

The Effects of Short-Term Rental Density on Housing Costs in New Orleans

Tajahya Brako

Political Science Senior Thesis

Bemidji State University

Dr. Patrick Donnay, Advisor

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Abstract

This study examines whether short-term rental (STR) activity affects housing costs across New Orleans neighborhoods. Using ZIP code-level data on licensed short-term rentals and housing characteristics, the analysis focuses on STR density (per 1,000 units) and its relationship with average rent and median home values. The results show a moderate, statistically significant positive relationship between STR density and rental prices ($r = .566, p < .05$), suggesting that higher concentrations of STR activity are associated with increased rents. In contrast, the relationship between STR density and median home values is positive but weak and not statistically significant ($r = .295, p = .286$). A simple regression model indicates that STR density explains approximately 32% of the variation in rent, with each additional STR per 1,000 units associated with an increase of about \$79.70 in average monthly rent. These findings suggest that STR activity may have a stronger impact on rental markets than on home values. The results contribute to ongoing policy debates regarding housing affordability and regulation in tourism-driven cities like New Orleans.

Introduction

Housing affordability has become a major policy concern in cities with strong tourism economies, including New Orleans. The rapid growth of short-term rental platforms such as Airbnb has raised questions about whether these rentals reduce the availability of long-term housing and contribute to rising costs. This thesis examines whether short-term rental activity is associated with higher housing costs across New Orleans neighborhoods. Specifically, it asks: *Does higher short-term rental density lead to higher rents and home values at the ZIP code level?* Using ZIP code-level data, this study compares variation in STR density and housing outcomes across 15 New Orleans ZIP codes. By focusing on STR density rather than raw counts, the analysis allows for more meaningful comparisons across neighborhoods of different sizes.

Literature Review

Introduction

This section reviews existing research on short-term rentals and housing markets, focusing on how STR activity may influence rental prices and home values. This debate matters especially in tourism-heavy cities. In a city where visitor demand is strong, an owner may earn more by renting a unit to tourists than by leasing it to a long-term tenant. If enough owners make that choice, the supply of housing available to residents can shrink. In theory, that reduction in supply can put upward pressure on both rents and sales prices. At the same time, the effect may not be uniform. Some listings are only spare bedrooms or occasional rentals of owner-occupied homes, which may have much smaller effects than commercial operators who control multiple entire-unit listings.

The literature on short-term rentals has expanded quickly over the last decade. Researchers have examined whether Airbnb and similar platforms affect rents, home prices, neighborhood change, tourism, and the effectiveness of local regulation. Although the literature does not claim that short-term rentals are the only cause of housing affordability problems, many studies find that they are one contributing factor, especially in places with high tourism demand and limited housing supply.

This literature review synthesizes that research to justify the present thesis. It first explains the major theoretical mechanisms connecting short-term rentals to housing outcomes. It then reviews leading empirical studies on rents and home prices. Next, it considers the importance of local context, regulation, and uneven neighborhood effects. Finally, it narrows to New Orleans and identifies the gap this thesis addresses: whether higher concentrations of short-term rentals are associated with higher housing prices across New Orleans neighborhoods.

Theoretical Mechanisms: Why STRs Might Affect Housing Markets

The central theoretical claim in this literature is straightforward: short-term rental activity can alter the effective supply and use of residential housing. Wachsmuth and Weisler (2018) argue that Airbnb can create a new “rent gap” by allowing owners to capture tourism revenue from residential property without large-scale redevelopment. In their account, digital platforms make it easier to convert ordinary housing into tourism-oriented housing, which can intensify gentrification and displacement pressures. Their argument is important because it moves the discussion beyond the idea of simple home sharing. Instead, it frames short-term rentals as a process that can transform the economic logic of neighborhood housing markets.

Other scholars emphasize the supply mechanism more directly. Horn and Merante (2017) show that if entire units are diverted from the long-term market, the number of units available to local renters falls. Barron, Kung, and Proserpio (2021) similarly argue that Airbnb activity can reduce vacancy in the for-rent stock and increase competition for remaining units. In both studies, the key mechanism is not merely that tourists arrive in a neighborhood, but that property owners face stronger incentives to use residential space for short-term tourist demand rather than long-term residential demand.

A second theoretical mechanism involves expectations and investment. If investors believe that properties can generate high revenue as short-term rentals, they may be willing to pay more to purchase those properties in the first place. That can increase demand for owner-occupied and investor-owned housing in affected areas. Kim, Leung, and Wagman (2017) show that regulations restricting short-term rentals can reduce housing values by limiting how owners can use their property. This suggests that the ability to operate a short-term rental is often built into property prices. From this perspective, housing values reflect not only the value of living in a property, but also the value of the right to monetize that property through short-term rental activity.

Not all STR activity has the same impact. Some listings involve spare rooms or occasional rentals, while others involve full-time commercial operations managing

multiple properties. As a result, recent research treats short-term rentals as a diverse phenomenon, with effects varying based on intensity, type of listing, and local market conditions. These forms of participation may produce income for residents without removing a full unit from the long-term market. Benitez-Aurioles and Tussyadiah (2020) also note that effects can differ across local markets and may be stronger for home values than for rents. The effect depends on the type of listing, the intensity of use, the surrounding housing market, and the regulatory environment.

These theoretical debates shape the empirical literature. Researchers generally ask whether the effects are positive or negative, but they also ask where the effects are strongest, which outcome is most affected, and whether policy can reduce those effects.

Empirical Findings on Home Prices and Rents

A large share of the empirical literature finds that short-term rental growth is associated with higher housing costs. Barron et al. (2021) find that a 1% increase in Airbnb listings leads to small but measurable increases in rents and housing prices. Other studies show similar patterns in cities such as Boston, Barcelona, and London, particularly in areas with high tourism demand. Their findings are important because they suggest that even relatively small percentage changes in listings can translate into measurable changes in housing costs across many local markets.

Horn and Merante (2017) reach a similar conclusion in Boston. They find that Airbnb expansion reduces the supply of long-term rental units and contributes to higher asking rents. Their study is especially useful because Boston is a city with strong tourism demand and persistent housing affordability concerns, which makes it a good comparison point for other urban markets with tight housing supply.

Outside the United States, the pattern is similar. Garcia-Lopez, Jofre-Monseny, Martinez-Mazza, and Segu (2020) find that Airbnb increased rents, posted prices, and transaction prices in Barcelona. Their estimates suggest particularly strong effects in neighborhoods with the highest concentration of Airbnb activity. Franco and Santos (2021) report a

positive relationship between Airbnb share and both residential property values and rents in Portugal, with especially strong effects in highly touristic areas such as Lisbon and Porto. Shabrina, Arcaute, and Batty (2022) also show that Airbnb activity in London is linked to housing-market pressure, particularly where the evidence points to commercialized or noncompliant listing activity.

Recent studies continue this pattern while also emphasizing spatial detail. Safari, Zhang, and Komarek (2025), the article used in the user's class presentation, analyze home sales in coastal Virginia and find that additional nearby Airbnb activity is associated with higher sale prices. They show that the effect is strongest close to the property and weakens with distance, and that the effect is stronger in higher parts of the home-price distribution. Their findings are especially helpful for this thesis because they reinforce two ideas that matter for research design: first, short-term rental effects may be highly localized, and second, those effects may not be uniform across all neighborhoods or price levels.

Not every study estimates the same effect size, and some scholars find that regulatory changes matter as much as raw listing growth. Koster, van Ommeren, and Volkhausen (2021) study Los Angeles County and find that stricter short-term rental ordinances reduced listings substantially and were followed by lower housing prices. Some research uses quasi-experimental designs, such as policy changes, to better identify causal effects. For example, studies of Los Angeles regulations show that reducing STR activity can lower housing prices. In effect, their findings suggest that when local governments successfully reduce short-term rental intensity, housing markets can respond.

Taken together, these studies establish a strong baseline in the literature. The most common empirical conclusion is not that Airbnb determines housing markets on its own, but that it exerts upward pressure on rents and home values, particularly in places where short-term rental activity is dense, commercially oriented, and concentrated in desirable or tourist-heavy neighborhoods.

Local Context, Regulation, and Uneven Effects

A major development in the literature is the move away from one-size-fits-all conclusions. More recent research shows that short-term rental effects are uneven across places, neighborhoods, and policy regimes. This matters for a thesis on New Orleans because a city-level average can hide major within-city variation.

Valentin (2021) examines regulation in New Orleans and finds that the city's rules reduced participation in the short-term rental market in targeted areas but also shifted activity toward adjacent neighborhoods. This result is especially important for political science because it shows that regulation may change the geography of the market rather than simply eliminate it. Local ordinances therefore matter not only for the size of the short-term rental sector but also for where its effects are felt.

Van Holm (2020) reaches a related conclusion in a study of New Orleans regulation. He finds that local rules changed Airbnb activity, again suggesting that regulation can have real behavioral effects even if it does not remove the market entirely. These studies are useful because they treat short-term rentals as a policy problem rather than just a market trend. They help explain why some cities see heavier neighborhood-level effects than others and why enforcement and design details matter.

The uneven-effects literature also appears in work outside New Orleans. Todd, Musah, and Cheshire (2022) examine London and show that Airbnb listings are associated with neighborhood-level house-price variation. Ayoub, Breuille, Grivault, and Le Gallo (2020) find evidence from French cities that Airbnb disrupts private rental markets, though the strength of the effect varies by place. Gant (2016) links holiday rentals to gentrification pressures and neighborhood change, while Jiao, Hansen, and Azimian (2021) find land-value effects around Airbnb listings in Austin. Together these studies support the idea that short-term rentals should be studied at a smaller geographic scale whenever possible.

This part of the literature also helps refine the thesis question. If Airbnb effects are localized, then a study that only looks at broad citywide averages may miss important variation. Likewise, if regulation can relocate activity across neighborhoods, then geographic units and spatial patterns become part of the substantive question. This is particularly relevant in New Orleans, where tourism, neighborhood identity, and land-use politics are deeply intertwined.

What the Literature Says About New Orleans

New Orleans is an especially valuable case for studying short-term rentals because it combines three features that the literature identifies as important: high tourism demand, neighborhood-level variation, and active regulation. The city has long depended on tourism, and many of its most visited neighborhoods are also places where residents have raised concerns about affordability, displacement, and neighborhood change. That makes New Orleans a case where the theoretical mechanisms in the literature are likely to be visible.

The most directly relevant scholarly studies are Valentin (2021) and van Holm (2020), both of which examine New Orleans regulation. These studies show that regulation matters, but they focus mainly on market participation and policy effects rather than directly estimating how short-term rental density is associated with home values across neighborhoods. That leaves room for additional work that focuses more squarely on housing outcomes.

The broader comparative literature suggests that New Orleans is exactly the sort of city where housing effects might appear. Studies in Boston, Barcelona, Portugal, London, Los Angeles, and coastal Virginia all show that short-term rental activity can contribute to housing-market pressure, especially where tourism demand is strong and where entire-unit listings are common. Because New Orleans shares many of these features, it is reasonable to expect that higher short-term rental density may correspond with higher local housing prices here as well.

At the same time, New Orleans should not simply be assumed to mirror every other city. Its housing stock, neighborhood geography, tourism economy, and regulatory history are distinctive. For that reason, the literature points in two directions at once. It gives a strong theoretical basis for expecting a positive relationship between short-term rental activity and housing prices, but it also makes clear that the size and distribution of that relationship must be studied locally. That tension helps justify the present thesis.

Research Gap and New Orleans

The literature now offers strong evidence that short-term rentals can affect housing markets, but several gaps remain. First, many studies focus on large international cities or on metropolitan areas outside Louisiana. Second, the New Orleans scholarship has paid significant attention to regulation and platform activity, but less work directly connects local short-term rental concentration to neighborhood housing values in a simple, policy-relevant way. Third, the literature repeatedly shows that effects vary by place and by level of geography, which means local empirical testing remains necessary even when the broader theory is well established.

These gaps are important for the present project. A thesis focused on New Orleans can contribute by examining whether neighborhoods with more short-term rental activity also have higher housing prices. Even if the project is exploratory, it can still help clarify whether the broad findings from the national and comparative literature appear in a New Orleans context. This matters not only for academic reasons but also for local policy debates about tourism, neighborhood change, and housing affordability.

The current thesis therefore asks: How does short-term rental activity affect housing prices in New Orleans neighborhoods? The expectation drawn from the literature is that neighborhoods with higher short-term rental density will have higher housing prices, although the relationship may be uneven and may depend on the local market structure, neighborhood composition, and regulatory environment. In that sense, this thesis is designed to test whether a well-established pattern in the literature also appears in one of the most tourism-dependent cities in the United States.

Methods and Analysis

What the Data Set Contains

The original dataset contained 1,309 short-term rental license records. These were aggregated to the ZIP code level for analysis. The document is comprised of separate listings for STR licenses and neighborhood descriptors. These descriptors include median age, racial breakdown, percent female, percent with a BA, median home value, average rent, and a qualitative measure for availability.

How I Cleaned the Data

In the preliminary analysis, I changed the demographics and housing sections from text to numeric, eliminated the records with empty ZIPs not in the main New Orleans study area, and collapsed the ZIP code data to the ZIP code level. This analysis retains 15 Orleans Parish ZIP codes with housing and demographics data: 70112, 70113, 70114, 70115, 70116, 70117, 70118, 70119, 70122, 70124, 70125, 70126, 70128, 70130, and 70131.

Descriptive Patterns

Short-term rental density varies across ZIP codes, with some areas showing higher concentrations of STRs per 1,000 units than others. There is also significant variation in median home values and average rents across the codes. 70124 has the highest valued home in the data set at \$575,000 while 70128 has the lowest home value at \$188,000. **(Table 1: ZIP code Summary)**

Results

Bivariate Relationship with Median Home Value

For each ZIP code, the presence of short-term rentals (STR) does show a positive correlation with greater median home values, but this is a weak correlation at only 0.295. At the ZIP code level, the relationship between STR density (per 1,000 units) and median home value is not statistically significant ($p = 0.286$), suggesting that STR density alone

does not strongly explain variation in home values across ZIP codes. A simple OLS regression produces a positive coefficient, suggesting that higher STR density is associated with higher home values, but this explains only a small portion of the variation ($R^2 = .087$). **(Figure 1)**.

Bivariate Relationship with Average Rent

The relationship is stronger for rent than for home values. STR density is positively associated with average rent, with a moderate correlation ($r = 0.566$, $p = 0.028$). In a simple OLS model, increases in STR density are associated with higher average monthly rent, and this relationship is statistically significant. This relationship does not establish causation, but it suggests that ZIP codes with higher STR density tend to have higher average rents.

This model explains approximately 32.1% of the variation in rent ($R^2 = .321$). The regression coefficient suggests that for each additional STR per 1,000 units, average monthly rent increases by about \$79.70, indicating a meaningful association between STR activity and rental prices. **(Figure 2)**.

Additional analysis using categorical STR density levels further supports these findings. A chi-square test shows a statistically significant and strong relationship between STR density and rent levels ($\chi^2 \approx 7.63$, $p < .05$). In contrast, the relationship between STR density and median home values is not statistically significant. However, rent and home values themselves are strongly related ($\chi^2 \approx 15.15$, $p < .01$), suggesting that STR effects on home values may operate indirectly through rental markets. **(Table 2A and 2B)**.

A multiple regression model including STR density, median home value, education, and population explains a substantial portion of variation in rent ($R^2 \approx 0.62$; $p < .05$). However, individual predictors are not statistically significant when included together, suggesting that the relationship between STR density and rent may be influenced by broader neighborhood characteristics. **(Table 3)**.

Interpretation

Each additional STR per 1,000 units is associated with an increase of about \$79.70 in average monthly rent. These results suggest that STR activity is more strongly linked to rental price increases than to home values. This aligns with prior research showing that STRs directly affect rental supply.

Discussion and Conclusion

The results of this study provide insight into how short-term rental activity is associated with housing costs in New Orleans. This study finds that short-term rental density is positively associated with housing costs in New Orleans, with stronger and statistically significant effects observed in rental markets. The stronger and statistically significant relationship with rent suggests that STR activity may place pressure on rental markets by reducing available long-term housing.

In contrast, the relationship with home values is weaker and not statistically significant, indicating that STR effects on property prices may be less direct or influenced by additional factors. These findings are consistent with existing literature, which shows that STR impacts vary across markets and are often strongest in high-tourism areas.

From a policy perspective, this raises important questions about regulation. Restrictions on STR activity may affect not only rental affordability but also property values, connecting this issue to broader debates about property rights and land-use regulation.

Limitations

These findings should be interpreted with caution for several reasons. First, there are only 15 ZIP codes in the sample, which limits statistical power. Next, the dependent variables in home value and rent appear to be a single repeated value per ZIP code instead of property-level observations, so the current data set is not a true hedonic sales dataset like the article from coastal Virginia. Third, ZIP codes are broad spatial units. The effects of short-term rentals are often at the census tract, block, or buffer-distance level, so ZIP code averages can miss neighborhood level variation.

Next Steps

This analysis converts STR counts into STR density (per 1,000 units) to allow for more meaningful comparisons across ZIP codes. Future work could expand on this by incorporating more granular geographic data or additional control variables. Another option is to integrate the STR data with either housing sale data or tract-level data to analyze whether higher STR clustering correlates with higher sale prices and to control for neighborhood characteristics. A ZIP-code analysis with STR density, income or education, and housing price would be a good start.

Appendix

Table 1: ZIP Code Summary

ZIP	STR per 1,000	Median Home Value (\$)	Average Rent (\$)
70112	2.47	394,000	2,099
70113	5.36	274,950	1,629
70114	2.03	276,900	1,100
70115	6.99	499,000	2,613
70116	12.24	389,450	1,695
70117	8.00	257,500	2,289
70118	3.30	349,450	1,750
70119	6.44	325,000	1,737
70122	2.01	299,000	1,197
70124	1.58	575,000	2,000
70125	4.51	334,450	1,600
70126	0.38	183,590	1,100
70128	0.26	188,000	1,050
70130	5.59	415,000	1,688
70131	0.24	268,999	1,071

Figure 1: STR Density (per 1,000 units) vs. Median Home

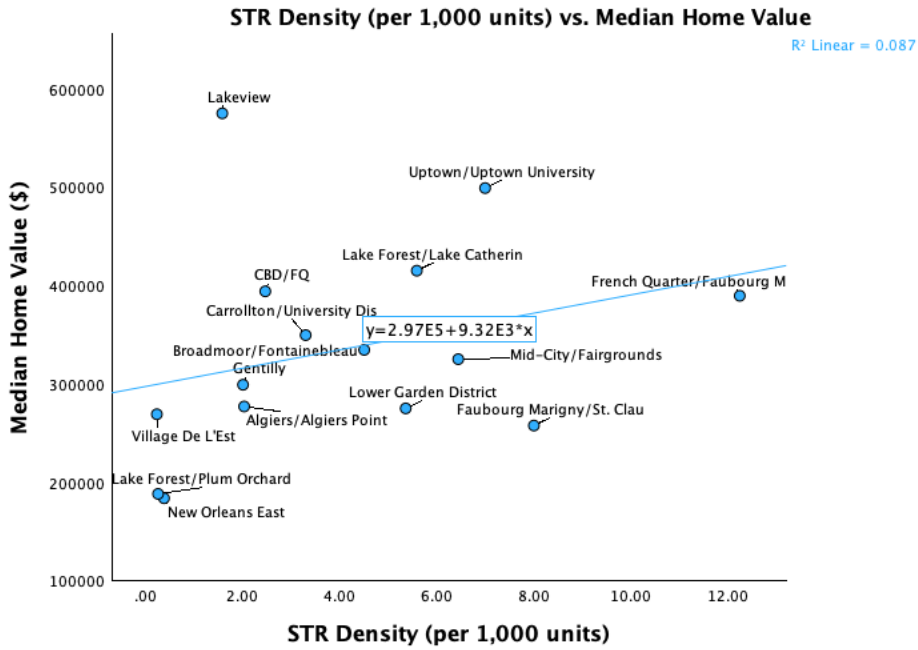


Figure 2: STR Density (per 1,000 units) vs. Average Rent

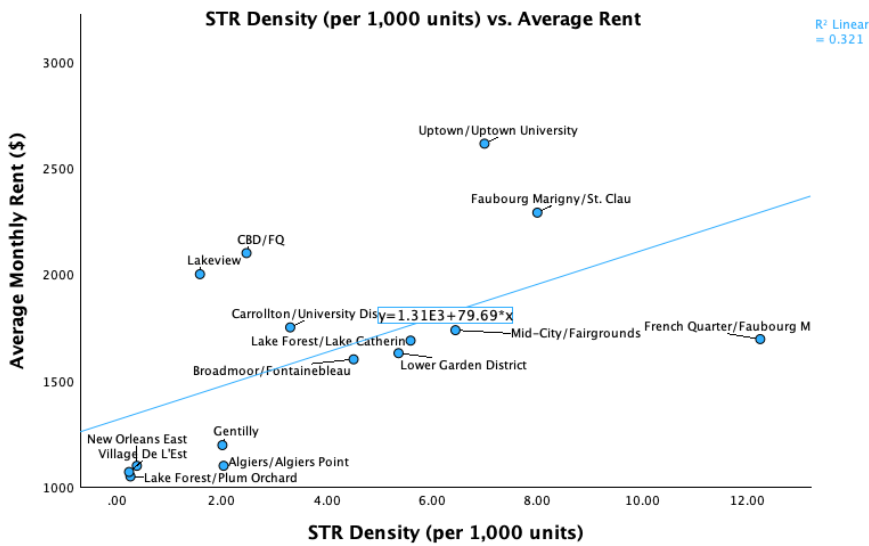


Table 2A and Table 2B

A. Relationship Between STR Density Levels and Rent Levels

Rent Level	Low STR	High STR	Total
Low Rent	5 (100.0%)	0 (0.0%)	5
Medium Rent	1 (16.7%)	5 (83.3%)	6
High Rent	2 (50.0%)	2 (50.0%)	4
Total	8 (100%)	7 (100%)	15

Chi-Square = 7.63, p < .05

B. Relationship Between STR Density Levels and Home Value Levels

Home Value Level	Low STR	Medium STR	High STR	Total
Low Home	5 (71.4%)	1 (14.3%)	1 (14.3%)	7
Medium Home	0 (0.0%)	5 (83.3%)	1 (16.7%)	6
High Home	0 (0.0%)	0 (0.0%)	2 (100.0%)	2
Total	5	6	4	15

Chi-Square \approx 15.15, p < .01

Table 3: Multiple Regression Analysis of Rent

Variable	Coefficient
STR Density (per 1,000 units)	60.01 (29.36)
Median Home Value	0.004 (0.002)
% Bachelor's Degree	-6.24 (13.83)
Population	0.006 (0.011)
N	15
R²	0.62

Notes: Dependent variable is average rent per ZIP code. Standard errors in parentheses.

References

- Ayoub, K., Breuille, M.-L., Grivault, C., & Le Gallo, J. (2020). Does Airbnb disrupt the private rental market? An empirical analysis for French cities. *International Regional Science Review*, 43(1-2), 76-104.
- Barron, K., Kung, E., & Proserpio, D. (2021). The effect of home-sharing on house prices and rents: Evidence from Airbnb. *Marketing Science*, 40(1), 23-47.
- Benitez-Aurioles, B., & Tussyadiah, I. P. (2020). What Airbnb does to the housing market. *Annals of Tourism Research*, 90, 103108.
- Franco, S. F., & Santos, C. D. (2021). The impact of Airbnb on residential property values and rents: Evidence from Portugal. *Regional Science and Urban Economics*, 88, 103667.
- Gant, A. C. (2016). Holiday rentals: The new gentrification battlefield. *Sociological Research Online*, 21(3), 112-120.
- Garcia-Lopez, M. A., Jofre-Monseny, J., Martinez-Mazza, R., & Segu, M. (2020). Do short-term rental platforms affect housing markets? Evidence from Airbnb in Barcelona. *Journal of Urban Economics*, 119, 103278.
- Horn, K., & Merante, M. (2017). Is home sharing driving up rents? Evidence from Airbnb in Boston. *Journal of Housing Economics*, 38, 14-24.
- Jiao, J., Hansen, K., & Azimian, A. (2021). Land value impacts of Airbnb listings on single-family homes in Austin, Texas, USA. *International Journal of Housing Markets and Analysis*, 14(4), 863-879.
- Kim, J. H., Leung, T. C., & Wagman, L. (2017). Can restricting property use be value enhancing? Evidence from short-term rental regulation. *Journal of Law and Economics*, 60(2), 309-334.

Koster, H. R. A., van Ommeren, J., & Volkhausen, N. (2021). Short-term rentals and the housing market: Quasi-experimental evidence from Airbnb in Los Angeles. *Journal of Urban Economics*, 124, 103356.

Safari, N., Zhang, L., & Komarek, T. M. (2025). The impact of short-term rental activity on house prices: Evidence from coastal Virginia. *The Annals of Regional Science*, 74, 1-31.

Shabrina, Z., Arcaute, E., & Batty, M. (2022). Airbnb and its potential impact on the London housing market. *Urban Studies*, 59(1), 197-221.

Todd, J., Musah, A., & Cheshire, J. (2022). Assessing the impacts of Airbnb listings on London house prices. *Environment and Planning B: Urban Analytics and City Science*, 49(1), 206-222.

Valentin, M. (2021). Regulating short-term rental housing: Evidence from New Orleans. *Real Estate Economics*, 49(1), 152-186.

Wachsmuth, D., & Weisler, A. (2018). Airbnb and the rent gap: Gentrification through the sharing economy. *Environment and Planning A: Economy and Space*, 50(6), 1147-1170.

van Holm, E. J. (2020). Evaluating the impact of short-term rental regulations on Airbnb in New Orleans. *Cities*, 104, 102803.