

Exempt, Evade, Enforce:
Unpacking Property Tax Dynamics
in the Short Term Rental Market



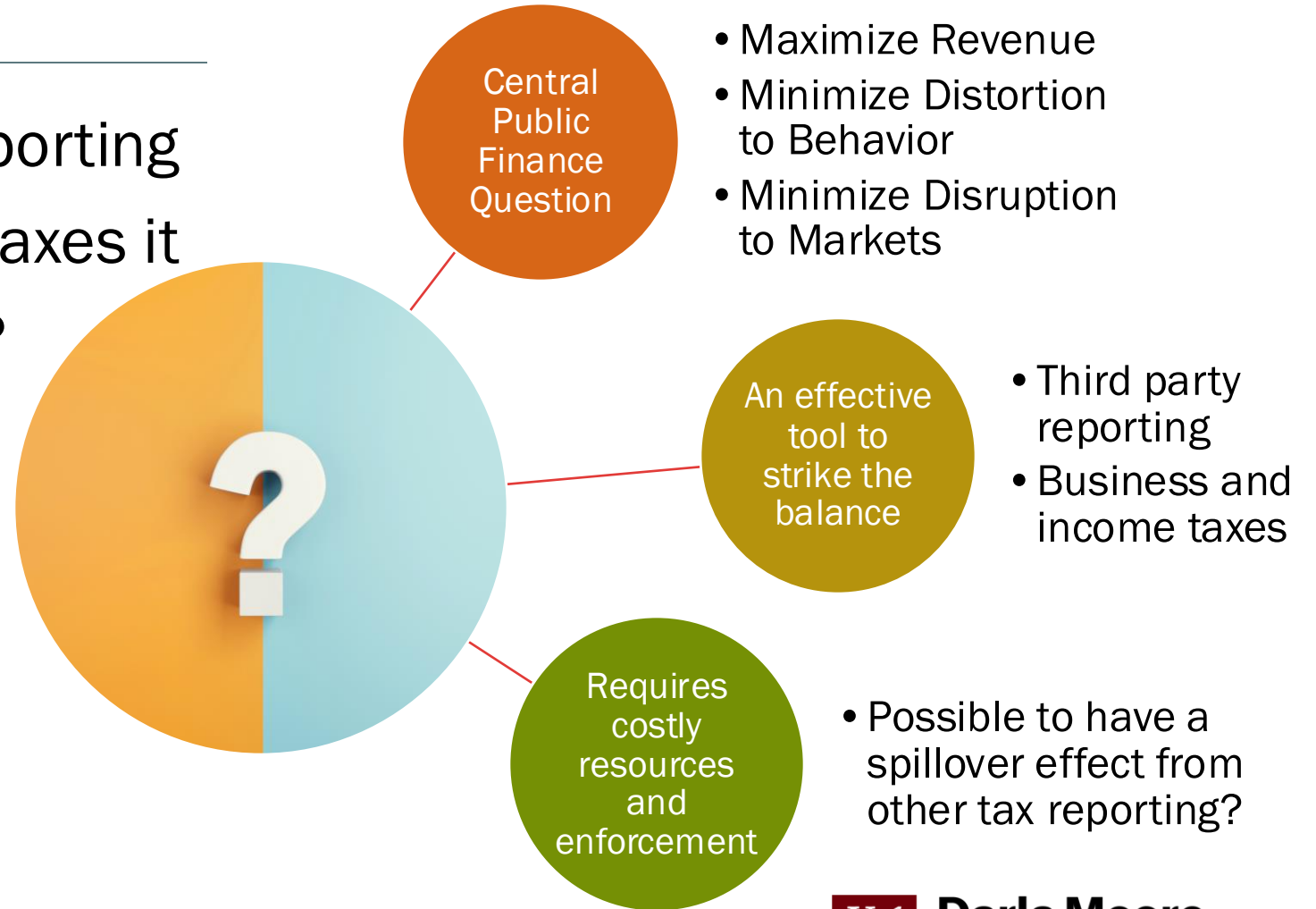
Kara Jones

October 2026

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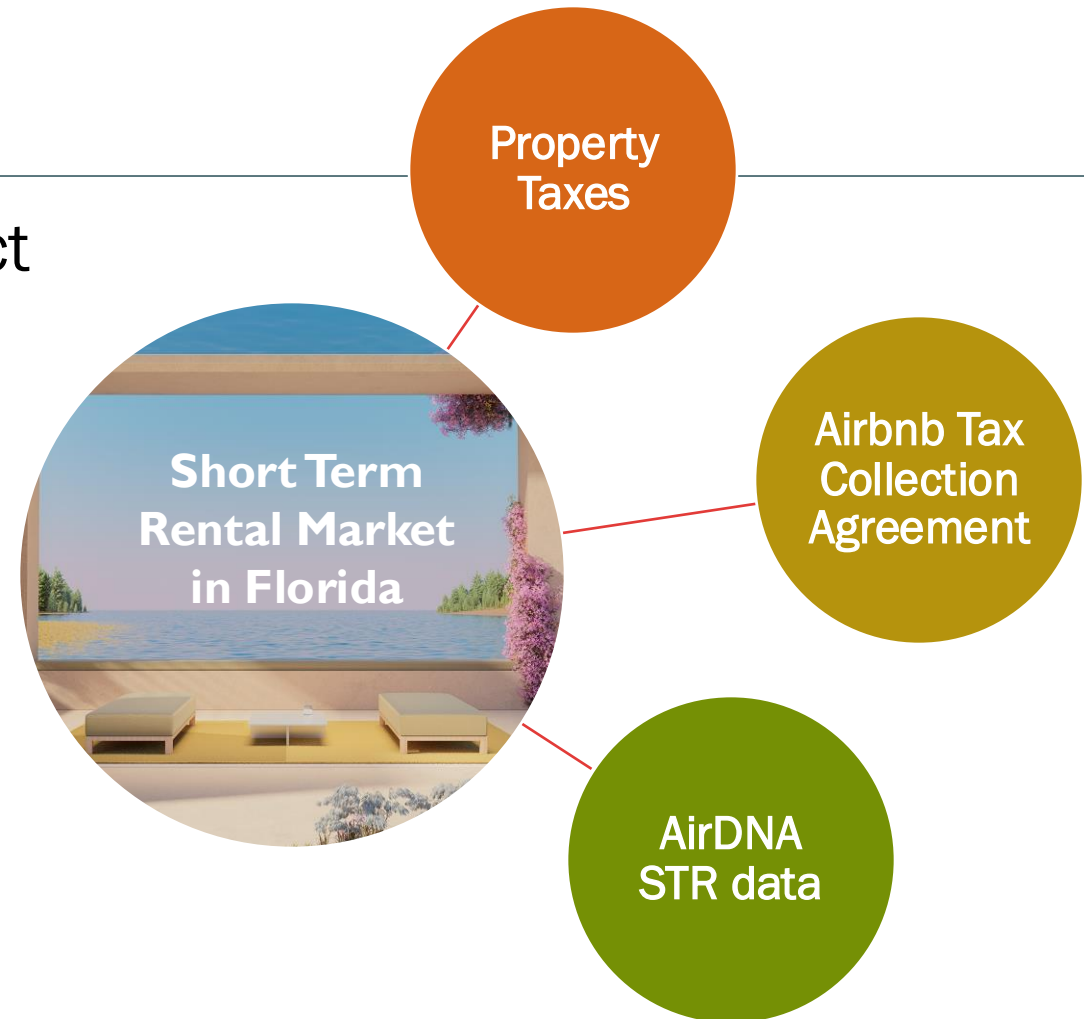
Research Question

1. How does third-party reporting affect compliance with taxes it does not directly target?



Research Question

1. How does third-party reporting affect compliance with taxes it does not directly target?
2. 3 things needed to answer:
 1. A tax where people have a strong incentive to evade and there is limited enforcement
 2. A policy change in indirect reporting
 3. Data showing tax behavior before and after the change



Motivation

Background

Empirical Strategy

Data

Results

Conclusion

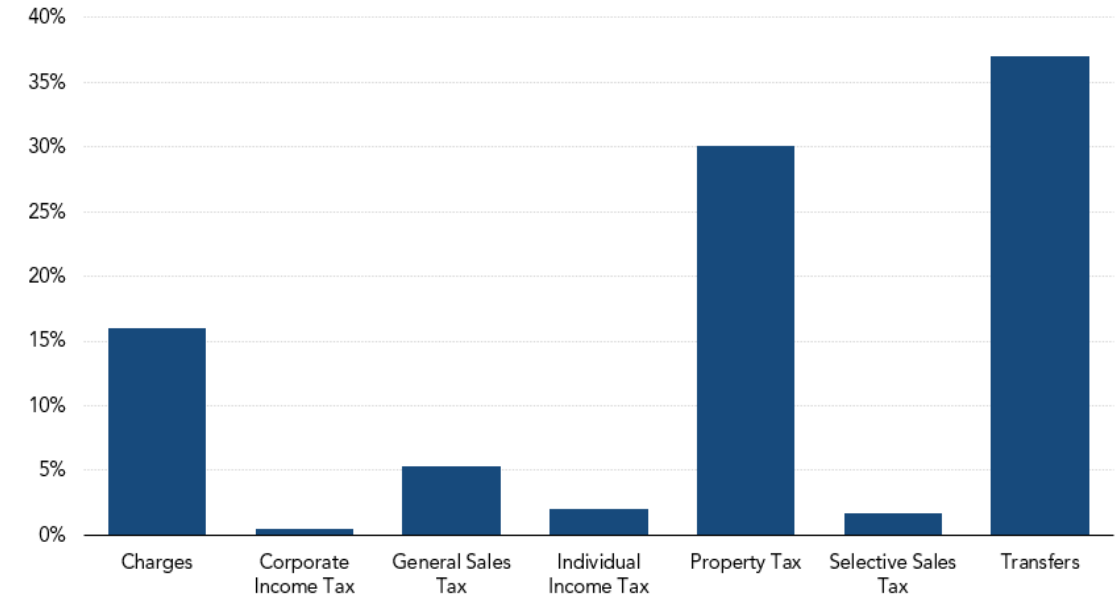
Motivation: The Hidden Backbone of Local Finance

- The property tax is the primary funding source of US counties (Yushkov, 2024)
- 30% of local government revenue
- \$581 billion in 2021 (Lincoln Institute 2024)

FIGURE 3

Sources of Local General Revenue

Share of total local general revenues, by source, 2021



Source: US Census Bureau Annual Survey of State and Local Government Finances, 1977-2021 (compiled by the Urban Institute via State and Local Finance Data: Exploring the Census of Governments; accessed 14-Jul-2023 10:05), <https://state-local-finance-data.taxpolicycenter.org>.



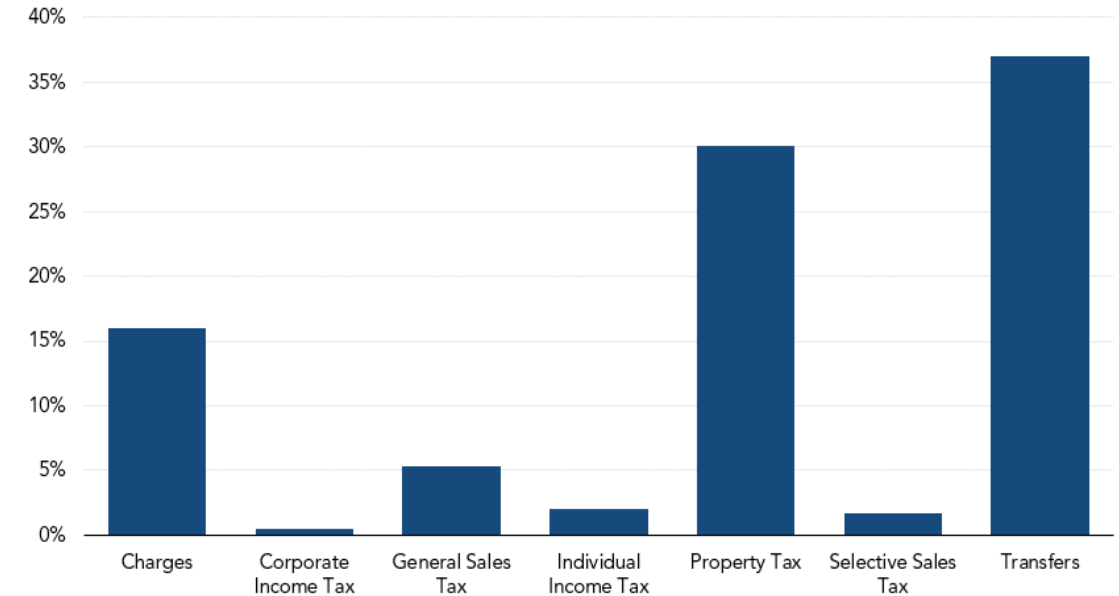
Motivation: The Hidden Backbone of Local Finance

- Evasion erodes the tax base
- Enforcement lags short term rental (STR) expansion
- Dual Problems:
 1. Increased public service demand
 2. Reduced tax revenue

FIGURE 3

Sources of Local General Revenue

Share of total local general revenues, by source, 2021

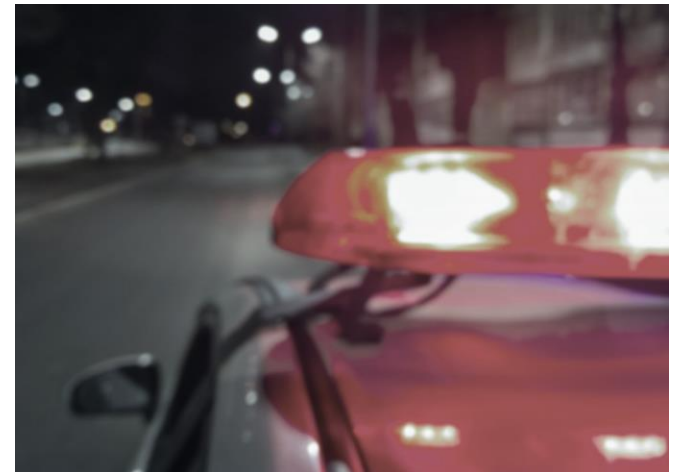


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Motivation: Increased Public Service Demand from STRs

- Competition with residents for public resources
- Especially important in times of overcrowding (Palombo 2015)
- Increase demand for police, fire, EMS, and waste services
- STR-dense neighborhoods see higher violent-crime rates and 911 calls
 - Boston (Ke et al. 2021), Portland & New Orleans (van Holm & Monaghan 2021)
- More waste generation, ER visits, and lower discretionary spending (Arora et al. 2025)



Motivation: Reduced Tax Revenue

- Municipalities face rising administrative and enforcement costs
 - Licensing, inspections, and data contracts (Office of the City Treasurer 2021)
- Tax Avoidance and Evasion through property tax exemptions
- Large tax breaks for owner-occupied homes
 - Homestead Exemption (HE)
 - Legal Residence Exemption (LRE)
- No annual verification

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Evade, Exempt, Enforce - Jones (2026)



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This Paper

- **Question 1:** How does third-party reporting affect compliance with taxes it does not directly target?
- **Question 2:** How do STR hosts avoid and evade property taxes?
- **Context:** Rental day limits for the homestead exemption in FL
 - Exceed **30** day limit → increase tax bill
 - Introduces a tax notch
 - Change in Reporting: Airbnb Voluntary Collection Agreements (VCAs)
- **Method:** Bunching Estimator to measure behavioral changes
- **Data:** AirDNA data, FL, 2015-2024

Preview of Results

1. How does third-party reporting affect compliance with taxes it does not directly target? **Increases compliance through perceived increase of audit probability**
2. How do STR hosts avoid and evade property taxes?
 - **They bunch below the limits to avoid taxes**
 - Florida hosts reduce bookings by ~16 nights
 - **Tax evasion prior to third party reporting**
 - Change in bunching patterns before and after Airbnb VCAs

Contribution to Tax Evasion and Sharing Economy Literatures

Tax Compliance & Information Reporting

- Third-party reporting reduces evasion in income and business taxes (Kleven et al. 2011; Persson 2019)
- Property tax evidence focuses on salience and enforcement: reminders, lien threats, social norms (Perez-Truglia & Troiano 2018; Hallsworth et al. 2017)
- **Contribution: Reporting for one tax spills over to compliance with another**

STR Regulation & Taxation

- STR bans and taxes affect housing markets and platform activity (Koster et al. 2021; Bei et al. 2023; Garz 2023; Li et al. 2022)
- Airbnb VCAs raise prices, reduce bookings, and affect entry and exit (Bieber 2021)
- **Contribution: First causal evidence on STR property tax compliance, identifying rental-day evasion as a new margin**

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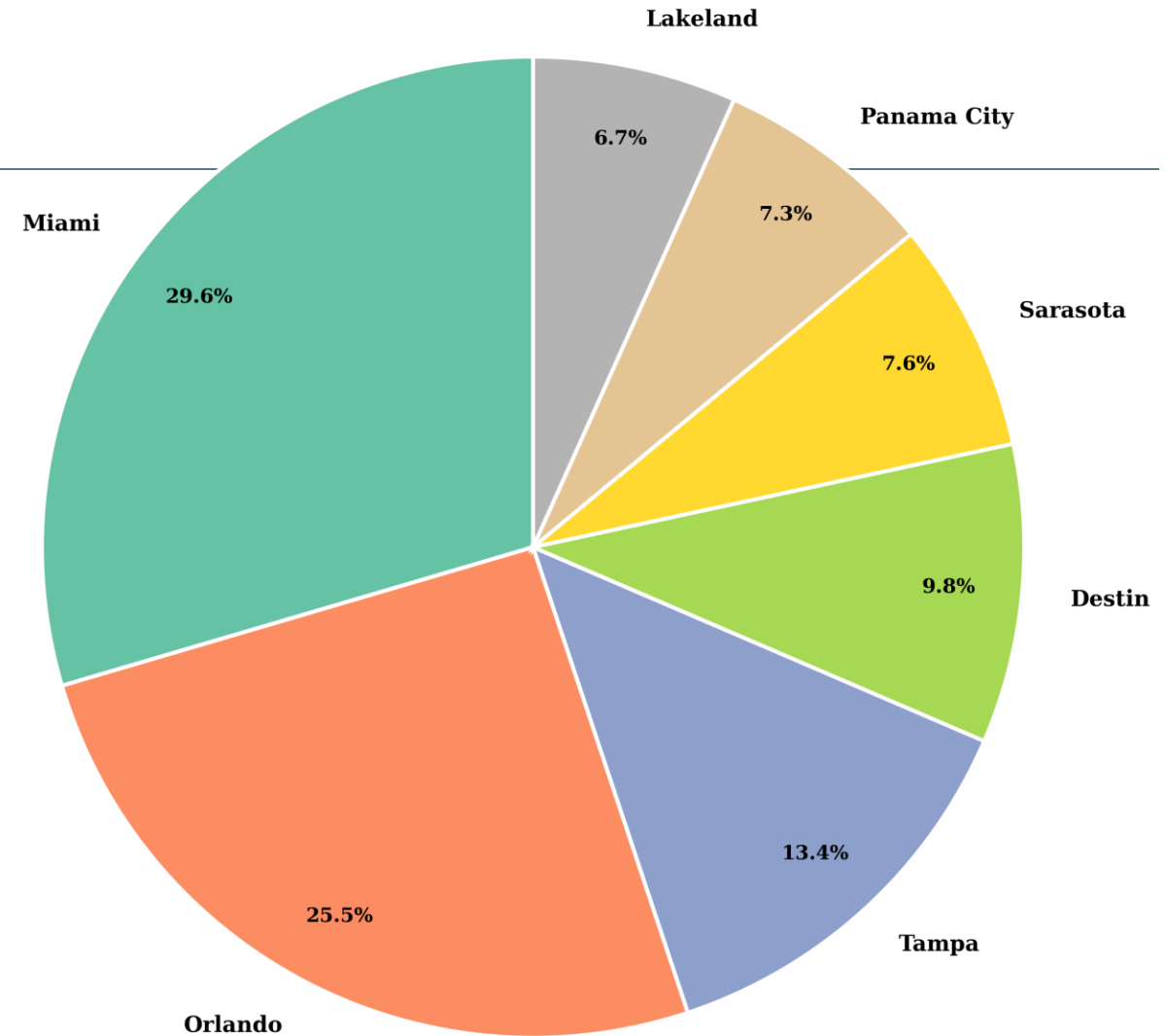
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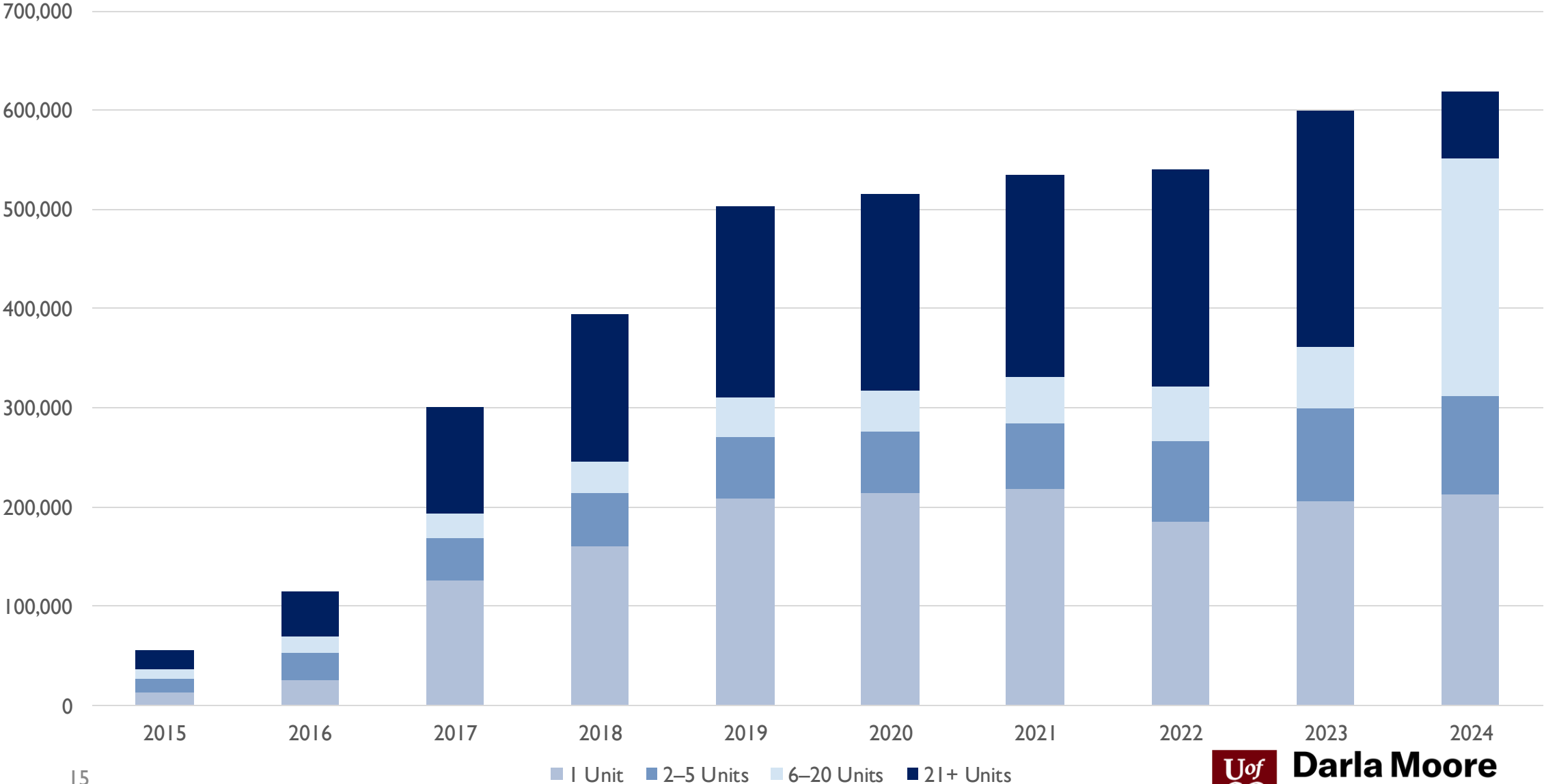
SHORT TERM RENTALS (STRS)

STR Market in Florida

- Majority of STRs are Entire Homes
- Over \$12 billion in revenue in 2024
- Approx. 10.5 million reservations in 2024
- STRs listed for an average of 3.09 years
- Most STR hosts own 21+ units (39%)
 - 1 unit: 37%
 - 2-5 units: 15%
- Popular Destinations



Growth in STRs in FL, from AirDNA data

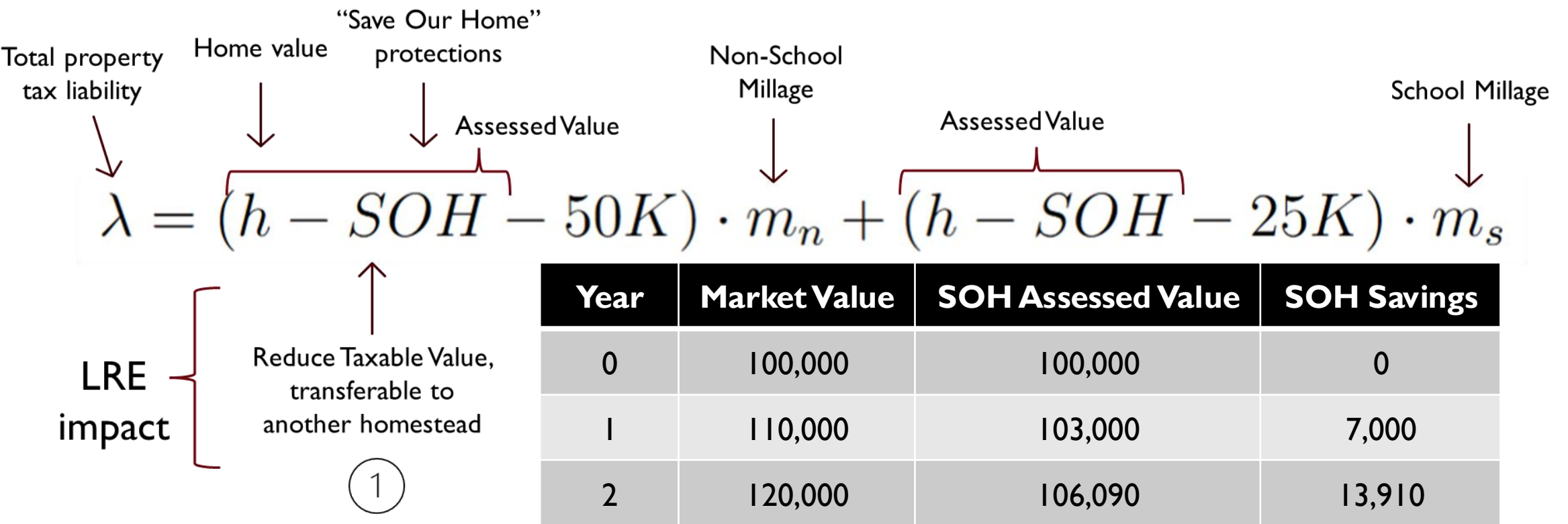


STR Market faces mounting regulations

- Large enforcement costs to collect taxes
- Tax jurisdictions respond with strict regulations
- Platforms self regulate to avoid strict regulations
- Airbnb Voluntary Collection Agreements (VCAs)
 - Airbnb collects and remits accommodation and sales taxes
 - No reporting on rental days for property tax exemptions
 - FL and Airbnb VCA: December 15, 2015

PROPERTY TAXES

Property Tax Liability with the Homestead Exemption



Property Tax Liability with the Homestead Exemption

Diagram illustrating the calculation of Property Tax Liability (λ) with the Homestead Exemption, showing the impact of the LRE (Local Revenue Exemption) and the "Save Our Home" (SOH) protections.

The equation is:

$$\lambda = (h - SOH - 50K) \cdot m_n + (h - SOH - 25K) \cdot m_s$$

Labels and arrows indicate the components and their relationships:

- Total property tax liability** points to λ .
- Home value** points to h .
- "Save Our Home" protections** points to SOH .
- Assessed Value** points to the term $(h - SOH - 50K)$.
- Non-School Millage** points to m_n .
- Assessed Value** points to the term $(h - SOH - 25K)$.
- School Millage** points to m_s .

The **LRE impact** is shown as a bracketed group of three items:

1. Reduce Taxable Value, transferable to another homestead (points to SOH).
2. \$50,000 exempt from non-school mills (points to $50K$).
3. \$25,000 exempt from school mills (points to $25K$).

Property Tax Liability with the Homestead Exemption

- Estimated Savings: \$2,000 - \$3,500 annually on \$400K house*
 - ~\$167 - \$291 per month
- *Save Our Homes* protections
 - Losing the exemption **resets assessed value to market value**

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CONCEPTUAL FRAMEWORK

Conceptual Framework: Taxpayer Optimization

Homeowner i rents house h_i for N_i nights in year

$$\pi_i = \overbrace{p \cdot N_i - c_i(h_i, N_i)}^{\text{Profit without notch}} - \underbrace{\mathbb{1}_{N_i > N^*} [\overbrace{\Delta \tau(h_i, m_n)}^{\text{Millage Rate}}]}_{\text{Change in property taxes with notch}}$$

- π_i : profit for homeowner i
- p : nightly rental price
- N_i : annual rental days
- c_i : operation costs
- h_i : home value
- N^* : LRE rental day limit

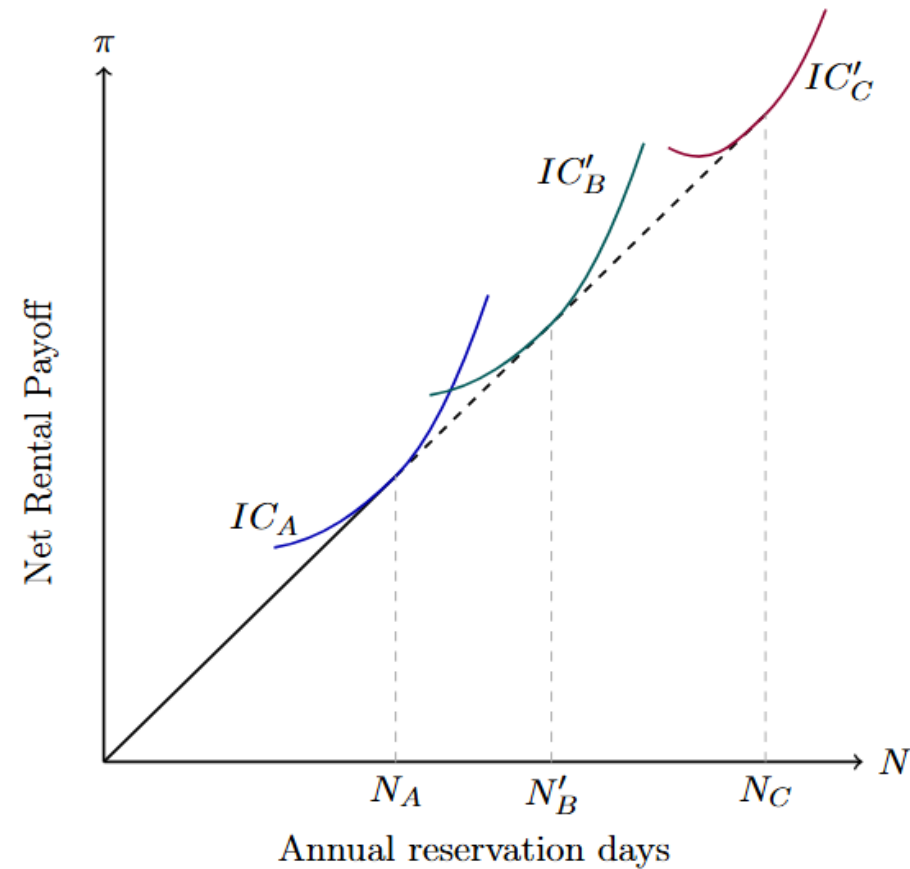
STR Host / Taxpayer Optimization

Profit without notch

$$\pi_i = p \cdot N_i - c_i(h_i, N_i)$$

$$FOC \quad \frac{\partial \pi_i}{\partial N_i} = p - \frac{\partial c_i(h_i, N_i)}{\partial N_i}$$

$$p = MC$$



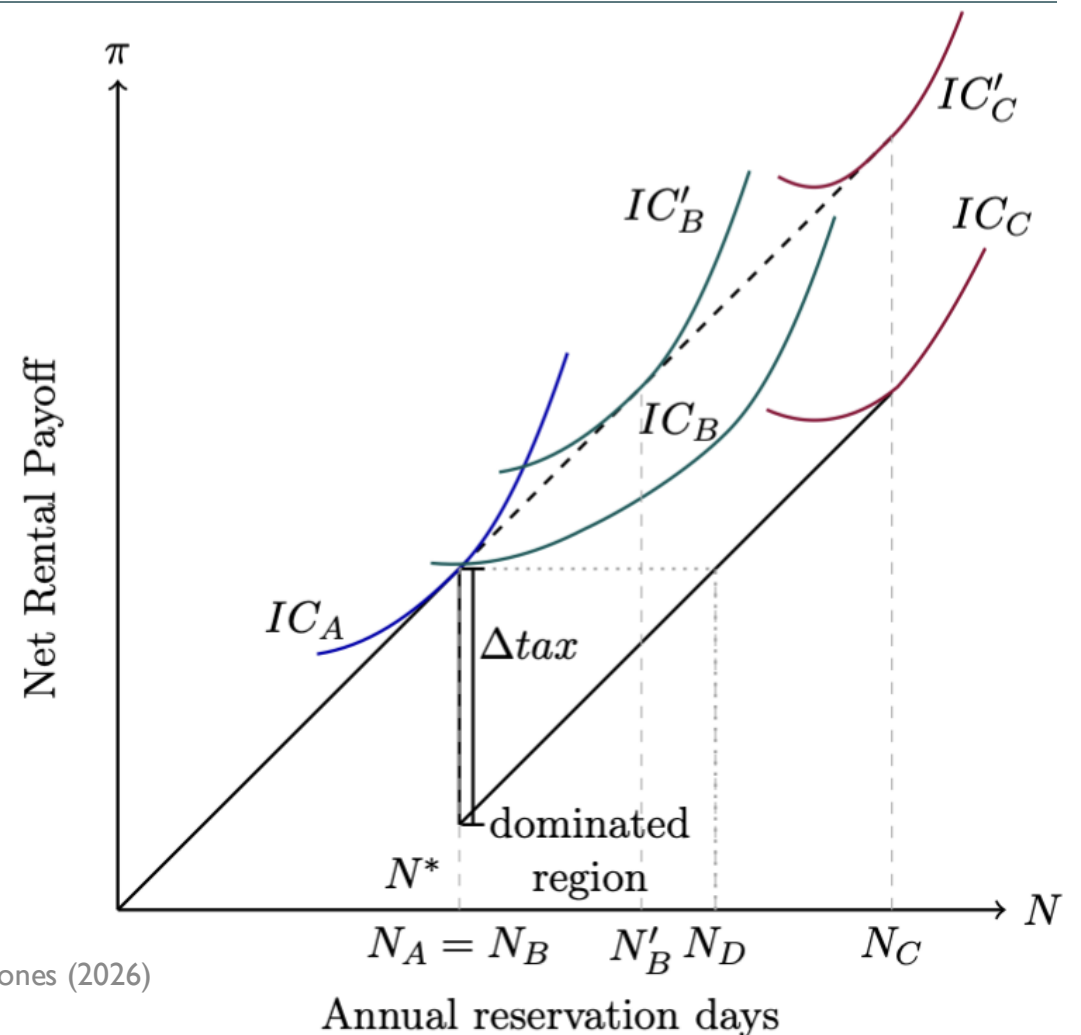
STR Host and Taxpayer Optimization

- Region where no one locates:

$$[N^*, N^* + \Delta N]$$

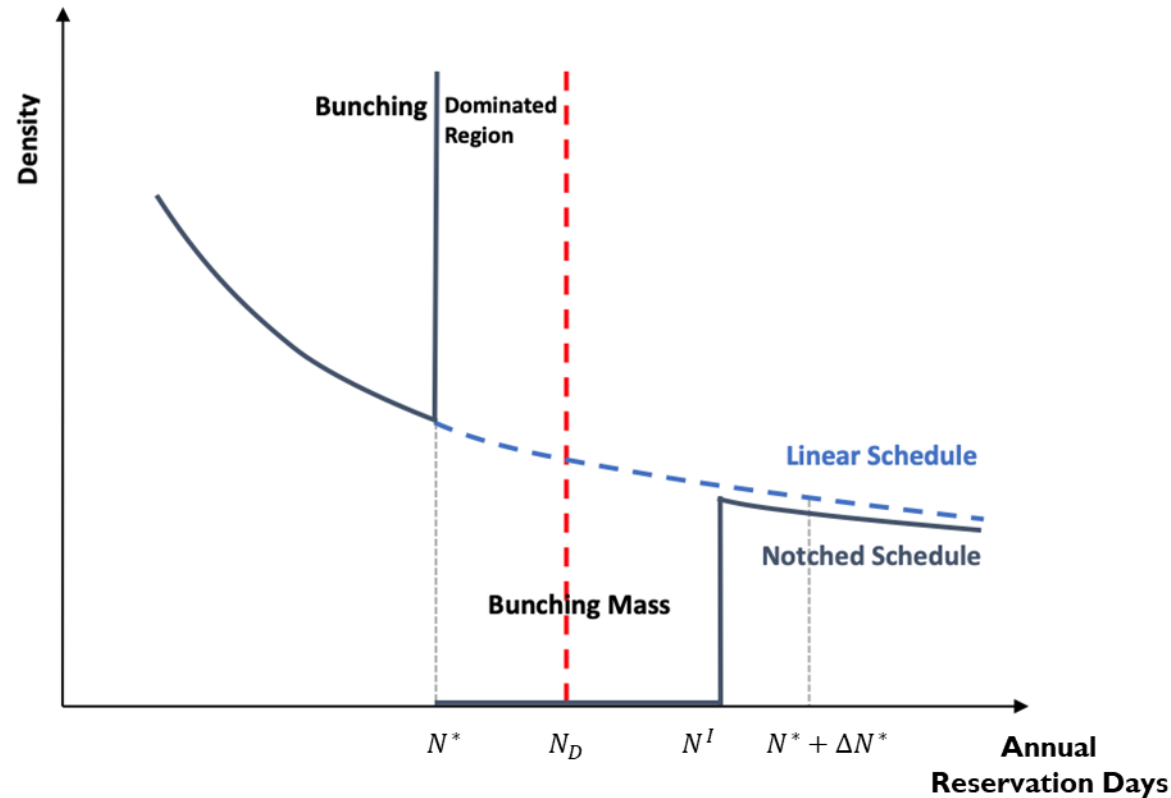
- where ΔN satisfies:

$$\overbrace{p \cdot \Delta N - (c_i(h_i, N^* + \Delta N) - c_i(h_i, N^*))}^{\text{Additional Profit}} = \underbrace{\Delta \tau(h_i, m_n)}_{\text{Change in property taxes}}$$



ESTIMATION METHOD

A context for bunching estimation: the notch



- Model situations with incentive changes
- Isolate tax avoidance due to intentional behavior of STR hosts
- Detecting behavioral adjustments by clustering
- Notch in rental day limit for Homestead Exemption

Bunching estimation using notches in LRE rental limit

- Plot distribution of STR reservation days (N):
 - j bins with the count of STRs c_j in each bin
 - Bin: range of reservation days

Diagram illustrating the bunching estimation model using notches in the LRE rental limit. The equation is:

$$c_j = \sum_{i=0}^p \beta_i (N_j)^i + \sum_{i=N_L}^{N_U} \gamma_i \mathbb{1}[N_j = i] + \sum_{r \in R} \rho_r \mathbb{1}\left[\frac{N_j}{r} \in \mathbb{N}\right] + \sum_{k \in K} \theta_k \mathbb{1}[N_j \in K \wedge N_j \notin [N_L, N_U]] + \epsilon_j$$

Annotations for the equation components:

- Binned data**: Points to c_j .
- Coefficients for polynomial**: Points to β_i .
- Bunching Region $[N_L, N_U]$** : Points to the summation $\sum_{i=N_L}^{N_U} \gamma_i \mathbb{1}[N_j = i]$.
- Round Number Controls (ex: 7 days)**: Points to $\rho_r \mathbb{1}\left[\frac{N_j}{r} \in \mathbb{N}\right]$.
- Fixed Number Control (ex: 14 days)**: Points to $\theta_k \mathbb{1}[N_j \in K \wedge N_j \notin [N_L, N_U]]$.
- Polynomial of degree p**: Points to $\sum_{i=0}^p \beta_i (N_j)^i$.
- Allow discontinuity at $N = 30$** : Points to the Bunching Region.

Bunching estimation using notches in LRE rental limit

- Estimate counterfactual distribution of STR reservation days (N) without notch:
 - j bins with the count of STRs c_j in each bin
 - Bin: range of reservation days

Binned data Coefficients for polynomial

Round Number Controls (ex: 7 days)

$$\hat{c}_j = \sum_{i=0}^p \beta_i (N_j)^i + \sum_{r \in R} \rho_r \mathbb{1}\left[\frac{N_j}{r} \in \mathbb{N}\right] + \sum_{k \in K} \theta_k \mathbb{1}[N_j \in K \wedge N_j \notin [N_L, N_U]] + \epsilon_j$$

Polynomial of degree p Fixed Number Control (ex: 14 days)

Bunching estimation using notches in LRE rental limit

- Estimate Excess Mass at $N = 30$ (FL)

Bunching Region $[N_L, N^*]$

Counterfactual binned data

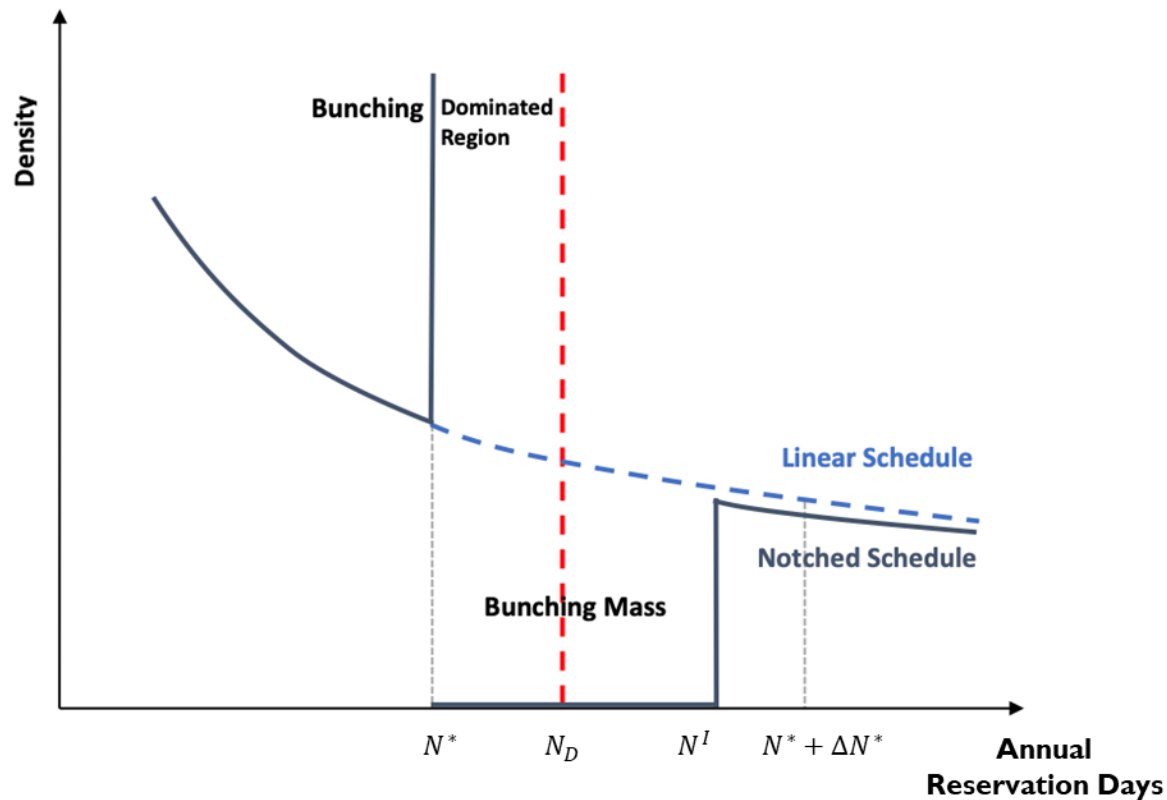
$$\hat{B}_0 = \sum_{j=N_L}^{N^*} (c_j - \hat{c}_j)$$

Bunching Estimate

Actual binned data

The diagram illustrates the formula for the bunching estimate $\hat{B}_0$. It is defined as the sum of the difference between actual binned data c_j and counterfactual binned data $\hat{c}_j$ over the bunching region $[N_L, N^*]$. The actual binned data c_j is represented by the term c_j in the summation, and the counterfactual binned data $\hat{c}_j$ is represented by the term $\hat{c}_j$. The upper limit of the summation is N^* , and the lower limit is N_L . The entire expression is labeled as the Bunching Estimate $\hat{B}_0$.

Bunching estimation using notches in LRE rental limit



- Normalized excess mass: reduction in nights

$$\hat{b} = \frac{\hat{B}_0}{\hat{c}_0}$$

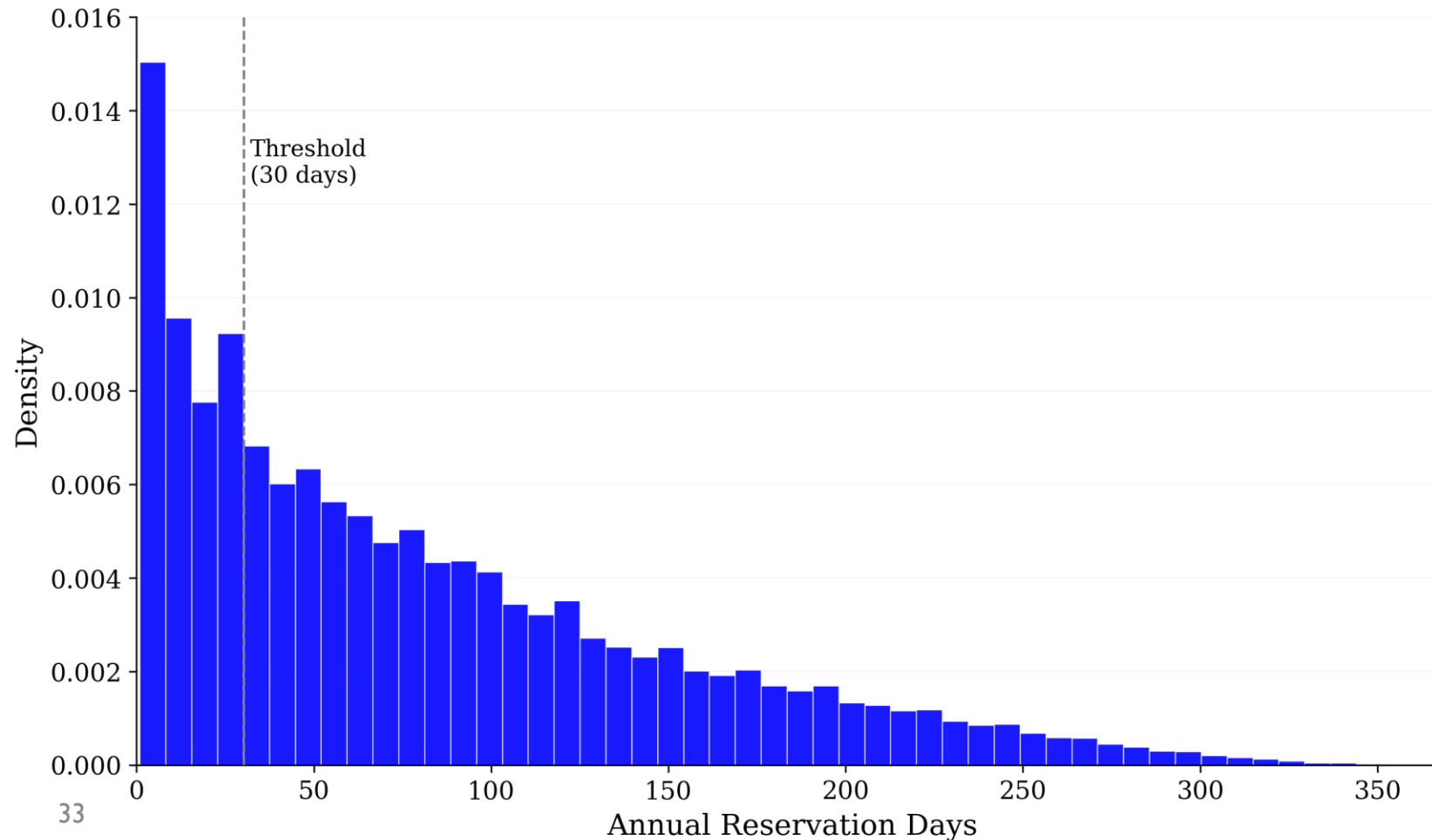
- Local Average Treatment Effect (LATE)

$$\hat{b}_{adj} = \frac{\hat{b}}{\text{share compliers}}$$

Bunching Estimator Assumptions

1. Smooth distribution → changes are behavior responses
 - Test graphically
2. Bunchers come from above the threshold
 - Support conceptually
3. The market has constant friction
 - Immense flexibility in booking, entering, and exiting STR market
 - Flexibility constant no matter number of bookings
4. No other changes at threshold
5. Correct functional form for counterfactual

Assumption 1: Smooth Distributions in STR market



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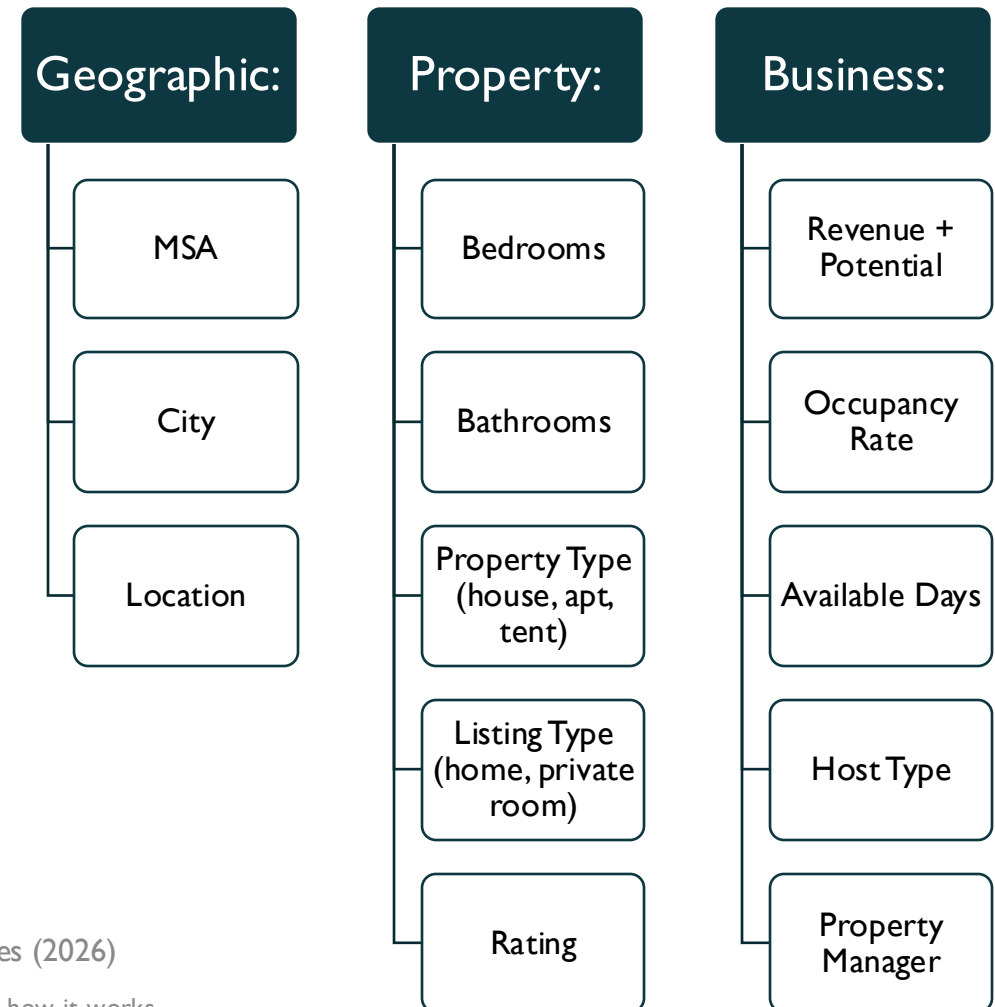
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STR data from AIRDNA

- AirDNA: 3rd party source for vacation rental data
 - Scraped Data – Airbnb & VRBO
 - Partner Data
- Algorithm for
 - Dual listed properties
 - Booked vs. blocked
- Monthly data from 2015 – 2024
- South Carolina and Florida



Other Data Sources: VCAs, Tax Law, CPI-U

- Voluntary Collection Agreement (VCA) – Bibler et al. (2021)*
 - Collect dates of VCAs
 - FL: December 15, 2015
- State Property Tax Law and Rates
 - FL Statutes section 196.061(1)
 - FL League of Cities
- CPI-U from BLS
 - All Urban Consumers
 - 90% of population
 - 2024 base year

Sample Restrictions: Hosts likely to have Exemption

- Entire Home Rentals
- Property Type
 - Likely Homeowner: Condo, House, Townhouse, Villa
 - Unlikely: Tent, Tipi, Yurt, Treehouse, Apartment
- Host Type
 - Host manages 1 Rental Unit

Summary Statistics for 1-unit Hosts, 2015-2024

Variable	All of FL	Orlando	Miami	Tampa
<i>A. Property Characteristics</i>				
Num. of Bedrooms	3.09	4.49	2.41	2.32
Bathrooms	2.54	3.51	2.07	1.87
Share of House Listings	0.49	0.48	0.54	0.51
Share of Condo Listings	0.34	0.14	0.36	0.41
Share of Properties on Airbnb and Vrbo	0.08	0.05	0.09	0.12
Years as a STR	5.11	4.95	4.77	4.93
<i>B. Other Characteristics</i>				
Annual Number of Reservations	31.44	34.60	35.78	33.20
Annual Reservation Days	147.01	150.89	140.49	158.27
Average Stay in Days	6.17	5.06	5.26	6.69
Average Occupancy Rate	0.53	0.55	0.52	0.56
Annual Revenue in Dollars	33,311.62	30,557.57	36,297.71	32,508.11
Revenue / Revenue Potential	0.81	0.82	0.81	0.80
Average Nightly Rate	236.16	213.37	283.48	207.39
Observations	1,168,880	239,183	136,272	89,119

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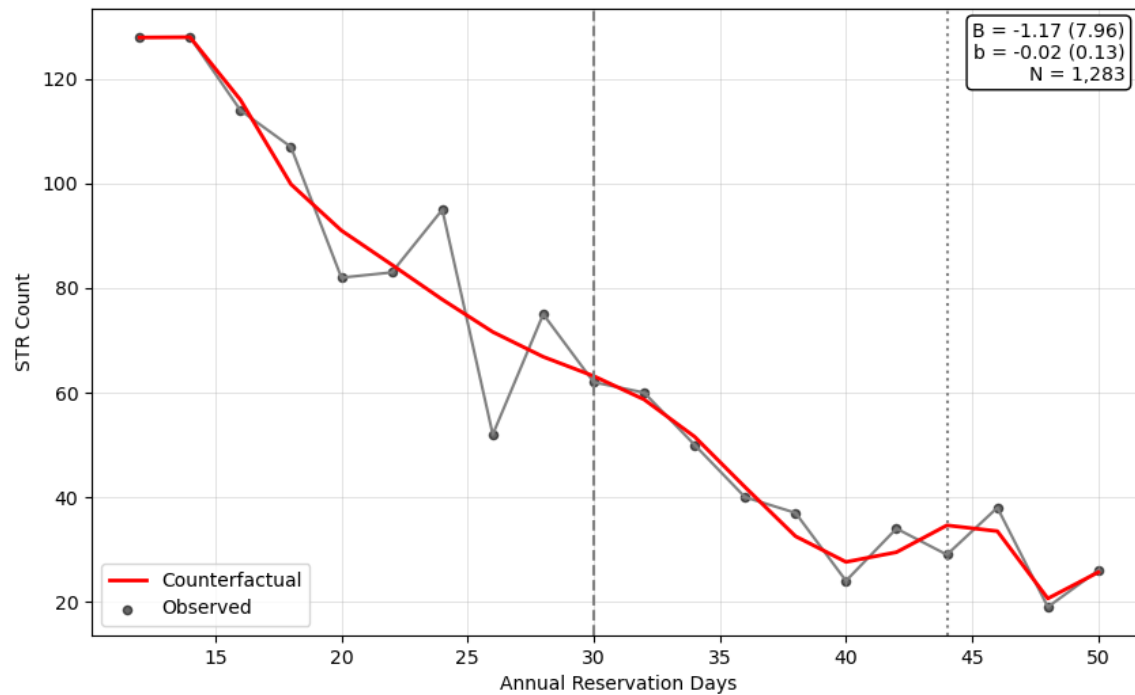
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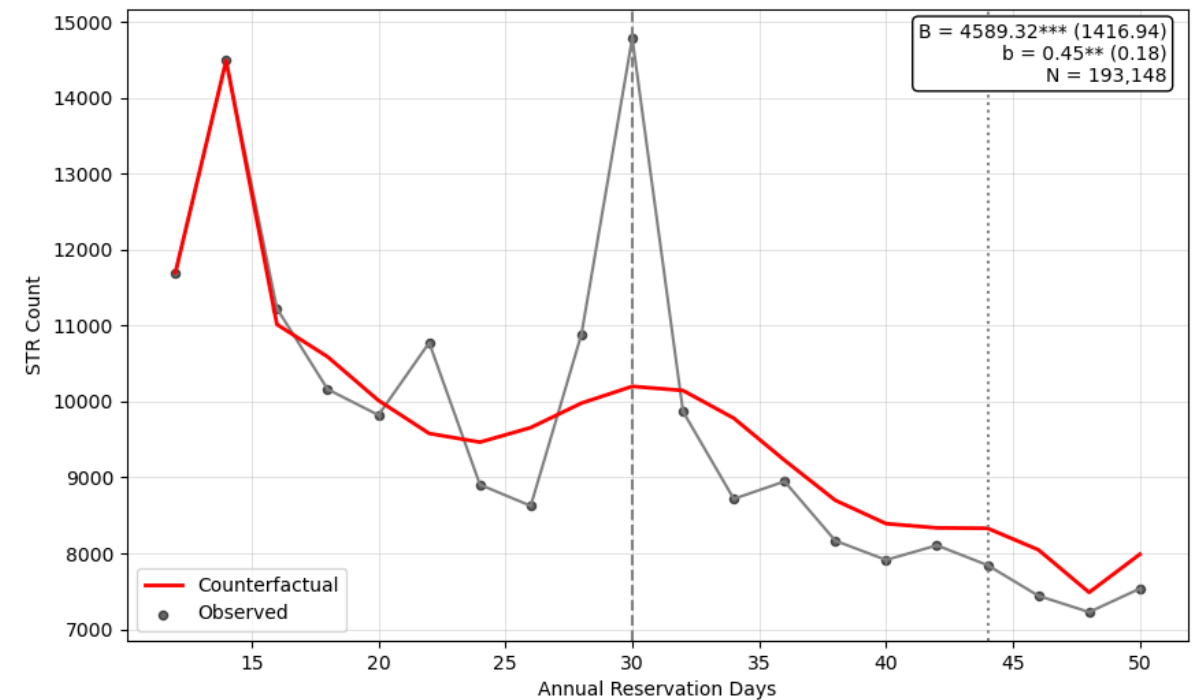
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Bunching Results pre- and post-VCA

Pre-Period: 2015



Post-Period: 2017-2024



Bunching Results pre- and post-VCA

Year(s)	Florida (30-day limit)	
	2015	2017–2024
Estimated Excess Mass	-1.171 (7.957)	4,589.321*** (1,416.941)
Normalized Excess Mass	-0.019 (0.126)	0.450** (0.184)
Share of Bunchers	-0.022	0.027
Adj. Normalized Excess Mass (LATE)	0.826	16.464
N	1,283	193,148

- Average Rev per Night: \$240
- Revenue Loss: $16.5 \times 240 = \$3,951$

Quantifying the Response of the Marginal Buncher

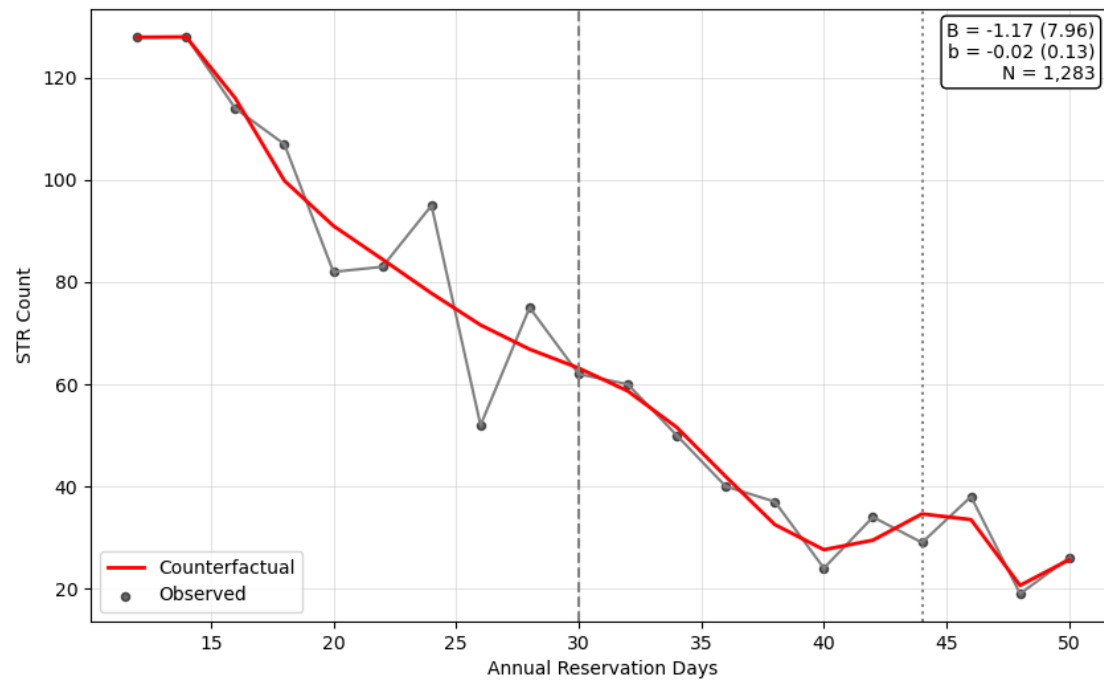
- Elasticity = $\epsilon_{N,t} = \frac{\% \Delta N}{\% \Delta T} = \frac{\hat{b}/N^*}{\Delta \lambda / \lambda}$
 - 1% increase in property tax $\rightarrow$ 1.0-2.8% decrease in nights booked
 - **Compliers:** 1% increase in property tax $\rightarrow$ 37-102% decrease in nights booked

A 100% elasticity in Florida would be renting 29 days instead of 60 days.

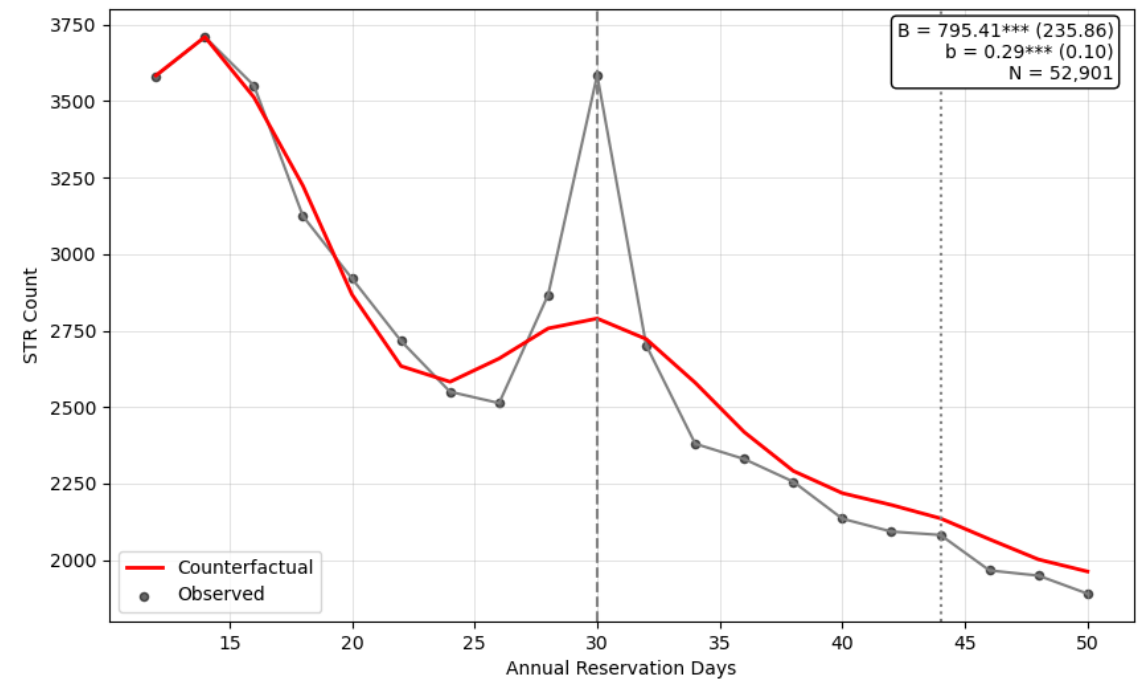
ROBUSTNESS CHECKS

Bunching Results pre & post-VCA, Airbnb Only

Pre-Period: 2015

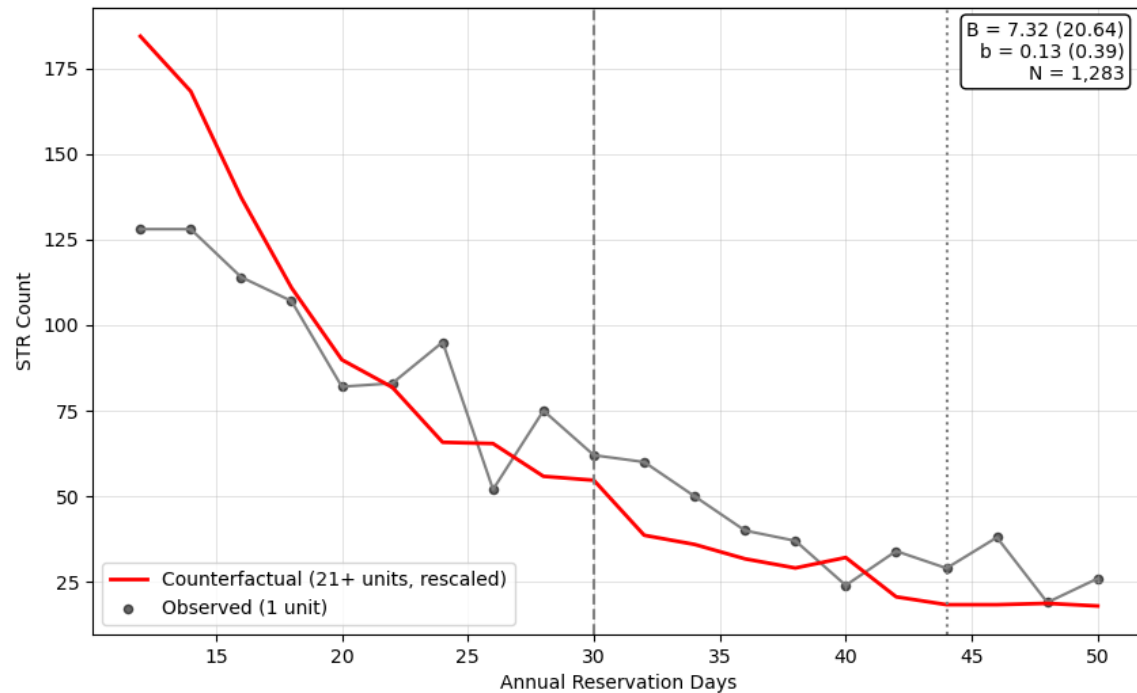


Post-Period: 2017-2024

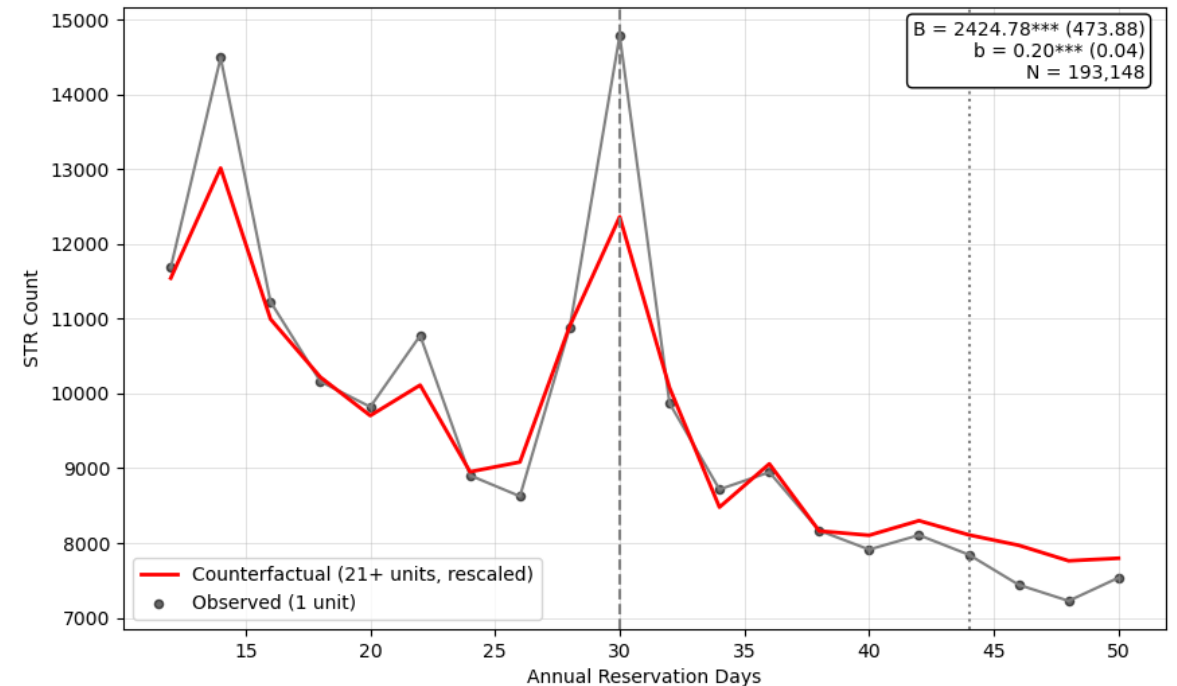


Bunching Results pre & post-VCA, 2I+ comparison

Pre-Period: 2015



Post-Period: 2017-2024



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Results Recap: Evidence of a Spillover Effect of Indirect Reporting

- **VCA Effect:** No bunching before the 2015 VCA; ~4,600 listings bunch after
- **Bunching Response:** The most responsive hosts cut bookings by ~16 nights
- How does third-party reporting affect compliance with taxes it does not directly target? **Improves Compliance**

Future Research: The Why behind the Spillover Effect

- Why would reporting that never mentions rental days matter?
 1. Perceived enforcement (primary channel)
 - VCAs bring Airbnb into the tax system, raising hosts' sense they could be detected
 - Airbnb notices about collecting taxes do not mention the homestead exemption ([Airbnb Notices](#))
 2. Salience (secondary, indirect channel)
 - Information alone moves compliance (Granicus 2023)
 - Many hosts don't know the 30-day rule exists (Thomson 2018)
 - Potentially indirect – “check other tax obligations”
 3. High stakes (amplifier)
 - Losing homestead triggers market reassessment and forfeits SOH protection
 - The homestead exemption rule existed prior to VCAs
 - Explains the large effect, not the behavior change

Exploring Airbnb Tax Collection Information Pages



Ask a question

Home > All topics > Payouts and taxes > Taxes > General tax info for hosts > How tax collection and

How-to • Home host

How tax collection and remittance by Airbnb works

Airbnb automatically collects and remits certain taxes on behalf of hosts who offer stays, experiences, and services. Hosts may need to manually collect and remit other applicable taxes on their stay or experience price.

Whether or not Airbnb automatically collects taxes, it doesn't change the total payout you receive as a host. You'll continue to receive your payout minus the applicable Airbnb service fees.

Understanding other tax obligations

We recommend doing some research to make sure you understand and comply with any local tax rules and obligations that apply to your listing. Check with your local government or a tax professional for additional information about taxes that apply to your situation.

Sources:

- <https://www.airbnb.com/help/article/1036>
- <https://www.airbnb.com/help/article/2301>

Applicable taxes

Our system determines which taxes are applicable by the address you enter for your stay, experience, or service listing. Please check your listing's details to make sure your address is correct. Even if Airbnb automatically collects and pays certain taxes on your behalf, you may still be required to manually collect other taxes. For example, Airbnb may collect regional taxes but not local ones in some places. Also, Airbnb is not responsible for any tax collection errors due to typos.

Tax and Fiscal Impact

- Before the VCA, an evading host rents more than 30 days but pays the residential rate.
- After the VCA, three options:

Host response	Tax rate paid	Revenue vs. evasion
1. Report it: keep renting more than 30 days	Commercial	Gain
2. Bunch: cut rentals to 30 days or fewer	Residential	\$0
3. Dominated region: rent just over 30 days, lose exemption without enough extra income	Commercial	Gain (not optimal for host)

- Revenue gains come only from groups 1 and 3.

BUNCHERS ONLY

\$13.8M*

Unrealized property tax revenue

4,600 hosts × \$3,000

Range: \$9.2M to \$16.1M

Desired: +\$13.8M

Realized: \$0

**Assumes bunchers would have otherwise rented more than 30 days. Relative to evasion, realized revenue from bunchers is \$0.*



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Policy Implications



- Depends on the goal of local government
- Thresholds and reporting curb commercialization of housing
 - At a cost to revenue and efficiency
- Smooth the notch
 - Gradual exemption phaseout instead of a sharp 30-day cutoff

Bigger Questions for Future Research

- **Are counties equipped to enforce rental day limits?**
 - Counties face high enforcement costs
 - Data-sharing lowers enforcement costs
 - Integrate property tax records with STR data?
- **Is 30 days the right limit? 14? 72?**
 - Tax design, salience, size impact compliance
 - Compliance → key to fairness and fiscal stability



THANK YOU

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