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The First Step Is The Hardest: California's Sliding Homeownership Ladder

AUTHORS
Daniel Shoag, PhD, MetroSight | **Issi Romem, PhD**, MetroSight & Terner Affiliate | **David Garcia**, Terner Center

Highlights

- **Homeownership in California continues to be eroded:** 43.5 percent of people aged 25–75 were homeowners in 2021, down from 49.8 percent in 2000. The decline was even more pronounced for younger Californians aged 35–45, an age range when many people in other states become homeowners. For that group the share that owned a home declined from 49.5 percent to 39.7, almost 10 percentage points in just 20 years.
- **Homeownership in California is increasingly out of reach relative to the country:** in 2021 the share of adults who own their home in California was just 43.5 percent, more than 15 percentage points lower than the rest of the United States, which is the largest the gap has ever been. In California, the age at which more than half of residents are homeowners is 49; by comparison, across most of the United States that age is 35.
- **The ability to afford a home, as opposed to the desire to own one, accounts for most of California's homeownership gap versus the nation:** while the typical timing of life cycle milestones such as marriage and childbearing can also influence rates of homeownership, most of the gap follows from residents' financial ability to afford a home in the state. We estimate the difference in financial ability to afford a home accounts for 55.6 percent of the observed difference in homeownership rates between residents of California and the rest of the U.S. (ages 25–75).
- **How much would slower housing price growth have helped?** Had housing prices in California risen from 2000 to 2021 in line with those in the rest of the country, about half (48 percent) of California's decline in homeownership rate over the period could have been averted.

The Homeownership Ladder

Homeownership is a core component of the American dream. A large majority of Americans report wanting to own a home and see homeownership as the best marker of financial success and security.[1] This widespread view is backed by the academic literature on the value of owning a home. A recent survey in *the Journal of Economic Perspectives* concluded that "homeownership remains beneficial for most families, offering both financial gains and a chance to build wealth."[2] Although there is some debate in the academic literature about the returns to housing wealth relative to stock portfolios[3], especially for low- and moderate-income families, homeownership is strongly correlated with a larger net worth and financial security.[4] Further, homeownership conveys many non-financial benefits.[5] Homeownership is not without risks, however, and mortgage and housing markets have long been characterized by discrimination and racial and ethnic disparities in the access and pricing of credit.[6] Still, disparities in homeownership are better seen as a target for policy than a cause for writing off housing as a wealth building tool.

Despite the broad desire of many families to own a home, the share of adults ages 25 to 75 who own a home in California is lower today than it was in 2000, and at 43.5 percent, is the second lowest in the country (behind only the District of Columbia). Moreover, while the age at which more than half of residents are homeowners in most U.S. states is about 35, in California that age is 49. In this paper, we examine the erosion of access to homeownership in California, and explore how house prices are affecting the ability of households to move up the metaphorical "homeownership ladder": moving from renting a home to owning one, and then successfully paying off a mortgage and owning their home outright.

We find that fewer Californians are becoming homeowners, and those who do purchase homes are doing so later in life. The declines in homeownership have been particularly pronounced for people aged 25–45, the time at which transitions to homeownership usually occur. For example, the share of 35–45-year-olds in California who own their own home has fallen roughly 10 percentage points since 2000. This has implications not only for their ability to build wealth, but also for the housing market, as more households remain renters for longer periods of time.

We also find that fewer homeowners move up the next rung of the homeownership ladder and pay off their mortgage. Whereas 30.3 percent of Californians aged 60–75 owned their homes free and clear in 2000, only 26.4 percent did in 2021. While this is part of a national trend[7], the rates in California lag the rest of the country considerably. Outside of California, almost 42 percent of Americans aged 60–75 own their homes outright. Retiring without mortgage debt is key to financial stability later in life. Research has found that homeowners older than age 65 who continue to have payments due on a mortgage appear nearly as financially constrained as renters.[8]

Many factors have contributed to these declines, including changing family dynamics and increased college enrollment which can delay the decision to buy a home, as well as lower interest rates which can influence the decision to pay off one's mortgage. However, we find

that the significant rise in housing prices in California has had a major impact on access to homeownership, above and beyond other drivers of people's choice to buy a home. The deterioration in the financial ability to buy a home explains more than half of the decline in California's homeownership rates. Had house prices in the state since 2000 risen only as fast as in the rest of the nation, an estimated 735,000 more of today's Californians could have afforded to become homeowners.

The report proceeds as follows. The next section describes the data and methodology used in this report. Section three presents evidence showing the delay in progress up the homeownership ladder in California. Section four presents evidence that rising housing costs have played a crucial role in delaying homeownership and explores what progress up the homeownership ladder would have been if housing prices had risen more slowly. Section five concludes and presents recommendations for increasing access to homeownership. Appendix A provides more theoretical and methodological context for understanding the role of housing prices in shaping homeownership dynamics in California.

Data and Methodology

Our analysis in this paper draws on three major data sources: the Decennial Census, the American Community Survey (ACS), and the Survey of Income and Program Participation (SIPP). Each of these has its own strengths and weaknesses for understanding trends in homeownership. The majority of the analysis derives from ACS microdata in 2021, as well as earlier data from the 1980 and 2000 Decennial Census, which allow us to track changes in household tenure over time as well as measure the characteristics (e.g., race/ethnicity, income, household composition) of those households. The advantage of the Census/ACS is that it asks questions about whether someone owns their home free and clear and that these data span many historical decades.

To analyze homeownership affordability and assess what impact house prices have had on homeownership rates in California, we rely on data from the SIPP. The SIPP is a nationally representative survey conducted by the Census and designed to provide accurate information about households' financial situation and participation in government programs. The survey selects a panel of 14,000–37,000 households that is surveyed repeatedly in waves lasting 2.5–4 years. The SIPP contains extremely detailed information on household financials, including net worth and mortgage status. The repeated nature of the panel allows us to observe people who transition from one ladder rung to another. However, the sample is not large enough to allow breakdowns into sub-state geographies nor does it allow us to study longer-term trends in homeownership rates.

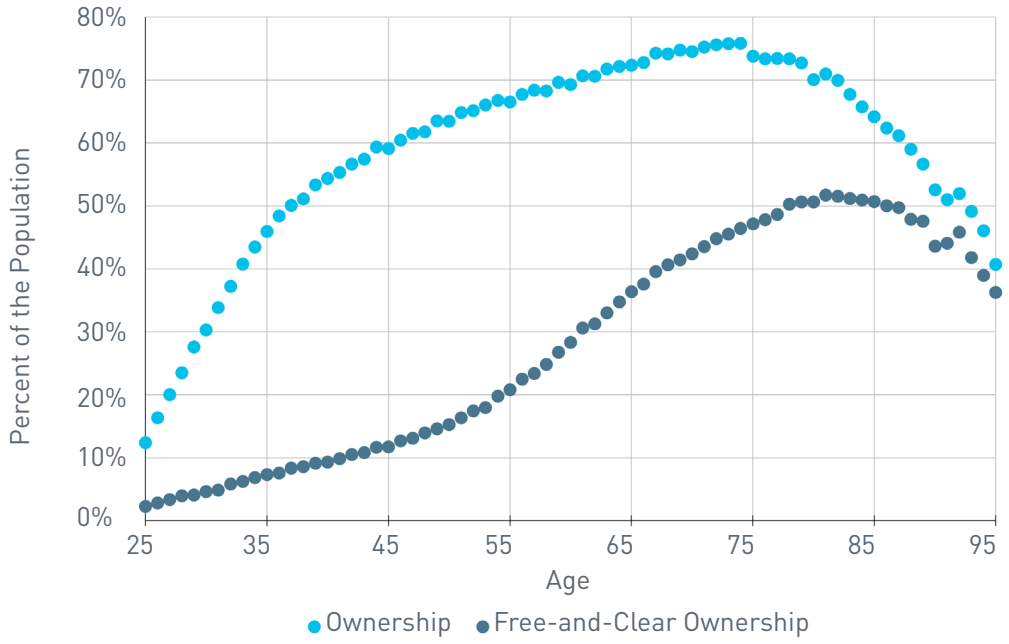
Most studies that examine the homeownership rate use household or housing unit measures of tenure. In this study, given our interest in the age at which someone is able to move up the homeownership ladder, we focus on individuals. One challenge to doing this analysis is accurately defining who owns their home—for example, should an adult child living with parents who own their home be considered an owner? Or, are they better classified as a non-owner, since presumably they will move out and form their own household over time? We define an owner as someone who

both (1) lives in an owned home and (2) is the householder or spouse of the householder. Similarly, we define free and clear ownership as someone (1) who lives in a home owned free and clear, and (2) is the householder or spouse of the householder.[9] An adult living in an owned home who is not the householder or spouse—for example, an adult child, sibling, parent, or friend—is considered a non-owner. Note that our definitions differ from the typically reported figures that focus on the status of the unit, rather than the person. Further, we limit our analysis to those over the age of 25. This limitation allows us to capture changes in ownership among adults rather than changes driven by child-to-adult population ratios. Since, in our person-level metric, children are non-owners, including them in the totals would make our tabulations sensitive to changes in the number of children in a household. Alternate constructions that use a broader definition of homeownership do not meaningfully change the results.[10]

In documenting homeownership trends, we further stratify our analysis by age, race/ethnicity, college attainment, and household composition. Research has shown that there are strong normative and life cycle patterns that shape when people decide to buy a home. Consider, for example, the life cycle pattern observed in the 2021 ACS for the U.S. as a whole (Figure 1). Ownership grows rapidly from 25–35, at which point roughly half the population are homeowners. Growth then slows but continues from 35–45 and then slows again from 45–60. From 60 to 75 growth is small or mostly flat in ownership, before it begins steeply declining at older ages. Similarly, until age 45, the share owning a home free and clear is relatively small. From 45–60 this share increases, with very rapid growth from 60–75. After 75 this growth flattens out before again declining with older age.

This life cycle pattern, which is well-documented in the literature[11], motivates the study of changes in ownership by

Figure 1: Homeownership and Life Cycle Patterns in U.S. in 2021



age. Ownership is a financial milestone accomplished as people advance into middle age. It is important to understand not only whether Californians are ever able to buy a home but also whether achieving this milestone takes longer than in the past.

Trends in Homeownership

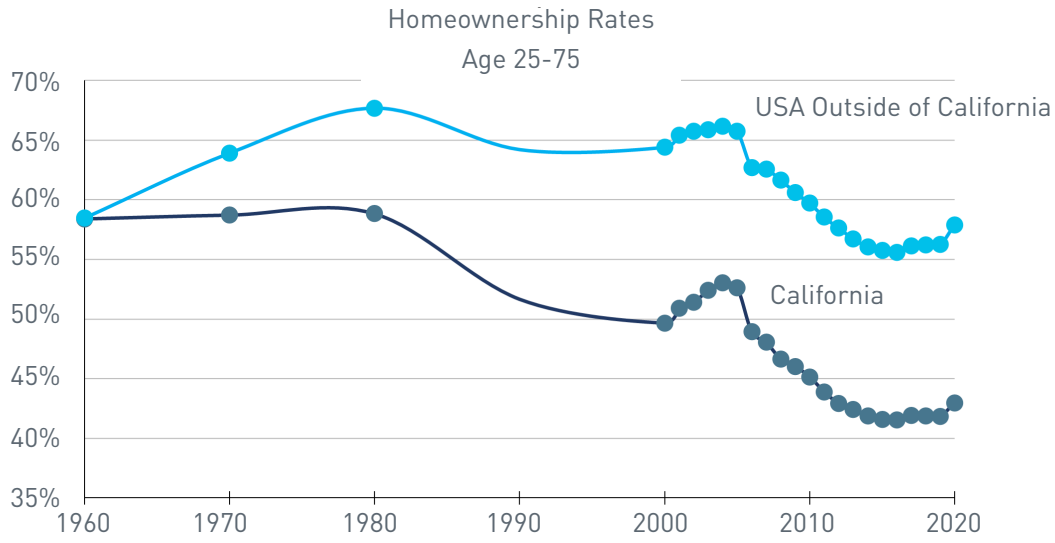
The homeownership rate in California has diverged significantly from that of the rest of the United States since the 1960s; the gap is now larger than any point in recorded history.

Prior to 1960, homeownership rates in California were similar to those in the rest of the country (Figure 2). The growing divergence between California and the rest of the nation is often attributed to the tightening of zoning laws in the 1960s and 1970s, which limited supply even as the state's population grew.[12] The gap has continued to grow: in 2021, California's homeownership rate was just 44.7 percent, which is 14.8 percentage points lower than that of the United States as a whole and the largest the gap has ever been.

The greatest declines in homeownership have been among people between the ages of 25 and 45.

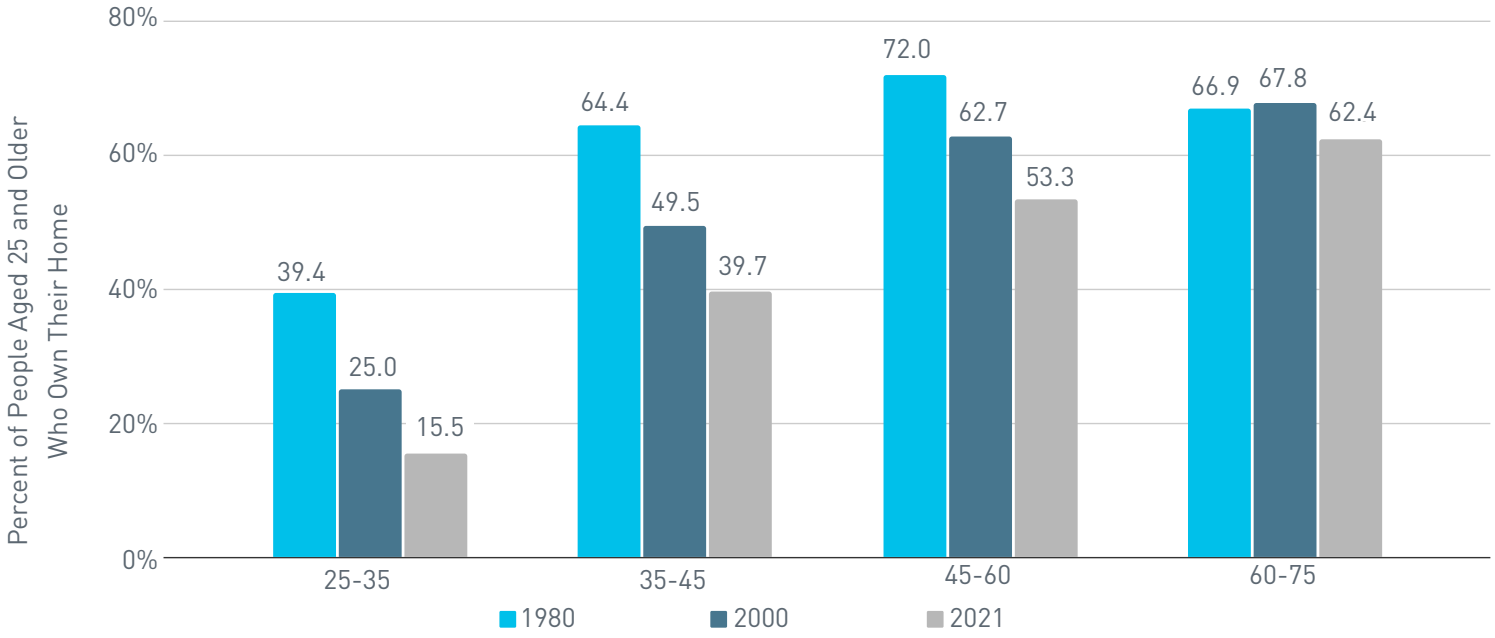
Although homeownership rates have declined for all groups, the most pronounced declines in the ability to climb the first rung of the ladder have been for those between the ages of 25 and 45 (Figure 3). Between 1980 and 2020, the share of 25–35-year-olds who owned their home declined from 39.4 to just 15.5 percent. Among 35–45-year-olds, the share who owned their home dropped from 64.4 to 39.7 percent. That equates to roughly 1,338,510 fewer homeowners aged 35–45 in California due to lower homeownership rates.

Figure 2: Trends in Homeownership Over Time in California



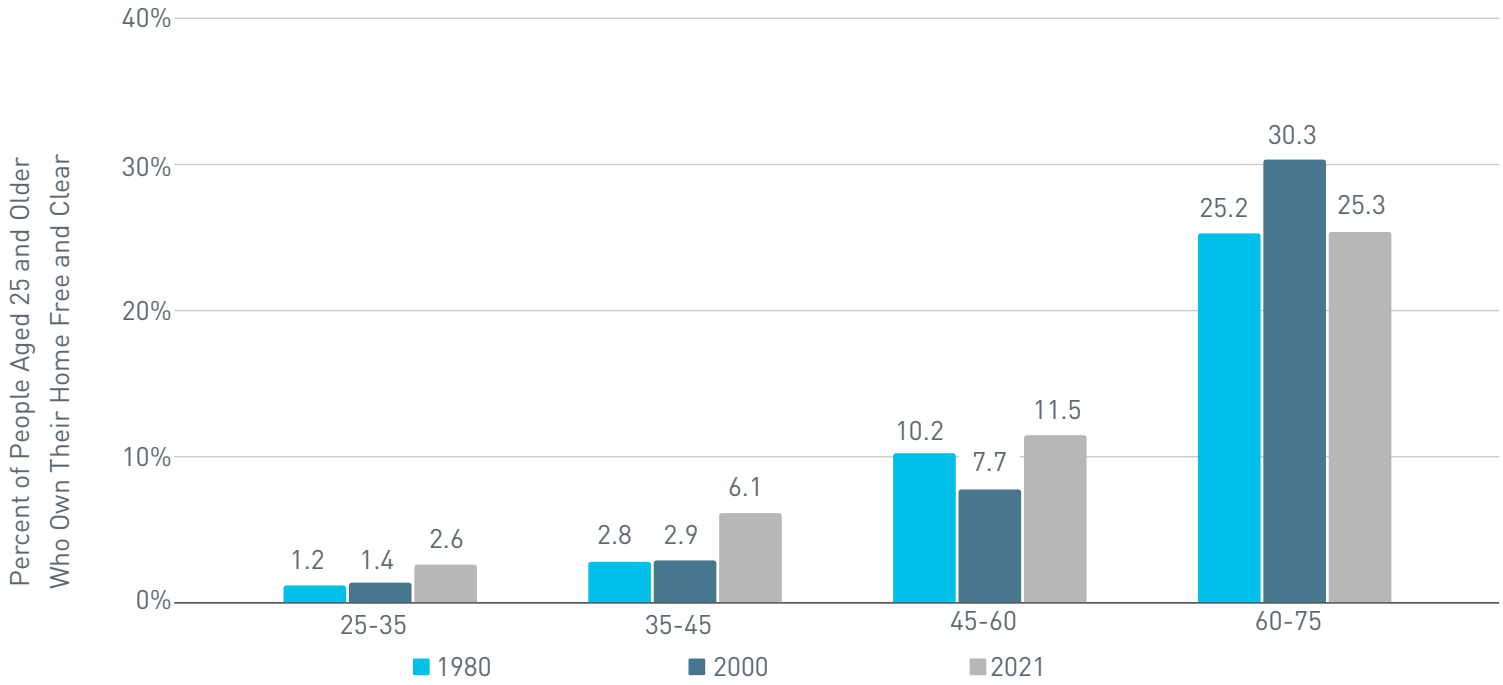
Source: Historical homeownership rates calculated from Census and American Community Survey data.

Figure 3: Changes in the Homeownership Rate Over Time in California by Age



Notes: These figures use data from the 1980 and 2000 Census, and the 2021 American Community Survey for California. Homeownership is defined as reporting that the primary residence is owned by either the respondent or their spouse.

Figure 4: Changes in the Free-and-Clear Homeownership Rate Over Time in California by Age



Notes: These figures use data from the 1980 and 2000 Census, and the 2021 American Community Survey for California. Free-and-clear homeownership is defined as reporting that the primary residence is owned by either the respondent or their spouse without a mortgage.

For adults aged 60 to 75 the ability to pay off their mortgage in full is also eroding.

In general, people only pay off their mortgage in full as they get older. As shown in Figure 4, a quarter of 60–75 year olds own their homes free and clear, compared to just 11.5 percent of 45–60 year olds, 6.1 percent for 35–45 year olds, and just 2.6 percent for 25–35 year olds. However, for people older than 65, the share that has paid off their mortgage has dropped since 2000, from 30.3 to 25.3 percent. For younger age groups, the share who own their home free and clear has actually increased over time. While this dynamic may seem counterintuitive, there may be several explanations for this uptick, including an abundance of inherited housing which is incentivized by various state and federal tax policies, rising income inequality and increased wealth for a small share of younger workers (e.g., in the tech industry), as well as multigenerational households in which the oldest generation who bought the home may no longer be identified as the householder or spouse.[13,14]

Homeownership now comes much later in life in California than for households in other parts of the country.

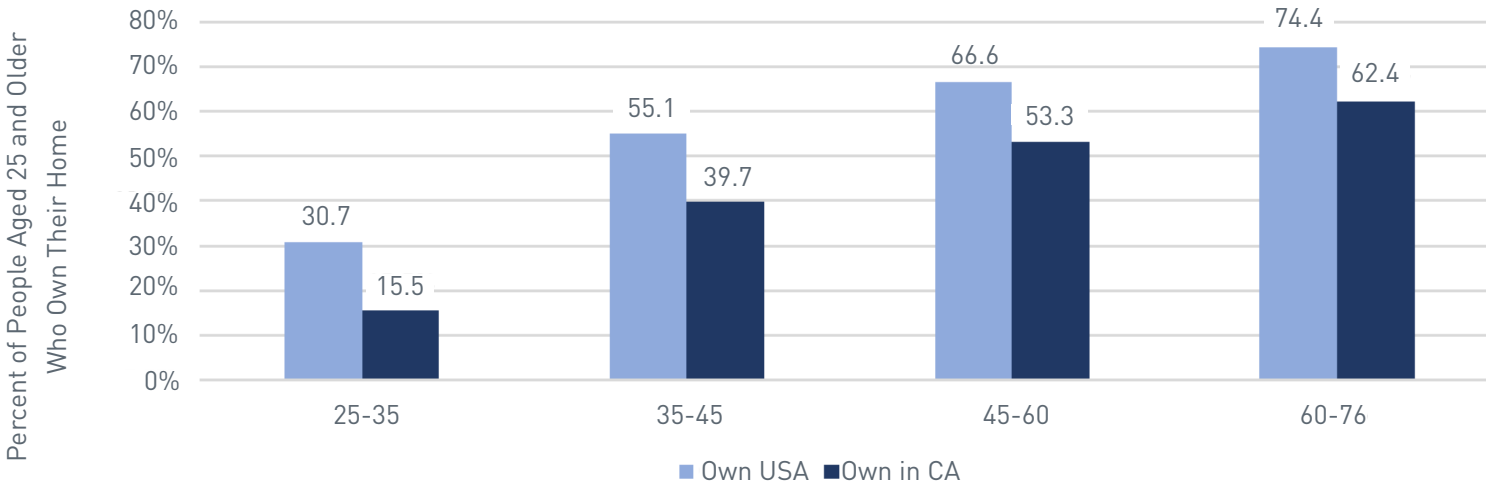
Californians are less likely than residents of other states to own their homes across all ages. The difference is particularly stark for those between the ages of 25 and 35, where homeownership rates in California are only half the rate for those outside the state. Gaps in free and clear ownership are also wide (Figure 5). In California, only 25.3 percent of homeowners between the ages of 60 and 75 own their home outright, compared to 39.5 percent in other states.

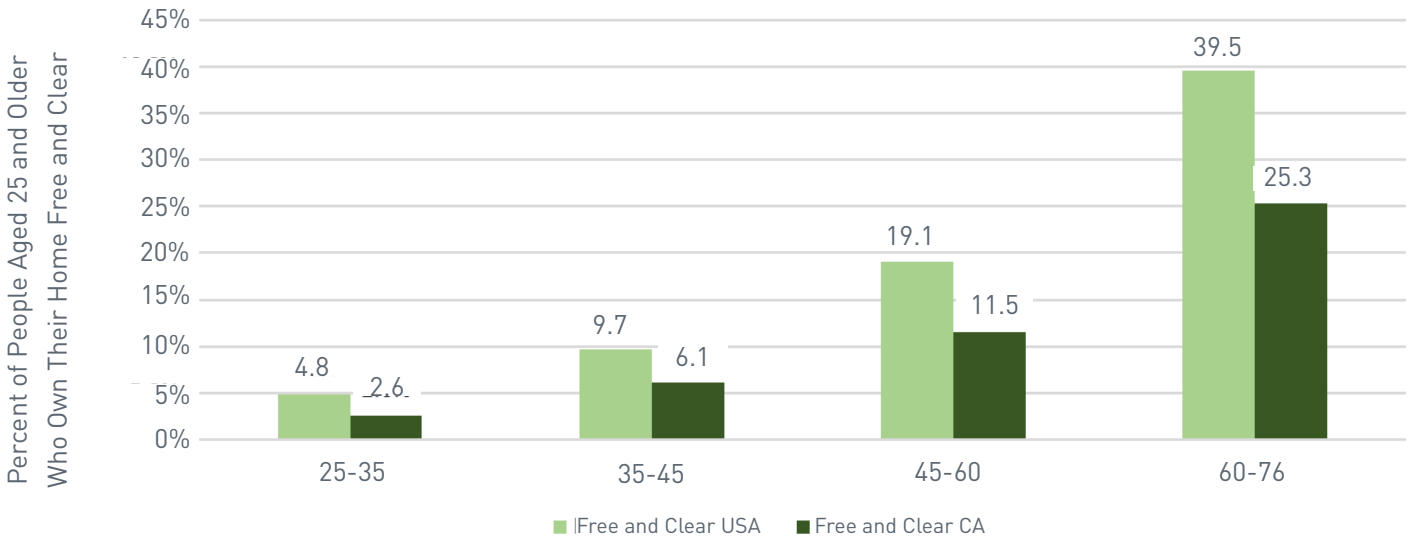
In California, the "age of prevalence"—the age at which more than half of the residents are homeowners—is 49. This age of prevalence is the highest of any state and it is 17 years higher than it was in 1980 (Figure 6). By comparison, the age of prevalence for homeownership in Illinois in 2021 was 35, only 5 years higher than it was in 1980. Across most of the United States, the age of prevalence is much closer to 35 than it is to 50, with implications for both wealth building (due to both the forced savings mechanism and the gradual pay down of mortgage principal as well as the potential for longer-term price appreciation) and the ability to pay off the mortgage. Not surprisingly then, Californians are also more likely to be older than people in other states when they are able to own their home free and clear.

These differences are not just limited to the state's expensive coastal regions.

Some of the lowest rates of homeownership in California are in the state's expensive coastal areas. In Los Angeles County, for instance, the 2021 homeownership rate in the 35–45 age group was 31.5 percent, which is less than two-thirds of the national average (55.1 percent). However, even in the less expensive areas of the Central Valley and Inland Empire, adults are significantly less likely to move up the homeownership ladder than the national average. In the San Joaquin Valley, for example, the homeownership rate for 35–45-year-olds was just 40 percent.

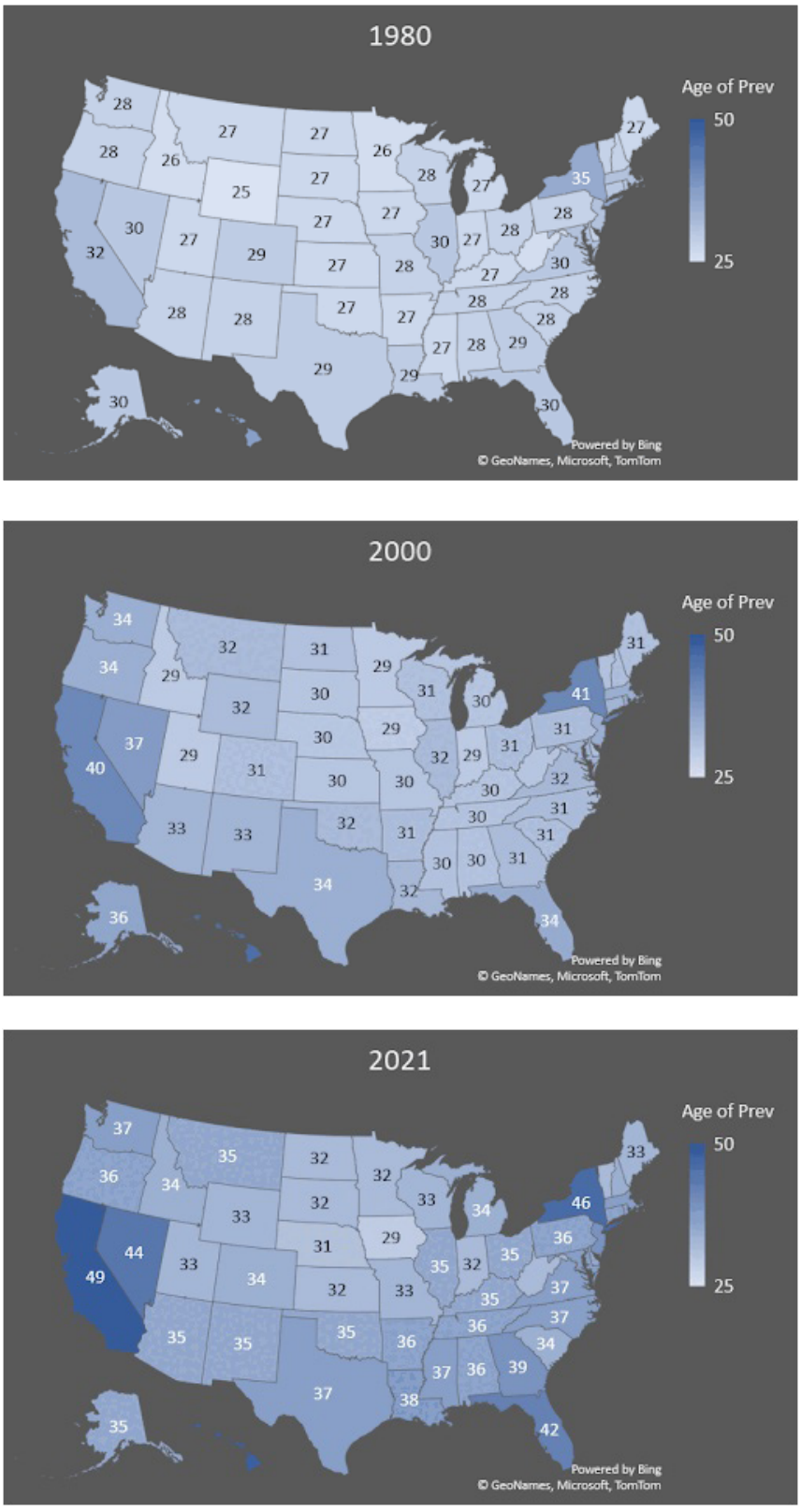
Figure 5: The Homeownership Ladder (Homeownership and Free-and-Clear Homeownership) in California Relative to the Rest of the Country





Notes: These figures use data from the 2021 American Community Survey for California. Homeownership is defined as reporting that the primary residence is owned by either the respondent or their spouse.

Figure 6: Age of Prevalence for Homeownership Across the U.S.



Notes: These figures use data from the 1980 and 2000 Census and 2021 American Community Survey for California. Homeownership is defined as reporting that the primary residence is owned by either the respondent or their spouse.

The decline in homeownership rates over the last 40 years are especially pronounced for Black and Hispanic people, especially at younger ages.

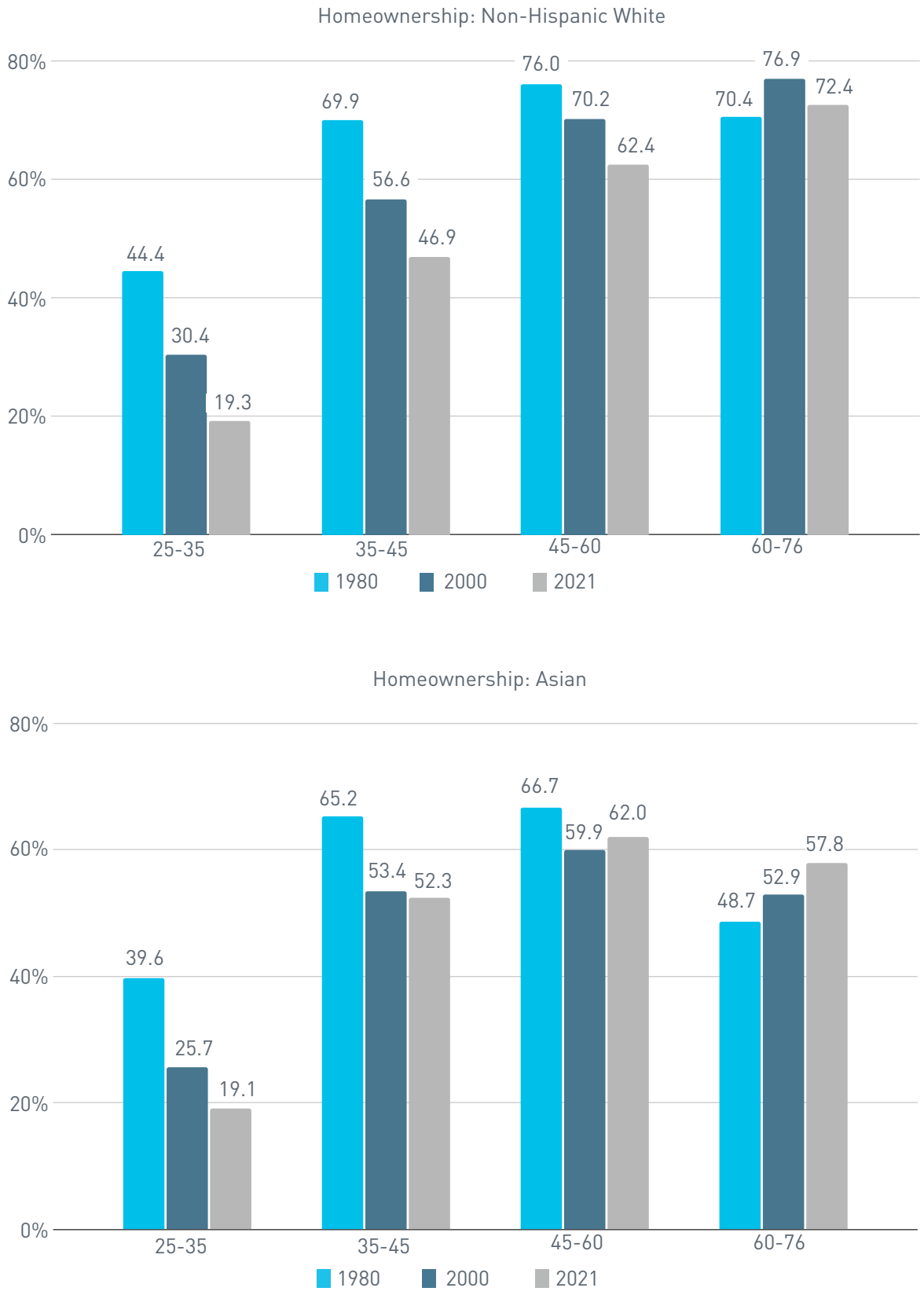
Taking the first step up the homeownership ladder in California has become increasingly difficult for all racial and ethnic groups. For some groups, such as Black and Hispanic/Latine people, the drop in homeownership since 1980 is particularly pronounced, compounding the challenges historically facing these groups from a legacy of systemically discriminatory policies, such as redlining, exclusionary zoning, and a lack of access to financing. For example, the homeownership rate for Black 35–45-year-olds fell from nearly 50 percent in 1980 to just under 23 percent in 2021. Among Hispanic Californians, adults between the ages of 25 and 45 have also seen dramatic declines. Conversely, the share of White people over the age of 60 who own their home has not changed substantially since 1980 (Figure 7). For Asian residents, rates of homeownership have been largely flat or have increased slightly since 2000. Older Asian and Hispanic adults (60–76 years of age) both saw a small uptick in homeownership over time.[15]

Homeownership declined for those with and without a college degree, and irrespective of marriage and childbearing.

Changes in homeownership rates in California may reflect the influence of greater college attendance rather than changes in affordability. For instance, if more people are choosing to go to college, they may be delaying homeownership by choice. To investigate this possibility, we breakout the homeownership ladder for those with and without a college education (Figure 8). In California, college graduates are more likely to own a home than non-college graduates at all ages 25+ in both 2000 and 2021. While the declines are steeper for Californians without a degree, both groups experienced a decline in homeownership rates.

Similarly, changes in homeownership rates in California may reflect the influence of family structure, e.g. decisions around marriage and childbearing. Figure 9 shows that the decline in ownership is common across married households and unmarried households, and for households with and without children. While there are stark differences in the levels across these groups, all of them have seen delays in the transition to homeownership in California. Particularly notable is the drop in the homeownership rate for people aged 35–45 with children. Historically, this demographic group has shown a strong desire and propensity to buy a home, yet the homeownership rate among this group has declined from 74.9 to 49.9 percent over the last 40 years.

Figure 7: Homeownership Ladder in California by Race and Ethnicity



Notes: These figures use data from the 1980, 2000 Census and the 2021 American Community Survey for California. Homeownership is defined as reporting that the primary residence is owned by either the respondent or their spouse. Hispanic ancestry is not excluded for categories other than White.

Figure 7 (Continued): Homeownership Ladder in California by Race and Ethnicity

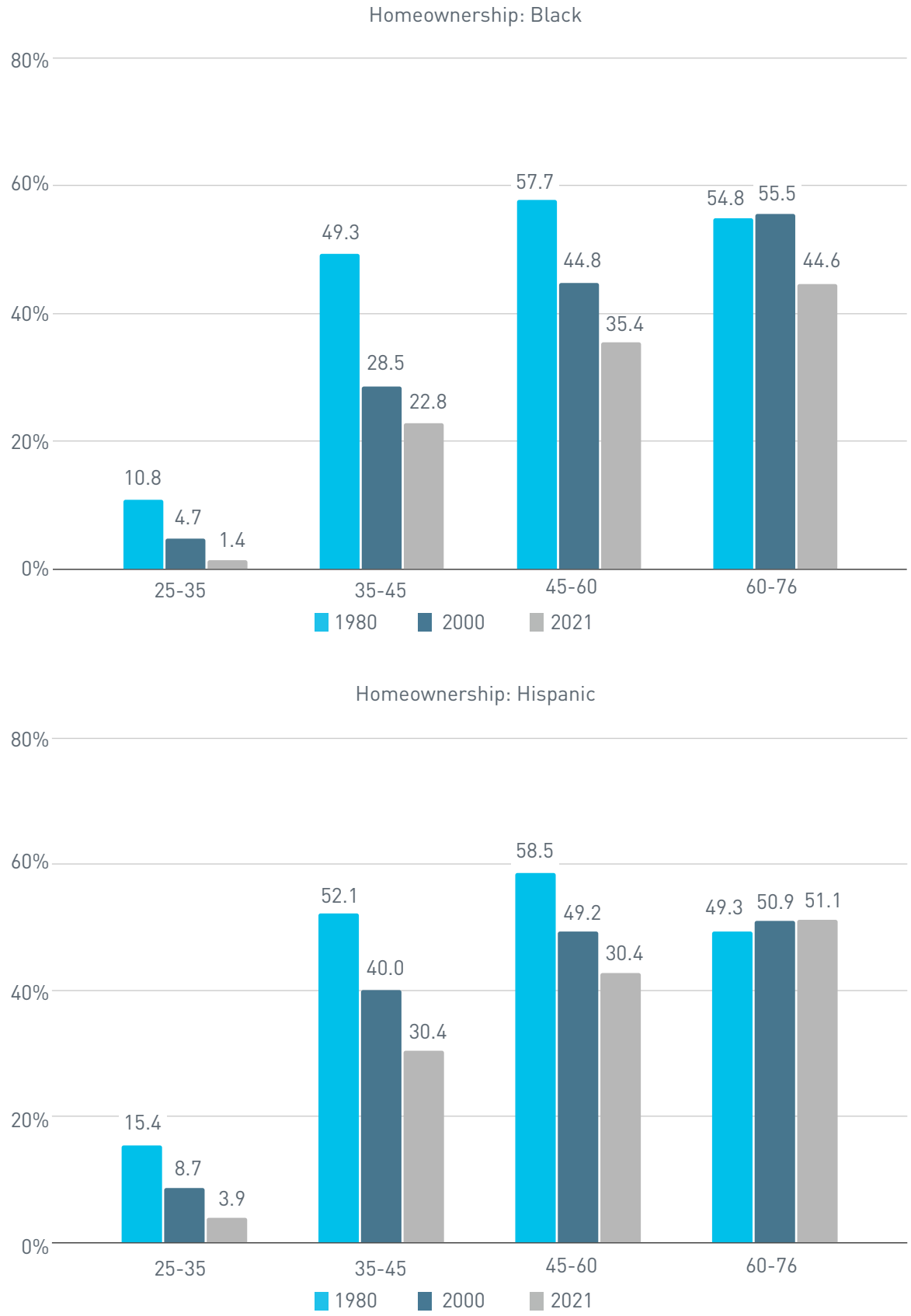


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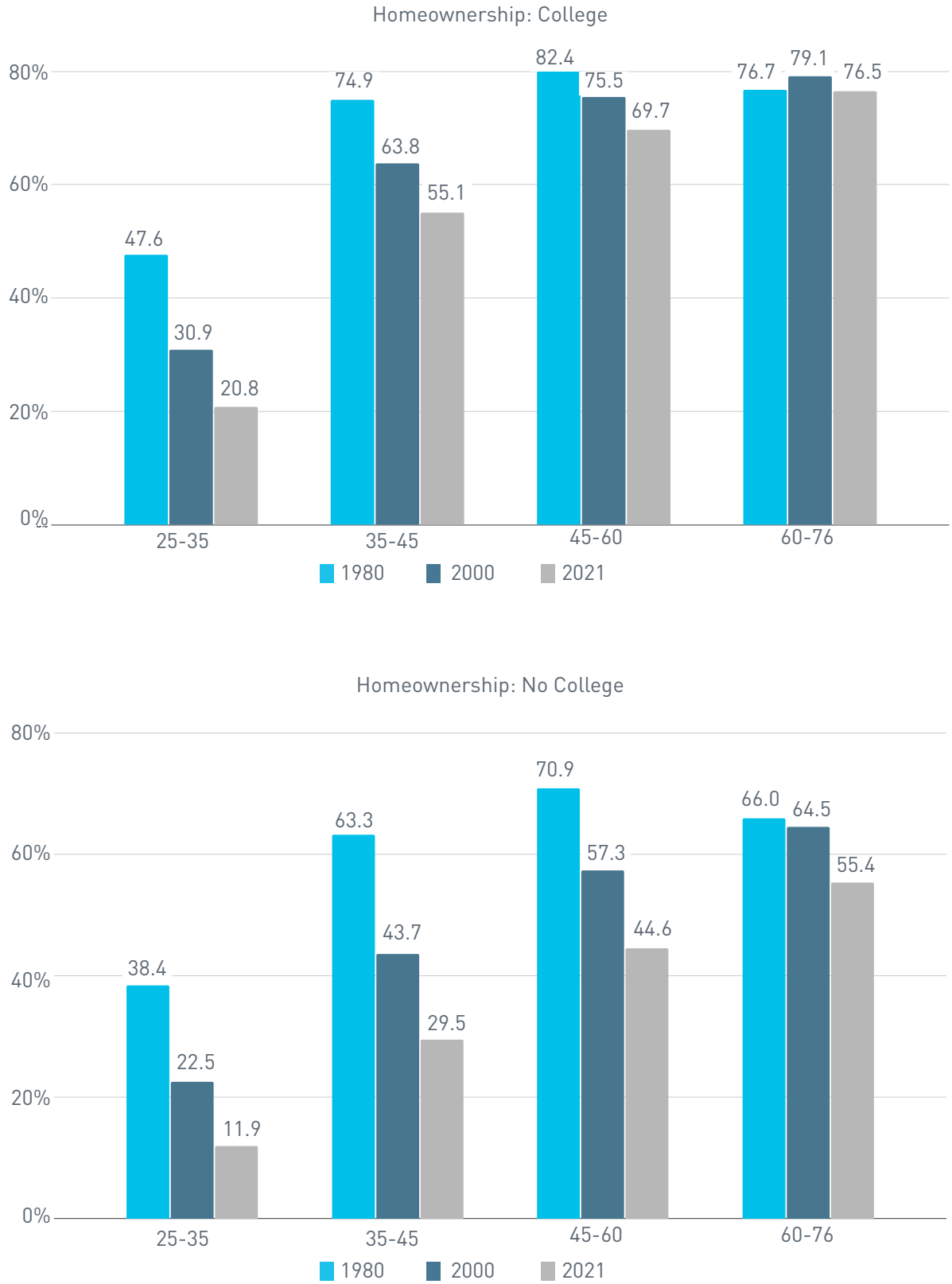
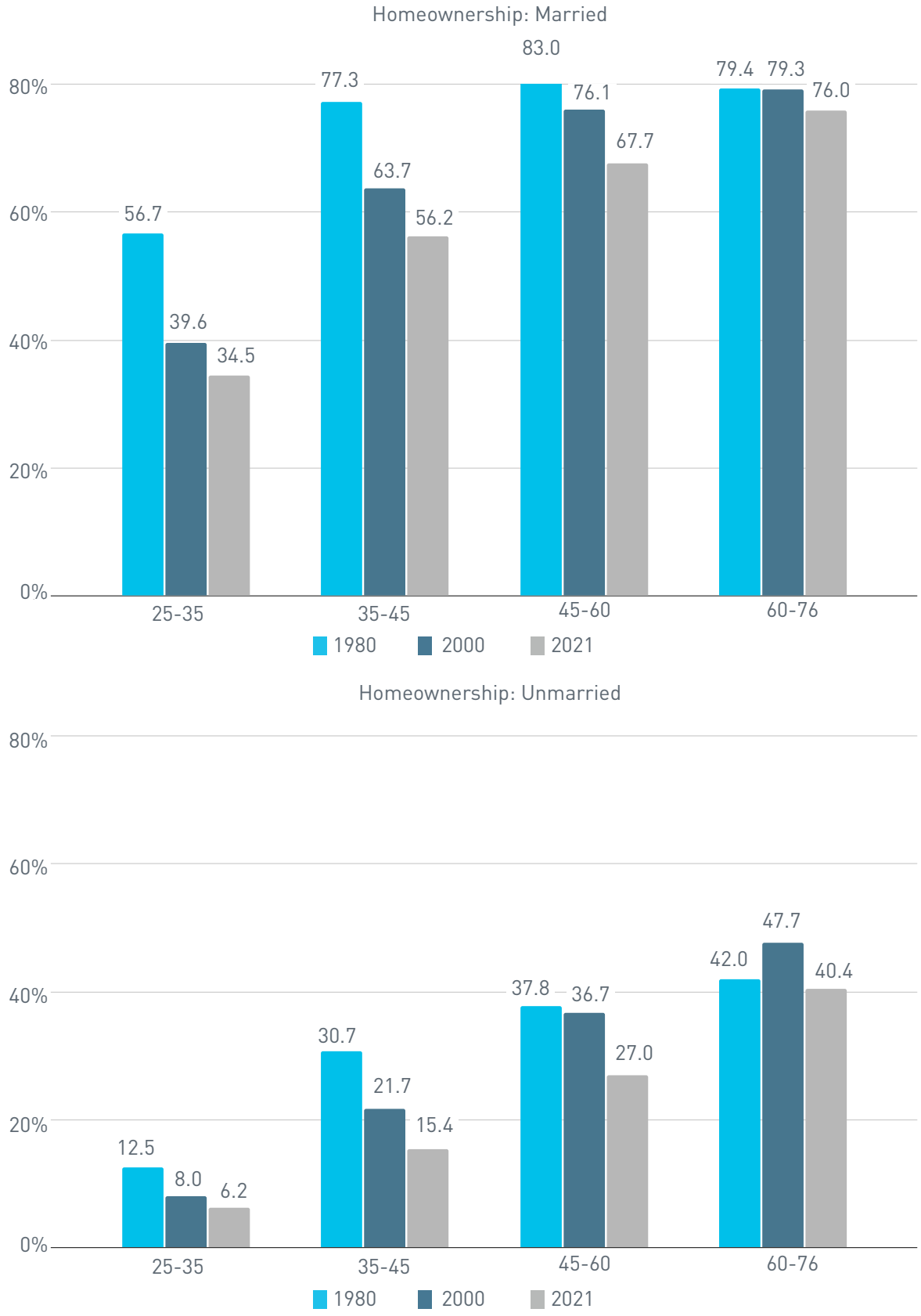
Figure 8: Homeownership Ladder in California by Education



Notes: These figures use data from the 1980, 2000 Census and the 2021 American Community Survey for California. Homeownership is defined as reporting that the primary residence is owned by either the respondent or their spouse.

Figure 9: Homeownership Ladder in California by Family Structure



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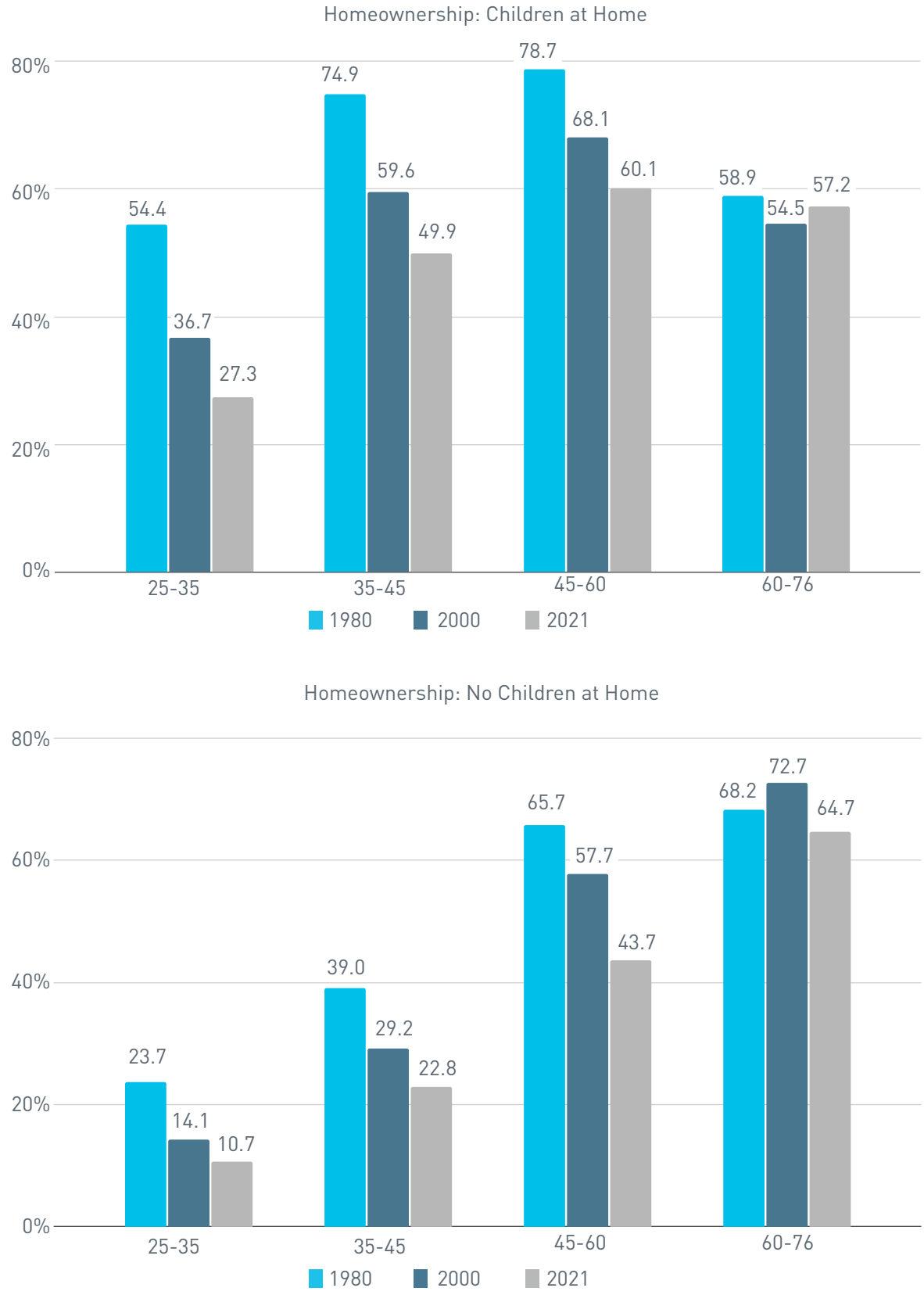


Notes: These figures use data from the 1980 and 2000 Census and the 2021 American Community Survey for California. Homeownership is defined as reporting that the primary residence is owned by either the respondent or their spouse.

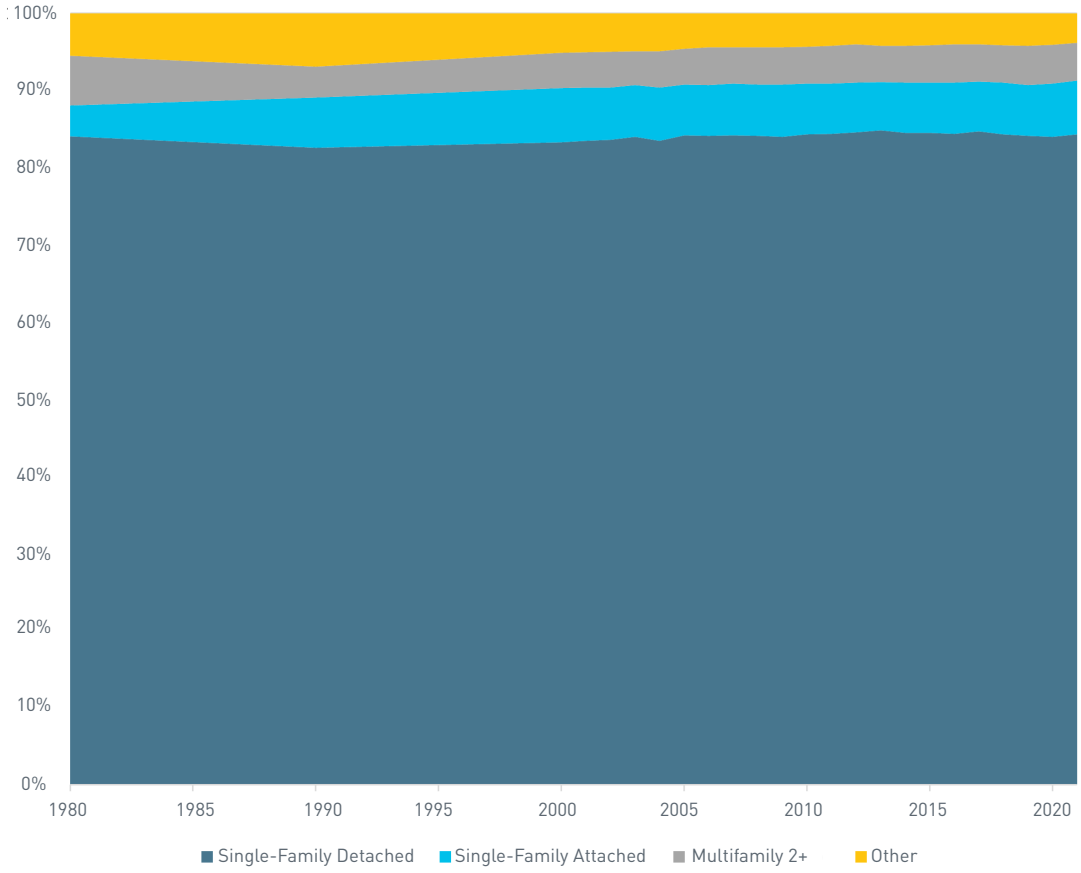
The pool of owner-occupied housing remains firmly centered on detached single-family homes.

From 1980 to 2021, the share of owner-occupied units in the state consisting of detached single-family homes remained almost unchanged in a narrow band between 82 and 85 percent (Figure 10). The remainder of owner-occupied units consist of roughly similar shares of attached single-family homes, multifamily units from duplexes and up, and a residual category that includes mobile homes, as well as boats and RVs. Thus, any changes over time in the mix of new units being built in the state has almost exclusively influenced the rental sector.

The Role of House Prices

The uniformity of the decline in homeownership across groups suggests that the erosion of progress up the housing ladder is not purely a demographic story, e.g. one in which independent delays in life cycle milestones such as marriage and childbearing may be influencing Californian's progress up the homeownership ladder. Making the claim that rising housing costs are causing the decline in progress up the homeownership ladder is challenging, since there are likely many interrelated factors at work. For example, high-skilled job growth in a region can drive up housing prices while also attracting individuals who are

Figure 10: Share of Owner-Occupied Housing by Structure Type



Notes: These figures use data from the 1980, 1990 and 2000 Census and subsequent editions of the American Community Survey for California. They reflect the structure types reported by owner-occupant heads of household and their spouses age 25 and older.

likely to have been in school longer and to marry and have children later, with implications for homeownership that go beyond those of affordability alone.

In this study, we perform a series of empirical analyses that lend support to a causal argument for the role of house prices in driving these declines and that provide estimates of the decline in homeownership that would have taken place in counterfactual scenarios. In this section, we present the highlights from those analyses, showing that California's exceptional housing price appreciation has been a key driver of people's inability to move up the homeownership ladder. A full rendition of the analyses is provided in Appendix A.

A key question to answer is: how many Californians would be homeowners today if housing prices had grown less rapidly in recent decades? The answer to that question is a useful guide for policymakers concerned about the stalled progress of residents in going up the homeownership ladder. One potential way to answer that question would be to take the relationship between housing prices and homeownership observed in reality, and use it to estimate homeownership rates under counterfactual scenarios in which housing prices had grown less rapidly. Unfortunately, while the observed relationship suggests a strong role for housing prices in driving the decline in homeownership, it does not isolate a causal effect. Homeownership may be lower in high-priced areas, but that may be due to economic and cultural factors that impact both prices and ownership independently (creating a correlation that does not reflect causation).

Therefore, rather than relying on a potentially non-causal correlation for our estimates, we model the impact of counterfactual prices on current Californians' ability to afford a home. In other words, we focus not on the choice to buy a home but on the financial ability to do so.

We focus on affordability and not ownership itself for two important reasons. First, housing prices impact ownership in a myriad of complicated indirect ways that no simple model can hope to capture well. Relative to ownership itself, the ability to afford a home is straightforward. In a counterfactual world where prices are lower, we can directly compute how many additional Californians would be in a position to purchase a home.[16] Second, the ability to afford a home is of interest to policymakers in its own right. While research shows that homeownership is beneficial, the great concern is not that Californians are not choosing to purchase homes but that they cannot afford to do so.

To estimate what share of households cannot financially reach the next rung of the ladder, we calculate a ratio of household net worth to average house prices. This ratio allows us to assess how much wealth is typically required to buy a home or to own one free and clear. We begin by calculating the typical net-worth-to-housing-price ratios of those observed buying homes or transitioning to free and clear homeownership in reality. We then use those cutoffs to classify what percentage of people have a net worth that would, given those cutoffs, allow them to (a) own a home and (b) own a home outright.

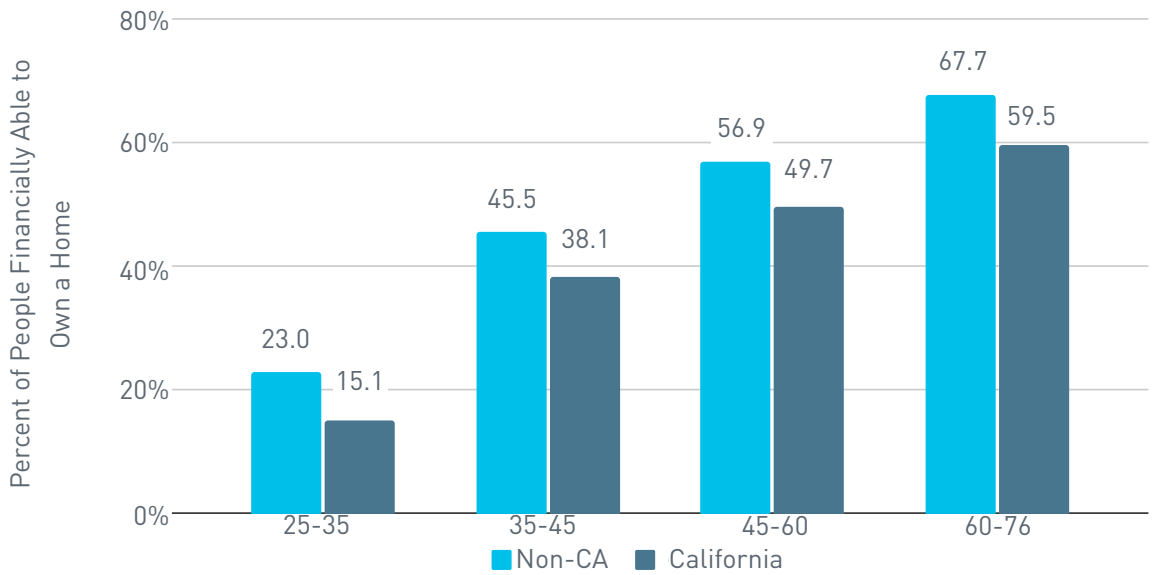
We find that, on average, households that transition from renting to owning do so when their net worth is 40 percent of average home values, and they tend to achieve free and clear status when their net worth is more than 160 percent of average home values. In the remainder of this analysis, we use these two thresholds to examine the ability to afford housing. We present alternative thresholds for comparison in Appendix A.

Compared to households in other states, fewer Californians at every stage of life are financially able to afford a home.

In Figure 11, we show that fewer Californians at every stage of life are financially able to afford a home or to own one without a mortgage despite Californians being richer than average. In 2019, the median Californian had a net wealth nearly 70 percent higher than the national median ($200,300 vs. $118,200). Despite this, when wealth is compared to housing prices, Californians are less capable of affording to purchase a home or pay off a mortgage.

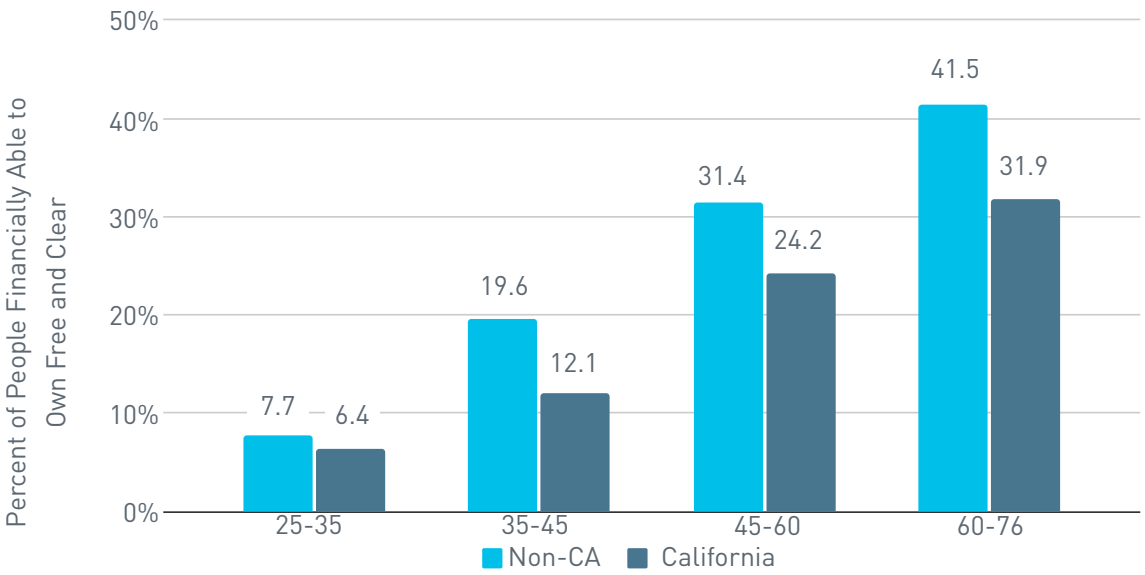
This affordability gap corresponds to a substantial share of the homeownership gap between California and the rest of the country (Table 1). For example, between the ages of 35 and 45, there is a 7.4 percentage point difference between California and the rest of the country in the share of people who can afford a home. The difference in homeownership rates between California and the rest of the country for this age group is 15.3 percentage points. This means that the difference in affordability accounts for nearly 50 percent of the difference (7.4 percentage points out of 15.3 percentage points). In the other age groups, the affordability gap corresponds to an even greater share of the homeownership gap.

Figure 11: Housing Ladder in California by Financial Affordability



Notes: These figures use data from the 2021 Survey of Income and Program Participation. The ability to own a home and to own it free and clear refers to a net-worth-to-housing-price ratio exceeding the empirically-derived thresholds of 40 and 160 percent, respectively.[17]

Figure 11 (Continued: Housing Ladder in California by Financial Affordability



Notes: These figures use data from the 2021 Survey of Income and Program Participation. The ability to own a home and to own it free and clear refers to a net-worth-to-housing-price ratio exceeding the empirically-derived thresholds of 40 and 160 percent, respectively.[17]

What if housing prices in California had not risen as rapidly as they did in recent decades? In Table 2, we consider three counterfactual scenarios, and estimate the impact of those scenarios on homeownership:[18]

- In the first scenario, we consider how many additional Californians would be in a financial position to afford a home had average housing prices in California risen in proportion to incomes from 2000 to 2021, rather than at the faster rate actually observed.
- In the second scenario, we assess this number assuming that average housing prices in California rose from 2000 to 2021 at the same rate as the rest of the United States.
- In the third scenario, we examine the difference in rates if prices in California had remained at their 2000 levels adjusted for inflation.[19]

The table reports what share of the observed 6.3 percentage point decline in homeownership in California from 2000 to 2021 (see Figure 2) would have been undone in each counterfactual.

From 2000 to 2021, California housing prices grew more quickly than the incomes of the state's residents.[20] Had housing prices grown only in proportion to the incomes of residents during that period, then 43 percent of the decline in Californian's homeownership would have been avoided. As a result, an additional 637,000 present-day Californians could afford to buy a home in this scenario.

Similarly, had housing prices in California risen from 2000 to 2021 at the same pace as they did in the rest of the U.S., 48 percent of the decline in the state's individual homeownership rate would have been avoided, allowing over 735,000 additional present-day Californians to afford a home.

Table 1: Impact of Housing Affordability on Homeownership Rate

Age Range (Share of Population 25–75)	Difference in Homeownership Rate in CA Compared to U.S.	Difference in Homeownership Affordability in CA Compared to U.S.	Percent of the Difference in Homeownership Rate Explained by Affordability Constraints
25–35 (24.4%)	-15.1%	-7.9%	52.3%
35–45 (22.6%)	-15.3%	-7.4%	48.4%
45–60 (30.1%)	-13.3%	-7.2%	54.1%
60–75 (23.0%)	-12.0%	-8.2%	68.3%
Weighted Average	-13.9%	-7.6%	55.6%

Notes: These figures use data from the 2021 Survey of Income and Program Participation, coupled with population shares from the 2021 American Community Survey (shares add up to slightly more than 100 percent due to rounding). The weighted average row weights the rows by California's population in each age bracket, not the US population.

Table 2: Alternative Affordability Scenarios and Their Impact on Homeownership Transitions

Scenario	Percent of the Decline in Ownership from 2000–2021 Potentially Avoided	Impact on Number of Californians Who Could Afford to Buy a Home
House Prices Rose Proportionately with Incomes	43%	637,378
House Prices Rose Proportionately with those in the Rest of the U.S.	48%	735,436
House Prices Rose Proportionately with Inflation	>100%	1,863,106

Finally, had housing prices in the state risen at the same pace as inflation (net of shelter), the entire decline in homeownership in the state would have been avoided, and more than 1.86 million of its current residents would be able to afford a home in the state.

Conclusion

Homeownership is an important milestone for most Americans, and not just because it generally provides financial stability and security. Owning a home can give people a sense of pride and accomplishment as well as a sense of belonging and community. From a financial perspective, home equity remains the largest asset of most households and can help to build inter-generational wealth.

The rate of progression up the homeownership ladder in California, though, is rapidly declining. Rates of homeownership for those between the ages of 35 and 45—the time when most people living in other parts of the country have shifted into homeownership—are considerably lower than where they were a few decades ago. The evidence in this report shows that housing prices are a key driver of this trend: much of the deterioration in homeownership is due to Californians being unable to afford to buy a home. Indeed, financial constraints on the ability to afford a house in California can help to explain a significant share of the decline in homeownership across the state, especially among younger households, as well as the ability of older households to achieve free-and-clear ownership before retirement.

Expanding access to homeownership will require a multi-pronged strategy, including increasing the overall supply of homes. Reform efforts in California in recent years have focused on increasing the inventory of residentially-zoned land and creating more pathways for zoning compliant projects to be expeditiously approved. However, progress on underlying cost drivers constraining feasibility—including labor, materials, impact fees, and increasing residential building code requirements—remain largely unaddressed. Further complicating matters, new housing is often subject to costly requirements for improving adjacent infrastructure and upgrading utilities. And proposed projects can be subject to long and uncertain legal challenges through the California Environmental Quality Act. The cost to build for-sale homes, in particular, has historically been hindered by California's relatively strict construction defect liability laws which can require builders to purchase costly insurance to protect against future litigation.

The California legislature's interest in spurring an increase in homeownership supply was recently evidenced by Senate Bill 9, a 2022 law that allows homeowners to build for-sale homes by splitting their lot and/or converting homes into for-sale duplexes. By removing restrictions on the creation of homeownership development in existing neighborhoods that may otherwise be largely built out, this option could catalyze the creation of more "missing middle" for-sale housing—housing that is smaller in size and located in neighborhoods without comparable entry level housing. More recently, Assembly Bill 1033 (Ting) has been proposed to enable accessory dwelling units to be conveyed as condos, a practice similar to policy in other states such as Oregon,[21] Washington,[22] and New Jersey. More must be done to ensure that these policies result in meaningful amounts of new housing.

The state is also exploring options for increasing homebuyer assistance programs. While these programs do not tackle the underlying cost and supply issues, they can be a critically important part of the solution, particularly when directed at Black, Indigenous, Hispanic/Latine, and Asian households that have historically been excluded from homeownership opportunities. For example, state legislators recently authorized $500 million to California's state housing finance agency (CalHFA) to fund and test a new shared equity program. Owners using this program—dubbed the California Dream for All—would be able to access an equity investment from the state of up to 20 percent of the home's value, thus reducing the mortgage amount. The homeowner would be obligated to repay the state's investment plus its pro-rata share of appreciated equity at resale or refinance. This first iteration of this program garnered significant interest—applications were paused after just eleven days. However, there have been some concerns that the program's support may not be sufficiently targeted to buyers who would benefit the most.[23] When Dream for All participants begin to close on their loans and data on program production becomes available, there should be an evaluation of outcomes, with specific attention to assessing how the program has served historically disadvantaged buyers. The shared equity approach has also been implemented at the local level, with varying degrees of success. The city of San Francisco's inclusionary housing shared equity homeownership program is an example of a proven model which could be explored by other localities.[24]

A variety of policy interventions are needed to bring California's homeownership rate more in line with that of the nation as a whole. California is likely to see greater wealth disparities, diminished economic mobility, and out migration across all groups as more residents who aspire to own a home continue to be shut out, while those that do manage to own, face longer roads to owning free and clear.

Endnotes

1 Schmidt, G. “Homeownership Remains the American Dream, Despite Challenges.” The New York Times. Retrieved from: https://www.nytimes.com/2022/06/02/realestate/homeownership-affordability-survey.html.

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6 Bostic, R. W., and Lee, K. O. (2008). “Mortgages, Risk, and Homeownership among Low- and Moderate-Income Families.” American Economic Review 98, no. 2: 310–14. https://doi.org/10.1257/aer.98.2.310; Newman, S. J., & Holupka, C. S. (2015). “Is Timing Everything? Race, Homeownership and Net Worth in the Tumultuous 2000s.” Real Estate Economics, https://doi.org/10.1111/1540-6229.12118.

7 Lusardi, A., Mitchell, O. S., & Oggero, N. (2020). “Debt and Financial Vulnerability on the Verge of Retirement.” Journal of Money, Credit and Banking 52.5: 1005–1034.

8 Mayer, C. (2017). Housing, Mortgages, and Retirement. In L. Fennell & B. Keys (Eds.), Evidence and Innovation in Housing Law and Policy (pp. 203–230). Cambridge: Cambridge University Press.

9 The ACS specifically asks about the respondent’s residence (for more than 2 months). Therefore, it is possible that some respondents may live in a non-owned home while owning another property. For the purpose of this exercise, we nevertheless consider them non-owners. Similarly, people may live in an owned home that they themselves do not own. For example, an adult child may live with their parents in a home their parents own.

10 We also exclude those living in group quarters. To the extent that incarceration has increased over time and largely affected those who would otherwise rent, our results will then likely understate the decline in those living in owned homes. There does not appear to be a large difference in the fraction of the California sample living in traditional households in California in the 2000 Census (97 percent) relative to the 2021 ACS (97.7 percent), and a small decline relative to the 2001 ACS (99.8 percent).

11 Halket, J. & Vasudev, S. (2014). "Saving up or settling down: Home ownership over the life cycle." Review of Economic Dynamics 17.2: 345-366.

12 Morrow, G. D. (2013). "The Homeowner Revolution: Democracy, Land Use and the Los Angeles Slow-Growth Movement, 1965-1992." Dissertation, UCLA.. Retrieved from: https://escholarship.org/uc/item/6k64g20f.

13 California's Proposition 13 and its later extensions that enable the benefits to be maintained by one's children create a disincentive for selling homes that can expand the pool of inherited housing. California home prices are also sufficiently elevated that capital gains on homes often exceed the federal capital gains tax exemption cap on owner-occupied housing. Because the basis for capital gains is stepped up when a home is inherited, a similar incentive is created for keeping homes in the family.

14 The uptick in free-and-clear homeownership in the younger age brackets could also reflect disproportionate growth at the high end of the income and/or wealth distribution (closely related to growing inequality), as well as good old-fashioned statistical noise.

15 This may reflect changing likelihoods to live with family or composition effects within these categories. A senior living in a home owned by their children is not a homeowner by our definition. If, historically, more Asian and Hispanic Californians aged 60+ used to live with their children than their counterparts today, that change over time would cause the observed homeownership rate for 60+ year-old Asian and Hispanic residents to rise over time. Similarly, changes in sorting on skills or income may also play a large role. While there are exceptions, homeownership is declining or relatively stable for the majority of demographic groups.

16 We also assume Californians' net wealth is unchanged. More details on these calculations and the assumptions involved are discussed below and in the appendix.

17 These ratios represent the average net-wealth-to-housing-price ratios for individuals in the SIPP transitioning from non-owners to owners and from owners with a mortgage to free-and-clear owners respectively.

18 Those estimates are subject to simplifying assumptions. A full rendition of the underlying calculations and their limitations is provided in Appendix A, and in particular in Appendix Endnote 9.

19 We do this using the CPI for all Item Less Shelter series (CUUR0000SA0L2).

20 Income growth in the state does not only consist of growth in incumbent residents' incomes. It is also driven by in- and out-migration of residents with various income levels. At least in California's large coastal metros, domestic in-migrants have tended to have higher incomes than domestic out-migrants. See: Romem, I. & Kneebone, E. (2018). "Disparity in Departure: Who Leaves the Bay Area and Where Do They Go?" Terner Center for Housing Innovation at UC Berkeley. Retrieved from: https://ternercenter.berkeley.edu/research-and-policy/disparity-in-departure/; Kneebone, E. & Romem, I. (2018). "Disparity in Departure: Los Angeles Region Supplement." Terner Center for Housing Innovation at UC Berkeley. Retrieved from: https://ternercenter.berkeley.edu/research-and-policy/summary-disparity-in-departure/.

21 Eastman, J. (2021). “Put a spare home or two in your backyard: Oregon’s ADU rules allow for more income-producing rentals.” The Oregonian. Retrieved from: https://www.oregonlive.com/hg/2021/09/put-a-spare-home-or-two-in-your-backyard-oregons-adu-rules-allow-for-more-income-producing-rentals.html.

22 Beekman, D. (2023). “Seattle is now building more ADUs than single houses.” The Seattle Times. Retrieved from: https://www.seattletimes.com/seattle-news/politics/seattle-is-now-building-more-adus-than-single-houses/.

23 Lazo, A. & Christopher, B. (2023). “California approved $300 million in state-backed home loans. Who got the money?” CalMatters. Retrieved from: https://calmatters.org/housing/2023/04/california-first-time-homebuyer-assistance-demographics/.

24 Reid, C. & Wilcox, W. (2020). “Creating Equity and Stability for Lower-Income San Franciscans Through Homeownership.” Fannie Mae. Retrieved from: https://www.fanniemae.com/media/33451/display.

Appendix A: Assessing the Impact of Housing Prices on the Homeownership Ladder

The uniformity of the decline across groups presented in the main brief above suggests that the decline of the housing ladder is not a purely a demographic story, e.g., one in which independent delays in life cycle milestones such as marriage and childbearing may be influencing Californian's progress up the homeownership ladder. However, making the claim that rising housing costs are causing the decline in progress up the homeownership ladder is not trivial. Changes in housing prices cause changes in the age of graduation, marriage, and pregnancy. They affect the decision and ability to get into college, which in turn may influence where people choose to live, which in turn could affect home prices. To quantify the causal role played by housing, we proceed in two steps.

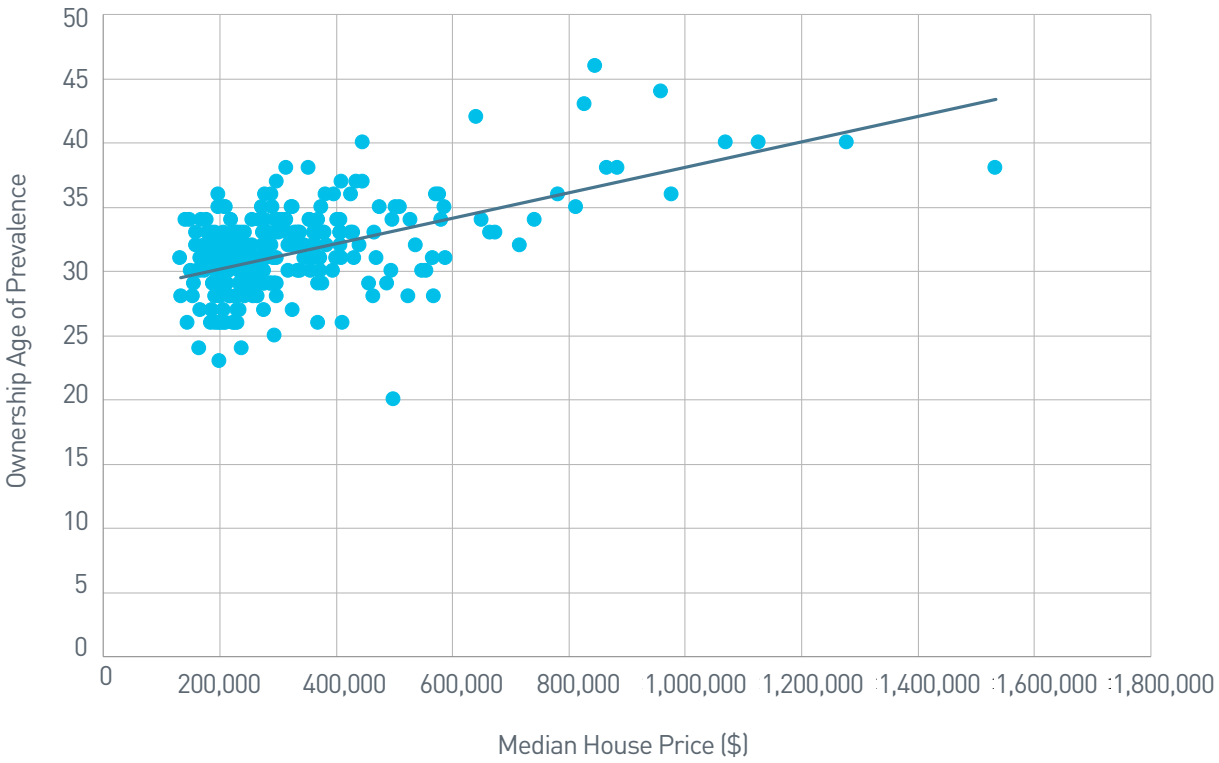
In this Appendix, we undertake a more detailed set of analyses to make the case that house prices have had a significant impact on homeownership trajectories in California. First, we demonstrate suggestive correlations between the decline of progress up the housing ladder and housing prices. We do that by exploring the relationship between prices and the age at which homeownership first exceeds 50 percent nationally—which we call the prevalence age—and then by examining homeownership for Californians who have moved away from California's housing markets. Both sets of comparisons fall short of allowing a purely causal interpretation, but they suggest a major role for housing. We then present a more detailed explanation of our analysis of housing affordability, where we separate the decision to own a home from the financial ability to do so. This separation allows us to explore the impact of house prices on the latter while abstracting from the more complicated trends impacting the former.

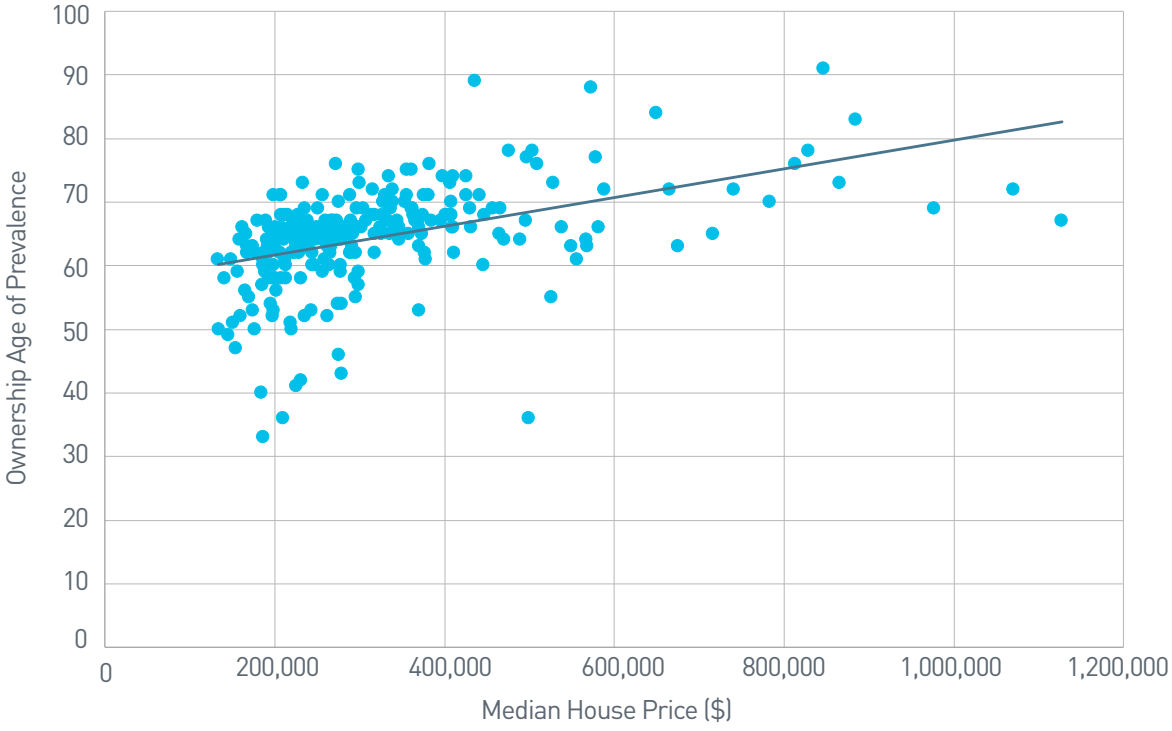
Correlation Plots

We begin with two correlations. The upper panel of Exhibit A.1 plots the relationship between the age at which homeownership first exceeds 50 percent, i.e.the age of prevalence, and median house prices in the 2021 ACS. The relationship is very strong with an R-squared of 0.3 just from this one covariate. The lower panel of Exhibit A.1 shows the correlation between the age of prevalence for free and clear ownership and home prices. Once again, this one factor accounts for much of the cross-metro variation (an R-squared of 0.21).

Five metro areas had to be excluded from the graph above because free and clear ownership never becomes prevalent at any age (Exhibit A.2). Those five metros are listed below, and it is striking that three of them are in California.

Exhibit A.1: Cross-Metro Relationship Between Prevalence Age and Housing Prices





Notes: These figures use data from the 2021 American Community Survey for California. Homeownership is defined as reporting that the primary residence is owned by either the respondent or their spouse.

Exhibit A.2: Metros Where Free-and-Clear Ownership Is Never Prevalent

Los Angeles-Long Beach-Anaheim, CA
New York-Newark-Jersey City, NY-NJ-PA
San Francisco-Oakland-Hayward, CA
San Jose-Sunnyvale-Santa Clara, CA
Washington-Arlington-Alexandria, DC-VA-MD-WV

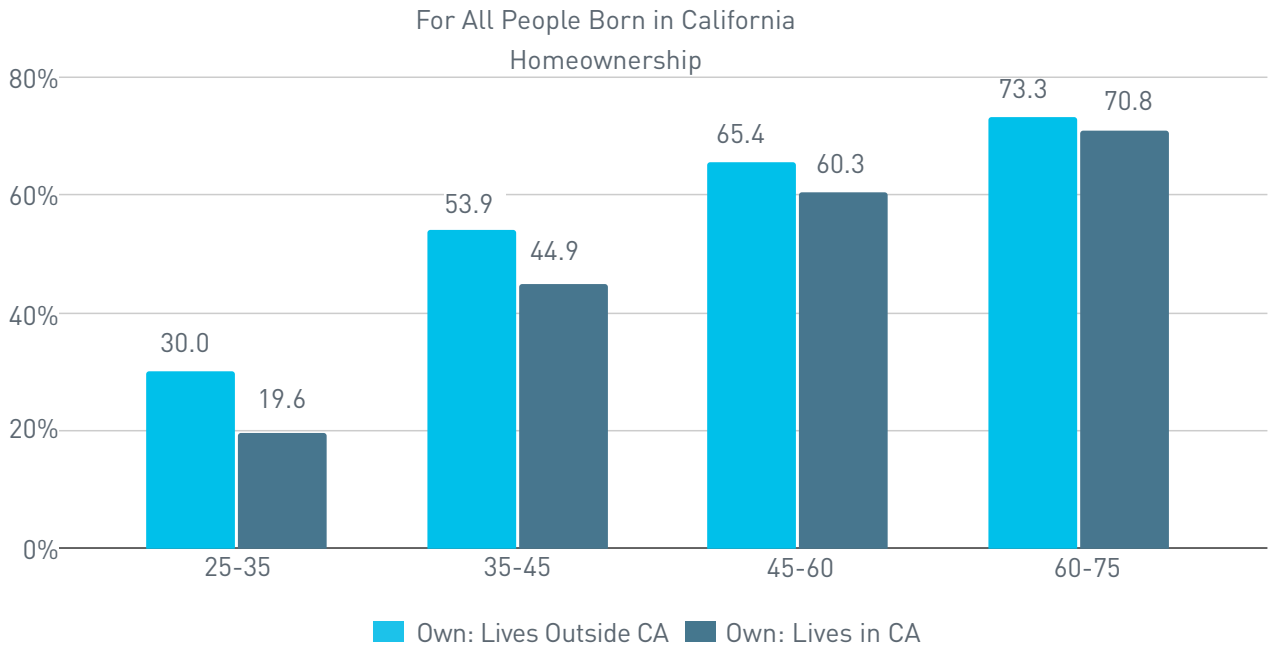
California "Movers" vs. "Stayers"

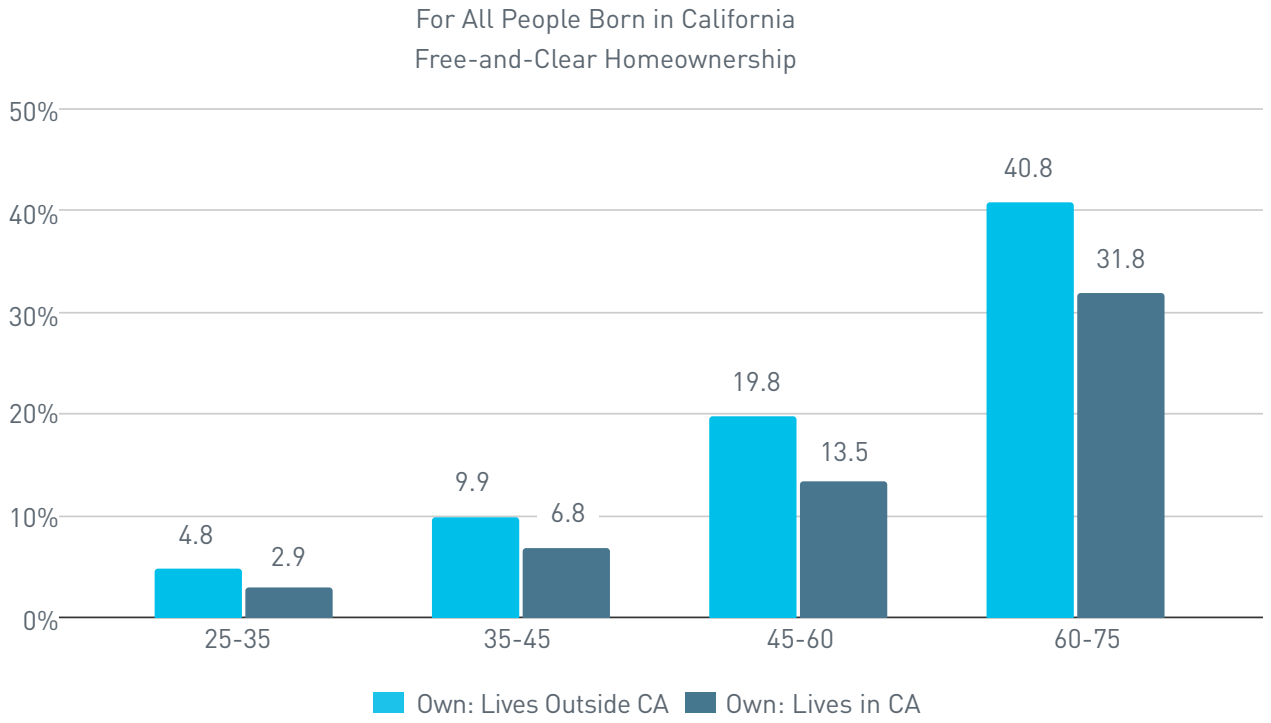
It is possible that Californians are different from other U.S. residents in a way that is correlated with homeownership. Perhaps growing up in California is associated with unfavorable attitudes towards homeownership or a yearning for living footloose, independently of housing prices. To test this notion, we explore the progress up the homeownership ladder of people born in California and compare outcomes between those still living in the Golden State and those who have moved elsewhere (Exhibit A.3). The results indicate that people from California progress farther and faster up the ladder outside of the state than inside of it. For example, among those aged 35–45, 54 percent of Californians who moved out of state became homeowners, compared to just 44 percent who remained. Similar trends are seen for progress toward free and clear home ownership. Moving is not random and is correlated with other factors that might affect the desire for ownership. Still, migrants leaving California show more progress up the ladder than stayers.

Outlining an Approach to Considering a Lower Prices Counterfactual

In this project, we wanted to answer the question of how many Californians today could become owners were housing prices counterfactually lower. The answer to this question is a useful guide for policymakers concerned about the stalled progress up the homeownership ladder. One way to answer that question is to use the relationship between prices and ownership measured in the data and demonstrated above. Unfortunately, while these empirical relationships suggest a strong role for housing prices, they do not isolate causal effects. Ownership may be lower in high-priced areas, but that may be due to economic and cultural factors that impact both prices and ownership independently, creating a correlation that does not reflect causation. For example, the growth of high-skilled jobs in an area may simultaneously raise prices and also attract individuals who are prone to delay marriage and homeownership regardless of prices.

Exhibit A.3: Homeownership Ladder for Those Born in California by Current Residence In- or Out-of-State





Notes: These figures use data from the 2021 American Community Survey for California. Homeownership is defined as reporting that the primary residence is owned by either the respondent or their spouse.

Therefore, rather than attempt to estimate the causal impact of prices on homeownership in the data, we model the impact of counterfactual prices on current Californians' *ability to afford* a home. In other words, we construct a pseudo-homeownership ladder defined *not* by the choice to buy a home or pay off one's mortgage but by the financial *ability* to do so.

Why affordability and not ownership itself? Housing prices impact ownership in a myriad of complicated *indirect* ways—for example via the decision whether and when to start a family, which can influence the *desire* to buy a home regardless of ability. No model can hope to reasonably capture all such effects.

Relative to ownership itself, the ability to afford a home is more straightforward. Assuming a counterfactual world where prices are lower but Californian's financial wealth is unchanged, we can directly compute how many additional Californians would be in a position to purchase a home or pay off their mortgage using the ratio of observed wealth to counterfactual prices. The assumption that financial wealth and family formation would be unchanged if home prices were lower is a big one. We are also not taking into account other factors that affect the ability to secure a mortgage such as debt-to-income ratios or credit scores.[1] Still, this approach lets us directly explore the impact of counterfactual prices on affordability with a transparent mechanism—sufficient wealth to buy a home or own one free and clear.[2]

Focusing on the ability to afford a home also accords with a legitimate interest for policymakers. While various confounding circumstances could impact the desirability of owning a home or paying off one's mortgage, *the financial ability to do so* is something everyone usually strives for *regardless of what they choose to do*. This ability, aside from the choice itself, also seems like an important target for policy. Even those who choose renting are better off if they have the financial ability to choose ownership if and when they would like to do so.

We can explore how many people have the financial ability to be on each rung of the homeownership ladder by defining the rungs in terms of the associated ratio of net worth to average house price. This ratio allows for monotonic progression up the ladder, i.e. people only climb the ladder as they have more financial resources to do so (though in practice some people may opt to rent as their wealth increases). It also corresponds to traditional financial milestones and conventional wisdom:

Making a down payment requires a payment as a percentage of the home value. For example, to avoid paying for private mortgage insurance (PMI), borrowers must make a down payment equal to 20 percent of the house price. Similarly, FHA loans require a down payment of at least 3.5 percent.[3]

Owning a home free and clear implies (at a minimum) that the owner has a net worth equal to 100 percent of the home value.

The ratio uses the average house price in the denominator as opposed to individuals' own home price for several reasons. First, home values are only observed for those who own a home, but we also need a measure of ability to afford a home for those who do not own one too. Second, an individual's selection of a specific home at a specific price-

point is subject to the same confounding circumstances such as delayed marriage and/or childbearing that plague the decision to buy a home in the first place. The question is whether someone is in a position to afford a home, not whether they can afford their current home. Using the average house price is more plausibly independent of those circumstances (at least inasmuch as they apply to the individual rather than to all Californians).

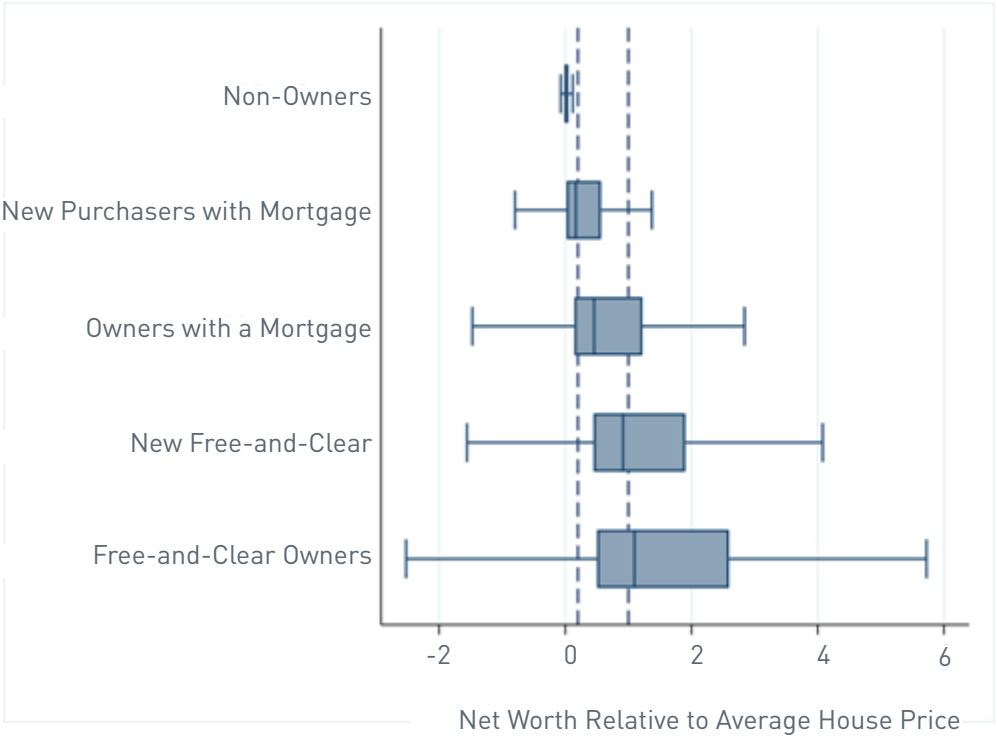
Rather than rely solely on the above-mentioned conventional wisdom cutoffs, such as the 20 percent down payment, we empirically derive cutoffs for the homeownership ladder rungs by *observing* the typical net worth-to-housing price ratios of those buying homes or transitioning to free and clear ownership. We then use those cutoffs to classify what percentage of people have a net worth that would, *given the typical net-worth-to-price ratio of those transitioning into ownership or free and clear status*, respectively, allow them to (a) own a home and (b) own a home outright.

Data: The Survey of Income and Program Participation

For this analysis, we use the Census Bureau's Survey of Income and Program Participation (SIPP). SIPP is a nationally representative survey designed to provide accurate information about Americans' financial situation and participation in government programs. The survey selects a panel of 14,000 to 37,000 households, which is surveyed repeatedly in waves lasting 2.5–4 years. The SIPP contains extremely detailed information on household financials, including net worth and mortgage status. The repeated nature of the panel allows us to observe people who transition from one ladder rung to another. In 2020, there were 2,459 unique respondents in California. The repeated questioning of SIPP respondents allows us to identify those who recently purchased a home. Using data from 2018–2021, we identify new purchasers as householders and their spouses whose homeownership status (tenure of residence) switches from non-owned to owned. Similarly, we mark those transitioning to free and clear ownership as those whose answer to the question "are there any mortgages or loans against the primary residence" switches from yes to no. While these classifications undoubtedly miss some purchasers and some free and clear transitions, they identify enough people to evaluate the distribution of net-wealth-to-average-house price at the time of the transition.

The SIPP sample is not large enough to allow breakdowns into sub-state geographies, We therefore use the annual Zillow Home Value Index to measure statewide average prices.[4]

Exhibit A.4: Net-Worth-to-Average-Housing-Price Ratio Distribution, by Homeownership Ladder Rung



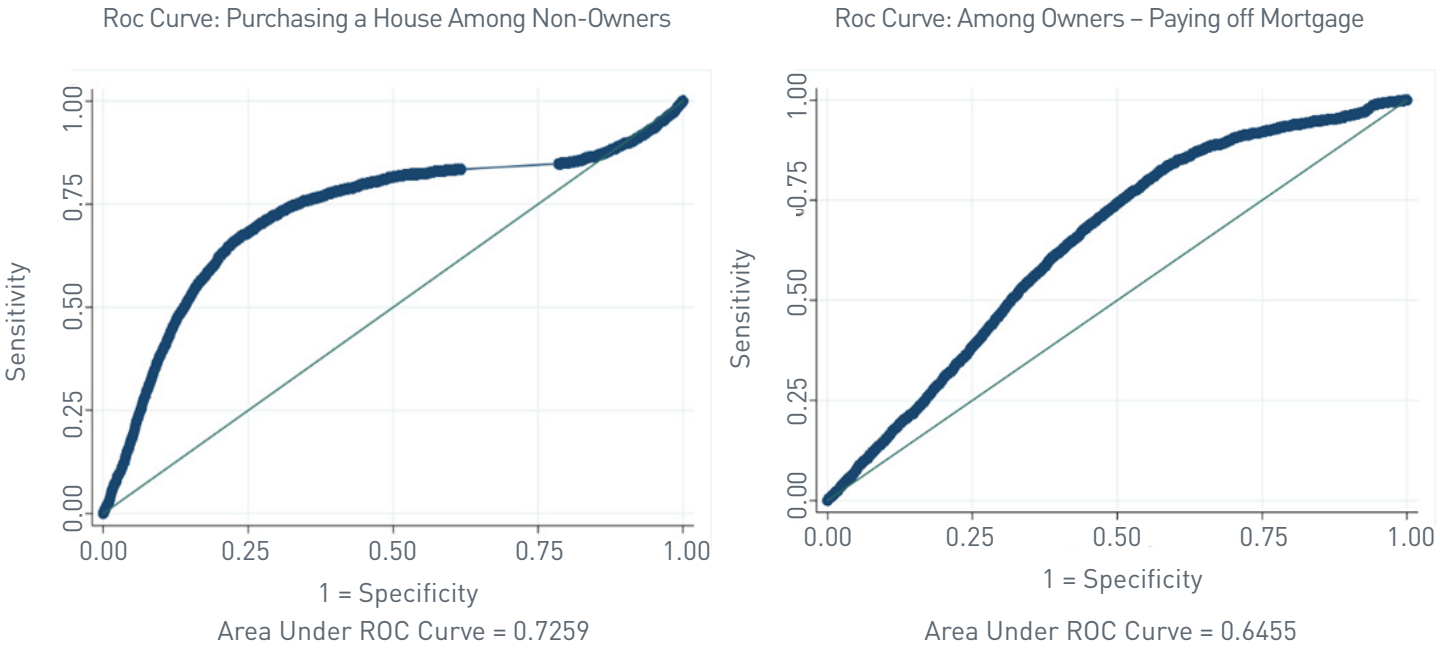
Note: The figure shows the national wealth distribution of new purchasers and newly free-and-clear homeowners relative to average house prices in the state. Traditional cutoffs of 0.2 (representing a 20 percent down payment) and 1 (representing net wealth of the house itself) are shown in dashed lines. Data are from the 2018–2021 SIPP. The boxes represent the 25th to the 75th percentile of the distribution. The tails represent the adjacent values as in Tukey (1977): the 75th percentile +150 percent of the interquartile range (IQR and the 25th percentile minus 150 percent of the IQR.[5]

The Housing Affordability Ladder and the Net-Wealth-to-Housing-Price Ratio

In Exhibit A.4, we plot the distribution of net-wealth-to-average-housing-price ratio for people at different rungs of the homeownership ladder, along with those experiencing a transition between rungs. For reference, we plot the rule-of-thumb benchmarks of 20 percent for buying a home and 100 percent for free-and-clear ownership. While the distributions are wide, they line up as expected, with non-owners having significantly less wealth on average than owners, who in turn have a lower net-worth-to-average price ratio than those who own free and clear.

How well does the net-wealth-to-housing-price ratio predict (i.e., align with) observed home purchase decisions? One way to quantify that is to look at the ROC curve for the transition from non-ownership to ownership.[6] (Exhibit A.5) The ROC curve plots the true-positive rate (TPR) for different net worth cutoffs against the false positive rate (FPR). In this context a true positive would be a non-owner purchasing a house, a false positive would be predicting a purchase by someone who remains a non-owner. The ROC curve reflects the combinations of TPR and FPR that would be obtained by

Exhibit A.5: ROC Curve Predicting Home Purchase / Free-and-Clear Homeownership Transition from Net-Wealth-to-Price Ratio



setting different cutoffs for the net-worth-to-price ratio as the discrimination threshold for predicting a purchase. In contrast, the thin diagonal represents the TPR and FPR that would be obtained by randomly guessing a fraction of non-owners' purchasing behavior. The ROC curve measures the ability of the predictor variable to discriminate the outcome variable. A good rule of thumb is that a ROC curve area of 0.7 or higher provides acceptable discrimination. The ROC area for ownership is 0.73, though only 0.64 for the transition to free-and-clear ownership.

The graphs establish that, empirically, there is an association between the net-worth-to-average-price ratio and moving up ladder rungs. To determine cutoffs to define the rungs, we use the mean value of the ratio among those transitioning between rungs. This gives a value of 40 percent and 160 percent of net worth to average house price for those transitioning to ownership and to free and clear ownership respectively. We also present results using rule-of-thumb ratios (for example 20 percent of the house price as a down payment and 100 percent of house price as net worth for comparison).

With these cutoffs, we can plot the distribution over the homeownership ladder when redefined not as homeownership directly—which is subject to concerns about confounding circumstances—but as financial ability to own a home or own it outright. This "financial homeownership ladder" more strongly illustrates the point that escalating California housing prices have reduced progress up the ladder.

Before considering the impact of housing prices on affordability, it's worth investigating the correspondence between the "homeownership ladder" and the "housing affordability ladder" expressed in terms of net-worth-to-price ratios. In Exhibit A.6 below, we show the correspondence for various ratio cutoffs between the percent of people at different age groups at different rungs of the ladder. For example, 15.5 percent of Californians

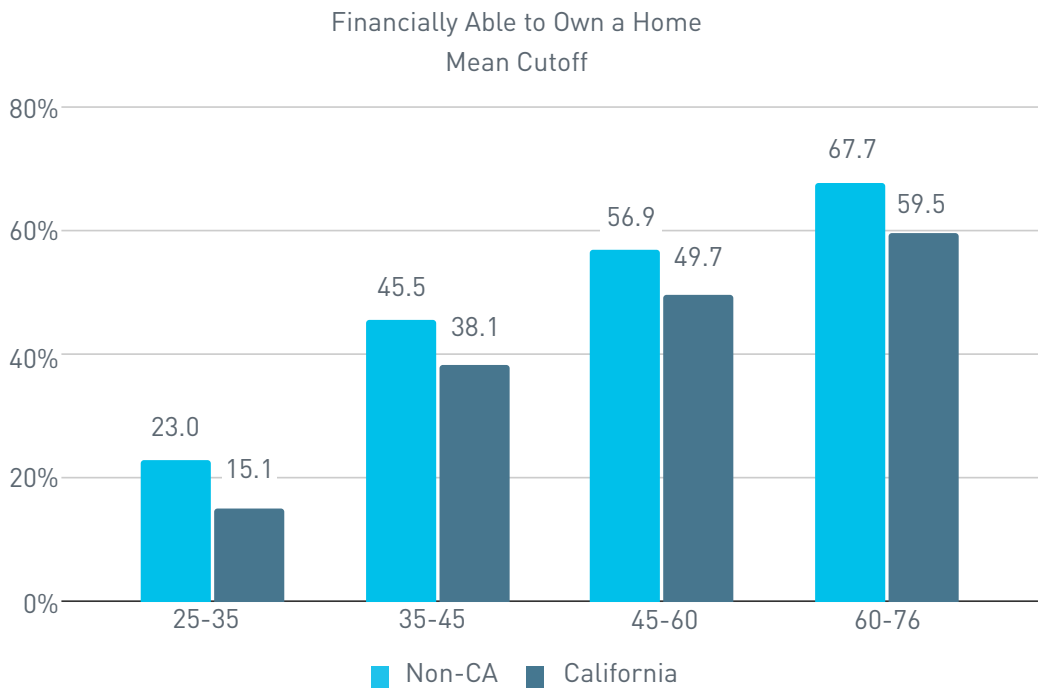
Exhibit A.6: The Homeownership Ladder and the Housing Affordability Ladders

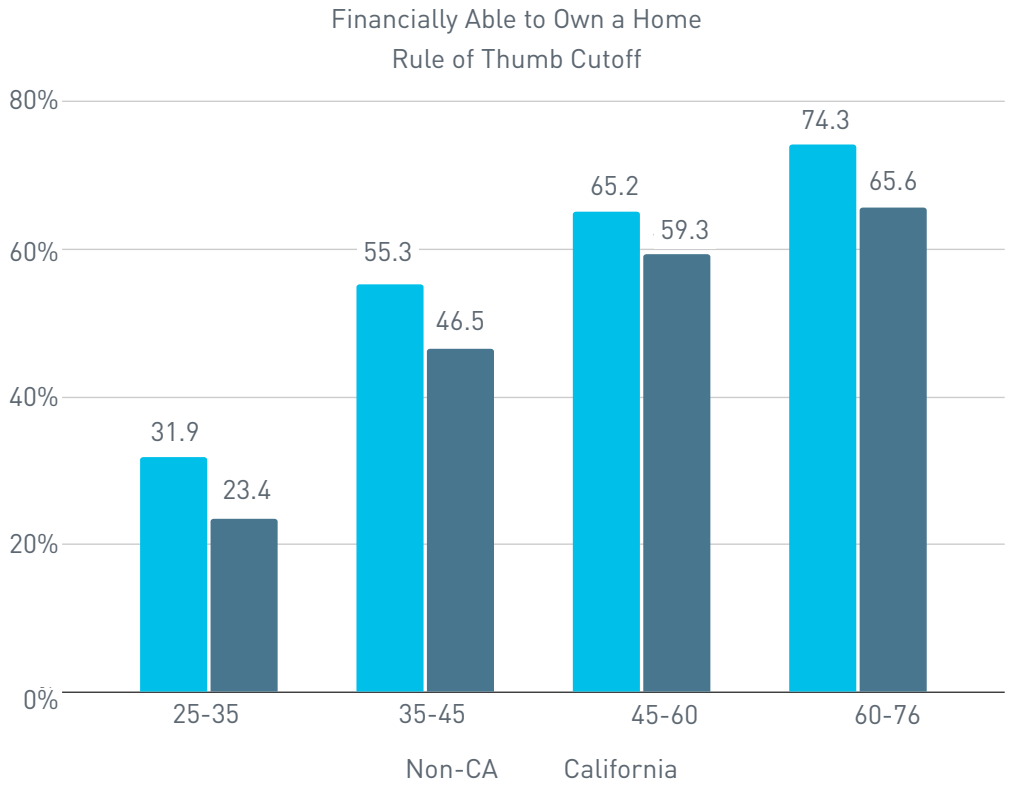
California								
	OWN HOME				FREE AND CLEAR			
	Homeownership Ladder		Financial Homeownership Ladder		Homeownership Ladder		Financial Homeownership Ladder	
Bins	ACS	SIPP Data	Mean NW/ Price Cutoff	Rule-of-Thumb NW/ Price Cutoff	ACS	SIPP Data	Mean NW/ Price Cutoff	Rule-of-Thumb NW/Price Cutoff
25-35	15.5%	14.1%	15.1%	23.4%	2.6%	2.5%	6.4%	7.9%
35-45	39.7%	38.1%	38.1%	46.5%	6.3%	5.4%	12.1%	20.3%
45-60	53.5%	53.8%	49.7%	59.3%	11.9%	9.8%	24.2%	32.6%
60-76	62.4%	61.4%	59.5%	65.6%	26.4%	24.2%	31.9%	42.0%

Non-California								
	OWN HOME				FREE AND CLEAR			
	Homeownership Ladder		Financial Homeownership Ladder		Homeownership Ladder		Financial Homeownership Ladder	
Bins	ACS	SIPP Data	Mean NW/ Price Cutoff	Rule-of-Thumb NW/ Price Cutoff	ACS	SIPP Data	Mean NW/ Price Cutoff	Rule-of-Thumb NW/Price Cutoff
25-35	30.7%	27.6%	23.0%	31.9%	4.9%	3.2%	7.7%	11.9%
35-45	48.1%	52.4%	45.5%	55.3%	7.8%	7.3%	19.6%	28.2%
45-60	66.6%	63.3%	56.9%	65.2%	20.3%	15.5%	31.4%	40.9%
60-76	74.4%	73.1%	67.7%	74.3%	41.9%	36.3%	41.55	51.7%

in the 25–35 age bracket owned a home per the ACS and 14.1 percent did per the SIPP. Using the mean net worth to price ratio of recent home buyers as the cutoff indicates that 15.1 percent of Californians could afford a home, and using the rule-of-thumb net worth to price cutoff (20 percent a-la down payment) the figure is 23.4 percent.[7] While we neither require nor expect perfect correspondence, because not everyone who can afford to buy a home will purchase one (or the converse), the relatively close tracking between the homeownership ladder and the financial homeownership ladder is reassuring, as it suggests that the latter is capturing real variation in the ability to buy a home or own one outright.[8]

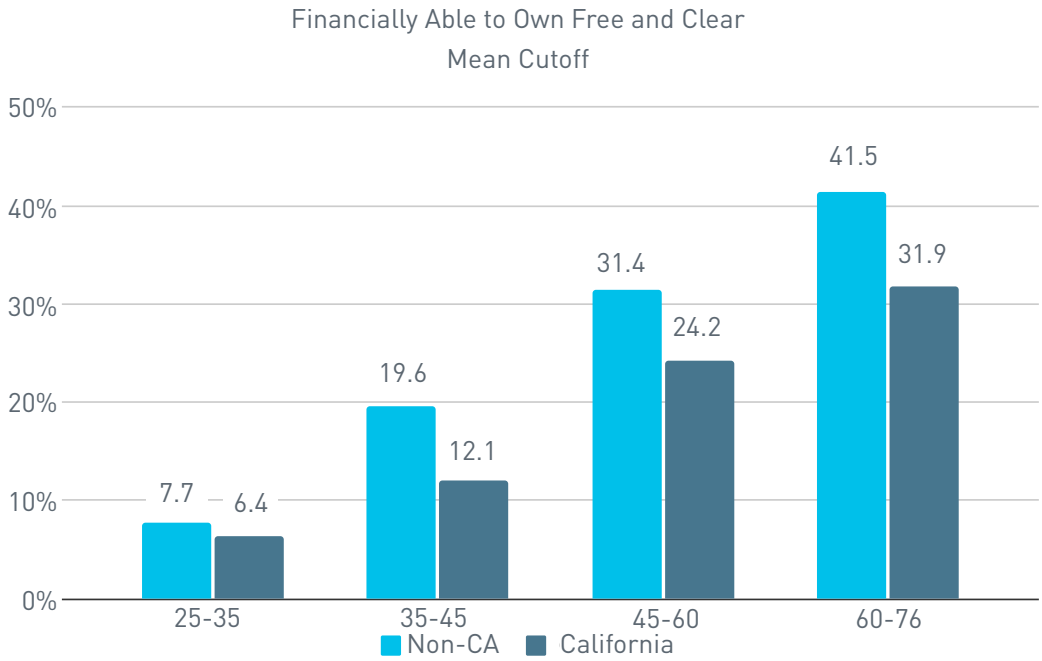
Exhibit A.7: Housing Ladder in California by Financial Affordability

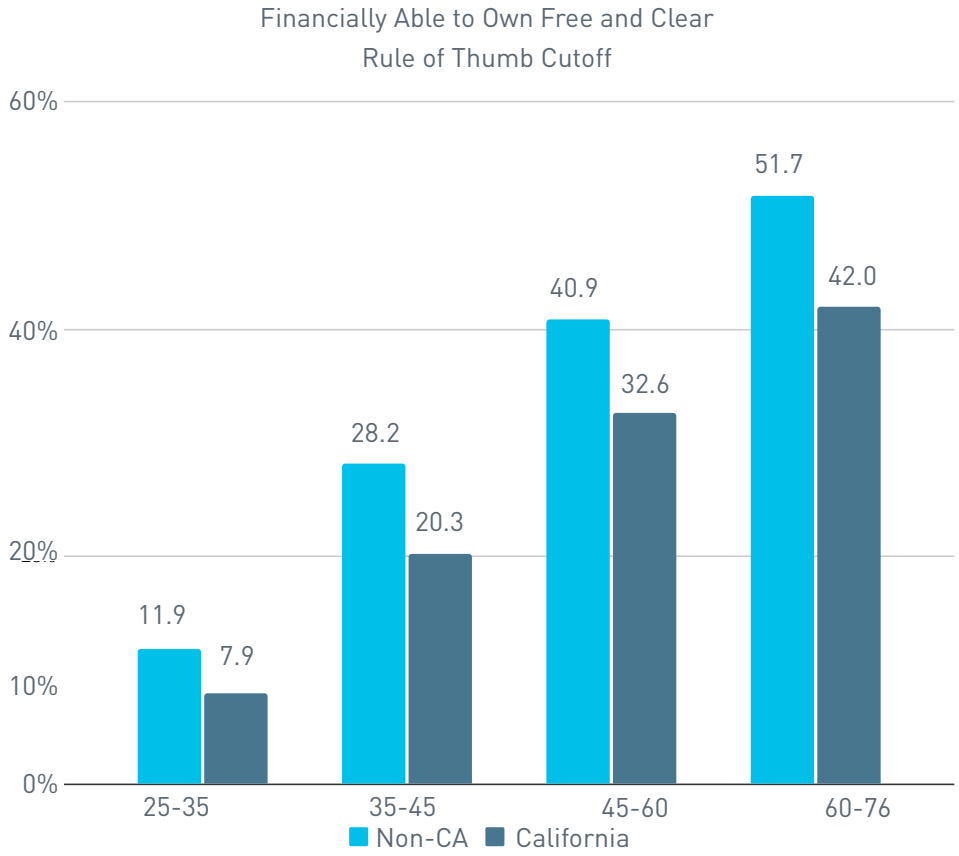




Notes: These figures use data from the 2021 Survey of Income and Program Participation.

Exhibit A.7: Housing Ladder in California by Financial Affordability





Notes: These figures use data from the 2021 Survey of Income and Program Participation.

It is useful to visualize these comparisons as well. In Exhibit A.7 we show that *regardless of how the homeownership ladder is defined*, fewer Californians at every stage of life are financially able to afford a home or to own a home absent a mortgage. Note that this is *despite* Californians being richer than average. In 2019, the median Californian had a net wealth nearly 70 percent higher than the national median ($200,300 vs $118,200). Despite this, when wealth is compared to housing prices, Californians are less capable of affording to purchase a home or pay off a mortgage.

With this validation in hand, we can contrast the financial homeownership ladder for California and the rest of the United States. While differences in the homeownership ladder between California and the rest of the country may be driven by lifestyle choices unrelated to affordability, the fact that Californians are delayed relative to the rest of the country *on the housing affordability measure* is not impacted by those factors. California and its housing prices mean that more people are not in the financial position to purchase a home or transition to free and clear ownership.

The differences are large in economic terms and persistent across the life cycle (Exhibit A.8). These gaps are also significant relative to the overall differences in ownership between California and the rest of the country. Between the ages of 35 to 45, there is

Exhibit A.8: Comparison of Ownership Rates

Age Range	Ownership Rate in CA	Ownership Rate ^{CA} - Ownership Rate ^{USA}	Affordability Rate ^{CA} - Affordability Rate ^{USA} Mean Cutoff	Affordability Rate ^{CA} - Affordability Rate ^{USA} Rule of Thumb Cutoff	Affordability Gap as Share of Ownership Gap	
					Mean Cutoff (4)/(3)	Mean Cutoff (5)/(3)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
25-35	15.5%	-15.1%	-7.9%	-8.5%	52.3%	56.3%
35-45	39.7%	-15.3%	-7.4%	-8.8%	48.4%	57.5%
45-60	53.5%	-13.3%	-7.2%	-5.9%	54.1%	44.4%
60-75	62.4%	-12.0%	-8.2%	-8.7%	68.3%	72.5%

Exhibit A.8 (Continued): Comparison of Ownership Rates

Age Range	Current Homeowners	Pop x (Ownership Rate ^{CA} - Ownership Rate ^{USA})	Pop x (Affordability Rate ^{CA} - Affordability Rate ^{USA}) Mean Cutoff	Pop x (Affordability Rate ^{CA} - Affordability Rate ^{USA}) Rule of Thumb Cutoff
25-35	810,505	-789,588	-413,096	-444,470
35-45	2,075,938	-800,046	-386,951	-460,157
45-60	2,787,090	-695,465	-376,492	-308,515
60-75	3,262,935	-627,487	-428,783	-454,928

an 8.8 percentage point difference between California and the rest of the country in the share of people who can afford a home under the rule-of-thumb cutoffs. The difference in homeownership rates between California and the rest of the country for this age group is 15.3 percentage points. Homeownership is lower in California for many reasons, as the state is more urban, has different demographics, different education patterns, and so forth. Nevertheless, the differences in affordability alone are qualitatively large enough to account for nearly 60 percent of the difference (8.8pp out of 15.3pp).

The Role of Housing Prices and Counterfactual Simulations

While the financial homeownership ladder shows that most of the difference in observed homeownership rates between Californians and other Americans is due to affordability, it does not specify how much alternate housing price scenarios would have changed this picture. One nice feature of reframing the ladder in terms of the net-worth-to-price ratio is that it allows us to explore counterfactual scenarios in which California's housing prices behaved differently, e.g., if they had grown more slowly. That allows us to simulate the potential impact of changes in housing prices on homeownership in the state. While these simulations impose somewhat unrealistic assumptions (such as an unchanging net-worth distribution or unchanged family formation), they provide a helpful benchmark of what would have happened in counterfactual scenarios.[9]

In Exhibit A.9, we consider three such counterfactual scenarios:

- In the first scenario, we consider the distribution of the net-worth-to-average-housing-price ratio had average housing prices in California risen *in proportion to incomes* from 2000 to 2021, rather than at the faster rate actually observed.
- In the second scenario, we consider the distribution had average housing prices in California risen from 2000–2021 *at the same rate as the rest of the United States.*
- In the third scenario, we consider the counterfactual distribution of net-worth-to-housing-price ratios had prices in California *remained at the 2000 level* adjusted for inflation.[10]

We then ask, under these scenarios, how many additional Californians would be in a financial position to afford a home (meaning their net-worth-to-housing-price ratio would exceed the mean or rule-of-thumb threshold).

In particular, we calculate:

$$\Delta = \left(\sum_i 1 \right)^{-1} \sum_i \left(1\left[\frac{NW_i}{\hat{P}} > 0.4 \right] - 1\left[\frac{NW_i}{P} > 0.4 \right] \right)$$

where i indexes respondents in the California SIPP, NW stands for net wealth[11], the notation 1[] represents an indicator variable, P represents existing housing prices, and $\hat{P}$ represents counterfactual prices. To keep this metric interpretable, we scale this percentage point change by the 6.3 percentage point drop in ownership rates for ages 25–75 in CA from 2000 to 2021.[12]

Therefore our final metric reported in Table A.9 below is:

$$\Delta \cdot (own_{2021} - own_{2000})^{-1}$$

Exhibit A.9 reports how much of the observed decline in homeownership would be undone by the portion of the population that would have been able to shift up the financial homeownership affordability ladder.

Exhibit A.9: Percent of the Decline in Homeownership from 2000–2021 That Could Potentially Have Been Averted If...

Housing Counterfactual Financial Metric	...House Prices Rose Proportionately with Incomes	...House Prices Rose Proportionately With Those in the Rest of the USA	... House Prices Did Not Rise
Rule-of-Thumb Net Worth Cutoff	22%	28%	81%
Mean Net Worth Cutoff	43%	48%	>100%

Across the board, the counterfactual exercises imply that a substantial part—if not all—of the decline in the progress up the homeownership ladder would not have occurred absent the exceptional growth in California's housing prices over the last two decades. The exact share of the decline in homeownership attributable to California's disproportionate housing price appreciation relative to the nation varies depending on both the counterfactual housing prices and whether we apply the rule-of-thumb or data-derived mean net worth cutoffs. However, the share is substantial—i.e. the result holds—irrespective of which net-worth-to-housing-price ratio cutoff is used.[13]

Owning a home is a significant achievement for many Americans, not just for the financial stability it provides, but also for the sense of pride, accomplishment, and community it can bring. It is the largest asset purchased by most households and a key pathway to accumulating savings. However, the rate of homeownership progression in California has significantly slowed. The evidence in this report and specifically in the appendix demonstrates that the inability of Californians to afford homeownership is mainly due to high prices. If housing prices had risen at a slower rate, the decline in homeownership progression would have been less significantly less severe.

Appendix Endnotes

1 The assumption that affordability depends on the wealth-to-price ratio is also non-trivial. One could imagine affordability depending on the distinction between the wealth and income, on current income relative to prices, etc. While we have explored some alternative approaches incorporating income—which usually suggest even larger impacts for prices—there are a myriad of potential approaches for defining affordability. It is important to be mindful of this assumption as well.

2 The impact of housing prices on affordability may be conservative relative to the overall impact on ownership if, for example, higher prices generated decreased ownership indirectly as well (say by inhibiting family formation).

3 https://www.forbes.com/advisor/mortgages/how-big-a-down-payment-on-a-home-should-you-make/

4 The effect of using local prices, if it were possible, is ex-ante ambiguous. Higher net worth households are concentrated in a few communities that in turn have higher home prices. These areas are also denser than average for the state. See: https://lao.ca.gov/reports/2019/4093/ca-geography-wealth-090519.pdf. Adjusting for local prices would push some residents down the housing affordability ladder in those areas while raising people in lower cost areas up the ladder. Again, we do not have the data needed to conduct the local price exercise.

5 Tukey, J. W. (1977). Exploratory Data Analysis. Pearson.

6 For a definition and background on the ROC curve, see: https://en.wikipedia.org/wiki/Receiver_operating_characteristic.

7 As mentioned earlier, the mean net-worth to housing price cutoff is 40 percent, which is substantially more than the rule-of-thumb 20 percent and "allows" fewer people to afford a home.

8 It is interesting to note two patterns relating the housing affordability ladder (columns 3 and 4) to the housing ladder (columns 1 and 2). The first is that, while the first metric (40 percent NW/P) seems to better track ownership in California, the second metric (20 percent NW/P) seems to track ownership better in the remainder of the United States. In other words, Californians apparently have (or are required to have) a higher net worth to price ratio when transitioning to ownership than in the rest of the country. Second, both in California and generally, fewer people are free and clear owners than have the financial ability to pay off their mortgage under either definition. This latter fact is not surprising, given the extremely low interest rates at the time. Many people who could have afforded to pay off their mortgages perhaps elected not to do so.

9 It is worthwhile to enumerate some of the limitations of the exercise. The simulations here make several unrealistic assumptions including (1) migration into and out of California (as well as births and deaths) would have been unchanged in a counterfactual situation with different housing prices, (2) the net worth distribution (including home equity) would have been unchanged under the counterfactual situation, and (3) the current household definitions (in particular marriages) would have been unchanged under the counterfactual. The simulation also assumes that the thresholds for net-worth-to-price ratios would remain relevant and constant under the counterfactual. It is possible to imagine violations of these assumptions. For example, lower housing costs would likely have changed migration patterns, may have incentivized different savings and investment behavior, or allowed different patterns of family formation. The purpose of the simulation is not to show exactly what would have happened (something unknowable), but rather to get a first-order approximation of the mechanical effect.

10 We do this using the CPI for all Item Less Shelter series (CUUR0000SA0L2)

11 For non-married respondents (even those part of a larger household), this is measured as their personal net wealth. For married adult respondents, this is measured as household net wealth.

12 This is necessary because the baseline fraction of the population over the cutoff varies across metrics, while we need a common baseline.

13 In unreported robustness tests, we explored incorporating both income and net wealth thresholds for the transition to ownership. These tests gave similar or even larger impacts of counterfactual housing prices on changes in affordability.

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