

Inter-Governmental Competition : Market Solutions to Political Problems

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Abstract

In normative public economics, inter-governmental competition is usually viewed as harmful. Although empirical support for this position does not abound, market integration has intensified competition among developed countries. In this paper we argue that when assessing welfare effects of inter-governmental competition for various forms of government imperfections (the public choice critique), the outcome is ambiguous and competition can be welfare improving.

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1. Introduction

What is the role of competition between governments? If competition is the fundamental force of efficient economic performance in the private sector, why should it be different for the public sector? Why cannot the same disciplining effect of competition be applied to the public sector as well? In the private sector competition will promote efficiency because firms which best satisfy consumers' preferences will survive and prosper, while others will lose customers and fail. Extending this argument to the public sector, competition among governments and jurisdictions should induce them to best serve the will of their residents. If they fail to do so, residents will vote out their incumbent or still worse they can leave for other jurisdictions which offer a better deal.

The purpose of this paper is to show that if the normative public economics view of a harmful tax competition and a risk of a race to the bottom has some merit, it also need to be seriously qualified. Indeed a positive role for intergovernmental competition in general, and fiscal competition in particular can be found. There are two main ways. First, the role for intergovernmental competition can be compared to an auction mechanism to get resources allocated to their best possible uses. Another possibility is that there is an agency problem in government which tends to make the public sector inefficient and possibly too large. In this paper we shall concentrate on this agency problem to show that inter-governmental competition can be welfare enhancing. This is in stark contrast with EU stance on intergovernmental competition which perceives it purely as messing up incentives with very damaging consequences for welfare.

It should be stressed at the outset that the purpose is to present a "public choice" perspective on the topic of inter-governmental competition in a manner that is provocative to stimulate debate even if it is not found persuasive. The intention is to temper normative public economics analysis with some public choice perspectives. That does not mean that we claim the public choice approach to be the correct one. Normative and political approaches to public policy issues are complementary.

The paper is organized as follows. First we present the disciplinary benefit of competition in aligning incentives of the politicians to those of the electorate. Second, we study how competition can facilitate the screening of good and bad governments. Third, we discuss how competition can usefully help the government to credibly commit to some desirable course of actions. Lastly, the main results from the fiscal competition theory are summarized and evaluated in the concluding section.

2. Competition and discipline

Politicians may pursue different objectives. At times, they may be public-spirited and dedicate themselves fully to furthering public interest. But they may also pursue their own ideas, even if these differ from those of their constituents. Some may want to derive private gains while in office or actively seek perks of office. Some may extend clientilistic favors to their families and friends. But the most important way in which they can act against the best interests of their constituents is by choosing policies that advance their own interests or those special groups to which they are beholden.

A government is *accountable* if voters can discern whether it is acting in their interest and sanction them appropriately if it is not, so that incumbents anticipate that they will have to render accounts for their past actions. The problem is then to confront politicians with a trade-off between diverting rents and losing office or doing what voters want and getting re-elected. In this view, elections can be seen as an accountability mechanism for controlling and sorting good from bad incumbents. By ‘good incumbent’, we mean someone who is honest, competent and not easily bought off by special interests.

The standard view of how electoral accountability works is that voters set some standard of performance to evaluate governments and they vote out the incumbent unless these criteria are fulfilled. However elections do not work well in controlling and sorting politicians. There are severe problems in monitoring and evaluating the incumbent’s behavior in order to make informed decisions about whether to re-elect or not. Voters face a formidable agency problem because they are inevitably poorly informed about politicians’ behavior and type. Moreover, the electoral sanction (pass or fail) is such a crude instrument that it can hardly induce the politicians to do what the public wants.

In this perspective, it might be reasonable to try and organize competition among politicians in order to control them. In this respect, the Brennan and Buchanan (1980) view is that decentralization is an effective mechanism to control governments’ expansive tendencies. The basic argument is that *competition among different decentralized governments can exercise a disciplinary force* and break the monopoly power of a large central government. Comparing performance in office among different incumbents would help in sorting good types from bad types as well as controlling the quality of their decisions. Hence one votes against an incumbent if his performance is bad relative to others, in order to induce each incumbent to behave in the public interest (see e.g. Belleflamme and Hindriks, 2004).

To see the logic of the argument, consider a simple example drawn from Hindriks and Myles (2004, Chapter 19). Suppose that the circumstances under which politicians make

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	State a	State b
Policy A	0,3	r,0
Policy B	r,1	0,1

Figure 2.1:

decisions can be good (state a) or bad (state b). Governments decide to adopt policy A , which is better for their constituents in the good state a , or policy B , which is better in the bad state b . Governments need not pursue the public interest and can rather advance their own interests by choosing policy A in state b and policy B in state a to get some private gains (say a rent $r > 0$). Suppose that politicians value being re-elected and that such value is $V > r$. Let the payoff matrix be as follows: the first number in each cell is the government payoff and the second number is voters welfare. If the government is reelected it gets the extra value V . The government knows the prevailing conditions (*i.e.*, whether a or b has occurred) but all that citizens observe is their current welfare.

To induce politicians to act as well as they can under this information structure, voters must set their re-election rule. If voters set the standard the incumbent must meet in order to be re-elected too high (such as committing to vote for the incumbent if the welfare level is at least 3), then the incumbent cannot be re-elected whatever he does if conditions turn

out to be bad (state b). Consequently, the incumbent has the incentive to obtain the rent r and leave office. Alternatively, if the voters set the standard for re-election lower, say at 1, the incumbent will be able to divert rent when conditions happen to be good (state a) and be re-elected by giving voters less than what they could obtain. Then voters are in a quandary because whatever they decide to do, the politicians will sometimes escape from their control and divert rent.

Suppose now that the electorate can compare the outcome of its incumbent with other incumbents (in different constituencies) facing exactly the same circumstances. Then from the observation of outcomes elsewhere, voters can potentially infer whether the prevailing conditions are good or bad and thereby get the most they can under either conditions. The information will be revealed if there is at least one government that chooses a different policy from that of the others. When conditions are good, vote for the incumbent if the outcome is at least 3. When conditions are bad, vote for the incumbent if the outcome is at least 1. Otherwise vote the incumbent out. Hence, a government facing good conditions a knows that by choosing the appropriate policy A , it will be re-elected for sure and get V which is more than the rent r he can get by choosing B and being voted out. In turn a government facing bad conditions b knows that by choosing B it will be re-elected and get V which is better than what it would get by adopting the wrong policy A to get the rent r but no chance of being re-elected. Therefore, comparing the performance of their incumbent with other incumbents facing similar circumstances, voters can gain increased control over their politicians and deduce what is attributable to circumstances as opposed to government actions.

3. Competition and screening

The original insight that tax competition leads to inefficiently low taxes and public good provision was obtained in models with benevolent decision makers. An alternative approach is to consider public officials that seek in their decision making to maximize their own welfare and not necessarily that of their constituencies. From this perspective, tax competition may help discipline *non-benevolent* governments. For instance if we view governments as "leviathan" mainly concerned with maximizing the size of the public sector, then tax competition may improve welfare by limiting taxation possibilities and thereby cutting down the size of government that would be otherwise excessive. This argument suggests that the public sector should be smaller, the greater the extent to which taxes and expenditures are decentralized. The evidence on this is, however, mixed. In fact there is not much evidence on the relationship between fiscal decentralization and the overall

size of the public sector.

An analogous argument applies to governments with some degree of benevolence, possibly due to electoral concerns. When political agency problems are introduced, this inefficiency of competition among governments is no longer so clear. Inter-governmental competition makes the costs of public programs more visible, as well as their benefits in ways that make public officials accountable for their decisions. Stated briefly, competition may induce government officials to reduce waste and thus reduce the effective price of public goods (see Besley and Smart, 2003).

In this section we concentrate on a different agency problem which is the competence issue. We shall show that fiscal competition can help to discipline and screen out government competence. The model is adapted from Hindriks and Lockwood (2004).

3.1. The Model

There are two time periods. In each time period, a politician makes a decisions about taxation and public good provision. Moreover, at the end of period 1, there is an election in which voters choose between the incumbent and a challenger, having observed only first-period fiscal policy. Consider the situation in which policy makers know the cost of public services better than does the taxpayer. Suppose the unit cost is either high θ_H or low θ_L (with $\theta_L < \theta_H$).

Politician is either "good" with probability π or "bad" with probability $1 - \pi$. A "good" politician is always low cost, and a "bad" politician is high cost with probability $0 < q < 1$. Thus the good politician is competent and the bad one is incompetent. However the incompetent can also can benefit from favorable economic circumstances (with probability $1 - q$) and produce at low cost. The gross benefit from a level G of public services is $B(G)$ which is increasing and concave function. The per-period welfare of the typical taxpayers is

$$W(G, T) = B(G) - \mu T$$

where $\mu \geq 1$ is the marginal cost of public funds. The intensification of tax competition is represented by an increase in μ (i.e. a basic implication of the tax competition theory). Both voters and politicians have the same discount factor, $0 < \delta < 1$.

With full information, taxpayers will demand a level of public service $B'(G_\theta) = \mu\theta$ and pay the government $T_\theta = \theta G_\theta$. Depending on the announced cost, taxpayers demand different amount of public services with $G_H < G_L$.

All politicians are honest: they care about the welfare of the voters and they do not want to divert rent.¹ The lack of congruence between politicians and voters comes from the private benefit of holding office, $R > 0$. This benefit from office creates potential conflict with voter interest to weed out bad politicians. There is also some lack of transparency in the government tax and spending decisions in the sense that the incumbent can "delay" the revelation of the true cost. This is made possible by borrowing freely on the international capital market at interest rate equal to discount rate $\delta < 1$. In the first period, the incumbent can freely borrow b on the international market so in second period, must pay back b/δ . This borrowing is not observable by voters.

3.2. Equilibrium

In the first period, the politician observes the unit cost $\theta \in \{\theta_L, \theta_H\}$ and then chooses a level of provision conditional on cost. Voters observe taxing and spending decisions prior to election. Voters make an inference about their incumbent's type based on observed performance and compare it to prior beliefs about the type of the challenger, and re-elect their incumbent if he is at least as likely to be "good". The incumbent gets rent R if he is re-elected.

Proceeding backwards, in the second period, the incumbent just sets $(G_k, T_k + b)$ if $\theta = \theta_k$. So, given borrowing b the second-period payoffs to voters from good incumbents is $W_L - b$ and the second-period expected payoff from bad incumbent is $EW - b$ where

$$\begin{aligned} W_k &= B(G_k) - \mu\theta_k G_k \text{ for } k = H, L \\ EW &= qW_H + (1 - q)W_L \end{aligned}$$

Since $W_H < W_L$ we have that bad type produces lower welfare than good type $EW < W_L$ and so voters prefer competent politicians and they will not re-elect their incumbent if they believe he is likely to be incompetent. In the first period, the good incumbent sets (G_L, T_L) . The bad incumbent sets (G_L, T_L) if cost is low, and if cost is high, he can:

- separate: set (G_H, T_H)
- pool: set (G_L, T_L) and borrow $\hat{b} = (\theta_H - \theta_L)G_L$.

So, if the probability of pooling is λ , voter beliefs that the incumbent is good are

¹See Besley and Smart (2003) for a similar analysis with *dishonest* politicians. Interestingly enough, they find that competition is welfare improving when there is a predominance of "good" (honest) politicians. In our model we show the opposite and more natural result that when politicians differ in *competence*, competition improves welfare when there is a predominance of "bad" (incompetent) politicians.

$$\begin{aligned}\Pr(\textit{good} | T_L) &= \frac{\pi}{\pi + (1 - \pi)(1 - q + \lambda q)} \\ \Pr(\textit{good} | T) &= 0, \quad T \neq T_L\end{aligned}$$

So, whatever λ , $\Pr(\textit{good} | T_L) \geq \pi$, so pooling always implies re-election, separating always implies no re-election.²

If the incumbent is bad, his payoff to separating when cost is high is

$$W_H + \delta [\pi W_L + (1 - \pi)EW]$$

where the incumbent rationally anticipates that he will be replaced by a challenger who is competent with probability π . His payoff to pooling is

$$W_L + \delta \left[R + EW - \frac{\hat{b}}{\delta} \right]$$

where the incumbent rationally anticipates that he will win the election, and that the debt incurred in order to pool must be repaid. So, comparing payoffs with separation and pooling the bad incumbent will pool if

$$W_L + \delta \left[R + EW - \frac{\hat{b}}{\delta} \right] \geq W_H + \delta [\pi W_L + (1 - \pi)EW]$$

which gives

$$R \geq \delta^{-1} \nabla(\mu) + \pi S(\mu) \equiv R(\mu)$$

where $\nabla(\mu) = W_H - (W_L - \hat{b}) > 0$ is the *incentive* cost, which is the welfare loss of the distortion in public good supply; and $S(\mu) = W_L - EW > 0$ is the *selection* cost of re-electing the bad incumbent instead of a good challenger. It can be shown that both incentive and selection costs are increasing in μ . Thus $R(\mu)$ is increasing in μ . Define μ° from $R(\mu^\circ) = R$. For $\mu \leq \mu^\circ$ there is a pooling equilibrium, and for $\mu > \mu^\circ$ there is a separating equilibrium.

²Given this, it is clear that good incumbents behave non-strategically, by choosing G_L , the optimal supply when cost is low. This is because if the voters observe G_L, T_L , whatever strategy the "bad" incumbent follows, rational voters must conclude that the probability that the incumbent is "good" is at least π .

In the separating equilibrium, the expected welfare of voters is

$$EW^{sep} = \pi(1 + \delta)W_L + (1 - \pi) [EW + \delta q (\pi W_L + (1 - \pi)EW) + \delta(1 - q)EW]$$

which is decreasing in μ . In the pooling equilibrium, the expected welfare of voters is

$$\begin{aligned} EW^{pool} = & \pi(1 + \delta)W_L + (1 - \pi) [EW + \delta q (\pi W_L + (1 - \pi)EW) + \delta(1 - q)EW] \\ & - (1 - \pi)q(\nabla + \delta\pi qS), \end{aligned}$$

which is also decreasing in μ .

The change in welfare due to a change in equilibrium strategy from a pooling equilibrium ($\mu \leq \mu^\circ$) to a separating equilibrium ($\mu > \mu^\circ$) is

$$EW^{sep} - EW^{pool} = (1 - \pi)q(\nabla + \delta\pi qS) > 0$$

Thus there is discontinuous increase in welfare around μ° that is proportional to the proportion of incompetent politicians.

Proposition: *Intensification of fiscal competition that leaves equilibrium unchanged reduces voter welfare. However more competition in a neighborhood of μ° that induces a change in the political equilibrium increases voter welfare. The welfare gain from fiscal competition is higher when there is a presumption that politicians are likely to be bad.*

So, whether we view fiscal competition as harmful or not reflects our perception of the quality of governments. Unconstrained actions of a good governments is good, but it can be very costly when governments are bad. Intensifying competition is most likely to be welfare improving for voters when there is a predominance of bad politicians.

4. Competition and Coherence

There are also circumstances where inter-governmental competition may be welfare enhancing even when governments are well-meaning and competent. This is the case when governments have imperfect commitment. We consider two examples.

The first example is the case where countries seek to give a competitive advantage to their domestic firms by offering *wasteful subsidies*. In equilibrium all countries will do this, so each country's subsidy cancels out with the subsidy of others. Since they cancel, none gains any advantage and all countries would be better off giving no subsidy. This

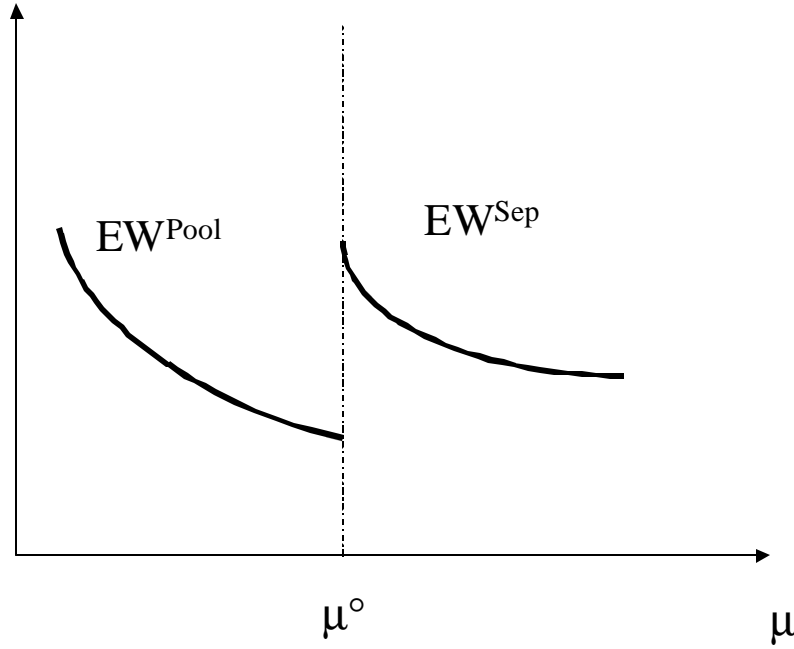


Figure 3.1:

is the Prisoners' Dilemma once again. Tax competition may help solve this inefficient outcome by allowing firms to locate wherever they choose and preventing governments from discriminating between domestic and foreign firms operating within a country. The mobility of the firms will force governments to recognize that their subsidy will not only give a competitive advantage to their domestic firms but that it will also attract firms from other countries. Because the government cannot discriminate between all firms operating within its borders, it will have to pay the subsidy to both the domestic and foreign firms, thereby eliminating the competitive advantage. Therefore mobility eliminates the potential gains from the subsidy and raises its cost by extending its payment to foreign firms.

Tax competition can therefore improve welfare by reducing the incentive for countries to resort to wasteful subsidies to protect their own industries. Notice that the non-discrimination requirement plays a crucial role in making tax competition welfare improving. If discrimination were possible, then governments could continue to give wasteful subsidies to their domestic firms.

The second example is the use of tax competition as a *commitment device*. In the tax competition model, governments independently announce tax rates and then the owners of capital choose where to invest. A commitment problem arises here because

the governments are able to revise their tax rates after investment decisions are made. If there were a single government and investment decision were irreversible, then this government would have an incentive to tax away all profits. The capital owner would anticipate this incentive when making its initial investment decision and choose not to invest capital in such a country.

Tax competition may help to solve this commitment problem. The reason is that inter-governmental competition for capital would deter each government from taxing away profits within its borders because it would induce reallocation of capital between countries in response to difference in tax rates. Tax competition is a useful commitment device as it induces governments to forego their incentive to tax investment in an effort to attract further investment or to maintain the existing investment level.

5. Empirical Evidence

It is natural for economists to think that competition among jurisdictions should stimulate public decision makers to act more efficiently and limit their discretion to pursue objectives that are not congruent with the interest of their constituency. Test of this hypothesis led to substantial empirical research investigating whether inter-governmental competition through fiscal decentralization affects public expenditures. The evidence as reviewed in Oates (1999), supports strongly the conclusion that increased competition tends to restrict government spending. But the fact that spending falls with more competition does not mean that resources are more efficiently allocated as competition increases. The problem is that it is hard to come up with measures of the quality of locally provided public services. However, there is one notable exception which is education where standardized test scores and post-graduating earnings provide performance measures that are easily comparable across districts. Following this strategy, Hoxby (2000) finds that greater competition among school districts has a significant effect both in improving educational performances and reducing expenditures per student. Besley and Case (1995) develop and test a political model of yardstick competition in which voters are poorly informed about the true cost of public good provision. They use data on state taxes and gubernatorial election outcomes in the US. The theoretical idea is that to see how much of a tax increase is due to the economic environment or to the quality of their local government, voters can use the performance in others jurisdictions as a "yardstick" to obtain an assessment of the relative performance of their own government. The empirical evidence supports the prediction that yardstick competition does indeed influence local tax setting. From that perspective intergovernmental competition is good to discipline politicians and limit

wasteful public spending.

A substantial body of empirical studies has emerged testing for interdependence among jurisdictions in tax and expenditure choices. One of the first and very influential work is by Case *et al.* (1993) who test a model in which state's expenditure may generate spillovers to nearby states. The great novelty of this work is to allow for spatially correlated shocks as well as spillovers. Using data from a group of states, strong evidence of fiscal interdependence emerges and the effects arising from interdependence are large. A dollar increase in spending in one state induces neighboring states to increase their own spending by seventy cents. Brueckner and Saavedra (2001) test for the presence of strategic competition among local governments using data of 70 cities in the Boston metropolitan area. Taking capital as the mobile factor and population as fixed, local jurisdictions choose property tax rates taking into account the mobility of capital in response to tax differentials. Property taxes are the only important local revenue. The authors use spatial econometric methods to relate the property tax rate in one community to its own characteristics and to the tax rates in competing communities. They find that tax rate in one locality is positively and significantly related to tax rates in contiguous localities. This means that the tax interdependence generates upward sloping reaction functions. Same conclusion has been obtained with similar methodology by Heyndels and Vuchelen (1998) in their study of property-tax mimicking among Belgian municipalities. Turning to welfare migration, Saavedra (1998) uses spatial econometric estimates of cross sections welfare benefits (AFDC) for the year 1985, 1990 and 1995 of all states in the US. She finds strong evidence that a given state's welfare benefit choice is affected by benefit levels in nearby states for each year. Moreover the findings show significant and positive spatial interdependence, suggesting that a given state would increase its benefit level as nearby-state benefits rise.

6. Conclusion: Competition vs Harmonization

The role of competition may be thought as a device to secure better fiscal performance, or at least to detect fiscal inefficiency. If market competition by private firms provides households with what they want at least cost, why intergovernmental competition cannot lead to better governmental activities? Poorly performing governments will lose out and better performing ones will be rewarded. Though appealing, the analogy can be misleading and the competitive model is not directly transferable to fiscal competition among governments. Once there is more than one jurisdiction, the possibility is opened for a range of fiscal externalities to emerge. Such externalities can be positive, as with tax competition, and lead to tax rates that are too low. Competition among governments to

render high quality services may give way to competition for under cutting tax rates to attract mobile factors always from neighboring jurisdictions. Given capital mobility, any attempt by local government to impose a net tax on capital will drive out capital until its net return is raised to that available elsewhere. The revenue gain from higher tax rate would be more than offset by an income loss to workers due to the reduction in the locally employed capital stock. Fiscal harmonization across jurisdiction would be unanimously preferred.

Empirical studies are essential to compare the costs and benefits of intergovernmental competition. Evidence of the presence of fiscal interaction between jurisdictions is not compelling evidence of harmful tax competition. Tax interaction can also be due to political effect where the electoral concern induces local governments to mimic tax setting in neighboring jurisdictions. In such case competition can be an effective instrument to discipline and control officials.

We can conclude with the question raised at the beginning of this paper on the analogy between market competition and government competition. The main lesson from the fiscal competition theory is that intergovernmental competition limits the set of actions and policies available to each government. There is no doubt that such constraints that are imposed on the authority of governments do, indeed, constraint or limit actions, and, in so doing, both "good" and "bad" actions may be forestalled. So, whether we view such competition as harmful or not reflects our perception of the quality of governments. Unconstrained actions of a "good" governments is good, but it can be very costly when governments can either abuse power, make wrong decisions or adopt incoherent policy.

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