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However, our instrument appears to be fairly randomly assigned with respect to characteristics of households that predict preferred taxes and spending. (See the body of the paper for more on this point.) Thus, our instrumental variables estimates should correspond to what the model predicts when we pick voters to be informed *at random* and vary the share of voters whom we inform. Put another way, the orthogonal case described above is the relevant one for predicting the effects of the model: lower tax salience generates higher property tax rates if politicians or bureaucrats like large government and wield agenda control.

## **Appendix II: Tests of How Arbitrarily Tax Escrow is Distributed Among Households**

### **A. The similarity of tax escrow and non-tax-escrow households**

In this section, we demonstrate that there is almost complete overlap in the support of the distribution of "treated" households (those with tax escrow) and the support of the distribution of control households (those without tax escrow). Such overlap in support suggests that tax escrow treatment is arbitrarily distributed among households.

To make this demonstration, we turn to the Residential Finance Survey (RFS, U.S. Census Bureau 2001). The RFS has excellent information on every aspect of a mortgage: the parameters of the mortgage itself, the financial characteristics of the borrower, and of course tax escrow status. Much of the mortgage information in the RFS is obtained directly from the lender, who is required to look up the loan. Thus, the mortgage information (including the tax escrow information) is accurate--it does not depend on a home owner's ability to recall the terms of his loan. In fact, the RFS arguably contains every variable that a bank would need to decide whether to recommend tax escrow. In addition, the RFS contains variables that the owner himself reports, akin to variables we find in the Census: income, current market value of the property, monthly housing costs (by type), mortgage status, tax escrow status. Note that the bank's and owner's report of tax escrow status agree 96 percent of the time.

Using probit regression and a propensity score algorithm, we regress a household's tax escrow status (1 if tax escrow, 0 otherwise) on every loan and household characteristic that a bank would plausibly use to determine whether to use tax escrow for the loan.<sup>1</sup> The estimated propensity score maximizes the power of the observable variables to explain tax escrow status. Appendix Table 5 shows the regression coefficients from the propensity score estimation for the 2001 RFS. Results for the 1991 RFS and 1981 RFS are similar.

Having computed a propensity score for each household, we demonstrate that the treated (tax escrow) and control distributions are extremely similar in Appendix Figure 1. The figure shows that the two distributions have almost identical support: the range of common support is literally 0.02 to 0.96. The distributions also peak in the same range: a propensity score of about 0.4. In other words, when we have nearly all of the relevant information on a mortgage, there is still a great deal of apparently arbitrary

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<sup>1</sup> These variables are: the year the property was acquired; the original amount of the mortgage loan; the assessed value of the property at the time the loan was made; the mortgage insurance type; whether the loan is sub-prime; the interest rate on the mortgage; points paid on the mortgage; the loan-to-value ratio at the time the mortgage was originated; an indicator for that loan-to-value ratio being 80 percent or below; an indicator for that loan-to-value ratio being between 80 and 95 percent; the current monthly housing cost; current household income; the current market value of the property (estimated by the owner); the *current* approximate loan-to-value ratio; the current unpaid balance on the mortgage; the owner's Hispanic ethnicity; the owner's being non-black; an indicator for a member of the household being 65 or older; whether the owner previously owned a home. We compute the current approximate loan-to-value ratio using data on current mortgage payments, current property values, and simple assumptions about the interest rate and increase in the property's value from purchase to the current time. We assume an average interest rate of 6 percent on a 30 year mortgage that commenced when the property was purchased. We assume that the current property value is equal to the property value at the time of purchase inflated by the state's house price FHFA index.

variation in tax escrow status among observably identical households.<sup>2</sup>

### B. Tests of spatial autocorrelation in tax escrow residuals

Nearly all of the plausibly problematic omitted variables--unobserved variables that affect both tax escrow status and tax rate-type outcomes--would exhibit spatial autocorrelation. This is both because households might co-locate based on such omitted variables (for instance, preferences for local amenities) and because of institutional factors that are geographically concentrated (for instance, houses in a certain area tend to be built by the same builders and are therefore alike in hard-to-observe ways).

For instance, suppose that an area has land that naturally lends itself to recreation--excellent opportunities for hiking and so on. Suppose that people interested in recreation are disproportionately likely to locate in the area and that they support higher local property taxes because they wish to support parks. Suppose that, knowing that they will pay higher taxes, they are keen on using tax escrow to spread out their payments. Such a scenario would generate negative bias: lower salience associated with higher tax rates (the opposite of what we find). For more on the likely sign of the biases, see the body of the paper. The point is not the sign of the bias, however. The point is that nearly all scenarios with omitted variables or endogeneity would generate spatial correlation. That is, so long as the amenity or other omitted variable is spatially correlated--which it almost certainly would be--a "marker" for such problems would be spatial correlation in *residual* tax escrow status.

Thus, a reasonable test of whether tax escrow status is randomly assigned *conditional* on the observable variables for which we control is a test of the spatial autocorrelation of residual tax escrow status. Specifically, we regress the percentage of households with tax escrow in a Census block on the full set of variables for which we control (including the SALO instrument) and we then compute residuals.<sup>3</sup> We test these residuals for spatial autocorrelation using the two most-often used statistics, Moran's I and Geary's C. If residual tax escrow status is approximately randomly assigned, we should not reject the null hypothesis of no spatial autocorrelation.

Moran's I (Moran 1950) is a test of spatial autocorrelation in continuous data based on cross-products of deviations from the mean. If the continuous variable  $x$  (the percent of households with tax escrow, in our case) is located at latitude  $i$  and longitude  $j$ , then Moran's I is:

$$I = \frac{n}{\sum_i \sum_j w_{ij}} \frac{\sum_i \sum_j w_{ij} (x_i - \bar{x})(x_j - \bar{x})}{\sum_i (x_i - \bar{x})^2}$$

where  $n$  is the number of observations,  $\bar{x}$  is the mean of the  $x$  variable, and  $w_{ij}$  is the distance between points  $i$  and  $j$ . The  $w_{ij}$  make up a spatial weight matrix. In the absence of spatial autocorrelation, the expectation of Moran's I statistic is  $-1/(n-1)$ , which tends to zero as  $n$  increases. A Moran's I statistic greater than  $-1/(n-1)$  indicates positive spatial autocorrelation, and a Moran's I statistic less than  $-1/(n-1)$  indicates negative spatial autocorrelation. The minimum possible Moran's I is  $-1$  and the maximum possible is  $1$ .

Geary's C is defined as:

$$C = \frac{n-1}{2 \sum_i \sum_j w_{ij}} \frac{\sum_i \sum_j w_{ij} (x_i - x_j)^2}{\sum_i (x_i - \bar{x})^2}$$

<sup>2</sup> The regression has an R-squared of 0.11.

<sup>3</sup> See the Data section of the paper for the list of control variables. Because we have demonstrated that it affects tax escrow, we must also control for the SALO instrument.

Geary's *C* varies between 0 and 2. A value of 1 meaning no spatial autocorrelation, a value closer to 0 means positive spatial autocorrelation, and a value closer to 2 means negative spatial autocorrelation. In comparison to Moran's *I*, which is a measure of global spatial autocorrelation, Geary's *C* is more sensitive to local spatial autocorrelation.

For our tax escrow residuals, Moran's *I* is equal to 0.015, which is not statistically significantly different from zero: the p-value is 0.441. Geary's *C* is equal to 1.014, which is also not statistically significantly different from zero: the p-value is 0.516. Both of these results suggest that, conditional on the observable variables, tax escrow status has so little spatial autocorrelation that it is unlikely to reflect omitted variables that would bias our main results.

### Appendix III: Text of Survey of Ohio homeowners

The following survey is part of a Stanford University research project on property taxation. We would be grateful if you take a moment to answer the questions below. Your answers will be anonymous and used purely for research, not for marketing or any other purpose. Please return your completed survey using the provided postage-paid envelope. If you would prefer, you may use your unique survey number located at the top right-hand corner of this page to complete the survey online at [insert link].

*Do you own the house at which you received this survey?*

Yes

No

*How many years have you lived at your current house?*

1

2-5

5-10

10-15

15+

*Do your property taxes pay for local services, state services, or both?*

local services

state services

both state and local services

do not pay property taxes

*Does your regular monthly mortgage payment include payments for property taxes on your house?*

Yes, taxes included in mortgage payment

No, taxes paid separately

No, have no mortgage/renting house

*Approximately how much did you pay in property taxes for your house during the 2008 year? (Simply give us your best estimate. You need not go to the trouble of consulting your records.)*

\$ \_\_\_\_\_

Note that one half of the surveys did not include the question, "Does your regular monthly mortgage payment include payments for property taxes on your house?"

### Appendix IV: Property Tax Limit Categorization

Experts categorize property tax limits into seven categories:

(i) specific property tax rate limits, which cap the tax rate that a specific type of local government--for instance, school districts--may use.

(ii) overall property tax rate limits, which cap the tax rate that all local governments *combined* may use. These are important because local governments--counties, municipalities, and school districts--often overlap. Without such an overall limit, local governments could potentially evade a specific limit by

reducing the tax rate of the restricted type of local government, raising the tax rate of another type of local government, and conducting intergovernmental transfers that negate the intention of the limit.

(iii) property tax revenue limits, which cap the total revenue collected by the property tax.

(iv) assessment increase limits, which cap the annual rate at which property assessments may increase.

They also occasionally roll assessments back to those in a particular starting year.

(v) limits on the general revenues of local governments, where those local governments are mainly supported by property taxes. Such limits prevent local governments from employing fees, sales taxes, or other revenue-raising devices to evade a property tax limit.

(vi) limits on the general expenditures of local governments, where those local governments are mainly supported by property taxes. Such limits have approximately the same effect as general revenue limits.

(vii) full disclosure or truth-in-taxation laws, which force local governments to inform taxpayers of *any* manner in which current proposals are likely to raise the property taxes they pay. These laws also force local governments to hold public hearings on any such proposals. Full disclosure laws are intended to prevent local government from evading property tax limits by obscure means, such as changing assessment ratios (which effectively change the tax rate).

It will be seen that several types of limits exist because each type of limit offers potential channels for evasion. Each type of limit reinforces one or more other limits.

Each type of limit can be imposed separately on each type of local government: municipality, school district, county, etc. For our analysis, we count a state as having a type of limit if it has that limit on any relevant type of government. This is necessary to make valid cross-state comparisons.

## Appendix References

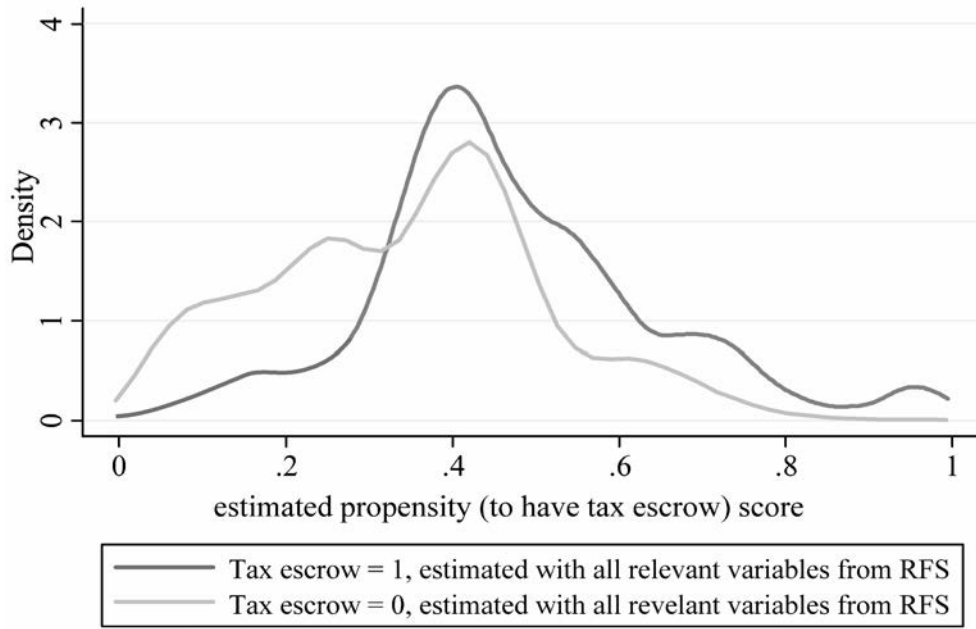
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Appendix Figure 1  
Distribution of the estimated propensity to have tax escrow  
for homeowners with and without tax escrow



kernel = epanechnikov, bandwidth = 0.0276



Appendix Table 1  
SALO Ratios of the Largest U.S. Bank Holding Companies

Bank Holding Company Name	total deposits in billions	SALO ratio times 1000
Nationsbank Corporation	160	25.2
First Union Corporation	134	6.5
Bankamerica Corporation	130	18.5
Chase Manhattan Corporation	126	51.5
Banc One Corporation	77	1.3
Wells Fargo & Co	71	21.5
Fleet Financial Group	69	99.6
Citicorp	63	1.7
Norwest Corporation	56	0.0
First Chicago NBD Corporation	54	5.7
U.S. Bank Corporation	50	1.9
PNC Bank Corporation	43	20.6
KeyCorp	40	0.4
Wachovia Corporation	37	1.7
Suntrust Bank	36	0.0
National City Corporation	36	19.8
Bankboston Corporation	33	0.0
Mellon Bank Corporation	30	126.8
Bank of New York Co	28	0.7
Bankers Trust New York Corporation	28	0.0
Comerica	23	8.8
Summit Bank Corporation	22	1.0
Mercantile Bank Corporation Inc	22	5.3
HSBC Hold PLC	21	11.2
Southtrust Corporation	21	7.7
BB&T Corporation	21	9.0
Huntington Bankshares	20	19.8
Regions Financial Corporation	20	13.7
Crestar Financial Corporation	18	10.4
Fifth Third Bank Corporation	17	7.5
First of America Bank Corporation	16	14.0
First Empire State Corporation	15	18.2
Marshall & Ilsley Corporation	14	0.0
Union Planters Corporation	13	17.9
Amsouth Bank Corporation	13	0.3
State Street Corporation	13	0.0
Star Bank Corporation	12	25.4

See notes at the bottom of the continuation of the table.

Appendix Table 1 continued  
 SALO Ratios of the Largest U.S. Bank Holding Companies

Bank Holding Company Name	total deposits in billions in 1998	SALO ratio times 1000
First Society Corporation	11	33.7
Greenpoint Financial Corporation	11	0.7
First Tennessee National Corporation	11	91.9
Compass Bankshares	11	0.0
Old Kent Financial Corporation	11	47.8
Northern Trust Corporation	11	0.0
Hibernia Corporation	9	6.9
Commerce Bankshares	9	0.0
Associated Bank Corporation	8	2.6
Dean Witter	8	0.0
Zions Bank Corporation	8	9.6
First American Corporation	8	1.9
First Virginia Bank	8	0.3
TB&C Bankshares	8	15.7
First Citizens Bankshares	8	1.6
First Commerce Corporation	8	0.1
Pacific Century Financial Corporation	7	2.7
J P Morgan & Co	7	0.0
Peoples Heritage Financial Group	7	24.2
TCF Financial Corporation	7	3.9
First National of Nebraska	7	0.0
Peoples Mutual Holdings	7	4.7
First Commercial Corporation	7	23.7

Notes: The SALO ratio is the bank holding company's ration of mortgage servicing assets to mortgage loans originated. SALO ratios are defined at the national level because mortgage servicing assets are centralized. The data shown are for 1998 which is the end of the period (1994 through 1998) that we use to construct the instrument for the 2000 estimation. Some time needs to elapse between mortgage origination and the experience of tax escrow.)

Appendix Table 2  
Descriptive statistics for variables used in this study

<u>variable</u>	<u>year</u>	<u>geographic level</u>	<u>units</u>	<u>mean</u>	<u>std dev</u>
property tax rate	2000	block group	mils	11.50	5.80
share of mortgage holders with tax escrow	2000	block group	percentage 0-100	61.54	22.82
share of home owners with tax escrow	2000	block group	percentage 0-100	44.52	21.41
share of all households with tax escrow	2000	block group	percentage 0-100	55.84	20.46
share of newly originated mortgages that are subprime	2000	block group	percentage 0-100	12.43	9.39
share of households that rent	2000	block group	percentage 0-100	29.87	22.09
average household income	2000	block group	thousands	58.09	29.38
average home value for owners	2000	block group	thousands	152.21	113.12
indicator for rural area	2000	block group	indicator 0/1	0.22	0.38
share of households with a child 18 years or younger	2000	block group	percentage 0-100	38.26	11.94
share of households with a member over 65 years old	2000	block group	percentage 0-100	23.05	10.39
average monthly housing cost, owners with mortgages	2000	block group	thousands	1.18	0.54
share of people who are non-white	2000	block group	percentage 0-100	23.20	25.26
average household size	2000	block group	number	2.69	0.50
share of households with a mortgage	2000	block group	percentage 0-100	40.19	20.98
share of households moved into house 3-5 years ago	2000	block group	percentage 0-100	24.73	10.86
share of households moved into house 6-10 years ago	2000	block group	percentage 0-100	18.01	7.94
share of households moved into house 11-20 years ago	2000	block group	percentage 0-100	19.60	8.54
share of households moved into house 21-30 years ago	2000	block group	percentage 0-100	13.47	8.49
share of households moved into house over 30 years ago	2000	block group	percentage 0-100	13.88	11.63
property tax rate	1990	block group	mils	10.50	6.00
share of mortgage holders with tax escrow	1990	block group	percentage 0-100	59.34	27.93
share of home owners with tax escrow	1990	block group	percentage 0-100	40.66	24.60
share of all households with tax escrow	1990	block group	percentage 0-100	55.06	23.25
share of all newly originated mortgages that are subprime	1990	block group	percentage 0-100	11.68	11.25
share of households that rent	1990	block group	percentage 0-100	31.40	22.01
average household income	1990	block group	thousands	39.93	21.30
average home value for owners	1990	block group	thousands	107.18	84.88
indicator for rural area	1990	block group	indicator 0/1	0.29	0.45
share of households with a child 18 years or younger	1990	block group	percentage 0-100	38.86	12.27
share of households with a member over 65 years old	1990	block group	percentage 0-100	23.43	10.99
average monthly housing cost, owners with mortgages	1990	block group	thousands	0.81	0.41
share of people who are non-white	1990	block group	percentage 0-100	17.88	24.75
average household size	1990	block group	number	2.79	0.52
share of households with a mortgage	1990	block group	percentage 0-100	36.75	20.66
share of households moved into house 3-5 years ago	1990	block group	percentage 0-100	24.20	12.43
share of households moved into house 6-10 years ago	1990	block group	percentage 0-100	15.12	8.13
share of households moved into house 11-20 years ago	1990	block group	percentage 0-100	24.42	10.97
share of households moved into house 21-30 years ago	1990	block group	percentage 0-100	13.25	9.71
share of households moved into house over 30 years ago	1990	block group	percentage 0-100	13.73	12.05

Appendix Table 2  
Descriptive statistics for variables used in this study

<u>variable</u>	<u>year</u>	<u>geographic level</u>	<u>units</u>	<u>mean</u>	<u>std dev</u>
property tax rate	1980	block group	mils	10.30	6.90
share of mortgage holders with tax escrow	1980	block group	percentage 0-100	57.90	28.83
share of home owners with tax escrow	1980	block group	percentage 0-100	39.87	25.57
share of all households with tax escrow	1980	block group	percentage 0-100	61.24	21.06
shares of households that rent	1980	block group	percentage 0-100	29.65	20.80
average household income	1980	block group	thousands	21.25	8.64
average home value for owners	1980	block group	thousands	54.83	31.56
indicator for rural area	1980	block group	indicator 0/1	0.27	0.43
share of households with a child 18 years or younger	1980	block group	percentage 0-100	42.91	13.24
share of households with a member over 65 years old	1980	block group	percentage 0-100	84.08	11.35
average monthly housing cost, owners with mortgages	1980	block group	thousands	0.31	0.13
share of people who are non-white	1980	block group	percentage 0-100	14.84	24.28
average household size	1980	block group	number	2.91	0.50
share of households with a mortgage	1980	block group	percentage 0-100	43.11	22.01
share of households moved into house 3-5 years ago	1980	block group	percentage 0-100	28.27	9.52
share of households moved into house 6-10 years ago	1980	block group	percentage 0-100	16.34	7.23
share of households moved into house 11-20 years ago	1980	block group	percentage 0-100	17.35	9.21
share of households moved into house 21-30 years ago	1980	block group	percentage 0-100	9.57	7.75
share of households moved into house over 30 years ago	1980	block group	percentage 0-100	6.92	7.00

Sources: U.S. Department of Commerce (1983, 1993, 2002, 2010); Federal Deposit Insurance Corporation (1975-2000, 1984-2000); Federal Financial Institutions Examination Council (2009); Mayer and Pence (2008)

Appendix Table 3  
 Effect of tax escrow (proxy for nonsalience) on tax rates, year 2000 data  
 dependent variable: property tax rate in mils

	OLS	IV
share mortgage holders with tax escrow	0.024 (0.006)	0.303 (0.072)
share households that rent	0.048 (0.005)	0.012 (0.011)
share mortgages that are subprime	-0.022 (0.013)	-0.048 (0.017)
share mortgages that are FHA/VA	0.008 (0.009)	-0.115 (0.031)
average household income	0.212 (0.017)	-0.011 (0.067)
average household income squared	-1.42E-03 (1.80E-04)	5.65E-04 (6.77E-04)
average household income cubed	3.85E-06 (6.69E-07)	-3.10E-06 (2.37E-06)
average household income to 4th power	-3.60E-09 (7.91E-10)	3.95E-09 (2.60E-09)
loan to value ratio	3.474 (0.384)	5.629 (0.774)
indicator: loan to value in 2nd quartile	1.194 (0.136)	0.839 (0.249)
indicator: loan to value in 3rd quartile	2.932 (0.250)	3.040 (0.441)
indicator: loan to value in 4th quartile	4.532 (0.363)	5.443 (0.596)
average home value	-0.031 (0.003)	0.003 (0.009)
indicator for rural area	-1.526 (0.198)	2.904 (1.181)
share with a child 18 years or younger	-0.008 (0.013)	0.006 (0.019)
share with member over 65 years old	0.022 (0.006)	0.064 (0.013)
average monthly housing cost	6.892 (0.907)	3.403 (1.271)
share who are non-white	-0.050 (0.005)	-0.043 (0.010)
average household size	0.755 (0.396)	1.233 (0.521)
share with a mortgage	0.011 (0.007)	-0.039 (0.017)
share moved in 3-5 years ago	0.005 (0.003)	-0.003 (0.005)
share moved in 6-10 years ago	0.020 (0.005)	0.023 (0.007)
share moved in 11-20 years ago	0.055 (0.006)	0.091 (0.012)
share moved in 21-30 years ago	-0.049 (0.009)	-0.039 (0.014)
share moved in over 30 years ago	0.034 (0.009)	0.053 (0.013)
constant	-10.830 (1.570)	-24.496 (3.742)

Notes: Ordinary least squares (OLS) and instrumental variables (IV) regressions with robust standard errors clustered at the county level. The instrument is the SALO ratio based on bank holding companies that do at least 50% of their business outside the state. Standard errors are in parentheses. Observations are at the block group level and are weighted by population. For descriptive statistics, see Appendix Table 2.

Appendix Table 4  
Responses to poll questions related to property taxes

Question	Answers and percentage of respondents
Which one of these taxes gives you the <i>least</i> for your money's worth? <sup>1</sup>	26% Social security tax 22% Federal income tax 21% State tax (sales/income) 16% Property tax 15% Not sure/all of them
From which level of government do you feel you get the <i>least</i> for your money? <sup>2</sup>	46% Federal 21% State 19% Local 13% Don't know/no answer
From which level of government do you feel you get the <i>most</i> for your money? <sup>3</sup>	23% Federal 20% State 38% Local 20% Don't know/no answer
Which level of government do you think spends your tax dollars most wisely--federal, state, or local? <sup>3</sup>	11% Federal 19% State 43% Local 27% Don't know/refused
How many cents of every tax dollar that goes to your [federal/state/local] government would you say is wasted? <sup>4</sup>	45 cents Federal 38 cents State 34 cents Local
Some of the biggest taxes people have to pay are.... No one likes to pay taxes, but thinking about those taxes, I'd like you to rank them, starting with the one you dislike most. <sup>5</sup>	29% Income tax 9% Social Security tax 23% Sales tax 36% Property tax 3% Other/don't know/refused
Suppose your state government must raise taxes substantially, which of these do you think would be the best way to do it? <sup>6</sup>	45% Sales tax 25% Income tax 10% Property tax 6% Other 14% Don't know
Of the taxes I name which would you least like to see increase...? <sup>7</sup>	26% Local property taxes 10% State sales taxes 7% State income taxes 22% Federal income taxes 9% Taxes on gasoline 18% Social Security taxes 7% Don't know

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Sources: 1: *Los Angeles Times* poll, December 1978. Authors' calculations based on Survey of Consumer Finances, 2001. 2: Advisory Commission on Intergovernmental Relations (1994). 3: Advisory Commission on Intergovernmental Relations (1993). 4: 1981 results from Gallup Poll (2009). 5: International Communications Research poll, February 2003. 6: Advisory Commission on Intergovernmental Relations (1976); see also note 31. 7: Princeton Survey Research Associates (1990).

Appendix Table 5  
Determinants of tax escrow status  
probit regression results with dependent variable: tax escrow (0/1)

mortgage is subprime	-0.829 (0.087)
household income	4.41E-06 (8.70E-07)
household income squared	-2.11E-11 (5.11E-12)
household income cubed	2.87E-17 (8.75E-18)
household income 4th power	-1.12E-23 (4.16E-24)
estimated loan to value ratio	-0.499 (0.270)
indicator: est loan to value in 1st quartile	-0.102 (0.096)
indicator: est loan to value in 2nd quartile	-0.001 (0.074)
indicator: est loan to value in 3rd quartile	0.045 (0.058)
current home value	-0.001 (0.000)
rural area	-0.296 (0.044)
household member over 65 years old	-0.071 (0.049)
annual housing cost	-1.21E-06 (1.13E-05)
non-white	0.395 (0.320)
household size	0.046 (0.032)
moved in 3-5 years ago	-0.053 (0.043)
moved in 6-10 years ago	-0.157 (0.045)
moved in 11-20 years ago	-0.233 (0.049)
moved in 21-30 years ago	-0.156 (0.061)
moved in over 30 years ago	-0.176 (0.108)
previously owned a home	-0.069 (0.031)
mortgage insurance	-0.737 (0.039)
original amount of the mortgage	4.41E-06 (9.26E-07)
assessed value of property at purchase time	3.04E-07 (3.98E-07)
current balance on mortgage	-4.39E-06 (7.53E-07)
current interest rate on mortgage	-0.072 (0.005)
points on mortgage	0.210 (0.016)
actual loan to value ratio	0.868 (0.169)
indicator: loan to value ratio 0.95 or greater	-0.601 (0.050)
indicator: loan to value ratio 0.80 or smaller	0.284 (0.047)
constant	0.498 (0.194)

Notes: Probit regressions using data on property owners from the Residential Finance Survey 2001. Standard errors are in parentheses. Observations are at the household level.