Tax Expenditure Limitations (TELs) and State Expenditure Structure

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Introduction to the Project

What are TELs?

- Tax Expenditure Limitations (TELs) are limits placed upon a government’s ability to expand by levying new taxes or by incurring new expenditures.
- TELs can be constitutional (amendments to state constitutions often passed by popular vote) or statutory (enacted by legislatures).
- TELs have become popular as states have responded to the fiscal crisis that started in 2008.
Purpose of the Study

- This paper analyzes the impact of TELs on different types of state expenditures.
- This study provides a comparative analysis of different types of TELs on the state level and aims to evaluate the effect of TEL policy on state expenditure structures.
- Are expenditures truly reduced via TELs?
- If so, which expenditures are reduced?
History of TELs across the States

- Tax Revolt of 1970s
  - Proposition 13 in California (1978)
    - To provide relief from increasing property tax and to place a limit on the growth of California government
History of TELs across the States

- Fiscal conservatism movement
  - Very visible limit on growth in a nation with a history of rapid continued growth
    - Compounded by Gann Amendment (1979) which further limited taxation authority of California
  - Third proposal Proposition 9 (1980) rejected by voters
    - Thought to be the end of Taxpayer Revolt.

- Was this only the beginning?
History of TELs across the States

- TABOR in Colorado
  - New image for TELs: “Taxpayer Bill of Rights”
    - Amendment to Colorado constitution in 1992
      - Required voter approval before any type of tax increase or debt, placed cap on property tax, reduced state spending
  - Reduced in scope by Amendment 23 (2000)
    - An effort to negate unintended effects of TABOR
  - Further reduced by Referendum C (2005)
    - Five-year suspension of TABOR
    - Problems with higher education and public health being more negatively effected than other outlays
    - State residents were unhappy with reductions in service
    - TABOR did not have significant positive impact on Colorado
      - Employment growth was less than peer states
History of TELs across the States

- States with TELs
History of TELs across the States

- Since TABOR in Colorado, there have been 26 major TEL initiatives on Ballots across the states
  - Only 10 of them have been implemented
    - One of those 10 was overturned 10 years later (Washington state)
  - Many were defeated at ballot or did not make it to ballot
Literature Review

- Fischel (1989)
  - Proposition 13 was inevitable in California due to the Taxpayer Revolt
  - Serrano v. Priest led to using property tax funds to fund public schools
    - This led to schools in more well-to-do areas receiving more funding
    - Equalizing school funding created more pushback
    - This, in part, led to the tax revolt, which led to the first major TEL
Literature Review

- **Widavsky (1980)**
  - Early study of TELs
  - Also felt that the TEL movement was inevitable
  - Spending has outpaced growth of nation

- **Bennett and DiLorenzo (1982)**
  - Reviewed early TELs from before Prop 13
  - Predicted state and per capita spending would increase without TELs
Literature Review (cont’d)

- Marlow and Joulfaian (1989)
  - Off-budget governmental expenditures increase the size of governments
  - Possible way to circumvent TELs
  - Governments must be able to respond to crises, and TELs are sometimes able to be overridden
Literature Review

- Mullins and Joyce (1996)
  - TELS can increase burdens on governments
    - When ability to tax and spend are limited, a dilemma is created
    - TELs lead to increased responsibility for states
    - Believed that TELs would NOT be able to limit the growth of government in the long run
Literature Review (cont’d)

  - “Fiscal Vice” after TABOR in Colorado
    - Severely limited Colorado’s ability to adjust to recessionary cycles
    - TABOR potentially increases the risk of municipal debt issues during economic downturns
    - There have been positive results from TABOR, but the potential for risk is high
Literature Review (cont’d)

  - Unforeseen downstream effects of TELs
    - Diminishing quality of public goods as a result of less funding
Literature Review (cont’d)

  - Equalizing factor not always preferred by citizens (well-to-do areas rely on higher tax rates for better levels of service – lower wealth areas may desire better services)
  - Four negative outcomes of TELs possible:
    - Reduced efficiencies
    - Increased costs of service delivery
    - Reduced ability to coordinate services
    - Greater compliance costs
Literature Review (cont’d)

- Hill, et. al. (2006)
  - Study of TELs in one state (Ohio)
  - Built-in flaw with TELs
    - TELs do not estimate what the long term impacts may be.
    - Downstream effects require more study and estimation
Literature Review (cont’d)

- Brome and Saas (2006)
  - Three arguments for why TELs can be successful:
    - TELs can stop governments from becoming larger than the public wants or needs
    - Lower tax burdens from TELs will encourage new businesses to invest in the area
    - TELs promote fiscal discipline
  - TELs however are not ideal of anticipating emergent needs
Literature Review (cont’d)

- Yuan (2007)
  - TELs have constrained spending
    - But led to reduced services, service quality
    - Double-edged sword
      - What are the long-term effects of reduced service, service quality?
Literature Review (cont’d)

- Sun (2014)
  - TELs can be successful in reducing some taxes (i.e. property taxes)
    - At the same time can result in substantial increases in other taxes (sales, income, user charges)
    - Reduction of property taxes can lead to increased expenses of other types, which are passed down to citizens
  - TELs can sometimes lead to larger governments
Literature Review (cont’d)

- Staley (2015)
  - Volatility
    - Fluctuation from the state economy equilibrium
      - Stability vs. volatility
    - Do TELs have an effect on volatility?
      - States with more binding TELs are associated with greater levels of volatility
  - Stringency
    - How binding is the TEL?
Conclusions Drawn from Literature

- All literature on subject is of recent vintage
- Literature will likely improve over time as more of the long-term effects of TELs appear
- TELs can be effective in decreasing tax revenue and reducing expenses
  - This isn’t always a good thing – service reductions and inability to respond to crises are unexpected consequences
Methods

- Research Design and sources of data
  - Panel of 50 states over five year period (2006 through 2011)
    - Designed to capture effects before and after 2008 recession
  - Data collected from National Conference of State Legislatures, Census Bureau and Multistate Associates, etc.
    - TELs, state expenditures by type, type of governments
Model

- In this study the impact of TELs on municipal revenue was estimated through a set of regressions expressed in the following equation:
  \[ \text{Exp}_{it} = \alpha_1 \text{TEL}_{it} + \alpha X_{it} + \beta F_{it} + u_i + \theta_t + \varepsilon_{it} \]
- where \( \text{Exp}_{it} \) is different type of state expenditure or expenditure from different sources for state \( i \) in year \( t \) in different model specifications, \( \text{TEL}_{it} \) is a dummy variable for state \( i \) in year \( t \) (1=state
- \( i \) in year \( t \) subject to TELs (0 = state \( i \) in year \( t \) not subject to TELs), \( X \) is a vector of control variable (total state revenue per capita), \( F \) is a vector of our hypothesis variables (mainly the different types of outlays per capita and the debt and interest payments per capita), \( u \) is a state fixed effect (for a fixed-effects model), \( \theta \) is a time fixed effect, \( \varepsilon_{it} \) is the error term, and \( i \) and \( t \) are, respectively, the state and time subscripts.
Hypotheses

- The presence of TEL in a state has a negative impact on:
  - State general expenditures
  - Police
  - Corrections
  - Education
  - Highways
  - Parks
  - Resources
  - Hospitals
  - Healthcare

- The presence of TEL in a state increases:
  - State outlays on debt interest payments
  - State outlays on total debt
Measures and Variables

- Populations used to control for state size
- All independent and control variables are per capita
- Independent variable: TEL
- Control variable: state total revenues per capita to control for state fiscal solvency
- Dependent variables: expenses and debt
Research Model

- Random Effects GLS regression
- Controls for political factors, time trends, populations and serial correlations
- Econometrically, we had to choose between running a fixed effect or random effect model. The Hausman test for random effects versus fixed effects was used to choose between the more efficient random effect model (RE) and the more consistent fixed effect model (FE).
Results

- **Marginally supported**: TELs have a negative effect on spending for general expenditures, police, parks, and increases state spending on debt

- **Supported**: TELs have a negative effect on spending for corrections, education, highways, natural resources, and increases state spending on debt interest payments

- **Not supported**: TELs have a negative effect on spending for hospitals and healthcare
## Results

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>Coefficient</th>
<th>Supported/Not supported</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypothesis 1: The presence of TELs in state has a negative impact on state general expenditures.</td>
<td>-0.123†</td>
<td>Marginally supported</td>
</tr>
<tr>
<td>Hypothesis 2: The presence of TELs in state has a negative impact on state spending on police.</td>
<td>-0.007*</td>
<td>Marginally supported</td>
</tr>
<tr>
<td>Hypothesis 3: The presence of TELs in state has a negative impact on state spending for corrections.</td>
<td>0.017***</td>
<td>Supported</td>
</tr>
<tr>
<td>Hypothesis 4: The presence of TELs in state has a negative impact on state spending on education.</td>
<td>0.01**</td>
<td>Supported</td>
</tr>
<tr>
<td>Hypothesis 5: The presence of TELs in state has a negative impact on state spending on highways</td>
<td>0.05**</td>
<td>Supported</td>
</tr>
<tr>
<td>Hypothesis 6: The presence of TELs in state has a negative impact on state spending on parks.</td>
<td>0.004*</td>
<td>Marginally supported</td>
</tr>
<tr>
<td>Hypothesis 7: The presence of TELs in state has a negative impact on state spending on natural resources.</td>
<td>0.023***</td>
<td>Supported</td>
</tr>
<tr>
<td>Hypothesis 8: The presence of TELs in state has a negative impact on state spending on hospitals.</td>
<td>0.011**</td>
<td>Not supported</td>
</tr>
<tr>
<td>Hypothesis 9: The presence of TELs in state has a negative impact on state spending on healthcare.</td>
<td>0.007**</td>
<td>Not supported</td>
</tr>
<tr>
<td>Hypothesis 10: The presence of TELs in state increases state spending on debt interest payments</td>
<td>0.032***</td>
<td>Supported</td>
</tr>
<tr>
<td>Hypothesis 11: The presence of TELs in state increases state spending on total debt.</td>
<td>0.637†</td>
<td>Marginally supported</td>
</tr>
</tbody>
</table>
Results

- The presence of TEL in a state has a negative impact on:
  - State general expenditures
  - Police
  - Corrections
  - Education
  - Highways
  - Parks
  - Resources

- The presence of TEL in a state increases:
  - State outlays on debt interest payments
  - State outlays on total debt
Discussion

- US has had a marked history of growth and expansion
  - TELs seek to limit government size
  - Rose to national prominence with Proposition 13 and the Taxpayer Revolt and later with TABOR in Colorado in 1992
  - TELs increased in popularity during 2008 recession, but not as many passed as were introduced
- TELs can limit the size of government
  - But not always permanently, as off-budget transactions can re-inflate governments
  - No long-term data on effects of TELs yet
Conclusions

- Fiscal pressure continues to mount
  - TELs can be a popular solution
    - More research and analysis needs to be done on long-term effects of TELs
    - TELs can lead to larger governments as governments are forced to respond to crises
    - TELs can lead to unforeseen increased expenditures in other categories
    - TELs can be successful in some areas, however, and they must be used with care
Strengths

- Expansive data set across all 50 states
- Five year data set
Limitations

- Data is a few years old
- Data does not extend back to beginning of Tax Revolt
- This study does not control for locally imposed TELs due to the lack of data.
- This study focuses on a period in which the fiscal crisis set in. This might arguable have made the state government even more reluctant to sanction expenditure increases, as doing so would have had a contractive effect on the economy.
Future Research

- Expanding on Sun’s (2014) study
  - More analysis needs to be done on municipal TELs
    - Gap in the scholarly research
    - Bigger data sets across major municipalities
    - What can this teach us about states?
    - Do municipalities have different issues than states with regards to TELs?
Implications of study

- TELs will remain popular
- We must learn from TELs of the past
- We must continue to analyze TEL policy
Thank you
Appendix 1: Operational Definitions

- TEL – a legal limit passed in an individual governmental unit to place a cap on levies and expenditures, or both
- Tax Revolt – period in the late 1970s US where popular sentiment turned against the expansion of government
- TABOR – Taxpayer Bill of Rights. A high profile Colorado TEL amendment
- Constitutional TEL – TEL amendment to state constitution
- Statutory TEL – TEL enacted through legislation
- Appropriations – funds earmarked for a particular purpose
- Per capita – per person (per taxpayer/state resident)
- Tax levy – amount of revenue raised by enacting a tax
- Volatility – amount of positive or negative change from normal operations
Appendix 2: Practice Model

- Random effect model was used for 50 states during period of 2006 – 2011
  - Analyzed how stringently binding TELs (among other factors) affected lower levels of state expenditures for police, parks, natural resources and highway expenditures
- Model avoided the problem of time-invariant region characteristics such as geography and demographics