, members of the presidential coalition who supported the president's reform efforts continue to receive their pay-offs from negotiated presidential side-agreements.

I develop the Fitts-Inman reform model in greater detail here, first for the majority-rule case and then for the case of the presidential veto.

1. Building Majority Reform Coalitions: The president first allocates executive branch resources to discover privately known b(g) schedules. Discovery of each constituent group's b(g) schedule costs r dollars, where r includes both the resource costs of revelation and the excess burden of the taxes needed to pay those costs. Currently, resources available for revelation are significant, perhaps as much as $500 million per year, and can be targeted to particular policy areas if the president wishes to pursue reform.[4]

How does the president use the information about b(g)? The model assumes that president's knowledge of a constituents' b(g) schedule cannot be costlessly verified by those outside the group, i.e., information is private.[5] In this case, only member-by-member bargains can be fashioned.[6] Both parties to such a bargain now know b(g). The president uses the information about the b(g) schedules to fashion a reform coalition as a sequence of member-by-member budget agreements. In these agreements, each member in the coalition agrees to reduce his request for constituent spending from g_i to g^* (costing his constituents area [C + D] in project economic benefits) and promises to vote for fiscal reforms in return

[4] The OMB staff budget for FY 1992 was $54 million, and the ten domestic policy cabinet positions have research staff budgets ranging from $4.2 million dollars in Transportation to as much as $160 million for the Corps of Engineers. See Federal Budget of the United States, FY 1992.

[5] If the president's knowledge of b(g) could be costlessly verified – i.e., become public – then the president's task becomes relatively simple. He need only reveal the true b(g) schedules, propose an efficient reform budget by cutting all inefficient projects from g_i to g^*, return the budget savings as a tax reduction which benefits at least a majority of the districts, and finally threaten to veto all alternative distributions of the surplus. The favored majority in the decentralized Congress will approve reform. This is the essence of Wittman's (1989) argument about the efficiency of congressional budgeting, only in his model strong political parties or congressional chairmen play the leadership role.

[6] For evidence that such member-by-member bargains are central to the president's relationship to congress, see Neustadt (1960, chapter 3) and, more recently, Sullivan (1990).

for presidential compensation for his constituents equal in value to area [C + D][7] plus a positive "sweetner" worth s dollars. The size of the sweetner is likely to vary across constituent groups depending upon the bargaining skill and the importance of their representative in the legislature. The compensation of area [C + D] + s is paid by the president as subsidies, projects, or favorable regulations. The executive branch's control over the bureaucracy, and thus over discretionary spending and regulations is assumed to be sufficient to fashion all needed reform coalition agreements.[8]

Importantly, the "sweetner" s will be a function of the size of the president's reform coalition, at least to a majority reform coalition of size M = .5N + 1, where N is the number of representatives in the legislature. For reform coalitions smaller than or equal to a majority, s = s(n) for n ≤ M. The reason is that each of the n members to the reform coalition generates released fiscal resources equal to area [C + D + E] = T dollars in economic value (see Figure 1, a member subscript is understood) which may be "captured" by the N - n non-reform members -- if they are a majority – for their own use by approving the reform program and then dividing the released dollars equally (universalistically) amongst themselves as a direct transfer valued at $\sum^{n}T/(N - n)$ dollars to each of the (N - n) non-reform members. Since non-reform members did not lose any project benefits, this transfer of $\sum^{n}T/(N - n)$ is a pure gain; further, the larger the reform coalition, the larger is this potential transfer to the non-reform majority.

To insure that members will prefer to join the president's reform coalition rather than abstain and enjoy the potential transfer available to those in the non-reform majority, the presidential "sweetner" s

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[7] In the general specification of the reform process considered here, area [D] of benefits is not automatically offset by an area [D] of tax relief. While constituents did pay area [D] in taxes for their local project, they may still continue to do so even after losing their project to reform. The distribution of the proceeds of reform need not be according to the existing tax code. Thus the president must pay compensation for [D] to insure member participation in his reform coalition.

[8] On presidential influence over discretionary spending and regulation through the executive branch's control of the bureaucracy, see Moe and Wilson (1993).

must satisfy,

$$s(n) = s_0 + \sum^{n-1} T/(N - (n-1)), \quad \text{for } n \leq M,$$

where s_0 is the minimum the president must pay above the returns to being in the non-reform majority and where $s'(n) > 0$ and $s''(n) > 0$. The amount s_0 may vary by congressional district according to each representative's bargaining skill and/or legislative importance.[9] The sum $\sum^{n-1} T/(N - (n-1))$ is the value of the "outside option" of being in the non-reform majority after defecting from a presidential coalition of size n. The sweetener s(n) is offered as a conditional agreement where payment is dependent upon the size n of the reform coalition as revealed when the reform proposal is finally announced by the president. I assume members of congress can observe n at the announcement date. When the president promises s(n), each member of the coalition has the appropriate incentive to stay within the president's reform coalition, even if the coalition is not a majority.[10]

Finally, since compensation will typically be made after the reform votes have been tallied, members may also demand a risk premium worth k dollars, contingent upon the members' assessment of the likelihood that the president's will keep his promise of compensation. If ρ is the exogenous probability the president will keep his promise (i.e., is an honest "broker"), then $k(n) = \{(1 - \rho)/\rho\}\{s(n)$

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[9] The fact that s_0 paid for each representative's vote may vary across congressional districts according to the bargaining skills and relative importance of the district representatives distinguishes this model from the "competitive," one-price models of vote-trading; see Philipson and Snyder (1992) for such a model.

[10] The size of s(n) depends upon the distribution of the surplus by the non-coalition majority. This distribution determines the value of the coalition member's outside option. Two alternative distributions might be considered. First, a non-universalistic, mimimal winning majority might form and capture the surplus for themselves in which case each member of the majority receives $\sum^{n} T/(.5N+1)$ dollars; see Baron and Ferejohn (1989). In this case, it can be shown that the expected value of the outside option remains equal to $\sum^{n-1} T/(N - (n-1))$, leaving s(n), and thus the final outcome, unaffected. Second, a fully universalistic distribution might be chosen given all members, even those in the president's coalition, an equal share of the surplus -- that is, $\sum^{n} T/N$. In this case, the value of the outside option becomes simply s_0 which is less than s(n) as specified above. The president has a clear incentive to favor such a distribution for it lowers his costs of coalition formation. However, the majority in the non-reform coalition will oppose such a distribution -- they prefer $\sum^{n} T/(.5N+1)$ or $\sum^{n-1} T/(N - (n-1))$. Thus only if the president can control the distribution of surplus as well as the size of reform will $\sum^{n} T/N$ be possible. See footnote 17 below.

+ area [C + D]} for risk neutral members.[11] Since $s'(n) > 0$ and $s''(n) > 0$, then $k'(n) > 0$ and $k''(n) > 0$.

The payment of {area [C + D] + s(n) + k(n)} dollars by the president, if agreed to, compensates the member's constituents for the loss of area [C + D] in project benefits and for the k(n) dollars of contract risks they bear. In the end, the constituents whose representative join the president's reform coalition receive a net economic gain worth s(n) dollars. The gain, s(n), is likely to vary across representatives and their constituents.

What is the incentive for the president to create an economic reform coalition? I assume the president enjoys political benefits from, first, the distribution of the reform's released economic resources created by reduced project spending, $\sum^n T$, and, second, from the sweetners of s dollars paid to each member of the reform coalition. The president is assumed to be able to claim political credit for some fraction of these economic benefits -- $1 \geq \theta_T \geq 0$ for the general fiscal savings worth T dollars and $1 \geq \theta_s \geq 0$ for the district specific sweetner s. The rate of presidential credit claiming for the payment of s, θ_s, is likely to be constant as s results from a single member-president agreement; θ_s may vary from

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[11] The reform process being studied here can be characterized as a typical stage – or round – of a larger, multi-stage reform game played repeatedly between the president and congress over their terms of office. In this setting, the exogenous probability ρ that the president will be an honest broker is crucial to the model and plays the same role here as the exogenous probability of a "tit-for-tat" or cooperative opponent in the analysis of the repeated finite prisoners' dilemma game in Kreps, et. al. (1982). Just as the prisoners' dilemma game may have a finite end with the well known difficulties that creates for cooperation, so too may this multi-stage reform game have a finite horizon -- namely when the president leaves office – with similar problems for cooperative deal-making. In the last stage of the meta reform game played just before leaving office, the president has no incentive to keep his promises of compensation. Thus ρ is 0 and $k(n) = \infty$, and thus no coalition deals or reform are possible. Since no reform is possible in the last stage, the next to last stage becomes the de facto last stage for reform. Here again the same argument for $k(n) = \infty$ applies. By backward induction, no reform is possible at any stage. The "solution" to this problem adopted here -- identical in spirit to that proposed by Kreps, et. al. for the finite prisoners' dilemma game -- is to assume an exogenous probability $\rho > 0$ that the president will be an honest broker. A second approach would be to assume that the president's relationship with congressional members runs forever, as might be the case when the president is simply an agent for his infinitely lived political party. Calvert (1989) presents a two player model of congressional deal-making with infinite repetition which might be adapted to our case; more generally, see Milgrom and Roberts (1992, 257-266).

district to district, however.

In contrast, I assume that the rate of presidential credit claiming, θ_T, for reform's general fiscal savings will become diluted as the size of the reform coalition increases. As with all jointly produced goods, it becomes progressively more difficult for the president to say about reform -- "Only I'm responsible" -- if more and more legislators are claiming credit too. I therefore specify $\theta_T = \theta_T(n) \geq 0$, where n is the size of the congressional reform coalition and $\theta_T'(n) < 0$ and $\theta_T''(n) \leq 0$. I assume the $\sum^n T$ dollars of general fiscal savings are spread throughout the nation as a whole, paid either as general tax relief as for TRA 86, as a deficit reduction in Clinton's FY94 Economic Plan, or as spending on a valued national public good as for Reagan's defense build-up from the domestic spending cutbacks in FY82.

The political cost to the president of adding a new member to the coalition is the political credit lost by taking dollars from direct executive branch activities and allocating them to congressional coalition building. I assume each executive branch dollar would earn a constant θ_R ($1 \geq \theta_R \geq 0$) in political credit when spent directly by the president and that the president earns at least equal credit when he works alone as when he works with an individual member ($\theta_R \geq \theta_S$). The opportunity cost in lost political benefits of bringing one new member into a reform coalition therefore equals θ_R times the executive branch resources expended to attract that member, or $\theta_R\{r + \text{area } [C + D] + s + k\}$ dollars.

The president's political benefits minus his political costs define the president's political gain in "claimable" net benefits (CNB) from fiscal reform. CNB is assumed to translate into presidential support for the president's next election bid or, for last term presidents, into support for the next party candidate or history's assessment of presidential leadership. Presidents are assumed to maximize CNB, their reward for fiscal reform.

For presidential coalitions of size $n \leq M = .5N + 1$ -- i.e., a bare majority or smaller -- CNB is defined as:

(1a) $CNB(n \leq M) = \theta_T(n) \sum_1^{s \leq M}[C+D+E] + \sum_1^{s \leq M} \theta_s s(n) - \theta_R \sum_1^{s \leq M}\{[C+D] + s(n) + r + k(n)\}$,

where $\theta_T(n) \sum_1^{s \leq M}[C+D+E]$ measures the political gains to the president from the aggregate fiscal savings, $\sum_1^{s \leq M} \theta_s s(n)$ is the president's political gain from the member specific sweetners, and $\theta_R \sum_1^{s \leq M}\{[C+D] + s(n) + r + k(n)\}$ is the political opportunity cost to the president of building a reform coalition of size $1 \leq n \leq M$.[12]

Once the president has built a reform coalition of bare majority size, additional projects can be added to reform – in effect, "taken" – without paying compensation, the sweetner, or the risk premium to these additional members which have had their projects reduced. The president has his majority coalition, and this coalition is sufficient to pass any reform budget.[13] The president gains political benefits from these additional, taken projects equal to $\theta_T(n) \sum_{M+1}^{s \leq N}[C+D+E]$, where the additional tax savings (= [C+D+E]) are only from the project reductions from districts beyond the bare majority coalition.

Taking projects for reform is not costless, however. The president must still incur the revelation costs of r to reveal b(g) for each of these taken projects. These costs are paid from the presidential account and have an opportunity cost in lost political benefits of $\theta_R \sum_{M+1}^{s \leq N} r$. In addition, the president incurs a political cost of $\theta_T(n) \sum_{M+1}^{s \leq N}[C+D]$ for these reduced projects since these members'

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[12] Once a bare majority coalition has been formed with n = M = .5N + 1 members, adding members to the reform coalition no longer requires s(n) + k(n) to rise – that is, the value of the sweetner and the risk premium paid to these members becomes fixed at s(M) + k(M) for any $n \geq M$. The sweetner and risk premium were paid to reform coalition members to prevent their being exploited by a majority of non-reform members. Once the president has a bare majority, however, this threat is removed.

[13] It is important to stress that the president must continue to pay compensation, the sweetner, and the risk premium to the members of his bare majority coalition. Such payments are required to hold the majority together so that the "taking" of additional projects beyond the bare majority can be enforced.

constituents do lose benefits (= [C+D]) under presidential reform.[14] Once the president has established a bare majority coalition for reform, additional project savings from members beyond the bare majority offer incremental claimable net benefits to the president of:

$$CNB(n>M) = \theta_T(n)\sum_{M+1}^{s\le N}[C+D+E] - \theta_R\sum_{M+1}^{s\le N}r - \theta_T(n)\sum_{M+1}^{s\le N}[C+D],$$

or,

(1b) $$CNB(n>M) = \theta_T(n)\sum_{M+1}^{s\le N}[E] - \theta_R\sum_{M+1}^{s\le N}r, \qquad \text{for } n > M.^{15}$$

Together, claimable net benefits are specified as:

(1c) $$CNB(n) = CNB(n\le M) + CNB(n>M).$$

The analysis is simplified considerably, without losing the central argument, if we assume all constituents are alike. (The president knows this fact only after he has built his reform coalition.) Here CNB(n) can be written more simply as the sum of:

(2a) $$CNB(n\le M) = n\theta_T(n)T - n\theta_R S(n),$$

for reform coalitions of size $1 \le n \le M$, where T equals the average economic value of fiscal resources released by each reform member up to the bare majority, and $S(n) = \{(1 - (\theta_s/\theta_R))s(n) + [C + D] + r + k(n)\}$ and defines the average cost to the president of bringing a new member into the reform coalition when coalitions are smaller than or equal to bare majorities; plus:

(2b) $$CNB(n>M) = (n - M)\theta_T(n)E - (n - M)\theta_R r,$$

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[14] The president always has the option of paying compensation for the lost benefits of [C + D] from presidential resources at a cost in CNB's of θ_R per dollar. Paying compensation will be preferred in this model whenever $\theta_T(n) > \theta_R$. For this analysis, however, I assume that $\theta_T(n) < \theta_R$ for $n > M$. Thus not paying direct compensation is the low-cost "takings" strategy. The qualitative results which follow are not affected by this assumption.

[15] The fact that the president bears the costs of [C+D] for lost project benefits insures that the president's majority reform coalition will not drive the level of funding for the "taken" projects to zero. If that were to happen, the president would bear a cost of lost project benefits of area [W+A+B+C+D] in return for benefits in tax savings of only area [A+B+C+D+E]; see Figure 1. The net contribution to CNB(n>M) from reducing projects to zero is then $\theta_T(n)\sum_{M+1}^{s\le N}$[E-W], clearly less than what is available above if the president keeps the taken projects at their efficient sizes.

for the additional gain from reform coalitions of size n > M where E equals the net gain to the president from adding members beyond the bare majority by simply "taking" portions of members' projects for reform without paying compensation from presidential resources, and r is the cost of revealing benefits so that the efficient taking of projects beyond the bare majority can be realized. Together:

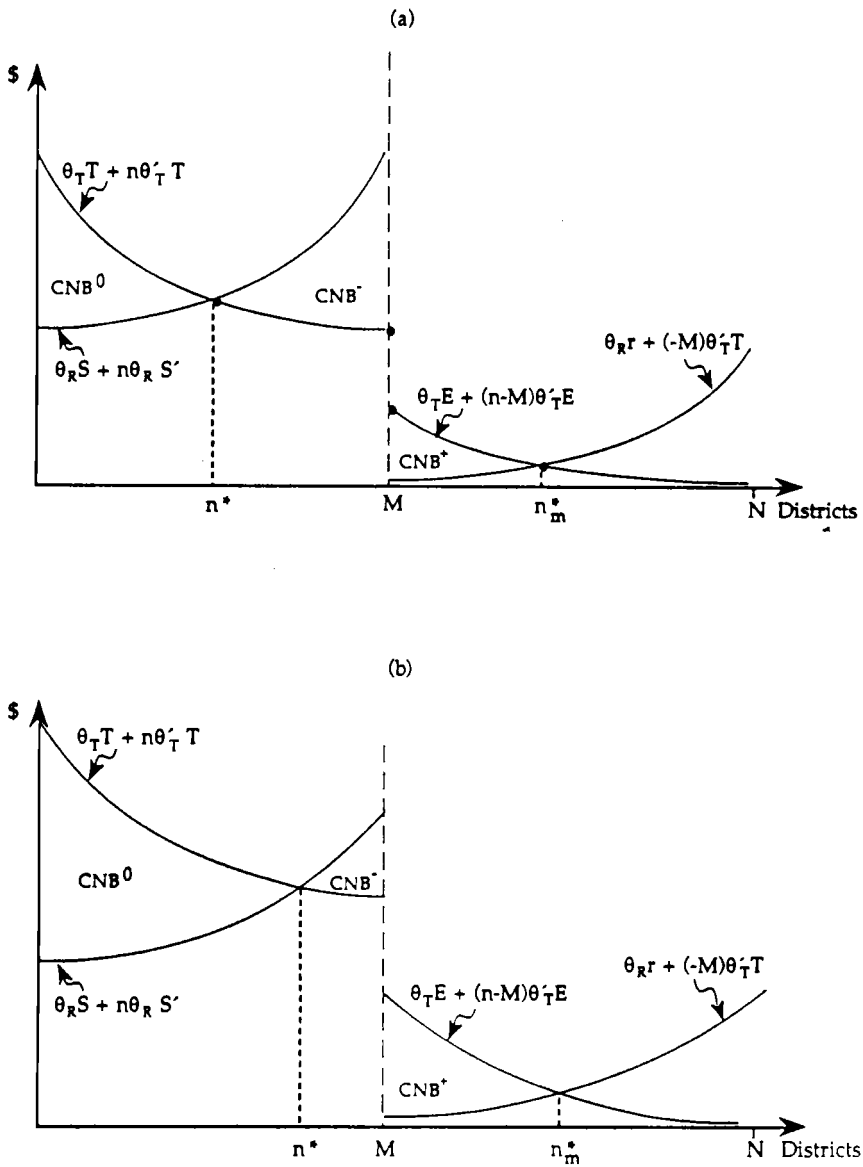
$$(2c) \qquad CNB(n) = \{\Psi(n)M + (1-\Psi(n))n\}\{\theta_T(n)T - \theta_R S(\Psi(n)M + (1-\Psi(n))n)\}$$
$$+ \ \Psi(n)\{(n - M)\theta_T(n)E - (n - M)\theta_R r\},$$

defines claimable net benefits over all values of n, where $\Psi(n)$ is defined as $\Psi = 0$ for $n \leq M$ and $\Psi = 1$ for $n > M$. CNB(n) is a dollar metric for the political gains to the president of pursing a fiscal reform strategy using a coalition of size n.

The president is assumed to pursue a fiscal reform strategy if there is some $n^* > 0$ which maximizes CNB(n) and for which $CNB(n^*)$ is positive. One possible maximum at $n^* \leq M$ is shown in Figure 2a, where $\theta_T(n)T + n\theta_T'(n)T$ equals the marginal political gain of adding an additional member to reform coalitions smaller than or equal to a bare majority ($n \leq M$) and $\theta_R S(n) + n\theta_R S'(n)$ is the marginal political cost of adding one more member to such a coalition. For $n \leq M$, the marginal benefits from coalition building decline as $\theta_T'(n) < 0$ and $\theta_T''(n) \leq 0$. For these coalition sizes, the marginal costs of coalition building increase as $s'(n) > 0$, $s''(n) > 0$ and $k'(n) > 0$, $k''(n) > 0$; thus $S'(n) > 0$, $S''(n) > 0$.

Also shown in Figure 2a is a second maximum at $n_m^* > M$. For coalitions larger than M the president can employ the takings strategy without compensation to add members to his reform policy beyond his bare majority coalition. Here the marginal benefits of adding a new member beyond M equal $\theta_T(n)E + (n - M)\theta_T'(n)E$; marginal benefits continue to decline, again as $\theta_T'(n) < 0$ and $\theta_T''(n) \leq 0$. The marginal costs of adding another member to reform for $n > M$ equals $\theta_R r + (-M)\theta_T'(n)T$; $\theta_R r$ are the added costs required to reveal b(g) schedules while $(-M)\theta_T'(n)T$ measures the additional dilution of political benefits as increases in n above M reduce the rate of credit claiming ($\theta_T(n)$) for reform benefits

FIGURE 2: Majority Coalitions



even from the infra-marginal members in the bare majority of M. Again, since $\theta_T'(n) < 0$ and $\theta_T''(n) \leq 0$, marginal costs are constant or rising.[16]

The choice between the two local optima at n^* and n_m^* in Figures 2a require the president to compare the net political gains of moving from n^* to n_m^*. Area CBN^- measures the lost CNB's of moving beyond n^* to build a bare majority coalition for reform. Once a coalition of size M is reached, however, the president can use the strategy of taking without compensation to fashion a larger fiscal reform involving projects for (n_m^* - M) members. This larger reform earns the president a positive CBN surplus of area CBN^+. If $CBN^+ \leq CBN^-$ then a reform using n^* members is preferred. This is the outcome in Figure 2a. If, however, $CBN^+ > CBN^-$ then the larger reform at n_m^* is chosen.[17] This equilibrium

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[16] The discrete downward shift at n = M in the president's marginal benefit curve from coalition building equals the lost claimable benefits because the president does not compensate "taken" members for their smaller projects ($=\theta_T(M)[C + D]$) plus the infra-marginal losses ($= M\theta_T'(M)T$) now included as an addition to marginal costs. The downward shift in the marginal cost curve at n = M includes the compensation ($=\theta_R[C+D]$), sweetner ($=\theta_R s(M)+M\theta_R s'(M)$), and contracting risk premium ($=\theta_R k(M)+M\theta_R k'(M)$) no longer paid to constituents whose projects have been "taken" less the infra-marginal losses ($= M\theta_T'(M)T$) now included as an addition to marginal costs.

[17] There are two modeling issues associated with the n_m^* equilibrium which should be mentioned here.

First, the comparisons of areas [CNB^+] and [CNB^-] requires the president to know the b(g) schedules of all remaining members before making the decision to stay with modest reform at n^* or to move to major reform at n_m^*. The expected net benefits of this information folows from avoiding a bad decision--that is, in expanding to n_m^* when you should stay at n^* or in staying at n^* when you should expand to n_m^*. Here, I assume that the expected gains to discovering the b(g) schedules beyond n^* are positive.

Second, when the president has achieved a majority (more precisely, a coalition of size M + 1) and has the use of the "takings" strategy, the value of the outside option for a marginal coalition member is reduced by the threat of a "taking". Were the member to exit, he is no longer guaranteed that he can just keep his project and share in the reform surplus -- as previously assumed -- but he might now become one of the "taken" members whose constituents lose their project. Further, with a majority, the president can also control the distribution of the reform's surplus. There is a fall in the expected value of the outside option. This fact increases the president's bargaining power over coalition members and allows him to capture a larger share of reform's fiscal surplus by paying a lower outside option than s(n). To capture this extra surplus the presidential side-agreements assume the form: 1) if reforms smaller than M are approved, then the president pays the outside option as orginally specified in s(n), but 2) if reforms larger than M are approved then the lower outside option will be paid. Again, I assume the size of the coalition is observable when the reform is announced.

is shown in Figure 2b where n_m^* is the preferred coalition size.

Passage of the president's reform proposal will require the majority support of at least .5N + 1 = M members. For major reform proposals involving n_m^* members -- Figure 2b -- passage is assured as the president has the guaranteed support of the compensated bare majority, M. For non-majority reforms based upon the coalition of n* members -- Figure 2a -- passage will require support of M - n* additional legislators. Once the n* reform coalition is formed, the reform's Tn* dollars in freed fiscal resources can be allocated to the constituents of the other, non-reform members. Since these non-reform members have retained their inefficient projects, any dollars received from Tn* will make their constituents better off. A general tax cut of Tn*/N paid to all constituents or a targeted tax cut of Tn*/(N- n*) paid only to the constituents of the non-reform members are two possibilities which would be favored by a majority of members. Both n* and n_m^* reform proposals are politically feasible.

Unfortunately, there is no promise that the larger reform at n_m^* will be optimal for the president; or if not, that n* will be very large. Presidential coalition building may lead to no more than a few modest reforms cleaning up only the most obvious fiscal abuses. Access to a presidential veto, however, can, if used strategically, increase the likelihood of major fiscal reforms.

2. Reform Using the Veto Strategy: With access to a presidential veto significant fiscal reforms may be possible, even when direct presidential coalition building leads to only modest reforms involving only a few n* members. Three steps are involved in the veto strategy: build a veto/reform coalition, fashion a reform proposal which can win majority support, and then, use the veto strategy to protect the reform proposal from defections.

Importantly, if the president gives all the fiscal surplus from reform only to members of his majority coalition, it can be shown that only the surplus is redistributed and the marginal costs and benefits of adding coalition members beyond M is unaffected; the equilibrium at n_m^* in Figure 2b remains. If, however, a universalistic distribution -- $\sum$ "T/N -- is imposed, then larger values of n_m^* will increase the presidential surplus and the equilibrium reform will be larger than n_m^* in Figure 2b. The logic behind coalition building and the reform process is identical, however.

As with the coalition-building strategy, the veto strategy requires the president to first use executive branch resources to reveal benefits and to build coalitions. With a presidential veto that requires a vote of 2/3's of the legislature to override, the crucial veto/reform coalition is of size V = .33N + 1. Each of the V members of the veto/reform coalition must be fully compensated for joining the president's team. As before this requires the president to pay S(n) dollars from executive branch resources for each of the members of the veto/reform coalition: r dollars to reveal a district's b(g) schedule and {area [C + D] + s(n) + k(n)} dollars in compensation.

Once this veto/reform coalition has been formed, however, the president can use the veto strategy (step three below) to bring new members into reform without paying guaranteed compensation. With the veto strategy, a coalition of size V gives the president the same opportunity to take projects without compensation as a coalition of size M did in the initial case of coalition-building. The specification of CNB(n) is identical to that in equation (2c) above, except now $\Psi(n)$ is defined as $\Psi = 0$ for $n \leq V$ and $\Psi = 1$ for $n > V$.

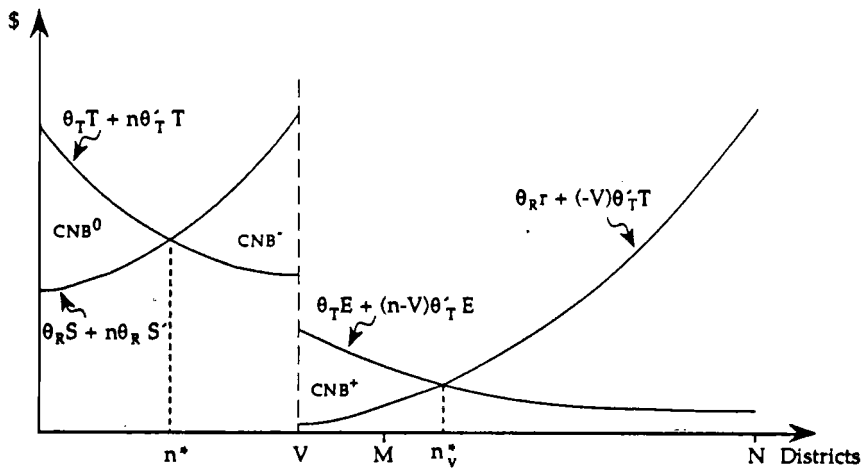
Figures 3a and 3b illustrate the two local optima for the veto case. Again a comparison of areas CBN^- and CBN^+ (different from those in Figure 2) determines the preferred presidential strategy. In Figure 3a, the modest reform at n^* is preferred ($CBN^- \geq CBN^+$) while in Figure 3b, the larger reform at n_v^* is preferred ($CBN^- < CBN^+$). In fact, Figure 3b is based upon the same political benefit and cost schedules as Figure 2a -- n^* is the same in both cases. Here we see that modest reforms at n^* can become major reforms at n_v^* when the president has access to, and uses strategically, the executive veto.[18]

Once the preferred reform proposal has been selected, then second, the surplus from reform --

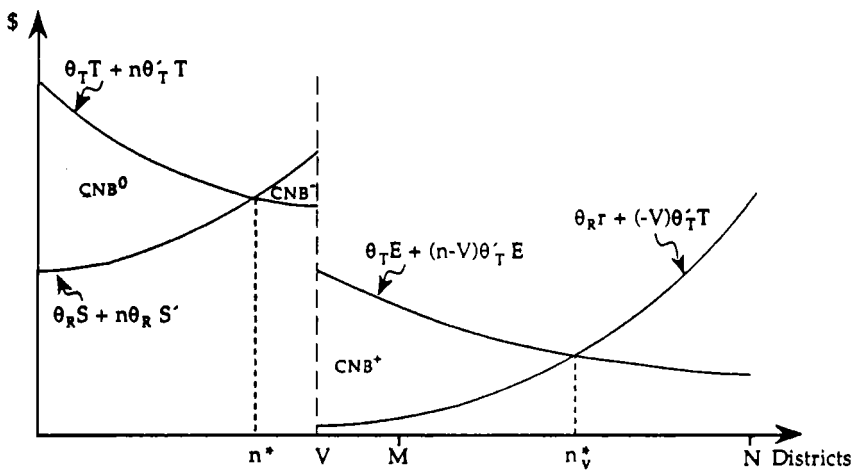
[18] The modeling issues associated with moving from n^* to large reforms discussed above for majority reform in footnote 18 apply to major veto reforms at n_v^* as well, though it should be noted that using the "takings" strategy to force a lower outside option on non-coalition members will be more difficult with the veto strategy. In this case, the president must be able to include the exact distribution of the surplus from reform in a "clear" veto constraint. This may be very difficult; see below and see Ingberman and Yao (1991).

FIGURE 3: Veto Coalitions

(a)



(b)



Tn^* or Tn_v^* – must be distributed to insure majority support. The small reform case involving n^* fully compensated members has been considered above, and passage is feasible. For the larger reform case using the veto strategy, a majority of members must benefit from the reform and the allocation of the Tn_v^* dollars. The president needs M votes for passage. He has V votes from the veto/reform coalition already in hand. To win the remaining M - V votes (= .17N = .5N + 1 - .33N - 1), the Tn_v^* dollars must be allocated to ensure passage. The decentralized congress, however, controls the distribution of these dollars. I assume that congress allocates the dollars equally to all members not already benefiting from reform as members of the president's veto/reform coalition. If so, then these N - V members each receive a transfer from reform of $Tn_v^*/(N - V)$ for their constituents.

Will that be enough to allow passage? Such an allocation is sufficient to win the yes votes of those $N - n_v^*$ members whose constituents are unaffected by reform; they have kept their projects and they capture a share of the surplus from reform. If $N - n_v^* \geq M - V = .17N$, or if $.83N \geq n_v^*$, then the reform will pass. If $n_v^* > .83N$, however, additional support may be needed from the members from V to n_v^* in Figure 3b who have lost their projects but have not been compensated by the president. Members from V to n_v^* will vote yes if their constituents' gain of $Tn_v^*/(N - V)$ is greater than their constituents' loss of project benefits of area [C + D]:

$$Tn_v^*/(N - V) > \text{area } [C + D],$$

or, since T = area [C + D + E], if:

$$[C + D]\{(n_v^*/(N - V)) - 1\} + [E]\{n_v^*/(N - V)\} > 0.$$

Sufficient for their support is that $n_v^* > N - V$, or, since $V = .33N + 1$, that $n_v^* \geq .67N$. But the members from V to n_v^* in Figure 3b are only needed for passage if $n_v^* > .83N$. We can conclude, therefore, that there are enough dollars from reform to permit passage under a congressional distribution

of the surplus as $Tn_v^*/(N - V)$.[19]

Steps one and two above show that the president and a majority of members of congress can all benefit politically from reform. Whether reform will occur depends, however, upon how well the president handles the threat to defect from reform posed by members from V to n_v^* in Figure 3b. These are the members who have given up their constituents' projects without presidential compensation.[20] It may well be in their private interests to "take their project back" and seek to become a member in the non-reform range from n_v^* to N of Figure 3b. To do so, the member simply claims that the president has mismeasured his constituents' benefits and that g_1 is in fact the socially efficient project for his constituency. This claim is credible as knowledge about project benefits is private; presidential protests to the contrary are unverifiable.

If defection occurs, then all members from V to N in Figure 3b will be playing the original legislative game to set their project spending. They form a majority. In decentralized legislatures, the outcome of this game will be the original inefficient project spending of Figure 1 for those members. Thus defection undoes major reform.

Will members from V to n_v^* in figure 3b choose to defect? Defection is the member's preferred

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[19] There are enough dollars in major reform to accomodate other congressionally decided distributions as well. At one extreme, a minimal winning coalition involving only the subset of pivotal (.5N - .33N) voters needed for passage might capture all the surplus earning a transfer of $Tn_v^*/.17N$ for their constituents. Clearly they will support reform since $Tn_v^*/.17N > Tn_v^*/(N - V)$. Reform passes under this distribution.

Alternatively, all members might share equally in the distribution earning Tn_v^*/N each for their constituents. Now passage depends upon the exact size of areas [C + D] and [E]. In the reasonable case where Figure 1's benefit curves are approximately linear (so that area [C] $\simeq$ area [E]) and where ϕ is small ($\simeq$ (1/N)) so that area [D] is small, then the very egalitarian distribution of Tn_v^*/N -- sometimes called "distribution neutrality" -- can also be shown to be sufficient to compensate a winning majority provided $n_v^*/N > .5$.

[20] Only districts from V to n_v^* in Figure 3b have an incentive to defect. Districts in the president's veto/reform coalition already have been compensated via the sweetner of s(n) sufficient to make reform their best alternative. Districts from n_v^* to N in Figure 3b are pure winners from major reform as they keep their local projects and receive a share of the reform's fiscal surplus.

Nash strategy if his constituents' gains from defection -- area [C + D] in saved project benefits -- are greater than their losses -- the share of the saved fiscal resources withdrawn because of defection or T/(N - V). Defection occurs, if area [C + D] > T/(N - V), or since T = area [C + D + E], if:

$$\text{area } [C + D]\{1 - 1/(N - V)\} > \text{area } [E]/(N - V).$$

It can be shown that this condition holds if the project benefit curve in Figure 1 is approximately linear (so area [C] ≃ area [E]) and if the legislature has at least five members.[21] In this reasonable case, defection is a preferred Nash strategy for members in the range V to n_v^* of Figure 3b. Reform unravels.

It is at this point that the third step in the president's veto strategy comes into play. If used correctly, the veto can stop defections. However, simply threatening to veto any reform other than the major reform involving n_v^* member is not enough. By itself that threat is not credible. Individual members in the V to n_v^* range of Figure 3b prefer to defect from reform. If they do, reform must be a modest reform, involving V or fewer districts. Further, there exists a modest reform proposal which a majority in the legislature can offer to the president and which the president, and his veto coalition, will accept rather than enforce the veto and return to a no reform, post-veto status quo. A modest reform proposal of n^* projects is certainly one, though not the only, such alternative. When defection is the preferred Nash strategy for members in the V to n_v^* range of Figure 3b, a naked threat to veto is not enough to guarantee major reform.

A presidential commitment to major reform creating a credible veto threat can do the trick, however. Ingberman and Yao (1991) show that if the president can commit to major reform such that it is costly to accept any reforms other than his major reform, then a clear and well understood -- not "fuzzy" -- veto threat becomes credible. Such a threat might be to veto any bill which does not meet a

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[21] If area [C] ≃ area [E], then the condition for defection becomes:

$$[D]\{1 - 1/(N - V)\} + [E]\{1 - 2/(N - V)\} > 0.$$

For V = .33N + 1, this condition holds if N > 4.5.

precise spending reduction target or offer a minimal tax rate or deficit cut. Here, the promise to veto any bill that does not reform n_v^* projects is the "clear" veto threat. If the president accepts a reform which does not meet his veto target then he suffers a clearly understood cost of K dollars in lost claimable net benefits, where K is the discounted present value of future political benefits lost because the failure to use the veto today diminishes the president's veto credibility in latter policy reforms -- that is, the president is seen as a "wimp."[22] One would expect high values of K are easier to establish early in one's presidency.

When the president can establish a cost K to accepting (i.e., not vetoing) the proposed alternatives to his n_v^* reform and K is greater than the benefits of accepting the alternative, then the veto threat is credible. The most tempting alternative to the president will be a modest reform in which only one of the members from V to n_v^* defects. In this case, the president will earn claimable net benefits of $CNB(n_v^* - 1)$ if he accepts modest reform. If K is greater than these benefits, however, then the president will prefer to veto even this "pretty good" reform. Members of the president's veto coalition sustain the veto, since their compensation from voting with the president exceeds their gains from defecting and accepting the $(n_v^* - 1)$ reform.[23] Thus the presidential veto threat is credible when K >

[22] In this model, K equals the discounted differences between the CNB's available from using the veto strategy and the CNB's available from using the no veto, majority-only strategy from all future efforts at fiscal reform. A telling example of when the failure to use the veto cost a president latter reforms was Carter's failure to veto an early term tax bill which dropped most of his major proposals. His subsequent reputation as a "tough veto" was severely damaged, a fact which significantly undermined his latter efforts to pass major tax reform; see Kantowicz (1985).

[23] A defector from the veto coalition will lose his local project -- it will still be part of the $(n_v^* - 1)$ reform -- but also his presidential compensation. If he stays with the president and vetos the $(n_v^* - 1)$ reform, he keeps his local project -- we return to the inefficient status quo -- and his presidential compensation of $s(V) + k(V)$, where now $k(V) = k = \{(1 - \rho)/\rho\}s(V)$ as [C + D] need not be paid; see footnote 12.

$CNB(n_v^* - 1)$.[24]

Importantly, this commitment-based veto strategy alters the preferred Nash strategy of each potential defector from reform. Each member from V to n_v^* in Figure 3b now knows that to defect from reform will leave the president with a modest reform package which returns $CNB(n_v^* - 1)$ in political benefits but which will cost him K if he fails to veto and accepts the package. With a credible veto, $K > CNB(n_v^* - 1)$, and the president vetoes the modest reform. To defect, therefore, will return all members, including the defecting member, to the original inefficient status quo at g_1 in Figure 1.

To remain in the reform coalition, however, gives the potential defector a net gain over this status quo of $Tn_v^*/(N - V)$ - area [C + D]. As shown above, this net gain is positive if $n_v^* \geq .67N$. Further, in the case of approximately linear demand curves (so area [C] $\simeq$ area [E] of Figure 1) and small values of the tax share ϕ ($\simeq 1/N$, so that area [D] becomes trivial), then any $n_v^* > V$ will be sufficient to insure a positive net gain from reform.[25] This is always the case when the president chooses major reform.

When the net gain to remaining in the reform coalition is positive, the potential defector chooses reform over defection. The commitment-based veto strategy forces each potential defector to face the costs to the full legislature of his decision to defect -- namely, the loss of $Tn_v^*/(N - V)$ -- rather than just his private costs of $T/(N - V)$. Facing these higher costs, defection is deterred and the unravelling of major reform is thereby blocked. The outcome is a reform budget with n_v^* efficient projects.

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[24] In fact, this condition is the tightest constraint on K. If one member in the range from V to n_v^* defects, it may well happen that all members will defect. In this case, the modest reform proposal is one which offers the president net claimable benefits of $CNB(V) = CNB^* - CNB^-$ in Figure 3b. Clearly, $CNB(n_v^* - 1) > CNB(V)$. The legislature's ability to organize "pretty good" reforms will have an important effect on the ability of president to use the veto strategy. K can become lower and thus the president is potentially more influential, the more disorganized is the legislature.

[25] In this case, it is possible to show generally that any n_v^* larger than $(N - V)/2$ will be sufficient for the defector to prefer his position in major reform to the no reform status quo. When V equals .33N + 1, then the sufficiency condition reduces to $n_v^* > V$.

Finally, when the veto strategy is available -- i.e., when $K > CNB(n_v^* - 1)$ -- and $n_v^* > M$ is the preferred size of a veto reform, then the veto strategy will be preferred by the president to building a majority reform coalition. This follows from the fact that for each value of $n > M$, the higher marginal benefits of adding districts using the majority coalition strategy -- greater than the marginal benefits from the veto strategy by $(V - M)\theta_T'(n)E$ -- are more than offset by the majority coalition strategy's still higher marginal costs -- greater by $(V - M)\theta_T'(n)T$ -- as $E < T$. Thus when pursuing major reforms as in Figures 2b and 3b, area CNB^- is always smaller and area CNB^+ is always larger with the veto strategy than with a majority coalition strategy. Presidential welfare is thereby increased. Further, since the increase in marginal costs with the majority coalition strategy is greater than the increase in marginal benefits for each $n > M$, the veto strategy will always produce larger reforms than what the president would have preferred with a majority coalition -- that is, $n_v^* > n_m^* > M$.

Giving the president the veto and the resources to make it work increases the likelihood and the size of major fiscal reform when congressional budgeting is inefficient.

C. When Is Presidential Fiscal Reform Most Likely?

The exogenous economic and political environment which define claimable net benefits defines in turn the likelihood that a president will pursue major reform of inefficient public budgets. At least six comparative static results follow from the model as developed here.

First, presidents who are popular may enjoy a higher rate of presidential credit claiming from reform ($\theta_T(n)$) as well as slower pace of decline in credit claiming ($\theta_T'(n)$). Both effects shift up the president's marginal benefit curves to reform coalitions and encourage more encompassing reforms. Popular presidents may also dominate president-member negotiations, particularly among new members; this fact raises the value of θ_s and reduces the president's marginal cost of coalition building. Again,

larger reforms result.[26]

Second, presidents who have reputations as honest brokers (raising ρ) will also face lower marginal costs to coalition building and therefore have an incentive to seek larger reforms.

Third, those programs whose marginal expenditures are very inefficient are the prime candidates for major reform. For a given level of congressional spending, those programs where the ratio [E]/[C + D] in Figure 1 is large will have lower marginal costs for coalition building and, for n > M generally or n > V in the veto case, also higher marginal benefits. These effects makes major reform coalitions more likely.

Fourth, when program inefficiencies are well known or easily documented, then the costs of revelation, r, will fall. This too makes large reforms more likely.

Fifth, access to the veto strategy makes major reform more likely. To exercise this strategy, the president must be able to establish that his veto threat is credible, or equivalently, that the cost of not vetoing some partial reform (K) are larger than the political benefits any partial reform might offer. K is larger when the president has a full agenda of future reforms or policies for which a reputation as a sure veto is important. This is most likely to be the case early in the presidential term and in times of national crises.

Sixth, any political forces outside the model which give the president "free" coalition members -- e.g., party allegiances or ideological commitments to efficient (or just smaller) goverment -- may increase the likelihood of major reform, even when those free coalition members do not by themselves constitute a majority or a veto coalition. Free coalition members lower the president's infra-marginal cost

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[26] Offsetting these effects is the fact that popular leaders may also be able to claim most of the credit for allocating discretionary resources and policies. If so, the opportunity cost of fiscal reform (θ_R) will be higher, and major reforms will be less likely.

One case where $\theta_T(n)$ and θ_S might both be high but θ_R might be low is when congress exercises tight oversight over executive allocations from the existing annual budget but the president is nonetheless seen as a strong leader on new policies. The outsider with a popular "mandate for change" might best describe this case.

Figure 1.[27] To pay for the dollars (g) used by the tax subsidy, higher average tax rates on other activities or an increase in the public deficit will be required. For each lost dollar from the tax subsidy there is a marginal social cost represented by c(g); again, see Figure 1. The socially efficient level of the tax subsidy is specified by g^* where $b(g^*) = c(g^*)$. The optimal expenditures for the subsidy, g^*, will be zero if b(g) lies everywhere below c(g). This may often be the case.[28]

The fact that the socially efficient subsidy may be zero does not mean that the subsidy will not be provided by a decentralized political process, however. A decentralized congress provides the level g_1, where $b(g_1) = \phi c(g_1)$. From Figure 1, it is clear that though b(g) may be less than c(g) and $g^* = 0$, when $b(g_1) = \phi c(g_1)$, $g_1 > 0$ may still occur. In this case, tax subsidies are inefficiently too large, creating a social excess burden such as area [E] in Figure 1.[29]

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[27] The specification of b(g) -- the willingness to pay for one more dollar of a tax subsidy for some good x -- can be specified formally as:

$$[\partial W(s_x)/\partial s_x]/[\partial g(s_x)/\partial s_x] = dW/dg = b(g), \text{ where:}$$

$W(s_x) = E\{p_x, v(p_x - s_x, I)\} - E\{p_x, v(p_x, I)\}$ measures the dollars required to achieve the same level of utility (v) at the unsubsidized price of x (p_x) as one can achieve at the subsidized price ($p_x - s_x$), and where, $g(s_x) = s_x x(p_x - s_x, I)$ measures the expenditure for the subsidy s when used to reduce the price of good x whose demand is $x(p_x - s_x, I)$.

When x is a purely private good, $b(g) \leq 1$ as the utility value of dollar from a price subsidy will be equal to or less than the utility value of a dollar of unconstrained income. When $b(g) < 1$, the tax subsidy is socially inefficient. However, if x provides significant positive externalities, the social b(g) schedule may well exceed 1 and tax subsidies can be socially efficient.

Not surprisingly, tax lobbyists spend most of their time arguing that their subsidized activities provide significant positive externalities.

[28] See fn. 27 above.

[29] Strictly speaking, the inefficient area [E] in Figure 1 is for a tax subsidy that benefits only the single constituent group shown in Figure 1. However, the argument that a decentralized congress will choose inefficiently high tax subsidies generalizes to subsidies which benefit many constituencies, provided the high demand constituent group chooses g. When many groups use the subsidy, each dollar of g paid to the high demand group costs not just c(g), but now c(g,n), where n is the number of constituent groups who benefit and $\partial c(g,n)/\partial n > 0$. In the simpliest case, c(g,n) = nc(g). The high demand group sets g at that level where its $b(g_1) = \phi n c(g_1)$. If $\phi n \leq 1$, as seems likely, then overprovision of the tax subsidy -- and an inefficiency such as area [E] -- still results.

Witte's (1985, chaps. 1, 13-15) and Arnold's (1991, chap. 8) political histories of U.S. tax policy

In 1985, prior to the passage of TRA 86, the list of potentially inefficient tax subsidies in the U.S. tax code was lengthy. Tax expenditures in the personal and corporate code totalled $1291/person and $398/person respectively; see Table 1. Economic research has shown many of these major tax subsidies to be economically inefficient.[30] Step one to tax reform is to reveal the individual b(g) schedules so that fiscal inefficiencies can be identified. In his 1984 State of the Union address, President Reagan instructed his Treasury Department to do just that. An internal Treasury Department task force was appointed, headed by tax economist Charles McLure and tax lawyer Ronald Pearlman. Economic research on the inefficiencies of the existing tax subsidies was available to the task force and used to specify the core elements of the reform proposal; see McLure and Zodrow (1987).

Known as Treasury I, the task force's reform proposal made significant reductions in these inefficient personal and corporate tax subsidies. The resulting fiscal savings were then returned as overall tax relief. In deciding on the new rate schedule the Treasury staff embraced the concept of "distributional neutrality" in which personal tax rates were to be lowered by an (approximately) equal percentage rate for all income classes. It was a guideline which was to survive throughout the reform process and insured that almost everyone benefited from reform; see Gravelle (1992) and section III.C below. Treasury I's proposal lowered personal tax rates to .15, .25, and .35 and the corporate rate to a flat .33. Most Americans would benefit, receiving back in tax relief more dollars than they had

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stress the importance of decentralized congressional decision-making in understanding the explosion of tax expenditures over the last twenty years. The economic analysis summarized in fn. 30 below suggests many of these tax expenditures are inefficiently too large.

[30] Major personal tax subsidies often judged to be inefficient include: deductions for state and local taxes (Bergstrom et. al. 1987), tax-exempt status for municipal debt (Metcalf, 1991), deductibility mortgage interest payments (Hoyt and Rosenthal, 1992), and the exemption from taxation of IRA savings (Gale and Scholz, 1993). Tax subsidies through the corporate income tax are equally suspect on efficiency grounds. Accelerated depreciation and an investment tax credits (Goulder and Thalmann, 1993) depletion allowances and the expensing of drilling costs for oil and gas (Pechman, 1987b), and the deductibility of employee fringe benefits (Feldstein and Friedman, 1978) have all been shown to have adverse efficiency effects.

sacrificed in lost tax expenditures; see U.S. Treasury (1984, Table 4-3). That those lost tax expenditures were likely to be less valuable economically than the unconstrained dollars of tax relief only enhanced the reform's atttractiveness.

The first step to major tax reform had been taken. It was President Reagan and the staff at Treasury who led the way.

B. Step 2: The Veto Strategy

Treasury I was sent to President Reagan for his consideration on November 26, 1984. Using Treasury I as a starting point -- particularly the across board lowering of tax rates which President Reagan found so attractive -- newly appointed Treasury Secretary James Baker and Deputy Secretary Richard Darman reorganized the list of loophole closings to fashion a politically more feasible reform, particularly reducing the burden on the corporate sector to appease Republicans and restoring expensing of oil and gas drilling costs to win over the oil and gas states, particularly the key support of Democratic Senator Russell Long on the Senate's Finance Committee. This revised reform, known as Treasury II, was presented to Congress and the American people on May 28, 1985 in a Presidential television address. Reagan made it very clear that tax reform was the top legislative priority for his second term.

Representative Dan Rostenkowski, Chairman of the House Ways and Means Committee which would consider the president's proposal, was receptive to tax reform, but only on his terms. After months of tax hearings and intensive special interest lobbying, the Ways and Means Committee produced its own version of tax reform. Known as H.R. 3838, the reform bill restored important personal tax loopholes (notably, full deductibility of state and local taxes) and continued the no taxation of fringe benefits so important to labor. To pay for this expansion of tax favors, H.R. 3838 added a top personal tax rate of .38 and raised the flat corporate tax rate to .36. House Republicans were not pleased.

Particularly unhappy over the changes were the economic conservative Republicans in the House led by Representatives Newt Gingrich, Trent Lott, and Jack Kemp. They saw an opportunity to block

the Ways and Means bill by defeating a crucial vote on the rules which would govern the debate over H.R. 3838. Rules play a central role in shaping legislation in the highly decentralized politics of the House. A closed rule to limit debate and amendments to H.R. 3838 was absolutely crucial to preventing H.R. 3838 from unravelling to special interest pleadings to restore tax favors. Once one favor was added from the floor, it was very likely the norm of deference -- vote for my favor and I'll vote for yours -- would take over and totally undo efforts at significant tax reform.[31] Rostenkowski and the Democratic leadership insisted on a closed rule which would limit debate on H.R. 3838 to five hours and restrict the only important floor amendment to a single vote on a Republican alternative bill.[32]

On December 11, 1985, following intensive lobbying by Republican Whip Trent Lott, the rule resolution was defeated 223-202 by a coalition of 164 Republicans and a few (59) conservative Democrats. Only 14 Republicans voted to consider tax reform under the proposed closed rule. Then Speaker of the House "Tip" O'Neil called the White House and announced that tax reform could not go through without the rule. Only if the White House could promise him that at least fifty Republicans would switch their votes and support the rule would he allow another rule vote and then full consideration of tax reform. Reform appeared to be dead.

At this juncture, Reagan issued his veto threat and fashioned his veto coalition. It was a key strategic move and proved sufficient to induce 58 Republicans, including conservative Jack Kemp and Minority Leader Robert Michel, to switch their votes to favor closed rule consideration of H.R. 3838. Kemp and Michel, along with all House Republicans, received a personal letter from the White House guaranteeing a presidential veto if the final tax reform did not meet the president's goal of continued tax

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[31] Rostenkowski had suffered such a fate with the passage of the Economic Recovery Tax Act of 1981 in which personal and business tax expenditures were significantly increased; see Table 1. It was a lesson that Rostenkowski would not forget.

[32] Two other amendments were also allowed in the rule vote. One was to expand a tax credit for campaign contributions to House and Senate candidates and second was to allow adjustments to the tax codes of U.S. Island possessions. Neither held significant consequences for the final version of TRA 86.

incentives for American industry (specifically, retain accelerated depreciation and lower corporate tax rates), a $2000 personal exemption, and a maximum rate for individuals of .35. This was the veto threat. It was a clear, not "fuzzy," veto target, and it could only be achieved by signficant reductions in tax expenditures.[33] To insure that the veto threat was credible, the president needed to build a veto coalition and to establish a credible cost (K) to not vetoing any partial reform which violated his veto guidelines.

The president found his veto coalition among House Republicans. The 88 ideologically conservative core Republicans who consistently opposed reform[34] plus the 58 Republican members who agreed to switch their votes on the rules for H.R. 3838 gave the president the 146 votes needed to sustain a veto. The key to the president's veto coalition were the 58 members who switched from opposing to supporting the closed rules for consideration of H.R. 3838. How did the president bring these members into his coalition?

There is strong, though admittedly indirect evidence, that presidential resources were crucial to winning their allegiance. To plead his case for reform, the president put his personal prestige on the line and left the White House for a rare meeting with all House Republicans at the Capitol on December 16, 1985. At this meeting, the legislative liaisons for the president watched members reactions closely and made a working list of Republicans who seemed most reponsive to the president's request to "keep the process alive" (Conlan, et al., 1990, p.132). Baker and Darman then got on the phone to make the

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[33] Here the president used the recently approved Gramm-Rudman-Hollings budget law to his advantage. Under Gramm-Rudman-Hollings, Congress was constrained to insure that tax reform was revenue neutral and did not increase the federal deficit.

[34] The core conservative group can be identified as those members of the Republican Party who voted against reform at every opportunity in the reform process. A logistic specification seeking to explain this voting behavior identifed the conservative ideology of the member (εD1Nom, + coefficient) and his constituents (%Mondale, - coefficient) as the statistically and quantitatively most significant determinants of such voting behavior. The variables εD1Nom and %Mondale are defined in a Data Appendix available upon request. Regression results are also available upon request.

president's case and to explore the possibility of swapping votes for presidential favors. In several instances, those favors -- farm legislation, import quotas for machine tools, and presidential and top aide visits during the coming election year -- made the difference (Birnbaum and Murray, 1987, pp. 171-172). Also crucial to eventual turnaround of Republican support was Reagan's credibility with the members; they knew him as a man of his word and one who would keep his veto promise (Birnbaum and Murray, p. 171). That evening, Reagan called O'Neill to tell him he had at least fifty Republican votes, and O'Neill agreed to hold another rules vote. On December 17, 1985 with 58 new Republican votes, the rules resolution passed, 258-168. H.R. 3838 was a now done deal. In fact, the final vote on H.R. 3838 was a voice vote.

An econometric analysis of House member voting on the two rule resolutions -- one before (December 11, 1985) and one after (December 17, 1985) the Reagan visit and veto threat -- confirms this apparently strong effect that Reagan's efforts had on Republican voting. The two votes were on substantively identical issues; the rules for consideration and the tax reform bill were identical in the two votes. All that differed between the first and second votes was the possible influence of Reagan's meeting and negotiations with the Republican members. The logistic vote regression presented in Table 2 illustrates the dramatic shift in Republican voting which followed.

The dependent variable is the member's two votes (recorded as 1 if <u>for</u> the resolution, 0 if <u>against</u>) on the two closed rules resolutions, "pooled" with the first 424 observations recording each member's vote on the first resolution and the second 424 observations recording their votes on the second resolution. Pooling observations for the two votes insures the most efficient estimation of the vote model's underlying behavioral parameters.[35]

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[35] The sample for this regression includes the 424 members who voted -- or indicated a clear position in favor of, or against, the rules -- on both rules votes.

Prior to estimating the pooled regression, formal tests of whether pooling was appropriate were performed. A test of whether Republicans and Democrats behaved similarly on the first rule vote, except for a constant "shift" effect to the underlying latent variable defining vote probabilities, could not be

Table 2: House Voting on the Rules for H.R. 3838

$$
\begin{aligned}
V_H^{\bullet} = {} & .227 \\
& (.383) \\
& + [.0021 - .0031\ \mathrm{RepV2}]\Delta y_H \\
& \quad (.0009)^* \quad (.0014)^* \\
& + [.0038 - .0058\ \mathrm{RepV2}]\ (\Delta \mathrm{SRev}) \\
& \quad (.0014)^* \quad (.0024)^* \\
& - [.590 - .669\ \mathrm{RepV2}](\%>68000) \\
& \quad (1.378) \quad (2.153) \\
& + [1.457 - 2.465\ \mathrm{RepV2}](\%\mathrm{Mondale}) \\
& \quad (1.218) \quad (2.073) \\
& + [1.327 - .723\ \mathrm{RepV2}](\mathrm{W\&M}) \\
& \quad (.447)^* \quad (.758) \\
& - [3.718 - 3.626\ \mathrm{RepV2}](\mathrm{Rep}) \\
& \quad (.318)^* \quad (.729)^* \\
& - [.751 + .009\ \mathrm{RepV2}]\epsilon\ \mathrm{D1Nom} \\
& \quad (.132)^* \quad (.238) \\
& + [.096 - .048\ \mathrm{RepV2}]\epsilon\ \mathrm{D2Nom} \\
& \quad (.118) \quad (.227)
\end{aligned}
$$

N = 848 % Votes Correctly Predicted = 77% $\chi^2(16) = 359.54$

*Asterisk indicates estimated coefficient exceeds its standard error by at least 1.65. Standard errors reported within parentheses.

The independent variables used to predict each member's voting behavior include: 1) constituent interests in tax reform measured by the change in after-tax income of the median income family -- averaged over itemizers and non-itemizers -- in the member's district due to the House version of H.R. 3838 (Δy_H), the percent of the member's district's families with incomes over $68,000 ($\%>68000$), the windfall gain in state income tax revenues to the member's state government due to federal base-broadening under tax reform (ΔSRev), and the percent of registered voters in the member's district who supported Mondale -- an early advocate of tax reform -- in the 1984 presidential election (%Mondale); 2) membership on the Ways and Means Committee, the committee responsible for drafting H.R. 3838 (W&M = 1 if on Ways and Means, O otherwise); 3) party affiliation (Rep = 1 if Republican, 0 if Democrat); and 4) instruments for members' personal values for public policies measured along the dimensions of economic conservatism (εD1Nom, where higher values identify the more conservative members) and social liberalism (εD2Nom, where higher values identifiy more socially liberal members). The variables εD1Nom and εD2Nom were specified using the member's two 1984 DNOMINATE vote indices of Poole and Rosenthal (1991) and the residual specification presented in Kalt and Zupan (1984), both corrected for possible simultaneity between vote score residuals and voting on TRA 86 as suggested in Jackson and Kingdon (1993).[36]

I anticipate that members whose constituents expected to benefit economically (larger values of Δy_H and ΔSRev and smaller values of $\%>68000$) and who supported Mondale (%Mondale), members who belonged to Ways and Means (W&M) or the House Democratic majority (Rep = 0), and members

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rejected. Nor could I reject the hypothesis that Democrats behaved identically on the two rules votes. Republicans did display significantly different behaviors on the two rule votes, however, as revealed in Table 2 above.

[36] Each independent variable is described in greater detail in a Data Appendix available upon request. The instruments used to correct for possible simultaneous equation bias from the inclusion of εD1Nom and εD2Nom were the quartile ranking of each observation's value of εD1Nom and εD2Nom.

who were economically and socially liberal (low values of $\underline{\epsilon D1Nom}$ but high values of $\underline{\epsilon D2Nom}$) would be the ones most likely to support H.R. 3838 and thus the two rule votes. Estimates in Table 2 cannot reject these hypotheses.

The important result here, however, is the strong influence that Reagan's visit and subsequent deal-making had on Republican behavior on the second of the two closed rule votes. Interacted with each independent variable is a dummy variable RepV2 which has the value 1 for Republicans voting on the second rules resolution, 0 otherwise. The estimated coefficient of RepV2 measures the change in the influence of the independent variable between the first and second rules votes for Republican members only. Reagan's visit to Republicans is the only substantive event which occurred over the six days between the two rules votes. RepV2 is therefore a measure of Reagan's influence on Republican members of the House.

Reagan's intervention as measured by RepV2 essentially neutralized Republican opposition, except in the core conservative coalition. $\underline{\epsilon D1Nom}$ has a significantly negative influence on the first rule vote, and Reagan's lobbying efforts before the second vote did little to change this effect. For the other, less ideologically committed House Republicans, however, the positive and significant effects of constituent economic interests ($\underline{\Delta y_H}$ and $\underline{\Delta SRev}$) seen on the first vote are fully offset in the second vote by the Reagan visit. Economic favors given by the president to swing Republican votes would explain this statistically significant, and fully offsetting, negative influence of RepV2 on the marginal effects of $\underline{\Delta y_H}$ and $\underline{\Delta SRev}$. Further, the strong negative bias on the first vote from simply being a House Republican -- the consequences of Lott's lobbying -- was then offset in the second vote by Reagan's promise to protect Republican interests through his veto threat. Together, it appears, presidential resources and the veto promise were enough to switch 58 of the 94 or so ideologically non-committed Republicans to the president's side. These 58 "switch" Republicans plus the 88 core conservatives formed the president's 146 member veto coalition for all subsequent deliberations on tax reform.

To complete the veto strategy Reagan needed to establish a credible cost (K) to not vetoing any partial reform which violated his veto guidelines. This Reagan achieved by making clear -- both in his televised address of May 28, 1985 and in his December 16, 1985 visit to the Capitol to ask for Republican support -- that his reputation as an effective president rested on the passage of TRA 86. Further, legislation important to Reagan was still to be decided: Star Wars, Contra funding, and two more budgets. Republicans, at least, viewed the passage of TRA 86 as crucial to an effective second term.[37] Was K large enough to insure a Reagan veto of any modest reform which did not meet his tax rate target? Certainly enough members of Congress thought so, for following the president's veto threat all subsequent reform deliberations in both the Senate and the House stayed within the veto constraint of continued accelerated depreciation and a .35 corporate rate for business and a $2000 personal exemption and a .35 personal rate for households.[38]

C. Step 3: Winning Votes with Economic Benefits

Central to this model of presidential fiscal reform is the idea that reform creates net economic benefits sufficient to induce a majority of legislators to vote for reform, even if they are not members of the president's reform coalition. Was this the case with TRA 86?

Net economic benefits from reform were computed using the NBER's TAXSIM program. Tax payments by the median income family in each congressional district and in each state were computed

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[37] See "Claiming the Credit in 1988," The New York Times, October 23, 1986.

[38] On the credibility of the president's veto promise, see Birnbaum and Murray (1987, p. 171). Particularly revealing are the comments of Representative Henry Hyde of Illinois, a leading Republican, who announced at the end of the president's visit with Republican House members: "Mr. President, if you say you'll fight for the $2000 exemption, the rate reduction, effective dates, and a lower capital-gains tax rate, I don't need a letter. I'll vote for (the rules)." (Birnbaum and Murray, 1987, p. 171).

On the importance of the veto constraint to shaping TRA 86 as a major reform, see Birnbaum and Murray (1987, chapters 8 and 9) and Conlan, et. al. (1990, chapter 6, particularly at p. 149) describing the efforts of the Senate to live within the president's tax rate target. It was major reform or no reform.

for the tax year 1988, first under the tax code before TRA 86 and then under the tax code for TRA 86 for itemizers and for families using the standard deduction. Net economic benefits from reform were then estimated as median income family's change in after-tax incomes specified as: 1) the difference in 1988 personal tax payments before and after TRA 86, minus 2) the extra interest cost payments for new state and local debt (exclusive of transition rule exceptions) no longer exempt under TRA 86, minus 3) additional 1988 state income tax payments for residents in those states using the expanded, post-TRA 86 federal income tax base; see Inman (1993) for details.

Under this incidence specification the average (weighted by % itemizers) median income family in 65% of the states and congressional districts enjoyed an increase in after-tax incomes from reform. Across congressional districts, the mean increase was $59.30 per median income family, but the distribution of benefits was skewed with most median income families gaining from $100 to $300 while in the very wealthy districts net transfers from reform ranged from -$300 to -$500 per family. Families whose members belonged to the president's veto coalition were not systematically discriminated against in the distribution of the proceeds of reform, though districts with senior members of the House and on key committees received higher net benefits.[39]

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[39] The distribution of changes in after-tax incomes as a percent of pre-tax incomes ($\Delta y_F/I$) across congressional districts is well-described by a cubic function of median taxpayers pre-tax incomes (I, measured in $10,000) and the legislative influence of their representatives measured here by the years in office of their representative (HSen, measured in years in office), membership on the Ways and Means Committee(W&M, 1 if on committee, 0 otherwise), the House Rules Committee (Rules, 1 if on committee, o otherwise), or the Conference Committee for TRA 86 (Conf, 1 if on committee, 0 otherwise), and membership in the president's veto coalition either as part of Lott's conservative coalition (Consv, 1 if in coalition, 0 otherwise) or as part of the president's "switch" coalition (Switch, 1 in coalition, 0 otherwise):

$$\Delta y_F/I = \underset{(.006)}{.104} - \underset{(.005)}{.092}*I + \underset{(.001)}{.026}*I^2 - \underset{(.0001)}{.0023}*I^3 + \underset{(.00003)}{.00007}*HSen + \underset{(.0008)}{.0010}*W\&M$$

$$+ \underset{(.0012)}{.0013}*Rules - \underset{(.0015)}{.0010}*Conf - \underset{(.0006)}{.0001}*Consv - \underset{(.0006)}{.0001}*Switch$$

$R^2 = .45$ (Standard errors reported within parentheses.)

Did these net economic benefits from reform make a difference to congressional voting on TRA 86? Tables 2 and 3 test for the effects of additional after-tax income for the typical median income family on the votes for tax reform. For each vote, the change in after-tax incomes from reform is estimated for the version of the reform bill under consideration in the House or the Senate at the time of the voting.[40]

As noted in section III.B, the relevant House votes are on the two closed rules votes for consideration of H.R. 3838. Voting for the closed rule was equivalent to voting for reform. In Table 2, the change in after-tax income, $\underline{\Delta y_H}$, has a positive and statistically significant effect for Democrats on both rule votes and for Republicans on the first rule vote, before presidential intervention.

A statistical analysis of Senate voting to close tax loopholes is reported in Table 3. The dependent variable is Log(p/1-p), where p is the percent of the fifteen Senate votes to restore tax favors in which the senator voted to restrict or close the tax preference. Other independent variables in addition to $\underline{\Delta y_s}$ are $\underline{\Delta SRev}$, $\underline{\%>68000}$, $\underline{\%Mondale}$, $\underline{Rep}$, $\underline{\epsilon D1Nom}$, and $\underline{\epsilon D2Nom}$ as specified earlier for House votes, only here state-wide data or senatorial voting records are used. New variables included in the Senate vote regression include the level of state and local sales tax revenue per family in the state ($\underline{STax}$) to allow for the fact that the Senate reform bill removed the deductibility state and local sales taxation and membership on the Senate Finance Committee ($\underline{Finance}$ = 1 if on Finance, O otherwise) as the

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This estimated relationship between before tax income and the rate of tax relief closely approximates the incidence analyses summarized in Gravelle (1992).

[40] Strictly speaking the change in net economic benefits should be measured as the extra income received from the rate reductions minus the utility value to the family of the tax favors lost; see Figure 1 and fn. 27. This specification could be accomodated econometrically by including each of these two components of the change in after-tax incomes – income received from the rate reduction and income lost due to closed tax favors – directly in the vote regressions. Inman (1993) presents estimates of the two components. Unfortunately, they are so highly correlated that separate coefficients could not be estimated. They were therefore combined here to form the simple estimate of net benefits as the change in after-tax income, the variable used in the vote regressions. This mismeasurement is likely to bias downward the estimated effects of net economic benefits on vote behavior.

Table 3: Senate Voting to Close Tax Loopholes

$$
\begin{aligned}
V_i^* = {} & -.136 \underset{(.531)}{} + .0021 \Delta y_i \underset{(.0007)^*}{} + .0028 \underset{(.0011)^*}{\Delta SRev} - .0002 \underset{(.0001)^*}{STax} \\
& - .974 \underset{(1.106)}{(\%>68000)} + 1.780 \underset{(1.692)}{(\%Mondale)} + .104 \underset{(.206)}{(Finance)} \\
& + .134 \underset{(.164)}{(Rep)} + .173 \underset{(.009)^*}{\epsilon D1Nom} + .145 \underset{(.096)}{\epsilon D2Nom}
\end{aligned}
$$

N = 100 % Votes Correctly Predicted = 61% $\chi^2(9) = 49.82$

*Asterisk indicates estimated coefficient exceeds its standard error by at least 1.65. Standard errors reported within parentheses.

committee responsible for drafting the Senate's version of reform. Estimation was by weighted least squares using the minimum χ^2 estimator for the logistic specification as suggested in Maddala (1983, p. 29). Table 3 shows senatorial voting was also reponsive to constituent economic gains. Increases in $\underline{\Delta y_s}$ and $\underline{\Delta SRev}$ increased the likelihood of voting for reform while senators from high $\underline{STax}$ states were less likely to support the reform process.

While net economic benefits from reform are statistically significant determinants of legislators voting behavior on TRA 86, are they also politically significant? For three reasons the answer appears to be yes.

First, the levels and distribution of economic gains and losses contained in TRA 86 are large enough to move the votes of those "on the fence" from the one side of the ledger to the other. For a typical House member uninfluenced by the the President's lobbying (RepV2 = 0), an \$156 (1 s.d.) increase in $\underline{\Delta y_H}$ or an \$102 (1 s.d.) increase in $\underline{\Delta SRev}$ increases the probability of a favorable (rule) vote for reform by .082 or by .097 respectively.[41] Similarly, a senator's likelihood of voting for (tax loophole closing) reform increases by .083 for a (1 s.d.) increase $\underline{\Delta y_s}$ of \$158 or by .071 for a (1 s.d.) increase in $\underline{\Delta SRev}$ of \$102. Further, senators from states without sales taxation are .081 more likely to vote for reform than senators from a state whose typical family pays the sample's average level of sales taxation (= \$1623/family).

Second, enough legislators were on the fence that a significantly smaller tax reform might not have passed. Using the estimated equation in Table 3, simulations of Senate voting where $\underline{\Delta y_s}$ and $\underline{\Delta SRev}$ were scaled by factors of .75, .5, .25, and then .1 – holding all other variables constant at actual values for each Senator – showed the expected share of "yes" votes to close a tax loophole declining from

[41] The marginal effects on voting for reform of extra residents' income, extra revenues for state governments, and the lack of state sales taxation were computed using an approximation for the logistic specification originally suggested by Amemiya; see Maddala (1983, p. 23). Marginal effects are estimated as .25 X the logistic coefficient X ΔIndependent variable – for example, for the a \$156 increase in $\underline{\Delta y_H}$ the change in the vote probability is estimated as .25 X .0021 X 156 = .082.

.59 under the actual net benefits of TRA 86 to .57 when benefits fall to 75% of original benefits, to .52 when net benefits fall by 50%, to .40 when benefits fall to 25%, and finally to .31 when benefits are only 10% of actual TRA 86 benefits. Similar simulations for the House using Table 2's estimates for the first rules vote -- before presidential intervention -- also shows legislators' support for reform shrinking as the scale of reform declines, though not as sharply as in the Senate. In the House, .48 of the members supported full-scale reform on the first rules vote, but a smaller reform only 10% the size of the original is estimated to receive the support of .42 of the members.

Third, presidential intervention was crucial to the passage of TRA 86, particularly in overcoming strong conservative opposition in the the House. What made tax reform attractive to President Reagan was its potential size, the fact that top personal rates could be reduced to .35 or lower; Murray and Birnbaum (pp. 94-95).

In the end, Reagan's insistence on broad-based, major reform backed by the veto threat had two important political consequences. It neutralized conservatives in the House and got reform into the Senate, and it generated enough economic benefits for Senators to find voting for reform attractive.

D. Step 4: Presidential Rewards from TRA 86

Having played a central role in the passage of TRA 86, did President Reagan reap any net claimable benefits (CNB) for the effort? Certainly the popular press supported the reform outcome, as did a significant fraction of surveyed voters.[42] Ultimately, however, politicans are interested in votes. The best continuous indicator of the president's popularity with voters is the monthly Gallup Poll of the president's overall approval and disapproval ratings; see Brody (1991). Table 4 presents estimates of the

[42] See editorials in the New York Times (October 22, 1986) and the Wall Street Journal (October 23, 1986). A Gallup poll conducted in the first two weeks of September, 1986 found that 39% of the voters approved of TRA 86, 33% disapproved, and 28% had no opinion. On the dimensions of personal tax payments, fairness, simplicity, and economic growth, significantly more citizens favored the bill than opposed. Support was strongest (49% approval) from the lower middle income households earning $15,000 to $24,999 per year.

Table 4: Reagan's Approval and Fiscal Policy Initiatives

(January, 1981 to September, 1988)

	Overall Approval	Overall Disapproval	Overall Approval	Overall Disapproval
constant	9.903 (4.417)*	-4.247 (3.427)	9.997 (4.593)*	-4.264 (3.588)
$OverApp_{-1}$	.759 (.085)*	--	.759 (.008)*	--
$OverDis_{-1}$	--	.749 (.087)*	--	.748 (.085)*
$ForApp_{-1}$	.121 (.074)*	--	.121 (.084)	--
$ForDis_{-1}$	--	.198 (.077)*	--	.197 (.080)*
UE_{-1}	-.404 (.293)	.808 (.396)*	-.408 (.306)	.819 (.412)*
π_{-1}	-112.79 (114.54)	246.71 (117.42)*	-110.03 (119.91)	245.63 (112.79)*
TRA 86	4.786 (1.952)*	-4.606 (2.023)*	4.793 (1.989)*	-4.619 (2.060)*
ERTA 81	--	--	.274 (2.045)	-.321 (2.202)
TEA 82	--	--	-.021 (3.501)	-.367 (3.607)
SS 83	--	--	.194 (3.451)	-.409 (3.536)
R^2	.824	.845	.817	.839
Durbin's alternative h	.088	-.495	.091	-.506

*Estimated coefficient exceeds its standard error by at least 1.65. Standard errors reported within parentheses.

effects of Reagan's contributions to the passage of TRA 86 on his monthly ratings.

Two specifications are estimated. The first specifies the president's monthly overall approval (disapproval) rating as a function of overall approval (disapproval) lagged one-month (OverApp $_{-1}$ or OverDis $_{-1}$); approval (disapproval) of the president's handling of foreign affairs, again lagged one month (ForApp $_{-1}$ or ForDis $_{-1}$); the national monthly unemployment rate lagged one month (UE $_{-1}$); the monthly inflation rate lagged one month (Π_{-1}); and a dummy variable (TRA 86) equal to 1 for that month just following the date of a key presidential contribution to TRA 86, 0 otherwise. The three dates of presidential intervention chosen for TRA 86 are the May 28, 1985 (the presidential speech introducing the Reagan reform proposal; June, 1985 = 1), December 16, 1985 (the presidential veto promise to House Republicans; January, 1986 = 1), and October 22, 1986 (Reagan signs TRA 86; November, 1986 = 1).

A second specification also includes dummy variables for the key dates of other important fiscal policies where Reagan assumed a political role: ERTA 81 for the three key dates (announcement, winning the support of a splinter Democratic coalition; and signing) in the passage of the Economic Recovery Tax Act of 1981; TEA 82 for the signing date of the Tax Equity and Fiscal Responsibility Act of 1982; and SS 83 for the signing date of the Social Security Act Amendments of 1983. While each of these policies received press exposure at the event dates comparable to that for TRA 86, in contrast to TRA 86 the coverage was not uniformly favorable. ERTA 81, TEA 82, and SS 83 provide a control for the pure "announcement" effect of policies on presidential popularity -- i.e., "any publicity is good publicity as long as they spell your name right."

The approval and disapproval equations of Table 6 were estimated by GLS allowing for possible error term interdependencies across the two equations; the low values of the Durbin alternative h statistic

do not reject the null hypothesis of no serial correlation of the errors.[43] Lagged overall approval (disapproval), lagged foreign approval (disapproval), and good (bad) economic news have the expected positive effects on overall presidential approval (disapproval).

Central to the analysis here is the fact that the key events dates associated with TRA 86 -- each of which was extensively and favorably reported in the press -- had an average "impact effect" on presidential approval of 4.8 percentage points. This gain in popularity is matched by an approximately equal average decline in presidential disapproval. Further, the other widely covered fiscal events of the Reagan presidency were never significant, suggesting that TRA 86's effects on approval ratings were related to the substance of the policy change, not just its publicity.[44]

These estimated effects of TRA 86 on Reagan's overall popularity are statistically significant and, in close elections, important politically. A 4.8% popularity gain is worth about five additional House seats for the president's party (Lewis-Beck and Rice (1984) and Marra and Ostrom (1989)), is enough to tip close (51% vs. 49%) governors races to the president's party (Simon (1989)), and sufficient improve the president's future success rate in congress by about 2 winning votes for every 100 positions that he favors (Ostrom and Simon (1985)). Timing is important, however. In the "what-have-you-done-for-me-lately" world of U.S. politics, the popularity gained from events such as TRA 86 depreciates from month to month. The estimates in Table 4 suggest that each percentage point gain in one month's popularity is worth only .759 percentage points one month latter. After one year, the popularity advantage of the event is effectively lost ($.759^{12} = .04$).

On balance, we can conclude that Reagan did gain political credit for his role in the passage of

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[43] The inclusion of a lagged dependent variable in the presence of serially correlated errors raises the possibility of simultaneous equation bias for parameter estimates. The low values of the Durbin alternative h statistic -- in effect a t statistic for the significance of one period serial correlation -- means we cannot reject the null hypothesis of no serial correlation. Reduced form estimates of the effect of TRA 86 omitting lagged approval (disapproval) were nearly identical to those reported in Table 4.

[44] See the September, 1986 Gallup poll referenced in footnote 42 above.

TRA 86, but the legislation was not the large and lasting "re-aligning" event that Republicans had hoped it might be.[45] That did not happen, in part because TRA 86 required the willing participation of both Democrats and Republicans in congress, and, as this model assumes for large reforms ($\theta_T(n) > 0$, but $\theta_T'(n) < 0$), they shared in the credit too. Rostenkowski, Packwood, and congress as an institution all gained in the polls following the passage of TRA 86.[46]

E. Summary

It is unlikely that TRA 86 would have succeeded without Reagan's support and influence. First, Reagan's Treasury organized the crucial information about tax expenditures' true costs and benefits and fashioned a tax reform proposal which became the central outline of TRA 86. Second, Reagan used presidential resources to build a veto coalition and offered a clear and enforceable veto target. Together they created a credible veto threat capable of insuring that only a major reform would be forthcoming. The veto threat was crucial, both in getting H.R. 3838 through the House and in controlling the Senate's proclivity to create, not close, tax loopholes. Third, only such a major reform was sufficient to insure that the median voters in a majority of congressional districts -- and states for the Senate -- benefitted economically from reform. Those economic benefits had a statistically significant effect on members' voting behaviors, and in the case of Senate voting for reform, were the difference between winning and losing.

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[45] At the time of its passage, Republicans had hoped the legacy of lower rates from the Reagan presidency would prompt a "massive political realignment . . . that will endure for the remainder of the century." Wall Street Journal, August 18, 1986, "Reagan, Rosty, and Packwood Star, While Other Pols Vie for Spotlight."

[46] See "Reservations About a New Bill," Newsweek, September 1, 1986 and "Claiming the Credit in 1988" New York Times, October 23, 1986. More generally, the quarterly ABC News Polls bracketing the passage of TRA 86 show a 4 % gain in the number of respondents who have "a great deal" or "quite alot" of confidence in Congress as an institution, rising from 41% on July 14, 1986 to 45% on October 27, 1986; there was a corresponding decline in the cohort with "some" confidence. See Patterson and Magleby (1992). TRA 86 was the only important legislative event during this period.

Finally, the analysis revealed politically claimable net benefits from the reform process. While perhaps not sufficient to re-align American politics, the presidential popularity gains from TRA 86 were large enough to influence congressional and gubernatorial races and subsequent congressional votes. There are political gains from improved fiscal policies -- if only such policies can be adopted.

IV. Conclusion

In the U.S. federal government, and in most of our state and local governments, legislatures have all the formal powers to tax and spend. The recent political economy literature has rightly sought to understand how such legislatures set our budgets. Yet on occasion -- important occasions -- presidents, governors, and mayors have shifted legislative budgets in significant new directions. This paper has sought to clarify the incentives for fiscal policy-making in decentralized legislatures and the important role the executive can play in shaping improved fiscal allocations. While the model captures important intuitions about presidential leadership generally and, more specifically, offers a good description of one of Reagan's most important policy successes, several extensions of this research are worth pursuing.

First, though the model extends the analysis of the veto-only models of Carter and Schap (1990) and Ingberman and Yao (1991) by giving the president resources for coalition building, those resources are taken as exogenous in the model. Presidential resources are found within the executive's discretion to set the final allocations of vaguely worded congressional regulations and appropriations; see Moe and Wilson (1993). An abuse of this discretionary power, however, may lead congress to tighten mandates thereby endogenizing presidential resources; see, for example, Weingast and Moran (1983). The president is therefore constrained in his use of presidential resources. The sources and consequences of this constraint should be considered formally. Solving congressional collective action problems and sharing the political credit for doing so -- as Reagan did in TRA 86 -- is perhaps one way of easing the constraint. If so, the constraint becomes endogenous to the reform game.

Second, the costs K to the president of violating his veto threat were assumed to be common knowledge to all players. In fact, K depends upon the president's future agenda and thus may not be observable by congress. If so, the likelihood of a presidential veto becomes uncertain to the congress. Matthews (1989) has developed a model of veto behavior in this case and his work offers an important extension of the analysis here.

Third, the model assumes the decentralized legislature determines the distribution of the proceeds from presidential reforms. The chosen distribution will affect the value of the "outside option" to members of the president's reform coalition and thus the costs of coalition building and the size of the president's claimable net benefits (CNB) from reform.[47] It is likely, therefore, that the president has a direct preference for the distribution of the proceeds of reform. Further, CNB's may depend directly upon the distribution of reform dollars if voters have preferences for fairness. If so the president will seek to influence the reform's distribution, but so too will congress. How then is this distribution determined?

Finally, the empirical analysis here is only one case study. While it illustrates that key elements of the model were at work in shaping TRA 86, one case study does not test a model. Additional attempts at presidential reform should also be examined. Besides tax policy, other budgets areas of significance where localized benefits are important include defense spending, state and local grants, agricultural policy, water projects and environmental regulation. Particular attention should be given to instances where the president sought fiscal reform but failed -- for example, Carter's efforts at major tax reform in 1978 (see Kantowicz, 1985). In addition to such case analyses, the model has very explicit predictions about government spending and taxation when legislatures are decentralized and presidents have resources and credibly use the veto threat. Specifically, spending on particularistic public goods

[47] The implications of alternative distributions for the model are considered in footnotes 10, 17, 18, and 19 above.

should decline. Such predictions have been tentatively confirmed in the U.S. historical record; see Inman and Fitts (1990). Extending that analysis to state and local budgets -- where veto powers, executive terms of office, and political resources differ across observations -- also seems a promising direction for additional empirical research.

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PRESIDENTIAL LEADERSHIP AND THE REFORM OF FISCAL POLICY:

Learning from Reagan's Role in TRA 86

DATA APPENDIX

Table 2: House Voting on the Rules for H.R. 3838

Dependent Variable:

Yes for Rules Vote: The first 424 observations represent member voting on House Resolution 336 with votes for (or "announced for") the resolution for a closed rule consideration of HR 3838 recorded as Yes = 1, while votes against (or "announced against") recorded as No = 0. The second 424 observations represent the same members voting on House Resolution 343 with votes for (or "announced for") the resolution for a closed rule consideration of HR 3838 recorded as a Yes = 1, while votes against (or "announced against") recoreded as No = 0. Members who did not vote, or announce a position, on both rule votes were excluded. Mean = .54; Standard Deviation = .49.

Independent Variables:

Δy_H: Increase ($\Delta y_H > 0$) or reduction ($\Delta y_H < 0$) in the after-tax incomes (y) due to the House version of HR 3838 for an "average" family with the median pre-tax income in the congressional district. Δy_H for the average family is calculated as the weighted average of Δy_H for itemizers and nonitemizers with the district's median pre-tax income, using the percent of itemizers at district's median income as the weight. All values of Δy_H are evaluated at 1988 incomes and allow for adjustments in state income tax payments in those states which use the federal tax base as the base for state income tax payments. Mean = $53.71; Standard Deviation = $155.73.

ΔSRev: The NASBO/NCSL estimated increase in the district's state government tax revenues per family for FY 1988 because of the effects of TRA 86 on the state income tax bases. Mean = $101.66; Standard Deviation = $101.78.

% > 68000: Percent of families in the congressional district with pre-tax family incomes greater than or equal to $68,000. Estimated under the assumption that the income in each district is distributed as a log-normal distribution ands using actual district mean and median family incomes. Mean = .146; Standard Deviation = .096.

%Mondale: Percent of registered voters in the congressional district who voted for Walter Mondale in the 1984 presidential election. Mean = .315; Standard Deviation = .099.

W&M: Dummy variable assuming the value = 1 if the congressional district is represented by a member on the House Ways and Means Committee, 0 otherwise. Mean = .08;

Standard Deviation = .28.

Rep: Dummy variable assuming the value = 1 if the congressional district is represented by a Republican, 0 otherwise. Mean = .42; Standard Deviation = .49.

ϵD1(2)Nom: Standardized value of the residual from an estimated regression of the representative's NOMINATE1 (NOMINATE2) score for the xxx Congress regressed against political party and district constituent interest variables. NOMINATE1 AND NOMINATE2 are described in Poole and Rosenthal (1991) and used here as summary measures of each representative's voting behavior over economic (NOMINATE1) and social (NOMINATE2) issues. If the district's representative had not served in the xxx Congress, the predecessor's NOMINATE scores were used. Constituent interest and political party variables used to explain NOMINATE1 and NOMINATE2 are median family income in the district (I) and family income x member's party affiliation in district (I x Republican); percent of district population over 54 years of age (% $\geq$54) and % $\geq$54 x Republican; % of district workers employed in manufacturing (%Man) and %Man x Republican; and % of district registered voters voting for Mondale (%Mondale) and %Mondale x Republican. The adjusted R^2 for these regressions are .62 for the NOMINATE1 regression and .28 for the NOMINATE2 regression. For both ϵD1Nom and ϵD2Nom: Mean = .00; Standard Deviation = 1.00.

To correct for possible simultaneous equation bias when ϵD1Nom and ϵD2Nom are included in the vote regressions, instrumental variables estimation was used using the quartile ranking of the observation's value of ϵD1Nom or ϵD2Nom as the instrument.

RepV2: Dummy variable assigned the value = 1 for all Republican representatives voting on the second House rule vote (House Resolution 343), 0 otherwise. Mean = .21; Standard Deviation = .41.

Table 3: Senate Voting to Close Tax Loopholes

Dependent Variable:

Yes to Close
Tax Loopholes: Yes to Close Tax Loopholes is specified as the Log(p/1-p), where p the percent of all Senate votes for which the senator voted in opposition to expanding a deduction, credit or transition rule. Votes in opposition (or positions recorded as "announced against") to these expansionary amendments are recorded as a 1, while votes in favor of these amendments (positions recorded as "announced for") are recorded as a 0. When a senator did not vote on a particular amendment that amendment was excluded in calculating the senator's value of Yes to Close Tax Loopholes. Individual Senate votes included in Yes to Close Tax Loopholes are:

S 125: Motion to table (kill) the D'Amato amendment to create a 15% tax credit for IRA contributions; revenue loss to be offset with an increase in corporate and individual minimum tax rate. Motion agreed: 51-48. A vote for the motion is a vote against the tax expenditure; "yes" = 1, "no" = 0.

S 126: Motion to table (kill) the Baucus amendment to create a 15% tax credit for IRA contributions; revenue loss to be offset with a decrease in the personal exemption for itemizers. Motion agreed: 76-21. A vote for the motion is a vote against the tax expenditure; "yes" = 1, "no" = 0.

S 127: Motion to table (kill) the Dixon amendment to create a 15% tax credit for IRA contributions; revenue loss to be offset with a floor on itemized deductions of 1% of AGI. Motion agreed: 78-18. A vote for the motion is a vote against the tax expenditure; "yes" = 1, "no" = 0.

S 128: Motion to table (kill) the Weicher amendment to disallow passive losses from oil and gas investments in the same way that other types of tax shelters are disallowed in the bill as proposed by the Finance committee. Motion agreed: 77-20. A vote against the motion is a vote in favor of closing a tax expenditure; "yes" = 0, "no" = 1.

S 130: Motion to table (kill) Kasten amendment to allow deductions for charitable contributions by taxpayers who do not itemize; revenue loss to be offset by reducing the threshold for phasing out the personal exemption. Motion agreed: 51-44. A vote for the motion is a vote against the tax expenditure; "yes" = 1, "no" = 0.

S 131: Motion to table (kill) Metzenbaum amendment to eliminate provision allowing Unocal to claim foreign tax credit on interest paid. Motion rejected: 33-66. A vote against the motion is a vote against the tax expenditure; "yes" = 0, "no" = 1. (Metzenbaum amendment approved by voice vote.)

S 132: Motion to table (kill) the Metzenbaum amendment to eliminate a transition rule exemption for Phillips Petroleum for a 10% tax on funds withdrawn from pension plan; additional revenues to be used to allow farmers to continue to income average. Motion agreed: 73-14. A vote against the motion is a vote in favor of closing a tax expenditure; "yes" = 0, "no" = 1.

S 133: Motion to table (kill) the Metzenbaum amendment to eliminate a provision in the bill to permit eight limited partners in Cimarron Coal to continue to pay capital gains tax at the then current rate of 20% on sales of royalities from a 1985 lease. Motion agreed: 68-31. A vote against the motion is a vote in favor of closing a tax expenditure; "yes" = 0, "no" = 1.

S 135: Motion to table (kill) Trible amendment to retain current tax law treatment of some public employee pension plans permitting tax free return on own contributions. Motion agreed: 57-42. A vote for the motion is a vote against the tax expenditure; "yes" = 1, "no" = 0.

S 136: Motion to table (kill) the Pryor amendment to delete a section of the bill permitting steel companies to carry back 50 percent of unused investment tax credits for 15 years instead of the current 3 years, thereby receiving refunds on taxes paid in earlier years. Motion agreed: 65-29. A vote against the motion is a vote in favor of closing a tax expenditure; "yes" = 0, "no" = 1.

S 139: Motion to table (kill) Melcher amendment to retain current tax law treatment of capital gains for farmers and owners of small woodlots and to add foreign-earned income of US firms as a tax preference item when calculating corporate minimum tax. Motion agreed: 63-32. A vote for the motion is a vote against the tax expenditure; "yes" = 1, "no" = 0.

S 140: To confirm the Finance committee's treatment of ESOP provisions. Adopted: 99-0. A vote for the motion is a vote for the Finance committee bill against tax expenditures; "yes" = 1, "no" = 0.

S 142: Motion to table (kill) the Harkin amendment to adjust the value of a farm or small business to keep pace with inflation, up to $500,000; revenue loss to be offset with an excise tax on mergers of large corporations. Motion agreed: 60-35. A vote for the motion is a vote against the tax expenditure; "yes" = 1, "no" = 0.

S 146: Motion to table (kill) the Melcher motion to waive revenue neutrality requirement contained in the Congressional Budget and Impoundment Control Act with respect to the following Melcher amendment to restore a 30% capital gains exclusion for farmers, ranchers, and small woodlot owners. Motion agreed: 54-39. A vote for the motion is a vote against the tax expenditure; "yes" = 1, "no" = 0.

S 148: Passage of the bill as amended. Passed: 97-3. A vote for the bill is a vote for tax reform; "yes" = 1, "no" = 0.

Mean of p = .60; Standard Deviation of p = .49.

Independent Variables:

Δy_s: Increase ($\Delta y_s > 0$) or reduction ($\Delta y_s < 0$) in the after-tax incomes (y) due to the Senate amended version of HR 3838 for an "average" family with the median pre-tax income in the state. Δy_s for the average family is calculated as the weighted average of Δy_s for itemizers and nonitemizers with the state's median pre-tax income, using the percent of itemizers at the state's median income as the weight. All values of Δy_s are evaluated at 1988 incomes and allow for adjustments in state income tax payments in those states which use the federal tax base as the base for state income tax payments. Mean = $56.47; Standard Deviation = $158.33.

ΔSRev: The NASBO/NCSL estimated increase in the state government's tax revenues per family for FY 1988 because of the effects of TRA 86 on the state income tax bases. Mean = $84.43; Standard Deviation = $101.80.

STax: State and local sales taxes per family in the state for the FY 1985. Mean = $1623; Standard Deviation = $542.

% > 68000: Percent of families in the state with pre-tax family incomes greater than or equal to $68,000. Estimated from the 1980 Census of Population figures on income distribution by state. Mean = .099; Standard Deviation = .087.

%Mondale: Percent of registered voters in the state who voted for Walter Mondale in the 1984 presidential election. Mean = .281; Standard Deviation = .050.

Finance: Dummy variable assuming the value = 1 if the senator is on the Senate Finance Committee, 0 otherwise. Mean = .20; Standard Deviation = .402.

Rep: Dummy variable assuming the value = 1 if the senator is a Republican, 0 otherwise. Mean = .53; Standard Deviation = .502.

ϵD1(2)Nom: Standardized value of the residual from an estimated regression of the senator's NOMINATE1 (NOMINATE2) score for the xxx Congress regressed against political party and state constituent interest variables. NOMINATE1 AND NOMINATE2 are described in Poole and Rosenthal (1991) and used here as summary measures of each senator's voting behavior over economic (NOMINATE1) and social (NOMINATE2) issues. If the senator had not served in the xxx Congress, the predecessor's NOMINATE scores were used. Constituent interest and political party variables used to explain NOMINATE1 and NOMINATE2 are median family income in the state (I) and family income x senator's party affiliation (I x Republican); percent of state population over 54 years of age (% $\geq$54) and % $\geq$54 x Republican; % of state workers employed in manufacturing (%Man) and %Man x Republican; and % of state registered voters voting for Mondale (%Mondale) and %Mondale x Republican. The adjusted R^2 for these regressions are .70 for the NOMINATE1 regression and .56 for the NOMINATE2 regression. For both ϵD1Nom and ϵD2Nom: Mean = .00; Standard Deviation = 1.00.

To correct for possible simultaneous equation bias when ϵD1Nom and ϵD2Nom are included in the vote regressions, instrumental variables estimation was used using the quartile ranking of each observation's value of ϵD1Nom or ϵD2Nom as the instrument.

Table 4: Reagan's Approval and Fiscal Policy Initiatives

Dependent Variables:

Overall Approval: Reagan's overall approval rating as reported in the monthly Gallup Poll. The approval rating is the percent of respondents who answer "approve" to the question: "Do you approve or disapprove of the way Ronald Reagan is handling his job as president?" Mean = 52.9; Standard Deviation = 7.92.

Overall Disapproval: Reagan's overall disapproval rating as reported in the monthly Gallup Poll. The disapproval rating is the percent of respondents who answer "disapprove" in response to the question: "Do you approve or disapprove of the way Ronald Reagan is handling his job as president?" Mean = 36.7; Standard Deviation = 8.69.

Independent Variables:

$OverApp_{-1}$: Overall approval rating lagged one month. Mean = 52.9; Standard Deviation = 7.91.

$OverDis_{-1}$: Overall disapproval rating lagged one month. Mean = 36.7; Standard Deviation = 8.68.

$ForApp_{-1}$: Foreign policy approval rating for the president lagged one month. The foreign policy approval rating is the percent of respondents who answer "approve" to the question: "Do you approve or disapprove of the way Ronald Reagan is handling foreign affairs?" Mean = 43.06; Standard Deviation = 7.31.

$ForDis_{-1}$: Foreign policy disapproval rating for the president lagged one month. The foreign policy disapproval rating is the percent of respondents who answer "disapprove" to the question: "Do you approve or disapprove of the way Ronald Reagan is handling foreign affairs?" Mean = 41.15; Standard Deviation = 8.65.

UE_{-1}: National monthly unemployment rate lagged one month. Mean = 7.64; Standard Deviation = 1.38.

π_{-1}: National monthly inflation rate lagged one month. Mean = -.003; Standard Deviation = .003.

TRA 86: A dummy variable equal to 1 for the months just following a major presidential intervention supporting the passage of TRA 86, 0 otherwise. Intervention dates are May 28, 1985 (the presidential speech introducing the Reagan reform proposal; June, 1985 = 1); December 16, 1985 (the presidential veto promise to House Republicans; January, 1986 = 1); and October 22, 1986 (Reagan signs TRA 86; November, 1986 = 1).

ERTA 81: A dummy variable equal to 1 for the months just following a major presidential intervention supporting the passage of the Economic Recovery Tax Act of 1981, 0 otherwise. Intervention dates are the announcement of ERTA 81 on February 18, 1981 (March, 1981 = 1), winning support of a splinter Democratic coalition on May 7, 1981 (June, 1981 = 1), and the passage of ERTA 81 on July 29, 1981 (August, 1981 = 1).

TEA 82: A dummy variable equal to 1 for the month just following the signing of the Tax Equity and Fiscal Responsibility Act of 1982 on August 19, 1982, 0 otherwise (September, 1982 = 1).

SS 83: A dummy variable equal to 1 for the month just following the signing of the Social Security Act Amendments of 1983 on April 20, 1983, 0 otherwise (May, 1983 = 1).

Footnote 39: The Incidence of TRA 86

Dependent Variables:

$\Delta y_F/I$: Reduction ($\Delta y_F > 0$) or increase ($\Delta y_F < 0$) in the average rate of tax burdens because of changes in after-tax incomes (y) due to the final version of HR 3838 known as TRA 86 for an "average" family with a pre-tax income of I. Estimates of Δy_F used the NBER TAXSIM caculator and make allowances for changes in personal tax rates and for

changes in personal exemptions, deductions, and exclusions for families who itemize with income I and for changes in personal exemptions, standard deductions, and the deduction of charitable contributions for families who are nonitemizers. Because many states use the federal tax code as the basis for state income tax payments, Δy_F also includes the effects of changes in state taxes paid (evaluated using 1986 state rates) because of changes due to TRA 86. Δy_F for the average family with income I is then calculated as the weighted average of Δy_F for itemizers and nonitemizers with pre-tax income of I, using the percent of itemizers at income level I as the weight. All values of Δy_F are evaluated at 1988 incomes. Estimates of exclusions, deductions, and exemptions under the pre-reform tax code are projections from 1986 pre-reform levels adjusted to 1988 incomes. Finally, $\Delta y_F/I$ is measured as above with allowances for the effects of municipal bond transition rules on personal tax burdens. The increase in Δy_F due to municipal bond transition rules is estimated as the average reduction in state or local interest payments per family because of the continued exemption of the favored bond. Mean = .0018; Standard Deviation = .006.

Independent Variables:

I: Median Pre-tax family income in the congressional district, measured in 10000's. Mean = $3.4041; Standard Deviation = $.8054.

HSen: The number of years the district's representative has served in the House. Mean = 8.22; Standard Deviation = 7.52.

W&M: Dummy variable assuming the value = 1 if the congressional district is represented by a member on the House Ways and Means Committee, 0 otherwise. Mean = .08; Standard Deviation = .28.

Rules: Dummy variable assuming the value = 1 if the congressional district is represented by a member on the House Rules Committee, 0 otherwise. Mean = .03; Standard Deviation = .17.

Conf: Dummy variable assuming the value = 1 if the congressional district is represented by a member on the Conference Committee for TRA 86, 0 otherwise. Mean = .03; Standard Deviation = .16.

Consv: Dummy variable assuming the value = 1 if the congressional district is represented by a member Representative Lott's conservative coalition in opposition to TRA 86, 0 otherwise. Mean = .20; Standard Deviation = .40.

Switch: Dummy variable assuming the value = 1 if the congressional district's representative switched his or her vote on the House Rule for HR 3838 following President Reagan's meeting with Republican representatives. Mean = .16; Standard Deviation = .37.