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State Corporate Tax Policy: Is Tax Competition the Main Determinant?

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Introduction

In the past few decades state corporate income tax policy and coordination/harmonization of corporate income taxes have been regularly discussed in the tax policy literature. The reason for this level of attention is that capital is assumed to be highly mobile across nations or unions with multiple jurisdictions with differential corporate tax rates (Bucovetsky, 1991; Cnossen, 2003; Frey & Eichenberger, 1996; Gordon, 1983; Isard, 1990; Keen & Marchand, 1997). Further, much of the literature focuses on states' "race to the bottom" in terms of corporate income taxation or incentives to base capital in their jurisdictions, and the tendency for this race/competition to cause inefficient levels of public services to be provided (Black & Hoyt, 1989; Bucovetsky, 1991; Edwards & Keen, 1995; Frey & Eichenberger, 1996; Keen & Marchand, 1997; Oates, 1972; Rushton 2000; Wilson, 1995, 1999). This has mainly to do with the fact that reductions in corporate income tax levels lower the revenues of local governments in a union or federal republic, though reliance on this revenue source varies across jurisdictions (Cnossen, 2003; Gordon, & Wilson, 1986; Wildasin, 1999; Zodrow, 2003).

Though most of the literature has focused on the inefficiencies caused by tax competition, more recent literature has taken an opposite or more neutral stance on the subject. Multiple scholars have found either inconclusive or positive benefits to tax coordination (Bovenberg, Cnossen & De Mooij, 2003;; Rounds, 1992; Wilson, 1995; Wilson & Wildasin, 2003, Zodrow, 2003). This paper synthesizes the current literature on the subject of state corporate tax policy and takes an empirical approach to determine what in fact drives the way in which states set corporate tax policy. Further, this paper

will take an empirical approach to understand what forces create an impetus for change and which do not. This paper departs from the literature insofar as it looks at the determinants of state corporate tax policy as opposed to its consequences by looking at a number of variables from the 50 U.S. states. I propose that while tax competition is an important factor, a more straightforward answer to this question exists. That being that political considerations, in particular budgetary policy, are also important determinants of state corporate tax policy. The main questions to be answered in this analysis are: *Do states adopt corporate tax rates adopted in nearby or geographically proximate states? Do states adopt corporate tax policies adopted by states with more similar characteristics? Do states consider a combination of the two? Or, do states choose a corporate tax policy with no regard to other states? Are there factors other than competition which drive changes in state corporate tax policy in a more direct fashion?*

Background on State Corporate Tax Policy: Coordination & Competition

Tax Coordination/Harmonization

Rounds (1992) defines harmonization as "any situation where differences in taxation between the states (or provinces) are reduced either by cooperation among the states or by a federal government policy". Tax coordination/harmonization deals with the ability of governments across jurisdictions in a union to coordinate or harmonize corporate tax rates so as to optimize local revenues, while simultaneously attracting capital to and preventing outflows or cross-hauling of capital out of their jurisdiction (Bucovetsky, 1991; Frey & Eichenberger, 1996; Gordon & Wilson, 1986). This is especially important in unions where local jurisdictions have a great deal of discretion

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over corporate tax rate levels (Wildasin, 1999). In a Federal system of government each jurisdiction has independent choice as to what tax rate will be chosen, as well as what level of public goods will be provided (Gordon, 1983). This distinction however, does not apply only to Federal systems but to multijurisdictional contexts in general.

Kanbur & Keen (1993) recall the similarities between a federal system of government, in terms of tax coordination/harmonization, and political and/or economic unions, such as the European Union (EU), and even go so far as to include international tax issues. The reasons for these similarities are the underlying difficulties and benefits of this type of cooperation. The EU has faced many of the same problems as federal states throughout the course of its history, though contexts and constraints are somewhat different; similarities are nevertheless significant (Cnossen, 2003; Edwards & Keen, 1996; Kanbur & Keen, 1993; Keen & Marchand, 1997; Zodrow, 2003).

Differences in tax rates become important not only for the harmonization or coordination of said rates but also for the competition it creates among jurisdictions. There are at least two ways of looking at tax coordination/harmonization from a reading of the literature. The first approach is to examine it as a means of providing a uniform tax rate across all member jurisdictions or to have a tax-revenue sharing whereby the federal (or supranational) government collects all tax revenues and each state then receives a percentage of those revenues be it by formula apportionment or other mechanism. The second approach is to agree explicitly to a certain tax rate but still allow for differing levels among the jurisdictions but with one caveat; change of the agreed upon levels takes place only through official or explicit agreement (Gordon, 1983; Isard, 1990; Rounds; 1992; Wildasin, 2002; Zodrow; 2003).

Competition in the form of corporate tax rates causes capital to move to areas where profitability will be its highest, i.e. where the tax rate is lowest, thereby having a positive effect on the jurisdiction receiving the capital, but a negative one the jurisdiction losing it. Black & Hoyt, (1989), model competition in this way and show that it may actually facilitate efficient locating of capital. Further, Wilson (1995) clearly states that while capital outflows which are caused by differential tax rates are seen as a cost from the point of view of a single jurisdiction, they are not seen as one from the viewpoint of the economy as a whole. We are reminded, however, that while harmonization does make administration, and economic and political interaction easier, there are still trade-offs with real winners and losers. Brochner, Jensen, Svensson & Sorensen, (2006), find evidence of this fact in their study on the EU and its member states. The also find that aggregate welfare gains may be only modest at best. Bucovetsky (1991), Gordon & Wilson, (1986) and Kanbur & Keen (1993) have all produced models which show that tax structures are in fact under pressure due to competition amongst multiple jurisdictions and that size does matter. The models they utilize provide evidence that tax competition does exist. Therefore, this force is a necessary one to consider when analyzing the determinants of state corporate tax policy. However, only through a thorough search for each agreement which may exist between states, is it possible to determine what levels of state corporate tax coordination or harmonization take place.

Tax Competition

Due to competition amongst individual governments or jurisdictions the need for and lack of coordination/harmonization of tax policies among jurisdictions has become

an item of considerable interest (Cnossen, 2003; Edwards & Keen, 1996; Kanbur & Keen, 1993; Rounds, 1992; Rushton, 2000; Wildasin, 2002; Zodrow, 2003). The reason this is important in the overall context of state corporate tax policy is that tax competition has recently led many scholars to conclude that tax coordination and competition have ambiguous effects on jurisdictions especially given contextual problems and model-specific variations (Bovenberg, Cnossen and De Mooij, 2003; Edwards & Keen, 1996; Rounds, 1992; Wilson 1999; Wilson & Wildasin, 2004; Zodrow, 2003). Wilson and Wildasin (2004) define tax competition as: "Noncooperative tax setting by independent governments, under which each government's policy choices influence the allocation of a mobile tax base among 'regions' represented by these governments." Given this interpretation one might think that tax competition could be modeled well utilizing game-theory to explain how states would act in a number of non-cooperative games where one state or actor has the first move and the second state or actor responds to this. One would expect less than social optimality given these conditions.

Again, while no consensus exists about the effects which tax competition has or creates there are at least three models which underpin the majority of the writings and/or studies and which serve as the foundation for the bulk of extensions and applications of new models. Tiebout (1956) in his influential work, created a theory of what in essence was an efficient theory of tax competition. His main argument was that taxes had to remain at a level which was equal to the cost of providing the individual taxpayer with public services at the margin. In essence his model was one where taxpayers voted with their feet. They chose regions in which the marginal benefits and marginal cost of taxation were equal. This extends to corporate tax policy in that capital is considered to

by mobile, thereby making capital allocation mobile, much like voters in Tiebout's model. Therefore, tax competition causes efficient relocating of capital in this model. This would imply that tax competition for mobile factors including, people and capital is beneficial.

Oates (1972) took a contrary position on the issue of tax competition. He suggested that taxes are kept too low in order to attract investment and as a result, this leads to under provision of public services or goods. He further argued that as jurisdictions competed with one another that none could obtain a competitive advantage and this would lead to a "race to the bottom". Continuing from there it is quite simple to see that competition would serve to make jurisdictions worse off than before. In other words, tax competition, in his view, is not beneficial but rather detrimental.

Zodrow & Mieszkowski (1986) & Wilson (1986) were some of the first scholars to model and explain tax competition's negative effects. Their models were not exactly the same, but nevertheless found approximately the same results and for the purposes of this paper we will focus on the ZM model and its implications for tax policy research. These two models assume that jurisdictions are symmetric where Nash equilibria are the norm. They also assume that each jurisdiction is too small to affect the overall national variables. Due to these limitations Bucovetsky (1991) and Wilson (1995) both carried out studies assuming asymmetry between jurisdictions and still find that tax competition with asymmetric jurisdictions causes under-provision of public output. Further, Wilson (1999) explains that the central message of the tax competition literature up to this point was to show that "independent governments engage in wasteful competition for scarce capital through reductions in tax rates and public expenditure level." (Black & Hoyt, 1989;

Edwards & Keen, 1996; Gordon & Wilson, 1986; Rounds, 1992; Rushton, 2000; Wilson, 1995, 1999; Wilson & Wildasin, 2004; Zodrow, 2003).

It becomes clear from these studies and models that if coordination or harmonization does not exist on some level there is a tendency for jurisdictions to compete or offer incentives for capital to locate in their jurisdiction. This earlier literature assumed that this competition caused a number of inefficiencies, including under-provision of public services which in some cases cause reductions in programs intended to redistribute income to the poor, misallocation of capital, and inefficiently low tax rates. However, while much focus was placed on the inefficiencies, little attention was focused on the political determinants of state corporate tax policy insofar as how it was determined and what, other than competition, might be driving this.

About the same time, though still focused on consequences, the literature was turning towards an understanding of the potential beneficial effects of tax competition. Wilson and Wildasin (2004) suggest that the previous theories are not as clear and do not have unambiguous effects in every case. The most prominent effects cited include the ability of competition to limit government size, or in other words, limit the growth of the public sector and also the ability to pressure governments into becoming more efficient and responsive (Black & Hoyt, 1989; Gordon & Wilson, 1986; Rounds, 1992; Rushton, 2000; Wilson, 1995, 1999; Wilson & Wildasin, 2004; Zodrow, 2003). Edwards & Keen (1996) model this specific idea using the ZM model as a basis. They find that competition should be set aside and coordination accepted only if the efficiency gains outweigh the policy-makers propensity to waste. In this case, at least for the current case, this could

manifest itself in the budgetary process, or changes in political ideology of decision makers.

Further evidence shows that in some cases tax competition may have other previously unknown benefits. The reasons for this include arguments such as efficient allocation of capital, reduction in the size of government, encouragement of competing governments to limit wasteful spending, considerations of tax rates levied in other jurisdictions, and, finally, welfare gains from competition for mobile firms as outlined before in the Tiebout Hypothesis (1956; Cnossen, 2003; Oates, 1972; Rounds, 1992; Rushton, 2000; Wildasin, 2002; Wilson, 1999; Wilson and Wildasin, 2004; Zodrow, 2003).

Tax competition has at least two aspects: implicit competition where jurisdictions lower or limit tax rates in an effort to keep resources and/or economic activity from leaving to other jurisdictions (tax-bases); and explicit competition where jurisdictions actively compete with the goal or intention of attracting economic activity and/or resources to their tax base (Edwards & Keen, 1996; Oates, 1972; Rounds, 1992; Rushton 2000, Wilson, 1995). When considering the EU or international tax competition it is that which exists instead between member states (independent nations) as opposed to state governments as in the United States or other federal republics but the issues in the EU and the US are strikingly similar.

Again, Wilson (1999) outlines the contrasting nature of tax competition insofar as it relates to efficient output of public goods or local services. On one hand, horizontal intergovernmental tax competition was for the most part, seen as mostly wasteful and potentially leading to misallocation of capital, as well as possibly causing jurisdictions to

provide less than efficient levels of public services. Finally, some theoretical studies have shown that tax competition can cause suboptimal tax rates across jurisdictions (tax bases). This would cause taxes to be higher than usual for the population (Cnossen, 2003; Oates, 1972: Rushton, 2000; Wilson, 1999; Wilson and Wildasin, 2004; Zodrow, 2003). Though both sides of the argument are considered at this point the literature gives an ambiguous answer in terms of tax competition's beneficial or negative effects conclusively, and does little to incorporate political processes, such as budgetary processes or political ideologies of citizens and/ or institutions in a jurisdiction into the models.

Jurisdictional Authority

Corporate taxes constitute an important type of revenue generation for both subnational and supranational governments (federal or otherwise), though, as mentioned before, the level of dependence on this type of revenue varies across jurisdictions, especially in the U.S. (Wildasin, 1999). Many uncertainties make the concept of tax coordination/harmonization across federal republics, regions such as the EU, and internationally not only economically difficult, but politically and administratively difficult as well. This is mainly because jurisdictional authority to tax is not always clear. This is especially true for corporations located in multiple jurisdictions (Gordon & Wilson, 1986; Wildasin, 1999, 2002). For a jurisdiction to impose a corporation income tax, it must first establish that the corporation is in fact subject to taxes levied by the jurisdiction. Though not of vital importance to the current study, the jurisdictional question, especially in the U.S., is a particularly interesting matter now under consideration.

Policy and Institutional Design

Rounds (1992) explains how U.S. policy and institutional design differ from most other federal republics in considerable ways. The attitude toward tax competition and in particular state corporate tax policy in the U.S. stems from the fact that many state governments were financially independent from the federal government for over 120 years and presently still have a great deal of fiscal independence. The general consensus is that the federal government should not intervene in regional development, in this case the setting of corporate income tax rates (Rounds, 1992, Wildasin, 1999.) Another, considerable distinction is that the Constitution is relatively silent on this issue, which leaves many questions for future decision-makers. However, there is one exception: the Constitution does make special inference in regards to the ability of state fiscal policies and the fact that they can and should not interfere with interstate commerce (Wildasin, 1999).

The U.S. unlike other federal republics does not look towards equalization or general-revenue grants to lessen the impacts of tax competition. The U.S maintains a tradition of state domination of local development. In other words, when it comes to taxation the U.S. allows states to determine their own corporate tax rate independently (Rounds, 1992, Wildasin, 1999, 2002). When both the state and federal governments impose a tax on the same tax base, this is known as vertical competition. Horizontal competition occurs when taxes are competed for across states or jurisdictions. Both of these cases illustrate the interest by some scholars for harmonization, or at least coordination, both among the states and with the federal government (Wilson, 1999). Still, it is necessary to remember that most countries lie somewhere between perfect

harmonization and perfect competition. For some it is not necessary for rates to be equalized or for there to be no competition but rather an optimal level of coordination, though it may be difficult to state what that particular level that might be (Isard, 1990; Rounds, 1992).

States are limited by federal statues and Supreme Court decisions as to how they can tax corporate income. The majority of states are members of the Multistate Tax Commission (MTC). Though membership is high, states are not required to follow the three-factor formula set forth by the commission (Wildasin, 2002). Another aspect for consideration is that an important mechanism for increasing tax harmonization is the federal tax deduction for state income taxes or the double taxation convention. These assist in lowering interstate income tax disparities (Rounds, 1992, Wilson, 1999).

Gordon & Wilson (1986) explain how state governments tax a multistate firm through the use of formula apportionment. The main way of achieving this is through the use of the Multistate Tax Corporation's (MTC) three-factor formula. While a guideline exists which is calculated using weighted averages of a corporation's payroll, capital assets and sales, this three-factor formula is not used by all states. More and more, states are using the sales portion of the formula as the main weight to determine taxing authority in their jurisdictions (Wildasin, 2002, 1999; Rounds, 1992). As stated previously, the fact that the U.S. allows states a large amount of discretion in regards to corporate tax policy is also a factor which should be considered. But, it is still important to take into account that the federal government, while allowing considerable discretion to the states, still levies a much higher tax level. Most states levy a rate of less than 10% whereas at the federal level it is around 35% (Wildasin, 2002, 1999).

Data

The data for this analysis will come from a number of sources including the U.S Census Bureau, the National Conference of State Legislatures and the Bureau of Economic Analysis. The model will take into account at least three types of variables. The variables are separated in to political, economic and demographic characteristics. States are classified by region as outlined by the U.S. Census Bureau. The years which will be considered are the years 2001-2007 with just two values of general fund allocation missing. Table 1 presents the descriptive statistics. All explanatory variables are lagged relative to corporate tax rates, 2001-2007, or to say the same thing another way, tax rates are stated as a lead.

Table 1. Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Tax_rate_next year (lead)	350	6.056	2.627	0	10
Genl.Fund Allocation (millions)	398	10.030	12.582	.491	91.592
Population (millions)	400	5.074	6.265	0	36.250
White %	400	82.258	12.040	28.6	96.7
Female %	400	50.634	.718	48.3	51.6
Population Under_18 %	400	23.96	2.871	7.8	31
Population 18-64 %	400	12.536	7.852	5	62.4
Population Over 65 %	400	12.656	1.676	6.8	16.8
Census Division (Fixed Effects)	400	5.12	2.538	1	9
Citizen Ideology	400	49.807	15.399	8.45	95.972
Institutional Ideology (Party)	400	46.518	26.568	0	97.5

All variables for the analysis are separated in to categories including political, economic and demographic. I will explain how each variable is calculated by variable type.

Political variables include party control of the legislature (Institutional ideology) and citizen ideology (Citizen ideology) and Census Division of which there are nine. The index scores are specified utilizing a political ideology index as outlined by Berry, Rinquist, Fording & Hanson (1998) and data obtained from Richard C. Fording's website at http://www.uky.edu/~rford/Home for the current date data. The index scores both state and citizen ideology on a 0 to 100 point basis where 0 is the most conservative and 100 the most liberal. This measure offers an especially good measurement because of the differences that exist within the same parties. This variable is important because those controlling the legislature and the overall conservatism/liberalism of the citizenry might have a direct impact on the way the corporate tax rate is perceived.

Geographic Region/ Division, as stipulated by the U.S. Census Bureau, is considered in this case a political variable because I believe it might play an important role in that certain regions may share more similarities or important political characteristics. The Census Bureau has four official Regions West, Midwest, South and Northeast. For the purposes of this paper the states will be separated into the nine official Census Divisions: Pacific, Mountain, West North Central, West South Central, East South Central, East North Central, South Atlantic, Middle Atlantic, and New England. Regions are quite broad encompassing states with substantial differences. Therefore, I chose a less aggregated approach with a Division as the largest aggregation as opposed to the larger Census Region. This might also tell us whether Division space shows diffusion or competition among states considered to be regional neighbors or to share similar characteristics due to proximity such as political ideology or budgetary processes.

Economic variables include State Government General Fund Allocations, which is missing for Kentucky in 2002 and 2004, the only variable missing in any year, and Average State Corporate Tax Rate in the coming year, which is defined as a lead to avoid contemporaneous endogeneity. Total state government fund allocations allow a way to calculate the changes in government expenditures as the corporate tax rates changes. This measure is in millions of dollars. This also allows for the analysis to focus on state allocations not total allocations which include funds from other sources. Further, state general fund allocations tell us what spending level the legislature in each state considers important.

In this analysis the dependent variable is the level of mean corporate income tax levels as a percentage based on levels year by year. The levels were calculated by summing all of the statutory corporate tax rates and dividing by the number of levels which exist. This information was obtained from the Bureau for Economic Analysis's website directly. The rate policy adopted by states allows for one to compare the changes in tax rate policy. Due to the number of different marginal tax rates the average will be used in cases where multiple levels are stated. This is by no means an exact measurement; however for the sake of analysis a simple approach has been utilized in order to operationalize this variable and to determine changes in corporate tax rates across years and between states. Note that many caveats exist for items such as federal deductibility and income replacement, just to name a few. Changes in state corporate tax rates are not common. Of 350 state-years, 318 show no change, 20 show a reduction, and 12 show an increase. The mean change is slightly and statistically insignificantly

positive, about 0.01% per state-year. This prevents state fixed effects from being

allowed, with so few changes to consider.

The only demographic variables included here is Total Population of the State in

millions (Pop_mill) as measured by the U.S. Census Bureau estimates in millions of

people. The total population of a state is an important variable to measure both the ability

of the state to provide both a workforce and the division of state GDP.

Methods and Hypotheses

The proposed study of this article is to model corporate tax rate setting policy as a

function of nearby or similar state corporate tax rate setting policy. Furthermore, I will

consider other relevant characteristics of the states. The method which will be employed

is a cross sectional time series with Census Division fixed-effects. Here the model will be

adapted in order to determine corporate tax diffusion policy across the states and changes

in the corporate tax rate as well but will also include political variables including

ideology indices for both institutions and citizens as well as state general fund allocations

as a proxy for budgetary policy. The model in this case is one in which corporate tax

rates in the next year are a function of general fund allocations (millions), populations

(millions), the Census Division (1-9), and finally the ideologies of the citizens and the

ideology of the institutions (party in control of the legislature).

The questions which I hope to answer through this analysis are: *Do states adopt*

corporate tax rate policy adopted in nearby or geographically proximate state? Do states

adopt corporate tax policies adopted by states with more similar characteristics? Do

states consider a combination of the two? Or, do states choose a corporate tax policy

with no regard to other states? And most importantly, are changes in corporate tax rates

better determined by factors other than competition? These questions, while seemingly

narrowly focused to a particular policy issue, might in fact be generalizable to other

policy areas. This analysis may be the foundation which would allow for further

prediction of state policy competition and potentially diffusion across a number of policy

areas and issues.

This analysis will help clarify the relationship states maintain, either explicitly or

implicitly with other states in the adoption of corporate tax policy and whether similar

political ideologies or budgetary policies matter. The fact that some states do not have a

corporate tax policy will not affect the analysis because this is in fact a strong tax policy.

The main hypothesis is that:

H1: While tax competition is an important factor changes in budgetary policy measured

here as state general fund allocations are a better determinant of what types of changes

might be seen in state corporate tax policy.

If this hypothesis holds, a general model concerning state corporate tax policy might be

in sight or at the least might provide insight into how states determine what tax rate

should be chosen.

Results

This paper at the beginning speaks to the fact that tax competition drives how

states develop or implement policy regarding corporate income taxes. Utilizing Census

Division and coding them 1 through 9 depending on region, I expected to find that states
which shared a census region would be more likely to look to neighbors in their region
when choosing a tax rate. Table 2 tells us which states are included in each Census
Division.

Table 2: Census Divisions and States

Div:	1 New England	2 Mid. Atlantic	3 East N.Ctrl	4 West N. Ctrl	5 S. Atl	6 East S.Ctrl	7 West S.Ctrl	8 Mntn.	9 Pac.
States	CT, ME, MA, NH, RI, VT	NJ, NY, PA	IN, IL, MI, OH, WI	IA, KS, MN, MO, NE, ND, SD	DE, DC, FL, GA, MD, NC, SC, VA, WV	AL, TN, KY, MS	AR, LA, TX, OK	AZ, NM, ID, CO, MT, NV, WY, UT	AK, HI, CA, OR, WA,

An Ordinary Least Squares regression was utilized including the same dependent
variable (next years average corporate tax rate) but only including general fund
allocations, population, census division fixed effects, and citizen and party ideology to
estimate the effect of region and the other variables on corporate tax rates. Table 3 gives
the results, which are heteroscedasticity consistent. Region effects are relative to New
England, the omitted category.

Table 3: OLS Regression with Census Division

Variable	Coefficient	Robust Std. Error
GF Allocation (millions)	***.087	.022
Population (millions)	***-.121	.043
Middle Atlantic	***-.123	.429
South Atlantic	***-1.312	.322
East North Central	***-2.139	.470
West North Central	***-1.644	.504
East South Central	***-2.453	.458

West South Central	***-4.024	.563
Mountain	***-2.940	.464
Pacific	***-3.474	.521
Citizen Ideology	-.006	.011
Institutional/ Legislature Ideology	***.016	.016
Constant	***7.350	.645
N	348	
R-Squared	.3325	

(***significance at the .01 level)

After looking at the variables in the model, it seems that region is a highly important factor. The model controls for budget size, population, regional fixed effects and ideologies of both the citizenry and legislature of a state. Census divisions one and two which include the New England and Mid-Atlantic region have on average higher corporate tax rates than the other region. New England, the omitted category, has an effect set to zero, and Middle Atlantic has an effect statistically insignificantly different from zero; all others are statistically significantly negative. Further, regions seven and nine, which include West South Central and Pacific divisions are considerably lower than the other regions, by an estimated 4.0 and 3.5 percentage points, other things equal. The importance of region may exist for a number of reasons and to bring the discussion back to tax competition, it may be possible that regions matter because of the regions' shared history, industry bases in the region and finally, along the lines of this analysis, because of local competition leading to local equilibria. Finally, the results also suggest that party ideology of the party in power in the legislature matters while citizen ideology does not. Higher scores are more liberal, associated with higher corporate tax rates. Apparently, citizen ideology has little effect unless translated into ideology of the party in power. The correlation between these two measures is 56.8%, large but far from perfect.

Higher General fund allocation decisions are associated with higher corporate tax rates in the following year. There could be endogeneity from other factors, but general fund allocations lag tax rates here. From the above table one sees that General fund allocations have statistically significant effects. Additionally, population shifts would be expected to change corporate tax rates, because governments must find a way to continue to provide particular service levels. So, for example, if a population shifted in time period one to a different jurisdiction due to the package of services the local government provides, and in time period two the government must now provide higher levels of services to this larger population, one would expect to see either expansion of tax base or higher tax rates or both depending on tax structure.

Conclusion

State corporate tax policy and its determinants are subjects which currently receive a great deal of attention. The literature, however, offers competition as a driving force but with at least one flaw: the lack of inclusion of political variables. Further, the literature is also ambiguous in regards to the effects of tax competition. Scholars are not certain whether competition creates benefits such as constraining growth of the public sector, creating efficient allocation of capital, and pressure for government to be more efficient and responsive (Black & Hoyt, 1989; Edwards & Keen, 1996; Gordon & Wilson, 1986; Rounds, 1992; Rushton, 2000; Wilson, 1995, 1999; Wilson & Wildasin, 2004; Zodrow, 2003), or if it causes inefficient levels of public services to be provided and narrowing of the tax base (Black & Hoyt, 1989; Bovenber, Cnossen and De Mooij, 2003; Bucovetsky, 1991; Cnossen, 2003; Edwards & Keen, 1995; Frey & Eichenberger,

1996; Gordon, 1983; Keen & Marchand, 1997; Oates, 1972; Rushton 2000; Wilson, 1995, 1999). Many of the models which currently exist in the literature, while very useful, are quite limited in the information which they provide, insofar as how effective either competition or coordination and harmonization can be (Bovenberg, Cnossen and De Mooij, 2003; Edwards & Keen, 1996; Rounds, 1992; Wilson 1999; Wilson & Wildasin, 2004; Zodrow, 2003) and also whether or not political processes, something Wilson & Wildasin (2004) identified, and ideology matter directly.

Considering the political underpinnings of the subject, it is extremely interesting to see that scholars have only considered the effects of competition and coordination and modeled said effects repeatedly, but have failed to explore the reasons for non-coordination, negotiation or competition in terms of a policy process, shared political characteristics or shared jurisdictional political ideologies. The purpose of this paper is to draw out empirical evidence supporting which determinants are important. Tax policy is an inherently economic issue affected strongly by political processes. Ideology matters, but apparently more in the ideology of the party in power than in the ideology of the population. These are correlated (57.8% in the data here), but not close to perfectly, and the estimation attributes much more effect to party ideology.

The results of this analysis suggest that while tax competition is certainly an important determinant of state corporate tax policy, local actors or policy makers may also be focusing more on local problems. Budgetary considerations and the need to find revenue for new or existing programs may be manifested in higher corporate tax rates. In other words, depending on the timing of both, as budgetary policy is considered by

decision-makers, the result of needed changes to existing financing levels means that corporate incomes are taxed at a higher rate or vice versa.

Another result of this paper is that changes in population also seem to have an effect on the level of corporate tax rates. The inverse relationship of the result suggests that as populations fall the corporate income tax rises. This seems logical at least in one sense given that as populations exit a jurisdiction then revenues must be made-up in other places e.g. the corporate income tax. While a basic analysis this paper offers some insight into the political processes which take place around state decisions on setting corporate tax rates. Further research might include analysis of the actual budgetary processes included in determining general fund allocations and how these interactions affect corporate income tax levels.

Region, as specified by Census Division, is a highly important determinant. Regions differ considerably in the level of corporate tax rates chosen. Additionally, the reasons for these differences include shared history, industry base, and perhaps local competition which has led to local equilibria. After conducting this analysis, one thing becomes very clear; tax competition is still an important determinant insofar as corporate taxes are concerned. However, states consider their general fund allocations as well as population shifts when determining how to set corporate tax policy.

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