Usage of Specialized Service Delivery: Economics or Institutions?

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Research Question

What is the role state fiscal institutions in the usage of special districts at the local level?

Motivations

- Previous research on the role of state fiscal institutions and special districts has been confusing at best
- TELs, structural and functional home rule have an inconsistent influence on the number of special districts in a given area.

Deficiencies in Previous Research

- Counts of special districts likely overstates (and understates) the number of operational special districts in an area
  - Overstates the count in the actual data by including districts that have no spending or no employees
  - Understates the actual count of special districts because of the Census of Government's definition
- Features of the preferred statistical model (Negative Binomial Regression) does not allow for incorporation of locational fixed effects

Empirical Model

- Time Period: 1972-2012, 5 year increments
- Unit of Analysis: County (i =3,071, n =27,528)
- Data Sources
  - Census of Governments
  - ACIR
  - Krane et al (2000)
  - BEA, BLS, SEER

Model Specification

$$share_{it} = \theta_t + \boldsymbol{\beta_1} + \boldsymbol{\beta_2} + \delta_i + \upsilon_{it}$$

Where,

- $\boldsymbol{\beta_1}$ is a vector of institutions variables
- $\boldsymbol{\beta_2}$ is a vector of economic variables
- δ_i is county fixed effects
- θ_t is year fixed effects
- υ_{it} is the usual composite error term

Model Specification

Independent Variables

Institutions

- TEL, city
- TEL, county
- Debt limit, city
- Debt limit, county
- Functional home rule, city
- Functional home rule, county

Economics

- Personal income, per capita
- Population
- Employment, per capita
- % of population <19
- % of population >65
- Count of special districts

Model Specification

Methodology

- Dependent variable is a proportion so OLS potentially will deliver predicted values outside of the range [0,1]
- A panel fractional probit model developed by Papke and Wooldridge will be utilized
- County and year fixed effects
- Bootstrapped standard errors that are robust to autocorrelation and heteroskedasticity are included

Results

Summary Statistics

Variable	Mean	St. Dev.	p25	p75
Curr. exp. share	0.067	0.101	0.007	0.077
Cap. exp. share	0.107	0.169	0.001	0.138
TEL, city	0.507	0.500	0.000	1.000
TEL, county	0.523	0.499	0.000	1.000
Debt limit, city	0.915	0.279	1.000	1.000
Debt limit, county	0.852	0.355	1.000	1.000
Functional HM, city	0.729	0.444	0.000	1.000
Functional HM, county	0.413	0.492	0.000	1.000

Results

Current Expenditures

Model:	Linear	Fractional Probit		Fractional Probit	
Estimation method:	Fixed effect	Pooled QMLE		GEE	
	Coefficient	Coefficient	APE	Coefficient	APE
TEL (City)	-0.0017	0.0117	0.0015	0.0158	0.0020
	(0.002)	(0.020)	(0.003)	(0.016)	(0.003)
TEL (County)	-0.0014	-0.0245	-0.0031	-0.0134	-0.0017
	(0.002)	(0.019)	(0.002)	(0.016)	(0.003)
DEBTLIM (City)	-0.0203**	-0.1328**	-0.0168**	-0.0730	-0.0093*
	(0.006)	(0.049)	(0.006)	(0.038)	(0.004)
DEBTLIM (County)	0.0113*	-0.0245	0.0135**	0.1062**	0.0135**
	(0.005)	(0.019)	(0.006)	(0.033)	(0.004)
FUNC HM (City)	-0.0090**	-0.0872**	-0.0110**	-0.1051**	-0.0134**
	(0.003)	(0.027)	(0.003)	(0.019)	(0.003)
FUNC HM (County)	0.0044*	0.0622**	0.0078**	0.0504**	0.0064**
	(0.002)	(0.020)	(0.003)	(0.016)	(0.002)

Results

Current Expenditures

Model:	Linear	Fractional Probit		Fractional Probit	
Estimation method:	Fixed effect	Pooled QMLE		GEE	
	Coefficient	Coefficient	APE	Coefficient	APE
PCY	-0.0001	-0.0005	-0.0001	-0.0008	-0.0001
	(0.000)	(0.001)	(0.000)	(0.001)	(0.000)
POP (1,000s)	-0.0000	-0.0001*	-0.0000	-0.0002**	-0.0000**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
PCJOB	0.0252*	0.1593**	0.0201**	0.2434**	0.0310**
	(0.012)	(0.065)	(0.008)	(0.059)	(0.008)
AGE $<$ 19	0.0158	-0.2153	-0.0272	-0.5577*	-0.0710*
	(0.032)	(0.299)	(0.037)	(0.259)	(0.033)
AGE $>$ 65	0.1324**	0.8874**	0.1119**	0.9284**	0.1182**
	(0.040)	(0.314)	(0.038)	(0.255)	(0.032)
SPDIST	0.0011**	0.0046**	0.0006**	0.0060**	0.0008**
	(0.000)	(0.001)	(0.000)	(0.001)	(0.000)

Results

Capital Expenditures

Model:	Linear	Fractional Probit		Fractional Probit	
Estimation method:	Fixed effect	Pooled QMLE		GEE	
	Coefficient	Coefficient	APE	Coefficient	APE
TEL (City)	0.0187**	-0.1750**	0.0230**	-0.0908	-0.0163
	(0.008)	(0.059)	(0.008)	(0.048)	(0.009)
TEL (County)	-0.0214**	0.2423**	-0.0253**	0.1062*	0.0190*
	(0.008)	(0.061)	(0.008)	(0.048)	(0.010)
DEBTLIM (City)	-0.0095	-0.1336**	-0.0050	-0.1224**	-0.0219**
	(0.013)	(0.053)	(0.013)	(0.046)	(0.008)
DEBTLIM (County)	0.0147	0.1244**	0.0179	0.1110**	0.0199**
	(0.008)	(0.047)	(0.010)	(0.039)	(0.007)
FUNC HM (City)	-0.0071	-0.2895**	-0.0112	-0.2270**	-0.0407**
	(0.007)	(0.032)	(0.008)	(0.024)	(0.005)
FUNC HM (County)	0.0106*	0.0490	0.0123*	0.0570**	0.0102**
	(0.005)	(0.028)	(0.006)	(0.020)	(0.004)

Results

Capital Expenditures

Model:	Linear	Fractional Probit		Fractional Probit	
Estimation method:	Fixed effect	Pooled QMLE		GEE	
	Coefficient	Coefficient	APE	Coefficient	APE
PCY	-0.0018**	-0.0092**	-0.0016**	-0.0064**	-0.0012**
	(0.000)	(0.002)	(0.000)	(0.002)	(0.000)
POP (1,000s)	-0.0001**	-0.0004**	-0.0001**	-0.0001**	-0.0000**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
PCJOB	0.0199	0.0875	0.0155	0.2181**	0.0391**
	(0.016)	(0.082)	(0.016)	(0.070)	(0.014)
AGE $<$ 19	-0.1859**	-1.4926**	-0.2649**	-2.0174**	-0.3616**
	(0.070)	(0.433)	(0.074)	(0.328)	(0.057)
AGE $>$ 65	0.1170	0.4041	0.0717	-0.1232	-0.0221
	(0.084)	(0.469)	(0.082)	(0.302)	(0.053)
SPDIST	0.0020**	0.0071**	0.0013**	0.0096**	0.0017**
	(0.000)	(0.001)	(0.000)	(0.001)	(0.000)

Conclusions & Implications

- Contrary to previous literature, TELs have little influence on the usage of specialized governance
- Functional Home Rule
  - Cities have a negative relationship
  - Counties have a positive relationship
- Limitations on cities and counties produce different results
  - Why might we expect this?


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