



The Effects of Property Tax Exemptions on Municipalities' Fiscal Behavior

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The Rise of Property Tax Exemptions

- The severity of property tax exemptions.
- The potential impacts of property tax exemptions

City of Killeen, Texas

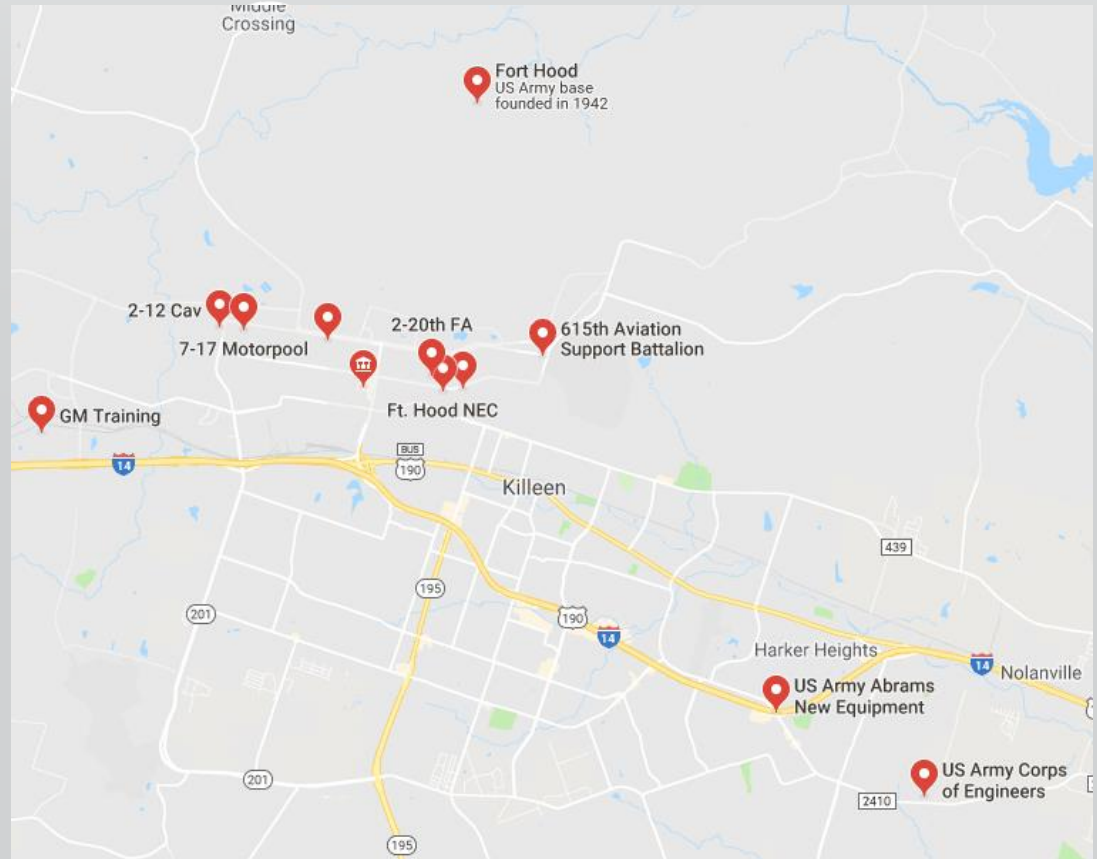


Table 1 Base Erosion in Texas Cities (Ranked by change in Base Erosion)

	2006		2015		Change in Base Erosion
CityName	Base Erosion	Exempt per capita(in \$1000)	Base Erosion	Exempt per capita/\$1000	
Frisco	4.48%	5.14	15.14%	20.85	238%
Mesquite	7.73%	4.11	15.92%	9.26	106%
League City	11.36%	7.17	19.25%	13.95	69%
McAllen	8.85%	4.36	14.58%	9.60	65%
Richardson	10.87%	10.72	17.68%	20.95	63%
Corpus Christi	15.15%	6.61	24.24%	16.75	60%
Grand Prairie	12.73%	7.26	18.13%	12.45	42%
Garland	13.85%	7.33	19.07%	10.37	38%
Victoria	11.88%	5.14	16.35%	11.52	37 %
Pharr	18.73%	5.55	24.07%	9.85	29%

Research Question:

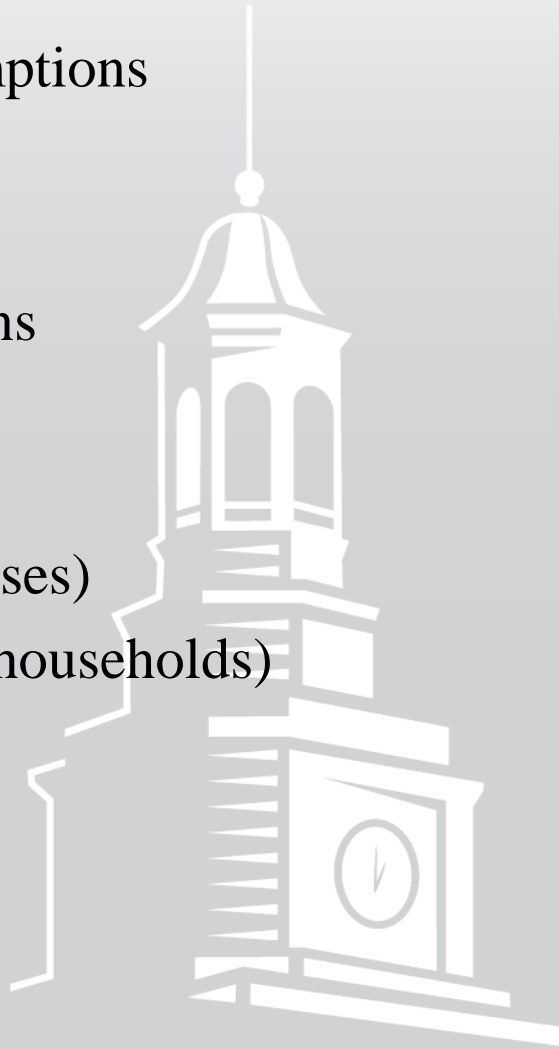
How do municipalities respond to the increasing amount of property tax exemptions?



Types of Property Tax Exemptions

Types of Property tax exemptions

- absolute exemptions
 - governments
 - nonprofit organizations
- partial exemptions
 - tax incentive (businesses)
 - tax relief (qualifying households)



Prior research

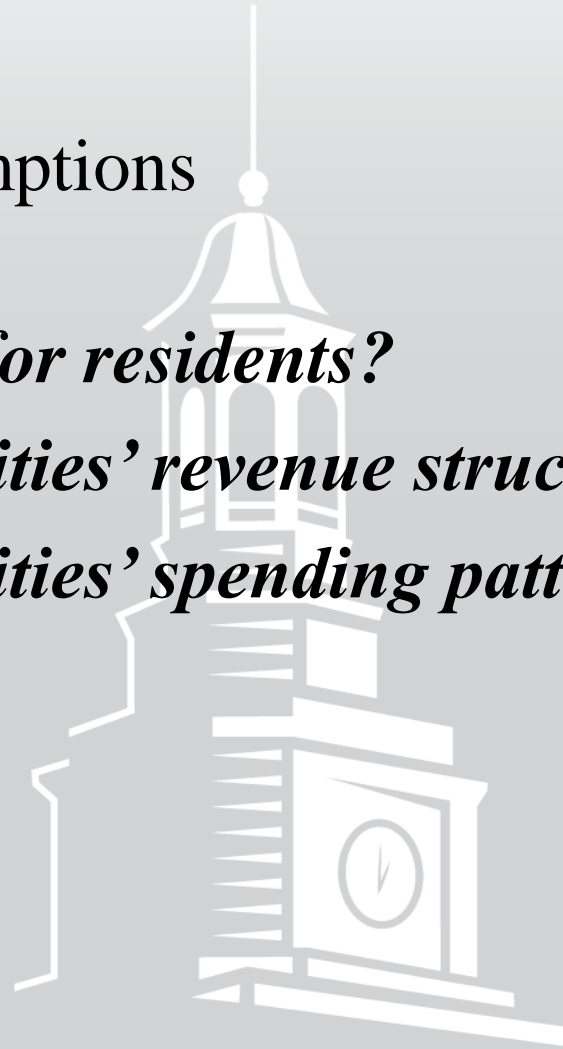
- Descriptive studies (Brody 2002; Weisbrod 1997; Gallagher 2002; Colombo and Hall 1995; Grime 1999; Kenyon and Langley 2010; 2011; Kenyon, Langley, and Paquin 2012).
- Empirical studies model economic effects of various types of exemptions:
 - nonprofit exemptions (Calabrese and Carroll 2012; Carroll and Calabrese 2012),
 - tax incentives (Anderson 2011; Tuszynski and Stansel 2018; Reese 1991),
 - tax relief (Moore 2008).

Due to scarcity of reliable parcel-level data, no study examines city's fiscal behavioral response to property tax exemptions.

Research Questions

Do property tax exemptions

- *provide tax relief for residents?*
- *change municipalities' revenue structure?*
- *change municipalities' spending pattern?*

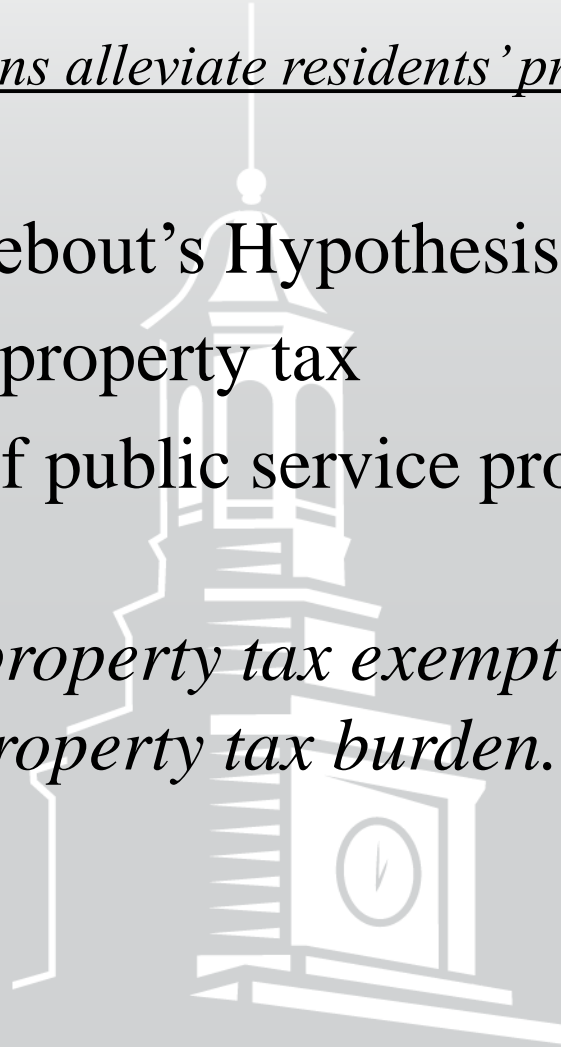


Theory and Propositions

Do property tax exemptions alleviate residents' property tax burden?

- An extension of Tiebout's Hypothesis.
 - Benefit view of property tax
 - Constant level of public service provision

H1: *The amount of property tax exemptions is not associated with the property tax burden.*



Theory and Hypothesis

Why diversify?

- Utility gap between contributors and freerides

Alternatives:

1. Reduce expenditures
2. Increase existing property tax revenue
3. Shift to more neutral, consumption based revenue sources

H2 : Municipalities intentionally shift their revenue structure toward nonproperty taxes as a solution to close the gap between the freeriders and contributors.

Theory and Hypothesis

Operating Expenditure vs. Capital Expenditures

- Contradictory findings in cutback management literature
 - *Capital expenditure was first cut* (Berne and Stiefel 1993; Grassberg 978; Marando 1990; Levine et al 1981; Wolman and Davis 1980),
 - *Operating expenditure was first cut* (Hood and Wright 1981; Schick 988; Morgan and Pammer 1988).

Cutting operating expenditure affects the gap between two groups immediately, whereas cutting capital expenditure has no immediate effect on the gap.

H3 : The amount of property tax exemptions is negatively associated with municipalities' capital expenditure.

Data

Why Texas?

- Since 2000 tax-exempt property annually appraised at full market value.
- State-of-art appraisal practices.

Data Sources

- Complete annual data on 41 Texas cities
- For 16 years, 2000-2015
- N = 612
- Data Sources: CADs, CAFR, Census Bureau

Research Design

Dependent variables: Property Tax Burden; HHI Index; Capital_Exp_Ratio

Regressors:

<i>Tax Base Erosion*</i>	<i>Tax Capacity*</i>	<i>Community Characteristics</i>
Absolute exemptions (EX_pc)	Sales tax revenue (Sales_pc)	Unemployment Rate(UNE)
Over 65 exemptions(OV65_pc)	All other revenue(AOR_pc)	Personal income per capita (PIPC)
General residence homestead (HS_pc)	Intergovernmental aid(IGR_pc)	Population over 65 (POP_65)
Other tax relief (REL_pc)	<i>Note: All financial variables are adjusted to 2011 constant dollars by using annual average CPI index from U.S. Bureau of Labor Statistics</i> <i>*Variables are in \$100,000.</i>	Population growth (Pop_GROWTH)
Tax incentives(INCEN_pc)		Percentage change in taxable property value (CHANGE_TAXABLE)

Research Design

Hausman test; Breusch- Pagen test; Wald test ;Fisher-unit root test; Pesaran and Friedman test;

- Heteroscedasticity
- No contemporaneous correlation
- No unitroot.
- Endogeneity

Estimation

- Two stage least squares
- 2SLS (L.HHI = L.Sales, L.AOR, L.UNE)
- 2SLS (L.PIPC = L.Pop_65, L.pop_growth, L.UNE)
- Regressors are lagged by 1 year
- Two way fixed effects with robust standard errors

Findings

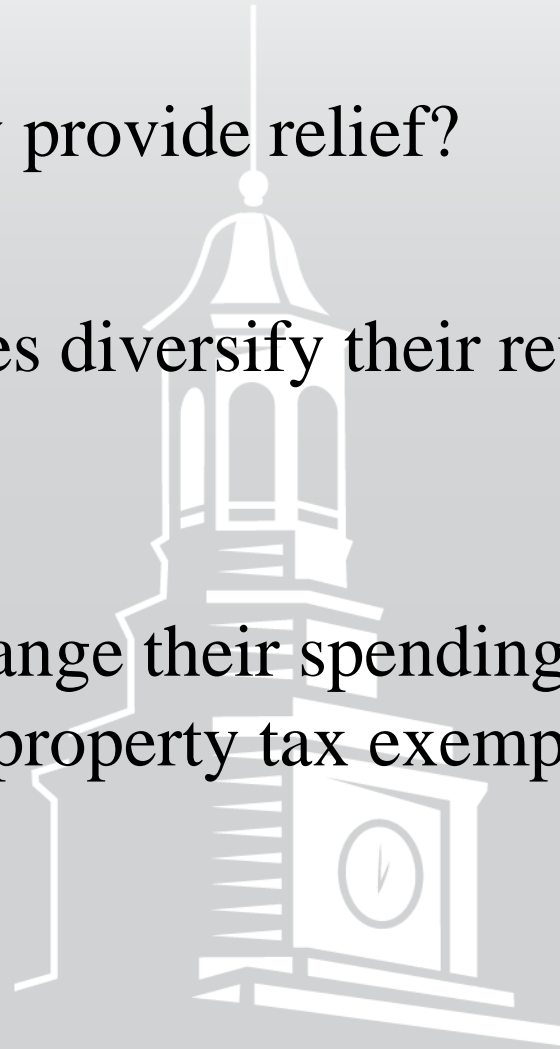
- Property tax burden
 - *Absolute, senior, and disabled exemptions show positive correlation with property tax burden.*
- Revenue structure
 - *Senior and disabled exemptions are positively correlated with municipalities' revenue diversification.*
- Expenditure choices
 - *Senior, disabled, and homestead exemptions are negatively associated with capital spending.*

Discussions

Do exemptions really provide relief?

Why do municipalities diversify their revenues structure?

Do municipalities change their spending behavior based on different types of property tax exemptions?



Future Research

City administrators know their property tax base is being eroded.

- Do municipalities change their economic development strategies?
- Should municipalities seek PILOTs?
- Implications for other countries.





Thank you.

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