USC Keston Institute for Infrastructure

California Homeowners' Growing Stake in Infrastructure and the Future

Dowell Myers, John Pitkin, and Julie Park

Research Paper 06-02 – April 2006

California Homeowners' Growing Stake in Infrastructure and the Future[1]

Dowell Myers[2], John Pitkin[3] and Julie Park[4]

April 4, 2006

INTRODUCTION

In planning for a desirable future for California, it is important to value infrastructure services and to support new investments for infrastructure. Last fall, the devastation wrought by Hurricane Katrina in New Orleans drew the attention of many Californians to the potential consequences of inadequate infrastructure, and in January, Governor Schwarzenegger proposed infrastructure spending that would require $68 billion in new state bonds over the next ten years. Yet, barring an obvious disruption, the need for infrastructure is not seen to be immediate or compelling. As recently as 2003, state voters overwhelmingly rejected Prop. 53, which called for earmarking 3 % of the state's general funds for infrastructure projects. There remains a popular resistance to financing public infrastructure improvements in California among many voters, often a majority.

The resistance has many sources. It is heartening to find, as described in this report, that most voters now agree that not enough money is allocated for infrastructure projects, but are they willing to increase the state budget if needed? Active support of new initiatives may be impeded by a general pessimism about the future or a lack of confidence in the abilities of decision makers to plan well with funds that are provided. In addition, when support for new funding is tested against the desire to minimize taxes, we believe there is clear risk that active support could fall below the required level, as it did in 2003.

The choices of homeowners will be especially instrumental in winning approval of new infrastructure funding. Constituting three-quarters (74.6%) of active voters, this group has much at stake. The tremendous boom in property values in recent years has enabled many to trade up to much higher priced homes than they occupied just five years ago. Even those who have remained in the same homes have witnessed extraordinary growth in their house values. In effect, the voters who are homeowners have suddenly acquired a

[1] Study prepared with a grant from the Keston Institute for Infrastructure, University of Southern California. The views expressed herein reflect those of the authors and do not necessarily reflect the views of the staff, officers or Board of the Keston Institute for Infrastructure.
[2] Professor of Urban Planning and Demography, Director, Population Dynamics Research Group, School of Policy, Planning, and Development, University of Southern California, Los Angeles, CA 90089-0626; dowell@usc.edu
[3] President, Analysis and Forecasting, Inc., P.O. Box 380415, Cambridge, MA 02238; john_pitkin@earthlink.net
[4] Associate Director, Population Dynamics Research Group, School of Policy, Planning, and Development, University of Southern California, 376 Von KleinSmid Center (VKC)
Los Angeles, CA 90089-0626; juliepar@usc.edu

much greater financial stake in the future than they may have realized before. Perhaps this new financial stake is too recent to have shifted voters' awareness of how important may be an adequate infrastructure. We find that overall support for infrastructure has increased in recent years but, curiously, support has lagged among homeowners and is now significantly lower than among voters who are renters. Yet it is the homeowners who have the rapidly growing personal stakes.

The present study explores more deeply the relative degree of support among homeowners for new infrastructure funding. At the same time as Californians have been debating the need for added infrastructure investments, the state has experienced a more than doubling of average property values. Our first task will be to assess these trends in house values for major demographic subgroups. Which groups have the highest average home investments? Which groups have experienced the largest increases in recent years? We will access newly available data to make these detailed assessments.

Our second task is to analyze existing opinion poll data collected by the Public Policy Institute of California on the degree of support for infrastructure and other public investments. Data made publicly available allow detailed analysis of these and other opinions among different demographic subgroups in California. Through statistical analysis we identify the effects of problem recognition, pessimism, and lack of confidence. And, controlled for income and all other factors, we identify the additional recalcitrance among homeowners.

Following that we examine trends in opinions on support for infrastructure and other public investments by using earlier PPIC surveys going back to 2001. A major contribution reached in this study is to measure and understand the paradoxical disconnect between homeowners' rapidly growing financial stakes in their houses and their relative resistance to public spending that could help protect those investments. By analyzing earlier opinion we find that this resistance appears to be a new phenomenon. In 2001 homeowners were relatively more supportive of infrastructure spending than renters; by 2004, well into the house price boom, they had become less supportive. This puzzling disconnect deserves scrutiny and public discussion.

HOME OWNERSHIP AND HOUSE VALUES

By all measures, a great majority of the voting population in California is comprised of homeowners. Almost three-quarters (73.9%) of regular voters in California are homeowners, and a clear majority of voters (56.0 %) are non-Hispanic white homeowners (refer to Table 1). Though the share of voters who are white non-Hispanic owners is declining, it is still a majority of all regular voters.

Table 1: Regular Voters by Race and Housing Tenure

	Owner Household	Rent or Other	Total
White	56.0%	14.6%	70.7%
Hispanic	7.8%	6.0%	13.7%
Black	3.8%	2.9%	6.7%
Asian	3.0%	1.2%	4.2%
Other	3.3%	1.3%	4.7%
Total	73.9%	26.1%	100.0%

In every race group, a majority of the voters are owners, and over 70 % of all white and Asian voters. Including renters, whites amount to over two-thirds (70.7 %) of California voters, Hispanics one in seven (13.7 %), blacks one in 15 (6.7 %), and Asians one in 24 (4.2%).[5]

Owner voters are typically older (median age 52) than renter voters (median age 39). On average, White owner voters are older (median age 55) and Latino (median age 42) and Asian (median age 39) owners younger.

The demographics of the voting population are jointly determined by the composition of the total population and the rate of voting, or *voters per capita* in the different race and tenure groups. There many more homeowners than renters in the total population (61.4% of the household population age 18 or over in 2004 lived in owner households), and homeowners vote at from 1.6 to 2.5 times the rates for renters of the same race.[6]

Higher rates of civic participation and voting by homeowners compared to renters are an expression of owners' direct stake in public policies and the functioning of government, including the provision and maintenance of public infrastructure. The quality of roads, public transportation, schools, parks, and public safety affects the attractiveness and market value of homes in an area. The soundness of public flood control systems and earthquake-proofing influence home values because they affect the risk of future casualty losses. At the same time, the impacts of property taxes levied to pay for many public services and improvements are more apparent to home owners than renters.[7] The most salient indication of homeowners' interest in public policies is seen in the market values of homes.

[5] These shares are generally consistent with those in a comparable federal survey of voting in a non-presidential election, the November 2002, Current Population Survey (CPS); the largest differences from the PPIC shares is a higher share of Asian voters (7.4 %), in this case including Pacific Islanders, more Hispanic owner voters (9.7%), and fewer Hispanic renter voters (3.9%).

[6] If the overall 48.1% of survey respondents who said they "always vote" is applied to the total population age 18 and over, the estimated number of voters is approximately equal to the number of votes cast in the November 2004 presidential election, 12.6 million, and far higher than the 7.7 million votes cast in the non-presidential November 2002 election. It therefore seems that respondents to the PPIC survey somewhat overstate their actual voting behavior, a frequent phenomenon in opinion surveys.

[7] Homeowners pay property taxes directly or through their mortgage bill, however, renters only pay them to the extent they are passed through as part of their rent.

In 2004, the latest year for which detailed survey data are available from the U.S. Census Bureau's 2004 American Community Survey very large sample of 43,413 households in California, the median estimated value of all owner-occupied homes in California was $492 thousand (refer to Table 2). For the majority of owners who are white and non-Hispanic, it was considerably higher ($564 thousand). Much lower median values were found for Latino and black owners ($407 thousand and $428 thousand respectively), while Asian owners reported much the highest median values of any race ($645 thousand).

Although there were only modest differences in median values among age groups for owners of all races combined (a maximum of 10% between age groups), there were substantial intergenerational differences among white owners. Median values for white owners in the 40 to 59 year old Baby Boom generation ($634 thousand) were above those both for younger and older whites, 1.27 times those for younger and 1.24 times those for older.

Table 2: Median House Values, 2004, California, by Age and Race
(thousands of dollars)

Race	18 to 39 years	40 to 59 years	60 yrs or over	All Households
All Races	$468	$518	$483	$492
White	$500	$634	$510	$564
Latino	$388	$415	$397	$407
Black	$428	$445	$402	$428
Asian or Pacific Islander	$617	$681	$598	$645

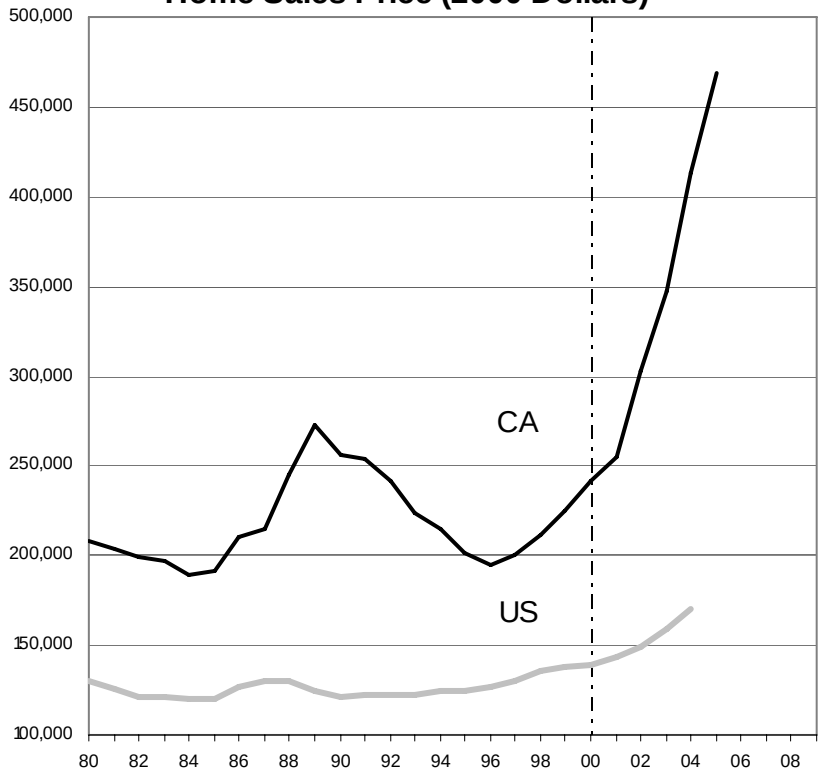
The majority of active voters who are non-Hispanic white homeowners belong to a class whose median house value in 2004 was $564 thousand, and the median value for homeowners of other races is $449 thousand. These owner voters' stake in real property and its future value by any measure is substantial, and this stake has grown markedly in recent years.

Trends In House Values

California house values have appreciated at an extraordinary rate since 2000. After a long decline in house values from 1989 through 1996 (expressed in constant 2000 dollars), gradually house values began to grow again (see Figure 1). After 2001 this annual growth accelerated to 21% and continued through 2005 at no lower than 16% per year. (The California Association of Realtors forecasts slower growth for 2006 that is still at the very strong rate of 10% per year.)

It should be understood that the recent escalation of average house values in California far exceeds that in the previous real estate boom in the late 1980s. Adjusting the trend to 2000 dollars allows us to compare values absent the long-term effects of inflation on the value of a dollar. As shown in Figure 1, the previous boom peaking in 1989 only reached half the dollar value of the current boom. Although the boom may be followed by a slump in future years, that is unlikely to be as deep and prolonged as in the recession of the early 1990s.[8]

Graph 1: Annual Median Single-Family Home Sales Price (2000 Dollars)



[8] At the beginning of the 1990s, the California economy slowed abruptly, ending a long period of expansion. For seven consecutive years, from 1984 through 1990, civilian employment in the state had boomed, averaging 459,000 additional jobs per year (a 3.7% average annual growth rate), but that ended in 1991. In that one year, employment fell by 362,450 jobs, and the losses continued for two additional years. This marked the most protracted recession in California since the Great Depression. A downturn in the national economy was made much worse in California by the downsizing of federal spending on military and aerospace which had been concentrated particularly in southern California. This misfortune was a direct fallout from the ending of the cold war, for which, ironically, former California Governor Ronald Reagan could take some credit. Such a scenario of drastic employment change in the next few years is not foreseen by anyone today. Nonetheless, house prices that have grown so rapidly, aided by s spell of such unusually low interest rates, are highly vulnerable to a downward correction.

For the average homeowner, this has been a period of tremendous growth in housing investment and home equity.[9] Changes in house values for specific demographic segments during this boom period can be inferred by comparing survey data with earlier benchmarks. Trends in house values are based on data from the 2000 Census and the 2004 ACS, two surveys which included the same question on estimated house value. The ACS is a relatively new survey conducted by the Census Bureau on an annual basis, but data from the 2005 collection will not be available for several months. No other source of data is sufficiently large and detailed to permit the level of analysis executed here.

Although we know from the California Association of Realtors data that the median price of homes sold in California increased by 87% between 2000 and 2004, we need to delve more deeply to learn how fully different demographic groups participated in this rise in real estate values. In fact, groups that were actively moving up in the market, buying higher valued homes, could well achieve increases in house values well in excess of average appreciation.

Between the 2000 Census and the 2004 ACS the median value for all owners in California rose by 99%, somewhat more than the 87% increase in median sale price.[10] The increases reported in Table 3 reflect the combined effects of appreciation, trading up, and first-time home purchases. Increases were greatest for Latino and black owners under age 40 (135% and 137%) and smallest, though still very robust, for older whites (97% for all races combined and less than other races in the same age group).[11] Driven by rising numbers of households seeking starter homes, values may have increased proportionally more for younger and minority owners. It is also possible that many older owners, most of whom purchased their homes when prices were much lower, are less aware of rapid changes in current market values and tend to report values that are below the market. Despite any such reporting bias, it is clear that all demographic groups of homeowners experienced substantial increases in house values between 2000 and 2004.

Table 3: Percent Change in Median House Values in California, by Age and Race, 2000 to 2004

Race	18 to 39 years	40 to 59 years	60 yrs or over	Total
All Races	134%	100%	99%	99%
White	104%	121%	97%	108%
Latino	135%	132%	121%	131%
Black	137%	132%	117%	128%
Asian or Pacific Islander	113%	124%	108%	118%

[9] The median net amount of cash realized from homes sold in California in 2005, was $221 thousand (California Association of Realtors), an indication of the amount of equity held by this group of owners. This compares to the $81 thousand realized in sales completed in 2000.

[10] In current dollars. In constant dollars, the median price rose 71%.

[11] The total for all races was below the increase for all but one subgroup. This is explained by the relatively greater increases in the numbers of Latino and other owners with lower average values than the more slowly growing group of white non-Hispanic owners.

In view of the relative increases of this magnitude and the associated dollar house values, we can also infer that the associated amounts of housing equity are greatest for older white homeowners than other groups, because they have, on average, owned their homes the longest, and therefore have experienced more cumulative value appreciation and had more time to pay off mortgage debt than others. It would be possible to estimate the amount of home equity more precisely given further research.

To summarize our analysis of growing house values, Asians have the highest housing values but are heavily outnumbered in the market by white homeowners, who also have very high values. The highest home values in every race are found among baby boomers age 40 to 59. Over the last few years, house values have increased explosively, with median sales prices increasing by 117% from 2000 to 2005. The value of homes *occupied* has increased even more rapidly due to trading up to even higher priced homes. This leaves California homeowners with a far greater financial stake in their homes and the communities that support them than they held just a few years ago. Given that homeowners are three-quarters of the voters, this increased financial stake should wield a substantial impact on public opinion in the state.

VOTER SUPPORT FOR INFRASTRUCTURE?

Infrastructure bears a vital link to every housing unit and helps support house values. Deterioration of roads or excessive congestion can make homes less attractive to buyers. Failure to provide for adequate schools is a key deterrent, as is the lack of necessary facilities to maintain a safe and healthy life style. Homeowners frequently purchase their homes with one eye on current enjoyment and the other on the investment potential down the road. Since most homeowners occupy their homes for longer than 5 years before selling, and often for 10 or 20 years, the home investment is usually for the long term and subject to substantial changes in the surrounding community.

Provision of infrastructure is also a long-term investment in the future. A key feature of infrastructure decisions is that these often entail benefits that will not commence for several years, because of time required for construction, and that will last for many years thereafter. A portion of the construction expense will be borne in the near term but much of it may be deferred to future years through bonded indebtedness. Thus, infrastructure planning necessarily has a future orientation. In principle, the home investment and infrastructure investment should be made with some joint consideration.

As part of a broader study of infrastructure issues, the Public Policy Institute of California (PPIC) conducted a major opinion survey in May and June of 2004, which they titled a "Special Survey on Californians and the Future."[12] We aim to further analyze this rich dataset which PPIC has kindly contributed to inform the public understanding. This telephone survey was conducted in 5 languages (English, Spanish, Chinese, Korean, or Vietnamese) with a total sample of 2,506 adults. For the purposes of

[12] Baldassare, Mark, "Special Survey on Californians and the Future." San Francisco, CA: Public Policy Institute of California (August 2004). For the full report on the survey, go to http://www.ppic.org

this study, the analysis is limited to voters who claim to "always" vote, which decreases the sample to 1,741 adults (over two-thirds of whom are homeowners).

Our opinion analysis proceeds in three stages. First, we assess briefly what is the general perspective of the voters with regard to pessimism about future living conditions in California and with regard to voters' confidence that the state and local governments are planning well for the future. We also inquire about the general belief whether or not there is adequate funding for infrastructure projects. In the second stage of analysis we evaluate support for infrastructure using three questions in the 2004 survey. Our analysis seeks to uncover the relative support among different demographic groups, and among homeowners compared to renters. The effects of income and education are also evaluated, because these could strongly shape the differences between homeowners and renters. Further, we wish to see how much influence is wielded by pessimism about the future or lack of confidence in government. In the final stage of opinion analysis, we compare the relative preferences of homeowners across several survey years, drawing on additional surveys provided by PPIC. The purpose of this analysis is to learn whether homeowners' level of support has increased or decreased in recent years, given that their financial stakes have changed so radically.

General Background Beliefs

Several general sets of beliefs constitute important background to willingness to support new spending for infrastructure. One important issue is whether or not voters believe adequate funding is already available. A question in the PPIC survey addresses that matter, with the following exact wording and the responses by regular voters:

Q34. Overall, do you think local government does or does not have adequate funding for the roads, school facilities, and other infrastructure projects that are needed to prepare for future growth in your part of California?

[1]	Does have adequate funding	27.5%
[2]	Does not have adequate funding	66.1%
[8]	Don't know	6.2%
[9]	Refused	.3%

Voters may be more willing to spend for infrastructure based on their assessment of current trends. If they see the future as becoming less livable, perhaps that would increase the willingness to make major new investments today. The PPIC survey asked about trends in both the state and local area, the latter of which may be more important to voters. The relevant question and responses follow:

Q21.Changing subjects, overall, do you think that in 2025 your part of California will be a better place to live than it is now or a worse place to live than it is now or will there be no change?

[1]	Better place	15.2%
[2]	Worse place	49.7%
[3]	No change	32.2%
[8]	Don't know	2.8%
[9]	Refused	.2%

Finally, there is the crucial matter of voters' confidence in the abilities of state and local governments to plan adequately. The loss of voter confidence has been highlighted by Mark Baldasarre as especially damaging in California.[13] Two questions are included in the PPIC survey, one about state government and the other about local government. We include both here because local improvements are directed by funding and planning efforts initiated at both levels of government. The questions and responses follow:

Q39.How much confidence do you have in the state government's ability to plan for the state's future and growth—a great deal, only some, very little, or none at all?

[1]	A great deal	11.3%
[2]	Only some	47.5%
[3]	Very little	30.1%
[4]	None at all	9.8%
[8]	Don't know	1.3%
[9]	Refused	0%

Q40.How much confidence do you have in your local government's abilities to plan for growth and the future in your region—a great deal, only some, very little, or none at all?

[1]	A great deal	13.8%
[2]	Only some	50.5%
[3]	Very little	24.9%
[4]	None at all	9.4%
[8]	Don't know	1.4%
[9]	Refused	.1%

The general picture emerging from these background beliefs is that two-thirds of voters believe there is not adequate funding at present for infrastructure projects, but only a small minority of voters has a great deal of confidence that either state or local government can plan well for the future. Approximately half express "only some" confidence, while over a third express little or no confidence. Lacking that confidence in state and local government, voters may be less willing to support new funding even if they feel it is needed. Further, voters' assessments of trends for the future in their part of

[13] Baldassare, Mark. *A California State of Mind: The Conflicted Voter in a Changing World* (Berkeley: University of California Press, 2002).

California may impact their spending preferences. The approximate half of voters who think living conditions will grow worse may be motivated to spend more in order to offset this trend. An alternative possibility is that voters may view the situation as hopeless and therefore wish to avoid "wasting" any additional spending.

Measures of Infrastructure Support

Three different questions are available in the August 2004 PPIC survey to help us evaluate the degree of support for infrastructure spending. One asks about an increase of local sales tax for roads and transit. The exact wording of this question and the responses by regular voters are as follows:

Q35. What if there were a measure on your local ballot to increase the local sales tax for roads and public transit projects by one-half cent for 20 years? Would you vote yes or no?

[1]	Yes	65.9%
[2]	No	31.0%
[8]	Don't know	2.8%
[9]	Refused	.4%

A second question asks about a local bond measure for school construction. As with the preceding question, two-thirds indicate a willingness to support spending. The exact wording of this question and the responses by regular voters are as follows:

Q36. Suppose your local school district had a 20-year bond measure on your local ballot to pay for school construction and renovation projects. Would you vote yes or no?

[1]	Yes	67.7%
[2]	No	28.9%
[8]	Don't know	3.2%
[9]	Refused	.2%

The third question has a very different structure. Rather than ask for open-ended support of a spending measure, this question poses a tradeoff between raising taxes for more spending and lowering taxes for less spending. Given the tradeoff, it is not surprising the level of support is substantially lower. The exact wording of this question and the responses by regular voters are as follows:

Q33.Which of the following statements do you agree with more—[rotate] [1] I'd rather pay higher taxes and have the state government spend more money on roads and other infrastructure projects; [OR] [2] I'd rather pay lower taxes and have the state government spend less money on roads and other infrastructure projects?

[1]	Higher taxes and more money for roads and other infrastructure	52.2%

[2]	Lower taxes and less money for roads and other infrastructure	38.0%
[3]	Don't know	7.4%
[4]	Refused	2.4%

Although the level of support in the tradeoff question appears to exceed 50%, this is a very tenuous majority. Before any measure came to ballot, the "don't knows" and other respondents could well be persuaded to vote in the negative. Similarly, once faced with competitive campaigning, greater doubt may be sown with regard to willingness to support new sales taxes or bonds. We need to ascertain among which groups support is firmest, and for whom the measures are least attractive.

As a first step to that understanding, let us examine the relationship between each of the three infrastructure spending measures and the background beliefs we have summarized. The relevant data are tabulated in Table 4.[14] The top row gives the overall level of voter support for each respective measure. Next we view the levels of support among homeowners and renters. For each measure, homeowners are substantially less likely to support new spending. Whether this is due to differences in income, age or other factors will be addressed below.

Among those who believe infrastructure funding is not adequate, support for new spending is extremely strong, on the order 20 percentage points higher. For example, the local sales tax increase for transportation projects is supported by 51.9% of those who believe current funding is adequate, but by 72.8% among those who believe current funding is not adequate (refer to Table 4).

Confidence in the abilities of state and local governments to plan for future population growth also appears to be strongly related to voters' willingness to support infrastructure. Belief that planning is effective equates to levels of support from 8 to 14 percentage points higher than if planning is seen as ineffective.

In contrast, whether or not one has a pessimistic view of future living conditions in the area seems to have only a slight relationship to support of new infrastructure spending. In fact, for two of the measures, those who have a more optimistic view are more willing to spend, while in the trade-off measure it is the pessimists who are more willing to spend for infrastructure.

Differences Between Owners and Renters

Given their large investments in local communities, it would be expected that homeowners are even more likely to support higher taxes for infrastructure than are renters. However, we find that homeowners, in fact, are *less likely* to support greater

[14] The percentages in support of each measure delete the responses of those who refused to respond and place all of the "don't knows" in the category of nonsupport.

spending for infrastructure projects. The deficits in support range from 3 to 10 percentage points (refer to Table 4).

Table 4: Voter Support for Higher Taxes of Each Kind Based on Other Expressed Opinions

	Support LOCAL Sales Tax for Transportation Projects	Support LOCAL Bond Measure for Schools	Support STATE Taxes for Infrastructure
Total Regular Voters	66.1%	67.8%	53.5%
Homeowners	63.8%	65.0%	51.9%
Renters	73.0%	74.9%	57.6%
Believe infrastructure funding…			
Adequate	52.3%	54.1%	33.9%
Not Adequate	73.1%	74.8%	63.5%
Believe local area in future will be…			
Better place to live	67.4%	69.9%	50.7%
Worse place to live	64.8%	65.7%	56.4%
Believe state government planning…			
Effective	71.9%	71.5%	56.2%
Not effective	57.4%	62.3%	49.4%
Believe local government planning…			
Effective	70.4%	72.4%	57.3%
Not Effective	57.9%	59.0%	46.1%

The largest disparity between homeowners and rents is observed for support of school bond measures. This may be due to the age distribution of homeowners versus renters (refer to Table 5). Homeowners are more likely to be older than renters given the nature of homeownership attainment. For example, over a quarter of homeowners are under age 45 (29.4%), while twice as large a share of renters (60.3%) are in these prime childrearing years.

In other words, homeowners may be less willing to support local school bond measures because they may assume that their interests are not served by funding support for other people's children. Income or ethnic differences may also be involved in these disparities between homeowners and renters. Accordingly, a more detailed statistical analysis is required to control for these other factors.

Table 5: Age Distribution of Voters by Tenure

Age	Homeowners	Renters
18 to 24	4.4%	16.1%
25 to 34	10.9%	22.3%
35 to 44	17.8%	23.8%
45 to 54	21.5%	17.8%
54 to 64	16.6%	10.1%
65 or older	29.0%	9.9%
Total	100.0%	100.0%

Explaining Voter Support for Infrastructure Spending

A multivariate probability model was developed to estimate the effect of each independent factor on level of support for infrastructure spending.[15] The models reported in Table 6 are replicated for each of the three infrastructure spending measures. The reported coefficients represent the percentage added support likely to follow if voters have the given attributes. The number of stars after each percentage indicates the degree of statistical significance or confidence in the estimated effect. A single star indicates marginal confidence, while three stars indicate extremely strong confidence in the estimate of the effect.[16]

The top row of coefficients shows that, net of all other factors, voters who are homeowners support infrastructure less often than do renters with the largest difference in support for higher taxes for state infrastructure funding (10.3% less for homeowners than renters).

The effect of each of the general background beliefs is also interesting. The largest factor in the survey is that voters who believe not enough funding currently exists for infrastructure are 20 to 27 percent more willing to support new spending. Also important is the level of confidence in state or local planning effectiveness. Voters who believe planning is ineffective are consistently less supportive of new spending, with significant effects ranging from 5 to 11 percent lower support.

[15] Multiple regressions were estimated as linear probability models where support for the infrastructure spending question was coded as 100 and non support as 0. Given the binary nature of the dependent variable, a more statistically efficient design would utilize logistic regression. However, the estimated parameters of such models are expressed as log odds, making theme difficult to communicate in words. Although logistic and linear probability regressions yield similar statistical conclusions, logistic regression is most often preferred in cases where the outcome variable has a mean that lies near the extremes, either 0 or 1. Given that our outcome measures are in the mid-range, this concern is less warranted. Moreover, the coefficients of the linear probability model are directly interpretable as percentage increases in voting support. Our judgment is that the advantages of this model specification outweigh any disadvantages.

[16] Statistical significance is expressed as the probability that only by chance is the given coefficient different from 0. The most significant effects in Table 3 have less than one percent chance of being due to such random fluctuation in the data, while the moderately significant effects have less than five percent chance of occurring randomly. Marginally significant effects have less than 10 percent chance, and hence we have less confidence in the than the others.

Demographic factors include the age and race or ethnicity of voters. Relative to young adults (under age 35), older voters are 5 to 6 percent less likely to support school bonds. This effect is surprisingly weak in light of the very different likelihoods of these voters benefiting from the bonds for their own children. In the other two spending measures, the oldest group of voters (age 55 and older) is about 5 percentage points *more* supportive than the youngest.

Racial and ethnic differences from whites are small and insignificant, with three exceptions. Latino voters expressed 7 or 13 percentage points higher support for the sales tax and school bond measures than did white voters. Blacks also expressed 6.5 percent stronger support for the school bond spending than did whites. It bears noting that these racial and ethnic differences are controlled for education and income differences to be discussed next.

The education level of voters, with one exception, has no effect on their willing ness to support infrastructure spending. That exception is found in the trade-off question of more spending/more taxes versus less spending with lower taxes. In that question, all other things being equal, those with a BA degree or higher education express support that is 12 percentage points greater than voters with no more than a high school degree. This is a notably large effect.

The income level of voters bears an uneven relationship to willingness to spend on infrastructure. Relative to the lowest income voters, those between $20,000 and $80,000 annual income appear roughly 11 to 14 percent more willing to support higher local sales tax for transportation projects. Voters with household incomes higher than $80,000 do not express support that is significantly higher than that of the lowest income voters (refer to Table 3). With regard to the school bond measure, there is only marginal evidence of higher support in a single income category. In contrast, with regard to the trade-off question, voters in most of the income groups are 10 to 15 percent more supportive of higher spending and higher taxes than are voters in the lowest income category. Essentially, there is no difference among voters above $20,000 income.

On the whole, we can summarize the effects of economic status on voting preference for more infrastructure spending as follows. Controlled for age and all other factors, higher income voters do not express lower support for increased spending. Moreover, on one measure—the trace-off question—the college-educated voters expressed a large preference for increased spending. The one attribute that generates a negative effect of lowered support for spending is homeownership. Controlled for the other factors, voters who are homeowners express support 6 to 10 percentage points lower than do renters. Were we to exclude from consideration the background beliefs, which are strongly influential on voting behavior, the negative effect of homeownership grows even two percentage points stronger.

Table 6: Explaining Probability of Support for Infrastructure Funding

		Support LOCAL Sales Tax for Transportation Projects		Support LOCAL Bond Measure for School Projects		Support Trade-off of More Spending versus Less	
Homeowner		-8.8%	***	-6.0%	*	-10.3%	***
Not Adequate Funding		20.7%	***	20.9%	***	27.1%	***
Pessimistic for Local Area		0.9%		-2.5%		5.9%	**
Low confidence in state planning		-11.2%	***	-5.4%	*	-3.8%	
Low confidence in local planning		-6.1%	**	-9.7%	***	-7.4%	**
age < 35	Ref.	….					
age3554		-5.6%		-4.7%		-6.0%	
age55ov		5.1%		-6.5%	*	5.2%	
Asian		-0.3%		0.7%		-7.4%	
Black		3.7%		6.5%		-0.1%	
Latino		7.0%	*	13.3%	***	-3.7%	
White	Ref.						
Other		8.6%		-1.9%		3.6%	
HS&less	Ref.						
Some College		-1.2%		-6.0%		2.3%	
BA+		2.2%		3.5%		12.2%	***
Household Income							
< $20,000	Ref.						
$20K-$40K		11.0%	**	3.7%		14.7%	***
$40K-$60K		14.4%	***	7.3%	*	15.4%	***
$60K-$80K		13.3%	***	-1.1%		12.6%	**
$80K-$100K		3.7%		0.3%		10.5%	*
$100K +		8.0%	*	-2.3%		15.4%	***
Intercept		55.1%	***	66.5%	***	26.7%	***
Obs.		1,187		1187		1,187	
R-Square		0.098		0.100		0.125	

*** p<0.01 ** p<0.05 * p<0.1

TRENDS IN OPINIONS SINCE 2000

During this time of such rapid increase in house values, did public opinion shift in a parallel manner? Below we compare survey results from different years. Our aim is to see whether voters have increased their support for higher taxes and spending on state and local infrastructure.

Sales Taxes for Roads and Transit

An earlier PPIC Statewide Survey, in May 2001, contains questions that are comparable to the questions in the August 2004 survey that we have analyzed and can be usefully contrasted.

Both surveys had questions on an increase in the sales tax for local transit and infrastructure.

> The May 2001 question was: "Some say that local governments will have to spend much more money on new roads, transit, and other infrastructure projects to prepare for future growth in your region. Would you favor or oppose paying a higher sales tax for this purpose?"
>
> And in August 2004: "What if there was a measure on your local ballot to increase the local sales tax for roads and public transit projects by one-half cent for 20 years? Would you vote yes or no?"

Among all respondents, the results were as follows:

	May 2001	Aug. 2004
Favor	41%	68%
Oppose	56%	29%
Don't know	3%	3%

Variations in wording and question order may account for some of the differences in responses but cannot explain away this large shift in public support of higher taxes for local infrastructure spending. In this regard, the 2001 and 2004 surveys are very comparable. Both mention roads and both follow similar questions on the adequacy of local government funding for infrastructure. Between these two surveys 27% of all responses shifted on net from opposition to support, reversing a majority *against* to a majority of more than 2 to 1 *in favor of* a higher local sales tax to support infrastructure.

Adequacy of Local Funding

Opinions about the adequacy of local funding for infrastructure projects, previously found to be strongly correlated with support for taxes for the purpose, changed in parallel over the three year period.

In May 2001 the question was: “Overall, do you think your local government does or does not have adequate funding for the roads, transit, and other infrastructure projects that are needed to prepare for future growth in your region?”

In August 2004: “Overall, do you think your local gov't does or does not have adequate funding for the roads, school facilities, and other infrastructure projects that are needed to prepare for future growth in your part of California?”

Among all respondents, the results were as follows:

	May 2001	Aug. 2004
Does have adequate funding	43%	33%
Does not	48%	60%
Other/don’t know	9%	7%

It is worth noting that the 10 to 12% shift to the view that funding is inadequate is much smaller than the 27% shift in opinion about increasing the local sales tax to support infrastructure projects. One possible explanation for the difference in shifts is changes in the wording of the questions. The most salient change in wording was the addition of “schools” to the examples of infrastructure projects in the second question in the later survey. It seems improbable that this would account for the difference, since spending on schools generally receives strong support from voters. The more likely explanation is that respondents either felt that the funding situation had deteriorated or were simply more ready to pay higher taxes to meet the continuing funding shortfall.

More Infrastructure Funding

While the question about trading off state taxes for more infrastructure funding was asked for the first time in 2004, a 2003 question about Proposition 53 posed a somewhat similar choice about earmarking a share of General Fund revenues for infrastructure. The differences in responses again indicate a shift toward support of use of state taxes to fund infrastructure projects.

In September 2003 the question was: “Prop. 53 on the Oct. 7th ballot, called the Funds Dedicated for State and Local Infrastructure Legislative Constitutional Amendment, generally dedicates up to 3% of General Fund revenues annually to fund state and local (excluding school and community college) infrastructure projects. The fiscal impact includes potential transfers of General Fund revenues for state and local infrastructure of 850 million dollars in 2006-2007, increasing to several billions of dollars in future years, under specified conditions. If the election were held today, would you vote yes or no on Prop. 53?”

And in August 2004: “Which of the following statements do you agree with more—[r][1] I'd rather pay higher taxes and have the state government spend more money on roads and other infrastructure projects; [OR] [2] I'd rather pay lower taxes and have the state government ?”

Among all respondents, the results were as follows:

	Sept. 2003	Aug. 2004
Yes on Prop. 53/ [1] higher taxes and more money for roads and infrastructure	21%	49%
No on Prop. 53/ [2] lower taxes and less money for roads and infrastructure	49%	43%
Other/don't know	30%	8%

Although respondents may have perceived the import of these questions to be quite different, one about a diversion of existing funds from other purposes, the other about higher taxes and funds for infrastructure, the difference in the responses is consistent with the other indications of a general increase in support for public spending on infrastructure.

Did Homeowners Raise Their Support More than Others?

In order to understand whether homeowners followed the general trend in Californians' opinions in favor of higher taxes for public infrastructure spending, we conducted a more in depth analysis by estimating comparable linear probability models for the three PPIC surveys. Have homeowners always been more reluctant than others to support infrastructure spending, or did their reluctance shrink from 2001 to 2004 as overall support for infrastructure spending increased and house values escalated?

The most comparable question across the three surveys is on a local sales tax for transportation and other infrastructure. In this case the homeowner effect stood at +4.3 percent (significantly different from zero at the .1 level) in the 2001 survey. That is, homeowners were more supportive of the tax than renters by 4.4%. However, that relative support turned negative and fell to -3.7 percent in 2003 (a change between years significant at the .05 level) and fell even further to -6.9 percent in 2004 (with the 3-year difference significant at the .01 confidence level).

In other words, at the beginning of the period, support for a sales tax for local public infrastructure was 4*.3 % greater* among all homeowners than among than renters; in 2003 the difference had reversed so that support among homeowners was *3.7% less* than among renters; and by 2004 the shortfall had increased to *6.9% less* support than among renters.[17]

[17] Comparisons are based on a model that includes *all respondents* because the May 2001 survey omits the question on regular voting and drops the *belief that infrastructure funding is not adequate* variable because it was not included in the September 2003 survey. When the sample is restricted to regular voters and the model is estimated for 2003 and 2004, the homeowner effect goes from -1.7% to -10.1%, a change which is significant at the .01 level.

When this comparison of the homeowner effect over time was applied to the adequacy of local funding for roads and other infrastructure in 2001 and 2004, there were no significant differences in the opinions of homeowners and renters.[18]

The estimated 2004 homeowner effect in the model of support for higher taxes and state spending on infrastructure, +11.2%, is both highly significant (at the .01 level) and larger than in the earlier model for the same year which includes the adequacy of infrastructure variable. It is also larger than the homeowner effect (-5.3 %) in support of Prop. 53 in the 2003 survey, but the difference between the effects in 2003 and 2004 was not statistically significant.

In sum, between 2001 and 2004 there was a general increase in the level of popular support for higher taxes to fund greater spending on public infrastructure in California. This trend paralleled the rise in median house values and homeowners' investments in California real estate. At the start of the period, *homeowners* on average were more supportive than renters but *did not participate fully in the general trend*, and their support for higher taxes and infrastructure spending lagged. Therefore, the perverse *negative homeowner effect* we found in 2004 *is a recent development*.

THE OUTLOOK FOR INFRASTRUCTURE SUPPORT IN 2006

As we write, in February 2006, there is no serious debate about the need for increased public investment in California's infrastructure, Governor Schwarzenegger and the Democratic leadership in the legislature are developing competing comprehensive packages of infrastructure initiatives to put before the voters, and general level of support for infrastructure spending appears robust in recent opinion polls. Yet the outlook for ballot box approval of large-scale infrastructure funding in 2006 remains uncertain.

- **Homeowner support lagging**. We have found that opinion poll support for higher taxes to fund infrastructure is significantly lagging among homeowners, a key group that makes up three-quarters of the regular voters who must approve any funding proposals. This resistance appears to be a recent development.

- **Contradiction with rising home investments.** The new homeowner resistance to infrastructure spending has arisen in a period of unprecedented escalation in house values and in spite of homeowners' stake in the quality of the community infrastructure that sustains those values. In view of these paradoxically parallel trends, further increases in house values should not be expected to reverse homeowners' resistance and could increase it further.

- **Ballot box support lower than polls.** Moreover, support expressed for tax-supported spending on different kinds of infrastructure in past elections has been lower than in the opinion surveys that preceded those elections. Recent examples

[18] Based on a sample of all respondents.

include Propositions 47 (Kindergarten-University Education Bond) and 55 (Education Facilities Bond).

- **Low confidence in planning**. Finally, although there is widespread belief among voters that more funding is needed for infrastructure, the equally widespread lack of confidence in planning abilities reduces the willingness to provide that funding. Without a widely accepted plan, voters may not open the purse strings.

In view of these warning flags on the track to possible votes this year, there is an urgent need to deepen our understanding of which homeowners are most reluctant to support increased taxes for infrastructure and why. This understanding is needed to target efforts to counteract resistance that is based on misperceptions about homeowners' stake in the quality of the infrastructure. Just as importantly, improved understanding of the reasons for homeowners' new resistance can help policymakers to formulate and calibrate funding proposals to defuse it.

- Do homeowners in general subscribe more than others to the national conservative agenda of lower taxes and smaller government?

- Do large numbers of new buyers, who have become homeowners in recent years, naively believe that the rise in prices is irreversible, regardless of the condition of the public infrastructure?

- Have rising house prices caused a cost squeeze for recent buyers who are faced with large mortgage payments, and is a possible cost squeeze exacerbated by high property taxes linked to high purchase prices?

These competing hypotheses can be further explored by mining and correlating available opinion, census, and realtor data in more detail. The most promising veins for further analysis would focus on differences in housing costs, finances, and opinions between demographic groups dominated by new buyers, i.e., younger owners, and long-term owners. A third important vein of further analysis will be to explore the differences between homeowners' support for local sales taxes for infrastructure in the 2001 and 2004 PPIC surveys. It will also be important to analyze new survey and ACS data as it becomes available.

Resolution of these and other questions must be reached soon, lest the forces opposed to infrastructure funding capitalize on the uncertainties and resistances identified here.