

Wealth, Property Tax Arbitrage, and California

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Abstract

States fund government with different constellations of taxes. In the state of California there are high marginal tax rates on top income earners and low effective property tax rates. In some other states the opposite is true. For high-net-worth individuals this presents an opportunity to arbitrage state tax laws as they become multi-state partial residents. This creates a misallocation of housing resources through the transfer of the cost of state services to the non-arbitrageurs. Eliminating the wedge between multi-state partial residents as a way of improving the allocation of housing resources in the case of the State of California is proposed.

JEL Codes: H2, H3, R3

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Introduction

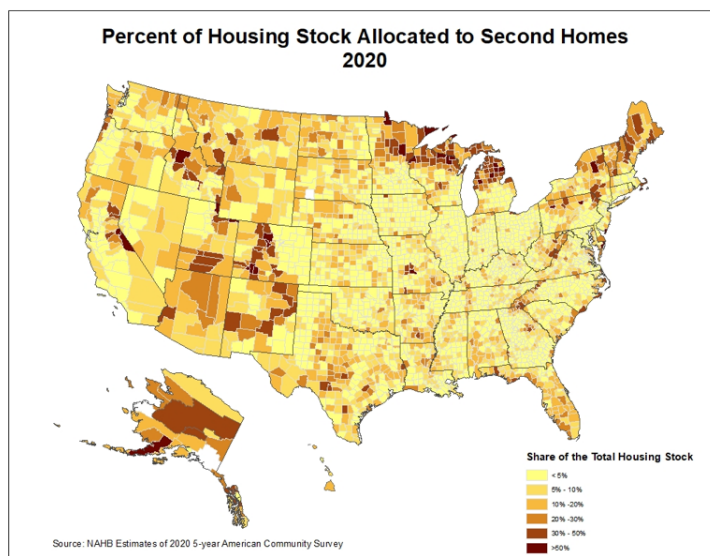
Public discourse on taxation frequently attributes net domestic migration out of California and other “high-tax” states to the presence of those taxes. While there have been many studies of taxes and migration (*e.g.* Gius 2011, Cohen, Lai and Steindel 2014, and Young, Varner, Lurie and Pinsinzano 2016), the aggregate impact, if found at all, tends to be quite small. Migration from one state to another has a host of causes. Even though high taxes and housing costs receive the most press, it is not clear that they are the driving forces at the margin. Moreover, taxes are associated with the delivery of public goods, and as Cebula 1974 and Glazer, Kanninen, and Poutvaara 2008 show, these are important as well. Those who do not value the institutions of higher learning, the public parks, and the public beaches of California might choose to live in a state where taxes and public goods are less and vice versa.

The missing piece, relevant to both tax and housing policy, is that these studies assume migrants leave the state entirely. For high-net-worth individuals that is often not the case. Moreover, partial reverse migration is also common among the affluent. These individuals may have a permanent residence in one state and spend significant time in another. For them, differences in income, property and sales taxes present an opportunity for advantageous tax arbitrage. In this paper we explore this aspect of California’s tax system and propose a policy that would neutralize the adverse tax incentives currently enjoyed by the multi-state high-net-worth individual.

Tax Arbitrage: Some Casual Evidence

Among other things, California is a destination for vacations by both residents of the state and those from elsewhere. For repeat visitations to favorite spots, a vacation or second home is often popular. The counties in California with the highest proportion of second homes are in the Sierra Nevada providing recreation that is primarily consumed by in-state residents. The same is true in the Upper Midwest, Parts of New England, and elsewhere (Figure 1).

Figure 1



Coastal counties close to or in amenity rich cities find many high-end homes that are not their owners' primary residences. The purchase of an L.A. mansion for \$165M by Jeff Bezos and a \$43M beach house in San Diego by Bill Gates, permanent residents of Washington State, are cases in point. And this is becoming more common as illustrated in a 2022 Wall Street Journal Article describing partial migrants to the City of Malibu:

“Mr. Stern—a two-time Malibu mayor and Coldwell Banker Realty real-estate agent—said he barely sees his neighbors in the Broad Beach area, because they are rarely there. The families that once lived in the neighborhood have largely been replaced by celebrities and billionaires such as the Chicago-born real-estate billionaire Sam Zell, Miami Heat President Pat Riley and Torstein Hagan, The Norwegian billionaire founder of Viking Cruises, property records show. Mr. Stern said many of his neighbors own two, three or even four other homes, visiting Malibu only periodically while their houses there sit empty for much of the year.”

Wealthy individuals wanting to own vacation or trophy properties should be free to do so, however, when their permanent residences are in low- to no-income tax states such as Washington or Texas, it points to a particular adverse tax arbitrage incentive. The effective property tax rate in California is a combination of Prop. 13 protections and the original sale price. Wiseman 1989 estimated that the effective property tax rates in San Francisco at the time of their study was 0.55% of market value. Gravelle 2008 estimated the effective property tax rate for the state of California to be between 0.58 and 0.87 and that for Texas to be 2.45 and Florida 1.77. This difference in effective tax rates partially makes up for the difference between the income tax in California and the lack of one in Texas and Florida. It also means that a partial resident of California can take advantage of the low property tax rates while avoiding California income tax through a declared permanent residence in another state. When one considers that high-net-worth individuals tend to travel more than average, it is possible that more time is spent in their California residence than in their residence of record.

To put some numbers to this, suppose our high-net-worth individual has passive adjusted gross taxable income of \$800K per year and homes valued at \$1.5M in Dallas TX and \$6M in Newport Beach CA. Assume also that their ownership of the Newport Beach home has been for enough time for Prop 13 protection to yield the average effective tax rate above. The property taxes paid are \$37,050 and \$36,000 on the Dallas and Newport Beach properties respectively. If they lived outside of California 183 days with declared permanent residency in TX, they would pay zero state income tax and their total combined state tax bills would be \$73,050. Were they to live in California without a second home in Dallas, the total tax liability would be approximately \$116,000. The partial migration yielded a \$42,950 gain for the year or close to ½ million over a decade.

Therefore, there is an incentive to split time between the two locations or between California and multiple out-of-state locations. The identical California resident who, for whatever reason did not split their time, would consume many of the same public goods; public safety and the protection of property, roads, and public spaces including state parks. While other public goods such as public health and welfare and education might not be directly consumed by the partial year resident, they are also not directly consumed by many Californians, and they are considered a shared responsibility of all residents. Californians with the same income and Newport Beach home are

paying an additional \$80,000 in California taxes and are therefore subsidizing the out-of-state partial year residents¹. Moreover, this subsidy might not be just between affluent full-time and part-time residents of the state. Wadi and White 2005 showed that the incidence of the Prop 13 tax savings relative to market value tax assessments represented a transfer from residents of inland counties of the state to those with homes on the coast. Thus, the subsidy might also be a transfer of wealth from residents of inland counties to those who maintain their official residence out-of-state.

Incentives matter. In this case the subsidy leads to higher consumption of second homes by affluent out of state residents than would occur absent these subsidies. British Columbia in 2016 and Toronto in 2017 recognized the impact of non-Canadian purchasers of homes on housing prices and enacted transfer taxes on foreign buyers of 15% and 17% respectively. Zaichao and Zhang 2022 estimated a 6% Vancouver and 9% Toronto reduction in home prices, and Mhadi and Pinto 2018 estimated a 6% reduction in Vancouver as a consequence of the imposition of these taxes. A non-resident tax on condo purchases in New York City was estimated to have led to a reduction in the price of high-end units by Suher 2016.

A Model of Supplementary Home Tax Arbitrage

To illustrate the problem studied here we construct a simple theoretical model. In the background are households who choose to live in one region or another due to a host of factors and who are not in the market for supplementary housing or vacation housing. This means that a complete equilibration of home prices to compensate for differences in tax structures and amenities does not take place and therefore a tax arbitrage possibility exists for high-net-worth individuals.

Consider two regions with different tax structures. Region 1 has both an income and a property tax denoted by $\tau_{1,y}$ and $\tau_{1,r}$ where y indicates income and r indicates real estate. Region 2 has a property tax $\tau_{2,r}$. Consider two agents who differ in only one characteristic, the source of income y . Agents are denoted A and B. Agent A has income y_A which can only be earned in Region 1 and Agent B has income y_B which is passive and earned wherever B sets their permanent residence.

There are two types of homes differing only in their designation. Let $H_{i,M}$ indicate the amount of housing purchased as a Main residence in Region i , and $H_{i,S}$ indicate the amount of housing purchased as a Secondary residence. The price of homes P_i differs only by region. Assume Region 1 has more amenities than Region 2. Then were both regions identical in all other aspects including their tax structure, in a no tax equilibrium $\delta P_1 = P_2$ where δ represents the utility value of the additional amenities in Region 1.

The Agents' Problem:

Each agent has a utility function $U(H_M, H_S)$ and faces a budget constraint that depends on the location of M and S.

¹ Some of the state provided services might require being present in the state to benefit from them, however many do not. For example, fire, disaster, road maintenance and public safety protects the value of the property regardless of the presence or absence of the owner.

$$\text{For } M = 1, S = 1: (1 - \tau_{1,y})Y_k = (1 + \tau_{1,r})P_1H_{1,M} + (1 + \tau_{1,r})P_1H_{1,S} \quad (1)$$

$$\text{For } M = 1, S = 2: (1 - \tau_{1,y})Y_k = (1 + \tau_{1,r})P_1H_{1,M} + (1 + \tau_{2,r})P_2H_{2,S} \quad (2)$$

$$\text{For } M = 2, S = 1: Y_k = (1 + \tau_{2,r})P_2H_{2,M} + (1 + \tau_{1,r})P_1H_{1,S} \quad (3)$$

$$\text{For } M = 2, S = 2: Y_k = (1 + \tau_{2,r})P_2H_{2,M} + (1 + \tau_{2,r})P_2H_{2,S} \quad (4)$$

For Agent A only (1) and (2) are possible as (3) and (4) result in $Y_A = 0$. In a Cobb-Douglas Framework the decision in favor of $S=1$ rather than $S=2$ requires:

$$[\delta/(1 + \alpha\delta - \alpha)][(1 + \tau_{1,r})/(1 + \tau_{2,r})][P_1/P_2] < 1 \quad (5)$$

The first two terms are less than 1. Unless P_2 is sufficiently low to compensate completely for the higher tax rates and the lower level of amenities, then Agent A chooses $S=1$. As the choice of vacation or secondary homes is typically in high-amenity regions, P_2 sufficiently low is not the usual case.

For Agent B, (1) through (4) are possible choices.

In the Cobb-Douglas framework the choice of $M = 2$ rather than $M = 1$ requires:

$$[(1 + \alpha\delta - \alpha)(1 - \tau_y)][(1 + \tau_{2,r})/(1 + \tau_{1,r})][P_2/P_1] < 1 \quad (6)$$

The first, second and fourth terms are less than 1 and therefore Agent B chooses $M = 1$ only if $\tau_{2,r}$ the property tax rate in Region 2 is sufficiently high to reverse the inequality. To the extent that P_2 compensates for property tax differentials, Agent B makes their permanent residence in Region 2 and as with Agent A, the supplementary residence is in Region 1. The amount of supplementary housing by Agent B in Region 1 is positively related to $(1 + \tau_{2,r})$ and inversely related to $(1 + \tau_{1,r})$. Therefore, Agent B in arbitraging the tax differentials purchases more housing in Region 1 than if they were subject to the same property tax and pays less income tax by establishing a permanent residence in Region 2.

To consider the impact of this on tax rates we now assume that there are m A agents and n B agents. Region 1's government collects tax revenue of:

$$R_i = \tau_{1,r}\sum_{k=1,m}P_1(H_{k,M,1} + (H_{k,S,1}|k \in \{A\})) + \tau_{1,r}\sum_{k=1,n}P_1(H_{k,S,1}|k \in \{B\}) + \tau_y\sum_{k=1,m}Y_i \quad (7)$$

Governments in both Regions are assumed to provide identical services to protect and maintain access to housing. These services, G , are proportional to the amount of housing consumed.

$$G_i = g\sum_{k=(A,B)}(H_{i,M,k} + H_{i,S,k})$$

Solving for income tax rates and taking the derivative with respect to n yields a required increase in τ_y as the tax incidence is shifted from residents of Region 2 to those of Region 1. This is only partially offset by the demand from B agents increasing the price of supplementary homes P_1 .

Description of the Data

If individuals are choosing to reside in a state with low/no state income tax while owning properties and spending significant time in states with higher state income tax rates and lower real estate tax rates; it should reflect in the counts of certain types of vacant homes in different states. This section describes the county level data used in the empirical analysis.

Arbitrage should be most apparent in the data for counties where the differential between high property tax/low-income tax and low property tax/high income tax is high. To focus on these counties, the following subset of states have been chosen: New York, California, New Jersey, Texas, Florida, and Washington comprising a total of 202 counties. Texas, Florida, and Washington have no state income tax and their effective property tax rates are relatively higher than California, New York, and New Jersey. Conversely, California, New York, and New Jersey have higher income tax rates relative to Texas, Florida, and Washington.

Measures of vacant homes, homes used for recreational purposes and homes where the owner lives elsewhere, are calculated as a percentage of the total number of homes for each county. The hypothesized tax arbitrage is by high-income households and therefore, evidence should be associated with high-income counties. The two primary outcomes of interest are total vacant homes and vacant homes where the owner lives elsewhere where the latter excludes certain homes designated as vacation homes.

To control for place-based characteristics of counties that might confound the density of vacant homes (δ in the model above), the USDA (United States Department of Agriculture) natural amenities score is also incorporated in the analysis. The natural amenities scale is a measure of the physical characteristics of a county area that enhance the location as a place to vacation. The scale was constructed by combining six measures of climate, topography, and water area that reflect environmental qualities most people prefer. These measures are warm winter, winter sun, summer temperate, summer humidity, topographic variation, and water area.

A majority of the variables are collected from the American Community Survey 2021 1-Year Estimate data. The variables are county occupancy data; total homes, total vacant homes, total occupied homes, vacant homes where the resident lives elsewhere, median home values and median property taxes paid.

Effective rates often differ from statutory rates as illustrated by California and New York. Property taxes in California are limited by Proposition 13, a constitutional amendment approved by California voters in 1978. The law limits general property taxes (not including those collected for special purposes) to 1% of a property's last sale price and restricts increases in assessed value to 2% per year or the change in the CPI whichever is less. These two rules combine to keep California's overall effective property tax rates below the national average. New York's property tax rates are recalculated each year based on the total current value of real estate in a tax district and the amount of revenue the tax authority is seeking. Increases in property taxes are limited in most districts to the lower of 2% or the rate of inflation.

As the focus here is on high net-worth individuals, each state’s top marginal income tax rate is assigned to all counties in the state. This variable includes local taxes, if any, and is adjusted for federal tax deductibility rules. A county’s largest city is used as a proxy for the county’s local tax rate. Data were drawn from Tax Analysts, Federation of Tax Administrators, and individual state tax return forms. Tax rates are as of January 1, 2021. County level median household income is from the U.S. Department of Commerce, Bureau of the Census, Small Area Income and Poverty Estimates (SAIPE) Program for the year 2021.

In order to compare counties across states, the effective tax rate differentials between counties are calculated as “rank gaps.” For property taxes a rank ordering of the effective property tax by county for the entire sample of counties is created. Similarly, a rank ordering of the top marginal income tax rate is created. The rank gap is defined as the difference between the rank order number from the property tax rank schedule and that for the income tax rank schedule for each county. If the rank difference (Effective property tax rank - Effective state income tax rank) in a county is less than 0, it implies that the county is in a state with public finance tilted towards income taxes (CA’s average rank is -11). Positive rank differences indicate that the county is in a state with public finance tilted towards property taxes. (TX’s average rank is 44).

Table 1 is an example of how tax rank differentials are calculated at the county level. The rank calculations for the 7 counties shown in the table are for illustrative purposes only. In the analysis presented in the paper, ranks are calculated for the entire set of 202 counties studied and therefore differ from those in the last column of Table 1.

Table 1
Tax Rank Differential: Condensed Computation

County, State	Effective Property Tax Rate (%)	Top marginal state income tax rate (%)	Effective Property Tax Rate Increasing Rank (A)	Top marginal state income tax rate Increasing Rank (B)	Rank Gap (A-B)
Los Angeles County, California	0.82	13.30	2	3	-1
Orange County, California	0.79	13.30	1	3	-2
Queens County, New York	1.00	14.78	3	5	-2
Richmond County, New York	1.04	14.78	4	5	-1
Dallas County, Texas	2.22	0	7	1	6
Palm Beach County, Florida	1.11	0	5	1	4
Pierce County, Washington	1.28	0	6	1	5

As the ability to tax arbitrage requires the income to maintain two separate residences and passive income to shelter, the data are stratified by local median income. The 202 counties are divided into low income (< \$60,00), medium income (\$60,000 – \$75,000) and high-income (>\$75,000). Descriptive statistics of the data are given in Table 2.

Table 2
Descriptive Statistics for 202 selected counties.

	Mean	Standard Deviation	Min	Max
Median Home Value	\$264,387	\$189,053	\$76,900	\$1,163,100
Effective real estate tax rate (%)	1.46	0.67	0	3.7
Top marginal state income tax rate (%)	5.75	6.88	0	14.78
Rank Gap	-44	377	-702	465
Median Household Income (\$)	\$66,514	\$17,252	\$35,716	\$139,462
Vacant Homes / Total homes (%)	10.65	7.48	0	50.7
Vacant houses where the resident lives elsewhere / Total Homes (%)	3.37	5.91	0	48.63
2 nd homes / Total Homes (%)	0.57	0.84	0	4.12
USDA Amenities Score	2.68	2.80	-2.26	11.15

Empirical Results

The empirical methodology is to first establish if high-income counties differ in the incidence of vacant homes when compared to the other counties. This would be the case if high net-worth individuals are engaged in tax arbitrage as they would augment the local demand for housing. This is not a sufficient condition, but an important one for the analysis. If in fact vacant homes are more prevalent in high-income counties, then we would test if the percentage of vacant homes is related to the tax rank differential. If arbitrage is taking place, we expect the percentage of vacant homes in high-income counties to be negatively correlated with rank differentials.

The mean percentage of vacant homes—2nd homes and homes where the residents live elsewhere—in the counties with negative rank gap is significantly higher than the mean percentage of vacant homes in the counties with positive rank gaps (Table 3). While 2nd homes that are listed as recreational properties are as prevalent in counties with positive rank as in those with negative rank, the difference in the mean percentage of homes that are vacant with residents living elsewhere between negative and positive rank is consistent with the tax arbitrage hypothesis.

Table 3
Mean difference in % of vacant homes
Stratification by rank gap

Mean of outcomes (as a % of total houses)	Counties w/ negative rank gap	Counties w/ positive rank gap	Mean difference
Total vacant homes	12.85 (0.54)	11.83 (0.29)	1.02** (0.58)
Vacant where residents live elsewhere	0.73 (0.13)	0.44 (0.04)	0.29** (0.01)
Homes vacant for recreational purposes	2.63 (0.44)	2.48 (0.25)	0.15 (0.49)

Table 4 summarizes the mean difference in vacant homes where the owner lives elsewhere between high-income and low-income counties, between high income and medium income counties and between medium-income and low-income counties. The mean percentage is significantly higher in high-income counties compared to low-income counties irrespective of the sign of the rank gap differentials. Between high-income and low-income counties, the mean difference in the percentage of vacation homes where the owner lives elsewhere is substantially higher and more significant in counties with negative rank gaps (high income tax/low property tax counties) compared to those with positive rank gap (low-income tax/high property tax counties). The findings provide further evidence consistent with the tax arbitrage hypothesis.

Table 4
Mean Difference in Incidence of Vacant Homes Where The Owner Lives Elsewhere
Stratification by Median Income

Stratification	High Income – Low Income Counties	High Income – Medium Income Counties	Medium Income – Low Income Counties
All counties	0.41*** (0.11)	0.21** (0.13)	0.19** (0.09)
Counties w/ positive rank gap	0.27*** (0.08)	0.10 (0.10)	0.16** (0.08)
Counties w/ negative rank gap	0.74** (0.33)	0.48* (.37)	0.26 (0.25)

The mean difference in percentages and standard deviations are reported in the table, and statistical significance is denoted by *** and ** at the 1% and 5% significance level, respectively.

An alternative to median income is median home value. The rationale is that low-income service workers might conflate the county income statistics in a vacation county. High-income vacation homeowners would be positively correlated with home values. Table 5 presents the results with this stratification. While not identical, the two ways of classifying counties show a consistent pattern of high-income and high housing values correlated with a higher incidence of vacation home ownership.

Table 5
Mean Difference in Incidence of Second Homes
Stratification by Median Home Value

Stratification	High Median Home Value Counties	Low Median Home Value Counties	Mean difference
Total vacant homes	12.59 (0.56)	11.84 (0.25)	0.75* (0.54)
Vacant where residents live elsewhere	0.93 (0.11)	0.30 (0.03)	0.63*** (0.09)
Homes vacant for recreational purposes	4.29 (0.50)	1.59 (0.18)	2.70*** (0.44)

The mean difference in percentages and standard deviations are reported in the table, and statistical significance is denoted by *** and ** at the 1% and 5% significance level, respectively.

Table 6 shows the regression results from estimating the effect of a unit change in tax rank differential on the percentage of vacant homes across counties with varied income levels. The primary explanatory variable of interest is the tax rank differential. All of the specifications include state fixed effects to correct for potential state level confounders. For high income counties the presence of vacant homes is negatively related to the rank gap. For median income counties the same is true when controls for natural amenities are included. The explanation for this result is that median-income counties with high amenities are often ski resort or lake resort counties with 2nd homes affordable for middle income households (Figure 1). None of the regressions have very high explanatory power, but that would be expected from the fact that the top 1% of the income distribution would represent a small, but important, component of the housing stock.

Using the sub-sample of homes designated as vacant and the owner lives elsewhere (Table 7) we find the results of Table 6 repeated. In these regressions, the incidence is also positively related to lower income taxes and higher property taxes. The regressions presented in Table 7 explain considerably more cross section variation than those presented in Table 6.

Using a further restrictive set of counties that include only high-income coastal California counties, and high-income counties in New York City and its environs, and positive rank gap counties from Texas and Washington, results in similar findings and confirms our hypothesis.

Table 6
Percentage of Vacant Homes

	High Income Counties		Medium Income Counties		Low Income Counties	
	(1)	(2)	(3)	(4)	(5)	(6)
Tax Rank Differential	-0.03** (0.01)	-0.04* (0.02)	-0.02 (0.01)	-0.03* (0.02)	-0.01 (0.01)	-0.02 (0.01)
USDA Amenity Score		0.58 (0.76)		1.99** (0.80)		1.72*** (0.39)
Controls						
Median Income		Yes		Yes		Yes
Median Home Value		Yes		Yes		Yes
State FE	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R-Square	0.09	0.08	0.14	0.19	0.03	0.34
No. Observations	66	66	68	68	68	68

Note: Numbers in parentheses are standard errors * =10%, **=5%, ***=1%

Table 7
Percentage of Vacant Homes where owner lives elsewhere

	High Income Counties		Medium Income Counties		Low Income Counties	
	(1)	(2)	(3)	(4)	(5)	(6)
Tax Rank Differential	-0.003** (0.001)	-0.004** (0.002)	0.002 (0.002)	0.003 (0.002)	0.00 (0.00)	0.00 (0.00)
USDA Amenity Score		0.10 (0.07)		0.20** (0.08)		0.15** (0.07)
Controls						
Median Income		Yes		Yes		Yes
Median Home Value		Yes		Yes		Yes
State FE	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R-Square	0.30	0.31	0.15	0.30	0.15	0.21
No. Observations	66	66	68	68	68	68

Note: Numbers in parentheses are standard errors * =10%, **=5%, ***=1%

A Foreign Home Ownership Taxation Proposal

The question here is different from the one that led to foreign ownership taxation in Vancouver, Toronto, and New York City. Here it is the incentive to game the funding of public services through the selective choice of permanent residence while at the same time enjoying partial residence in California that provides the adverse incentive. To address this in a revenue neutral way (*i.e.*, not an additional source of revenue but a fix to the tax arbitrage incentives) a policy option for the state should entail additional property taxes on non-resident homes.

Specifically, a new, separate tax applying to homes that are not the permanent residence of the owner is proposed. There is some question about the legality of imposing this tax only on out-of-state residents (Stankee 1983) and therefore it would need to be tied to the use of the property, not the characteristics of the owner. To not penalize California owners of vacation properties as they pay income taxes, the vacant home property tax paid would be eligible for use as a credit against state income taxes. This would make the tax neutral for in-state residents. Those who avoid California income tax by their choice of residence in a low-income or no-income tax state, would not be able to use the credit as they would have no California income tax liability. To be revenue neutral, the highest marginal income tax rate in the state should then be lowered. This would further reduce the incentive to tax arbitrage and the incentive to locate homes and businesses outside of the state.

The economic consequences of the proposed property tax are severalfold. First, there will be fewer out-of-state owners of vacation properties. Second, the incentive to build high-end vacation properties would be lower. Third, it would free up construction resources, including construction labor for the building of primary residence homes. And fourth, the revenue received could be used to reduce the top marginal income tax rate on Californians thereby further reducing the tax-arbitrage incentives. Finally, the question of whether or not this tax would result in slower economic growth and fewer jobs has been taken up in the literature. While there might be some impact, careful studies find it is likely small (*e.g.* Papke and Papke 1986, Deller, Stallmann and Amiel 2012 and Ojede and Yamarik 2012). Moreover, those studies are on taxes and investment, not on taxes on 2nd homes.

If someone wants to live in Dallas or Jackson Hole and have a vacation home in California, that is their choice. But it should be because that is what they like and how they want to live, and not because the structure of California's public goods funding creates an incentive for them to tax arbitrage. By eliminating the adverse incentives in California's low property tax and high marginal income tax system, there will be a more efficient allocation of both housing resources and the burden of funding public services.

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