SELF-IMPOSITION OF PUBLIC OVERSIGHT

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Abstract We argue that policymakers may have self interest in policy restraints through public oversight. Self imposition of public oversight can be beneficial for the policymaker because it may help alleviating the dynamic inconsistency problem that she otherwise faces. In the exhibited setting, self imposed public oversight takes the form of a tax ceiling, which can only be overridden through the legislature's consent. This mechanism is shown to create a valuable credible commitment for the policymaker to future tax restraints, thus inducing larger productive effort.

Keywords Legislative oversight, tax caps, dynamic inconsistency

JEL classification D72, H11

Acknowledgments to be added

1. Introduction

Two main potential deficiencies of government policymaking have been acknowledged in the political economy literature. One, with roots in public choice, embodies the view that government acts upon own interests, which do not in general coincide with those of the public. An important implication of this insight is that the public would be better served by constraining the policymaker.

The second deficiency has to do with dynamic consistency. According to this view, the government has an incentive to shirk from its policy promises; and in anticipation of such, individual actions will not be optimal. The implication of this perspective is the search for rule based policymaking that restrains the government discretion.

While the mechanisms underlying the above deficiencies are very different, their policy implication share in common the element of policymaker's restraint that supposedly may enhance efficiency. Such a restraint can take the broad form of an externally imposed political or a fiscal constitution, which tie policymaker's hands. An important component of such restraints is public oversight – by the legislature or the judiciary, for example - that can affect policymaking by the executive.

A common view of public oversight depicts opposing interests of the overseeing (the legislature or the judiciary) and overseen (the executive policymaker). There is by now a well developed literature, referenced to below, within this paradigm that studies the ensuing interaction from a principal-agent perspective, whereby the public delegates policymaking authority to the executive with potentially non-congruent preferences. The main issue there is how to effectively carry out an oversight of non-congruent policymakers.

In this paper, we argue that, where the policymaker displays non-congruent preferences, and also there is the dynamic consistency issue, she may have self interest in a restraint through public oversight. In other words, we explore whether self imposition of public oversight can be beneficial for the policymaker and find that the answer is often positive. The reason for this is that such oversight may help alleviating the dynamic inconsistency problem that the policymaker otherwise faces.

More specifically, we consider an environment where economic agents expend productive effort in order to generate income. This income is taxed, and the tax revenue is used to provide a public good and to benefit the tax setting policymaker. There is also ex ante uncertainty about the production function of the public good, which is subsequently resolved. We subscribe to the incomplete contracting approach, which makes it impossible to make policy choices contingent on the resolution of this uncertainty. The policymaker is faced with dynamic inconsistency and is unable to fully resolve it through policy commitment – which implies that the individual agents undersupply effort in anticipation of high taxes. In this situation, while letting the individual agents, acting through the legislature, make policy decisions directly may help alleviating the consequences of dynamic inconsistency, it will not best serve the policymaker's self interest, as his objectives are different. In fact, under our assumptions, delegation of policymaking to the legislature is not an equilibrium strategy.

We, however, show that a self imposed tax ceiling, which can only be overridden through individuals' consent, does benefit the policymaker and, therefore, constitutes the equilibrium strategy. Such tax ceilings are commonplace in the US states and municipalities;[1] more generally, limits on taxes or public spending, with override provisions, are often times used at the national level as well. As an extension, we show that this self imposed tax ceiling is an increasing function of the cost of tax avoidance and is a decreasing function of the policymaker's benevolence toward the public: in other words, when tax avoidance is an issue and, separately, more benevolent policymakers are willing to accept a tighter level of public oversight. We also explore an alternative commitment mechanism to restrain taxation, a simple bargaining between the policymaker and the legislature, and study whether it may constitute the equilibrium commitment strategy for the policymaker and under what conditions it can be advantageous relative to public oversight.

Whereas, as discussed below, various institutions that evolved historically, such as the parliament or the extension of voting franchise, have been interpreted by various scholars as having commitment value by tying policymakers' hands, this paper contributes by emphasizing institutional elements of contemporary reality, such as tax ceilings and public oversight, as

[1] Where they feature under the acronym TEL – tax and expenditure limitations.

carrying such a value. This view should prove useful more generally in understanding how the system of checks and balances is presently continuing to evolve.

The reset of the paper proceeds as follows. The next section contains a review of the related literature and provides some institutional details on tax and expenditure limits in the US. Section 3 then describes the baseline analytical framework. The main analytical insights are presented in Section 4, and Section 5 concludes. Some extensions of the chief results are contained in the appendix.

2. Background

Related literature

This paper is related to several separate literatures. The public choice literature following Buchanan and Tullock's, 1962, influential work explores from a normative perspective constitutional restraints on the government, drawing attention to the divergence of interests between the voters and the government. Indeed, the whole idea of checks and balances is based on the understanding of this tension. In this tradition, Romer and Rosenthal, 1978, 1979, for example, present bargaining models between voters and a politician, whose objectives do not completely coincide.

There is much work by political scientists on the legislative control of the executive. Aberbach, 1990, MacDonald, 2010, and McCubbins et al., 1989, are representative of some of the literature. Parts of it, notably, Aberbach, 1990, documents the growing importance of legislative oversight in the US over the post World War II period; Lees, 1977, is a conceptual review of early work; and Pelizzo et al., 2008, contain an illuminating review of institutional frameworks in which legislative oversight takes place. Congleton, 2011b, is a fascinating paper that provides a theoretical explanation for power sharing in municipalities; it is supported by empirical analysis of the evolution of such in seventeenth century New England.

Theoretical contributions, such as Aghion and Bolton, 2003, Alesina et al., 2004, Gersbach, 2009, Hanssen, 2004, Maskin and Tirole, 2004, provide modeling frameworks to explore the interaction between the executive and the overseeing branches of government, such as the

legislature or the judiciary, focusing on other features rather than dynamic inconsistency. Likewise, Besley and Case, 1995, and Peltzman, 1995, explore an alternative mechanism for government (spending) restraints, namely, regular elections, and show that elections serve as a disciplining device. This is complementary to the theory presented in this paper in viewing the executive as a party interested in limitations, albeit for a very much different reason.

Another complementary literature considers decision making rules by the legislature to contain public spending, specifically, supermajority procedures to approve spending growth have been invoked in this context. Dal Bo, 2006, Gradstein, 1999, Messner and Polborn, 2004, are representative papers along these lines. In the presented context, all individuals are identical, and so procedural details of preference aggregation is not an issue here.

This paper's specific contribution is most closely related to the line of work initiated through the seminal contribution North and Weingast, 1989. In it, the authors provide a careful account of the evolution of British parliamentary powers. They interpret the root cause of this evolution in the King's interest in creating commitment to restrain expropriation as a resolution of dynamic inconsistency; Congleton, 2011a, extends this line of inquiry. Further work along these lines has provided some additional historical examples, such as in the context of Greek democracy, in Fleck and Hanssen, 2006; in the context of British Acts to extend voting franchise, in Gradstein 2007; and in the context of the evolving role of the British parliament in late nineteenth-early twentieth centuries. Additional theoretical work on strategic delegation in additional various contexts is represented in Jack and Lagunoff, 2006, and Harstad, 2010.

The value added of this paper relative to the above literature is in interpreting the legislative oversight as a willing commitment on the part of the executive to restrain taxation. With this objective in mind, we focus on a tax ceiling, exceeding which requires legislature's approval, as a specific institutional feature of interest. This feature better corresponds to contemporary reality than historically important emergence of the parliament and the evolution of its functions, or voting franchise extensions. We interpret this institutional feature as, at least in part, resulting from policymakers' self interest in creating a credible commitment. This paper is the first to explore the implications of this feature as the means to impose self restraint in public spending.

Institutional details

Before proceeding with the formal model, we briefly discuss institutional arrangements toward limiting the size of government in the US. In particular, tax and expenditure limitations (TELs) are rules that attempt to restrain the growth of government, and currently almost all states have some form of TEL in place, see Krol, 2007, and Mullins and Wallin, 2004. These limitations come in different shapes and forms. Explicit tax limits, the specific example used as an illustration here, is just one case in point. Budget balanced rules, debt limits, and various political restraints fall in the same category. Historically, while some forms of limits were used as early as nineteenth century, their use intensified more recently, particularly since 1970s. It is important to note that this tendency took place in the aftermath of a substantial increase in the size of state and local governments, presumably as a consequence of rapid economic growth (Krol, 2007). Brooks et al., 2016, find that about one in eight US cities has some kind of self imposed spending limits. The general consensus from a bulk of studies (well summarized in Brooks et al., 2016) is that such limits have had success in restraining the growth of government. We lack detailed information as to the extent to which the initiative for such limits comes from the executive branch as opposed to the citizens themselves. Anecdotal evidence (see e.g., the path breaking California's proposition 13) suggests that in many cases they are due to the pressures, direct or indirect, by the citizens. Yet, prominent recent examples of tax caps initiated by the executive include Governor Cuomo of New York and Governor Christie of New Jersey. Cf., "The tax cap has succeeded in taming out-of-control property tax increases throughout this state and it must be extended to ensure property taxpayers continue to be protected from the crushing burden of skyrocketing tax increases. I urge the Legislature to act this session to keep the cap and continue the progress we have made to deliver tax relief to all New Yorkers." (Governor Andrew Cuomo, NY State press release, July 2015). In many other cases, some form of bargaining between the legislature and the executive resulted in the adoption of tax caps or spending limits.

While we use tax limitations as an example, this paper's main idea is obviously applicable to other forms of limits on government spending, such as debt ceilings, for example. In this regard, it is instructive to note that the debt ceiling in the US was first instituted in 1917, in response to the growth of spending in the context of World War I efforts. This resulted in the national debt reaching the then record in 1917 and was the background for the debt ceiling legislation.

3. Basic framework

Model

Consider an economy populated with a measure one of identical individuals in the unit interval, indexed i, represented through a legislature, and a political leader, referred to as a policymaker. The individuals expend productive effort, e_i, that is associated with a convex cost, say, $e_i^2/2$.[2] Gross income is equivalent to the effort, and it is taxed at the endogenous rate of T, $0 \leq T \leq T_{max} < 1$, where T_{max} is assumed to exceed ½ . A fraction of tax revenue $T \int e_j \, dj$ is devoted to public spending, and the complementary fraction constitutes the policymaker's rent; we let (1-γ) and γ, $0<\gamma<1$, denote the former and the latter fractions, respectively. We assume for now an exogenous γ and think of it as a maximal feasible rent fraction. Public spending, $(1-\gamma) T \int e_j \, dj$, generates valuable public goods, G, via a linear production function:

$$G = A(1-\gamma) T \int e_j \, dj \qquad (1)$$

where A is ex ante distributed in the interval $[0, \infty)$ according to the cdf F, with the expected value of $\bar{A}$. Thus, A is interpreted here as the productivity parameter, which randomly fluctuates. An equally plausible and analytically equivalent interpretation of A would be as a taste parameter for public spending – which could be random because of unforeseen circumstances, such as the need or lack thereof for military expenses.

All individuals derive utility from private consumption whose amount is determined by net income; the public good; and disutility from effort. We then write:

$$U_i = (1-T) e_i + G - e_i^2/2 \qquad (2)$$

The policymaker's utility is derived solely from the rent, for now; and we write:

$$V = \gamma T \int e_j \, dj \qquad (3)$$

[2] This is subsequently extended to explore, in addition, the issue of tax evasion. In the appendix, we show how the analysis can be generalized to the case of individuals differing with respect to the effort costs.

We stipulate the policymaker's preferences as starkly different from the individuals' merely for illustrative purposes, and later on this assumption is modified. As will become clear from the ensuing analysis, all that is ultimately needed for our argument is that the policymaker's preferred tax rate exceeds the one favored by the public.

The decision making sequence in this basic variation is as follows. First, the productivity parameter A is realized, and the individuals choose efforts; then, the policymaker selects a tax rate. We will be interested in subgame perfect equilibria. Before proceeding with the analysis, we pause to note that the model is deliberately very simple for illustrative purposes. Some of the simplifying assumptions are further relaxed in the appendix in order to show possible extensions.

Preliminary considerations

Suppose as a benchmark that the policymaker first sets the tax rate; then the individuals choose their efforts, and the productivity parameter A is realized; and private and public consumptions materialize. Thus, contrary to the main analysis we assume for a moment that commitment to a tax rate is possible. We conduct the equilibrium analysis backwards. The amount of effort that maximizes individual utility is[3]

$$e_i = 1 - T$$

Anticipating this, the policymaker sets the tax rate to maximize own utility, and the resulting tax rate is $T = ½$. It then follows that the identical effort level is $e_i = ½$; and the resulting policymaker's utility level is $\gamma/4$.

In contrast, when the tax rate is chosen at the last stage, after the effort decisions have been made, then $T = T_{max}$. Anticipating this, the equilibrium effort levels are

$$e_i = 1 - T_{max}$$

Substitution yields the resulting policymaker's utility as

[3] Because there is a continuum of individuals, the effect of each individual's effort on the aggregate amount of the public good in equation (1) is nil.

$$V = \gamma\, T_{max}(1 - T_{max}) \qquad (4)$$

which decreases in T_{max} in the relevant range (recall that $T_{max} > 1/2$), and is in any case smaller than the utility level of $\gamma/4$ obtained under the commitment to the tax rate.

This illustrates that, when commitment to the desired ex ante tax rate of ½ cannot be made, the equilibrium outcome is detrimental for the policymaker.

4. Public oversight

The above presented analysis shows that commitment to a restraint on the tax rate could well be in the best interest of the policymaker himself. In this section, we exhibit a mechanism to attain a modicum of such a commitment. The first potential possibility we explore is to fully delegate policymaking to the individuals themselves, as represented in the legislature.

Suppose, therefore, that in the last stage the legislature determines the tax rate, for example, through majority voting.[4] Then the preferred tax rate for individual i is given by:

$$-e_i + A(1-\gamma) \int e_j\, dj > 0,\ T = T_{max};\ \text{and}\ -e_i + A(1-\gamma) \int e_j\, dj < 0,\ T = 0 \qquad (5)$$

As the individuals will make identical effort choices, this can be alternatively rewritten as:

$$T = T_{max} \text{ if } A > 1/(1-\gamma);\ T = 0 \text{ if } A < 1/(1-\gamma) \qquad (6)$$

Note that these preferred tax rates are identical across all individuals, hence, constitute the legislature's choice. The corresponding identical effort levels then are:

$$e = 1 - E(T) = 1 - T_{max}\,[1 - F(1/(1-\gamma))] \qquad (7)$$

where "E" will refer henceforth to the expectation operator.

Substituting these values, the policymaker's expected utility level is

$$E(V) = \gamma\,\{1 - T_{max}\,[1 - F(1/(1-\gamma))]\}\, T_{max}\,[1 - F(1/(1-\gamma))] \qquad (8)$$

[4] As the individuals are identical, the details of collective decision making are immaterial.

This is smaller than the utility level obtained when the policymaker himself makes tax decisions whenever

$$\{1 - T_{max}\,[1-F(1/(1-\gamma))]\}[1 - F(1/(1-\gamma))] < 1- T_{max} \qquad (9)$$

or when $-1 + [2- F(1/(1-\gamma))]T_{max} < 0$; this is, in particular, always the case if γ is large enough (and/or T_{max} is sufficiently close to ½).

The following proposition summarizes this part of the analysis:

Proposition 1. When considering whether to delegate policymaking to the legislature, the policymaker faces a tradeoff between inducing larger efforts and smaller than desired tax rate. When the fraction of the rent is high enough, delegating is inferior to the policymaker keeping the right to make tax decisions.

Assuming that (9) holds, it then follows that the policymaker, when faced with the option to delegate tax decision making to the legislature prefers not to do so.

We then proceed to consider our main mechanism for the policymaker to commit not to increase taxes ex post, by creating public oversight. Suppose that the policymaker stipulates a tax rate, say T*, such that any tax rate in excess of it required public approval through legislature, whereas any tax rate below T* can be implemented at policymaker's discretion; it will be referred to as a tax ceiling or a tax cap. Then the individuals choose effort levels; A gets realized; the policymaker then can freely set $T<T^*$, or submit a tax proposal $T>T^*$ for the legislature's approval. If it gets approved, it is implemented, or else T* prevails. We will again explore the resulting subgame perfect equilibrium.

Tax caps on various income sources and or public spending limits are prevalent at the state (most of the states have such limits) and local levels in the US, and their statutory changes, sometimes initiated by taxpayers or, alternatively, by governors or mayors, have to be approved by the respective legislatures.[5] While no corresponding institution formally exists at the federal

[5] For instance, local property taxes are often caped at two percent, and increases require legislative procedures; see Mullins and Wallin, 2004, for a review.

level, the system of vetoes and overrides ensures that the ultimate decision on tax changes is proposed by the government, but has to be approved by the legislature, specifically, by the House of Representatives.

Proceeding backwards, in the last stage, the policymaker would like to implement as high a tax rate as possible, subject to the legislature's approval. It follows from the analysis in the previous section that when $A>1/(1-\gamma)$, then $T= T_{max}$ will be approved. In contrast, when $A<1/(1-\gamma)$, the legislature is interested in T=0, so that the best the policymaker can do is to set $T=T^*$ - for which no approval is needed.[6] It then follows that $E(T) = FT^* + T_{max}(1-F)$, where for notational brevity $F = F(1/(1-\gamma))$. For future reference, we note that $dE(T)/dF = T^*- T_{max}<0$, which implies that a leftward shift in the distribution of A (in the sense of first order stochastic dominance) reduces the expected tax rate.

In anticipation of such, the individuals select effort; the equilibrium choice is

$$e = 1 – E(T) = 1 – [FT^* + T_{max}(1-F)] \quad (10)$$

We can then calculate the policymaker's expected utility:

$$E(V) = \gamma e\, E(T) = \gamma[1-E(T)]\, E(T) \quad (11)$$

Taking its derivative with respect to the tax threshold T^* we obtain the first order condition:

$$dE(V)/dT^* = \gamma[1-2E(T)]dE(T)/dT^* = 0 \quad (12)$$

where $dE(T)/dT^* = F > 0$. It then follows that the equilibrium level of T^* is given by:

$$1-2E(T) = 1 – 2[FT^* + T_{max}(1-F)] = 0$$

or,

$$T^* = [1 – 2\, T_{max}\, (1-F)]/2F \quad (13)$$

In particular, note that, since $T_{max} > ½$ by assumption, it then follows that $T^* < ½$. Moreover, differentiation reveals that $dT^*/dF > 0$, implying that when the distribution of A is shifted leftwards

[6] In presenting this argument we employ the fact that all individual are ex ante identical, hence, will be identical ex post.

in the sense of first order stochastic dominance, then the equilibrium tax threshold becomes larger, limiting public oversight. In contrast, when the distribution of A is shifted leftwards, or when the taste for public spending increases, then the equilibrium tax threshold becomes smaller, enhancing public oversight. This is done by the policymaker in order to equilibrate E(T) to its optimal level. Further,

$$dT^*/d\gamma = (dT^*/dF)(dF/d\gamma) > 0$$

implying that the larger the fraction of the rent the larger is the tax threshold below which the policymaker has the freedom to act without public oversight. Additionally, it should be clear that the outcome obtained here is advantageous for the policymaker relative to the situation where he alone determines policy. That is because dynamic inconsistency is somewhat alleviated under public oversight. This is when the realization of A is small and, hence, the legislature is interested in a low tax rate – which constitutes a check on the policymaker's ability to increase the ex post tax rate to its maximal level.

Summarizing thus far,

Proposition 2. In equilibrium, the policymaker favors public oversight by the legislature in conjunction with a tax cap whose override requires the legislature's approval, as the means to restrain future taxes. This is, in particular, advantageous when the realization of the productivity parameter is small, in which case the legislature favors low taxes.

Note that for this main result to hold, doing just one of the following: delegating to the legislature or setting a tax cap, is not sufficient. The policymaker has to do both in order to create a credible commitment and at least partly alleviate dynamic inconsistency.

In the remainder of this section we consider some extensions of the baseline analysis.

Tax avoidance

We here extend the above model in by considering another margin, beyond effort shirking, which may impact the extend of public oversight, namely tax avoidance. In doing so, we build upon Feldstein's, 1999, important contribution, with a few differences. One is that Feldstein's is a normative analysis, whereas ours is positive. Another, more important, difference is that in Feldstein's commitment to taxes is possible, whereas here it is ruled out. This introduces dynamic consistency issues that are absent in Feldstein's framework.

Suppose, therefore, that in addition to the effort decision, the individuals also determine how much of earned income to evade, a_i. As gross income is equivalent to effort, reported or taxed income then is e_i-a_i. It then follows that consumption equals after tax income plus the evaded income, or (1-T)(e_i-a_i) + a_i. We assume that tax evasion is costly and let $\phi a_i^2/2$, $\phi>0$, denote the associated cost; this parameter can be interpreted as the steepness of the marginal cost of tax evasion. Finally, the amount of the public good is determined by public spending,

$$G = A(1-\gamma)\, T\left[\int e_j\, dj - \int a_j\, dj\right]$$

Substituting all these, the utility function can be written as follows:

$$U_i = (1-T)(e_i-a_i) + a_i - e_i^2/2 - \phi a_i^2/2 + A(1-\gamma)\, T\left[\int e_j\, dj - \int a_j\, dj\right] \qquad (14)$$

The sequence of events is similar to the main analysis, except that now, in addition to effort choices the individuals also determine tax avoidance.

It can be verified that the last stage, of the tax rate determination, remains unchanged relative to the previous analysis; and the same goes in regard to the effort choices. The equilibrium amount of tax evasion is given by maximizing the individual expected utility with respect to a yielding the first order condition:

$$-(1-E(T)) + 1 - \phi a_i = 0$$

so that $a_i = E(T)/\phi$. The expected policymaker's utility then is:

$$E(V) = \gamma\, E(T)\left[\int e_j\, dj - \int a_j\, dj\right] = \gamma E(T)[1 - E(T) - E(T)/\phi] \qquad (15)$$

where $E(T) = FT^* + T_{max}(1-F)$. Proceeding as above, we obtain that the first order condition of maximizing this utility with respect to T* is equivalent to:

$$1 - 2E(T) - 2E(T)/\phi = 0 \qquad (16)$$

Total differentiation of this equation with respect to α and ϕ reveals:

Proposition 3. The equilibrium level of the tax cap is an increasing function of the marginal cost of tax evasion, $dT^*/d\phi > 0$.

The higher the marginal cost of tax evasion the weaker is the disincentive effect of higher taxes, which makes it less beneficial for the policymaker to accept a tighter level of public oversight. In particular, when ϕ tends to infinity, we find ourselves in a situation where the tax cap is characterized by equation (13); generally, however, where tax evasion is an issue, the self imposed level of public oversight is tighter than without it.

Partially benevolent policymaker

The above analysis can be extended to the case of a partially benevolent policymaker, with preferences as follows:

$$V = \gamma T \int e_j \, dj + \beta \int U_j \, dj, \ \beta>0 \qquad (17)$$

where β represents the extent of benevolence toward the citizens.[7] In this case, the policymaker is only partially rent seeking. We now repeat the preceding analysis of public oversight, with the threshold tax rate T* for this case.

When $A>1/(1-\gamma)$, then both the individuals and the policymaker are interested in setting $T=T_{max}$ which will be implemented. When $A<1/(1-\gamma)$, the individuals' preferred tax rate is T=0; the preferred tax rate for the policymaker is T=0 if β is sufficiently large, and T=1 if β is small enough.[8] The latter case – generating divergence of preferences between the policymaker and the legislature - is the more interesting one, and this is the one we focus on. In this case, the nature of

[7] When β tends to infinity, the above specification corresponds to the case of full benevolence, which as will be shown below is not particularly interesting for our analysis.
[8] More precisely, the threshold level of β is $1-\gamma$.

the expected tax rate is equivalent to the one in the previous part, hence, the effort levels have the same nature as well. Substituting these values into the policymaker's utility function we write his expected utility:

$$E(V) = \gamma(1\text{-}E(T))\,E(T) + \beta[(1-E(T))^2/2 + \bar{A}(1-\gamma)E(T)(1-E(T))] \qquad (18)$$

The first order condition with respect to T* is:

$$dE(V)/dT^* = \{\gamma(1\text{-}2E(T)) + \beta[-(1-E(T)) + \bar{A}(1-\gamma)(1-2E(T))]\}\, dE(T)/dT^* = 0$$

where $dE(T)/dT^* > 0$ as was previously shown; the second order condition holds provided that $\bar{A}$ is large enough. This condition can then be rewritten as follows:

$$[\gamma + \bar{A}(1-\gamma)](1-2E(T)) - \beta(1-E(T)) = 0 \qquad (19)$$

Totally differentiating and employing the second order condition, we then obtain that $dT^*/d\beta < 0$, and $dT^*/d\bar{A} < 0$. Now, the larger T* the less stringent is public oversight, or the more free hand the policymaker has in setting policy.

With this in mind, we have

Proposition 4. The more benevolent the policymaker is the more stringent is the equilibrium level of public oversight by the legislature.

In other words, policymakers with non-congruent preferences to those of the legislature are less willing to submit themselves to public oversight. While this result is intuitive, it is important in indicating how policies may be shaped in a divided government. For completeness, in the appendix we develop analogous analysis from the legislature's perspective, inquiring about a tax ceiling that it would find optimal to impose on the policymaker. It is important to point out further extensions that are compatible with the above analysis. It would, for example, be possible to stipulate that the policymaker does not derive any private rent, but instead attached a higher weight than the individuals to public spending or its end result, the amount of the public good. While this extension is not pursued here, the analysis in this sub-section shows how it can be done. Another extension of the main analysis, to a bargaining between the policymaker and the legislature, is pursued in the appendix.

5. Concluding remarks

Public oversight is an essential ingredient of democratic policymaking. Its acknowledged advantage is in restraining the executive with potentially non-congruent interests to those of the public. Historically cited examples in support of this view consist of recorded evolution of legislative and judiciary independent powers, as well as extension of coting franchise in Western democracies. Existing work (North and Weingast, 1989, Congleton, 2011a,b, Gradstein, 2007) suggests that these institutional features, in part at least, reflected the interest of ruling powers as the means to overcome dynamic inconsistency. More contemporary examples of institutional features that constrain the executive are various tax and public spending limitations, exceeding which requires legislative approval. Such limitations are common at the state and local level in the US.

In this paper, we suggest that these, too, may well arise because of the executive policymaker's self interest in alleviating dynamic inconsistency. In the presented model, such limits are ultimately self imposed by the policymaker at equilibrium, through delegation of override decisions to the legislature. This serves as a credible commitment mechanism to restrain from large tax increases, thereby enhancing productive effort. The important implication of our analysis is that the legislature and the executive policymaker may, in fact, have common interest in restraining the latter ability to raise taxes, although the legislature is shown to typically favor more stringent limits. Hence, policy preferences of these two government branches may not be too polarized, after all. This perspective helps our understanding of the evolution of contemporary institutional features that pertain to the interaction between branches of the government.

APPENDIX

Imposition of a tax ceiling by the legislature

We explore a situation, analogous to the one examined in Section 4, whereby the legislature, as opposed to the policymaker, sets the tax limit; for brevity, we skip the details of the model, which is similar to the one in the text, except for the fact that the legislature sets the tax limit in the first stage. Specifically, note that

the present situation is a special case of the variation with a partially benevolent policymaker examined in Section 4, with the parameter β tending to infinity. Still, it is useful to explore this case separately.

We let T** denote the tax cap set by the legislature. The analysis here proceeds similarly to Section 4; we then write the expected utility of the individuals (it corresponds to equation (18) for the case where the policymaker sets the limit):

$$E(U) = (1-E(T))^2/2 + \bar{A}(1-\gamma)E(T)(1-E(T)) \qquad (A1)$$

where $E(T) = FT^{**} + T_{max}(1-F)$; and $e = 1 - E(T) = 1 - [FT^{**} + T_{max}(1-F)]$. Differentiating equation (A1) we obtain:

$$dE(U)/dT^{**} = [-(1-E(T)) + \bar{A}(1-\gamma)(1-2E(T)]dE(T)/dT^{**} = 0$$

or,

$$-(1-E(T)) + \bar{A}(1-\gamma)(1-2E(T)) = 0 \qquad (A2)$$

Comparing with equation (19) we then obtain the following result:

Proposition A1. The tax cap set by the legislature is smaller than the one set by the benevolent policymaker.

This result essentially follows from the text argument (of which this is formally a special case, with the parameter β there tending to infinity). It shows that, although both the policymakers and the legislature have common interest in imposing tax limits, there is still disagreement between them as to the exact value of this limit.

Bargaining as an alternative commitment mechanism

The analysis in the text has shown that indirectly delegating some of the policymaking burden to the legislature through oversight can be a powerful tool in creating a commitment to a taxation restraint, where full delegation is inferior. We now explore an alternative potential commitment device. To describe this institutional feature, it is important to realize that real life policies are seldom determined unilaterally by policymakers; more often than not they can be viewed as being formed through a bargaining process between the executive and the legislature. This is the case because of the many vetoes and overrides that characterize the relationship between the two branches of the government. Without going into details of

such a bargaining, we now depart from the previous setup by assuming that policies are determined so as to maximize the joint objective function of the policymaker and the legislature. Whereas in the previous parts the tax rate was the main objective, the rent fraction being determined by the policymaker, now both policy aspects will be assumed to be determined with the view of maximizing that objective. To this end, we write the objective to be maximized as

$$W = V + \beta \int U_j \, dj \qquad \text{(A3)}$$

and stipulate the now endogenous fraction of the rent to be $0 \leq \gamma \leq \gamma_{max} < 1$.

We assume the following sequence of events. First, the rent seeking policymaker sets the bargaining weight for the legislature, β. Then the individuals select efforts. Finally, bargaining between the policymaker and the legislature, with the predetermined weight, yields the tax rate T and the rent fraction γ.

In the last stage, policies T and γ are determined. We write the derivatives of the objective function with respect to these variables, while using the fact that the individuals make identical effort choices, as follows:

$$\partial W/\partial T = \gamma e + \beta[-e + A(1-\gamma)e]$$

$$\partial W/\partial \gamma = Te - \beta ATe$$

These expressions are both positive – indicating that both the tax rate and the rent fraction rate are maximal – when

$$A > (\beta-\gamma_{max})/\beta(1-\gamma_{max}), \text{ and } A < 1/\beta \qquad \text{(A4)}$$

In contrast, if the former inequality is reversed then the tax rate equals zero; and if the latter inequality is reversed then the rent fraction equals zero. This implies that the equilibrium effort choices are:

$$e = 1 - E(T) = 1 - T_{max}[1 - F((\beta-\gamma_{max})/\beta(1-\gamma_{max}))]$$

It then follows that the policymaker's expected utility can be expressed thus:

$$E(V) = \int_{\frac{\beta-\gamma_{max}}{\beta(1-\gamma_{max})}}^{\frac{1}{\beta}} (\gamma_{max} T_{max}\, e)\, dF(A) = \gamma_{max} T_{max}\, e \int_{\frac{\beta-\gamma_{max}}{\beta(1-\gamma_{max})}}^{\frac{1}{\beta}} dF(A) =$$

$$\gamma_{max} T_{max} \{1 - T_{max} [1 - F((\beta-\gamma_{max})/\beta(1-\gamma_{max}))]\} [F(1/\beta) - F((\beta-\gamma_{max})/\beta(1-\gamma_{max}))] \qquad \text{(A5)}$$

where $\gamma_{max}<\beta<1$.[9]

Taking the derivative with respect to β we then obtain the following first order condition:

$$dE(V)/d\beta = T_{max}F'(z)\,\gamma_{max}/\beta^2(1-\gamma_{max})\,[F(1/\beta) - F(z)]$$

$$- [1 - T_{max}(1-F(z))][F'(1/\beta)/\beta^2 + F'(z)\,\gamma_{max}/\beta^2(1-\gamma_{max})] = 0 \qquad \text{(A6)}$$

where $z = (\beta-\gamma_{max})/\beta(1-\gamma_{max})$. Here the first term reflects the positive effect of giving a higher weight to the legislature through the increase in effort, because of a lower expected tax rate; and the second term reflects the negative effect of the lower tax rate on the policymaker's utility. The equilibrium weight β optimally balances these two considerations from the policymaker's perspective. Further note that, when the mass of the distribution of A shifts rightward, beyond 1/β, this makes bargaining with the legislature less appealing for the policymaker as then any rent is precluded. This should be contrasted with the case of public oversight examined in the previous sections, where the distribution of this productivity parameter did not matter for the policymaker's utility.

Summarizing,

Proposition A2. The policymaker chooses to bargain with the legislature over policies, instead of determining them on his own. Although this limits the expected fraction of the rent, it also restrains future expected taxes, thus leading to higher productive efforts. When the distribution of the productivity parameter is skewed to the right, bargaining appears less attractive than public oversight from the policymaker's perspective.

Heterogeneous individuals

We now briefly discuss how the analysis can be extended to the case on heterogeneous individuals. Suppose, therefore, that the cost of effort is $e_i^2/2h_i$, $h_i>0$, and h's are distributed according to a known distribution. To make the analysis comparable to that in the main text, suppose that the distribution of h's is symmetric around the mean value of 1 and that the legislature takes decisions through majority voting. The individual effort levels then will be given by:

[9] Setting β outside of this range will never be optimal for the policymaker.

$e_i = h_i(1-E(T))$, and the aggregate effort, given our distributional assumptions, is as in the main text, 1-E(T). It then follows that the policymaker's expected utility remains the same as in the main text, (11), hence, the equilibrium analysis will also be sustained.

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