DO TAX AND EXPENDITURE LIMITS INFLUENCE FEDERAL LOBBYING BY STATE AND LOCAL GOVERNMENTS? EVIDENCE FROM A PANEL DATASET[1]

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ABSTRACT

A large body of literature has emerged regarding the overall effects and efficacy of state and local tax and expenditure limits (TELs). Importantly, much of this literature has detailed some of the unintended consequences of those fiscal constraints. This paper adds to that latter strand of the literature by evaluating the relationship between state and local TELs and the prevalence of federal lobbying expenditures by those governmental units constrained by such a limit. With the inclusion of several different measures of state and local TELs, panel data spanning several years, and various specifications, the results indicate that fiscally constrained state and local governments increase federal lobbying efforts, though the result is far less robust for states. Disaggregation of these TELs suggests little association between lobbying and a revenue limit at the state level (though a stronger positive association exists with expenditure limits), while a property tax limit (expenditure limit) is positively (negatively) associated with lobbying expenditures at the municipal level.

Keywords: Tax Limits, Expenditure Limits, Lobbying, Fiscal Federalism, State and Local Public Finance, TELs

1. INTRODUCTION

Tax and expenditure limits (TELs) have become a centerpiece and mainstay of state and local fiscal constraints, especially as more recently envisioned and created. Largely driven by the tax revolts and Proposition 13 passed by the state of California in the 1970s, these fiscal constraints have become much more prevalent, with 28 states faced with some form of a TEL (Rueben and Randall 2017), along with 41 states imposing similar constraints on their respective local jurisdictional units (Mengedoth and Pinto 2015). This has led to a significant body of literature that details how these TELs impact various aspects of economic and public-sector activity (Abrams and Dougan 1986; Lowery 1983;

1. The author would like to thank Rebecca Goldstein and Hye Young You for access to their datasets.

Joyce and Mullins 1991; Mullins and Joyce 1996; Cabases et al. 2007; Epple and Spatt 1986; Farnham 1985).[2]

An important byproduct of these constraints, to be discussed in greater detail below, are the potential secondary effects and unintended consequences that these limits may create. This is especially true as both state and local governments faced with such constraints attempt to circumvent their intent through several different avenues. This may come in the form of increasing off-budget expenditures (Bennett and DiLorenzo 1982), adopting alternative revenue sources not bound by the limit (Sun 2014; Wang 2018), through the creation of special assessment districts (Bowler and Donovan 2004; Carr 2006; Carr and Farmer 2011; Goodman and Leeland 2019), or through some other means.

This current study adds specifically to this latter stream of the literature by evaluating an additional avenue through which state and local governments may circumvent these constraints once faced with them; the effect that such TELs have on state and local lobbying expenditures. Importantly, expenditures of this type have increased significantly over the past several decades. To that, these expenditures have risen by roughly 50% between 1998 and 2017 while the total number of state and local governments involved in federal lobbying has grown by roughly 86% over the same period (Center for Responsive Politics).[3]

Further, since 1980 state and local lobbying efforts have increased over 420% and now makes up over 12% of all organized lobbying expenditures at the federal level (Schlozman et al. 2015; Goldstein and You 2017). Interestingly, little research exists to explain this phenomenon. Therefore, this paper provides several important contributions. First, it is suggestive of another potential channel through which state and local governments circumvent constitutionally or legislatively imposed TELs. Second, it provides at least a partial explanation for the increased lobbying efforts observed by these jurisdictional units, as it roughly corresponds with increased efforts to constrain state and local taxation and spending observed through the 1970s and 1980s. Finally, it provides several opportunities for future research.

Importantly, revenue constrained jurisdictions might find it beneficial to increase such lobbying efforts to circumvent these various limits on taxing behavior. Research indicates that local governments especially have become much more dependent upon nontax revenue sources when faced with a property tax

2. Krol (2007) and Rose (2010) also provide important literature reviews of these and other works.

3. Information is freely available at https://www.opensecrets.org/lobby/indusclient.php?id=W03&year=1998

limit (McCubbins and Moule 2010; Shadbegian 1999; Skidmore 1999; Kioko and Martell 2012). Further, to the extent that such efforts prove successful and are considered off-budget (and thus not subject to an expenditure limit), this would allow such a jurisdiction to increase its expenditures beyond the explicit intent of any expenditure limit in effect. On the flip side, it is quite possible that such constrained jurisdictions, rather than expending even more scarce resources to these endeavors may instead reduce total lobbying expenditures. This presents an important empirical question.

In order to evaluate this potential, I employ several different TEL measures using both indicator variables and an index variable created by Amiel et al. (2009). These measures are also broken down by the type of limit imposed (whether a tax limit or expenditure limit), and the intensity and relative stringency of the limit (as measured through the index variable). Additionally, I include a dataset of federal lobbying expenditures by state and local governments which comes from the Center for Responsive Politics and supplemented with additional data drawn from Goldstein and You (2017). Combined, these data run from 1999 through 2012 for local governments and 1999 through 2015 for state governments. The dataset for local lobbying expenditures is specifically drawn from a large sample of local governmental units with a population of 25,000 or greater. Anticipating the results stricter TELs imposed on local governments are strongly associated with increased lobbying expenditures and efforts, which appears to be driven by the existence of a property tax limit in particular. At the state level, while a stricter TEL is associated with increased lobbying expenditures, the result is not robust, though an explicit expenditure limit is associated with increased lobbying.

The remainder of the paper is structured as follows: section 2 details the relevant literature regarding TELs and theoretical considerations for why state and local governments lobby the federal government. Section 3 discusses the data and empirical specifications employed. Section 4 presents the results, while section 5 concludes.

2. REVIEW OF THE RELEVANT LITERATURE AND THEORETICAL CONSIDERATIONS

A large body of literature evaluates the extent to which tax and expenditure limits affect fiscal outcomes and other major factors across several jurisdictions. Early research on state and local TELs in particular typically showed mixed results at best in relation to how effective they were in achieving their stated goals (Abrams and Dougan 1986; Lowery 1983; Joyce and Mullins 1991; Mullins and Joyce 1996; Cabases et al. 2007; Epple and Spatt 1986; Farnham 1985). However more recent research, incorporating panel data and accounting for pos-

sible endogeneity, indicates that TELs can be at least somewhat effective at accomplishing their stated goals in certain settings (Bails and Tieslau 2000; Shadbegian 1996; New 2010; Bae and Gais 2007).

Additional and even more recent work examines how exactly and whether TELs limit the growth of government. For example, Seljan (2014) applies a principle-agent framework and theoretically finds that the effectiveness of a TEL at limiting such growth is dependent upon whether those constraints are overseen by limited-government preferring agents. Further, Kousser et al. (2008) do not find any systematic evidence that a particular type of TEL is effective at limiting the growth of government, while Amiel et al. (2014) indicate that the restrictiveness of a TEL is an important indicator of its ability to constrain.

Another piece of the literature as relates to this current study is the body of work that has been devoted to the secondary effects and unintended consequences associated with the implementation of TELs. For instance, a significant amount of research suggests that tax limits tend to increase bond ratings and borrowing costs, while expenditure limits tend to lower those same costs for both state and local governments (Bayoumi et al. 1995; Eichengreen 1992; Johnson and Kriz 2005; Lowry 2001; Poterba and Rueben 1999; Dove 2016). Deller et al. (2013) evaluate how TELs imposed at the state level influence overall state debt. Their research indicates that relatively more restrictive TELs result in increased debt burdens if they restrict either expenditures or revenues. Evidence also suggests that TELs increase the likelihood of municipal default (Dove 2014, 2019).

Additional research suggests that another unintended effect that TELs can have is to force state and local governments to simply shift revenue sources and to shift spending toward off-budget expenditures (Bennett and DiLorenzo 1982). Specifically, Sun (2014) shows that property taxes do tend to be lower in the face of a TEL, though the lost revenue tends to result in increased user fees along with sales and income taxes. Wang (2018) adds to this debate by building a unique TEL index and suggests that sales taxes and user fees do tend to be relatively larger in cities faced with a TEL. Additionally, Stallmann (2007) finds that local governments also tend to create and rely more heavily on special assessment districts.

Further, Mullins (2004) notes that educational funding is significantly affected by the presence of a TEL, which appears to both negatively and disproportionately impact relatively low-income districts. Maher et al. (2016) consider a cross-section of municipal governments and evaluate how TELs and other institutional features affected funding ratios for both municipal pensions and other

post-employment benefits (OPEB) through the Great Recession. While differences in pension funding was not associated with the restrictiveness of TELs, OPEB funding was negatively associated with the existence of a municipal TEL.

Additionally, Brooks and Phillips (2010) and Revelli (2013) evaluate how municipal TELs impact local grant expenditures obtained from central governments. This flypaper effect was found to be much stronger when municipal governments were faced with specific tax and expenditure limits. Finally, Kioko and Martell (2012) indicate that local property tax limits do not increase the extent of state aid to locally constrained governments. However, Park et al. (2018) do indicate that during times of fiscal stress (in particular the Great Recession), relatively more restrictive TELs resulted in those municipal governments so constrained receiving more intergovernmental aid. The evidence related to these unintended consequences relates specifically to the current question at hand: while grants-in-aid to junior jurisdictions are not constrained by TELs, and thus would be potentially desirable for those jurisdictions to receive them, it's necessary for those junior jurisdictions to first obtain the actual grants. That said, to what extent might TELs impact the prevalence of lobbying by state and local governments at the federal level?

This paper is also related to the theoretical work regarding lobbying activity generally. Here several theories have been advanced to explain why organized interests develop. Olson (1965) suggests such interests develop to obtain concessions and other selective benefits for members. In this framework, group size plays a significant role, as all organizations face free-rider problems, especially as they grow. This suggests then that the most successful special interest groups tend to concern themselves with single issues. Overall, these interests have an advantage in obtaining benefits, which may be contrary to the general welfare. This analysis gives rise to the capture theory of regulation, in which regulation (and other public-sector mandates) rather than promoting the general welfare, benefit the very groups the regulation is meant to constrain, while imposing the costs across the general population (Stigler 1971).

More recent scholars have modified and refined Olson's initial work given the general lack of empirical support for the above theoretical consideration. This neopluralist view (Lowrey 2007), while recognizing the free rider problem suggested by Olson, finds that in many contexts organized interests can overcome it. This suggests that there will be a much larger plurality of interest groups representing a broad collection of issues operating within the public sphere (Lowrey 2007).

Additionally, there is a literature that theoretically teases out the factors that specifically influence state and local government lobbying. Peterson (1981) pro-

vides a foundational theoretical framework to explain when and why subnational governments lobby, which he later develops into both functional and legislative theories of federal systems (Peterson 1995). These are two contrasting theories regarding how federal systems operate, though both can help illuminate why subnational jurisdictions may lobby a national government. Here, economic growth is the main policy concern for subnational governments, which leads to three general policies being pursued: developmental, allocational, and redistributive. Developmental policies are those that enhance economic growth, allocational policies are those that result in the production of publicly provided goods, while redistributive policies are those that involve redistribution from relatively better to worse off and disadvantaged citizens or using regulation to accomplish a particular outcome (Peterson 1981).

In this context, Tiebout Competition and the perverse incentives that result from taxing productive assets makes the pursuit of redistributive policies impractical four subnational jurisdictions and local governments in particular. However, functional theory suggests that this problem is minimized by intergovernmental transfers from the federal to subnational governments. Therefore, comparative advantages emerge in which state and local governments focus on development while the national government focuses on redistribution. Thus, subnational governments will be most likely to lobby for or against such redistributive policies (resulting from either taxation or regulation) that positively or negatively impacts those very subnational governments. Hays (1991) tests these hypotheses using Congressional testimony from five major intergovernmental interest groups, finding support that state and county governments fit the theory, but less evidence that cities do. Additionally, TEL constrained state and local governments might find it even more difficult to pursue developmental goals, which would leave such jurisdictions at a competitive disadvantage. Thus, this may incentivize greater lobbying efforts by those subnational governments in order to secure more intergovernmental transfers.

Legislative theory suggests that political agents will attempt to concentrate benefits and disperse costs across constituents as this is a means by which to garner voter support (Peterson 1995). Based on this theory, a national government will attempt to force the costs of a policy action onto state and local governments, while reaping the benefit the policy confers. For example, federal unfunded mandates have imposed significant costs on state and especially local governments over time. Such behavior should also, at the margin, impact TEL constrained state and local governments more so than unconstrained jurisdictions. This could incentivize greater lobbying by constrained jurisdictions as well, especially for local governments.

Further, as Cammisa (1995) notes, once obtained, pressure will be exerted on state and local governments to continue to maintain these redistributive policies, but to avoid the direct expenditures related to them. Therefore, they will be incentivized to continue direct lobbying of a supernational government. Overall, and more generally related to the research question at hand, the existence of a TEL would, at the margin, make redistributive policy goals even more difficult to attain (as it constrains the ability to tax and thus redistribute). This may incentivize a greater reliance on subnational lobbying of the federal government to offset this effect, which is an unintended consequence resulting from these constraints. On the flip side, federal mandates may also impose additional costs (or benefits depending on the nature of the mandate), on those subnational governments, which may also incentivize greater lobbying efforts by them. Even if state and local governments are a clear minority on the issue, their lobbying efforts might send an important signal to lawmakers regarding the overall relevance and importance of the issue. If this conjecture holds, then TELs are expected to be positively correlated with federal lobbying by subnational governments.

On the other hand and in contrast to all of the above theoretical considerations, limiting both revenues and expenditures to begin with may increase the opportunity cost associated with using what are now relatively more limited resources for the purposes of lobbying at the federal level and thus may, at the margin, reduce the likelihood of such behavior. This is especially true given that expending scarce time and resources toward lobbying does not guarantee success. Thus, the combination of a higher opportunity cost for using those resources for such efforts coupled with a lower expected payout may reduce the likelihood that TEL-constrained state and local governments will pursue such activities. Given these two possibilities this presents an important empirical question, which the remainder of the paper is dedicated to testing.

3. DATA DESCRIPTION AND EMPIRICAL SPECIFICATION

Data for this paper come from several sources. State lobbying expenditure data were drawn from the Center for Responsive Politics for the years 1999 through 2015.[4] In regard to local government lobbying expenditure data, primary information is derived from Goldstein and You (2017). Their dataset compiled the lobbying disclosure reports as required by the Lobbying Disclosure Act (LDA) of 1995 for 1,262 cities with a population of 25,000 or more between 1999 and 2012. These disclosures are provided quarterly and have been aggregated to annual lobbying expenditures for those cities noted above. The current study also follows Goldstein and You (2017) and derives the (log of) state and local lobbying expenditures by year as its dependent variable, due to the skewed

4. Expenditure data is employed as a proxy for lobbying activity and follows Goldstein and You (2017) and Loftis and Kettler (2008).

distribution of the data.[5] Given this, the baseline model takes the following form:

$$\log(Lobby)_{it} = \alpha_0 + \beta_1 TEL_{it} + Z'_{it}\gamma + \theta_i + \mu_t + \varepsilon_{it} \qquad (1)$$

where $\log(Lobby)_{it}$ represents the (log of) total annual lobbying expenditures by both state governments between 1999 and 2015 and local governments between 1999 and 2012, TEL_{it} represents a measure of state and local TELs to be discussed in greater detail below, while Z'_{it} represents a vector of control variables also to be discussed in greater detail below.

To that, there have been several different methods used to measure TELs as accurately as possible within the literature. These have ranged from simple dummy variables to more sophisticated indices constructed to measure the greater nuance that exists across jurisdictions. This paper incorporates one such index measure developed by Amiel et al. (2009). This index is based on the work of Poulson (2005) and, to a lesser extent, the Advisory Commission on Intergovernmental Relations (1987), Resnick (2004), and Bae and Gais (2007). Importantly it spans from the initial adoption of a TEL imposed on state and local governments through 2005, and considers six specific characteristics that may potentially be associated with any given TEL. These include whether it serves as some form of tax/revenue limit, an expenditure limit, or both as well as whether those limits are constitutional or statutory, and the level of government it applies too. These characteristics are then given a numerical value, with stricter characteristics receiving a higher score relative to weaker characteristics, while points are also deducted if there are exemptions and overrides available.[6] Thus, the index ranges between a low of "0" (effectively no TEL) and a high of "38".

5. Interestingly, the overall level of lobbying expenditures indicates very small sums expended relative to state and local budgets, with no individual expenditures exceeding even 1% of a budget in a given year. Though individually small, in the aggregate these sums become much more sizeable, especially when state and local lobbying efforts are coordinated through interest groups such as the National Association of Governors or the National Association of State Legislatures. See Marbach and Leckrone (2002) for a detailed analysis of how these groups affected federal lobbying for the passage of TEA-21. Additionally, the relatively low level of resources devoted to lobbying conforms with Tullock's Paradox (1980), i.e. the empirically consistent fact that lobbying expenditures never fully dissipate the rents available through federal transfers. Further, it's also possible that lobbying expenditures exhibit significant diminishing returns, in that some expenditures are necessary to lobby to begin with, but the result quickly dissipates. This may also help explain these relatively low levels of lobbying expenditures.

6. At the state level, Alabama receives a "0", Alaska a "15" and Colorado a "30". Coincidentally, Colorado's TABOR is considered to be one of the most restrictive TELs that exists.

Additionally, this study also incorporates two dummy variables representing whether a state or local government is constrained specifically by either a revenue limit or an expenditure limit. This allows the analysis to evaluate not only the overall restrictiveness in place, but also whether a particular type of limit is driving the result. Further, including such a dummy variable allows the analysis to exploit the full data set (from 1999 to 2015 for states and 1999 to 2012 for local governments) instead of simply 1999 to 2005, since this latter year was the last year for which the TEL index had been coded. Additionally, given that any index necessarily requires some level of subjectivity in its construction, applying dummy variables in this manner helps to alleviate those potential negative consequences. However, while the dummy variables allow for more years to be included in the analysis, these two dummy variables are, unfortunately, time invariant. Thus, while state fixed effects and year dummies are included in the baseline model with the TEL index, state fixed effects could not be employed in the latter specifications.

Along with these main independent variables of interest the paper also includes a few socioeconomic and institutional control variables that might influence federal lobbying by state and local jurisdictions. Here, I try to keep the measure of these variables as consistent as possible between the state-level and local-level analyses, though note where and how they diverge below. First, I include total population, percentage of the population over 65, percentage of the population between the age of 5 and 17, per capita income, the unemployment rate, the Gini Coefficient of each state, and the percentage of the population living below the poverty line.

Here, having a relatively larger non-working percentage of the population, higher unemployment rate, and a larger population living in poverty may increase the demand for publicly provided services, which in turn could place pressure on the public purse and increase the likelihood that a given jurisdiction will increase efforts toward lobbying. However, it is also possible that these greater strains on the public treasury may lead those jurisdictions to divert less resources toward lobbying (as those resources are allocated directly toward publicly provided goods). Therefore, these variables would be expected to have an ambiguous effect on lobbying efforts. A larger population may also increase the demand for publicly provided services, which would increase the likelihood of lobbying, however, it may also increase the tax base and thus potentially reduce the likelihood of lobbying. Thus, this variable would also be expected to have an ambiguous effect. These data were taken from US Census. Further, data for municipal governments were only available for the years 2002, 2007, and 2012. Therefore, I interpolate values between those years, and for data prior to 2002 I simply use the values derived from the observations for the year 2002. Additionally, as the theories regarding subnational lobbying behavior suggest, a major driver of such behavior are redistributional goals. Thus, a more economically unequal society (as measured by the Gini Coefficient), would be expected to

increase lobbying efforts. This variable was also drawn from the US Census but was only available for US states and only began being recorded in 2006. Therefore, state scores are applied to their respective cities and the score for 2006 is applied to all previous years.

I also include two fiscal variables, which are total own-source revenue and total own-source expenditures. These two variables are also taken from US Census data, specifically the Annual Survey of State and Local Government Finances. Here, the effect that both variables will have should be ambiguous. More revenue may decrease the likelihood to lobby, as a given jurisdiction should be more self-sufficient. On the other hand, more revenue available would also suggest more resources that could be devoted toward lobbying. Further, while increased expenditures may lower the likelihood that a given jurisdiction actively lobbies the federal government due to the higher opportunity cost associated with doing so, larger expenditures may also actually incentivize expending resources on lobbying, as successful lobbying efforts would alleviate any pressure that relatively larger expenditures might place on a jurisdiction's budget.

Several political control variables are also added; whether or not a state's delegation to the US Senate belongs entirely to the Democratic party (1=Yes), the average DW-NOMINATE for the congressional delegation to the US Senate by state,[7] and also whether or not the state's governor is a Democrat (1=Yes).[8] For the local-level analysis I substitute whether or not the member of the US House of Representatives that represents the particular city is a Democrat and also the average House DW-NOMINATE score. Additionally, I include a dummy variable if a state (local) government had a US Senator (Congressman) in a leadership role or was a chairman of a standing committee. Here, leadership and chairmanship positions might act as substitutes to lobbying, since these relatively powerful individuals are better able to appropriate funds and would thus decrease lobbying. On the other hand, given their positions and key roles, this may drive their local contingencies to lobby them harder.

I also add a variable representing the American Recovery and Reinvestment Act (ARRA) and a dummy variable representing the federal earmark ban that went into effect in 2010. ARRA is represented as the total funds distributed under the program for each year, which should proxy for the size of resources available to lobby over. Here, given the large pool of resources made available

7. The DW-NOMINATE score, first developed by Poole and Rosenthal (1985) is a measure of ideological disposition of each US Senator and Congressman, based exclusively on his or her roll-call voting record, spanning the range "-1" to "1" with a more positive number associated with a more liberal ideological disposition and vice versa for more negative numbers.

8. This information was taken from the Congressional Budget Office (2015).

by ARRA, this would be expected to increase lobbying efforts, while the earmark ban should decrease the prevalence. Table 1 provides the summary statistics for all the local-level variables, while table 2 includes summary statistics for all of the state-level variables.

Several potential problems need also be addressed. First, is the potentially endogenous nature of including own-source revenues and expenditures. Additionally, these variables may be highly collinear. Regarding this latter point, I calculate the variance inflation factor (VIF) of every control variable with each of the TEL variables discussed above. While the mean VIF of each model from the local government specifications never exceeds 5.30 (4.55 with the overall TEL index, 5.26 with expenditure limits, and 5.28 with a property tax limit), the individual VIF of the revenue and expenditure variables are quite high, varying from a low of 18.91 to a high of 26.26. Further, the mean VIF from the state-level specifications range between 10.13 and 10.35, which is just above the typically acceptable level of 10. However, excluding own source revenues and expenditures from these latter models decreases the mean VIF to between 2.73 and 3.25. Therefore, in what follows I report results both including and excluding these two variables. Finally, given the panel nature of the dataset employed, both heteroskedasticity and autocorrelation are a concern. To alleviate these potential problems, I apply cluster-robust standard errors, with the clustering applied by state.

Table 1. Summary Statistics for Local Government Varaibles

Variable	Observations	Mean	Std. Dev.	Min	Max
(Log of) Lobbying Expenditures	17668	2.38	4.57	0	13.36
Lobbying Expenditures (Levels)	17668	18284.39	46549.84	0	635000
TEL Index	8834	21.06	11.13	0	38
Local Expenditure Limit (1=Yes)	17668	21.06	11.14	0	1
Local Property Tax Limit (1=Yes)	17668	0.37	0.48	0	1
Population (In Thousands)	17668	103.06	297.46	18.16	8214.43
Per Capita Income (In Thousands)	17668	29.39	10.68	9.99	101.51
% Over 65	17668	12.33	4.31	2.55	37.78
% Unemployment	17668	7.38	3.36	1.49	30.25
% Poverty	17668	10.34	6.58	0.53	38.15
Total Own-Source Revenues (In Millions)	17668	215.53	1604.25	1.544	68454.82
Total Own-Source Expenditures (In Millions)	17668	223.45	1904.68	1.42	81160.83
Democrat US Representative (1=Yes)	17668	0.71	0.45	0	1
House DW-NOMINATE Score	17668	0.102	0.39	-671	1.293
Democrat Mayor (1=Yes)	17668	0.106	0.308	0	1
Gini Coefficient	17668	0.423	0.053	0.28	0.64
% Population Age 5-17	17668	17.78	3.53	2.52	31.86
House of Representatives Committee Chair (1=Yes)	17668	0.26	0.44	0	1
House of Representatives Leadership Role (1=Yes)	17668	0.052	0.22	0	1
American Recovery and Reinvestment Act Expenditures (In Billions)	17668	39.64	71.37	0	235
Earmark Ban (1=Yes)	17668	0.214	0.41	0	1

Table 2. Summary Statistics for State Government Varaibles

Variable	Observations	Mean	Std. Dev.	Min	Max
(Log of) Lobbying Expenditures	850	7.44	5.84	0	14.56
Lobbying Expenditures (Levels)	850	155469	270438	0	2100000
TEL Index	350	8.68	8.49	0	30
State Expenditure Limit (1=Yes)	850	0.14	0.34	0	1
State Revenue Limit (1=Yes)	850	0.10	0.30	0	1
Population (In Hundreds of Thousands)	850	60.04	66.20	4.92	389.94
Per Capita Income (In Thousands)	850	45.73	8.68	28.86	73.51
% Over 65	850	13.23	1.95	5.61	19.43
% Unemployment	850	5.76	2.03	2.27	13.80
% Poverty	850	12.45	3.42	4.20	23.1
Total Own-Source Revenues (In Hundres of Millions)	850	18.97	22.22	1.31	182.59
Total Own-Source Expenditures (In Hundreds of Millions)	850	24.02	27.26	1.61	222.32
Democratic Senate Delegation (1=Yes)	850	0.35	0.48	0	1
Senate DW-NOMINATE Score	850	0.03	0.37	-0.607	0.80
Democrat Governor (1=Yes)	850	0.46	0.50	0	1
Gini Coefficient	850	0.452	0.02	0.402	0.51
% Population Age 5-17	850	22.10	4.14	14.28	32.75
US Senate Committee Chair (1=Yes)	850	0.28	0.45	0	1
US Senate Leadership Role (1=Yes)	850	0.17	0.38	0	1
American Recovery and Reinvestment Act Expenditures (In Billions)	850	37.41	65.15	0	235
Earmark Ban (1=Yes)	850	0.353	0.478	0	1

4. RESULTS AND INTERPRETATION

There are several interesting results obtained from the analysis. Table 3 provides the results when applying local lobbying data. Columns 1 and 2 consider the results for the TEL index both excluding and including own-source revenues and expenditures respectively. Columns 3 and 4 follow the same pattern as do columns 5 and 6 but evaluate the expenditure and property tax limits respectively.

Overall, each result for the local TEL variables (whether the index or simple dummy variables) are statistically significant at conventional levels, regardless if own-source revenues and expenditures are included or excluded. The point estimates indicate that a one-unit increase is associated with a 10.5% increase in local lobbying expenditures respectively. Further, an expenditure limit decreases lobbying expenditures between 92% and 98%, while a property tax limit increases those expenditures between 143% and 151%.

Further, those control variables that were anticipated to have an unambiguous effect generally conform to what was expected. Here, greater inequality is

generally correlated with increased lobbying as is the ARRA, with most specifications significant. Political affiliation is also significant, with more liberal NOMINATE scores and mayoral political affiliation with the Democratic party positively associated with lobbying expenditures.

Next, the results from the state-level analysis are presented in table 4, which follows the same layout as table 3. These results are far less robust than those found at the local level. Further, the sign of the coefficients is not entirely consistent with the local-level results either. First, applying the TEL index indicates that a one-unit increase in that index is associated with a roughly 18% increase in lobbying expenditures, though is only marginally significant in one specification (column 2). Further, while a revenue limit also increases expenditures, it is not statistically significant. However, an expenditure limit is highly significant and indicates that states constrained by such a limit increase lobbying expenditures by nearly 400%. Additionally, the control variables behave as expected, though greater inequality does not indicate a statistically significant relationship.

Overall, these results provide some important implications, especially to the extent that such results are causal. Specifically, it appears that TELs affect local governments much more acutely than they do state governments. Here, while TELs do appear to increase the likelihood that a given state government will lobby the federal government, there is no real statistically significant effect that such limits have on actual expenditures. While a state expenditure limit does have a strong positive relationship with lobbying efforts, revenue limits do not appear to affect this behavior. On the other hand, local governments appear to be much more sensitive to property tax limits as opposed to expenditure limits, and interestingly those local expenditure limits appear to reduce local-government lobbying efforts.

These findings would suggest that constraining the ability to raise revenue has a more significant effect on lobbying activities, at least for local governments, relative to expenditure limits. This result may be because a significant proportion of local revenue is tied to the property tax, and thus may be much more constraining than a general tax limit placed on a state government (which may have many other taxable bases or sources of nontax revenue available).[9] Additionally, stricter TELs also impact local-government behavior much more so than do state TELs. This again may be the result of a relative inability for

9. It may also be the case that voter ideology is playing a role as well, as relatively more frugal voters might lead state and local governments to simply lobby less. However, such ideological factors should be picked up to a large extent with the inclusion of the DW-NOMINATE variable.

Table 3. Municipal-Level OLS Results -- Tax and Expenditure Limits
Dependent Variable = (Log of) Total Lobbying Expenditures

	(1)	(2)	(3)	(4)	(5)	(6)
Local TEL Index	0.105***	0.105***				
	(0.0218)	(0.0217)				
Local Expenditure Limit (1=Yes)			-0.977**	-0.916**		
			(0.455)	(0.439)		
Local Property Tax Limit (1=Yes)					1.512***	1.431***
					(0.491)	(0.496)
Population (In Thousands)	0.00728	0.00875	0.00216	0.00608***	0.00219*	0.00594***
	(0.00952)	(0.0105)	(0.00129)	(0.00162)	(0.00126)	(0.00162)
Per Capita Income (In Thousands)	0.252***	0.255***	-0.00741	-0.00372	-0.0157	-0.0118
	(0.0674)	(0.0666)	(0.0103)	(0.00989)	(0.0108)	(0.0107)
% Over Age 65	-0.0713	-0.0777	-0.0976***	-0.0842***	-0.0880***	-0.0758***
	(0.0995)	(0.102)	(0.0206)	(0.0199)	(0.0226)	(0.0206)
% Age 5-17	0.185	0.184	0.0484	0.0426	0.0361	0.0311
	(0.139)	(0.138)	(0.0498)	(0.0495)	(0.0427)	(0.0426)
% Unemployment	-0.0863	-0.0921	0.0594	0.0679	0.00476	0.0157
	(0.0988)	(0.0980)	(0.0690)	(0.0684)	(0.0620)	(0.0616)
% Poverty	-0.0988	-0.104	-0.00963	-0.00857	0.00238	0.00271
	(0.0632)	(0.0633)	(0.0427)	(0.0419)	(0.0329)	(0.0325)
Gini Coefficient	-1.288	-1.304	17.21***	15.23***	18.53***	16.58***
	(2.167)	(2.153)	(3.491)	(3.624)	(3.450)	(3.603)
Total Own-Source Revenues (In Millions)		0.000819		0.000246		0.000191
		(0.000698)		(0.000580)		(0.000592)
Total Own-Source Expenditures (In Millions)		-0.00230		-0.000895*		-0.000821
		(0.00177)		(0.000499)		(0.000524)
Democrat US Representative (1=Yes)	-0.367	-0.372	2.016***	1.752***	1.931***	1.684***
	(0.346)	(0.342)	(0.450)	(0.512)	(0.383)	(0.427)
US House Committee Chair (1=Yes)	-0.323***	-0.321***	0.352	0.340	0.165	0.163
	(0.0975)	(0.0967)	(0.258)	(0.251)	(0.176)	(0.175)
US House Leadership Role (1=Yes)	0.0829	0.0828	-0.122	-0.186	0.135	0.0616
	(0.147)	(0.145)	(0.500)	(0.502)	(0.393)	(0.402)
House DW-NOMINATE Score	-0.386	-0.393	2.202***	1.909***	2.218***	1.939***
	(0.469)	(0.465)	(0.633)	(0.685)	(0.501)	(0.562)
Democrat Mayor (1=Yes)	0.404*	0.393*	1.003***	0.791***	1.052***	0.848***
	(0.213)	(0.206)	(0.269)	(0.266)	(0.296)	(0.305)
American Recovery and Reinvestment Act Expenditures (In Billions)			0.00375***	0.00381***	0.00342***	0.00349***
			(0.000987)	(0.000980)	(0.00104)	(0.00103)
Earmark Ban (1=Yes)			0.0949	0.168	0.201	0.267
			(0.320)	(0.300)	(0.357)	(0.337)
City Fixed Effect	Y	Y	N	N	N	N
Year Dummy	Y	Y	Y	Y	Y	Y
Observations	8,834	8,834	17,668	17,668	17,668	17,668
R-squared	0.057	0.058	0.121	0.142	0.141	0.160

Robust standard errors clustered by state in parentheses. Constant Suppressed in output tables.

*** p<0.01, ** p<0.05, * p<0.1

Table 4. State-Level OLS Results -- Tax and Expenditure Limits
Dependent Variable = (Log of) Total Lobbying Expenditures

	(1)	(2)	(3)	(4)	(5)	(6)
State TEL Index	0.182	0.187*				
	(0.112)	(0.110)				
State Expenditure Limit (1=Yes)			3.998***	3.982***		
			(0.783)	(0.794)		
State Revenue Limit (1=Yes)					0.620	0.965
					(1.359)	(1.406)
Population (In Thousands)	0.132	0.268	0.0180**	0.0113	0.0160*	0.00685
	(0.205)	(0.249)	(0.00798)	(0.0250)	(0.00873)	(0.0273)
Per Capita Income (In Thousands)	-0.193	-0.187	0.130*	0.125*	0.103	0.0969
	(0.289)	(0.289)	(0.0653)	(0.0654)	(0.0655)	(0.0648)
% Over Age 65	-1.060	-1.016	0.498	0.515	0.272	0.268
	(1.516)	(1.532)	(0.428)	(0.428)	(0.446)	(0.431)
% Age 5-17	-1.607	-1.554	0.788**	0.815**	0.790*	0.811**
	(1.474)	(1.462)	(0.369)	(0.367)	(0.407)	(0.395)
% Unemployment	0.532	0.698	0.523	0.525	0.569	0.556
	(0.518)	(0.539)	(0.359)	(0.352)	(0.394)	(0.385)
% Poverty	-0.314	-0.314	-0.0254	-0.0331	-0.0955	-0.102
	(0.191)	(0.192)	(0.150)	(0.145)	(0.160)	(0.153)
Gini Coefficient			5.446	-0.747	-2.069	-8.837
			(24.46)	(25.19)	(25.99)	(26.51)
Total Own-Source Revenues (In Millions)		0.0475		-0.0856		-0.0964
		(0.144)		(0.124)		(0.130)
Total Own-Source Expenditures (In Millions)		-0.115		0.0916		0.107
		(0.102)		(0.0801)		(0.0815)
Democrat US Senator (1=Yes)	4.367**	4.280*	4.643**	4.837**	4.959**	5.144***
	(2.131)	(2.140)	(2.095)	(2.082)	(1.939)	(1.898)
US Senate Committee Chair (1=Yes)	-0.592	-0.511	-0.130	-0.159	-0.259	-0.302
	(0.576)	(0.586)	(0.542)	(0.561)	(0.551)	(0.574)
US Senate Leadership Role (1=Yes)	0.483	0.568	1.490*	1.429*	1.708*	1.621*
	(0.914)	(0.927)	(0.797)	(0.798)	(0.861)	(0.872)
Senate DW-NOMINATE Score	-0.274	-0.610	5.697**	5.916**	5.867**	6.052**
	(3.051)	(3.043)	(2.355)	(2.353)	(2.533)	(2.548)
Democrat Governor (1=Yes)	1.113*	1.262**	0.757	0.742	0.692	0.662
	(0.557)	(0.586)	(0.688)	(0.690)	(0.721)	(0.720)
American Recovery and Reinvestment Act Expenditures (In Billions)			-0.0504	-0.0485	-0.0703	-0.0670
			(0.0514)	(0.0478)	(0.0519)	(0.0480)
Earmark Ban (1=Yes)			3.073	2.766	4.442	4.012
			(3.062)	(3.026)	(3.478)	(3.316)
State Fixed Effect	Y	Y	N	N	N	N
Year Dummy	Y	Y	Y	Y	Y	Y
Observations	350	350	850	850	850	850
R-squared	0.134	0.140	0.253	0.257	0.205	0.211

Robust standard errors clustered by state in parentheses. Constant Suppressed in output tables.

*** p<0.01, ** p<0.05, * p<0.1

local governments to circumvent those constraints, and potentially greater interjurisdictional competition for federal resources that may accrue as a result of successful lobbying efforts.

Most puzzling is the negative effect found in relation to local expenditure limits and federal lobbying, especially when evaluated next to state expenditure limits which net an opposite result. Given that intergovernmental grants are not actually subject to TEL limits, such an expenditure limit may be more likely to increase the prevalence of federal lobbying. However, it could simply be the case that many times federal grants require some type of matching expenditure by the recipient, which might discourage potential recipients from seeking out such funds through lobbying to begin with.

Further, Kioko and Martell (2012) find that local property tax limits do not result in greater state aid flowing to those lower-level jurisdictions. This can seriously affect a local jurisdiction's ability to pursue the policy goals described by Peterson (1981), i.e. developmental, allocational, and redistributive.

All these factors may incentivize local governments more so than state governments to increase lobbying activity at the federal level, which is consistent with the findings of this paper. Finally, as Park et al. (2018) find, more restrictive TELs do result in greater transfers to local governments during times of fiscal stress, as especially observed during the Great Recession. This current study compliments that finding, with the availability of ARRA resources associated with significantly higher lobbying expenditures, though again there is no apparent effect on state governments. This is also suggestive of how it is that local governments can obtain such transfers, though greater research on other potential avenues is warranted, as this is only one potential channel.

5. CONCLUSION

State and local lobbying efforts at the federal level have been on the rise over the past few decades. This current paper has evaluated how fiscal constraints, and in particular tax and expenditure limits, imposed on various state and local jurisdictions may impact the magnitude that such constraints can have on these expenditures. This study not only adds to the growing literature that evaluates the unintended consequences associated with TELs, but also the theoretical literature that explores how and why state and especially local governments lobby the federal government. For instance, TEL constrained governments tend to shift spending toward off-budget expenditures (Bennet and DiLorenzo 1982) and unconstrained revenue sources (Sun 2014; Wang 2018). Additionally, TEL constrained jurisdictions may find the pursuit of developmental and allocational goals, a la Peterson (1981), to be even more difficult to pursue and achieve.

The results indicate that TELs have a larger effect on the lobbying efforts made by local governments than they do state governments. This is true about the overall restrictiveness of a particular TEL and also when evaluating either a tax limit or expenditure limit individually. Somewhat surprisingly, while expenditure limits increase state lobbying efforts at the federal level, they are associated with a reduction in these efforts at the local level. Further, tax limits are in fact positively correlated with increased lobbying expenditures made by both state and local governments, however this result is not robust at the state level.

These findings provide several additional implications that future research could evaluate. Specifically, these results raise interesting implications regarding voter preferences, especially in those jurisdictions where citizens desire a relatively smaller government. In particular, do these citizens genuinely prefer smaller government, or do they still prefer a relatively larger bundle of publicly provided goods paid for by other jurisdictions and acquired through lobbying? Field work and survey collection detailing how exactly TELs might impact lobbying expenditures and decision-making by state and local public officials would also help advance a better understanding of this relationship.

Additional research would also benefit from a deeper dive into state and local lobbying behavior specifically regarding the American Recovery and Reinvestment Act, political affiliation, and income inequality. ARRA was a significant piece of legislation, but from the results presented above appears to have influenced local governments much more so than state governments. This result was also true for income inequality. Finally, the results for members of Congress in leadership and chairmanship positions in inconclusive. This would also warrant a deeper dive into drawing out the implications of this, which would add important richness to the literature.

REFERENCES

Abrams, B.A. and W.R. Dougan (1986) "The Effects of Constitutional Restraints on Governmental Spending", *Public Choice*, 49(2):101-116.

Advisory Commission on Intergovernmental Relations (1987) *Fiscal Discipline in the Federal System: National Reform and the Experience of the States*, Washington, D.C.

Amiel, L., S. Deller, and J. Stallmann (2009) "The Construction of a Tax and Expenditure Limitation Index for the US." *University of Wisconsin-Madison Staff Paper 536.*

Amiel, L., S. Deller, J. Stallmann, and C. Maher (2014) "Does the Restrictiveness of State Tax and Expenditure Limitations Affect State Revenues and Expenditures?", *International Journal of Public Administration*, 37(4):237-248.

Bae, S. and T. Gais (2007) "The Effects of State-Level Tax and Expenditure Limitations on Revenues and Expenditures", *Rockefeller Institute Policy Brief*.

Bails, D. and M.A. Tieslau (2000) "The Impact of Fiscal Constitutions on State and Local Expenditures", *Cato Journal*, 20(2):255-277.

Bayoumi, T., M. Goldstein, and G. Woglom (1995) "Do Credit Markets Discipline Sovereign Borrowers? Evidence from U.S. States", *Journal of Money, Credit and Banking*, 27(4):1046-1059.

Bennett, James T. and Thomas J. DiLorenzo (1982). "Off-Budget Activities of Local Government: The Bane of the Tax Revolt", *Public Choice*, 39(3):333-342.

Bowler, S. and T. Donovan (2004) "Evolution in State Governance Structures: Unintended Consequences of State Tax and Expenditure Limits", *Political Research Quarterly*, 59(2):189-196.

Brooks, L. and J.H. Phillips (2010) "An Institutional Explanation for the Stickiness of Federal Grants", *The Journal of Law, Economics, and Organization*, 26(2):243-264.

Cabasés, F., P. Pascual, and J. Vallés (2007) "The Effectiveness of Institutional Borrowing Restrictions: Empirical Evidence from Spanish Municipalities", *Public Choice*, 131(3-4):293-313.

Cammisa, Anne Marie (1995) *Governments as Interest Groups: Intergovernmental Lobbying nd the Federal System*, Praeger Publishers: Westport, CT.

Carr, J. B. (2006) "Local Government Autonomy and State Reliance on Special District Governments: A Reassessment", *Political Research Quarterly*, 59(3): 481-492.

Carr, J.B. and J. Farmer (2011) "Contingent Effects of Municipal and County TELs on Special District Usage in the United States", *Publius: The Journal of Federalism*, 41(4):709-733.

Congressional Budget Office (2015) *Estimated Impact of the American Recovery and Reinvestment Act on Employment and Economic Output in 2014*, Washington D.C.

Deller, S., C. Maher, L. Amiel, and J. I. Stallmann (2013) "The Restrictiveness of State Tax and Expenditure Limitations and State Debt", *Public Finance and Management*, 13(1):1-25.

Dove, J.A. (2014) "Financial Markets, Fiscal Constraints, and Municipal Debt: Lessons and Evidence from the Panic of 1873", *Journal of Institutional Economics*, 10(1):71-106.

Dove, J.A. (2016) "Do Fiscal Constraints Prevent Default? Historical Evidence from U.S. Municipalities", *Economics of Governance*, 17(2):185-209.

Dove, J.A. (2019) "Is There a Relationship Between TELs and Default? Evidence from US Municipalities", *Papers in Regional Science*, 98(1):433-450.

Eichengreen, B. (1992) "Should the Maastricht Treaty be Saved?" *Princeton Studies in International Finance #74*. Princeton University Press: Princeton.

Epple, D. and C. Spatt (1986). "State Restrictions on Local Debt: Their Role in Preventing Default", *Journal of Public Economics*, 29(2):199-221.

Farnham, P.G. (1985) "Re-Examining Local Debt Limits: A Disaggregated Analysis", *Southern Economic Journal*, 51(4):1186-1201.

Goldstein, R. and H. Young You (2017). "Cities as Lobbyists", *American Journal of Political Science*, 61(4):864-876.

Goodman, C.B. and S.M. Leland (2019) "Do Cities and Counties attempt to Circumvent Changes in their Autonomy by Creating Special Districts?", *American Review of Public Administration*, 49(2):203-217.

Hays, R.A. (1991) "Intergovernmental Lobbying: Toward an Understanding of Issue Priorities", *Western Political Quarterly*, 44(4):1081-1098.

Johnson, C.L. and K.A. Kriz (2005) "Fiscal Institutions, Credit Ratings, and Borrowing Costs", *Public Budgeting & Finance*, 25(1):84-103.

Joyce, P.G. and D.R. Mullins (1991) "The Changing Fiscal Structure of the State and Local Public Sector: The Impact of Tax and Expenditure Limitations", *Public Administration Review*, 51(3):240-253.

Kioko, S.N. and C.R. Martell (2012) "Impact of State-Level Tax and Expenditure Limits (TELs) on Government Revenues and Aid to Local Governments", *Public Finance Review*, 40(6):736-766.

Kousser, T., M.D. McCubbins, and E. Moule (2008) "For Whom the TEL Tolls: Can States Tax and Expenditure Limits Effectively Reduce Spending?", *State Politics & Policy Quarterly*, 8(4):331-361.

Krol, R. (2007) "The Role of Fiscal and Political Institutions in Limiting the Size of State Government", *Cato Journal*, 27(3):431-445.

Loftis, M.W. and J.J. Kettler (2008) "Lobbying form Inside the System: Why Local Governments Pay for Representation in the U.S. Congress", *Political Research Quarterly*, 68(1):193-206.

Lowry, R.C. (2001) "A Visible Hand? Bond Markets, Political Parties, Balanced Budget Laws, and State Government", *Economics & Politics*, 13(1):49-72.

Lowery, D. (1983) "Limitations on Taxing and Spending Powers: An Assessment of their Effectiveness", *Social Science Quarterly*, 64(2):247-263.

Lowery, D. (2007) "Why do Organized Interests Lobby? A Multi-Goal, Multi-Context Theory of Lobbying", *Polity*, 39(1):29-54.

Marbach, J.R. and J.W. Leckrone (2002) "Intergovernmental Lobbying for the Passage of TEA-21", *Publius: The Journal of Federalism*, 32(1):45-64.

Maher, C.S., S. Park, and J. Harrold (2016) "The Effects of Tax and Expenditure Limits on Municipal Pension and OPEB Funding During the Great Recession", *Public Finance and Management*, 16(2):121-146.

McCubbins, M.D. and E. Moule (2010) "Making Mountains of Debt out of Moleholes: The Pro-Cyclical Implications of Tax and Expenditure Limitations", *National Tax Journal*, 63(3):602-622.

Mengedoth, J. and S. Pinto (2015) "Show and TEL: Are Tax and Expenditure Limits Effective?", *Econ Focus*, Federal Reserve Bank of Richmond.

Mullins, D.R. (2004) "Tax and Expenditure Limitations and the Fiscal Response of Local Government: Asymmetric Intra-Local Fiscal Effects", *Public Budgeting & Finance*, 24(4):111-147.

Mullins, D.R. and P.G. Joyce (1996) "Tax and Expenditure Limitations and State and Local Fiscal Structure: An Empirical Assessment", *Public Budgeting & Finance*. 16(1):75-101.

New, M.J. (2010) "U.S. State Tax and Expenditure Limitations: A Comparative Political Analysis", *State Politics & Policy Quarterly*, 10(1):25-50.

Olson, M. (1965) *The Logic of Collective Action: Public Goods and the Theory of Groups*, Harvard University Press.

Park, Ji-Hyung, S. Park, and C.S. Maher (2018) "The Effects of Tax and Expenditure Limitations (TELs) on Municipal Fiscal Outcomes During a Period of Fiscal Distress", *Public Finance and Management*, 18(1):84-110.

Peterson, P.E (1981) *City Limit*, Chicago: University of Chicago Press.

Peterson, P.E. (1995) *The Price of Federalism*, The Brookings Institution: Washington, D.C.

Poole, K.T. and H. Rosenthal (1985) "A Spatial Model for Legislative Roll Call Analysis", *American Journal of Political Science*, 29(2):357-384.

Poterba, J.M. and K. Rueben (1999) "State Fiscal Institutions and the U.S. Municipal Bond Market." in: James M. Poterba (ed) *Fiscal Institutions and Fiscal Performance*, Chicago: University of Chicago Press.

Poulson, B. (2005). *Grading the States' Tax and Expenditure Limits: A Fiscal Discipline Report Card*, Americans for Prosperity Foundation.

Resnick, P. (2004) *Taxpayer Report: Fiscal Cap Style TELs in the States: An Inventory and Evaluation*, CPEC Center for Tax Policy. Denver, CO.

Revelli, F. (2013) "Tax Mix Corners and Other Kinks", *The Journal of Law and Economics*, 56(3):741-776.

Rose, S. (2010) "Institutions and Fiscal Sustainability", *National Tax Journal*, 63(4):807-837.

Rueben, K. and M. Randall (2017) "Tax and Expenditure Limits: How States Restrict Revenues and Spending", *Urban Institute*. Washington, D.C.

Schlozman, K.L., P.E. Jones, H. Young You, T. Burch, S. Verba, and H. E. Brady (2015) "Organizations and the Democratic Representation of Interests: What Does it Mean When Those Organizations Have no Members?", *Perspectives on Politics*, 13(4):1017-1029.

Seljan, E.C. (2014) "The Limits of Tax and Expenditure Limits: TEL Implementation as a Principal-Agent Problem", *Public Choice*, 159(3):485-501.

Shadbegian, R.J. (1996) "Do Tax and Expenditure Limitations Affect the Size and Growth of State Government?", *Contemporary Economic Policy*, 14(1):22-35.

Shadbegian, R.J. (1999) "The Effect of Tax and Expenditure Limitations on the Revenue Structure of Local Government, 1962-87", *National Tax Journal*, 52(2):221-238.

Skidmore, M. (1999) "Tax and Expenditure Limitations and the Fiscal Relationships Between State and Local Governments", *Public Choice*, 99(1-2):77-102.

Stallmann, J.I. (2007) "Impacts of Tax & Expenditure Limits on Local Governments: Lessons from Colorado and Missouri", *The Journal of Regional Analysis & Policy*, 37(1):62-65.

Stigler, G.J. (1971) "The Theory of Economic Regulation", *The Bell Journal of Economics and Management Science*, 2(1):3-21.

Sun, R. (2014) "Reevaluating the Effect of Tax and Expenditure Limitations: An Instrumental Variable Approach", *Public Finance Review*, 42(1):92-116.

Tullock, G. (1980). "Efficient Rent-Seeking." In J.M. Buchanan, R. Tollison, and G.Tullock (Eds) *Toward a Theory of the Rent-Seeking Society*, College Station: Texas A&M University Press.

Wang, S. (2018) "Effects of State-Imposed Tax and Expenditure Limits on Municipal Revenue Reliance: A New Measure of TEL Stringency with Mixed Methods", *Publius: The Journal of Federalism*, 48(2):292-31