Analyzing the Impact of Local Policy on ADU Permitting in California Cities

A Culminating Project Presented to the Department of Public Policy and Administration at California State University, Sacramento, in Fulfillment of the Requirements for the Degree of

MASTER OF PUBLIC POLICY AND ADMINISTRATION

By: Jennifer Carter

Fall 2024

Advisor: Ahrum Chang, PhD

EXECUTIVE SUMMARY

My culminating project examines the impact of three local policies on the permitting rate of accessory dwelling units (ADUs) in California cities with populations of 50,000 or more. California faces a significant housing crisis and has fallen short of construction targets needed to meet demand, and ADUs are a viable way to partially address this shortfall. Since 2016, state-level policy efforts to deregulate ADU development have led to growth in permitting, but there is limited analysis of the effectiveness of local-level policies to encourage ADU development. This research aims to fill that gap and assess whether cities with ADU design programs, waived impact/development fees, or waived parking requirements are associated with increased ADU permitting.

I conducted a random-effects panel regression utilizing ADU permitting data from the California Department of Housing and Community Development (HCD), demographic data from the United States Census American Community Survey (ACS), and policy information from local government agencies. The dataset included 177 cities over six years, 2018 through 2023. I collected data directly from municipal websites, documents, and ordinances to ensure an accurate representation of policy features. My analysis included three policy variables and several sociodemographic control variables, including median household income, median gross rent, and racial demographics.

The key findings of my research are that of the three policies included, only pre-approved ADU design programs are positively associated with increased ADU permitting, significant at the $p < 0.10$ level. Waived impact and development fees and parking requirements, while potentially beneficial to property owners, do not show statistically significant impacts on permitting rates. These results suggest that while fee and parking waivers may reduce some

barriers for homeowners, they are insufficient to increase ADU permitting rates alone, likely due to high construction costs, limited available financing, or restrictive administrative processes.

When modifying the model's dependent variable from ADUs permitted to ADUs permitted per 1,000 residents, no single policy significantly impacts permitting rates. This modified analysis also indicates that cities with higher gross median rents have higher rates of ADU permitting, and cities with higher median household incomes are associated with lower rates. This suggests that lower-income communities may be more inclined to pursue ADU development for supplemental rental income or to house older family members who need care or lower housing costs. Additionally, the research finds that cities with a higher percentage of Black residents are associated with lower ADU permitting rates, raising equity concerns. This suggests that cities should include a more equity-focused strategy for ADU development to make construction more accessible for all communities, especially those economically disadvantaged and those who have experienced restrictive housing policies.

My results align with previous studies finding that ADU design programs and streamlined processes have increased ADU permitting. While design programs simplify the process for homeowners, fee waivers and relaxed parking requirements may need to be combined with additional incentives or programs that meaningfully increase ADU growth. Future research can increase the study population to include all cities in California, compare permitting rates to ADU construction completion, and utilize a formal survey to collect more detailed data on local policies. This research provides insight for policymakers and local agency officials looking to increase ADU development, meet RHNA goals, and promote sustainable urban development. As California prepares for the statewide rollout of AB 1332, mandating pre-approved ADU designs, understanding the effectiveness of these local policies is important to ensure its success.

INTRODUCTION

California has fallen short of its housing construction targets for decades, creating a severe housing shortage and intensifying the existing dynamics of increased demand and high housing prices (Legislative Analyst's Office, 2015; Mawhorter, 2019). Between 1980 and 2010, California's major metropolitan areas needed to construct 190,000 to 230,000 new housing units to keep pace with demand but only added 120,000 units per year on average (Kim et al., 2023). To address the state's chronic housing shortage, California's general plan guidelines incorporate mandatory housing elements that require local governments to plan and zone to meet current and projected housing needs for all income levels as outlined in the Department of Housing and Community Development's (HCD) Regional Housing Needs Allocation (RHNA) goals. In recent years, accessory dwelling units (ADUs) have emerged as a feasible policy alternative to help cities satisfy their RHNA requirements, add diverse housing stock to their region, and decrease urban sprawl through infill development in existing neighborhoods (Kim et al., 2023). California has taken action to simplify ADU construction through state-level policy changes, but contemporary research on local-level ADU policies is limited and leaves gaps in our understanding of the topic. Specifically, there is a notable lack of scholarly focus on isolating which local-level policies successfully incentivize ADU construction, which my research aims to explore. Further investigation is needed to understand these effects and to inform future policy development.

This research aims to answer the question, "Are certain local-level policies associated with increased permitting of accessory dwelling units in California cities with populations of 50,000 or more?" In this paper, I will provide background information and review relevant literature on ADUs and the factors impacting their construction in California. Next, I will present

the study's methodology including research approach, data sources, variables, and data analysis methods. Then, I will discuss the results, examine possible limitations in the overall research design, and make suggestions for future research.

This research is important to consider as California looks to address its housing crisis while providing flexible housing options and promoting sustainable urban development. This research has the potential to impact future local-level policy development, providing cities looking to increase their housing stock or meet their RHNA goals with an understanding of the specific policies associated with increased ADU construction.

BACKGROUND

Accessory dwelling units (ADUs), also known as granny flats, in-law units, or backyard cottages, are independent housing units located on a lot in addition to a primary residence (Kim et al., 2023). These units can be developed in various ways, such as converting a part of an existing home, adding extensions, or constructing new, standalone structures (Kim et al., 2023). The role of ADUs in addressing California's housing supply shortage and affordability crisis has been extensively studied, with mixed findings regarding their overall impact. While some studies demonstrate the potential of ADUs to increase housing stock (Chapple et al., 2021; Fulton & Shigley, 2018; Kim et al., 2023; Wegmann, 2020), others have found their impact to be limited, particularly in reaching those most in need of affordable housing (Greenberg et al., 2022; Ramsey-Musolf, 2018; Week, 2021).

ADUs contribute to the broader notion of "missing middle" housing, which seeks to address housing shortages by providing options that fall between single-family homes and large multi-family complexes (Wegmann, 2020). Some studies show that by offering smaller-scale and

denser housing, ADUs can cater to different demographics and income levels, contributing to a more diverse housing stock in communities heavily impacted by shortages (Chapple et al., 2021; Kim et al., 2023). ADUs have become a significant share of new housing permits in the Bay Area and Southern California, high-cost urban areas where land is scarce (Marantz et al., 2023b). This growth highlights the accessory dwelling unit's role in providing infill housing solutions as one piece of the larger puzzle of addressing the state's supply issues (Woetzel et al., 2016).

However, there are some concerns that while ADUs as a policy solution hold promise, their impact on addressing California's housing crisis is limited, particularly in addressing the housing shortage for low-income households. Although deregulation has increased ADU development, this growth has primarily occurred in affluent areas with greater access to capital and technical assistance, suggesting racial and socioeconomic disparities in development (Greenberg et al., 2022). Studies have found that lower-income homeowners face barriers to building ADUs, and without applying rent control or occupancy covenants, these units may not effectively serve low-income populations or add to the community's rental housing stock as intended (Greenberg et al., 2022; Ramsey-Musolf 2018; Week, 2021).

Additionally, despite the significant increase in ADU construction, ADUs contribute minimally to closing the overall housing gap. According to data compiled by the California Department of Housing and Community Development, between 2018 and 2023, over 100,000 ADUs were permitted, and over 68,000 were constructed statewide (HCD, 2024). While this is a striking increase in ADU development, these units account for only a fraction of California's estimated 3.5 million housing shortfall, emphasizing the impracticality of relying on ADUs to solve the housing crisis (Woetzel et al., 2016).

In recent years, California has implemented additional state policies aimed at overcoming local barriers to ADU development by passing bills like SB 9 to encourage the construction of smaller, more affordable homes (LegiScan, 2021). However, the effectiveness of these state initiatives depends significantly on the decisions made by individual cities. A 2022 analysis by the Terner Center found that some localities have imposed restrictions on lot splits and duplex construction, potentially hindering the impact of SB 9 (Alameldin & Underriner, 2023). While many municipalities comply with the bare minimum of state ADU guidelines, certain California cities, including Los Angeles, San Diego, and Pasadena, have used their authority to surpass state-mandated standards, implementing policies to incentivize ADU construction. The City of Los Angeles has developed a standard plan program for ADUs, allowing property owners to choose from twenty preapproved designs ranging from 400 ft^2 to 1200 ft^2 (City of Los Angeles, 2024). The City of Pasadena has incorporated an affordability agreement for homeowners who wish to construct an ADU as a rental unit, allowing them to apply for a reduced residential impact fee (City of Pasadena, 2024). Finally, The City of San Diego has established an ADU bonus program based on income restriction rental agreements, allowing property owners to construct up to 3 ADUs on their property in certain transit priority areas (Alameldin & Underriner, 2023).

LITERATURE REVIEW

This literature review provides important context for ADU development in California cities, which struggle to meet Regional Housing Needs Allocation requirements and search for policy tools to address the state's dire housing shortage. The review consists of subsections detailing challenges to ADU development, community impacts of ADU development, California laws influencing ADU development, and impacts of local-level policies on ADUs.

Challenges to ADU Development

Challenges to ADU development have been extensively studied, finding obstacles at both community and institutional levels (Mukhija et al., 2014; Volker & Handy, 2023). Community resistance often arises from concerns about increased density, limited parking, traffic, and a perceived influx of low-income renters, which are linked to fears of declining property values and additional strain on city services (Infranca, 2014; Mukhija et al., 2014). Volker and Handy (2023) found that 40% of surveyed homeowners in the Sacramento Metropolitan Area expressed interest in building an ADU, but many were discouraged by these concerns.

A theme in the literature is the challenge of institutional barriers in ADU development, including restrictive local land use regulations, bureaucratic hurdles, and high permitting and construction costs (Infranca, 2014). Researchers found that the permitting process, height and setback regulations, and design requirements make development difficult, particularly for those unfamiliar with regulatory procedures (Chapple et al., 2021; Volker & Handy, 2023). In a California statewide survey, half of the homeowners found it difficult to obtain an ADU permit, and the same proportion found it challenging to meet local development standards (Chapple et al., 2021).

Despite the potential benefits, prohibitive upfront costs, including permitting and city impact fees, often dissuade homeowners from pursuing ADU development (Proussaloglou, 2024; Volker & Handy, 2023). High development costs add to development barriers, with median statewide construction costs averaging $150,000 (Greenberg et al., 2022). These financial obstacles disproportionately impact low-income homeowners, who are less likely to have access to necessary financing for ADU construction (Chapple et al., 2020). Despite state legislative

efforts to reduce these barriers, ADU construction remains limited among low-income households.

ADU adoption also varies based on neighborhood characteristics. Research by New York University's Furman Center found that ADUs are more likely to be permitted in neighborhoods with low to medium housing costs and larger parcels of land than in communities with very low or high housing costs. Additionally, ADU ownership tends to be concentrated among more affluent homeowners, who are less likely to identify as Hispanic or Latino than the typical California homeowner, highlighting the socio-economic divide in ADU accessibility (Chapple et al., 2021; Marantz et al., 2023a).

Despite the broad interest in ADU development, community opposition, and institutional barriers limit their adoption. Targeted policy interventions at the local level can reduce regulatory barriers, simplify the permitting process, and provide financial support for low-income homeowners, which are essential to bridge the gap between ADU potential and practical implementation (Volker & Handy, 2023; Week, 2021).

Community Impacts of ADU Development

Extensive literature exists on the public perceptions and construction impacts of ADU development, which presents mixed findings regarding its benefits and shortcomings. Some studies have found that ADU development has grown in popularity due to its economic, environmental, and sustainable land use benefits. In contrast, others have found resistance grounded in privacy concerns, increased neighborhood density, and the impact of additional residents on existing infrastructure.

One central theme in the literature is the positive impact of ADU construction on local housing stock. ADUs can incrementally increase housing within a community without relying on large-scale development projects (Adomatis, 2021; Proussaloglou, 2024). Researchers found that when adding housing units to existing residential parcels, there is a boost in housing density without expanding the urban footprint, unlike the increased sprawl often associated with large subdivisions (Greenberg et al., 2022; Nichols & Adams, 2015). The literature contends that an ADU is also significantly less expensive to build in California than more typical affordable housing developments, making it more financially feasible to construct in greater numbers (Garcia, 2017; Woetzel et al., 2016).

The literature also highlights that ADUs provide flexible housing options, increasing the number of units available for different demographics and adding diversity to a community's housing options. Researchers found that ADUs support multi-generational living arrangements and are often used to accommodate extended family members or aging relatives while maintaining privacy and independence for both parties (Greenberg et al., 2022; Infranca, 2014).

The literature notes that ADUs bring additional income opportunities for homeowners, which can help offset housing-related costs by renting the unit out to short or long-term tenants (Adomatis, 2021; Chapple et al., 2017; Greenberg et al., 2022). One survey reveals that most ADUs are used as primary residences for the homeowner or a local tenant, not as vacation or short-term rentals, which benefits the overall local housing supply. Findings also indicated a 60% long-term tenant rate in Portland, Oregon, Seattle, Washington and Vancouver, Canada and 85% in California’s East Bay Area region (Garcia, 2017). Additionally, ADUs may increase property value for homeowners, as Brueckner and Thomaz (2024) found that the presence of an ADU raised a parcel’s assessed value and selling price between 7% and 9%.

A contrasting theme in the literature is negative perceptions of and local resistance to ADU development in a community. One negative impact of ADUs is decreased privacy for homeowners and neighbors. A study by Volker and Handy (2023) found that 14% of survey respondents cited privacy as a key reason for not adding an ADU to their property. The aesthetic impact on properties and the change in neighborhood character are also cited as concerns. Researchers also found that increased density can strain existing infrastructure and require expensive updates (Wegmann, 2020). In older communities, utility services, parks, schools, and roads may have trouble accommodating new housing units and additional residents (Kim et al., 2023). Increased neighborhood density also reduces the availability of on-street parking, a major concern for residents who oppose ADU development (Adomatis, 2023; Kim et al., 2023). This concern is consistent with findings by Wegmann and Chapple (2012), who note that secondary units are far less likely to have off-street parking than other rental units. However, Chapple et al. (2021) disagree with the severity of this concern, finding in a statewide survey of California ADU owners that 40% of tenant-occupied units did not utilize on-street parking, and 46% parked just one car on the street.

Finally, another theme in the literature is the affordability of ADUs as rental housing. Some studies found that ADUs are a naturally occurring affordable housing option due to their smaller size, setting, and lower building costs, and a survey of ADU owners found that a majority of units are rented below market rates (Chapple et al., 2021; Wegmann & Chapple, 2012). However, other research has found ADU rent to be similar to market-rate apartments, and they are often used to satisfy legal housing requirements in a city's housing element without actually providing affordable units to the community (Ramsey-Musolf, 2018). Additionally, research contends that ADU affordability is often associated with family members as tenants and

varies considerably depending on the region (Chapple et al., 2017). Although research outcomes have been mixed, policymakers and academics have promoted ADUs as a solution to California's housing crisis, leading to increased ADU legislation over the past decade.

California Laws Influencing ADU Development

California's focus on ADU legislation has evolved over time, responding to challenges and opportunities associated with increasing housing supply. In 1982, the state explicitly authorized ADU construction on single-family lots through SB 1160. In 2002, California passed AB 1866, allowing local agencies to approve or deny ADUs without public notice or review board hearings. Lawmakers hoped these efforts would streamline the approval process, but these early laws did not stop cities from using zoning rules to impose restrictive discretionary review processes and requiring conditional use permits (Marantz et al., 2023a; Ramsey-Musolf, 2018).

Between 2016 and 2020, California's legislature enacted a series of transformative statutes to address locally imposed barriers and further promote ADU construction. In 2016, SB 1069 and AB 2299 and in 2017, SB 229 reduced or eliminated parking requirements, utility connection fees, and fire sprinkler mandates for certain ADUs (LegiScan 2016a; LegiScan, 2016b; LegiScan, 2017). At this time, ministerial (automatic) approval for units that met certain criteria for size, parking, and setbacks was also mandated (Marantz et al., 2023a). Local government agencies were also authorized to permit Junior ADUs (JADUs) and to create voluntary local ADU ordinances under AB 2406 (LegiScan, 2016c). Additional legislative updates in 2020 included AB 68, AB 881, and SB 13. These laws removed minimum lot size requirements, shortened permit approval timelines, modified impact fees, and expanded the types of ministerially approved ADUs (LegiScan, 2019a; LegiScan, 2019b; LegiScan, 2019c). These

laws also capped fees, prohibited cities from making owner-occupancy rules, and allowed homeowners to build an ADU and a JADU on the same lot (Marantz et al., 2023a).

The state's legislative focus also expanded to financial and institutional support measures. In 2019, AB 671 required local agencies to include a plan to promote affordable ADUs in their housing elements and allowed these ADUs to count toward low-income housing allocations under RHNA requirements (LegiScan, 2019d). This law also required HCD to compile a listing of state grants and other financial incentives for building ADUs. In 2023, AB 671 permitted local agencies and community land trusts to utilize CalHome program funding to purchase residential properties, build ADUs, and lease or sell each unit (Chapple et al., 2017; LegiScan, 2023a). In 2023, AB 976 permanently removed owner-occupancy requirements, and finally, AB 1332, effective in January 2025, requires cities to provide pre-approved ADU plans to residents to minimize design approval time and make building more accessible (Ashford et al., 2024; LegiScan, 2023b; LegiScan, 2023c).

The gradual shift toward deregulation reversed previous barriers to construction and led to significant ADU growth. According to a study by the Terner Center at UC Berkeley, California cities saw a significant increase in ADU applications between 2015 and 2017. According to data collected by HCD, ADU permitting grew by 88%, while ADU construction increased by nearly 200% from 2019 to 2022 (Calder & Gygi, 2023; Marantz et al., 2023a). However, a recent study published in Cityscape found that the effects of these reforms are regionally dependent. While some areas saw a significant increase in ADU permits, others have been less productive due to continued local resistance and confusing development regulations (Marantz et al., 2023b).

Influence of Local-Level Policies on ADU Development

Limited long-term research has been done to examine how local government policies influence ADU development, but recent studies have found several successful approaches. A report by the Terner Center at UC Berkeley found three policies that have contributed to increased ADU production in Portland, Oregon, Seattle, Washington, and Vancouver, Canada (Chapple et al., 2017). These policies include reformed zoning rules, waivers of permit or utility connection fees, and education programs for homeowners detailing the planning and construction process. Another study by Kim et al. (2023) found that in the City of Los Angeles, the characteristics of each property influenced ADU development more than the overall characteristics of the neighborhood. This finding was consistent both before and after the city implemented a local ADU ordinance. This research shows that implementing a local ADU ordinance diversified the neighborhoods and property types where units were constructed, suggesting that zoning reform can influence ADU permitting rates.

Evidence from other cities strengthens the argument that local policies play an important role in encouraging ADU construction. In Portland, Oregon, the city worked with volunteer organizations on a homeowner ADU education program and saw permits increase from 3.0% to 10.9% between 2009 and 2015 (Chapple et al., 2017). Similarly, Encinitas, California, created a Permit Ready Accessory Dwelling Unit (PRADU) program that has made an impact on ADU construction rates (Kopko & Warfield, 2023). The PRADU program includes pre-approved designs to streamline the planning and permitting process and reduce costs for homeowners. Encinitas had 27 units built with PRADU plans during its first year, which was approximately 25% of the city's total ADU development that year (Kopko & Warfield, 2023). These increases suggest that simplifying the development process can reduce barriers for homeowners and

increase the number of units. However, more research is necessary to understand the complex relationship between local policies and permit numbers.

Hypothesis

Considering the outcome of state-level policy adjustments and deregulation discussed in the literature review, I expect the presence of each specific local-level policy will be positively associated with higher rates of ADU permitting in California cities with populations of 50,000 or more.

METHODOLOGY

This study employs an explanatory research design to explore the relationship between local agency development policies and ADU permitting outcomes in California cities. The study looks at the impact of three key policies: (1) an ADU design program, (2) impact and development fee waivers, and (3) parking requirement waivers. This section describes the study population, data sources, data collection considerations, variables, and the statistical methods used. The approach is designed to isolate the effects of specific ADU policies while controlling for other socio-economic and demographic factors that may influence ADU development patterns.

Study Population

The study sample includes 177 of California's 483 incorporated cities, analyzing those with a population of 50,000 or more. The cities included in this study and their policies are listed in Appendix 1. These cities were selected because larger population centers tend to experience more significant housing pressures (Lewis and Neiman, 2002). ADUs allow a city to increase housing density while conserving existing land, making a populated city more likely to adopt

such policies (Nichols & Adams, 2015). The study includes data from 2018 to 2023 after several significant state-level policy changes took effect.

Data Sources

Source 1: California Department of Housing and Community Development (HCD)

California law requires each local government to adopt a general plan outlining its long-term community vision. The general plan must also include a housing element that analyzes current and future housing needs and outlines goals, policies, and programs for development to meet these needs. To ensure compliance, HCD evaluates each city's housing element and provides the compliance status in its Housing Element Compliance Report, which I accessed through the California Open Data Portal.

Additionally, California Government Code section 65400 requires each city or county to prepare an annual report (APR) for HCD, which details the progress on implementing planning/zoning changes detailed in the housing element section of its general plan. HCD collects and publishes this self-reported information, which is available for download on their Housing Open Data Tools portal. The APR section titled "Annual Building Activity Report Summary - New Construction, Entitled, Permitted, and Completed Units" is hosted by the California Open Data Portal and includes 80,843 ADUs permitted between 2018 and 2023 in my selected city sample. This dataset includes the name of the reporting city, the calendar year, the unit construction type, and the number of issued ADU permits.

Source 2: American Community Survey (ACS)

The U.S. Census Bureau conducts the American Community Survey (ACS), which collects detailed demographic, social, economic, and housing data. The 2022 ACS 5-Year Estimates

(2018-2022) contain data collected over five years and provide a more reliable dataset for smaller geographic areas, like cities. I accessed the 2022 ACS information through a version of the data compiled by the California Department of Finance. The 1-Year Estimate was used for 2023 data, as the 5-Year Estimates were not available at the time of the study. I selected several control variables from this data, which I described later in this section.

Source 3: Local Government Websites

I compiled data on ADU-related policies from local government agency websites through published municipal codes, fee schedules, ADU manuals, and other city-sponsored outreach and education documents. In addition to using each city website, I made direct phone and email inquiries to city planning and building departments as needed. I collected data on the presence of the following ADU policies for each city during the study period: (1) a pre-approved ADU design program, (2) waiver of all city-imposed impact/development fees for ADUs, and (3) waiver of all parking requirements for ADUs.

Data Collection Considerations

I set parameters and standards to ensure consistent and accurate data collection of my subject policies across 177 unique cities. In collecting data on impact and development fees, I focused on city-imposed fees for ADUs, excluding school and utility connection fees outside the city's control. Per California law, ADUs under 750 square feet are exempt from impact and development fees. Data collection included whether cities offered total fee waivers for ADUs 750 square feet or larger or if they chose to apply impact and development fees.

Parking policy data collection followed a similar process. California law exempts certain ADUs from parking requirements, with exemptions applying to units within half a mile of public

transit, in historic districts, part of the primary residence, or near car-share vehicles. The law also prohibits cities from requiring more than one parking space per unit or bedroom, whichever is less. When garages or carports are converted into ADUs, replacement parking for the primary residence cannot be required. The collected data assesses whether cities adhered to these statutes or waived all parking requirements.

Pre-approved ADU design programs vary widely across cities, with some jurisdictions having long-standing programs and others only recently implementing these programs in anticipation of a state-mandated deadline set by AB 1332. By January 1, 2025, cities and counties are required to establish pre-approval programs for ADUs that must include (1) accepting ADU plan submissions for pre-approval, (2) reviewing and approving or denying submissions in line with existing ADU laws and charging the same permitting fees as a regular ADU of the same size, and (3) posting pre-approved ADU plans on their websites with the designer's contact information (LegiScan, 2023c). In some California cities, pre-approved design programs may not have been around long enough to impact ADU permitting outcomes noticeably. I chose to include these cities in the analysis because their non-statutory, early adoption of these programs shows a proactive effort to reduce barriers to ADU development.

In contrast to cities implementing new programs, I found that the city of Santa Cruz had recently removed its long-standing and highly regarded pre-approved ADU program. Santa Cruz was included in the dataset, as the program existed for most of the established period for this study. Finally, I found that several cities allow property owners to use pre-approved plans from other jurisdictions' ADU programs. These cities were not classified as having pre-approved ADU design programs in my data as significant review is needed to approve these plans, and these extra regulatory steps can still create barriers to development.

Variables

The dependent variable of this study is the total number of ADUs permitted in each city between 2018 and 2023. Three independent variables, all binary (coded as 1 = Yes, 0 = No), are included to capture the presence of key ADU-related policies at the city level.

The first independent variable is an ADU design program, measuring whether the city offers permit-ready architectural plans or designs that have been pre-reviewed by the jurisdiction but still require minor review for final approval. This variable was chosen as a previous case study by Kopko and Warfield (2023) found that ADU permitting increased significantly after implementing a pre-approved design program in Encinitas, California. After compiling this data, I found that 53 cities had ADU design programs.

The second independent variable is waived impact and development fees, measuring whether the city waives development or impact fees for all ADUs regardless of size, location, or construction type. This excludes school or utility connection fees outside the city's authority. A study by the Terner Center for Housing Innovation identified permit or utility connection fee waivers as a significant factor in the increase in ADU production in Portland, Oregon, Seattle, Washington, and Vancouver, Canada, in recent years (Chapple et al., 2017). I found that 16 cities waived all city-imposed impact and development fees.

The third independent variable in this study is waived parking requirements, whether the city waives parking requirements for ADUs, regardless of size, location, or construction type. Marantz et al. (2023b) found that ADUs have become a large share of new housing permits in certain high-cost urban areas of California where land is scarce. Removing off-street space requirements for parking conserves valuable and scarce land, allowing more room for ADU

construction in populated urban areas looking to increase their housing stock. I found that 34 cities waived all parking requirements.

Additional socio-economic and demographic variables were included to control for other factors influencing ADU permitting. First of these variables are median household income levels, median gross rent, and the racial makeup of the population, specifically the percentage of Hispanic/Latino, White, and Black residents. Studies have found that lower-income homeowners face greater barriers to constructing ADUs due to high development costs, lack of access to financing, and other administrative barriers (Chapple et al., 2020; Week, 2021). Additionally, research contends that ADU ownership is higher among more affluent homeowners who are less likely to identify as Hispanic or Latino (Chapple et al., 2021; Marantz et al., 2023a).

Another variable used is housing element compliance status, which notes the standing of a city's housing element with HCD. AB 671 in 2019 required local governments to include plans in their housing elements to increase ADUs in their community, and studies contend that cities using ADUs to meet low-income housing allocations under the RHNA requirements have been associated with higher ADU construction (Ramsey-Musolf, 2018). Finally, the total population of a city was added to the models to modify the dependent variable, altering it to the number of ADUs permitted per 1,000 residents. This variable is important to understand the role that population plays in this analysis due to the vastly different city sizes and characteristics throughout the state. See Table 1 for descriptive statistics of all variables.

Statistical Method

I used a random-effects panel regression to analyze the relationship between local ADU policies and the number of ADUs permitted. The analysis used multiple models and controlled for

demographic and socio-economic factors to ensure the effects of policy variables were isolated and accurately measured. The unit of analysis for this research was cities. The data was organized in a panel or longitudinal dataset, capturing data for each city at multiple points in time. Due to the skewed nature of variables, the analysis used log-transformed variables to compress higher values and to correct any skew in the data.

To isolate the effect of each individual policy, three separate regressions were run, including the impact of pre-approved ADU design programs on permitting, the impact of waived impact and development fees on permitting, and the impact of waived parking requirements on permitting rates. These analyses included the control variables described previously in this section. Three additional regressions were then run to consider the impact of a city's population. In these regressions, the dependent variable was changed from permits issued to permits issued per 1,000 residents. Initially, I chose to exclude the total population from the regression models because the research focused on local-level policies, and using population size could place more weight on demographic factors, overshadowing the impact of the subject policies. The decision to add population size was to assess whether the observed policy effects would hold up once controlling for city size.

RESULTS

This research investigates the impact of three specific local-level policies on ADU permitting in California cities with populations over 50,000 between 2018 and 2023. After the Hausman specification test, this study uses the random-effects model (see Table 2). Each model explores the effect of policy intervention on ADU permit issuing rates and includes demographic and economic control variables. This study hypothesized that a city implementing the subject ADU policies would be associated with a higher rate of ADU permits than those without. The

regression results indicate that one of my hypotheses was accepted, and two were rejected. The results of the first model show that having an ADU design program is associated with an increase in the permitting rate of ADUs, statistically significant at the $p < 0.10$ level ($p = 0.058$). This result suggests that design programs play a role in reducing permitting barriers and simplifying the development process for homeowners. In the second and third models, the independent variables of waived parking requirements and waived impact and development fees did not produce statistically significant results. This result suggests that while waiving fees or parking requirements can reduce some upfront costs or administrative burdens, they may not be strong enough incentives to drive ADU development alone, potentially due to the high overall costs of ADU construction that far exceed savings from fee waivers or relaxed design standards. Although other variables like race, median household income, housing element compliance status, and gross median rent were included in the analysis, they did not exhibit statistically significant relationships with ADU permitting rates. This suggests that these factors have limited influence on ADU permitting when examined alongside specific policy interventions.

In the regressions that included ADUs permitted per 1,000 residents as the dependent variable, no single policy appeared to be effective at increasing ADU permitting (see Table 3). Across all three models, gross median rent had a significant positive impact ($p = 0.001$, $p = 0.002$, and $p = 0.001$), meaning that higher rents are associated with increased ADU permitting rates. In contrast, across all three models, median household income had a statistically negative effect ($p = 0.040$, $p= 0.047$, and $p = 0.023$), indicating that higher household incomes in a city are associated with fewer ADUs permitted. Additionally, two models of the three models found a significant negative effect of the percentage of Black residents in a city ($p = 0.086$ and $p = 0.081$), finding a higher percentage of Black residents is associated with fewer ADUs permitted.

Table 1: Descriptive Statistics

Variables	Obs	Mean	Std. dev.	Min	Max
Dependent					
ADUs Permitted	1,062	76.123	408.120	0	7160
ADUs Permitted per 1,000 Residents	1,023	0.343	0.448	0	4.272
Independent					
ADU Design Program (1=yes; 0=no)	1,032	0.308	0.462	0	1
Waived Impact and Development Fees (1=yes; 0=no)	990	0.097	0.296	0	1
Waived Parking Requirements (1=yes; 0=no)	1,056	0.193	0.395	0	1
Control					
Percent White (%)	1,022	0.344	0.194	0.008	0.803
Percent Hispanic (%)	1,023	0.396	0.214	0.030	0.971
Percent Black (%)	1,022	0.053	0.058	0.001	0.411
Median Gross Rent (log)	1,023	7.455	0.271	6.770	8.161
Median Household Income (log)	1,023	11.348	0.315	10.576	12.318
Housing Element Compliance Status (1=yes; 0=no)	1,062	0.836	0.370	0	1
Total Population (log)	1,023	11.581	0.658	10.723	15.195

Table 2: Regression Results, Dependent Variable ADUs Permitted

Variables	Model 1	Model 2	Model 3
ADU Design Program	127.555* (67.249)	-	-
Waived Impact and Development Fees	-	-20.452 (109.957)	-
Waived Parking Requirements	-	-	-37.200 (76.744)
Percent White	216.234 (204.173)	282.178 (221.594)	251.781 (199.758)
Percent Hispanic	170.529 (200.309)	186.451 (217.134)	153.439 (196.865)
Percent Black	192.319 (447.273)	203.815 (476.057)	195.090 (442.385)
Median Gross Rent	116.193 (125.335)	125.176 (131.451)	112.594 (123.312)
Median Household Income	-28.037 (106.017)	-37.471 (110.634)	-40.024 (102.414)
Housing Element Compliance Status	59.987 (86.828)	42.852 (91.504)	41.788 (86.123)
Year	Included	Included	Included
Constant	-672.786 (1168.698)	-603.985 (1240.512)	-452.814 (1136.844)
Observations (N)	993	954	1016
R2	0.0264	0.0046	0.0062

Note: *p < 0.10; **p < 0.05; ***p < 0.01.
Standard errors in parentheses. The primary independent variable differs across models: ADU design program in Model 1, waived impact and development fees in Model 2, and waived parking requirements in Model 3.

Table 3: Regression Results, Dependent Variable ADUs Permitted per 1,000 Residents

Variables	Model 4	Model 5	Model 6
ADU Design Program	0.056 (0.057)	-	-
Waived Impact and Development Fees	-	-0.022 (0.091)	-
Waived Parking Requirements	-	-	-0.074 (0.065)
Percent White	0.191 (0.203)	0.160 (0.218)	0.143 (0.199)
Percent Hispanic	0.258 (0.214)	0.229 (0.228)	0.171 (0.211)
Percent Black	-0.765 (0.483)	-0.868* (0.506)	-0.833* (0.477)
Median Gross Rent	0.638*** (0.191)	0.605*** (0.195)	0.616*** (0.188)
Median Household Income	-0.340** (0.165)	-0.335** (0.169)	-0.364** (0.161)
Housing Element Compliance Status	0.093 (0.746)	0.089 (0.076)	0.0846 (0.074)
Year	Included	Included	Included
Constant	-0.597 (1.384)	-0.356 (1.435)	-0.063 (1.354)
Observations (N)	993	954	1016
R2	0.201	0.194	0.203

Note: *p < 0.10; **p < 0.05; ***p < 0.01.
Standard errors in parentheses. The primary independent variable differs across models: ADU design program in Model 4, waived impact and development fees in Model 5, and waived parking requirements in Model 6.

DISCUSSION

This study finds that of the three policies examined, only the ADU design program appears as an effective policy that enhances permitting rates. This result aligns with existing literature, which emphasizes that streamlined, pre-approved design programs simplify complex permitting processes and reduce costs to make ADU projects more accessible and appealing to homeowners (Ashford et al., 2024). This success has also been seen in cities like Encinitas, California, where the Permit Ready ADU program increased production by 25% in the first year, and Portland, Oregon, where streamlined permitting significantly boosted development (Chapple et al., 2017; Kopko & Warfield, 2023).

While examining the second independent variable, the study finds that impact and development fee waivers alone are insufficient motivators for ADU development, contrasting

with prior research by Chapple (2021). While waivers may alleviate some costs, they do not meaningfully reduce the financial burden enough to increase permitting rates, especially given California's high ADU development costs, which average around $150,000 per unit (Greenberg et al., 2022). Similarly, the literature states that while fee waivers can assist homeowners, they are less effective in high-cost areas, especially for low-income homeowners lacking access to affordable financing (Chapple et al., 2021). It is challenging to evaluate the effectiveness of fee waivers due to policy inconsistencies across the state, as some cities waive only certain fees while others offer full waivers. Additionally, since savings from fee waivers are relatively small compared to the total construction cost, other financial incentives may be necessary to make a meaningful difference in ADU permitting rates.

The results of the third regression show that eliminating parking requirements had no significant effect on increasing ADU permitting, challenging common concerns about ADU construction's impact on parking availability. The literature highlights parking as a central issue tied to neighborhood density, with many residents opposing ADU projects due to fears of limited on-street parking (Wegmann, 2020). However, these findings suggest that, despite resident concerns, waiving parking requirements for homeowners interested in building ADUs does not significantly impact permitting rates.

The fourth, fifth, and sixth regressions were run using ADUs permitted per 1,000 residents as the dependent variable. They conclude with findings similar to the previous three regressions while also finding certain impactful sociodemographic variables. These analyses found that no single policy is effective at increasing ADU permitting rates, including an ADU design program. This challenges previous research by Chapple (2017) and Kopko and Warfield (2023) which found a positive effect. These findings also suggest that permitting rates are

heavily influenced by a city's population instead of local-level policies. Larger populations are associated with greater housing demand, which the literature links to playing a significant role in ADU development (Lewis and Neiman, 2002; Marantz et al., 2023b). Smaller cities lacking demand and resources may struggle to see increases in ADU permitting rates through these isolated policy measures, as population appears to be a stronger driver of ADU production.

Gross median rent had a significant positive impact on ADU permitting in regressions four through six, indicating that areas with higher rents have increased ADU permitting rates. This finding is consistent with previous literature that contends cities with higher rents had higher ADU application rates and the documented appeal of extra income for homeowners renting out second units (Adomatis, 2021; Pfeiffer, 2019; Volker & Handy, 2023). In contrast, these models also showed that median household income had a negative effect on ADU permitting rates, meaning that cities with higher household incomes are likely to have fewer ADUs permitted. This finding may suggest that homeowners in lower-income neighborhoods are motivated to build an ADU for additional income opportunities or as multi-generational housing. This contrasts with research by Pfeiffer (2019), which finds that areas with lower incomes, higher poverty rates, and higher rates of multi-generational households have more restrictive building regulations, making it more challenging to develop second units. Finally, two of the three models indicated a negative effect of the percentage of Black residents in a city, suggesting that finding a higher percentage of Black residents is associated with a lower rate of ADU permitting, raising equity concerns. This finding conflicts with previous research by Marantz et al. (2023), which found no consistent relationship between permitting rates and the percentage of Black residents.

The results of this study carry several policy implications, especially as California cities approach the statewide rollout of mandatory ADU design programs under AB 1332. The findings suggest that although these programs could increase ADU permitting rates, larger cities with high housing demand may see more immediate benefits, and less populated cities may need additional support to see similar outcomes. Cities can address potential outcome disparities by providing additional resources to residents or bunding design programs with other policies. The findings emphasize that ADU policies must be part of a larger, equity-focused strategy to ensure that construction is accessible for all communities, especially those historically disadvantaged by economic disparities and restrictive housing policies. Specifically, increasing financing support through subsidies or affordable loan programs could also extend the impact of these programs and make ADU development more feasible for lower-income households (Greenberg et al., 2022).

There are several limitations to consider in this study and a number of ways to expand upon this research in the future. First, the sample size was limited to a specific group of cities based on population size, potentially introducing sampling bias. By expanding the sample size to include all incorporated cities in California, future research could improve the accuracy of the findings. Each city also has unique characteristics like physical location, local economy, and political climate, and these or similar variables may be difficult to reflect in the study's design. Similarly, previous literature found regional differences in ADU policy outcomes, suggesting that policy effectiveness may vary significantly based on these unique characteristics. Future studies might address these regional differences by taking a case study approach to explore how bundled policy components, such as pairing design programs with fee waivers or financing assistance, could yield higher permitting rates in specific areas (Marantz et al., 2023b).

Another limitation is that this study's focus is restricted to three policies represented in binary form. This data collection method may oversimplify policy variations across cities or fail to capture the influence of other significant local policies. Specifically, impact and development fee waivers vary across cities, and my data collection reflects only whether all fees were waived. Future data collection to further break down this policy based on the extent of fee waivers offered could provide a better understanding of the impact of fee waivers. Additionally, the study relies on data collected from public-facing city websites and city building and planning staff inquiries to fill in any data collection gaps. Future research could distribute a formal survey to collect data directly from cities, including additional policies or regional characteristics.

Another limiting factor is that this study only considers permitting rates without tracking whether ADUs are actually constructed. The study could offer a more comprehensive look at the policy's impact on increasing housing stock by including completed construction data. When incorporating completed unit data with permitting data, research could also be done to examine factors that hinder the completion of units that make it beyond the rigorous project approval phases but are ultimately not constructed. This could help us understand barriers encountered in the later stages of development and address them to increase effectiveness.

Finally, given the limited time since significant statewide ADU policy reform was implemented, a more extended timeframe might be necessary to fully capture the effects of local policy changes on permitting rates. Beyond expanding the timeframe, future studies could also adjust the regression model to use instrumental variables or dynamic panel data to address initial limitations and improve result accuracy. Adding to the regression model adjustments, qualitative methods could also be considered. These methods could bring local policy challenges and community perspectives to light that may be overlooked in a quantitative analysis.

CONCLUSION

California's dire housing crisis has driven policymakers to search for creative and practical solutions to increase housing stock, including boosting ADU development. The urgency of addressing this issue is underscored by the state's consistent failure to meet construction targets paired with growing demand. While early analysis of state-level policies has shown a positive growth in ADU construction, this research improves our understanding of the effectiveness of local-level policies. This research is important as it provides local agencies with the knowledge to increase housing stock, meet RHNA goals, and promote sustainable urban development in their communities.

This research finds that establishing an ADU design program increases the number of ADUs permitted in a city. This policy streamlines the development process for homeowners and reduces the costs associated with the design stage. Additionally, the research finds that waiving all impact and development fees or parking requirements is insufficient to increase ADU development. These policies alone may not offset ADU construction's high initial costs, limiting their overall influence. When considering population in the model, all three ADU policies do not impact permitting rates. Greater population is associated with higher housing demand and appears to be a stronger factor in determining a city's ADU permit rate.

Several control variables were significant when including population in the models. Higher gross median rent was found to have a positive association with ADU permitting, and median household income had a negative association with ADU permitting rates. These findings suggest that higher rents and lower incomes may encourage homeowners to build ADUs to generate additional income. This finding may also suggest that ADUs enable intergenerational living, allowing family members to provide care for aging family members or provide them with

a more affordable living situation due to high rental housing costs. Finally, the percentage of Black residents in a city was found to have a negative association with ADU permitting, indicating equity issues, and warranting future research surrounding the barriers to development for different populations.

While this research does not offer a complete picture of how local-level policies influence ADU permitting, it does present valuable findings for practitioners and future researchers. These findings will allow cities to address potential outcome disparities, consider additional resources for residents, or bundle design programs with other policies to increase their impact on permitting rates. Limitations of the research include focusing solely on permitting and not considering construction completion rates, oversimplifying policies, and limiting the sample to cities of a certain population size. Despite the acknowledged limitations, this study sets the groundwork for future research, including applying qualitative methods, gathering data through a formal survey, and considering the impact of the study's specific policies over an extended period. It also provides data collected at a point in time that is useful for future research analyzing ADU permitting rates after the implementation of AB 1332. As cities prepare for the statewide rollout of mandated ADU design programs, these findings are crucial to maximizing their effectiveness and finding complementary policies to increase ADUs in their communities.

APPENDIX 1

City	ADU Permits 2018	ADU Permits 2019	ADU Permits 2020	ADU Permits 2021	ADU Permits 2022	ADU Permits 2023	ADU Design Program	Waived Development and Impact Fees	Waived Parking Requirements
Alameda	0	26	39	78	59	51	No	Yes	No
Alhambra	27	30	11	73	124	158	No	No	No
Aliso Viejo	0	0	0	0	0	0	No	No	No
Anaheim	8	33	94	156	168	243	Yes	No	No
Antioch	2	1	17	32	9	36	No	No	No
Apple Valley	0	0	17	16	21	22	No	Unknown	Yes
Arcadia	4	11	22	43	75	70	No	No	No
Bakersfield	0	0	0	23	76	39	No	No	No
Baldwin Park	7	5	10	59	11	102	No	No	No
Beaumont	0	0	0	1	0	0	No	No	No
Bellflower	0	11	49	58	52	9	No	No	No
Berkeley	81	88	110	121	112	95	No	No	No
Brentwood	7	9	20	16	0	19	No	No	No
Buena Park	1	1	1	16	18	50	No	No	No
Burbank	54	110	97	317	252	296	Yes	No	No
Camarillo	8	8	13	7	24	30	No	No	No
Carlsbad	33	33	50	74	81	82	Yes	No	No
Carson	0	46	5	33	6	68	No	Unknown	No
Cathedral City	2	1	8	5	11	28	Yes	No	No
Chico	3	27	61	58	45	36	Yes	No	No
Chino	0	9	9	21	25	38	Yes	No	No
Chino Hills	0	0	5	16	17	17	No	No	No
Chula Vista	16	40	41	123	217	148	No	No	No
Citrus Heights	2	7	5	15	34	28	Yes	No	Yes
Clovis	9	4	10	23	23	28	Yes	No	No
Colton	4	0	12	11	10	5	No	No	No
Compton	0	23	2	39	40	66	Yes	No	No
Concord	19	18	24	40	44	50	Yes	No	No
Corona	3	0	14	17	32	42	No	No	No
Costa Mesa	4	6	19	43	69	81	No	No	Yes
Cupertino	15	15	19	41	30	17	Yes	No	No
Daly City	74	68	74	65	46	39	No	No	No
Davis	16	32	15	20	17	23	Yes	No	Yes
Delano	0	0	0	16	5	6	No	No	No
Diamond Bar	2	6	7	17	44	35	No	Unknown	No
Downey	3	16	53	117	137	142	No	No	No
Dublin	19	10	9	20	5	9	Yes	No	No
Eastvale	0	0	4	10	9	15	No	No	No
El Cajon	10	18	18	32	50	67	Yes	No	No
El Monte	6	11	12	38	52	78	No	No	No
Elk Grove	0	`	6	10	29	4	Yes	No	Yes
Encinitas	55	103	129	115	122	105	Yes	No	No
Escondido	3	28	38	58	70	92	No	Yes	Yes
Fairfield	1	3	3	13	17	22	No	No	Yes
Folsom	11	7	17	43	45	33	No	No	No
Fontana	18	33	0	86	104	145	No	No	No
Fountain Valley	13	23	38	45	58	85	Unknown	Unknown	No
Fremont	34	64	51	77	149	80	Yes	Yes	Yes
Fresno	2	4	6	19	24	37	Yes	No	Yes
Fullerton	18	37	41	70	66	75	No	Yes	No
Garden Grove	82	96	260	267	374	405	No	No	No
Gardena	12	17	23	26	59	57	No	No	No
Gilroy	7	16	13	27	16	40	No	No	No
Glendale	67	110	146	265	261	263	No	No	No
Hanford	0	0	0	20	3	3	No	No	No
Hawthorne	3	13	27	21	25	0	No	No	No
Hayward	5	21	39	44	94	71	No	No	Yes

City	ADU Permits 2018	ADU Permits 2019	ADU Permits 2020	ADU Permits 2021	ADU Permits 2022	ADU Permits 2023	ADU Design Program	Waived Development and Impact Fees	Waived Parking Requirements
Hemet	0	1	2	33	27	10	No	No	Yes
Hesperia	1	2	10	5	10	11	No	Unknown	No
Highland	0	0	0	24	11	29	No	No	No
Huntington Beach	0	28	31	60	91	84	No	No	No
Huntington Park	6	10	24	4	14	9	No	No	No
Indio	0	0	0	29	49	24	No	No	No
Inglewood	0	0	0	26	54	33	No	Yes	No
Irvine	1	0	0	1	5	0	No	No	No
Jurupa Valley	6	0	6	17	44	71	Yes	No	No
La Habra	5	5	26	30	44	26	No	No	Yes
La Mesa	19	35	0	65	62	99	No	No	Yes
Laguna Niguel	0	3	3	10	10	10	Yes	No	No
Lake Elsinore	0	0	0	1	6	6	Unknown	Unknown	No
Lake Forest	1	1	4	14	13	13	No	No	No
Lakewood	10	17	23	38	58	51	No	No	No
Lancaster	0	0	12	192	61	231	No	No	No
Lincoln	3	0	3	6	10	5	No	No	No
Livermore	18	36	39	60	61	49	No	No	No
Lodi	0	3	2	1	15	28	Yes	No	No
Long Beach	59	151	268	444	509	671	Yes	No	No
Los Angeles	4079	4792	3425	5064	7160	6474	Yes	No	No
Lynwood	0	7	20	44	105	118	Yes	No	No
Madera	0	0	0	1	0	15	No	Yes	No
Manteca	0	0	0	0	36	21	Yes	No	Yes
Menifee	0	0	2	11	12	13	Yes	No	No
Merced	0	0	1	2	7	5	Yes	No	No
Milpitas	1	16	17	32	71	33	No	No	No
Mission Viejo	0	0	3	14	8	17	Unknown	Unknown	No
Modesto	1	5	10	7	0	93	Yes	No	No
Montebello	0	0	7	9	20	66	No	Unknown	No
Monterey Park	0	0	0	51	59	61	No	Unknown	No
Moreno Valley	1	5	7	24	37	61	No	No	No
Mountain View	6	15	18	31	42	70	Unknown	Unknown	No
Murrieta	0	3	2	9	19	7	No	No	No
Napa	20	34	45	60	50	61	Yes	No	No
National City	0	5	2	9	28	49	No	No	Yes
Newport Beach	3	5	8	45	34	43	Yes	Yes	No
Norwalk	1	16	26	86	97	58	No	No	Yes
Novato	6	10	14	27	20	25	No	No	No
Oakland	252	289	174	274	287	219	Yes	Yes	No
Oceanside	21	30	49	103	137	122	No	Yes	No
Ontario	0	30	69	11	97	128	No	No	No
Orange	10	10	39	56	83	69	No	No	No
Oxnard	3	13	28	63	75	191	No	No	No
Palm Desert	0	0	0	9	13	21	No	No	No
Palmdale	0	0	0	9	74	66	Yes	No	No
Palo Alto	36	62	43	89	120	127	No	No	No
Paramount	0	3	12	38	50	34	No	No	No
Pasadena	13	16	80	112	213	176	Yes	No	No
Perris	0	0	1	3	3	11	No	No	No
Petaluma	25	32	20	28	22	24	Yes	No	Yes
Pico Rivera	13	21	27	51	61	69	No	No	No
Pittsburg	0	1	7	9	26	23	Yes	No	No
Placentia	2	2	5	7	14	14	No	No	No
Pleasanton	7	11	9	16	6	11	No	No	No
Pomona	17	71	56	92	0	0	No	No	Yes
Porterville	5	3	1	3	5	27	Yes	No	No
Rancho Cordova	0	0	0	0	4	2	No	No	Yes
Rancho Cucamonga	5	14	2	16	70	79	No	No	No

City	ADU Permits 2018	ADU Permits 2019	ADU Permits 2020	ADU Permits 2021	ADU Permits 2022	ADU Permits 2023	ADU Design Program	Waived Development and Impact Fees	Waived Parking Requirements
Redding	0	0	0	2	3	16	Yes	Yes	No
Redlands	8	10	11	29	14	57	No	No	No
Redondo Beach	13	30	19	35	34	47	No	No	Yes
Redwood City	23	39	60	81	83	73	Yes	No	Yes
Rialto	0	1	14	32	35	0	Unknown	No	Unknown
Richmond	48	39	42	75	55	85	No	No	No
Riverside	2	25	60	127	0	275	No	No	Yes
Rocklin	1	3	6	8	20	15	No	No	No
Roseville	2	5	8	19	26	24	No	No	No
Sacramento	41	57	76	170	224	246	Yes	No	Yes
Salinas	7	17	16	110	134	197	Yes	Yes	No
San Bernardino	0	0	25	80	0	249	No	No	No
San Clemente	13	13	14	17	28	25	No	No	No
San Diego	216	627	491	871	662	1909	Yes	No	No
San Francisco	270	480	247	320	342	290	No	No	Yes
San Jacinto	0	0	0	2	2	4	No	No	No
San Jose	192	416	331	420	448	470	Yes	No	No
San Leandro	4	27	20	45	36	60	No	No	Yes
San Marcos	2	2	6	18	24	29	No	No	No
San Mateo	8	45	52	68	82	83	No	No	No
San Rafael	24	13	36	18	45	32	No	No	No
San Ramon	9	4	7	15	11	11	No	Yes	No
Santa Ana	42	57	64	133	170	199	Yes	No	No
Santa Barbara	153	62	95	151	111	125	No	Unknown	No
Santa Clara	21	51	45	53	76	54	No	Yes	Yes
Santa Clarita	13	25	47	44	0	0	No	No	No
Santa Cruz	54	59	67	80	99	82	Yes	No	No
Santa Maria	45	107	204	401	468	415	No	No	No
Santa Monica	20	0	0	81	138	127	No	No	Yes
Santa Rosa	80	50	65	95	111	154	Yes	No	No
Santee	1	1	3	13	18	17	No	No	No
Simi Valley	27	0	53	24	74	84	No	No	No
South Gate	25	38	85	0	0	0	No	No	Yes
South San Francisco	3	4	47	41	51	45	Yes	Yes	No
Stockton	4	4	16	29	60	51	Yes	No	Yes
Sunnyvale	30	49	59	79	59	59	No	No	Yes
Temecula	0	0	18	9	15	13	Yes	No	No
Thousand Oaks	14	17	31	60	103	66	No	No	No
Torrance	11	39	40	87	120	129	No	No	No
Tracy	7	18	10	80	120	35	Yes	No	No
Tulare	0	0	3	5	13	16	No	No	Yes
Turlock	2	3	2	5	5	8	Yes	No	No
Tustin	4	6	7	10	14	6	No	No	No
Union City	8	12	7	23	31	21	No	No	Yes
Upland	0	14	41	54	59	43	No	No	No
Vacaville	9	3	10	15	27	24	No	No	No
Vallejo	20	21	23	36	21	35	No	No	No
Ventura	0	12	5	6	23	0	No	No	No
Victorville	0	3	1	1	11	11	No	No	No
Visalia	2	4	2	5	16	21	Yes	No	Yes
Vista	0	2	51	60	79	103	Yes	No	No
Walnut Creek	22	13	17	26	24	21	Yes	No	Yes
Watsonville	4	10	18	33	30	43	No	No	No
West Covina	0	6	11	49	115	30	No	Yes	No
West Sacramento	0	0	2	7	18	14	No	No	No
Westminster	23	25	57	118	177	189	No	No	No
Whittier	8	21	19	61	78	105	No	Unknown	No
Woodland	35	0	49	27	15	14	No	No	No
Yorba Linda	6	4	6	30	32	20	No	No	No
Yuba City	0	0	0	0	2	7	No	Yes	No
Yucaipa	3	5	12	31	33	44	No	No	No

REFERENCES

Adomatis, S. K., S.R.A. (2021). Valuation of accessory dwelling units. *The Appraisal Journal, 89*(4), 248–263.

Alameldin, M., & Underriner, Q. (2023). San Diego's success in spurring missing middle housing: The accessory dwelling unit bonus program. Terner Center for Housing Innovation. https://ternercenter.berkeley.edu/research-and-policy/san-diego-adu-bonus-program/.

Ashford, G., Justus, A., & Armlovich, A., (2024, August 13). *What Hawaii can learn from California's long and bumpy road to ADU stardom.* Niskanen Center. https://www.niskanencenter.org/what-hawaii-can-learn-from-californias-long-and-bumpy-road-to-adu-stardom/

Brueckner, J. K., & Thomaz, S. (2024). ADUs in Los Angeles: Where are they located and by how much do they raise property value? *Real Estate Economics, 52*(3), 885-907. https://doi.org/10.1111/1540-6229.12471

Calder, V.B., & Gygi, J., (2023, June 28). *The Promising Results of Accessory Dwelling Unit Reform*. CATO Institute. https://www.cato.org/blog/results-accessory-dwelling-unit-reform-so-far

California Department of Housing and Community Development (HCD) (2024). *Annual Progress Reports - Data Dashboard and Downloads*. https://www.hcd.ca.gov/planning-and-community-development/housing-open-data-tools/housing-element-implementation-and-apr-dashboard

Chapple, K., Ganetsos, D., & Lopez, E. (2021). *Implementing the Backyard Revolution: Perspectives of California's ADU Owners.* Center for Community Innovation. https://www.aducalifornia.org/wp-content/uploads/2021/04/Implementing-the-Backyard-Revolution.pdf

Chapple, K., Garcia, D., Valchuis, E., & Tucker, J. (2020). *Reaching California's ADU potential: Progress to date and the need for ADU finance.* Terner Center for Housing Innovation. https://ternercenter.berkeley.edu/wp-content/uploads/pdfs/Reaching_Californias_ADU_Potential_2020.pdf

Chapple, K., Wegmann, J., Mashhood, F., & Coleman, R. (2017). *Jumpstarting the market for accessory dwelling units: Lessons learned from Portland, Seattle, and Vancouver.* Urban Land Institute. https://escholarship.org/content/qt4b9836bh/qt4b9836bh.pdf

City of Pasadena, Planning and Community Development Department (City of Pasadena). (2024). Accessory dwelling units. https://www.cityofpasadena.net/planning/planning-division/community-planning/accessory-dwelling-units/

Fulton, W. B., & Shigley, P. (2018). *Guide to California Planning* (5th ed.). Solano Press Books.

Garcia, D. (2017). *ADU update: Early lessons and impacts of California's state and local policy changes.* Terner Center for Housing Innovation. https://ternercenter.berkeley.edu/wp-content/uploads/pdfs/ADU_Update_Brief_December_2017_.pdf

Greenberg, J., Phalen, H., Chapple, K., Garcia, D., & Alameldin, M. (2022). *ADUs for all: Breaking down barriers to racial and economic equity in accessory dwelling unit construction.* Terner Center for Housing Innovation. https://www.aducalifornia.org/wp-content/uploads/2022/08/ADUs_for_All.pdf

Infranca, J. (2014). Housing changing households: regulatory challenges for micro-units and accessory dwelling units. *Stanford Law & Policy Review, 25*(1), 53–90.

Kim, D., Baek, S. R., Garcia, B. et al. (2023). The influence of accessory dwelling unit (ADU) policy on the contributing factors to ADU development: an assessment of the city of Los Angeles. *Journal of Housing and the Built Environment, 38*, 1585–1599. https://doi.org/10.1007/s10901-022-10000-2

Kopko, K., & Warfield, A., (2023). *"Pre-Approved ADU's: A Tool for Revitalizing California's Affordable Housing Struggle."* Inland Center for Sustainable Development. *https://icsd.ucr.edu/case-study-adu*

LegiScan. (2016a). California Senate Bill 1069. https://legiscan.com/CA/text/SB1069/2016

LegiScan. (2016b). California Assembly Bill 2229. https://legiscan.com/CA/text/AB2299/2016

LegiScan. (2016c). California Assembly Bill 2406. https://legiscan.com/CA/text/AB2406/2016

LegiScan. (2017). California Senate Bill 229. https://legiscan.com/CA/text/SB229/2017

LegiScan. (2019a). California Assembly Bill 68. https://legiscan.com/CA/text/AB68/2019

LegiScan. (2019b). California Assembly Bill 881. https://legiscan.com/CA/text/AB881/2019

LegiScan. (2019c). California Senate Bill 13. https://legiscan.com/CA/text/SB13/2019

LegiScan. (2019d). California Assembly Bill 671. https://legiscan.com/CA/text/AB671/2019

LegiScan. (2021). California Senate Bill 9. https://legiscan.com/CA/text/SB9/2021

LegiScan. (2023a). California Assembly Bill 671. https://legiscan.com/CA/text/AB671/2023

LegiScan. (2023b). California Assembly Bill 976. https://legiscan.com/CA/text/AB976/2023

LegiScan. (2023c). California Assembly Bill 1332. https://legiscan.com/CA/text/AB1332/2023

Legislative Analyst's Office. 2015. *California's high housing costs: Causes and consequences.* Legislative Analyst's Office. https://lao.ca.gov/publications/detail/3214

Lewis, Paul & Neiman, Max. (2002). Cities Under Pressure: Local Growth Controls and Residential Development Policy.

Los Angeles Department of Building and Safety (City of Los Angeles). (2024). Approved standard plans. Retrieved from https://www.ladbs.org/adu/standard-plan-program/approved-standard-plans

Marantz, N. J., Elmendorf, C. S., & Kim, Y. B. (2023a). *Evaluating California's Accessory Dwelling Unit Reforms: Preliminary Evidence and Lessons for State Governments.* The New York University, Furman Center for Real Estate and Urban Policy. https://furmancenter.org/files/Evaluating_California's_Accessory_Dwelling_Unit_Reforms_508.pdf

Marantz, N. J., Elmendorf, C. S., & Kim, Y. B. (2023b). Where Will Accessory Dwelling Units Sprout Up When a State Lets Them Grow? Evidence From California. *Cityscape, 25*(2), 107–118.

Mawhorter, S. (2019). *Housing policies in California cities: Seeking local solutions to a statewide shortfall.* Terner Center for Housing Innovation at the University of California, Berkeley & Center for California Real Estate, California Association of Realtors. https://ternercenter.berkeley.edu/blog/local-solutions-statewide-shortfall

Mukhija, V., Cuff, D., & Serrano, K. (2014). Backyard Homes & Local Concerns: How can local concerns be better addressed? University of California Los Angeles, Luskin School of Public Affairs City Lab. https://static1.squarespace.com/static/58e4e9705016e194dd5cdc43/t/58fb35bf20099eb9a7159970/1492858335968/2014_BYH+Report+cityLAB+UCLA.pdf

Nichols, J. L., & Adams, E. (2015). The Flex-Nest: The Accessory Dwelling Unit as Adaptable Housing for the life span. *Interiors, 4(1),* 31-52.

Pfeiffer, D. (2019). *Regulating ADUs in California: local approaches & outcomes*. Terner Center for Housing Innovation. https://ternercenter.berkeley.edu/wp-content/uploads/2023/04/Pfeiffer_Regulating_ADUs_in_California.pdf

Proussaloglou, E. (2024). Architecture and the accessory dwelling unit Revolution: Perspectives from builders. *Critical Planning, 27*(1). https://doi.org/10.5070/CP827063133

Ramsey-Musolf, D. (2018). Accessory dwelling units as low income housing: California's Faustian bargain. *Urban Science, 2*(3), 89. *https://doi.org/10.3390/urbansci2030089*

Volker, J., & Handy, S. (2023). Exploring Homeowners' Openness to Building Accessory Dwelling Units in the Sacramento Metropolitan Area. *Journal of the American Planning Association, 89*(1), 45–60, https://doi.org/10.1080/01944363.2022.2036222

Week, L. A. (2021). Less is not more: The False Promise of Accessory Dwelling Units for San Francisco's Lowest-Income Communities. *Journal of Affordable Housing and Community Development Law, 30*(2), 281-303.

Wegmann, J. (2020). Death to single-family zoning… and new life to the "missing middle." *Journal of the American Planning Association, 86*(1), 113–119. https://doi.org/10.1080/01944363.2019.1651217

Wegmann, J., & Chapple, K. (2012). *Understanding the Market for Secondary Units in the East Bay*. UC Berkeley: Institute of Urban and Regional Development. https://escholarship.org/uc/item/9932417c

Woetzel, J., Mischke, J., Peloquin, S., & Weisfield, D. (2016). *A tool kit to close California's housing gap: 3.5 million homes by 2025.* McKinsey & Company. *https://www.mckinsey.com/~/media/mckinsey/featured%20insights/urbanization/closing%20californias%20housing%20gap/closing-californias-housing-gap-full-lreport.pdf*