The Reform of Business Property Tax in Ontario: An Evaluation

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Introduction

Business property taxes in Ontario (most of Canada) are high

- typically 25-40% of gross rents
- 2–4 times residential tax rates

Past reforms in Ontario have reduced tax rates – at substantial revenue cost – and further reforms are contemplated.

Key empirical questions:

1. Are high business taxes "killing jobs"? Creating sprawl?
2. Why do cities continue to use them? Should provinces regulate local tax rates?

Overview

1. Introduction
   - Business property taxes in Canada: The lay of the land
   - Economic effects and incidence of the property tax
2. Business taxes and employment: Evidence from Ontario
3. An assessment

Some stylized facts

In most Canadian provinces:

- BPT rates much higher than residential rates.
- Large tax differentials between neighbouring cities.
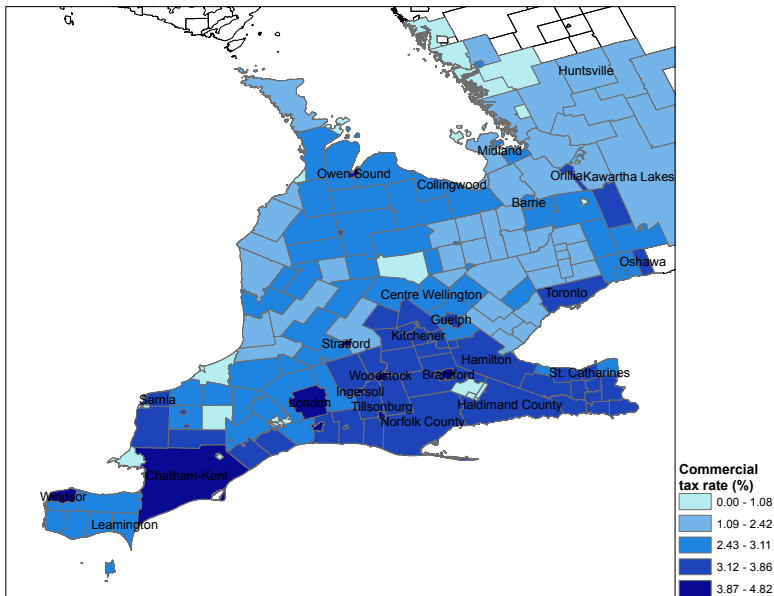- Often higher in central cities than suburbs.

Table: Ratios of commercial to residential tax rates, Canada, 2010-11

Province	Large Cities	Other Municipalities
Quebec	3.68	2.54
Ontario	3.38	2.46
Alberta	2.63	1.95
British Columbia	3.96	3.32

Note: Population-weighted averages.

Source: Provincial governments and author's calculations.

Figure: Commercial property tax rates, Ontario, 2010

Commercial tax rate (%)
- 0.00 - 1.08
- 1.09 - 2.42
- 2.43 - 3.11
- 3.12 - 3.86
- 3.87 - 4.82

Some stylized facts

In most Canadian provinces:

- BPT rates much higher than residential rates.
- Large tax differentials between neighbouring cities.
- Often higher in central cities than suburbs.

Potential economic costs of these tax policies:

- Loss of business productivity and employment
- Suburbanization of employment
- Excessive commuting time
- Inefficient land use patterns in central cities

The economic effects of the business property tax

Understanding economic effects of BPT requires a theory of how tax burden is shared between business owners, workers, and local residents.

Tax base: land and capital (buildings) employed in a city. Hybrid nature of tax gives rise to two theories.

1. Benefit tax view: BPT is simply a tax on use of local land – which is in **fixed supply**.
   - Tax is capitalized into land values – paid by landowners
   - Intercity tax differences are "neutral"
   - Cities will not "overtax" business land – used as benefit tax

   In this theory, the BPT is a pretty **good** tax.

Problems with the benefit view: With capitalization, we expect to see

- Substitution away from capital – land used less intensively
- Political pressure to rezone land from business to residential uses

With these effects, BPT is not neutral – affects land use, business location, employment, and productivity.

2. Capital tax view: BPT is a tax on local use of capital.
   - Since capital is mobile, BPT is highly distortionary
   - Tax burden is on local residents – lower wages, higher prices
   - Competition among cities drives tax rates to low levels

   In this theory, the BPT is a pretty **bad** tax.

Previous research

Empirical evidence on the two views is mixed.

- Many studies find that local tax differences are largely capitalized into property values.
    - Not necessarily inconsistent with the capital tax view
- Some case studies find effects of local property tax on employment, business investment.
    - Most studies: Effects are small
    - Strongest effects at city boundaries

This study: Estimated effects of BPT reform on business location.

Introduction
The Ontario reform
Assessment

History
Data and empirical strategy
Results

Property tax reform: A brief history

With uniform assessment in 1998, Ontario permits a classified property tax.

- Tax ratios (business/residential) generally (much) greater than one.

Province government mandates reductions in tax ratios for business classes:

- 1998-2004: Business tax ratios cannot increase.
- 2001-2004: Business tax *levies* cannot increase, if tax ratio above provincial average (the "hard cap")
- 2004-present: Business levy increases cannot exceed one-half of residential increase, if ratio above average.
- 1998-????: Harmonization of Business Education Tax.

Introduction
The Ontario reform
Assessment
History
Data and empirical strategy
Results

Reforms have induced substantial reductions in tax rates ...
and in revenues?

Table: Average business tax rates in metropolitan areas

City	Core city 2000	Core city 2008	Suburbs 2000	Suburbs 2008	Estimated Revenue Cost
	(per cent)				($ millions)
Brantford	6.36	5.34	4.97	4.19	5.9
Guelph	5.39	4.52	4.49	3.64	6.0
Hamilton	5.41	4.27	4.31	3.27	43.0
Kingston	4.32	4.29	4.65	4.13	0.2
Kitchener	5.38	4.26	5.30	4.10	15.1
London	5.65	5.08	4.54	3.91	17.5
Oshawa	4.82	4.14	4.18	3.41	21.3
Ottawa	4.66	3.14	4.72	4.05	148.2
Peterborough	5.61	4.60	3.02	2.40	5.7
St. Catharines	5.14	4.20	5.21	4.28	9.9
Toronto	7.69	4.13	3.80	2.64	1069.6
Windsor	5.51	5.14	3.76	3.28	13.0
Province Total	3.99	3.50			1835.2

Introduction
The Ontario reform
Assessment

History
Data and empirical strategy
Results

Revenue cost of reforms appears large – but this does not represent true economic cost.

- depends on the ultimate economic incidence of the tax, and its effects on business location and productivity.

To evaluate the case of tax reductions, we should ask:

- What were the effects of the "hard cap" on business location?
- What does the reform tell us about the likely effects of future (voluntary) tax reductions?

Introduction
The Ontario reform
Assessment

History
Data and empirical strategy
Results

To answer these questions, estimate regression models of the form

$$\Delta \log E_{mi} = \alpha + \beta \Delta \log t_{mi} + \gamma \Delta \log \bar{t}_{-mi} + \theta X_{mi} + \epsilon_{mi} \qquad (1)$$

where:

E_{mi} = # of establishments/employment in municipality m, industry i

t_{mi} = effective tax rate in municipality

$\bar{t}_{-mi}$ = effective tax rate in neighbouring municipalities

X_{mi} = control variables

Introduction
The Ontario reform
Assessment

History
Data and empirical strategy
Results

Key data sources

- Counts of establishments with 10 or more employees, from Canadian Business Patterns data, for 2-digit industries Manufacturing, Trade, and Professional Services.

- Employment from 2001, 2006 Census, for 2-digit industries.

- Tax rates and tax levies 2000-2006 from administrative sources, for Industrial, Commercial, and Office Building property classes.

- Effective tax rates on employment defined as total tax levy on property class, divided by total employment of the corresponding industry.

Introduction
The Ontario reform
Assessment

History
Data and empirical strategy
Results

Empirical strategy

OLS estimation of this model will be biased, because of omitted variables and measurement error problems.

- "correlation $\neq$ causation"

Solution: use provincial "hard caps" as instrumental variables to explain tax rate changes.

- In other words, estimate effects on business location of *provincially mandated* tax rate changes only.

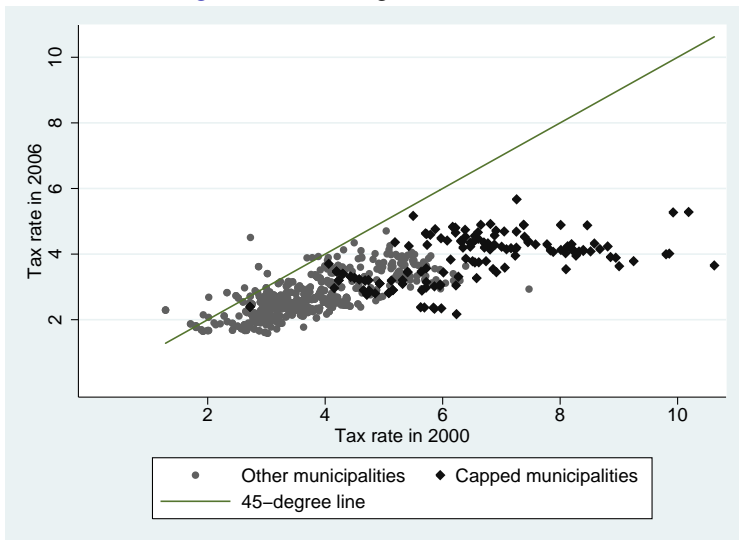The hard cap explains much of variation in tax rates 2000-2006...

Introduction
The Ontario reform
Assessment

History
Data and empirical strategy
Results

Figure: The change in business tax rates

Introduction
The Ontario reform
Assessment

History
Data and empirical strategy
Results

Table: Estimated effects of the hard cap

	$\Delta\log(E)$	$\Delta\log(TAX)$	$\Delta\log(NBTAX)$
CAP	0.15**	-0.82***	-0.13
	(0.07)	(0.30)	(0.17)
NBCAP	-0.14	-0.28	-0.57**
	(0.11)	(0.26)	(0.23)
CAP × NBCAP	-0.08	0.94**	0.54*
	(0.13)	(0.39)	(0.28)
$\Delta\log(TAX)$			
$\Delta\log(NBTAX)$			
$\Delta\log(Population)$	0.44***	-0.09	0.13
	(0.13)	(0.24)	(0.13)
$\log(TAX)$ in 2000	0.00	-0.07***	-0.03**
	(0.01)	(0.02)	(0.01)
$\log(E)$ in 2000	-0.07***	0.06**	0.03*
	(0.01)	(0.03)	(0.02)
Observations	783	783	783
R-squared	0.28	0.08	0.09

Introduction
The Ontario reform
Assessment

History
Data and empirical strategy
Results

Table: IV estimates: Effects of taxes on business location

	(1)	(2)	(3)
Δ log(TAX)	-0.23*	-0.25**	-0.17**
	(0.13)	(0.10)	(0.08)
	-[0.045]	[0.049]	[0.075]
Δ log(NBTAX)	0.38	0.18**	0.21*
	(0.27)	(0.09)	(0.11)
	[0.023]	[0.044]	[0.047]
Δ log(Population)	0.37**	0.41***	0.39***
	(0.15)	(0.14)	(0.13)
log(TAX) in 2000	-0.00	-0.01	-0.00
	(0.01)	(0.01)	(0.01)
log(E) in 2000	-0.07***	-0.07***	-0.07***
	(0.01)	(0.01)	(0.01)

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

Robust standard errors, clustered by municipality. All specifications include industry and region fixed effects.
The excluded instruments in the three columns are:
1: Residential tax, CAP, mean NBCAP, and their interaction;
2: Residential tax, CAP, dummies for no capped neighbours and all capped neighbours, and their interactions with CAP;
3: Residential tax, CAP, dummies for all numbers of capped neighbours, and their interactions with CAP.
In brackets are Shea's partial R^2 for each the first stage specifications.

Results so far:

- Regress 2001–2006 changes in establishment counts on provincially mandated tax changes, and control variables.
- Estimates imply a 10% tax reduction causes a 2.5% increase in establishments, and a 1.8% decline in surrounding municipalities.

Is this a little or a lot?

- Estimated elasticities are fairly small.
- But reform could important, because initial tax differences were large.

To gain a sense of overall impacts of the reform, simulate its effects on employment, based on actual tax rate changes and estimated elasticities.

Table: Simulated effects of tax reform, 2000-6

City	Change in Tax Rate:		Simulated:	
	Core City	Suburbs	Static Revenue Loss	Employment Change
	(percentage points)		(percent)	
Toronto	-3.3	-1.1	-43.1	3.2
Ottawa	-1.7	-0.4	-26.8	1.7
Mississauga	-1.2	-1.5	-30.4	0.4
Hamilton	-1.1	-0.8	-17.6	6.1
Brampton	-1.2	-1.1	-29.4	-3.3
London	-1.5	-0.3	-6.7	2.1
Markham	-1	-1.8	-26.5	-3.5
Vaughan	-1	-1.4	-27	-4.5
Windsor	-0.2	-0.3	-2.9	9.5
Kitchener	-0.8	-0.7	-16.7	0.7
Richmond Hill	-1	-0.9	-26.6	0.9
Oakville	-1	-1.1	-26.9	-1.5
Burlington	-1.1	-0.9	-28.9	-2.2
Oshawa	-2.9	-2.5	-13.6	6.5
Province Total			**-21.9**	**3.1**

Note: Reported tax rates are for office building class. Employment change is simulated based on
  estimated tax elasticities and actual change in tax levies in each municipality.

Concluding remarks

My empirical results show:

- small but significant effects of local BPT differences on business location and employment
- reform increased employment in capped municipalities – largely at the expense of employment elsewhere in Ontario

Policy implications/future research questions:

- The case for further reductions in municipal/provincial BPT differentials
  - How can cities limit economic costs of BPT, without sacrificing revenues?
- If the BPT is a bad tax, why is it so popular for cities?