It's All Very Taxing

Interstate Tax Competition and the Balanced Budget

Ian Peters

Eastern Connecticut State University

November 20, 2015

Background

- To recover from the Great Recession, states have been doing whatever they can to create jobs
- Connecticut, 2014: Governor Dannel Malloy offers $400 million to UTC
- Nevada, 2014: State offers $1 billion to Tesla Motors
- Massachusetts, 2015: State Senator Eric Lesser offers up to $100,000 to businesses investing in "Gateway Cities"

Tax Competition

- Large Scale
  - Chirinko and Wilson (2011) - Tax competition is like "riding on a seesaw" in the United States
  - States tend to reduce their taxes when their neighbor raises them
  - "Wisconsin is open for business. In these challenging economic times while Illinois is raising taxes, we are lowering them." -Governor Scott Walker (2011)
- Small Scale
  - Cassell and Turner (2010) found "race to the bottom" tax competition in Ohio
  - Enterprise zone program encouraged municipalities to reduce tax rates to attract business
  - Similar effects have been found in Switzerland by Rossi and Dafflon (2004) and Feld et al. (2010)

The Problem with Tax Competition

- When tax competition is ineffective, state governments lose out on revenue from businesses that have remained in their state
- Genschel (2002) argues that corporate taxes make up only a small part of tax revenue, so competition shouldn't be an issue
- Roe (2009) points out that in Delaware, a state with more corporations than people, 17% of the state budget comes from incorporation fees

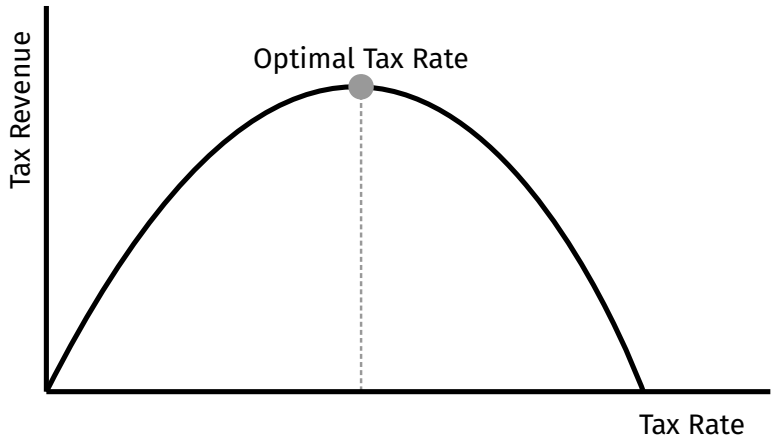
The Role of this Project

Given that state governments are not supposed to accumulate deficits and are required to balance their budget every year; this paper will focus on how these governments attempt to create that balance in the age of tax competition.

- Do states raise taxes on consumers or businesses?
- Do states cut spending on government programs?
- Differences in competitive behavior between small and large states

Methods and Theory

- The Laffer curve, which measures the relationship between tax rates and tax revenues
- Quadratic relationship, there is a certain point where government revenues are maximized
- If the government goes above this level, then it starts losing revenues

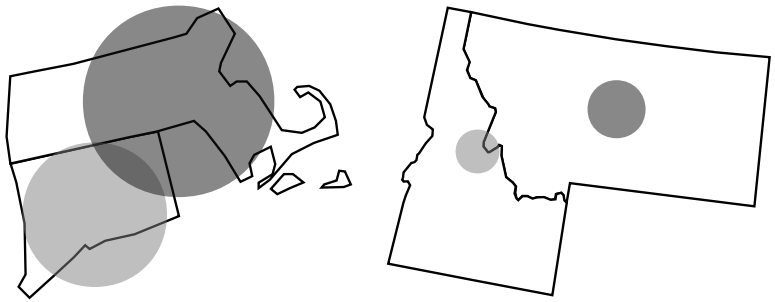


Methods and Theory

- Keynesian economic theory assumes that governments should spend more during recessions, to help boost the economy, even if it means taking a deficit
- This proves to be a problem for state governments, because they cannot incur deficits (however, they can issue bonds)
- The Ricardian equivalence expects governments to spend more than they take in during recessions, and vice-versa during expansions
- Based on the Ricardian equivalence, this project will assume, in the long run, that state governments spend as much as they take in

Methods and Theory

- Location theory, used in this project, will be new to tax competition literature, particularly in the United States
- Does tax competition affect small and large states differently?
- Is tax competition more effective in small states, as compared to large states?



Methods

- Three econometric models will be created to estimate the effects of tax competition on state budget balances
  - Change in state government revenue sources
    - Total corporate tax revenue
    - Income tax revenue as percentage of total revenue
  - Change in state government expenditures
- Data will be collected from various government sources, from 1980 to 2012
- Modeling will be performed using statistical software, Stata/SE 8.2

Methods

$$CORPREV = \alpha + \beta_1 CORPTAX + \beta_2 CORPTAX^2 + \beta_3 INCTAX + \beta_4 UNEMP + \beta_5 EDU + \beta_6 POP + \beta_7 ENTRY(1/CORPTAX, INF, EDU, MINWG, SALESTAX) + \epsilon \quad (1)$$

$$GOVEXP = \alpha + \beta_1 CORPTAX + \beta_2 CORPTAX^2 + \beta_3 INCTAX + \beta_4 INCTAX^2 + \beta_5 UNEMP + \beta_6 FEDSUB + \beta_7 INT + \beta_8 POP + \beta_9 ENTRY(1/CORPTAX, INF, EDU, MINWG, SALESTAX) + \epsilon \quad (2)$$

$$INCREV = \alpha + \beta_1 CORPTAX + \beta_2 CORPTAX^2 + \beta_3 INCTAX + \beta_4 INCTAX^2 + \beta_5 UNEMP + \beta_6 EDU + \beta_7 ENTRY(1/CORPTAX, INF, EDU, MINWG, SALESTAX) + \epsilon \quad (3)$$

Preliminary Results

- 5 of 48 states removed due to nonsensical data or outliers
- Regressions performed in Stata (random and fixed effects)
  - Ordinary least squares (OLS)
  - Generalized least squares (GLS)
    - ★ Used to correct for heteroskedasticity and autocorrelation
  - Two-stage least squares (instrumental variable *ENTRY*)
- *CORPREV*, *GOVEXP*, and *INCTAX* models have R^2 between 0.58 and 0.64
- *CORPREV*, *GOVEXP* models are very sensitive to specification
  - Possible multicollinearity caused by *GSP*

Preliminary Results

- Significant results using GLS fixed effects
  - *CORPTAX* and *INCTAX* are significant predictors of *CORPREV*
  - *CORPTAX*, but not *INCTAX*, is a significant predictor of *GOVEXP*
  - *INCTAX*, but not *CORPTAX*, is a significant predictor of *INCREV*
- According to the models, state governments do not raise taxes on individuals in response to ineffective tax competition
- Instead, state governments respond by cutting spending, which may be considered the lesser of the two evils presented

Questions?