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# Public Support for Transportation Sales Taxes in California: A Two County Assessment

**Abstract:** Voters in California counties have been asked to approve transportation sales taxes on over 75 different occasions, and according to the Legislative Analyst, revenues from local option transportation sales taxes accounted for 15% of all revenues raised statewide for transportation during fiscal year 2005/2006. While many analyses examining public support for such taxes have been undertaken using aggregate-level data, little work has been done examining the individual decision to support a transportation sales tax at the polls. In this paper, we argue that an individual's propensity to approve or deny a sales tax extension for transportation purposes is a function of a set of attitudinal and self-interest factors. Using a two-county survey, we find that opposition to the renewal of the existing sales tax is centered among anti-tax, political conservative residents who do not trust elected officials. Furthermore, we find that while the two counties border one another, the impact of the attitudinal and self-interest factors in the model vary significantly by county. The findings are important for transportation practitioners who face future transportation sales tax elections, and for political scientists who are attempting to develop a generalizable set of factors which explain public support for transportation sales taxes.

**Keywords:** county; elections; sales tax; transportation.

## 1 Introduction

Over a decade ago a coalition of highway-oriented interests referred to California's roads and freeways in the following way:

California, which once had the best highway system in the country, now ranks near the bottom nationally, as investment in the state's transportation infrastructure has failed to keep pace with population growth and burgeoning vehicle travel. (Transportation California 1999: p. 3)

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Commentators, highway engineers, and elected official have asserted with great zeal that the state is failing to support either the adequate addition of roads or the appropriate level of maintenance for the roads that do exist. National rankings of the nation's most difficult traffic and congestion problems routinely include several California metropolitan areas. In a 2010 study of the nation's urban highways, California was rated as having eight of the worst fifteen places with roads in "poor" condition (TRIP 2010). In addition to the state's deteriorating roads, Californians also face deteriorating traffic conditions, which lead to frayed nerves, higher transport costs, intensified pollution, greater noise levels, endangered political careers, conflicts over locating highway and street improvements, and disputes over how to pay for the billions of dollars that traffic management entails, all of which are relatively unexplored by political scientists.¹

Considering the costs involved and the importance of transportation concerns among the general public and for officials who are managing urban policy agendas, the lack of political science involvement is perhaps unsurprising. Even though the political fortunes of most elected officials, those who manage the politics of everyday life, are crucially affected by how citizens feel about the quality of what is happening immediately around them – at their schools, their shopping centers, their recreation facilities, their sense of personal security, and how maddening it is to navigate to work – political scientists tend not to concern themselves with the everyday aspects of community life, especially as it relates to the movement of goods and people.

Apart from the topicality of transportation policies, there are other reasons why this issue should engage students of local politics. Urban growth and development do play central roles in urban theoretical formulations. Indeed, there are scholars who make a strong case for the social construction of the urban built form as being the central component of any study of urban politics. The growth machine, regime politics, city limits, and other approaches emphasize geography, land use conversion, land rents, and development issues have clearly subsumed a great portion of what has transpired among those claiming to study urban politics (Williams 1971; Cox 1973; Logan and Molotch 1987; Lewis 1996).

In addition, transportation networks and related issues regarding communication flows are critical to urban development, and struggles over transportation infrastructure reflect the nature of political power. Simply consider how

<sup>1</sup> Of course there is a huge technical, engineering, and economic literature and urban planners have been involved extensively in the transportation planning area. However, among political scientists there is the classic work of Doig 1966; Lupo et al. 1971; Altshuler et al. 1979; and the more recent work of Panagopoulos and Schank 2008.

development and land values often follow transportation networks. Bringing less intensely used land into the urban conversion process depends on the capacity to affect decisions on extending or improving roads into non-urban places, and the public's willingness to support financing of additional transportation infrastructures so as to fuel urban development.

Moreover, there are many controversies that emerge from the link between transportation and development. There are evaluations of the distributive implications, such as the classic link between housing segregation, transportation, and job accessibility (C. Hendrickson and J. Pucher unpublished; Holzer 1991; American Public Transit Association 1993; Jargowsky 1997). There are also disputes about the link between urban form and environmental issues, including air quality, habitat conservation, agricultural preservation, flooding, and water quality, and climate change; and these are in turn connected to general conversations about roads and highways and managed growth, which currently get articulated in terms of such expressions as "smart" growth (Urban Land Institute 1998; Briechle 1999, Handy 2005).

Further complicating matters is the relatively sparse scholarship utilizing individual-level data which focuses on decisions to approve or extend a transportation sales tax measure. While Hamideh et al. (2008) examine the 2004 failure of Measure B in Ventura County, California, using data from a survey of general election participants, most research on transportation sales tax elections takes the form of case studies (Nelson and Colman 1991; Beale et al. 1996; Haas et al. 2000; Werbel and Haas 2001; Crabbe et al. 2005; Weinstein et al. 2006) or aggregatelevel analyses using county-level indicators (Haas et al. 2000) or precinct-level census and voting data (Hannay and Wachs 2007). Case studies and aggregatelevel analyses have been valuable in identifying factors which lead to approval of such taxes. However, these studies tend to focus on either the general decisionmaking and contextual dynamics of issue outcomes, rather than on micro-level, individual behavior. Our study uses individual-level data, allowing us to add additional factors to our understanding of what might affect the adoption of new or higher transportation taxes.

We view an individual's propensity to approve or deny a sales tax extension for transportation purposes as a function of a set of attitudinal and self-interest factors. Pinpointing the nature of these attitudes and other factors is complex because decisions about funding road and freeway improvements touch on so many issues. In this paper, we hope to contribute to the understanding of transportation politics by determining the factors which predicted whether the individuals in two southern California counties (Riverside and San Bernardino) supported an extension of local sales taxes for the funding of transportation infrastructure and transit.

## 2 The Setting and Survey Methods

The two-county area under study manifests virtually every facet of urban problems, including the rapid transformation of previously rural places in urban uses, increasing demographic diversity, infrastructure stress, older places struggling to maintain their vitality as residential and commercial centers, and institutional complexity involving varieties of local regimes and conflicts between localism and regionalism.

The data in this study were derived from a telephone survey of randomly selected households in the two-county area, conducted in late 2001 and early 2002. Telephone survey respondents were randomly selected from a comprehensive sample frame consisting of all telephone working blocks, which contain residential telephone numbers in the two counties. Over 2600 residents (2695) were surveyed from the two-county area for a 95% level of confidence and an accuracy of approximately  $\pm 1.9\%$  for overall findings. In Riverside County the sample size was 1147 households (an accuracy of  $\pm 2.9\%$ ), and the sample size in San Bernardino County was 1548 (an accuracy of  $\pm 2.5\%$ ).

Although the yearly survey typically is composed of quality of life questions, it also occasionally includes questions at the request of public and private agencies. In the 2001/2 survey, both Riverside and San Bernardino County governmental agencies submitted questions tapping the pulse of the community regarding extension of the existing half-cent transportation sales tax (Measure A in Riverside County and Measure I in San Bernardino County). Along with questions on extension of the Measures, the survey also included items which measured attitudinal and self-interest factors which theoretically could be linked to support for the sales tax extensions. The derived data provide a chance to explore a number of possible factors that affect citizen support of the extension at the individual-level.

Each county previously approved a half-cent local option sales tax for transportation. Table 1 identifies the major components of both Riverside County's Measure A and San Bernardino County's Measure I in their original and extended forms. The measures are remarkably similar in terms of expenditure categories, but differ somewhat in how funds were to be allocated across the expenditure categories. Riverside County's Measure A was placed on the ballot in November 1988 and was approved with 79% of the vote. It contained a multimodal expenditure plan with funds earmarked for regional freeways and highways, for local streets and roads, and for public transit. The expenditure plan also created three geographic subareas (Coachella Valley, Palo Verde, and Western Riverside). The

<sup>2</sup> Creating subareas serves several purposes. First, it ensures that revenues generated in the subarea will be returned to the subarea for expenditure. Second, it allows for more project specificity in the expenditure plan, which has implications for micro targeting during the election campaign.

Table 1: Major Components of Measure A and Measure I.

Riverside County Measure A: 1988		Riverside County Measure A: 2002	
Area and Project Category	Allocation	Area and Project Category	Allocation
Western Riverside County Area		Western Riverside County Area	
Highways and Commuter Rail	25%	Highway Improvements	30%
Local Streets and Roads	40%	New Corridors	11%
Specialized Transportation	2%	Commuter Rail/Intercity Bus/Special-	12%
Area Total (in millions)	\$617	ized Transit/Commuter Services	
		Regional Arterials	%6
		Local Streets and Roads	29%
		Bond Finance	%8
		Economic Development	1%
		Area Total (in millions)	\$3360
Coachella Valley Area		Coachella Valley Area	
Highways and Regional Arterials	25%	Highways and Regional Arterials	20%
Local Streets and Roads	40%	Local Streets and Roads	35%
Specialized Transportation	2%	Specialized and Public Transit	15%
Area Total (in millions)	\$240	Area Total (in millions)	\$1255
Palo Verde Area		Palo Verde Area	
Local Streets and Roads	100%	Local Streets and Roads	100%
Area Total (in millions)	\$13	Area Total (in millions)	\$47
Total (in millions)	\$870	Total (in millions)	\$4662

(Table 1: Continued)

San Bernardino County Measure I: 1989		San Bernardino Measure I: 2004	
Area and Project Category	Allocation	Area and Project Category	Allocation
San Bernardino Valley Area		San Bernardino Valley Area	
Major Freeway and Highway Projects	23%	Freeway Projects	29%
		Freeway Interchange Projects	11%
Local Streets and Roads	19%	Major Streets	20%
Major Streets	12%	Local Streets and Roads	20%
Commuter Rail	%8	Metrolink/Rail Service	%8
Elderly & Handicapped Transit	%9	Express Bus/Bus Rapid Transit	2%
Traffic Management and Environmental	2%	Service	
Enhancement		Senior and Disabled Transit Service	%8
Area Total (in millions)	\$1289	Traffic Management Systems	2%
		Area Total (in millions)	\$4520
Mountain-Desert Subareas		Mountain-Desert Subareas	
Arterial and Regional Projects	%59	Local Streets and Roads	%02
Local Streets and Roads	30%	Major Local Highway Projects	25%
Elderly & Handicapped Transit	2%	Senior and Disabled Transit Service	2%
Area Total (in millions)	\$328	Area Total (in millions)	\$1250
		Cajon Pass Area Area Total (in millions)	\$170
Total (in millions)	\$1617	Total (in millions)	\$5940

Source: Measure A and Measure I expenditure plans accessed from the Riverside County Transportation Commission (http://www.rctc.org) and San Note: Total expenditures are based upon projections developed in expenditure plans.

Bernardino Associated Governments (www.sanbag.ca.gov).

extension of Riverside County's Measure A was placed on the ballot in November 2002 and was approved with 69.2% of the vote. The extended measure was also multimodal in nature and maintained the three geographic subareas. It took effect in 2009 and will expire in 2039.3

San Bernardino County's first attempt to enact a half-cent local option sales tax came in 1987. It failed, receiving only 44.9% of the vote. Two years later, 59.8% of county voters voted yes on Measure I, which imposed a halfcent sales tax for transportation purposes. Similar to Riverside's Measure A, Measure I consisted of a multimodal expenditure plan and created geographic subareas within the county (Colorado River, Morongo Basin, Mountains, North Desert, San Bernardino Valley, and Victor Valley). The extension of Measure I was placed on the ballot in November 2004 and was approved with 80% of the vote. The extended measure maintained the multimodal funding approach and the six geographic subareas, but added an expenditure plan including freeway and interchange projects along Interstate 15 in the Cajon Pass, which is the major north-south freeway connecting the San Bernardino valley with the mountain-desert areas of the county. Measure I took effect in 2010 and will expire in 2040.

Although communities throughout the nation are routinely limited in their ability to raise and spend funds, California's local regimes have been particularly constrained fiscally, as a consequence of Proposition 13 together with several revenue-limiting progeny and court interpretations, which have made it very difficult for all governments to avoid seeking public approval for tax increases (O'Sullivan et al. 1993, 1995; Ibele and Borenstein 2001). However, the counties in the study region were successful in the late 1980s in getting an increase in the respective county sales taxes, with explicit votes of the local population required. Each of the sales tax measures had a 20 year life and would lapse unless the voters extended them. Riverside's extension, Measure A, was approved by its county voters in 2002 and San Bernardino's voters approved Measure I, in 2004. While the original votes in the 1980s only required a simple majority vote, the extensions required a 2/3<sup>rds</sup> vote of the public.

<sup>3</sup> The Measure A extension was governed by a Public Utilities Code (PUC §240000) statute specific to Riverside County which did not require a twenty year sunset date. When San Bernardino County went to the ballot in 1989, it ran Measure I under a blanket PUC statute (§190000) which did require a sunset date not to exceed 20 years. However, the California legislature modified the PUC in 2003 which removed the 20 years sunset requirement and allowed counties to lengthen the duration of the sales tax (AB 427). This allowed San Bernardino County to run a 30 year extension in 2004.

## 3 The Analytical Approach

Our analysis focused on whether or not the respondent was willing to support an extension of the half-cent local option sales tax earmarked for transportation purposes. Such taxes have proliferated throughout the nation because they have considerable appeal to officials and citizens.<sup>4</sup> The appeal rests on six considerations. First, elected officials have political cover. Legislators can nurture and support taxes without exposing themselves to the charge of having raised taxes since it is the voter who actually sanctions the increase. Legislators simply provide the voter the option. Second, the sales tax measures have measurable results. It is possible to link a specific service and project with public revenues. Voters are able to link concrete actions, structures, buildings, or services to particular fees and taxes, especially when governmental entities advertise the use of measure dollars near a construction site (i.e., a construction site sign that reads "This project is funded with Measure I dollars"). Third, funds generated through local measures are earmarked for transportation purposes. This provides assurance to voters that funds will not be diverted to uses that are not intended by them, thereby addressing a major source of voter skepticism since many voters believe general taxes often go to projects that they do not support. Fourth, local measures provide speed and flexibility. Local measures all contain expenditure plans which outline the projects to be funded by the half-cent sales tax. As a result, the ordinary budget process is not required and funds can move quickly and directly to implement projects and avoid the lags and transaction costs associated with intergovernmental grants and transfers. Fifth, there are *incentives* to generating funds through local measures. The federal government and states, including California, provide funding when local governments can provide a locally generated match, so localities can leverage federal and state dollars with locally produced revenue. Finally, local measures have the advantage of local control. Voters are often skeptical of revenues generated in the county and sent to Sacramento because there is a perception that the revenues do not return to the county. The local option ensures that local revenues generated in the county stay in the county and are expended in the county (Goldman et al. 2001; Green 2006).

The survey items used to predict support for the tax extension are described below.

**<sup>4</sup>** According to the Intergovernmental Forum on Transportation Finance, 26 states have adopted dedicated local option transportation sales taxes (PRINCIPALS 2008).

**<sup>5</sup>** While not all state transportation funding programs require a local match, certain programs do require a match from local governments (e.g., the Grade Separation Program requires a 10% non-state match).

### 3.1 Political Predisposition

We expect that opinions regarding a tax increase or the extension of an existing tax are likely to incite those individuals who have not seen a tax worth supporting in decades, if ever. Since the enactment of Proposition 13, many Californians, including many in the study region, have adopted a kind of generalized opposition to all tax increases at all times. These "tax rebels" (Neiman and Riposa 1986) convey a kind of sweeping anti-government outlook, which is associated with an almost automatic opposition to any kind of tax (Sears and Citrin 1982; Field 1988). We would expect individuals with a generalized hostility towards government, public spending, and taxes to be more aligned with a self-expressed political conservatism or an affiliation with the Republican Party, which regularly opposes tax increases and often underscores the need for less, not more, public spending.

As a result, we include four measures of political predisposition in the analysis. First, we use the respondent's political philosophy. As part of the survey, respondents were asked to indicate whether they were very liberal, somewhat liberal, middle of the road, somewhat conservative, or very conservative. Higher scores indicate a higher level of conservatism and we expect higher levels of conservatism to be negatively related to support for a local transportation sales tax measure.

Second, we use the respondent's party identification. We might expect Republicans to oppose extension of the tax measure. Yet another perspective is that one might actually expect less opposition from Republicans because the measure at hand was merely an extension of an existing half-cent sales tax, not a new tax. In fact, this argument was one of the arguments made by supporters of the measures in both counties. In contrast, Hamideh et al. (2008), in their study of Ventura County's failed attempt to enact Measure B in 2004, found that Democrats were more likely to support the adoption of a new transportation sales tax measure. Respondents were asked to indicate whether they were a Democrat, Republican, Independent, or "Other." The model contains a dummy variable coded "1" for Democrat and "0" for Republican, Independent, or Other. We expect being a Democrat is positively related to support for a local transportation sales tax measure.

Third, we included a proxy for the respondent's general willingness to support raising more public revenue. In 2002, voters statewide were asked to vote on a bond measure to fund California's college and university facilities. Respondents were asked whether they would definitely or probably vote yes or definitely or probably vote no. Higher scores on the item indicate that the respondent is less willing to support the bond, thus less willing to support raising revenue in general. We expect opposition to the education bond measure to be negatively related to support for a local transportation sales tax measure.

Finally, we included a measure of public confidence in local public officials. Respondents were asked whether they had a great deal of confidence, some confidence, not much confidence, or no confidence that elected officials in their cities or communities would adopt policies to benefit the general community. Lower scores indicate more confidence in local public officials. Because local officials are charged with managing the revenues generated from local measures, we anticipate that there will be a negative relationship between the confidence score and support for a local transportation sales tax measure (that is, those with the most confidence – meaning the lower score – are more likely to support the tax extension).

## 3.2 Evaluations of Existing Levels of Public Services and the Region

We use six items in which the respondent provides evaluations of local public services and the region itself. The first measure is satisfaction with the county as a place to live. Respondents were asked whether the county was a very good, fairly good, neither good nor bad, fairly bad, or very bad place to live. Higher scores indicate *less* favorable ratings of the county as a place to live and should be negatively related to support for a local transportation sales tax measure.

Second, we used a measure of the respondent's rating of local streets and roads. Each respondent was asked whether the way local streets and roads were kept up was excellent, good, fair or poor. Higher scores indicate *dissatisfaction* with the way local streets and roads are kept up.

Insofar as a particular policy or program of road and highway improvements appears to be general and diffuse in its benefits, one would expect general support for such projects. However, it is not clear at all how one's orientation to streets and highways should shape opinion. Satisfied drivers might believe that new taxes to fund improvements or new roads, for example, are not necessary. On the contrary, though, currently satisfied drivers might also believe that spending is necessary to maintain the quality that exists in the face of growing traffic. Dissatisfied drivers might favor spending for roads and highway improvements in order to make their commuting lives easier. But they might also be so angry or cynical about a project's ability to make improvements that they are likely to oppose new taxes for projects or they might have to decide to use an exiting strategy and leave the region rather than pay higher taxes (Hirschman 1970; Lyonset al. 1992). Simply put, it is unclear as to whether there will be a positive or negative

(or no) relationship between rating of streets/roads and willingness to support a tax extension.

Third, respondents in both counties were asked questions about Metrolink, which is the major southern California commuter rail service connecting Riverside and San Bernardino Counties with Los Angeles and Orange Counties, and includes connections to the major bus service in each county. Riverside County residents were asked to provide a favorability rating of Metrolink and bus service. San Bernardino County residents were asked whether it was very important, somewhat important, or not important to use new Measure I revenue for expanded Metrolink and bus service. Accordingly, we created dummy variables coded "1" for favorable assessments of Metrolink and bus service and "0" for unfavorable assessments.<sup>6</sup> Again, if the tax extension is seen as primarily a caroriented boon, one might expect a negative relationship. On the other hand, if the respondent perceives of the tax extension as a general source of funds, significant amounts of which might support Metrolink and bus service, then one might expect a positive relationship. Unlike bus service, Metrolink only serves the Western Riverside subarea of Riverside County and the San Bernardino Valley subarea of San Bernardino County. While more than 40% of respondents in other subareas view Metrolink favorably, it is theoretically possible that the relationship between Metrolink favorability and support for an extension of the sales tax could be tempered by geographic proximity to Metrolink service. As a result, we include an interaction term in the multivariate modeling (see Tables 4 and 5).

Finally, we included three measures of the respondent's perception of the county economy. The first measure is a sociotropic evaluation of the county economy. Because local ballot measures place significant demands on voters to collect information in the absence of candidate or party cues, voters may be risk averse in choosing to extend a local sales tax in the face of a poor economy (Bowler and Donovan 1994). To evaluate this hypothesis, our survey respondents were asked if the county economy was excellent, good, fair, or poor. Higher scores indicate that the respondent perceives the economy as being poor and should be negatively related to support for a local transportation sales tax measure.

The second and third measures are pocketbook evaluations. If the voter's family income is not enough to meet their current financial obligations, then

<sup>6</sup> We assume that a San Bernardino County resident would hold a favorable rating of Metrolink and bus service if s/he believes it is very important to use Measure I revenue for expanded service. As a result, when creating the favorability dummy variables for Metrolink and bus service, we coded the respondent "1" if s/he viewed increased revenues as very important and "0" (unfavorable) if the respondent viewed increased revenues as somewhat important or not important. While conservative, we believe the measure to be a reliable proxy for favorability.

the voter may be less likely to vote to extend the local transportation tax. Each respondent was asked if household income was enough to save and buy extras, just enough to pay the bills, or not enough to meet your bills and obligations. Higher scores indicate that income is not enough to meet current financial obligations, which should be negatively related to support for a transportation sales tax measure. That is, the importance of funding transportation should decrease because the voter is more concerned about paying the mortgage and putting food on the table than paying an extra half-cent on every dollar spent on goods and services. As a follow-up question, each respondent was then asked if their family would be better off, worse off, or about the same one year from now. Higher scores indicate that the respondent perceives their future financial condition to be worse off, which should also be negatively related to supporting the transportation sales tax.

#### 3.3 Self-Interest

Two measures of self-interest factors were included in the modeling. First, we included a measure of the number of cars used by the members of the household. We assume the number of cars is related to greater use of freeways and local streets and roads, and thus should be positively related to support for the local transportation sales tax extension. Second, we included a measure of commute time. Each respondent was asked to report the number of minutes spent each day commuting to and from work. If one assumes that transportation improvements will reduce the length of time needed for commuting, then we expect a positive relationship between commute time and support for the local transportation sales tax.

Self-interest factors could also include transportation service or certain characteristics of projects in the expenditure plan of the measure. A voter may be more inclined to support the extension of a measure if she will more directly benefit from a particular service or project. For example, Hannay and Wachs (2007) found that voters in Sonoma County were more likely to support a transportation sales tax measure if they lived near US-101, the major transportation corridor in the county and the corridor where many of the expenditure plan projects would be located. While we are able to examine the effect of geographic proximity to Metrolink service on the relationship between favorability and support for extending the sales tax, the survey did not include items which inquired about certain projects included in

<sup>7</sup> Retired and unemployed respondents were not asked the question. They, along with individuals who work at home and do not commute, are given a value of "0" on this measure.

the expenditure plans of each measure. Thus, we are not able to empirically assess the impact of such projects on support for the extension of Measures A and I.

#### 3.4 Controls

The analysis also includes a set of social background measures as controls, including the respondent's age, family income, education level, race/ethnicity, gender, and how long the respondent has lived in the county.

## 4 Findings

The dependent variable in the analysis is whether or not the respondent is supportive of extending the half-cent transportation sales tax currently on the books in the two-county study region. Table 2 presents the breakdown of support among survey respondents who expressed a view for renewing the transportation sales tax in the two counties. What is revealed is that the two counties seem remarkably similar with respect to their expressed level of support for renewing the transportation sales tax, although there is a very modest tendency for respondents in San Bernardino County to be more supportive of extending the transportation sales tax. Two things are worthy of note here. First, the level of support in both counties exceeds the two-thirds vote requirement for local option transportation taxes. Second, the level of support in both counties is remarkably similar to the actual outcome when the measures were placed before the voters in 2002 and 2004. Riverside County voters approved Measure A in 2002 with 69.2% of the vote and San Bernardino County voters approved Measure I in 2004 with 80.0% of the vote.

It is also worth noting that in the context of an actual election and campaign, depending on themes, the relative resources of the various sides, overall turnout,

**Table 2:** Percent Voting Yes/No on Extending Transportation Sales Tax in Riverside and San Bernardino Counties.

Vote	Riverside County	San Bernardino County
Yes	72.2%	75.8%
No	27.8%	24.2%
n=	997	1367

Note: Undecided and non-answers excluded.

the composition of turnout, and the exact nature of the spending proposed through the new revenues, there might be a substantial difference between who votes to extend the sales tax and who does not. We began assessing these differences by analyzing the bivariate relationships between the study predictors outlined above and support for extending the half-cent sales tax. The results of the bivariate analysis are presented in Table 3.

Reported in Table 3 is the percentage of respondents who indicated intent to oppose the sales tax extension by each of the study predictors. We have reported the results for the study region as a whole and by county. The results indicate various levels of significant associations at the bivariate level. The results seem particularly striking for political predispositions. Indeed, a notable majority of respondents who are most likely to vote no on a state bond increase for educational purposes are also likely to vote no on the transportation sales tax. In fact, while only 25.6% in Riverside County and 16.4% in San Bernardino County indicate they intend to definitely vote yes on the education bond and no on the transportation sales tax, nearly double that rate in Riverside County (51.5%) and nearly quadruple that rate in San Bernardino County (63.6%) indicate their opposition to the sales tax measure among those who definitely would vote no on the bond measure. Notable increases in the intent to vote no on the transportation sales tax extensions occur as residents have less confidence in public officials in both counties, and identify with a non-Democrat party in San Bernardino County. Of interest, however, is that in Riverside County, the general pattern is that the more conservative a respondent is, the more likely he/she is to oppose the tax extension. But the respondents categorizing themselves as "very liberal" break the pattern, and are nearly as opposed to the tax extension as the "somewhat conservative" respondents.

Measures of satisfaction with the region as a place to live and ratings of the way streets and roads are maintained also appear to affect the inclination to support the extending the local transportation sales tax, but only in San Bernardino County. While Riverside County respondents are more likely to oppose Measure A when the county is viewed as a very bad place to live and streets and roads are maintained very poorly, the differences fail to meet acceptable levels of statistical significance. It is noteworthy that attitudes regarding Metrolink and local bus service are quite strongly related at the bivariate level. Respondents in both counties are approximately seven percent more likely to support the extension of the transportation sales tax measures when transit options are viewed favorably.

Perceptions of the economy also affect support for the sales tax extensions; however, the results once again vary by county. As predicted, economic evaluations were negatively related to the extensions. The first measure of economic evaluation

**Table 3:** Bivariate Relationship Between Study Predictors and Percent Indicating Intent to Oppose Transportation Sales Tax Extension.

Predictor of Support for Extending Transportation Sales Tax	Percent Indicating a NO Vote on Extending Transportation Sales Tax				
	Two-Counties	Riverside	San Bernardino		
Confidence in Local Public Officials					
Great Deal of Confidence	15.2%***	17.1%***	13.5%***		
Some Confidence	21.7%	24.8%	19.4%		
Not Much Confidence	29.2%	33.3%	26.4%		
No Confidence	41.1%	40.4%	41.6%		
Support for 2002 Statewide Education Bond					
Definitely Vote Yes	19.9%***	25.6%***	16.4%***		
Probably Vote Yes	22.6%	25.4%	20.7%		
Probably Vote No	43.2%	43.5%	42.9%		
Definitely Vote No	57.6%	51.5%	63.6%		
Whether or Not Democrat					
Democrat	21.9%***	25.7%	19.5%***		
Not Democrat	27.9%	28.8%	27.1%		
Self-Rated Political Philosophy					
Very Liberal	26.4%***	28.6%***	25.2%		
Somewhat Liberal	21.9%	18.6%	23.8%		
Middle of the Road	21.1%	22.3%	20.2%		
Somewhat Conservative	28.9%	31.8%	26.5%		
Very Conservative	34.9%	41.1%	30.3%		
Rating of County as a Place to Live					
Very Good	22.7%***	24.4%	20.3%***		
Fairly Good	23.8%	28.1%	20.9%		
Neither Good nor Bad	27.9%	29.0%	27.3%		
Fairly Bad	41.9%	45.7%	40.2%		
Very Bad	43.8%	36.4%	45.3%		
Ratings of Streets and Roads	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	221111			
Excellent	17.3%***	23.1%	11.1%***		
Good	22.6%	25.7%	19.4%		
Fair	23.2%	26.2%	21.1%		
Poor	32.4%	34.2%	31.6%		
Favorability Rating of Bus Service		2 //			
Favorable	22.4%***	24.8%*	20.2%**		
Unfavorable	28.9%	31.7%	27.3%		
Favorability Rating of Metrolink			_, .,, ,,		
Favorable	22.4%***	25.3%*	19.4%***		
Unfavorable	29.7%	32.6%	28.3%		
Rating of the Economy in County	27., 70		20.570		
Excellent	24.4%**	28.9%**	18.2%		
Good	23.0%	22.5%	23.5%		

(Table 3: Continued)

Predictor of Support for Extending Transportation Sales Tax	Percent Indicating a NO Vote on Extending Transportation Sales Tax			
	Two-Counties	Riverside	San Bernardino	
Fair	26.0%	31.6%	22.7%	
Poor	33.2%	38.1%	31.4%	
Personal Financial Condition (Current)				
Enough to Save and Buy Some Extras	22.4%***	25.1%	20.4%***	
Just Enough to Pay Bills	26.5%	28.9%	24.7%	
Not Enough	35.2%	35.8%	34.9%	
Personal Financial Condition (Prospective)				
Better Off	24.2%	28.1%	21.2%*	
Same	26.4%	26.1%	26.6%	
Worse Off	32.6%	30.0%	34.7%	

 $<sup>\</sup>chi^2$  p-values: \*p<0.05, \*\*p<0.01, \*\*\*p<0.001.

was the sociotropic assessment of the county economy. In both counties, the measure was negatively related to support for the sales tax extension, but the finding is only statistically significant for Riverside County respondents.<sup>8</sup> The other measures of economic performance tested the impacts of pocketbook evaluations of support for the sales tax extensions. Both the current and prospective personal financial condition items were negatively and statistically related to support for Measure I in San Bernardino County. Nevertheless, we found no statistical relationship between the pocketbook measures and support for Measure A in Riverside County.

It should be noted that none of the self-interest variables seemed to have a bivariate relationship with whether or not the respondent would support an extension of the transportation sales tax.

Table 4 reports the results of the binary logistic model we use to assess the role of various factors we have hypothesized to affect the chances of a respondent being a supporter or opponent of extending the sales taxes in the two-county region. A positive coefficient indicates the respondent was more likely to support the extension while a negative coefficient indicates the respondent was less likely to support the extension. The assumption is that each respondent's likelihood of supporting an extension is shaped by a combination of political predispositions (e.g., being opposed to government spending in general, not trusting local public officials, or level of conservatism), evaluations of county conditions (e.g., rating

**<sup>8</sup>** There is a 13% difference between those who rated the local economy as excellent and those who rated it poor for San Bernardino respondents, but the p-value was 0.054, which leads us to conclude that the difference is no different from zero.

Table 4: Binary Logistic Regression for Predictors of Support for Transportation Sales Tax Election.

	Panel 1	Panel 2
County	0.392***	0.409***
Confidence in Local Public Officials	-0.192***	-0.191***
Support for 2002 Statewide Education Bond	-0.428***	-0.428***
Whether Respondent Democrat	0.150	0.150
Level of Conservatism	-0.110*	-0.111*
Rating of County as a Place to Live	-0.143*	-0.146*
Rating of Local Streets and Roads	-0.143*	-0.139*
Favorability of Bus Service	0.268**	0.273**
Favorability of Metrolink	0.283**	
Favorability of Metrolink * SB Valley/W Riv Subarea		0.326**
Favorability of Metrolink * Not SB Valley/W Riv Subarea		0.153
Rating of Economy in County	0.006	0.003
Personal Financial Condition (Current)	-0.205**	-0.205**
Personal Financial Condition (Prospective)	0.019	0.019
Number of Cars	-0.007	-0.008
Length of Commute	0.3e-4	0.3e-5
Whether or Not Respondent is Black	0.079	0.070
Whether or Not Respondent is Hispanic	0.531**	0.529**
Whether or Not Respondent is White	0.317*	0.325*
Age	0.003	0.003
How Long Resided in County/Region	-0.003	-0.003
Income	0.019	0.019
Education Level	-0.2e-3	-0.001
Gender	0.102	0.101
Constant	2.807***	2.794***
n=	2360	2360
Logistic Regression $\chi^2$	173.736***	174.789***
Logistic Regression $\chi^2$ df	22	23
-2 Log Likelihood	2517.190	2516.137
Percent Correctly Classified	75.2%	75.2%

Note: Cell entries are logistic regression coefficients.

the county as a poor place to live, rating the maintenance of local streets and roads poor, or viewing the county economy as poor), self-interest characteristics (e.g., the number of cars the respondent owns or the length of commute), and social status (e.g., lower income families might be less likely to support an extension because they cannot afford the money or resent the regressive nature of sales taxes). In any case, as indicated above, the fairly rich attitudinal survey data we have permit us to explore some of these relationships.

<sup>\*</sup>p<0.05, \*\*p<0.01, \*\*\*p<0.001.

What is apparent is a fairly consistent and strong relationship between more general views about government spending and taxing and support for the transportation sales tax extension in both counties. Respondents who opposed the 2002 statewide education bond and those who identified themselves as conservative were more likely to be opposed to the extension of the transportation sales tax. Additionally, there appears to be a relationship between the attitudes about local government services and the region, and support for the sales tax extension. Indeed, respondents who provided poor assessments of local elected officials, the county as a place to live, ratings of local streets and roads, Metrolink, and local bus service were all more likely to vote no on the extension. In addition, those who indicated that they are currently having difficulty with their own personal financial condition were likely to vote no on the extension. Finally, the relationship between favorability of Metrolink and support for the extension is tempered by geographic proximity to Metrolink service (see Panel 2). As the interaction terms indicate, the favorability of Metrolink is a much more powerful predictor of support for the extension for respondents living near Metrolink service in the Western Riverside and San Bernardino Valley subareas versus those who do not.

The results are somewhat surprising in two ways. First, only one of the economic variables reached statistical significance. The rating of the county economy and the respondent's prospective financial condition were unrelated to support for Measure A or I. However, as noted above, the current financial condition of the respondent was negatively associated with support for the measures, indicating that individuals were more likely to vote no on the sales tax extensions if family income was judged as insufficient in meeting current family obligations. Second, the measures of social background (other than Hispanic origin) and self-interest seem consistently unrelated to whether or not the respondent is likely to support an extension of the transportation sales tax. Whether the respondent was a Democrat, the length of commute, the number of cars in the family, income, or education, for example, in principle could have a variety of connections to a person's inclination to support or oppose such an extension. Yet those relationships were not statistically significant.

Because we found significant differences between support for the sales tax measure and the study predictors by county at the bivariate level, we included a dummy variable in the modeling controlling for the respondent's county. The dummy variable was significant, indicating significant differences between support for the sales tax measure in Riverside and San Bernardino Counties. Therefore, we estimated the model for each county to determine if there were differences between support for the sales tax measure and the study predictors at the multivariate level as well. The results are presented in Table 5.

Table 5: Binary Logistic Regression for Predictors of Support for Transportation Sales Tax Election by County.

	Riverside County		San Bernardino County		
	Panel 1	Panel 2	Panel 3	Panel 4	
Confidence in Local Public Officials	-0.182***	-0.182**	-0.215***	-0.208***	
Support for 2002 Statewide Education	-0.306*	-0.304*	-0.566***	-0.554***	
Bond					
Whether Respondent Democrat	-0.036	-0.036	0.261	0.263	
Level of Conservatism	-0.271***	-0.270***	0.007	0.008	
Rating of County as a Place to Live	-0.037	-0.036	-0.237**	-0.247***	
Rating of Local Streets and Roads	-0.018	-0.018	-0.231**	-0.216***	
Favorability of Bus Service	0.251	0.248	0.311*	0.317*	
Favorability of Metrolink	0.337*		0.286*		
Favorability of Metrolink * SB Valley/W Riv		0.326		0.428**	
Subarea					
Favorability of Metrolink * Not SB		0.405		0.011	
Valley/W Riv Subarea					
Rating of Economy in County	-0.211	-0.209	0.163	0.158	
Personal Financial Condition (Current)	-0.137	-0.138	-0.259*	-0.261*	
Personal Financial Condition (Prospective)	0.233	0.232	-0.125	-0.127	
Number of Cars	-0.085	-0.084	0.025	0.026	
Length of Commute	-0.4e-4	0.3e-4	-0.9e-4	0.2e-3	
Whether or Not Respondent is Black	-0.179	-0.174	0.251	0.229	
Whether or Not Respondent is Hispanic	0.460	0.461	0.576*	0.565*	
Whether or Not Respondent is White	0.264	0.262	0.372	0.400	
Age	0.006	0.005	-0.001	-0.001	
How Long Resided in County/Region	-0.011	-0.011	0.001	0.001	
Income	0.023	0.023	0.024	0.025	
Education Level	-0.053	-0.052	0.037	0.035	
Gender	-0.107	-0.105	0.252	0.258	
Constant	3.153***	3.142***	3.251***	3.204***	
n=		994		1366	
Logistic Regression χ <sup>2</sup>	70.863***	70.946***	137.473***	140.782***	
Logistic Regression χ² df	21	22	21	22	
-2 Log Likelihood	1103.519	1103.436	1375.322	1372.014	
Percent Correctly Classified	74.6%	74.6%	76.9%	77.2%	

Note: Cell entries are logistic regression coefficients.

There are significant differences between support for the sales tax measure and the study predictors by county (with some of the differences already noted above when we discussed bivariate analysis). Only two of the variables are significant for both counties (confidence in local elected officials and support for the

<sup>\*</sup>p<0.05, \*\*p<0.01, \*\*\*p<0.001.

statewide education bond), while several of the variables are significant for one county or the other. For example, while level of conservatism is negatively related to support for Measure A (Riverside County), there is no statistical relationship between level of conservatism and support for Measure I (San Bernardino County). On the other hand, the rating of the county as a place to live, the rating of local street and road maintenance, the favorability of local bus service, and the current financial condition are significantly related to support for Measure I but not for Measure A. Furthermore, favorability of Metrolink for all respondents is a significant predictor of support for the extension in both counties (Panels 1 and 3). However, when the interaction terms are introduced (Panels 2 and 4), only the interaction term in the San Bernardino County model is statistically significant. Substantively, this indicates that the positive relationship between favorability of Metrolink and support for the extension was a much more powerful predictor for respondents living in the San Bernardino Valley subarea than in other subareas of the county. In Riverside County, both interaction terms failed to reach acceptable levels of significance, although the interaction term for Western Riverside County subarea respondents barely exceeded the 0.05-level (p=0.051).

The findings in Table 5 suggest that while anti-tax conservative respondents were generally opposed to the extensions in both Riverside and San Bernardino Counties, ratings of the county, ratings of transit services, and pocketbook assessments of the economy were not factored in the decision to support or oppose the extension of the transportation sales tax in Riverside County to the same extent they were in San Bernardino County. The findings in Table 5 also suggest that county characteristics also help shape the attitudinal predispositions of the respondents in the survey.

As mentioned above, the ratings of the county as a place to live, ratings of local street and road maintenance, ratings of local bus service, and pocketbook assessments of the economy shaped decisions on the sales tax extension in San Bernardino County, but not Riverside County. Not surprisingly, San Bernardino County residents were more negative in their assessments of the county and government services, and on average reported lower levels of household income, which could have led them to factor in ratings of the county and services while their counterparts in Riverside County did not.

## 5 Discussion

If the findings could be generalized across time and place, it would provide some good news, in general, to supporters of highway and road construction and even

to those who support additional public transportation revenues in California. Of course, actual election outcomes will illustrate varying support for taxes of one kind or another (Colman 1987; Nelson and Colman 1991; Beale et al. 1996). This project focuses on one specific kind and level of tax – an extension of a county half-cent sales tax earmarked for transportation purposes. Not surprisingly, renewals of existing taxes tend to have an easier time of it than the establishment of new taxes, and proposals for smaller increases tend to be more successful than larger increases. However, there are also theoretical reasons for why a sales tax for transportation purposes is more acceptable, ceteris paribus, than user or fee-based charges, such as tolls or gasoline or tire taxes. The burden of the sales tax is more diffuse than such taxes. Indeed, as one major study of local option sales taxes concludes, "the sales tax generates a very large amount of revenue at a low marginal tax rate, and tends to meet less opposition from voters than most other revenue options" (Goldman et al. 2001: p. 25). As a testimony to their appeal, such taxes are being passed increasingly by states and localities, while taxes on motor fuels and vehicles have been stagnant or reversed, or state government has refused to raise them (see Green 2006 and Wachs 2009). In other words, there are reasons to expect high levels of support for the sorts of local option transportation sales taxes that the respondents in this study are assessing – it is a renewal; it is a small tax; its costs are diffuse; the burden of congestion is apparent and highly publicized on an on-going basis; and there was not a substantial effort to oppose the renewals in either county in 2002 or 2004, respectively.

Of course, local option transportation sales tax votes do not always pass. Indeed, from 1980 to 2006 there were 78 California county elections to establish or renew a local transportation sales tax. Of these 43 failed (55%).9 So clearly, on average, the distribution of outcomes suggests that such taxes can be difficult to enact or renew. Proposals and electoral circumstances vary, and there are certain aspects of a given transportation tax proposal that might make it more or less subject to support. The two-county region examined here, however, manifested a number of factors that have been found to increase public support for such proposals (Colman 1987; Beale et al. 1996), including widely perceived and broadly experienced traffic problems; a planning process that involves and educates the public about a realistic expenditure plan to deal

<sup>9</sup> Aggregated from multiple sources, including Brown et al. (1999), Goldman et al. (2001), the Center for Transportation Excellence (http://www.cfte.org/success/pastelections.asp), California county Registrar of Voters websites, and Dr. Todd Goldman's comprehensive dataset on transportation sales taxes in California (used with permission of the author).

with these problems; clear earmarking of funds and assurances that funds are used exclusively in dealing with transportation problems; a broadly based campaign organization which involves both road builders and those concerned with social and environmental effects; a solid record of having fulfilled previous promises in order to reinforce support for future proposals and tax renewals; ensuring that the local tax is perceived as fair and the burden is shared by all; and providing benefits to a broad segment of the community (Probolsky 2011).

In the two counties, virtually all of those factors were present at high levels in 2002 and 2004. An extended period of population growth and increasing congestion were clearly elevating traffic to a high level of consciousness of the area's residents. In 1997, only 11.6% of San Bernardino County respondents identified traffic congestion as a "great problem" while 48.6% of respondents identified traffic as a "large problem" in 2005.10 Relevant public agencies repeatedly and forcefully explained the need for additional funding (Danelski 2002; Sellers et al. 2009), with news coverage generally supporting the need for increased public support for transportation funding, including both major newspapers in the study area endorsing the extension of the sales taxes. The prospective issue before the voters was an extension of an existing tax that had funded a widely distributed set of projects, designed to benefit virtually every area within the two counties. Moreover, the distribution of funds for existing roads, new construction, and public transportation, coupled with program and project expenditures which were distributed across all geographic subareas of the county (see Nelson and Colman 1991), ensured fairly widespread stake-holding. And, of course, notwithstanding whether in fact the tax is regressive and falls more heavily on lower income families (Chernick and Reschovsky 2000), the expired sales tax and extension were viewed as being widely shared rather than as falling on any identifiable cohort. Finally, specific projects were touted and residents of the region were informed of projects through an extensive public education campaign which micro targeted voters (Sellers et al. 2009).

What of the "tax rebel" resident, who is impervious to most arguments for more taxes or public spending and is inclined to oppose most expenditures? Indeed, in one major study of local option transportation taxes, it was found that anti-tax sentiments and political conservative sentiments account for a "disproportionate number of referendum defeats" (Beale et al. 1996: p. 78). That study further identified "mistrust of local officials" as a factor in the defeat of a number

<sup>10</sup> Based upon annual surveys completed by the authors in 1997 and 2005.

of proposed local option transportation taxes. The fact that confidence in local elected officials played such a significant role in shaping attitudes regarding the extensions of Measure A and I should not be surprising, particularly when one considers some of the significant political scandals which have occurred in the study area, ranging from bribery of elected officials to influence decision-making to violation of open meeting laws to using the office of a county official to run a party machine. It is clear from the analysis here that the core of the opposition to the proposals in the study region was among anti-tax, political conservative residents who do not trust elected officials.

Our findings show that the residents in Riverside County differed from those in San Bernardino County as the ideological position of the respondent was much more important in Riverside County and the ratings of the county and services, along with the resident's pocketbook assessment of the economy, were more important to San Bernardino County residents. Furthermore, Hamideh et al. (2008), in their study of Ventura County's failed attempt to enact Measure B in 2004, found that Democrats were more likely to support the transportation sales tax measure while the variable for Democrats in our analysis was not significant in either county model or the two-county model.

Previous literature has been inconsistent in terms of identifying a generalizable set of factors which explains voter behavior in transportation sales tax elections. This study has identified two variables (confidence in local public officials and voting on the 2002 statewide education bond) which appear to be statistically significant in predicting support of the tax extension. But even these two variables have only approximately 6% predictive power (with a Nagelkerke R<sup>2</sup> of 10.5% for the full model). So what is to be done? First, individual-level surveys could include items which measure support for certain project characteristics or even specific projects and utilize such measures as self-interest factors in addition to the self-interest and political factors discussed above. There is support at the aggregate level for such relationships (e.g., Hannay and Wachs 2007) and it is reasonable to believe similar relationships exist at the individual-level. Second, perhaps one way to produce more robust predictive variables is to use focus group analysis to suggest other variables of interest that might be explored in future studies. In addition, such focus groups should shed light on the possible lack of unidimensionality of variables such as political philosophy and party affiliation. For example, one might assume that Democrats tend to share a common vision regarding tax extensions, yet it is quite possible that Democrats who self-identify as "very liberal" might be as opposed to extensions of transportation taxes as would be those who self-identify as "conservative," although for very different reasons. This type of interaction warrants further study.

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