

TO OWN OR TO RENT?

THE EFFECT OF TRANSACTION TAXES ON HOUSING MARKETS

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THIS PAPER: TRADEOFFS INDUCED BY HOUSING TRANSFER TAXES

- Authors build complex housing search model with renters, landlords, owner-occupiers
 - ▶ Includes life-cycle component, credit/transaction/maintenance costs
 - ▶ Calibrate model to border DiD evidence from Toronto's LTT surcharge (29 parameters!)
 - ▶ Solve for pre/post-reform steady state
- Huge quantity semi-elasticity ϵ implied by the model
 - ▶ 15% \downarrow in buy-to-own (BTO) but only 2% \uparrow in buy-to-rent (BTR)
 - ▶ 14% \downarrow in all transactions relative to $\Delta\tau = 1.3$ p.p. $\implies \epsilon = -10.8!$
 - ▶ Can (mostly) quantitatively match reduced form point estimates
- Policy implications: tax generates large distortions w/welfare loss = 79% of revenue
 - ▶ **Counterfactual:** imposing relatively higher τ on BTR investors vs. BTO shrinks welfare loss to 42% \implies rationale for targeting (emphasize more?)

Can LA's 'Mansion Tax' Unlock Affordable Housing Across California?

Los Angeles voters appear likely to pass Measure ULA, which could generate \$900 million a year for housing subsidies and tenant protections. But critics fear the fee will backfire.



While transfer taxes aren't new, recently they're reaching California registrars via public plebiscites – which is new. Culver City passed a transfer tax by ballot measure in 2020 (with a lower, marginal rate) that already ranks as the city's third-largest income stream. This year alone, the levy has already raised tens of millions of dollars, mostly on the strength of a handful of nine-figure property sales. Phillips calls transfer taxes a “third-best option,” following land value taxes, which virtually no US municipality uses, and property taxes, which California has strictly limited under Proposition 13 since 1978.

LA homes that sell for more than \$5 million would be assessed a 4% fee under Measure ULA. *Photographer: Valerie Macon/AFP via Getty Images*

NOT ALL TRANSACTION TAXES ARE CREATED EQUAL

- Affordability issues have sparked boom in research on transaction taxes
 - ▶ Policymakers want to cool prices w/o restricting credit → set high τ
 - ▶ Disagreement in literature on whether prices go up or down in response
 - ★ $P \uparrow$ when incidence falls on domestic capital, flippers
 - ★ $P \downarrow$ if instead tax international capital flows (e.g. East Asia/Australia/Canada)
- But traditionally, low sales tax rates and motivated by **revenue** requirements
 - ▶ Examples: NYC mansion tax (Kopczuk & Munroe 2015), Washington, D.C. (Slemrod, Weber, Shan 2017), UK stamp duty (Best & Kleven 2018)
 - ▶ Most global RE markets impose flat sales tax rates of 1-3%, many with $\tau < 1\%$
- LTT in Toronto more towards the second vein → 1.3% surcharge on buyers, investors and owner-occupiers face same tax schedule
 - ▶ Framing of paper is quiet on distinction between transaction vs. Tobin taxes

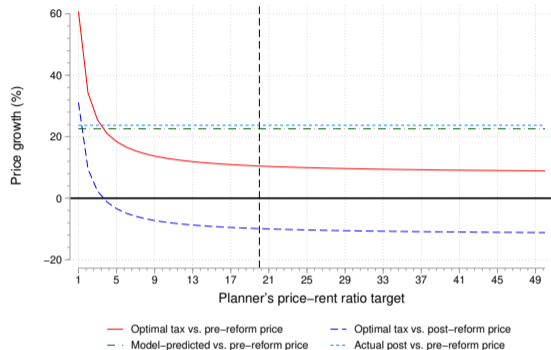
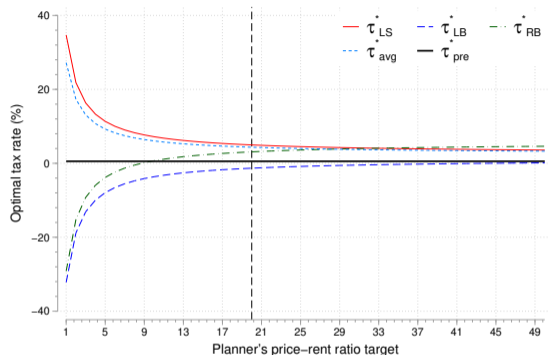
COMMENT #1: ALTERNATIVE MECHANISMS FOR THE RESULTS

- A few things not in the model...
 - ▶ Choosing the “scale” of housing: multiple properties, small vs. large units, etc.
 - ▶ Investment horizon: long vs. short-term flips for second homes
 - ▶ Buy-to-sell (BTS) market segment and vacancy → vacancy taxes as alternative policy
- Argument is that “match quality” thresholds change leading to reduction in liquidity
- Simple alternative story is profit maximization: transaction costs are a fixed cost which gets subdivided more for longer holding periods
- **Can we isolate BTS from BTO and BTR in the data?**
 - ▶ Paper currently unclear on this point
 - ▶ Loosely incorporate BTS segment in current model via discount rate r differing across types

WHAT HAPPENS IN A MODEL WITH SPECULATORS?

- Chi, LaPoint, Lin (2022) [CLL] estimate model of heterogeneous investor beliefs to examine Tobin taxes targeting speculators in housing markets
- Idea: highly price-elastic investors trade and hold properties like equities
 - ▶ **Speculators** = those who trade because their beliefs about future prices and rents deviate from the fundamental value \rightarrow rental risk premium of Sinai & Souleles (2005)
 - ▶ Exogenous rental dividend b/c atomistic landlords (no observed change in BTR)
 - ▶ τ reduces inventory \implies substitution towards rental market \implies *expected* rents $\uparrow\uparrow$
- Some overlap in empirical results and calibrated model predictions w/this paper
 - ▶ Empirically, $\Delta\tau > 0 \implies$ sales volume \downarrow , TOM \uparrow , holding period \uparrow ✓
 - ▶ Structural model with $\Delta\tau > 0 \implies$ expected price-rent ratio \downarrow ✓
 - ▶ Heterogeneous investor model $\implies P \downarrow$ for small $\Delta\tau$, but $P \uparrow$ if $\Delta\tau$ larger!

LOWER PRICE-RENT RATIO TARGETS REQUIRE HIGHER τ



- *CLL* model calibrated to tax returns in Taiwan → recover investor beliefs and trades

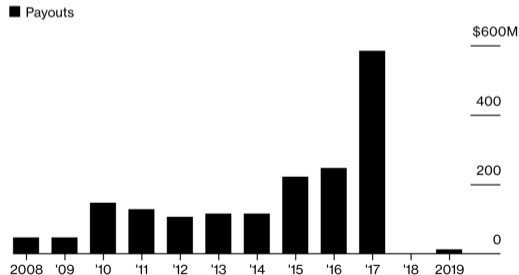
Given that models are very different, worth clarifying role of speculation in contexts where τ used as a revenue-raising device.

NYC Becomes One Billionaire Family's Haven From China Property Crash

Soho China's founders shifted much of their fortune out of the country before controls tightened and the market imploded.

Power Couple Payout

Soho's founders took almost \$1.8 billion in dividends and return on capital, and plowed much of it into NYC real estate



Source: Bloomberg

Taking the Plunge

China's property moguls shed tens of billions of dollars in net worth



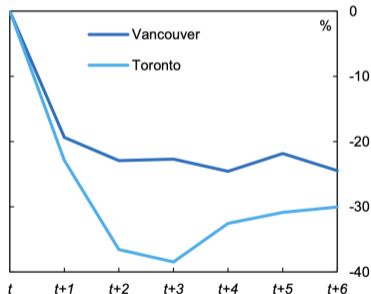
COMMENT #2: ROLE OF INTERNATIONAL CAPITAL MARKETS

- Canada is a particularly important reservoir for mainland Chinese capital
 - ▶ Easy to establish permanent residency (live there 730 days out of last 5 years)
 - ▶ Gorbach & Keys (2020): inflows amplified by taxes targeting Chinese investors (e.g. SG, HK)
 - ▶ 50% withholding tax on non-residents selling properties vs. 25% tax on rental income
- **Helps explain why BTR channel is prominent in this setting**
 - ▶ Residency period \implies longer holding period \implies inelastic demand for BTR properties
 - ▶ \implies welfare improvement from raising more revenue from this segment of the market
 - ▶ Chi, LaPoint, Lin (2022): using tax returns, no effect of τ on BTR, but current landlords partially pass through costs in form of higher rents
 - ▶ Distinction between whether incidence falls on domestic or foreign capital
- Identify likely non-residents or recent émigrés based on names in MLS or merge to deeds?
 - ▶ External validity: re-estimate model taking out transactions involving foreigners

Canada to Ban Foreigners From Buying Homes as Prices Soar

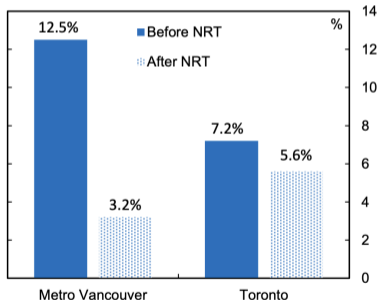
- Trudeau to put billions toward boosting housing supply
- Benchmark price is up more than 50% over past two years

Chart 1: Cumulative decline in resales following the non-resident taxes



Note: t denotes month before implementation.

Chart 2: Share of non-resident home purchases



Note: NRT is non-resident taxes.

- Even if just half of NR buyers decide to rent out, this is entire BTR share for Toronto!
- Ban unlikely to make $P \downarrow$ because students and permanent residents exempt

Source: Bank of Canada Staff Analytical Note (2019): "Non-Resident Taxes and the Role of House Price Expectations"

COMMENT #3: SOME SUGGESTED EXTENSIONS

1. Use Conley (2008) standard errors to account for spatial correlation in Table 1 results
 - ▶ Implementation: create figure showing robust vs. Conley CIs and point estimates as distance bandwidth varies (e.g. Méndez-Chacón & Van Patten 2022)
 - ▶ Select cutoff parameter to maximize SEs, searching over length between greater metro border endpoints or jurisdictional boundaries
 - ▶ Potentially important because key results for BTR sales and PR ratio are only marginally significant w/robust SEs
2. **Relatedly, do we worry about sample selection in the MLS here?**
 - ▶ Small # of obs. w/non-zero BTR even with distance bandwidth = ∞
 - ▶ Compare to summary stats from official data sources?
3. **Several potential counterfactuals:** redistribution via public goods provision (Favilukis & Van Nieuwerburgh 2021) and simulate role of credit constraints through shift in $G_m(\chi)$

DYNAMIC BORDER RD TO TRACK ADJUSTMENT OVER TIME

- Alternative *dynamic, continuous, multi-dimensional* border RD implementation:

$$y_{i,c(d),t} = \theta_{d,qy(t)} + \delta_t + \sum_{t=-k, t \neq -1}^{+k} \left[\beta_t \cdot LTT_i + \gamma_t \cdot g(Lat, Lon)_i \right] + \eta' \mathbf{X}_{i,c(d),t} + \varepsilon_{i,c(d),t}$$

- Not simply another robustness check!
 - ▶ Parallel trends must hold for other outcomes, not just for volume (shown in appendix)
 - ▶ Empirical section hard to follow w/o writing down specification (individual vs. district-level)
 - ▶ Exploring additional outcomes and long-run effects key innovation on empirical side beyond analysis in Dachis, Duranton, Turner (2012)
- **Estimates also hide influence of other Toronto housing market regulation**
 - ▶ Controls: foreign buyer tax (Hartley et al. 2021), LTV restrictions (Han et al. 2021)
 - ▶ Do we need to worry about GE effects due to stacking these reforms? → use symmetric time window around LTT and check that point estimates stable

MAJOR TAKEAWAYS

- **State-of-art search model** highlights how flows between BTR, BTO, and rental segments distorted by housing transaction taxes
- Important policy implications given affordable housing crisis in Toronto and elsewhere
- **More context needed** to gauge whether this is a general model of transaction taxes
 - ▶ Small tax relative to other global markets \rightarrow large effects despite $\Delta\tau = 1.3$ p.p.
 - ▶ Investor strategies in this context likely driven by immigration policy
 - ▶ Important to say more about identity of investors given that...
 - (I) Currently no role for speculators or second homes in search model
 - (II) Housing transaction taxes can be revenue focused or macroprudential in nature
- Looking forward to seeing updated simulation results and model extensions!



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THANKS!
