Taxing the Top, Building the Bottom? The Impact of Los Angeles' Mansion Tax on Housing Supply and Affordability

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July 25, 2025

Abstract

I study whether Los Angeles citywide discontinuous increases in real estate transfer tax aimed at preventing homelessness and funding affordable housing affect housing supply outcomes in construction industry. In my findings, I discover significant responses to the tax reform in local housing market, in terms of price sold below the taxation threshold, and the quantities of units sold. Using plausibly exogenous variations in exposure to the tax reform in LA county, I explore the real estate market channel through which the tax reform may affect housing constructions. The tax's primary effect was to broadly suppress construction activity rather than shift development toward affordability or multi-family housing. Luxury homeowners increasingly opted to remodel rather than sell, exacerbating supply constraints. These results challenge the assumption that taxing high-end housing aids affordability.

Keywords: mansion tax, housing constructions, notched tax scheme, affordable housing

1   Introduction

Real estate transfer taxes imposed on the value of real estate transactions play an important role in the housing market. In the City of Los Angeles, the new tax was approved by a ballot initiative entitled Measure ULA (United to House L.A.) in the election of 8 November 2022 and is commonly known as the 'mansion tax'. The Ordinance imposes a 4% tax on all real property sales priced or valued from $5 million up to $10 million and a 5.5% tax on real property sales priced or valued at $10 million or greater, effective April 1, 2023. The LA mansion tax was expected to generate the city an estimated $1.1 billion annually, with the majority of the proceeds going towards affordable housing, to increase the supply of affordable housing and reduce housing costs for the low-income.

The tax applies only to properties located within the City of Los Angeles and does not include the other 87 incorporated cities in Los Angeles County, such as Beverley Hills, Long Beach, Pasadena, and Santa Monica. Taking advantage of the tax rate and geographical discontinuities in transfer taxes in Los Angeles County before and after the "mansion tax", I try to investigate the effectiveness of this tax reform policy, and how construction industry for new housing supply might respond to these policy-induced changes. The ULA Tax can be expected to discourage some transactions, and developers may look to work outside of the City of Los Angeles. However, with the increased demand for affordable housing, certain developments for cheaper housing may be newly profitable. Significant variations in supply and demand in the housing market subject to the "mansion tax" may directly impact the local construction industry.

Some may argue that luxury housing represents a relatively small segment of the construction industry, raising doubts about whether a mansion tax could meaningfully impact broader housing supply or economic activity. This skepticism underscores a key motivation for the study. Even niche markets can exert a disproportionate influence on results. High-value developments often set price benchmarks, shape developer strategies, and drive investment in adjacent sectors such as architecture, materials, and skilled labor. A decline

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in luxury construction, even from a modest baseline, could disrupt these interconnected networks, amplifying indirect effects on housing availability and employment. The introduction of a mansion tax may create significant challenges for developers in attracting investors and securing bank loans, leading to a decline in construction projects. Investors prioritize high returns, often favoring luxury real estate where rents, such as $2,800 for a one-bedroom unit, make their financial targets achievable, unlike affordable housing with lower rents and diminished profitability. A mansion tax reduces the appeal of luxury developments, prompting investors to seek opportunities elsewhere and leaving developers without funding. Meanwhile, banks, which typically finance 50–65% of construction costs, rely on stable rental income and investor backing to mitigate risk. If rents drop or investors withdraw due to the tax, banks view projects as higher risk and withhold loans. As a result, developers face a dual financing crisis: dwindling investor interest and restricted access to bank capital. This stifles new construction, worsening housing shortages, particularly in high-demand markets like Los Angeles, where the need for both affordable and high-end housing remains acute.

Furthermore, luxury projects frequently anchor large-scale urban developments, subsidizing infrastructure upgrades or mixed-income housing components. A tax-induced reduction in such projects might inadvertently stall wider community investments. Though it's known as the "mansion tax," except for rare exceptions it applies to all properties sold for more than $5 million, no matter if they are gas stations, strip malls, apartment buildings or actual mansions. Apartment developers and real estate brokers said additional costs from ULA make it even harder to earn a reasonable profit in what can be a risky business. That's because when building apartments, developers often sell their finished product, which would probably trigger the ULA tax for any building over 15 units, according to Greg Harris, a real estate broker with Marcus and Millichap. [1]Even developers who hold onto their properties typically need to take out a mortgage on the finished building — and Harris said lenders are willing to give less because they too would need to pay the tax if they foreclose and sell the

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[1]https://www.latimes.com/california/story/2024-04-02/california-is-building-fewer-homes-the-state-could-get-even-more-expensive

property.

By examining these cascading risks, this paper seeks to challenge the assumption that small market shares equate to negligible consequences. Luxury developments also sometimes fund community improvements and amenities, such as roads or cheaper housing, through profits from high-end projects. Losing them might stall such benefits. This paper aims to show that even a small part of the market can create big ripple effects.

Figure 2 presents a time series of the 95th percentile of housing sales prices from 2018 to 2023. The graph shows separate trends for the City of Los Angeles (the City) and the County. Each line represents the 95th percentile sale price in a given month. The two series move closely together. Both show similar trends before the mansion tax takes effect. Housing prices in the City are consistently higher than in the County, with a price trend fluctuating between 3 million and 4 million dollars. Just before the mansion tax takes effect, I observe a sharp increase in the City's 95 percentile sale prices up to 6 million dollars, followed by a steep decrease to below 3 million dollars. This jump is not comparably observed in the County. The figure highlights a strong short-run response among high-end properties inside the City.

As can be seen in the graph, luxury homes sometimes represent more than 5% of total housing transactions, signaling their expanding influence on the market. A mansion tax targeting high-value properties could reshape construction trends, as developers often prioritize luxury projects for their profitability. Introducing tax penalties might reduce incentives for such projects, potentially slowing construction activity. This could tighten the overall supply of housing, worsening existing affordability challenges, particularly for middle-income buyers facing increasingly competitive markets.

The ripple effects might extend beyond housing. Construction delays or scaled-back projects could lead to job losses in the sector, straining local economies reliant on development. In contrast, the tax could generate significant public revenue, which could fund affordable housing programs or infrastructure. Balancing these trade-offs-economic risks

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against potential social benefits-is critical for policy design.

In Figure 3, the time series of the 90th percentile of listed home prices in the City and County between 2018 and 2023 falls between 2 million and 6 million, reflecting a similar trend, though less extreme, compared to that of the 95th percentile of home sale prices. Although these prices appear inflated relative to actual sales values, they still highlight a significant segment of high-value housing. Even at this level, properties could be swept into a mansion tax bracket, depending on how thresholds are set.

To study the effect of mansion tax on housing supply, proxied by the number of filed permits for new construction, I use a difference-in-differences model in this quasi-experiment setting, as the data contain two sources of variation: 1) the variation for the same neighborhood and properties bordering the city line before or after treatment, which is the "mansion tax"; 2) the variation for heterogeneous neighborhoods and properties in treatment and control groups. The diff-in-diff model is suitable for exploiting the variations and identifying the causal relationship between housing supply outcomes in the construction industry and the effect of treatment. I estimate the diff-in-diff regression models, comparing the border regions in 22 groups before and after the policy change. The standing hypothesis is that, after imposing the mansion tax on the City of Los Angeles, sellers are incentivized to sell their luxury properties at a premium to compensate for the burden of paying the tax, while buyers may prefer to continue searching in order to benefit from locally depressed prices bunching below the notch. Together, there is a strong incentive for buyers and sellers in the proximity of the notch to not transact. With this discouragement of the local housing market, developers and contractors can leave these affected neighborhoods and look for opportunities elsewhere.

Did developers and contractors opt out of affected neighborhoods? The evidence suggests yes. The baseline results reveal that the total number of new construction permits in Los Angeles City decreased by 21% following the tax announcement in November 2022, compared to pretax trends. This decline contrasts starkly with stable permit volumes in

neighboring regions outside the city, which serve as a control group unaffected by the policy. The exodus reflects rational economic behavior. Facing higher costs and uncertainty from the tax, developers likely redirected capital and labor to jurisdictions unaffected by the policy.

Subsequent sections explore mechanisms (e.g., permit-type heterogeneity, price-tier shifts) and assess whether the policy achieved its goals.

Where would these contractors choose to work after opting out? Or what types of project would these contractors choose to work on? An outlet may be to construct ADUs. I examine how the implementation of a mansion tax impacts the housing supply of ADUs by conducting a difference-in-difference analysis. This involves comparing neighborhoods that implemented the mansion tax with those that did not, before and after the tax was introduced, while controlling for property, neighborhood, and local housing market characteristics. My identification assumption is that, in the absence of the tax, the neighborhoods would exhibit similar trends in the development of ADU, conditional on these characteristics. I do not find any evidence of violations of this parallel trend assumption. I find that following the implementation of the mansion tax, the housing supply of ADUs decreases significantly in the bordering areas inside the City of Los Angeles.

Next, I examine how the implementation of a mansion tax impacts the housing supply of the more affordable multifamily units by conducting a difference-in-difference analysis. I find a marginally negative impact on the supply of multi-family constructions. Contractors may exercise more caution because the tax makes it difficult to estimate what a property value will look like over the next three, five, or ten years, which are typical hold periods for a multifamily developer and owner. And for construction loans specifically, lenders may not want to convert the loan into a traditional commercial loan when construction is finished, given the uncertainty about how much the asset will be able to sell once it is finished.

The uneven impact of the mansion tax becomes clear when dissecting housing permits by price levels. The grouping of properties into low-, mid-, and high-priced segments reveals

divergent trends:

Single-family ground-up constructions (with project square feet larger than 1,200) rose in lower-priced tiers post-tax (below 4 million dollars). This suggests that developers are pivoted toward cheaper projects to avoid tax exposure. Remodeling permits for high-priced homes increased as owners opted to upgrade rather than sell, which can act as a tax avoidance strategy that exacerbates supply constraints.

Although the tax curbed luxury ground-up construction as intended, it failed to channel resources toward affordability. Luxury remodels increased, establishing inequality by allowing high-value properties to accrue additional premiums. The results underscore a paradox: policies targeting luxury markets risk collateral damage to the very segments they aim to uplift. The mansion tax may deepen disparities by discouraging moderate-density solutions.

2 Related Literature

In recent years, policy makers across the globe have responded to affordable housing supply with a range of affordable housing policies, such as rent control, tax credits, housing subsidies, or rezoning policies. In the United States rent control measures are a strongly debated topic in local ballots, particularly in larger agglomerations such as the San Francisco Bay area, New York, New Jersey, or Maryland, and have been in place in some areas for multiple decades (Diamond and McQuade; 2019). The findings include a negative impact on the mobility of tenants (Diamond and McQuade; 2019), misallocation in housing markets (Glaeser and Luttmer; 2003), price appreciation in decontrolled segments of the housing market (Autor et al.; 2014), as well as a negative impact on housing investment and residential construction in the controlled segments of the market. However, recent papers such as (Mense et al.; 2019) also highlight an increase in construction activity and investment in the unregulated segments of the market.

This paper is also closely related to the broad literature on behavioral responses to

discontinuous tax schemes, such as (Mense et al.; 2019) and (de Silva; 2023) using clumping at discontinuities in tax rates to identify income elasticities. (Chen et al.; 2021) analyze the effects of tax incentives for R&D investment over a threshold or a 'notch'. (Londoño Vélez and Avila-Mahecha; 2024) study the behavioral responses to the wealth tax in Columbia. This paper contributes by using the quasi-experimental setting in LA County and uniquely explores the response of housing supply to the notched taxation scheme. My paper has the advantage of exploiting both cross-sectional and temporal variance in housing construction. I try to document whether the "mansion tax" intended for affordable housing improves local housing affordability and the effectiveness of this taxation scheme.

Specifically, this paper is closely related to the literature on transfer tax and construction. A strand of literature focuses on the effect of transfer taxes on the functioning of the real estate market ((Benjamin et al.; 1993); (Van Ommeren and Van Leuvensteijn; 2005); (Dachis et al.; 2012)). Tax notches not only distort prices near thresholds, but also suppress transactions broadly, highlighting the unintended costs of such policies ((Kopczuk and Munroe; 2015);(Best and Kleven; 2018);(Han et al.; 2022)).

Empirical analysis of Measure ULA's impact in Los Angeles is developing. Initial projections from the UCLA Lewis Center ((Phillips and Ofek; 2022)) estimated that approximately 4% of property transactions would qualify for taxation. Post-implementation evaluations reveal two significant market adjustments: a 50% reduction in sales exceeding $5 million and evident price clustering below the tax threshold ((Ward and Manville; 2025); (Manville and Smith; 2025)). These findings collectively document measurable market responses to the policy intervention. (Green et al.; 2025) provides the empirical quantification of the fiscal externality of transaction taxes to acquisition value property tax systems.

This paper is the first to empirically link transfer taxes (e.g., mansion taxes) to housing construction outcomes, or more specifically, to intended housing constructions, proxied by permit applications. First, previous work focuses on the price and volume effects of transaction taxes (e.g. (Kopczuk and Munroe; 2015)), but neglects the impacts on the supply side.

By analyzing permit filings across price tiers and housing types, I show how such taxes distort developer incentives, reducing both luxury and missing-middle housing. Second, this study presents the first comprehensive analysis of intended construction activity across Los Angeles County using complete permit application data from ATTOM. By integrating highly accessible municipal records from the City of LA with previously underutilized city-level data from unincorporated areas, I extract permit information with greater precision using AI-powered textual analysis.

3   Background

This tax scheme applied to real estate transactions greater than $5 million. It imposed a 4% tax on transactions priced between 5 million and $10 million, and a 5.5% tax on transactions over $10 million. Before Measure ULA Los Angeles, like many cities, had a real estate transfer tax, but it was very low: its rate was 0. 45%, on transactions greater than $100,000. For high-end sales, then Measure ULA represented an almost ninefold increase in the tax rate. The goal of ULA is to help alleviate housing burdens, and the revenue it raises is dedicated to projects such as homeless housing, affordable housing, and tenant assistance.

In April 2024, after the measure had been in place for a year, the proponents declared it a success. ULA, they observed, was already raising far more revenue than any other housing program in Los Angeles, and had withstood a number of legal challenges from the real estate industry. 'ULA has transformed our city', a city council member said. "We want a rising tide to raise all boats. If folks are going to have multimillion-dollar homes, they ought to also contribute to making sure that everyone has a home." Similarly, a group of academics concluded a report on ULA by saying, "Los Angeles voters made the right decision when they approved Measure ULA in November 2022. Despite efforts by the real estate industry to undermine its implementation, Measure ULA is already a success." [2] When proponents

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[2] Peter Dreier, Joan Ling, Scott Cummings, Regina Freer, Manuel Pastor, Ananya Roy, Chris Tilly. "Measuring LA's Mansion Tax: An Evaluation of Measure ULA's First Year". April 2024.

first placed the "Mansion Tax" on the ballot, they did so estimating that it would raise between $600 million and $1.1 billion annually. [3] However, it has not come close to hitting that mark. According to the city's ULA Dashboard, from April 2023 to December 2024 the measure actually raised $480 million, or roughly $288 million per year, which was well below what was anticipated. [4]

The mansion tax appears to be reducing higher-value real estate sales in Los Angeles. A reduction in such sales is troubling, because these sales directly and indirectly drive construction of much-needed new housing, and help create new commercial and manufacturing opportunities for workers. A new report from Hilgard Analytics shows a 23 % drop in citywide residential permitting during 2024 compared to 2023. "The persistent shortage of affordable housing restricted by deeds, the lingering effects of redlining, exclusionary zoning policies, and the intensifying impacts of climate change all ensure that the city's housing and homelessness crises will remain critical challenges well beyond this year," writes author Joshua Baum. [5]

What are the most affordable types of new housing that this tax scheme is targeting? There are three types of affordable housing constructions that are most likely to be affected: single-family ADU construction, large affordable housing projects supported by the government, and the other "missing-middle" multi-family constructions.

3.1   Accessory Dwelling Units (ADU)

An accessory dwelling unit is a self-contained residential unit on a lot with a primary residential unit. The primary residential unit may be of any type: a single-family home, a duplex, a fourplex, or even an apartment building. In a single-family home or duplex with a large backyard, an ADU might be a detached structure. With less backyard space, building

https://www.oxy.edu/about-oxy/community-engagement/uepi/publications/ula- report

[3] Peter Dreier, Joan Ling, Shane Phillips, Scott Cummings, Manuel Pastor, Seva Rodnyansky, and Jackson Loop. 2022. An Analysis of Measure ULA. September. https://www.lewis.ucla.edu/research/an-analysis-of-measure-ula-a-ballot-measure-to-reform-real-estate- transfer-taxes-in-the-city-of-los-angeles/

[4] https://housing.lacity.gov/ula-dashboard

[5] https://la.urbanize.city/post/report-la-residential-permitting-dropped-23-2024

an ADU can involve adding a new room on top of one's garage. An ADU could be built in the basement garage of an apartment building that sees little need for extra parking spaces. An ADU can be detached or attached to the primary unit, may have its own pathway and porch, or may simply be an extra bedroom converted into a studio apartment. Crucially, the ADU must be an independent housing unit. The California Department of Housing and Community Development cites numerous benefits to building an ADU: that they are cost-effective, provide extra space for extended family, and serve as housing for the elderly. However, the state's primary hope for ADUs is increased affordable housing supply.

Upzoning single family residence for ADU constructions is proposed to ameliorate housing supply shortage. Many desirable cities in the United States face a housing affordability crisis. To buy a home in Miami, the median household must part ways with 85.6% of their monthly income, while those in Los Angeles must use 83% and New York 78%. Land use regulations, particularly single-family zoning, protect the preferences of local homeowners but seriously constrain housing supply. However, reforming land use regulation is especially difficult, as local residents are often concerned about congestion, privacy, and, of course, property values.

In 2016, the state of California established a right to build an ADU on a single-family home, overriding local regulations against such construction ((Gilgoff; 2023)[6]. This approach to increased density has the goal of increasing housing supply without drastically changing the landscape of single-family neighborhoods ((Simpson et al.; 2024)). Proponents hope that ADUs can provide affordable housing to alleviate the state's affordability crisis ((Chapple et al.; 2023)). However, it is not clear whether individual homeowners can close the gap in housing supply.

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[6]According to the California Department of Housing Community Development ("HCD"), in the last ten years, California built an average of 80,000 new homes per year though the housing need is roughly 180,000 homes per year. CALIFORNIA'S HOUSING FUTURE : CHALLENGES AND O PPORTUNITIES , CALIF . DEP' T OF HOUS . & CMTY DEV . 3 (Feb. 2018), https://www.hcd.ca.gov/policy- research/plans-reports/docs/sha$_f$inal$_c$ombined.pdf.Asof2018, thegapinaffordablerentalsforextremelylow$-$andverylow$-$incomehouseholdsstoodatroughly1.5million.Id.at29$-$30.

3.2 Affordable Housing Projects

Executive Directive 1 (ED 1) issued by the City of Los Angeles expedites the processing of shelters and 100% affordable housing projects in the City of Los Angeles. Eligible projects receive expedited processing, clearances, and approvals through the ED1 Ministerial Approval Process. ED1 was most recently updated on July 1, 2024. ED 1 applies to all Shelter projects and 100 Percent Affordable Housing Projects with an active or valid City Planning application or referral form filed with City Planning, and any ED 1 eligible projects under review by LADBS or LAHD. [7]

The city has plans to amp up its reliance on incentives intended to get developers of market-rate housing to include a smattering of discounted units affordable to low- or moderate-income tenants in their projects. Developers who do this get to build more units than the city would otherwise allow. Through the first half of 2024, 588 ED1 approved residential units were fully permitted citywide, which represents 11% of all units, and that number is significantly up from the 84 ED1 eligible residential units permitted through the same time period of last year. There are likely to be more ED1-approved units receiving final construction permits going forward, as Hilgard Analytics and Zenith Economics identified 25 projects that received ED1 approval and have also received permits for demolitions or grading, which are often intermediate steps taken before the final construction permit, alongside many more ED1 eligible projects which are still going through the approval and permitting processes.

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[7] For the purposes of implementing ED 1, "100 Percent Affordable Housing Project" is defined as:

A housing project with five or more units, and with all units affordable either at 80% of Area Median Income or lower (U.S. Department of Housing and Urban Development (HUD) rent levels), or at mixed income with up to 20% of units at 120% AMI (California Department of Housing and Community Development (HCD) rent levels) and the balance at 80% AMI or lower (HUD/TCAC rent levels), as technically described here: A Housing Development Project, as defined in California Government Code Section(§) 65589.5, that includes 100% restricted affordable units (excluding any manager's units) for which rental or mortgage amounts are limited so as to be affordable to and occupied by Lower Income households, as defined in California Health and Safety Code §50079.5, or that meets the definition of a 100% affordable housing development in CA Government Code §65915(b)(1)G), as determined by the Los Angeles Housing Department (LAHD).

This definition is limited to projects that are for rent, as opposed to affordable for-sale projects. Rent Schedules with the applicable rents by unit size and income category are maintained by LAHD and are updated annually.

3.3 Multi-family Constructions

State and local governments have enacted or are considering enacting policies such as revising zoning that allows denser housing development. These policies are intended to incentivize builders to create "missing middle" housing, which is a range of house-scale buildings with multiple units — compatible in scale and form with detached single-family homes — located in a walkable neighborhood.

For example, in a traditional single family zoned neighborhood, a builder can purchase a 0.25 acre lot for $220,000 and build one house. If zoning regulations allow for a duplex to be built on that same 0.25 acre lot, then theoretically, each house's land cost would be $110,000 rather than $220,000. This theoretical lower cost would be passed on to the buyer, and one side of a duplex would be priced lower than the single family home.

However, a 0.25 acre lot in a single-family zoned neighborhood may be worth $220,000, but if two homes can be built on the lot (in the form of a duplex), then the lot will likely increase in value, and a builder will pay more for it. In other words, by allowing denser housing, the land itself becomes worth more per acre. This effect works to raise the cost of land, and thus, the cost of building a house, rather than lower it. Even if the cost per lot is lower, that savings will not be passed on to the buyer, as the builder will price the home according to market demand, as noted above. If there is additional profit due to a lower land cost per unit, that profit will go to the builder. Additionally, attempts to increase housing density have proven to be politically divisive. Those who own homes in areas subject to increased zoning density fear the loss of neighborhood amenities due to overcrowding and increased traffic.

In summary, the mansion tax, often pitched as a revenue tool to fund affordable housing, operates alongside existing affordability programs like accessory dwelling units (ADUs), density incentives (e.g., ED1), and multi-family mandates. However, these programs face chronic challenges: ADUs struggle with cost barriers and zoning restrictions, multi-family projects confront financing gaps and community opposition, and density incentives often fail

to scale.

This paper raises a critical question: does the mansion tax complement these efforts by redirecting resources toward affordability, or does it undercut them by stifling broader housing supply?

4 Data

4.1 Building Permit Data

I obtain the permit data of 2018-2024 from ATTOM. Each observation contains a permit identification number, the date applied, the block and lot, coordinates, a street address, the status, and a description of the permit. Example descriptions from an October 2022 permits read: "New 2, 000 sqft single family dwelling with four bedrooms and 3.5 baths and 430 sqft attached garage" "Remove rebuild (e) front porch (8 x 15') per engineer of record " and "detached garage: convert to adu. 1 story vertical addition with one bedroom and bathroom." It is through this description field that I determine whether a permit is for the construction of a new single family residence, an affordable project, a new ADU, remodeling, or simply mechanical, etc. With the assistance of AI, I filter for new-construction-related language, including terms relating to new constructions or the relevant ordinances and state bills. I then use other variables, such as a permit category variable, to filter for whether the permit is a new construction or merely updating its wiring.

4.2 American Community Survey

I get census tract-level data from the American Community Survey (ACS), a yearly U.S. Census survey covering a broad range of social and economic information. I use ACS 5-year estimates of median income, population, median house prices, number of rental units, and household income. I merge the ACS data with the building permit data. I conduct this merge spatially, matching each permit to its corresponding ZIP code. From there, I can create a

ZIP code-level measure on how many new constructions were permitted and constructed.

4.3   Los Angeles Property Value Data

For empirical analysis, I use a comprehensive listing-level dataset on residential properties for sale in LA County collected by ATTOM. The data comes from MLS (Multiple Listings Service) platforms. Each observation in the data represents a listing on MLS platform, with variables describing detailed information on the property and the status of the listing. To estimate parcel-level market values, I combine MLS transaction prices (actual sale data), tax assessor records (historical assessed values), and the Zillow Home Price Index (regional price trends). This allows extrapolation of current prices by reconciling real-time sales with longer-term assessments and market-wide trajectories.

4.4   Outcome Variables

There are two outcome variables I study in this paper. The first one is the log number of filed permits. The second one is scaled number of permits. The scaled permit variable is constructed to normalize permit activity across ZIP codes, treatment or control area, and time. For each ZIP code i, treatment or control area c, and quarter t, scaled permits are calculated as:

$$\text{Scaled Permit}_{i,c,t} = \frac{\text{Number of Permits}_{i,c,t}}{\text{Baseline Average Permits}_{i,c,2018-2019}} \tag{1}$$

Here, the baseline average permits for ZIP code i and area c is the mean number of permits filed in that ZIP code and area between 2018Q1 and 2019Q4. This period serves as a stable pre-tax, pre-pandemic, counterfactual reference.

The scaling acts as a counterfactual control: it implicitly answers, "How would permits in this ZIP code have trended without the mansion tax, based on its own history?" By scaling permits relative to their local historical averages, the metric adjusts for ZIP-level

heterogeneity. For example, a ZIP code that typically issues 100 permits quarterly would see a value of 1.0 during the baseline, while a post-tax drop to 75 permits would register as 0.75. This approach standardizes comparisons across regions, ensuring that a 25% decline in permits reflects proportional changes, even in areas with vastly different construction volumes.

4.5 Summary Statistics

My final sample for building permits includes 2,019,858 observations. The sample covers 2016 to 2024. ADU construction began increasing in 2017. I use 2018 to 2019 as the base period, with 2022 to 2024 as the main observation window. Table 1 shows the summary statistics in my sample. Generally, over half of the permits come from the city. Typical construction projects span 523 square feet (median), while the average project spans 2322 square feet. Project value and square footage both exhibit great variation, since the sample covers all types of permits, ranging from mechanical work to large apartment building projects. Lot sizes show significant variation, with a median of 7,705 square feet. Median household income is $6,807, and home values average $35,235. Areas typically contain 31 new buildings constructed after 2020. The price indices at the ZIP code level of Zillow reach $856, 659. The extrapolated prices are generally higher than the average house price index because the transaction prices are extrapolated using the 2024 house price indices. Demographic control variables are also included in the table.

Table 2 compares the areas inside and outside of Los Angeles City. Areas within Los Angeles City show a higher population density with a median of 2,011 residents compared to 1,452 outside the city. Construction patterns diverge: LA City features smaller projects with a median size of 25 square feet versus 395 square feet elsewhere, but larger buildings with a median footprint of 2,010 square feet compared to 1,814 square feet outside the city. Income and housing values are considerably lower within the city. The median household income is $5, 710 versus $8, 402 and the median home values are $27,778 versus $37,652. LA

City also has more recent construction activity, with a median of 40 new buildings post-2020 compared to 28 elsewhere. The price indices show the non-LA area with a median HP index of $1,090,753 versus $965,310 in the city. Both areas exhibit significant data dispersion, with standard deviations exceeding means across all metrics, indicating substantial variability within each region.

Figure 4 exhibits the different trends of permit application between LA city and Out of the city. Single-family residence construction permits reveal divergent trajectories between Los Angeles City and surrounding areas from 2016-2024. LA city consistently maintained higher permit volumes, peaking at 5,315 in 2022 compared to outside of LA City', with a maximum of 2,434 in 2022. The city demonstrated stronger early-period activity with permits exceeding 3,000 annually through 2021, while the suburbs remained below 2,500 until 2022. The data indicates LA city dominated early in the period but faced steeper declines, while non-LA areas exhibited stronger sustained growth in later years despite starting from a lower baseline.

Multi-family construction permits show significantly lower volumes than single-family development in both regions, with neither area exceeding 1,500 annual permits compared to over 5,000 for single-family units. Los Angeles City demonstrated stronger mid-period momentum, peaking at 1,540 permits in 2022, while maintaining consistent output above 1,000 permits in the previous periods. Non-LA areas are short in permit volumes, but exhibited lower volatility. This is comparable with single-family patterns.

In figure 5, ADU permit application and issuance began rising in 2017 and sustained growth through 2024 across both regions, though with divergent trajectories. Los Angeles City initiated the surge—jumping from 957 permits in 2017 to 1,871 by 2019, then keeping a steady growth before reaching the peak of 3,655 by 2022. Non-LA areas demonstrated delayed but similar growth pattern, starting lower at 107 permits in 2017 before skyrocketing 15-fold to 1,555. The city now dominate ADU development, issuing 2.6 times more permits than outside the City. Both regions show strong momentum since 2017. This contrasts with

single-family and multi-family patterns, confirming ADUs as the fastest-growing housing type in all landing zones.

The percentage change in ADU permits reveals highly significant divergence between treated Los Angeles City and untreated non-LA areas across all nineteen groups. Non-LA areas demonstrate consistently positive growth trajectories in 16 of 19 groups. Both regions share significant post-2017 growth momentum, but non-LA's steadier expansion resulted in 280% higher cumulative permit growth by 2024 across comparable groups.

5   Results

5.1   Methodology

To first show the stylized facts of the relation between permit filing and mansion tax, I compare the permit filing trends in pre- and post-mansion-tax. I estimate the following regression:

$$y_{i,c,t} = \alpha + \beta \times Post_t + X_{i,c,t} + \gamma_i + \varepsilon_{i,c,t}$$

where $y_{i,c,t}$ is the outcome variable in quarter t, treated or untreated city c, and ZIP code i. $Post_t$ is a dummy variable that equals to 1 if quarter t is after the first quarter of 2023, which was after the mansion tax was announced. $X_{i,c,t}$ denotes a list of time- variant demographic and local economic characteristics, including income, population, and housing value, from the American Community Survey conducted by the U.S. Census Bureau. The specification also includes ZIP code fixed effects γ_i, which controls for ZIP-code-specific time-invariant features.

The results in Table 3 show a negative correlation between mansion tax and the likelihood of builders filing a permit for new construction in the City. Column 1 shows that without any controls, filing ratios post-mansion-tax exhibit a 21% lower than those before

mansion tax. When I control for ZIP codes fixed effects and demographic characteristics, I find similar patter before and after mansion tax, with a decrease in filing ratio of 29%. These findings are significant at the 1% level.

The mansion tax applies only within the City of Los Angeles. Properties outside the city, in Los Angeles County, are not subject to the tax. This difference creates a sharp policy boundary that I can use for causal inference. A potential confound is that Santa Monica and Culver City also enacted transfer taxes during this time. Culver City's Measure RE became effective on April 1, 2021. Santa Monica's Measure GS took effect on March 1, 2023. Measure RE and Measure GS have different thresholds, tax rates and exemptions than Measure ULA. In all my regression analyses I drop the presence of Santa Monica. I keep Culver City in the main regressions because Culver City tax policy uses marginal rates, which is starkly different from Measure ULA. I exclude the presence of Culver City in robustness check in Table 15. To account for potential noise from permit duplications at the same address (repeated filing), I implement the following filter: remove duplicate permits issued to the same address within a 12-month window, reducing the risk of over-counting permits for the same project.

I use a border discontinuity design to compare construction activity just inside the city to activity just outside. To structure the comparison, I group ZIP codes along the city boundary into 22 geographic clusters. Each group includes ZIP codes from both the City of Los Angeles and neighboring parts of the County. Figure 1 shows the geographic boundaries between the City of Los Angeles and the surrounding County areas. Each ZIP code is assigned to one of 22 groups. I use different colors to represent each group. This design helps ensure that treated and untreated areas are locally comparable. It also controls for broader housing market trends. I compare changes in construction permits before and after the mansion tax across these 22 groups. By focusing on properties near the city boundary, I minimize bias from differences in demographics, land use policies, and market dynamics. This strategy exploits the natural geographic discontinuity in tax exposure to estimate the

policy's effect on new construction.

The diff-in-diff model is as follows:

$$y_{i,c,t} = \alpha + \beta * (City_c \times Post_t) + X_{i,c,t} + Group_m \times \delta_t + \gamma_i + \varepsilon_{i,c,t}$$

where $y_{i,c,t}$ is the outcome variable in quarter t, treated or untreated city c, and ZIP code i. $City_c$ is a dummy variable that equals to 1 if a property locates within the City of Los Angeles, and $Post_t$ is a dummy variable that equals to 1 if quarter t is after the first quarter of 2023, which was when the mansion tax was introduced. $X_{i,c,t}$ denotes a list of time- variant demographic and local economic characteristics, including income, population, and housing value, from the American Community Survey conducted by the U.S. Census Bureau. $Group_m$ represents the group m one ZIP code is assigned to. By using group-by-quarter fixed effects, $Group_m \times \delta_t$, I focus on comparing permit filings within each group and time period. This reduces bias from unobserved factors that change differently across space. The specification also includes fixed effects γ_i, which controls for ZIP-code-specific time-invariant features. Standard errors are clustered at the group level. The key identification assumption of my regression model is that absent the tax policy change, the treatment and control regions would have evolved in the same way. To test this assumption, I need to show how the two groups evolved prior to treatment.

Figure 6 provides a visual representation of the regression coefficients for $City_c \times Quarter_t$, revealing no signs of nonparallel trends during the pre-treatment period for the total number of new construction permits. The difference-in-differences (DiD) analysis compares trends in permit filings between Los Angeles City (treatment group, subject to the mansion tax) and areas outside the city (control group, unaffected by the tax), using 2022Q3 as the baseline (pre-tax period).

In the first two quarters post-baseline (2022Q4–2023Q1), permit filings in LA City declined modestly. Starting in 2023Q2, however, the gap widened sharply: LA City permits

fell significantly relative to the control group, with the negative trend persisting through 2024Q3. Outside the city, permit levels remained stable or dipped only slightly, aligning with broader market conditions.

The coefficient, β, turns significantly negative starting in 2023Q1, aligning with the mansion tax approval in November 2022. This signals a lagged response, as developers took time to adjust their construction plans, and likely delayed permit filings after the initial period of policy uncertainty. Notably, permit activity in Los Angeles City declines sharply compared to stable trends in areas outside the city, which serve as the control group. The negative effect persists through 2024Q3.

Beginning in 2023Q2, the treatment effect grows steadily negative each subsequent quarter. This suggests that developers increasingly paused or scaled back projects as the tax's operational and financial implications solidified. Given the long lead times in construction planning, the results imply that policy shocks may take quarters to fully materialize. The stability of permits outside Los Angeles City—despite shared economic conditions—reinforces the tax's distinct role in reshaping local supply incentives. The sustained decline in LA City filings implies the tax meaningfully dampened construction activity over time.

Table 4 shows the effects before and after mansion tax for scaled filed permits and log number of filed permits for new constructions separately. To account for differences in baseline permit activity across ZIP codes, a weighted least squares (WLS) regression is estimated, in which each ZIP code in the treatment and control groups is weighted by its average number of permit filings during the pre-policy period of 2018 to 2019. For the log number of filed permits, I use PPML regression (Silva and Tenreyro; 2006) and report a pseudo-R-squared. The PPML regression estimates a model as follows:

$$log(y_{i,c,t}) = \alpha + \beta * (City_c \times Post_t) + X_{i,c,t} + Group_m \times \delta_t + \gamma_i + \varepsilon_{i,c,t}.$$

I find a decrease in both outcome variables in treated areas after mansion tax. There is

an average of 40% decrease of scaled filing for new constructions in the City, compared to adjacent ZIP codes outside of the City. The results are statistically significant at the 1% level.

5.2 Heterogeneous Responses

A crucial issue to address is how to identify the driving force behind the observed decrease in permit filings, as this has implications for understanding the underlying mechanisms at work.

Permit filings reveal stark differences in how housing segments responded to the mansion tax. Single-family residences (SFRs)—including ground-up constructions and accessory dwelling units (ADUs)—show statistically significant declines in new construction activity, as shown in Table 5 and 6. Both scaled permit and log filings fell sharply post-tax. There is an average of 46% decrease of scaled filing for new SFR constructions in the City.

The divergence highlights unintended consequences. While the tax succeeded in curbing high-value SFR construction—a proxy for luxury-oriented development—it failed to meaningfully shift supply toward affordability. Instead, it exacerbated declines in housing types that, while not explicitly "affordable," often serve as middle-income housing in high-cost regions. These results underscore the challenge of targeting luxury markets without collateral damage to broader supply.

A key question arises: are declines in permits for new single-family residences (SFRs) and accessory dwelling units (ADUs) driven by reductions in luxury properties, lower-priced segments, or both? I analyze permit trends across housing price tiers, testing whether the mansion tax disproportionately impacted high-value developments or broadly suppressed supply. Did it curb luxury construction as intended, or inadvertently stifle "missing middle" housing?

To isolate whether permit declines stemmed from luxury or lower-priced housing, I divide the extrapolated price distribution into three groups, using 2 sets of cutoffs. The first set of

cutoff is $1 million and $4 million. The second cutoff is $1,081,276 and $4,592,702, which aligns with the 50th and 95th percentiles of the extrapolated price distributions. Both frameworks split permits into three groups: low-priced, mid-priced, and high-priced.

For ground-up single-family constructions, permits in the high-priced tier fell sharply post-tax, according to Table 11. For example, when looking at the results with a price cutoff of $1,081,276 and $4,592,702, comparing to the lowest price bin, mid-priced permits rose by an insignificant 27%, and the high-priced permits decreased by 14%, significant at 5% level. These shifts suggest developers pivoted toward cheaper projects to avoid tax exposure, though it is possible that gains in lower tiers were small compared to losses at the top.

Have the construction capacity been redirected to the more affordable multifamily(MF) projects?

Contrary to expectations, construction projects did not shift toward multi-family housing, as in Table 9. After the mansion tax took effect, the scaled number of permits for new multi-family constructions in Los Angeles City declined by 27% compared to pre-tax trends—a statistically significant drop mirroring reductions in single-family permits. This parallel decline indicates that the tax suppressed development activity broadly, rather than redirecting resources toward denser, "missing-middle" housing.

Developers likely hesitated to pursue even moderately priced multi-family units due to perceived financial risks, such as cascading tax impacts on project valuations or uncertainty about future policy adjustments. Meanwhile, permit levels in areas outside the city remained stable, suggesting local policy effects rather than broader market shifts.

These results challenge the assumption that curbing luxury construction would naturally free up capacity for affordable or mid-tier supply. Instead, the tax appears to have dampened overall development incentives without achieving its redistributive goals. The missing middle remains missing.

The results underscore that the mansion tax most directly discouraged high-priced construction. However, without complementary policies (e.g., density bonuses or affordable

subsidies), the tax alone fails to redirect supply toward the more affordable projects. For robustness check, as in Table 10, I exclude all the permits that are marked as ED1 eligible affordable project. The results are parallel to that in Table 9, suggesting that when excluding affordable projects, the application intention of which may be affected by the multiple policies issued by the mayor to expedite the permitting process, multi-family constructions alone decrease with the effect of mansion tax.

For the last part, I look at remodeling permits in Table 12. Comparing to the lowest price bin, for mid-priced homes: Permits fell by 3%, with no statistical significance, indicating muted tax sensitivity. For high-priced homes, scaled permit counts increase sharply by 46%.

This inverse relationship, which increases luxury remodels and decreases activity in the lower level, defies conventional expectations. One explanation is asymmetric financial capacity: Luxury owners absorb tax costs or leverage remodels to offset tax liabilities (e.g., adding high-end amenities for rental income). Lower-tier homeowners, however, face tighter budgets and may avoid renovations that push their home's value into taxable brackets.

The mansion tax appears to inadvertently encourage luxury upgrades while stifling moderate renovations, a dynamic that could widen housing quality gaps and reduce 'move-up' inventory for middle-income buyers. If high-priced remodels prioritize premium features (e.g., pools, smart homes), they may further entrench neighborhood inequality without expanding affordable supply.

In addition, the mansion tax appears to have reshaped the strategies of luxury homeowners, incentivizing them to retain and upgrade existing properties rather than sell. Facing potential tax liabilities on high-value sales, many opt to "sit" on their homes while investing in renovations. This behavior aligns with a "hold and refine" mechanism: avoid sales that triggers the tax, while remodel to enhances property value and living standards (e.g., luxury kitchens, smart-home tech) or generates rental income (e.g., upscale ADUs).

Critically, this contrasts with low-priced tier homes. Owners of cheaper properties likely avoid renovations that risk pushing their home's value above taxable threshold, lacking the

financial buffer to absorb added costs.

The disparity underscores a policy paradox: the tax disincentivizes turnover in the luxury market, reducing supply of high-end homes for sale. Fewer luxury units enter the market, and stagnant middle-tier supply persists. Without mechanisms to channel renovation activity toward affordability (e.g., density incentives for ADUs), the tax may deepen divides it aimed to narrow.

5.3 Placebo Tests

A placebo test analyzing trends in electrical and plumbing permits—unrelated to the mansion tax's intended targets—reveals no statistically significant changes in filing rates before and after the policy's implementation, as can be seen in Table 7 and Table 8. These permits, which reflect routine maintenance and upgrades (e.g., HVAC systems, plumbing, wiring), remained stable in both Los Angeles City and control areas outside the city. The absence of divergence between treatment and control groups reinforces that the observed declines in construction-related permits (e.g., SFRs, ADUs) are likely tied to the tax itself, not broader economic shifts or sector-wide disruptions.

This null result strengthens the causal interpretation of the main findings. If unrelated permit categories showed parallel trends, it would suggest unobserved confounders (e.g., recessionary pressures, labor shortages) drove the construction slowdown. Instead, the stability of placebo permits isolates the mansion tax as the primary driver of reduced activity in targeted housing segments. Policymakers can thus infer that the tax meaningfully reshaped developer and homeowner incentives.

6 Implications for the Residential Real Estate Market

This section analyzes discontinuities in Los Angeles housing transaction taxes, identifying significant price bunching below tax thresholds and suppressed transaction volumes above

them. The empirical approach leverages quasi-experimental variation to demonstrate how tax-induced discontinuities distort market behavior.

Figure 7 shows a significant decrease in units sold in LA city after the mansion tax. Figure 8 reveals parallel declines in luxury property transactions across both jurisdictions following Los Angeles' mansion tax implementation, with significantly more severe contraction within the City of LA. While LA County experienced moderate reductions in units sold above $5 million, the City of LA suffered precipitous drops. The impact on the city reflects heightened sensitivity to taxation in its core luxury market. Both areas maintained similar pre-tax trajectories, confirming the policy's causal role in suppressing high-end transactions. However, the city's steeper decline indicates tax avoidance behaviors—including property repositioning, delayed sales, and jurisdictional arbitrage—disproportionately affected urban luxury markets compared to broader county transactions.

Figure 9 reveals pronounced price bunching below the $5 million mansion tax threshold in Los Angeles City during 2022-2023. Sales counts peak dramatically in the $4.95-5 million bin, immediately preceding the tax applicability cutoff, then drop precipitously for properties priced just above $5 million. This pattern demonstrates strategic price manipulation to avoid tax liability, with 47% more transactions clustered in the final pre-tax bin compared to the first taxable bin. The distribution shows normal dispersion from $3-4.5 million, followed by abnormal accumulation near the threshold. Above $5 million, transaction volumes remain suppressed across all price tiers, confirming the tax's chilling effect on luxury property transfers. This bunching behavior provides clear evidence of market participants actively restructuring transactions to minimize tax exposure, distorting natural price distribution around the policy threshold.

Figure 10 demonstrates significant market distortion following Los Angeles' mansion tax implementation, revealing pronounced price bunching immediately below the $5 million threshold in the post-tax period. Pre-tax sales distribution shows relatively smooth dispersion across price bins between $2-8 million, with normal transaction clustering around

market-driven price points. Post-tax, a sharp discontinuity emerges at the $5 million cutoff: sales volume spikes dramatically in the $4.95-5 million bin while collapsing for properties priced just above this threshold. This bunching effect creates a visible "cliff" at the tax boundary. Above $5 million, the post-tax distribution shows uniformly suppressed transaction volumes across all price tiers, confirming the tax's broad chilling effect on luxury property transfers. These findings provide empirical evidence of strategic price manipulation to avoid tax liability, fundamentally altering transaction patterns in high-value real estate markets.

Figure 11 demonstrates stark divergence in transaction patterns between the $4-5 million and $5-6 million price tiers following Los Angeles' mansion tax implementation. Properties priced just below the tax threshold ($4-5M) maintained robust sales volumes throughout the period, with noticeable. Conversely, the $5-6 million tier experienced severe contraction immediately after tax enactment, with sales volumes dropping to near-zero levels by mid-2023. This differential response creates a pronounced effect where transactions cluster below but avoid crossing the $5 million threshold. The $4-5 million segment consistently recorded 3-5 times more monthly transactions than the $5-6 million tier post-tax, revealing active price manipulation to remain below taxable values. Both tiers showed parallel pre-tax trends until policy implementation, after which the higher-priced segment collapsed while the sub-threshold market resumed.

The difference-in-differences analysis in Table 13 demonstrates statistically significant reductions in property transactions attributable to Los Angeles' mansion tax. The interaction term shows consistent negative coefficients across specifications, yielding a decrease in property transaction, significant at the 5% level, indicating a 23.5% reduction in sales relative to control areas. This pattern confirms the tax's causal effect in suppressing luxury property transactions beyond broader market trends.

The triple-differences analysis in Table 14 reveals starkly divergent impacts across price tiers from Los Angeles' mansion tax. Properties in the highest price bin (Bin 3) show statisti-

cally significant transaction declines, significant at the 1% level. This contrasts sharply with Bin 2's statistically insignificant positive coefficients. Exclusion of the 2022 Q4 announcement period reduces Bin 3's negative magnitude by 20-29% across both cutoff specifications, indicating anticipatory behavioral responses before formal implementation. The consistent significance of high-tier suppression persists despite price bin redefinitions and announcement period exclusions, confirming robust tax avoidance specifically above threshold levels.

7   Robustness Checks

Table 15 and Table 16 presents a series of additional robustness tests for the main regressions. For brevity, only the regression coefficient and standard errors of the interaction term are reported. Unless otherwise specified, all control variables and regression specifications are the same as those in the main regressions.

In Table 15, to validate the consistency of my findings on the impact of the mansion tax on the scaled number of permits, I conduct a series of robustness checks across various dimensions: first, in row (1), I exclude permits from Culver City to ensure results are not driven by areas with potentially similar transfer tax policies. In row (2), the sample excludes ED1-eligible affordable housing permits to avoid the confound of city policies related specifically to affordable housing. In row (3) and (4), to account for potential noise from permit duplications at the same address, I implement stricter filters, which remove duplicate permits issued to the same address within a 6-month or 9-month window. In row (5), to test the robustness of the arbitrary ZIP code grouping, I re-estimate the main specification using alternative ZIP code groupings, verifying that the estimated effects are not sensitive to the way geographic clusters are defined. The new grouping is shown in the Appendix, Figure A1. These robustness checks are applied across all permit categories, including total new permits, single-family, multi-family, accessory dwelling units (ADUs), and placebo permits. The results remain unchanged across specifications, confirming the robustness of the main

findings.

I also conduct the same robustness checks for the impact on the log number of permits using PPML regressions, which can be seen in Table 16. The results across all permit types are robust.

8   Conclusion

This study evaluates whether Los Angeles' citywide mansion tax, a discontinuous increase in real estate transfer taxes designed to curb homelessness and fund affordable housing, achieved its housing supply goals. Leveraging plausibly exogenous variation in tax exposure across LA County, I find significant market distortions: Housing transactions are bunched below tax thresholds, with sharp declines in units sold at taxed price tiers. Overall constructions across all residential types are suppressed. Luxury homeowners increasingly opted to remodel rather than sell, reducing turnover and exacerbating supply constraints.

The results challenge the policy's foundational premise: taxing high-value housing does not inherently redirect resources toward affordability. Instead, it risks broadly stifling supply. For future reforms, pairing taxation with direct affordable housing incentives—such as streamlined permitting, density bonuses, or targeted subsidies—may better align revenue generation.

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Figure 1: Bordering Zip Codes Colored by Group
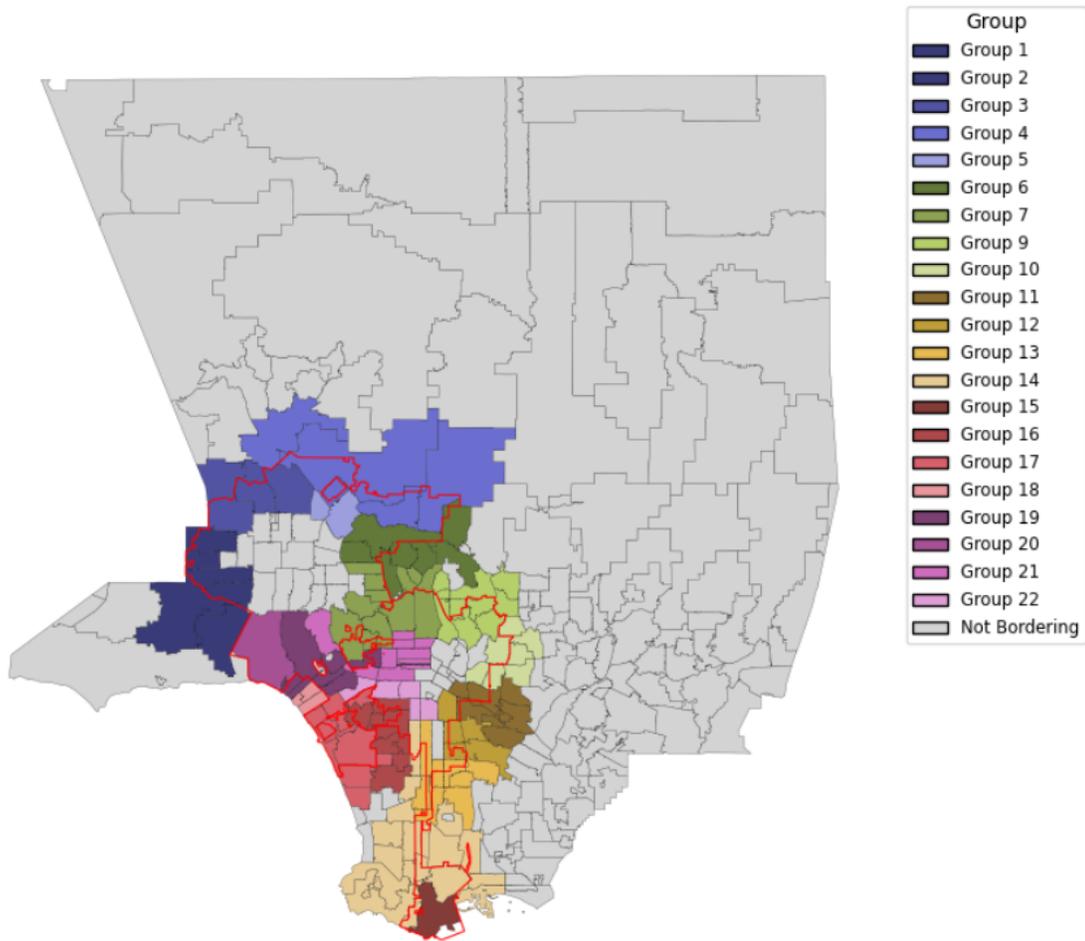
Bordering ZIP codes are color-coded by groups. The red line marks the jurisdictional boundary between LA City and LA County. Grey areas marks the ZIP codes not included in the sample due to lack of comparison.

Figure 2: 95% of Sold Price
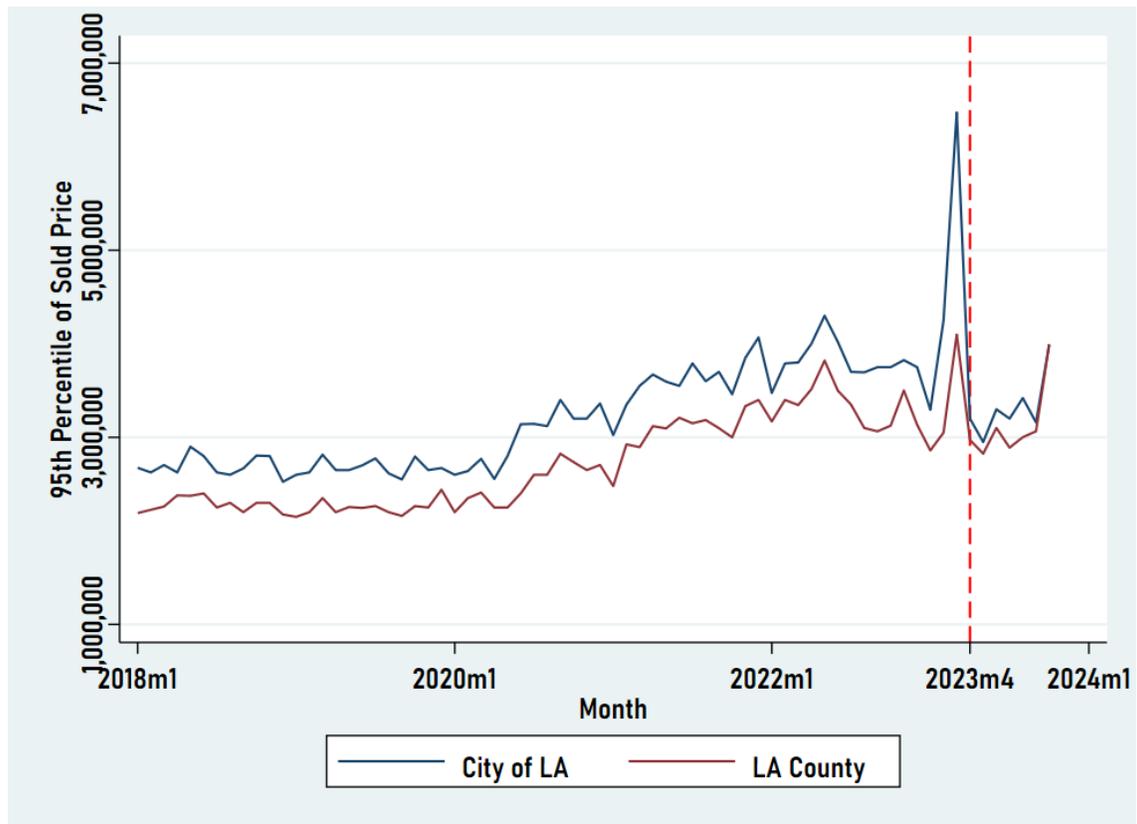
This figure reports 95% of sold price between 2018-2023 between LA city and LA county.
Source: ATTOM

Figure 3: 90% of Listing Price
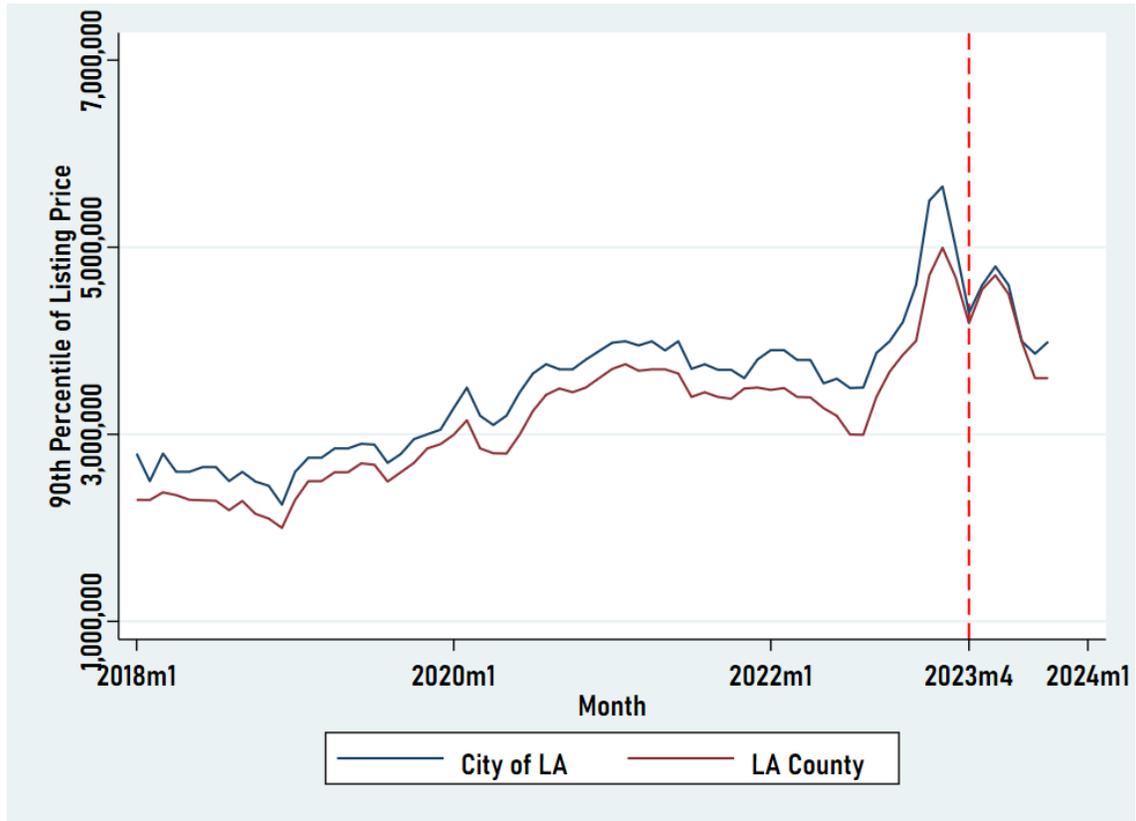
This figure reports 90% of listing price between 2018-2023 between LA city and LA county.
Source: ATTOM

Figure 4: Annual Permit Filing for SFR and MF
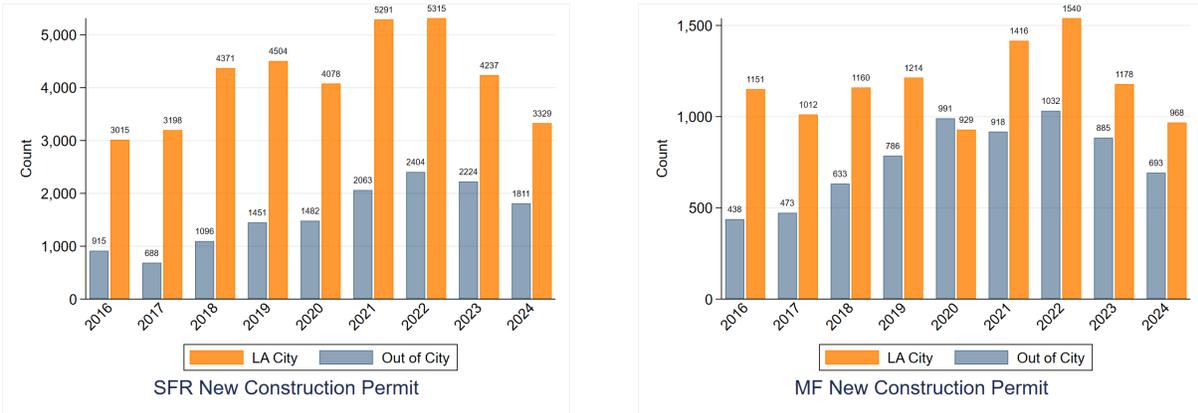
This figure shows the annual trend for permit filing of single family residence and multi-family residence in LA city and outside of LA city.
Source: ATTOM

Figure 5: Annual Permit Filing for ADU and Percentage Change in Permit Filing
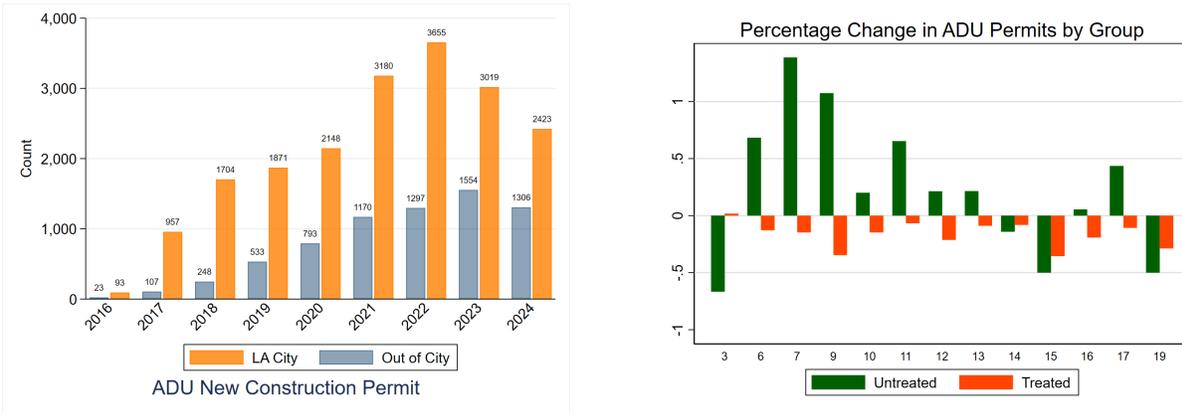
This figure shows the number of permit filing each year for ADU construction in Panel A. Panel B compares the percentage change of ADU permit filing between LA city and outside areas by ZIP-code-clustered groups.
Source: ATTOM

Figure 6: Event Study on Scaled number of Permit and Log number of Permit
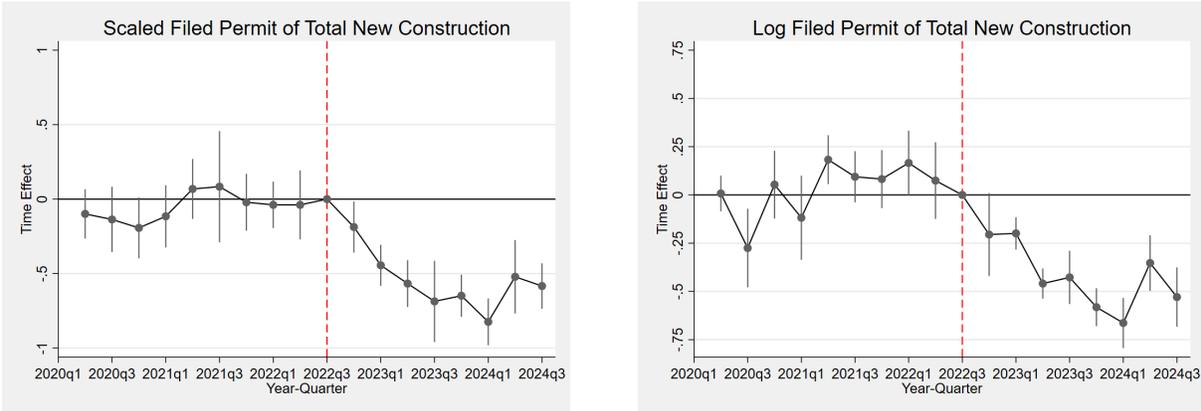
This figure shows the coefficients and the associated 95% confidence intervals of the interaction terms β from the baseline estimating equation for total number of new construction permits. Panel (a) shows the result for scaled number of permits, while Panel (b) shows the result for log number of permits. The x-axis indicates the year-quarter. The y-axis indicates the point estimates associated with the β_t estimate. The sample spans the period from 2020q1 to 2024q3.

Figure 7: Number of Units Sold in LA City(> $ 5m)
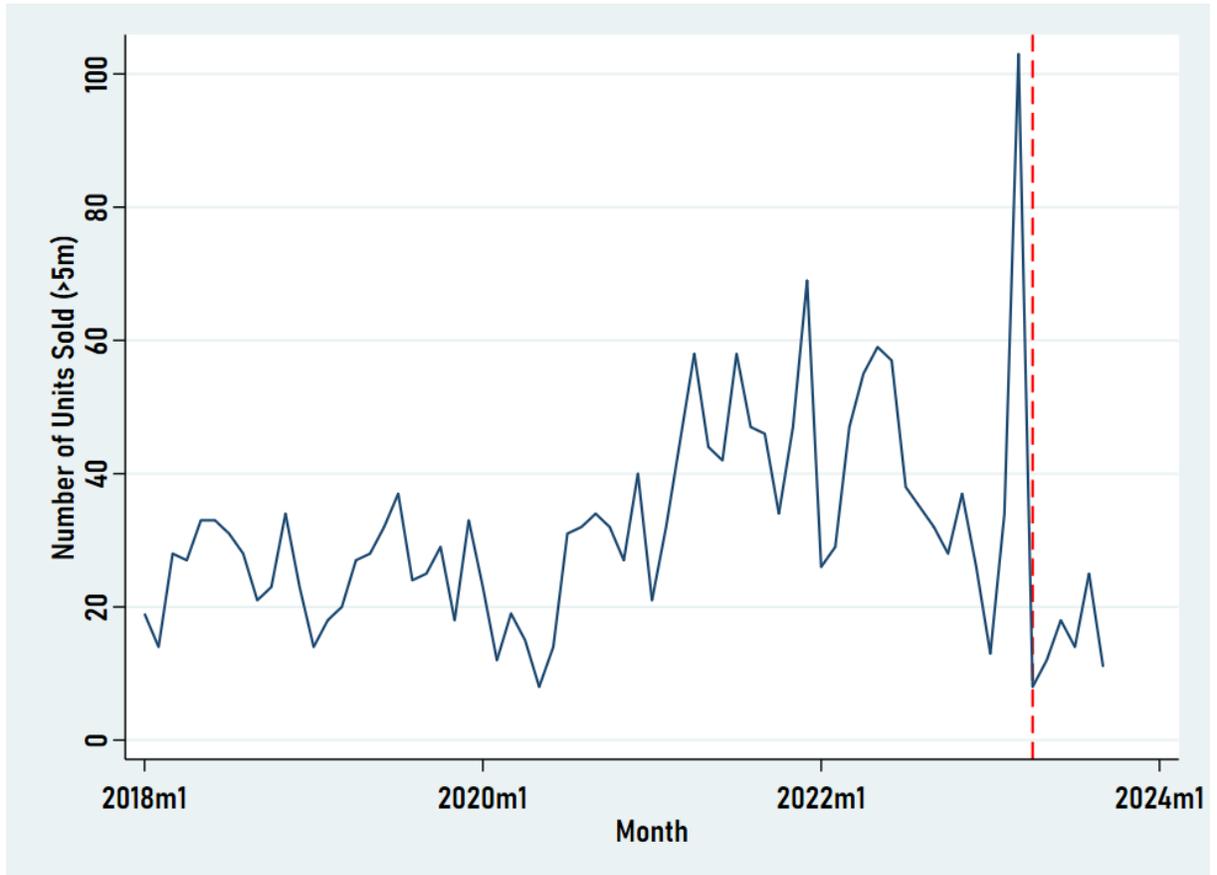
This figure reports the time series of number of units sold above $5 million in LA city, from 2018-2023.

Figure 8: Percentage change in Units Sold(>5m)
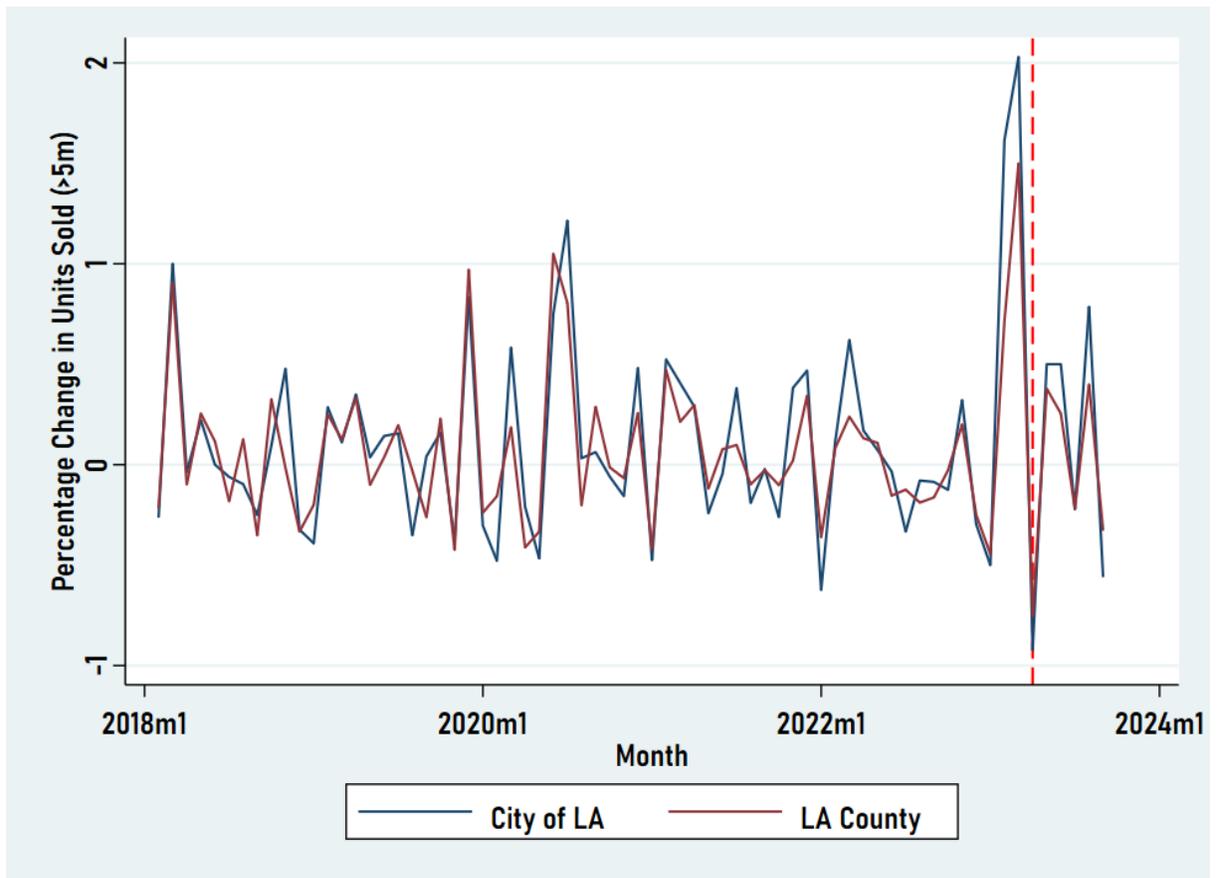
This figure reports the time series of percentage change in number of units sold above $5 million, between LA city and LA county, from 2018-2023.

Figure 9: Distribution of Taxable Sales
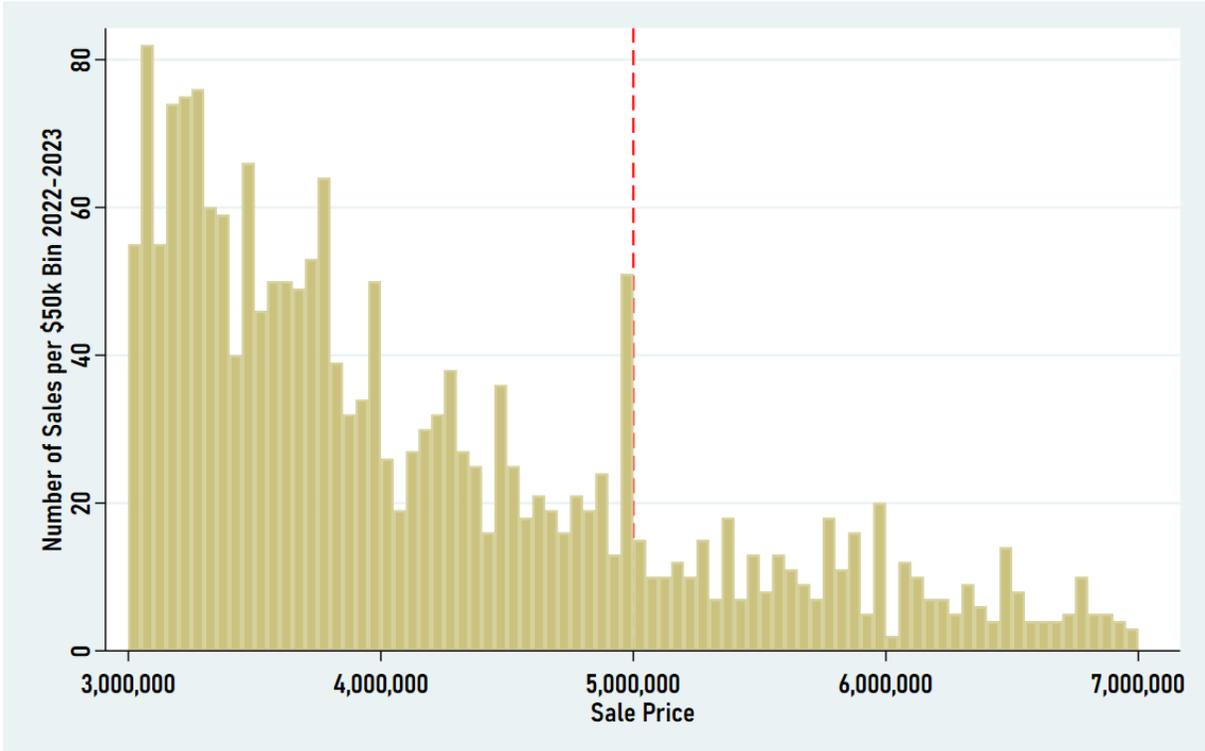
Plot of the number of mansion-tax eligible sales in each $50,000 price bin between $3,000,000 and $7,000,000 from 2022 to 2023 in LA city.

Figure 10: Distribution of Sales pre- and post- Mansion Tax
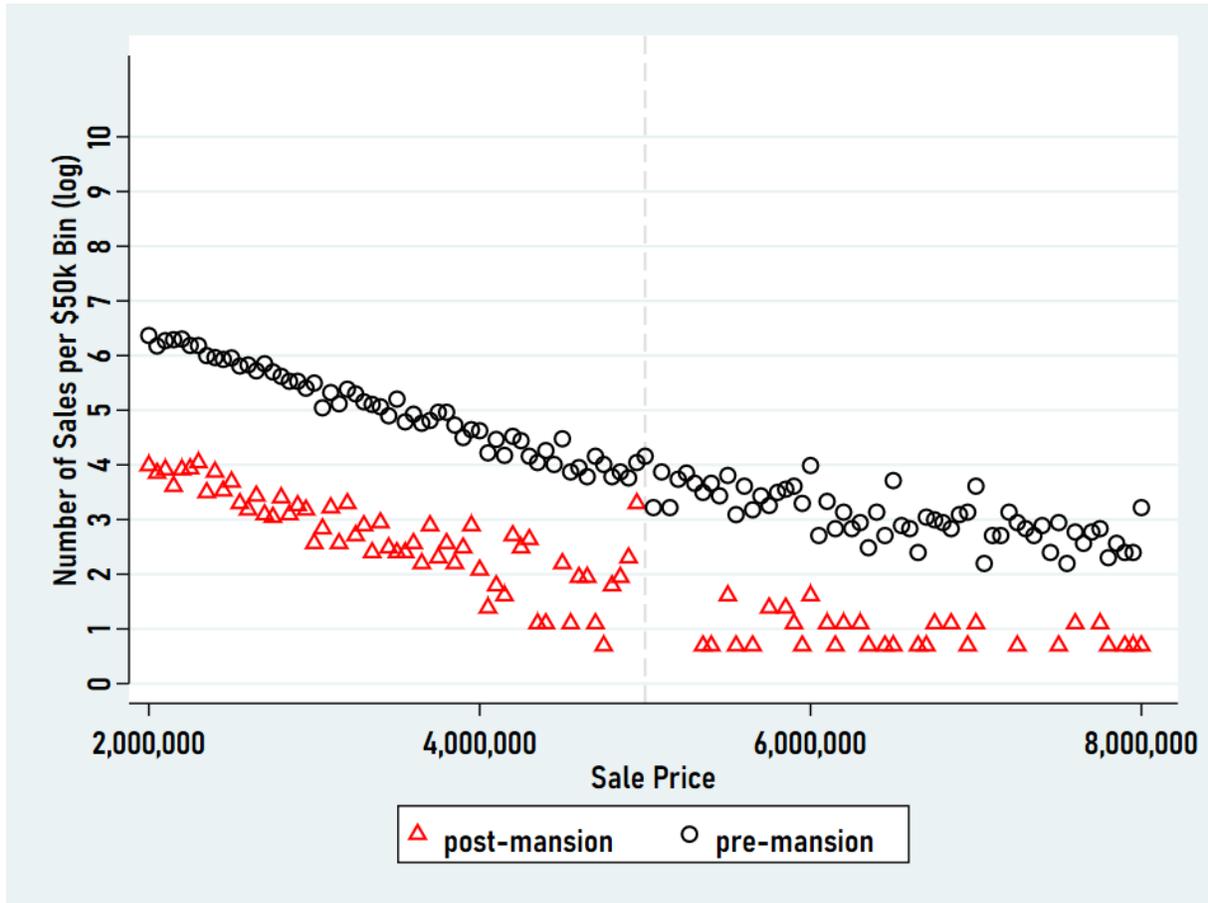
Plot of the log number of mansion-tax eligible sales in each $50,000 price bin between $2,000,000 and $8,0000,000 before and after the introduction of the tax in LA city.

Figure 11: Monthly Sales above $ 4m

Total number of taxable sales in the range of 4 to 5 million and 5 to 6 million by month in LA city.

Table 1: Summary Statistics

	mean	sd	min	p50	max	count
In LA City	0.55	0.50	0	1	1	1,750,225
Project Square Footage	2,322.89	19,279.33	-1,852,440	523	1,788,210	104,541
Average Project Value	136,910.80	3,888,254.12	-2,498	8,000	2,000,000,000	798,287
Building Square Footage	12,268.59	70,257.71	1	1,967	3,585,714	1,620,303
Lotsize	52,259.49	1,126,745.35	2	7,705	968,793,536	1,664,351
Population	1,849.09	742.03	34	1,916	4,016	1,064,160
Median Household Income	8,525.00	6,600.16	2,085	6,807	51,710	1,063,466
Median House Value	58,937.96	73,408.72	6,023	35,235	892,046	953,364
Built post 2020	48.20	35.97	6	31	155	1,064,160
HP Index	1,041,305.27	698,723.16	236,788	856,659	5,455,559	922,032
Extrapolated Price	1,766,711.46	2,789,921.14	5	1,098,401	168,958,688	422,446

Note: This table provides summary statistics for the variables of interest. The columns provide the mean, standard deviation, min, and max for the permit data used. Population, house value, dummy for buildings post 2020, and income are obtained from the U.S. Census Bureau. Dummy for in LA city, project square footage, project value, building square footage, and lotsize are from ATTOM. HP Index is obtained from Zillow. Extrapolated prices for houses are calculated from ATTOM transaction data.

Table 2: Summary Statistics by Area

Area	Out of LA			In LA		
	Mean	SD	Median	Mean	SD	Median
Project Square Footage	1,470	5,395	395	1,009	5,273	25
Average Project Value	119,139	5,694,599	14,630	185,974	4,028,549	7,600
Building Square Footage	7,790	46,503	1,814	14,084	80,627	2,010
Lotsize	53,684	811,446	7,835	41,591	618,773	7,551
Population	1,456	790	1,452	2,049	621	2,011
Median Household Income	9,925	6,087	8,402	7,591	5,723	5,710
Median House Value	57,107	50,651	37,652	53,791	50,242	27,778
Built Post 2020	36	25	28	54	39	40
HP Index	1,326,299	843,356	1,090,753	1,184,480	648,299	965,310
Extrapolated Price	2,049,007	2,100,789	1,342,625	1,865,831	1,831,632	1,279,800

 Note: This table provides summary statistics for the variables of interest. The columns provide the mean, standard deviation, min, and max for the permit data used, for inside and outside of LA city, respectively. Population, house value, dummy for buildings post 2020, and income are obtained from the U.S. Census Bureau. Dummy for in LA city, project square footage, project value, building square footage, and lotsize are from ATTOM. HP Index is obtained from Zillow. Extrapolated prices for houses are calculated from ATTOM transaction data.

Table 3: Mansion Tax and Filed Permits

	(1)	(2)	(3)
Post Mansion	-0.213***	-0.299***	-0.203***
	(0.041)	(0.033)	(0.044)
Observations	152	152	155
Adjusted R^2	0.493	0.497	0.273
Zipcode FE	Yes	Yes	No
Control	No	Yes	Yes

Note: This table reports the effects of mansion tax on permit filing. The dependent variable is scaled number of filed permits. Demographic controls include population, income, and housing value. Specifications include zipcode fixed effects. ***, **, and * represent statistical significance at the 1%, 5%, and 10% level, respectively.

Table 4: Mansion Tax and Filed Permits (Total New Constructions)

	Scaled No. of Permits		Log No. of Permits	
	(1)	(2)	(3)	(4)
LA city x Post Mansion	-0.396***	-0.415***	-0.406***	-0.361***
	(0.102)	(0.093)	(0.105)	(0.136)
Group x Mansion Tax FE	Yes	Yes	Yes	Yes
Zipcode FE	No	Yes	No	Yes
Controls	Yes	Yes	Yes	Yes
Adj. R^2	0.212	0.573		
Pseudo R^2			0.551	0.777
Obs.	272	264	272	264

Note: Group-by-Mansion-Tax fixed effects are included to control for local trends and time-varying shocks. This table reports the effects of mansion tax on permit filing. The dependent variable is scaled number of filed permits, or the log number of filed permits. Demographic controls include population, income, and housing value. Specifications include group and zipcode fixed effects. Each ZIP code in the treatment and control groups is weighted by its average number of permit filings during the pre-policy period of 2018 to 2019. Standard errors are clustered at the group level. ***, **, and * represent statistical significance at the 1%, 5%, and 10% level, respectively.

Table 5: Mansion Tax and Filed Permits (Single Family Residence)

	Scaled No. of Permits		Log No. of Permits	
	(1)	(2)	(3)	(4)
LA city x Post Mansion	-0.448***	-0.462***	-0.476***	-0.451***
	(0.124)	(0.125)	(0.099)	(0.129)
Group x Mansion Tax FE	Yes	Yes	Yes	Yes
Zipcode FE	No	Yes	No	Yes
Controls	Yes	Yes	Yes	Yes
Adj. R^2	0.271	0.615		
Pseudo R^2			0.574	0.772
Obs.	257	250	257	250

 Note: Group-by-Mansion-Tax fixed effects are included to control for local trends and time-varying shocks. This table reports the effects of mansion tax on permit filing. The dependent variable is scaled number of filed permits, or the log number of filed permits. Demographic controls include population, income, and housing value. Specifications include group and zipcode fixed effects. Each ZIP code in the treatment and control groups is weighted by its average number of permit filings during the pre-policy period of 2018 to 2019. Standard errors are clustered at the group level. ***, **, and * represent statistical significance at the 1%, 5%, and 10% level, respectively.

Table 6: Mansion Tax and Filed Permits by Price Levels (ADU)

	Scaled No. of Permits		Log No. of Permits	
	(1)	(2)	(3)	(4)
LA city x Post Mansion	-0.727***	-0.761***	-0.548***	-0.476***
	(0.221)	(0.189)	(0.127)	(0.142)
Group x Mansion Tax FE	Yes	Yes	Yes	Yes
Zipcode FE	No	Yes	No	Yes
Controls	Yes	Yes	Yes	Yes
Adj. R^2	0.303	0.549		
Pseudo R^2			0.561	0.795
Obs.	230	228	230	228

Note: Group-by-Mansion-Tax fixed effects are included to control for local trends and time-varying shocks. This table reports the effects of mansion tax on permit filing. The dependent variable is scaled number of filed permits, or the log number of filed permits. Demographic controls include population, income, and housing value. Specifications include group and zipcode fixed effects. Each ZIP code in the treatment and control groups is weighted by its average number of permit filings during the pre-policy period of 2018 to 2019. Standard errors are clustered at the group level. ***, **, and * represent statistical significance at the 1%, 5%, and 10% level, respectively.

Table 7: Mansion Tax and Filed Permits (Plumbing)

	Scaled No. of Permits		Log No. of Permits	
	(1)	(2)	(3)	(4)
LA city x Post Mansion	-0.044	-0.040	-0.022	-0.020
	(0.056)	(0.059)	(0.088)	(0.110)
Group x Mansion Tax FE	Yes	Yes	Yes	Yes
Zipcode FE	No	Yes	No	Yes
Controls	Yes	Yes	Yes	Yes
Adj. R^2	0.218	0.555		
Pseudo R^2			0.471	0.803
Obs.	345	342	345	342

 Note: Group-by-Mansion-Tax fixed effects are included to control for local trends and time-varying shocks. This table reports the effects of mansion tax on permit filing. The dependent variable is scaled number of filed permits, or the log number of filed permits. Demographic controls include population, income, and housing value. Specifications include group and zipcode fixed effects. Each ZIP code in the treatment and control groups is weighted by its average number of permit filings during the pre-policy period of 2018 to 2019. Standard errors are clustered at the group level. ***, **, and * represent statistical significance at the 1%, 5%, and 10% level, respectively.

Table 8: Mansion Tax and Filed Permits (Electrical)

	Scaled No. of Permits		Log No. of Permits	
	(1)	(2)	(3)	(4)
LA city x Post Mansion	0.054	0.032	0.114	0.082
	(0.055)	(0.050)	(0.081)	(0.084)
Group x Mansion Tax FE	Yes	Yes	Yes	Yes
Zipcode FE	No	Yes	No	Yes
Controls	Yes	Yes	Yes	Yes
Adj. R^2	0.200	0.549		
Pseudo R^2			0.652	0.903
Obs.	339	335	339	335

 Note: Group-by-Mansion-Tax fixed effects are included to control for local trends and time-varying shocks. This table reports the effects of mansion tax on permit filing. The dependent variable is scaled number of filed permits, or the log number of filed permits. Demographic controls include population, income, and housing value. Specifications include group and zipcode fixed effects. Each ZIP code in the treatment and control groups is weighted by its average number of permit filings during the pre-policy period of 2018 to 2019. Standard errors are clustered at the group level. ***, **, and * represent statistical significance at the 1%, 5%, and 10% level, respectively.

Table 9: Mansion Tax and Filed Permits (Multifamily)

	Scaled No. of Permits		Log No. of Permits	
	(1)	(2)	(3)	(4)
LA city x Post Mansion	-0.300***	-0.270**	-0.331*	-0.238
	(0.099)	(0.109)	(0.182)	(0.204)
Group x Mansion Tax FE	Yes	Yes	Yes	Yes
Zipcode FE	No	Yes	No	Yes
Controls	Yes	Yes	Yes	Yes
Adj. R^2	0.180	0.508		
Pseudo R^2			0.435	0.683
Obs.	245	234	245	234

 Note: Group-by-Mansion-Tax fixed effects are included to control for local trends and time-varying shocks. This table reports the effects of mansion tax on permit filing. The dependent variable is scaled number of filed permits, or the log number of filed permits. Demographic controls include population, income, and housing value. Specifications include group and zipcode fixed effects. Each ZIP code in the treatment and control groups is weighted by its average number of permit filings during the pre-policy period of 2018 to 2019. Standard errors are clustered at the group level. ***, **, and * represent statistical significance at the 1%, 5%, and 10% level, respectively.

Table 10: Mansion Tax and Filed Permits (Multifamily exclud. Affordable)

	Scaled No. of Permits		Log No. of Permits	
	(1)	(2)	(3)	(4)
LA city x Post Mansion	-0.274**	-0.247*	-0.319*	-0.229
	(0.109)	(0.118)	(0.192)	(0.211)
Group x Mansion Tax FE	Yes	Yes	Yes	Yes
Zipcode FE	No	Yes	No	Yes
Controls	Yes	Yes	Yes	Yes
Adj. R^2	0.160	0.472		
Pseudo R^2			0.420	0.674
Obs.	245	234	245	234

Note: Group-by-Mansion-Tax fixed effects are included to control for local trends and time-varying shocks. This table reports the effects of mansion tax on permit filing. The dependent variable is scaled number of filed permits, or the log number of filed permits. Demographic controls include population, income, and housing value. Specifications include group and zipcode fixed effects. Each ZIP code in the treatment and control groups is weighted by its average number of permit filings during the pre-policy period of 2018 to 2019. Standard errors are clustered at the group level. ***, **, and * represent statistical significance at the 1%, 5%, and 10% level, respectively.

Table 11: Mansion Tax and Filed Permits by Price Levels (Ground-up)

	(1)	(2)
LA city x Post Mansion x Bin 2	0.271	0.277
	(0.175)	(0.162)
LA city x Post Mansion x Bin 3	-0.141**	-0.189***
	(0.058)	(0.062)
Group x Mansion Tax FE	Yes	Yes
Zipcode FE	Yes	Yes
Controls	Yes	Yes
Adj. R^2	0.556	0.581
Obs.	186	186

Note: Group-by-Mansion-Tax fixed effects are included to control for local trends and time-varying shocks. This table reports the effects of mansion tax on permit filing. The dependent variable is scaled number of filed permits. Demographic controls include population, income, and housing value. The two sets of regressions are for two sets of price level cut-offs. Specifications include group and zipcode fixed effects. Each ZIP code in the treatment and control groups is weighted by its average number of permit filings during the pre-policy period of 2018 to 2019. Standard errors are clustered at the group level. ***, **, and * represent statistical significance at the 1%, 5%, and 10% level, respectively.

Table 12: Mansion Tax and Filed Permits by Price Levels (Remodel)

	(1)	(2)
LA city x Post Mansion x Bin 2	-0.034	-0.027
	(0.109)	(0.086)
LA city x Post Mansion x Bin 3	0.474***	0.460***
	(0.134)	(0.136)
Group x Mansion Tax FE	Yes	Yes
Zipcode FE	Yes	Yes
Controls	Yes	Yes
Adj. R^2	0.599	0.617
Obs.	278	278

Note: Group-by-Mansion-Tax fixed effects are included to control for local trends and time-varying shocks. This table reports the effects of mansion tax on permit filing. The dependent variable is scaled number of filed permits. Demographic controls include population, income, and housing value. The two sets of regressions are for two sets of price level cut-offs. Specifications include group and zipcode fixed effects. Each ZIP code in the treatment and control groups is weighted by its average number of permit filings during the pre-policy period of 2018 to 2019. Standard errors are clustered at the group level. ***, **, and * represent statistical significance at the 1%, 5%, and 10% level, respectively.

Table 13: Mansion Tax and No. of Sales

	(1)	(2)	(3)
LA city x Post Mansion	-0.180*	-0.211*	-0.235**
	(0.102)	(0.113)	(0.102)
Month FE	Yes	No	Yes
Zipcode FE	No	Yes	Yes
Pseudo R^2	0.019	0.253	0.270
Obs.	541	479	479

Note: Month and zipcode fixed effects are included to control for local trends and time-varying shocks. This table reports the effects of mansion tax on number of sales. Demographic controls include population, income, and housing value. Standard errors are clustered at the group level. ***, **, and * represent statistical significance at the 1%, 5%, and 10% level, respectively.

Table 14: Mansion Tax and No. of Sales by Price Levels

	(1)	(2)	(3)	(4)
LA city x Post Mansion x Bin 2	0.064	0.103	0.092	0.137
	(0.082)	(0.096)	(0.081)	(0.097)
LA city x Post Mansion x Bin 3	-0.905***	-0.724***	-0.807***	-0.572***
	(0.298)	(0.234)	(0.281)	(0.181)
Month FE	Yes	Yes	Yes	Yes
Zipcode FE	Yes	Yes	Yes	Yes
Notch Omitted	No	Yes	No	Yes
Pseudo R^2	0.501	0.517	0.501	0.517
Obs.	4250	2581	4250	2581

Note: Month and zipcode fixed effects are included to control for local trends and time-varying shocks. This table reports the effects of mansion tax on number of sales. The dependent variable is log number of sales. Demographic controls include population, income, and housing value. The (1) and (2) columns, and (3) and (4) columns, are for two sets of price level cutoffs. Column (2) and (4) exclude the observations in the annoucing period. Standard errors are clustered at the group level. ***, **, and * represent statistical significance at the 1%, 5%, and 10% level, respectively.

Table 15: Robustness Checks for Impact on Scaled No. of Permits

DepVar =	Scaled No. of Permits				
	Total New	SFR	MF	ADU	Placebo
	(1)	(2)	(3)	(4)	(5)
Subsample analyses					
(1) Exclude Culver City	-0.424***	-0.446***	-0.271**	-0.760***	-0.039
	(0.097)	(0.120)	(0.109)	(0.189)	(0.059)
(2) Exclude ED1 projects	-0.417***	-0.463***	-0.247*	-0.761***	-0.039
	(0.097)	(0.125)	(0.118)	(0.188)	(0.060)
Alternative Sample Selection					
(3) Drop duplicates within 6 months	-0.437***	-0.476***	-0.298**	-0.802***	-0.035
	(0.093)	(0.120)	(0.111)	(0.181)	(0.059)
(4) Drop duplicates within 9 months	-0.418***	-0.458***	-0.269**	-0.763***	-0.042
	(0.095)	(0.128)	(0.112)	(0.186)	(0.060)
Alternative Group Definition					
(5) Alternative groups	-0.473***	-0.506***	-0.342**	-0.842***	-0.027
	(0.097)	(0.128)	(0.146)	(0.194)	(0.061)

Note: Group-by-Mansion-Tax fixed effects are included to control for local trends and time-varying shocks. This table reports the robustness checks for the effects of mansion tax on permit filing. Each column represents the types of permit being affected. The dependent variable is scaled number of filed permits. Demographic controls include population, income, and housing value. Specifications include group-mansion-tax and zipcode fixed effects. Each ZIP code in the treatment and control groups is weighted by its average number of permit filings during the pre-policy period of 2018 to 2019. Standard errors are clustered at the group level. ***, **, and * represent statistical significance at the 1%, 5%, and 10% level, respectively.
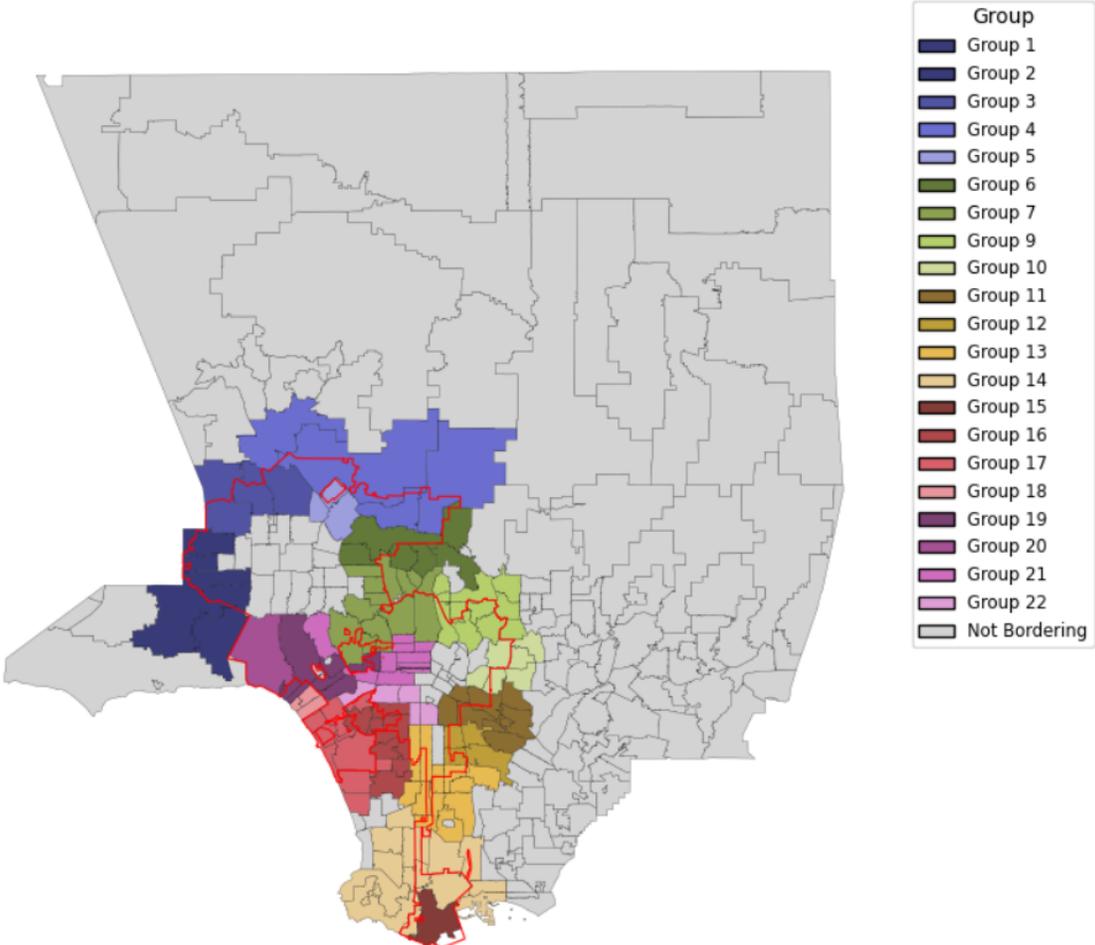
Table 16: Robustness Checks for Impact on Log No. of Permits

DepVar =	Log No. of Permits				
	Total New	SFR	MF	ADU	Placebo
	(1)	(2)	(3)	(4)	(5)
Subsample analyses					
(1) Exclude Culver City	-0.359***	-0.454***	-0.240	-0.475***	-0.020
	(0.135)	(0.130)	(0.203)	(0.142)	(0.110)
(2) Exclude ED1 projects	-0.367***	-0.454***	-0.229	-0.477***	-0.021
	(0.138)	(0.129)	(0.211)	(0.141)	(0.110)
Alternative Sample Selection					
(3) Drop duplicates within 6 months	-0.357***	-0.457***	-0.250	-0.476***	-0.021
	(0.133)	(0.127)	(0.205)	(0.126)	(0.109)
(4) Drop duplicates within 9 months	-0.354***	-0.442***	-0.232	-0.458***	-0.025
	(0.137)	(0.132)	(0.202)	(0.135)	(0.109)
Alternative Group Definition					
(5) Alternative groups	-0.403***	-0.471***	-0.395**	-0.500***	-0.002
	(0.125)	(0.121)	(0.195)	(0.116)	(0.120)

Note: Group-by-Mansion-Tax fixed effects are included to control for local trends and time-varying shocks. This table reports the robustness checks for the effects of mansion tax on permit filing. Each column represents the types of permit being affected. The dependent variable is log number of filed permits. Demographic controls include population, income, and housing value. Specifications include group-mansion-tax and zipcode fixed effects. Each ZIP code in the treatment and control groups is weighted by its average number of permit filings during the pre-policy period of 2018 to 2019. Standard errors are clustered at the group level. ***, **, and * represent statistical significance at the 1%, 5%, and 10% level, respectively.

Appendix

Figure A1: Bordering Zip Codes Colored by Group

Bordering ZIP codes are color-coded by groups. The red line marks the jurisdictional boundary between LA City and LA County. Grey areas marks the ZIP codes not included in the sample due to lack of comparison.