# THE 40-YEAR DECLINE IN CALIFORNIA'S HOUSING PRODUCTION 

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Official governmental estimates of California's population date back to before the Civil War; and the state's first full federally conducted census was in 1860. Official government counts of California's aggregate housing stock (the number of "dwellings" or, more recently, "housing units") exist dating back to 1940. The latter were determined originally through the federal census process and, in recent decades, with growing sophistication by both federal and state officials. ${ }^{1}$ An analysis of these estimates over the last 80 years reveals very troubling and continuing trends.

This paper examines the relationship between changes in both California's population and its housing stock over the last 80 years (1940-2020). The key takeaway is that, over the last four decades, the rate of California's annual housing production has declined - even in terms of the nominal average number of housing units produced annually (i.e., the average raw numbers of housing units added annually in each respective decade). Moreover, California has also experienced a free fall in the state's "relative" housing production rate, a trend that is shown most starkly in the data about the most recent decade ended (the 2010s). The free fall is especially detectable when the data about nominal housing production are normalized by (or against) both (i) the state's corresponding population data, and similarly (ii) the corresponding total number of existing housing units. ${ }^{2}$ Viewed against the historical data, California's housing production slowed to a mere crawl in the 2010s.

[^0]The data used for this paper were derived from federal census reports from 1940 through 1970 and, for more recent decades, from data reported by the California Department of Finance (which reports housing unit and population data annually rather than by decade). The data from these sources are available online at https://www.census.gov/prod/www/decennial.html and http://www.dof.ca.gov/Forecasting/Demographics/Estimates/. Taken together, these sources show the following historical California population and housing stock estimates determined as of April 1 of the respective years shown below:

TABLE 1
California Population and Housing Units
Beginning of Each Decade - 1940-2020
Year: Total CA Population: Total CA Housing Stock (Units):

| 1940 | $6,907,387$ | $2,340,400$ |
| ---: | ---: | ---: |
| 1950 | $10,586,223$ | $3,590,700$ |
| 1960 | $15,717,204$ | $5,465,900$ |
| 1970 | $19,953,134$ | $6,997,000$ |
| 1980 | $23,667,902$ | $9,279,244$ |
| 1990 | $29,758,213$ | $11,182,513$ |
| 2000 | $33,873,086$ | $12,214,550$ |
| 2010 | $37,253,956$ | $13,670,304$ |
| $2020^{3}$ | $39,804,743$ | $14,353,528$ |

During the 80 -year period covering 1940 to 2020, California's housing production underwent intermittent periods of economic recession, accompanied by steep declines in the raw numbers of the housing units that were produced per year. After the post-WWII recovery, sizable California homebuilding recessions occurred during each of the following time periods:

- the mid-1960s - due to an interest rate spike following an overheated wartime economy,
- briefly the early-mid 1970 's - precipitated by the oil crisis,
- the early 1980 's - from the interest rates spiking and erratic fiscal/tax policies,
- the beginning of the 1990s - following the savings and loan crisis, and
- beginning in or before 2008, when the nation plunged into the Great Recession.

During the 1960s through 1980s, housing production in California tended to recover after each such recession and return to relatively robust levels. The same cannot be said, however, about more recent decades. During the three decades of the 1990s through the 2010s, each successive recession has been followed by a successively more anemic and inadequate homebuilding recovery. The following Table 2 shows that nominal California homebuilding has, in recent decades, been persistently below the levels seen during the earlier decades reviewed.

[^1]TABLE 2
Average Annual California Nominal Housing Production, Number of Units Annually (by Decade - 1940-2020)

Decade: $\quad$ Avg. Ann. Housing Units Produced:

| 1940 s | 125,030 |
| :--- | ---: |
| 1950 s | 187,520 |
| 1960 s | 153,100 |
| 1970 s | 228,224 |
| 1980 s | 190,327 |
| 1990 s | 103,204 |
| 2000 s | 145,575 |
| 2010 s | 68,322 |

The 80-Year Average of Annual Nominal Housing Unit Additions (1940-2019):

Table 2 (above) and Figure 2 below show that the average annual nominal additions to the housing stock made during each of the last three decades (1990-2020) has been below the average nominal annual housing stock additions averaged over the entirety of the last 80 years (the orange line shown). With the exception of some periods of somewhat recovering production (e.g., about 1999 through 2005), nominal annual housing production has been in a long, generally downward drift that began in the 1970s.

FIGURE 2


To better understand the impact of the nominal decline in California's housing production, one needs to look beyond the so-called "nominal" unit production data. One should also consider the nominal data normalized by (or against) each of (1) California's population, and (2) its housing stock - the number of existing units - both of which have soared from 1940 to now. When one considers California's growing population and housing stock as the context against which to consider the state's down-trending nominal housing unit production, the recent decades' decreases in average annual nominal housing production becomes starker and more troubling.

California's April 2020 population was roughly 476\% larger than was its April 1940 population, having risen from 6,907,387 in April 1940 to 39,804,743 in April 2020. The state's population has nearly doubled over the 50 years since 1970. Table 3 and Figure 3 below list and depict California's growing population estimates for the decades shown.

TABLE 3
Beginning-of-Decade (April 1) California Population Estimates - 1940-2020

| Year: | Population Est.: | \% Decadal Increase: |
| :---: | :---: | :---: |
| 1940 | $6,907,387$ |  |
| 1950 | $10,586,223$ | $53.5 \%$ |
| 1960 | $15,717,204$ | $48.5 \%$ |
| 1970 | $19,953,134$ | $27.0 \%$ |
| 1980 | $23,667,902$ | $18.6 \%$ |
| 1990 | $29,758,213$ | $25.7 \%$ |
| 2000 | $33,873,086$ | $13.8 \%$ |
| 2010 | $37,253,956$ | $10.0 \%$ |
| 2020 | $39,804,743$ | $6.8 \%$ |
|  |  | --- |

FIGURE 3


California's accumulated housing stock grew $513 \%$ over the same 80 -year period - from an estimated 2,340,400 in April 1940 to 14,353,528 in April 2020. The housing stock grew extremely fast in the late 1950s and early 1960s, when strong economic growth and changing demographics and lifestyles (including greater mobility, fewer inter-generational adult households, deferred marriages, and smaller households) and federal policies spawned vigorous homebuilding production. Both in nominal and relative terms, the growth in California's housing stock has slowed in the most recent decades - even more so than has California's population growth. Table 4 and Figure 4 below list and depict the ending California housing stock estimates for the years shown:

TABLE 4
Beginning-of-Decade California
Housing Stock Estimates - 1940-2020 (April 1 estimates)
Beginning
Decade: Housing Stock: \% Increase During Decade:

| 1940 s | $2,340,400$ | $53.4 \%$ |
| :--- | ---: | ---: |
| 1950 s | $3,590,700$ | $52.2 \%$ |
| 1960 s | $5,465,900$ | $28.0 \%$ |
| 1970 s | $6,997,000$ | $32.6 \%$ |
| 1980 s | $9,279,244$ | $20.5 \%$ |
| 1990 s | $11,182,513$ | $9.2 \%$ |
| 2000 s | $12,214,550$ | $11.9 \%$ |
| 2010 s | $13,670,304$ | $5.0 \%$ |
| 2020 s | $14,353,528$ | --- |

FIGURE 4


Viewed over the 80-year time period considered, there has been a drop in the ratio between (i) the percentage growth in the California housing stock over the timeframe, and (ii) the corresponding percentage growth in California's population. It may be difficult to assess the many implications of the falling ratio between housing production and population growth given that the growth in both growth factors has slowed in recent decades when compared to the explosive growth in the $20^{\text {th }}$ Century. Even so, it is clear that the state's population has grown at faster rate than has its housing stock in three out of the last four decades. The disparity is all the more worrisome because census data show that California's average household size has been falling through the decades. Consequently, a ratio greater than one is needed merely to maintain a constant percentage of households being housed.

TABLE 5
Ratio between California's Population Growth and Housing Stock Growth - Decades 1940s - 2010s

|  | Recadio of Decadal Growth in |
| :---: | :---: |
|  | Housing Stock / Population |
| 1940s |  |
| 1950s | 1.00 |
| 1960s | 1.08 |
| 1970s | 1.04 |
| 1980s | 1.75 |
| 1990s | .80 |
| 2000s | .67 |
| 2010s | 1.19 |
|  | .74 |

FIGURE 5


The data discussed above allows consideration of California's annual housing production estimates when they are normalized by (or against) California's population and growing housing stock estimates over the same 80 -year timeframe. First, we can calculate California's housing production expressed in terms of the average number of housing units that were added annually during each decade in relation to the corresponding population at the time. The calculations yield the average number of housing units that were added during each respective decade per 1,000 persons of California population utilizing the median state population for each decade as the respective denominator. Table 6 and Figure 6 below show the results. California's annual average housing production normalized against California's population is expressed as the decadal average annual housing units produced per 1,000 in California population, as follows:

TABLE 6

|  | Average Annual Housing Units Added per <br> Decade: <br>  <br> , 000 in Population - by Decade: |
| :--- | :---: |
| 1940s | 14.29 |
| 1950s | 14.26 |
| 1960s | 8.58 |
| 1970s | 10.46 |
| 1980s | 7.12 |
| 1990s | 3.24 |
| 2000s | 4.09 |
| 2010s | 1.77 |

80-year Average Annual Housing Units Added per 1000 in Population (the orange line on the graph)
7.98

FIGURE 6


Next, we can calculate California's housing production expressed as the average number of housing units that were added annually during each respective decade expressed as a percentage of the housing stock (using the median number of units that existed in the decade). Table 7 and Figure 7 below show the results. California's annual housing production normalized by (or against) California's accumulated housing stock is expressed below as the average annual housing units produced as a percentage of the median stock of housing units during the decade.

TABLE 7

|  | Average Annual Housing Units Added <br> Decade: |
| :--- | :---: |
| as a Percentage of Then-Existing Housing Stock: |  |

Average Annual Housing Units Added as a Percentage of Existing Housing Stock 1940s through 2010s (the orange line on the graph) $2.25 \%$

FIGURE 7


The last two tables and graphs (both Tables and Figures 6 and 7) show a persistent, multidecadal, and profound drop in California's normalized housing production - with the nadir to date in the 2010s (the decade that ended April 1, 2020). Specifically, they show that:

- In the decade just ended (the 2010s), there were added in California, on average, fewer than two (2) housing units to California's housing stock annually for every 1,000 Californians - compared to an average rate of eight (8) housing units per 1000 Californians annually over the entire 80-year period, 1940 through 2019.
- In the same decade just ended (the 2010s), there were added housing units at an annual rate of only less than one-half of one percent ( $0.5 \%$ ) in relation to the existing housing stock - compared to an average rate of $2.25 \%$ over the same 80 year period, 1940 through 2019.

In light of California's worsening rates of homelessness and its housing unaffordability both of which indicate the dire undersupply of homes, California's policies require change to spur a much faster pace of homebuilding activities, undertaken at a rate much closer to historical norms.


[^0]:    1 Data about California's growing housing stock and population are reflected in more recent decades in annual estimates maintained by the California Department of Finance. Expectably, the decadal and annual estimates do not perfectly reflect the actual numbers of both the population and its stock of housing units present within the state from time to time. However, because this paper analyses only decadal changes in the state's population and housing stock, the necessary imperfections in the federal and state estimates over time are likely smoothed and minimized in their effect. The trends described in this paper likely would not be appreciably affected by better perfecting the estimates used - assuming it were possible to do so.
    ${ }^{2}$ Normalization is the act of relating (i) nominal data garnered for a field of inquiry to (ii) other information also garnered pertaining to one or more correlated fields. For example, if one were to record the respective heights of many children covering different age groups, their respective heights viewed in isolation, without more context, would vary widely and be of little use for analysis or comparison. However, if the information were related back to - i.e., normalized by (or against) - the corresponding ages of the children measured, then the data would yield more meaningful information for use in mass and individual comparisons.

[^1]:    3 The estimates shown in this paper for April 1, 2020 were extrapolated from the January 1, 2019 and 2020 estimates because estimates for April 1, 2020 were not yet available.

