

# What do Americans Think About Federal Tax Options to Support Public Transit, Highways, and Local Streets and Roads? Results from Year Four of a National Survey



MTI Report 12-07



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REPORT 12-07

**WHAT DO AMERICANS THINK ABOUT FEDERAL TAX  
OPTIONS TO SUPPORT PUBLIC TRANSIT, HIGHWAYS, AND  
LOCAL STREETS AND ROADS? RESULTS FROM YEAR FOUR  
OF A NATIONAL SURVEY**

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<b>16. Abstract</b> <p>This report summarizes the results of year four of a national random-digit-dial public opinion poll asking 1,501 respondents if they would support various tax options for raising federal transportation revenues, with a special focus on understanding support for increasing revenues for public transit. Eleven specific tax options tested were variations on raising the federal gas tax rate, creating a new mileage tax, and creating a new federal sales tax. Other questions probed various perceptions related to public transit, including knowledge and opinions about federal taxes to support transit. In addition, the survey collected data on standard sociodemographic factors, travel behavior (public transit usage, annual miles driven, and vehicle fuel efficiency), and attitudinal data about how respondents view the quality of their local transportation system and their priorities for government spending on transportation in their state. All of this information is used to assess support levels for the tax options among different population subgroups.</p> <p>The survey results show that a majority of Americans would support higher taxes for transportation—under certain conditions. For example, a gas tax increase of 10¢ per gallon to improve road maintenance was supported by 67 percent of respondents, whereas support levels dropped to just 23 percent if the revenues were to be used more generally to maintain and improve the transportation system. For tax options where the revenues were to be spent for undefined transportation purposes, support levels varied considerably by what kind of tax would be imposed, with a sales tax much more popular than either a gas tax increase or a new mileage tax.</p> <p>With respect to public transit, the survey results show that most people want good public transit service in their state. In addition, two-thirds of respondents support spending gas tax revenues on transit. However, questions exploring different methods to raise new revenues found relatively low levels of support for raising gas tax or transit fare rates. Also, not all respondents were well informed about how transit is funded, with only about half knowing that fares do not cover the full cost of transit.</p>			
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## I. INTRODUCTION

Over the past several decades, the transportation revenues available from state and federal gas taxes have fallen significantly, especially in terms of inflation-adjusted dollars per mile traveled. At the same time, the transportation system requires critical—and expensive—system upgrades. Among other needs, a large portion of the national highway system needs major rehabilitation, and there is growing desire at all levels of government to substantially upgrade and expand infrastructure to support public transit, walking, and bicycling, modes that have been relatively neglected in the past 50 years.

This dilemma of growing needs and shrinking revenues can be resolved in only two ways: either the nation must dramatically lower its goals for system preservation and enhancement, or new revenues must be raised. If the latter is to happen, legislators must be convinced that increasing taxes or fees is politically feasible. One portion of the political calculus that legislators make when deciding whether or not to raise new revenues is, of course, considering likely public support for—or opposition to—raising different kinds of taxes.

This report contributes to the understanding of current public sentiment about increasing transportation taxes by presenting the results of Year Four of a telephone survey investigating public opinion about a variety of transportation tax options at the federal level. The specific taxes tested were 10 variations on raising the federal gas tax rate or creating a new mileage tax, as well as 1 option for creating a new federal sales tax. In addition, the survey collected standard sociodemographic data, some travel behavior data, and attitudinal data about how respondents view the quality of their local transportation system and their priorities for government spending on transportation in their state. All of this information is used to assess support levels for the tax options among different population subgroups.

The survey questionnaire described the various tax proposals in only general terms, so the study results cannot be assumed to reflect support for any actual proposal put forward. Nevertheless, the results show likely patterns of support and, more important, the public's likely *relative* preferences among different transportation tax options.

An important new emphasis in the survey project for 2012 and 2013 was to understand various perceptions related to public transit, including knowledge and opinions about federal taxes to support transit. Several new transit-related questions were added to explore respondents' knowledge of whether different levels of government help to pay for transit, their opinion about whether gas tax revenues should be spent on transit, and their support for different Congressional options to raise additional revenues to support improved and expanded transit.

Because the survey is the fourth year of a project to assess how public support for federal transportation taxes may change over time, most of the questions asked are identical to those in the earlier surveys carried out in the three prior years.<sup>1</sup> This report compares the results of the four surveys to establish how public views may have shifted over the past years.

The remaining chapters of the report contain the following material. Chapter 2 describes findings from other polling on similar transportation taxes to provide context for understanding this survey's results. Chapter 3 describes the survey methodology and presents an overview of the questionnaire and details of the implementation procedure. Detailed discussion of the survey findings on the different tax options and the transit-related questions follow in Chapters 4 and 5. Chapter 6 summarizes key findings and suggests some implications of those findings for policymakers.



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## II. A REVIEW OF POLLING ON GAS, MILEAGE, AND SALES TAXES FOR TRANSPORTATION PURPOSES

To provide context for interpreting the survey results presented in this report, Chapter 2 reviews the results from 74 other public opinion polls that asked about support for gas, mileage, and sales taxes whose revenues would be used for transportation purposes.

Surveys conducted in the past seven years were identified by searching the Internet-based archives of popular pollsters and aggregators of public opinion polls, including the Pew Center for the People and the Press, the Roper Center for Public Opinion Research, Rasmussen Reports, SurveyUSA, and PollingReport.com. This work was supplemented by searching Google and newspaper databases to find mainstream media coverage on polls about transportation taxes.<sup>2</sup> Complete survey results were obtained directly from the survey sponsors' websites or through personal contact with the sponsors.

Most of the surveys reviewed here were conducted by public agencies, advocacy groups, popular pollsters, or news media, with a few others conducted by academics or research-oriented nonprofits.

### GAS TAXES

Gas taxes are a primary source of transportation revenue at both the state and the federal level. However, the federal government and many states have not raised the tax rates in a decade or more, so the real value of the revenues raised has fallen with inflation. As a result, there is frequent talk about raising gas tax rates, and public opinion on such increases has been extensively polled. Table 21 in Appendix B presents the key findings from 57 polls asking about support for gas tax increases.

Making direct comparisons among the polls is difficult because the specific tax increases proposed and the contexts in which they are presented both vary widely. For example, some proposals call for unspecified increases in the gas tax, while others propose specific increases that range from 5¢ to \$2 per gallon. Some polls link the gas tax increase to a particular purpose, such as maintaining bridges, while others link the increase to very general uses, such as "to help meet new transportation needs."

Two general trends do emerge across the polls, however. First, support levels tend to be below 50 percent and are often considerably lower. Only about a quarter had support levels over 40 percent. Second, support tends to be particularly high when the tax increase is linked to some sort of environmental benefit. Table 22 in Appendix B, which presents the results for the 13 polls that link a gas tax with environmental benefits, shows that more than two-thirds of these found support levels above 40 percent.

### MILEAGE TAXES

Far less polling has been done about mileage taxes because these are not currently in use anywhere in the United States, although they are under active discussion among transportation policymakers and researchers. A review of 15 polls shows that support is

not especially strong but can be strengthened when the taxes are linked to environmental benefits (see Table 23 in Appendix B). The five polls linking a mileage tax to environmental benefits found support levels ranging from 33 percent to 50 percent, but the other ten polls without that environmental link found support levels no higher than 39 percent.

## **SALES TAXES**

Public opinion about local sales taxes to fund transportation programs has been extensively tested. However, very little polling has been done to test public support for a national sales tax to support transportation, most likely because the federal government does not collect sales taxes, leaving them for state and local governments to use as a revenue tool. (If the federal government were to consider imposing its own sales tax, there would likely be a very strong backlash from state and local officials.)

For more than a decade, sales taxes have been one of the most popular methods used by local governments to raise revenue for transportation purposes. In almost all cases, the taxes were placed on the ballot for voter approval, so the election results provide one clear picture of the level of public support. And in fact, many of these local sales taxes have passed, especially in California where the great majority of the population currently lives in counties whose voters have approved local sales taxes for transportation by two-thirds majorities. In addition to the evidence from election results, considerable public polling has been done prior to elections to assess the appeal of sales tax increases.

Table 24 in Appendix B summarizes a sampling of 26 polls testing public opinion on sales taxes. Overall support levels were quite high: 12 of the polls showed support at 50 percent or higher, and only 8 had support levels under 40 percent.

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### III. SURVEY DESIGN AND ADMINISTRATION

#### QUESTIONNAIRE DESIGN

The survey questionnaire was designed to test public support for three types of taxes: an increase in the federal gas tax, a new national mileage tax, and a new national sales tax. In all cases, respondents were told that the revenue raised would be spent only for transportation purposes.

To make these hypothetical taxes easier for respondents to understand, the survey gave specific amounts for each. The amounts were selected to be simple numbers within the range of mainstream current policy discussion.

Because a gas tax and a mileage tax are revenue options likely to receive considerable policy scrutiny in coming years, the survey tested support for these concepts when the taxes were presented in different forms. Overall, 11 different tax options were tested—8 variants of a gas tax increase, 2 variants of a new mileage tax, and 1 new sales tax option.

**Gas tax increases.** All variants of a federal gas tax increase involved raising the existing 18¢-per-gallon tax<sup>3</sup> to 28¢ per gallon, but each included a different set of information for respondents to consider. The eight variations were:

- A base-case 10¢ increase in the gas tax without further stipulations.
- A 10¢ increase in the gas tax that would be phased in over five years, increasing by 2¢ per year.
- A 10¢ increase in the gas tax, with the revenues to be spent only for projects to reduce local air pollution caused by the transportation system.
- A 10¢ increase in the gas tax, with the revenues to be spent only on projects to reduce the transportation system's contribution to global warming.
- A 10¢ increase in the gas tax, with the revenues to be spent only on projects to maintain streets, roads, and highways.
- A 10¢ increase in the gas tax, with the revenues to be spent only on projects to reduce accidents and improve safety.
- A 10¢ increase in the gas tax, with the revenues to be spent only on projects to add more modern, technologically advanced systems like real-time travel alerts, longer lasting pavements, and better-timed traffic lights.
- A 10¢ increase in the gas tax, with respondents informed of the annual tax burden for a typical driver under both the current and increased tax rates. Respondents were told that the tax burden would increase from an average of \$100 a year to \$150 a year for someone driving 10,000 miles a year in a car with a fuel economy of 20 miles per gallon.

**New mileage taxes.** Two variants of the mileage tax were presented, both of which involved levying a new tax per mile driven, with electronic meters being used to track miles driven and drivers being billed when they buy gas. The two variants, which differed only in the rate structure, were:

- A base-case 1¢-per-mile tax, with every car being taxed at the same rate.
- A variable-rate mileage tax for which the average rate would be 1¢ per mile, but vehicles that pollute less would be charged less and vehicles that pollute more would be charged more.

**A new national sales tax.** In this option, the federal government would levy a new 0.5 percent sales tax.

A new feature of the survey project introduced in 2012 was a special focus on understanding support for raising revenues to pay for public transportation. Respondents were asked if they knew whether different entities help to pay for transit (transit riders, plus government at the local, state, and federal levels), their opinion about whether or not gas tax revenues should be spent on public transit, and their support for, and preference among, different Congressional options to find additional revenues to support improved and expanded transit.

In addition to testing population-wide support levels for the tax options and opinions about public transit, the survey was designed to assess how responses to the questions might vary by respondents' opinions about their local and state transportation systems, sociodemographic factors, and travel behavior characteristics. Introductory questions asked respondents to rate the quality of roads and highways and transit service in their community and to indicate the priority they thought government should place on various options for improving the transportation system for everyone in their state. The questionnaire concluded with a standard set of sociodemographic questions on such factors as age, race and ethnicity, and income. To assess travel behavior, the survey included one question asking how many miles the respondent drove in the previous year and another question asking if the respondent had used any form of public transit within the past 30 days. Respondents also were asked the average fuel efficiency of the vehicle they drove most often for personal use.

The exact wording used for all questions can be found in Appendix A, which reproduces the survey questionnaire.

## **SURVEY IMPLEMENTATION**

The Social Science Survey Center at California State University, Fullerton, conducted the survey from March 4 to April 4, 2013, on behalf of the Mineta Transportation Institute's National Transportation Finance Center. A total of 1,501 adults nationwide were interviewed by telephone in either English or Spanish, with 31 (2 percent) of the interviews conducted in Spanish.

Telephone numbers included in this sample were randomly generated, and survey respondents were reached by both cell phone (N = 378) and landline phone (N = 1,123).

The margin of error for the total sample is  $\pm 2.53$  percentage points at the 95 percent confidence level. Smaller subgroups have larger margins of error.

Unless otherwise indicated, all results are weighted by gender, race, Hispanic ethnicity, education level, and imputed income values to match the U.S. population estimates from the Census Bureau's American Community Survey 1-year estimates for 2011.<sup>4</sup>



## **IV. FINDINGS ON SUPPORT FOR THE TAXES**

This chapter presents highlights of the survey results. It first describes the survey respondents and then presents the support for the tax options among all respondents and also among population subgroups. The chapter concludes with findings on how support for the base-case 10¢ gas tax increase and new flat-rate mileage tax compares with support for variants on these options. (Appendix A presents the complete results of the survey.)

### **SURVEY RESPONDENTS**

The 1,501 adult survey respondents were generally representative of the U.S. population in terms of region and sociodemographic characteristics (see Table 1). The sample diverged from the national average most (from 6 to 11 percentage points) along a few dimensions of ethnicity, education, age, and income. In terms of ethnicity, the unweighted sample had fewer people of Hispanic or Latino origin or descent. The sample also had fewer people with a high school diploma or less education, and more with college graduate degrees. Finally, the sample included fewer adults in the 18- to 39-year age range but more adults in the 60- to 79-year range.

**Table 1. Comparison of Census Region and Sociodemographic Characteristics of Survey Respondents with Those of the Adult U.S. Population (2013)**

	RDD sample (%)	Cell sample (%)	Total sample, unweighted (%)	U.S. adults <sup>a</sup> (%)
Census region <sup>b</sup>				
Northeast	21	15	20	18
Midwest	27	21	26	22
South	33	30	33	37
West	18	33	21	23
Gender				
Male	43	54	45	49
Female	57	46	55	51
Of Hispanic/Latino origin/descent	8	13	9	17
Race				
White	79	66	76	74
Black/African-American	9	11	9	13
Asian/Asian-American	2	5	3	6
Other	10	18	12	8
Education				
Less than high school graduate	4	6	5	14
High school graduate	20	23	20	29
Some college	25	26	25	24
College graduate	26	28	27	24
Some graduate school	4	4	4	--
Graduate degree	22	14	20	9
Income (annual household)				
\$0 - \$25,000	19	26	21	25
\$25,001 - \$50,000	19	23	20	25
\$50,001 - \$75,000	17	14	17	18
\$75,001 - \$100,000	13	13	13	12
\$100,001 - \$150,000	16	14	15	12
\$150,001+	16	10	14	9
Age				
18 - 29	6	27	12	22
30 - 39	8	23	11	17
40 - 49	16	14	16	18
50 - 59	23	12	21	18
60 - 69	24	9	21	13
70 - 79	16	6	13	7
80+	8	9	7	5

<sup>a</sup> All data are for adults 18 years and older except for household income, which is for all U.S. households. The U.S. population estimates are from U.S. Census Bureau, "2011 American Community Survey 1-Year Estimates" (no date), downloaded from <http://factfinder2.census.gov/faces/nav/jsf/pages/searchresults.xhtml> (accessed May 21, 2013).

<sup>b</sup> Census regions are defined at U.S. Census Bureau, "Census Regions and Divisions of the United States" (no date), [https://www.census.gov/geo/www/us\\_regdiv.pdf](https://www.census.gov/geo/www/us_regdiv.pdf) (accessed May 21, 2013).

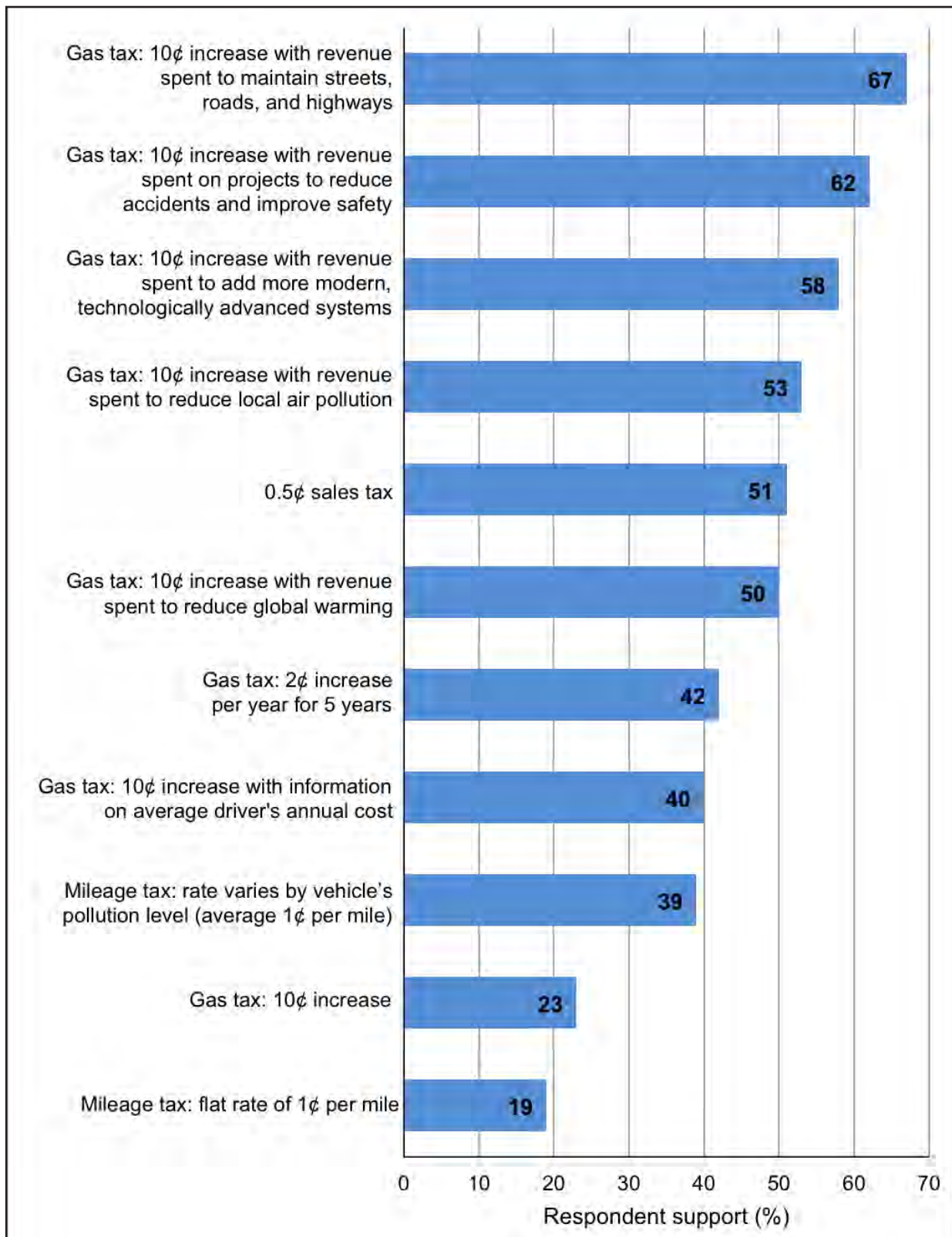
Note: Some percentages do not sum to 100% due to rounding.



## **OVERALL SUPPORT LEVELS FOR THE TRANSPORTATION TAX OPTIONS**

The survey results show that a majority of Americans would support higher taxes for transportation—under certain conditions (see Figure 1). For example, a gas tax increase of 10¢ per gallon to improve road maintenance was supported by 67 percent of respondents, whereas support levels dropped to 23 percent if the revenues were to be used more generally to maintain and improve the transportation system. The only other variant on a gas tax that received at least 60 percent support in 2013 was an increase of 10¢ per gallon with the revenues dedicated to reducing accidents and improving safety. However, support for several other tax options was still above 50 percent, a healthy showing of support for a tax increase of any kind.

For tax options where the revenues were to be spent for undefined transportation purposes, support levels varied considerably by what kind of tax would be imposed, with a sales tax more than twice as popular as either a gas tax increase or a new mileage tax.

**Figure 1. Support Levels for the Tax Options Surveyed (2013)**

Note: "Support" is the sum of those who said they strongly or somewhat supported the tax option.

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## SUPPORT BY POPULATION SUBGROUPS

We also examined support levels for the different tax options by subgroups within the population. The statistical test of two proportions was used to check whether differences among subgroups (e.g., men versus women) are statistically significant at the 95 percent and 99 percent confidence levels. Results are presented in Tables 2 through 5 below. In each case, the first subgroup listed in a table for that set of population categories is the base case against which all the other subgroups are compared.

The following discussion focuses on those differences among subgroups where the patterns are clearest. We defined “clear” patterns as ones where (1) support varied consistently across at least five of the tax options, and (2) the average magnitude of the difference between the groups across all 11 tax options was at least 8 percentage points or more. Readers should note that the variations noted below are not necessarily the only important ones that may exist. Rather, the variations described are those that could be identified by the particular statistical tests used and also fell within the cutoff points selected.

Table 2 shows support for the taxes when the respondents are broken into subgroups by sociodemographic categories and U.S. Census region. The clear patterns that emerge are linked to race, ethnicity, employment status, and age. With respect to race, Asians/Asian-Americans were, on average, 11 percentage points more likely to support most of the taxes than whites. (The pattern held almost as clearly with African-Americans and whites.) The magnitude of the differences by race was often very large—as high as 35 percentage points for the gas tax option related to reducing global warming. Looking at ethnicity, respondents of Hispanic or Latino origin or descent were more supportive. As for age, respondents in the youngest group (18- to 24-year olds) were significantly more likely to support virtually all of the taxes than respondents in the two older groups. The average difference in support was 20 percentage points for the youngest group as compared to the oldest group. Finally, employed respondents were more supportive of the taxes than retirees, mirroring the differences in support by age.

**Table 2. Support<sup>a</sup> for the Tax Options, by Census Region and Sociodemographic Characteristics (2013)**

Census regions and socio-demographic categories	Mileage tax			Gas tax					Info about average annual costs (%)		
	Sales tax (%)	Flat (%)	Variable (%)	10¢ increase (%)	2¢ increase per year, for 5 years (%)	Revenue to reduce local air pollution (%)	Revenue to reduce global warming (%)	Revenue to maintain streets / highways (%)		Revenue to improve safety (%)	Revenue to add high tech systems (%)
All respondents	51	19	39	23	42	53	50	67	62	58	40
Census region											
Northeast	47	19	40	17	38	58	57	70	67	60	40
Midwest	54	20	33	22	42	51	48*	70	62	58	38
South	50	14	40	22	38	49*	43**	66	59*	60	37
West	51	21	38	27**	48*	57	55	64	63	54	45
Gender											
Male	49	18	36	27	43	50	47	67	58	59	44
Female	53	19	42*	20**	41	56*	52	67	66**	56	37**
Race											
White	48	18	38	24	43	47	44	67	57	55	38
Black/African-American	66**	23	38	19	47	80**	65**	69	83**	63	51**
Asian/Asian-American	60*	30**	47	19	40	68**	79**	66	72**	75**	43
Other	48	13	45	26	30*	60*	63**	73	69*	62	42
Of Hispanic/Latino origin/descent											
Yes	60	17	54	27	51	61	63	78	70	62	45
No	50**	19	36**	22	40**	51**	47**	65**	60**	57	39
Education											
High school graduate or less	51	21	40	21	41	57	53	71	68	61	38
More than high school	51	17	39	25	43	50*	48	64**	57**	55*	42

Table 2, continued

Census regions and socio-demographic categories	Sales tax (%)	Mileage tax			Gas tax							Info about average annual costs (%)	
		Flat (%)	Variable (%)	10¢ increase (%)	2¢ increase per year, for 5 years (%)	Revenue to reduce local air pollution (%)	Revenue to reduce global warming (%)	Revenue to maintain streets / highways (%)	Revenue to improve safety (%)	Revenue to add high tech systems (%)			
Employed													
Yes	51	18	38	24	43	54	49	69	60	55	41		
No	60**	22	44	26	46	57	58**	69	69**	67**	45		
Retired	37**	16	33	17*	34*	43**	38**	56**	57	53	30**		
Annual household income													
0 - \$50,000	53	20	41	20	43	59	52	71	66	59	39		
\$50,001 - \$100,000	52	16	38	26*	43	48**	46	64*	59*	56	42		
\$100,001+	52	20	40	31**	41	55	52	68	62	59	45		
Age													
18 - 24 years	73	24	52	27	53	71	64	79	85	71	54		
25 - 54 years	52**	19	39**	24	43*	54**	53**	69**	58**	57**	40**		
55 years+	41**	16*	34**	20*	36**	44**	39**	60**	56**	52**	34**		

\* Statistically significant at p<0.05.

\*\* Statistically significant at p<0.01.

<sup>a</sup> Sum of those who said they “strongly” or “somewhat” supported the option.

Notes: The test of two proportions was used to check if there is a statistically significant difference between “support” levels among subgroups. The first sub-group listed in each category is the “base” case for the test; it is compared to the proportion of respondents who supported the individual policies in each of the other subgroups within that category.

Except for those noted above, Table 2 reveals few other clear patterns of statistical significance. For example, there are no clear patterns showing consistent variation in support for the taxes by region of the country, gender, educational attainment, or income.<sup>5</sup>

Table 3 shows support levels by political characteristics. Political party affiliation played a fairly strong role, with Democrats more likely than Republicans or party-independent respondents to support all of the taxes. The difference between Democrats and Republicans was, on average, 15 percentage points.

**Table 3. Support<sup>a</sup> for the Tax Options, by Political Characteristics (2013)**

Political characteristics	Mileage tax				Gas tax				Info about average annual costs (%)		
	Sales tax (%)	Flat (%)	Variable (%)	10¢ increase (%)	2¢ increase per year, for 5 years (%)	Revenue to reduce local air pollution (%)	Revenue to reduce global warming (%)	Revenue to maintain streets / highways (%)		Revenue to improve safety (%)	Revenue to add high tech systems (%)
All respondents	51	19	39	23	42	53	50	67	62	58	40
Registered voter											
Yes	52	17	38	22	42	51	47	66	61	57	40
No	50	26**	42	30**	49	58	60**	74*	68*	59	43
Likely voter <sup>b</sup>											
Yes	50	17	37	21	41	50	45	66	59	55	39
No	50	26**	42	30**	49*	58*	60**	74*	68*	59	43
Political affiliation											
Democrat	61	18	46	27	49	60	59	69	69	63	46
Republican	43**	15	30**	15**	31**	41**	34**	60*	53**	50**	27**
Independent <sup>c</sup>	50*	13	34**	21	43	50*	41**	68	56**	55	45
Other <sup>d</sup>	46*	23	41	20	34*	49	47*	64	57*	60	42

\* Statistically significant at  $p < 0.05$ .

\*\* Statistically significant at  $p < 0.01$ .

<sup>a</sup> Sum of those who said they "strongly" or "somewhat" supported the option.

<sup>b</sup> Likely voters are those respondents who said they are registered voters and that they vote "all of the time" or "most of the time."

<sup>c</sup> Registered, but declined to state a party.

<sup>d</sup> Registered member of any other party, including the American Independent party.

Notes: The test of two proportions was used to check if there is a statistically significant difference between "support" levels among subgroups. The first sub-group listed in each category is the "base" case for the test; it is compared to the proportion of respondents who supported the individual policies in each of the other subgroups within that category.

The survey asked three questions about travel behavior and personal vehicle mileage in order to examine whether support for the tax options varied by these factors. As Table 4 shows, there were no strong patterns based on how much respondents drove annually, except that respondents who did not drive at all were more supportive of most of the taxes.

The average self-reported fuel economy of respondents' personal vehicles is correlated somewhat with support for the taxes. Respondents driving very high-mileage vehicles (39 or more miles-per-gallon) were more likely to support all of the taxes. An additional analysis not shown in Table 4 that checked for different support among people driving the most fuel-inefficient vehicles (12 or fewer mpg) found no clear difference in support from those driving vehicles with whose fuel-efficiency levels were closer to average. Also, respondents who had taken public transit within the previous 30 days were more likely to support the tax options than respondents who had not.



**Table 4. Support<sup>a</sup> for the Tax Options, by Travel Behavior Characteristics (2013)**

Travel behavior characteristics	Mileage tax				Gas tax						
	Sales tax (%)	Flat (%)	Variable (%)	10¢ increase (%)	2¢ increase per year, for 5 years (%)	Revenue to reduce local air pollution (%)	Revenue to reduce global warming (%)	Revenue to maintain streets / highways (%)	Revenue to improve safety (%)	Revenue to add high tech systems (%)	Info about average annual costs (%)
All respondents	51	19	39	23	42	53	50	67	62	58	40
Annual miles driven											
1 - 7,500	48	21	38	23	42	53	44	69	66	55	41
7,501 - 12,500	44	18	39	23	43	41**	45	63	50**	53	38
12,501+	53	9**	37	25	43	48	46	69	54**	58	38
Don't know	59*	22	44	18	41	69**	68**	69	72	60	40
Don't drive	60*	34**	44	26	42	71**	63**	65	78**	70**	48
Miles per gallon <sup>b</sup>											
≤ 24	48	14	34	24	37	45	41	65	55	54	36
25 - 38	53	16	42**	25	44*	50	47	68	60	55	43*
39+	59*	35**	49**	28	44	71**	64**	66	75**	68**	49**
Taken transit in last 30 days											
Yes	62	30	52	27	53	70	67	66	74	66	52
No	49**	16**	36**	22	39**	49**	46**	68	59**	55**	38**

\* Statistically significant at p&lt;0.05.

\*\* Statistically significant at p&lt;0.01.

<sup>a</sup> Sum of those who said they "strongly" or "somewhat" supported the option.<sup>b</sup> Categories correspond to the EPA's "SmartWay" vehicle rating system (U.S. Environmental Protection Agency, "Vehicle Rating System and SmartWay Thresholds, MY 2011 & MY 2012" (no date), [http://ofmpub.epa.gov/greenvehicles/SmartWay\\_2012.pdf](http://ofmpub.epa.gov/greenvehicles/SmartWay_2012.pdf) (accessed May 31, 2012)).

Notes: The test of two proportions was used to check if there is a statistically significant difference between "support" levels among subgroups. The first sub-group listed in each category is the "base" case for the test; it is compared to the proportion of respondents who supported the individual policies in each of the other subgroups within that category.

Another set of analyses examined how support for the different tax options correlates with respondents' opinions about the transportation system (see Table 5). Respondents' opinions about road and transit services in their local community are not clearly correlated with support for the taxes, but the quality of local public transit is. Respondents in communities with no public transit service were less supportive of 10 of the taxes. More revealing was another set of questions asking respondents about their priorities for how governments might spend transportation revenues: reducing traffic congestion; maintaining streets, roads, and highways; expanding and improving local public transit service; reducing accidents and improving safety; and increasing use of modern technologies. Not surprisingly, respondents who placed a high priority on these goals were more likely to support almost every tax option than were those who placed a low priority on them. The average magnitude of the differences was very large, ranging from a low of 15 percentage points for low-versus-high priority placed on reducing traffic congestion and a high of 27 percentage points for low-versus-high priority placed on reducing accidents and improving safety.

**Table 5. Support<sup>a</sup> for the Tax Options, by Opinions of the Transportation System (2013)**

Opinions about the transportation system	Mileage tax				Gas tax						Info about average annual costs (%)
	Sales tax (%)	Flat (%)	Variable (%)	10¢ increase (%)	2¢ increase per year, for 5 years (%)	Revenue to reduce local air pollution (%)	Revenue to reduce global warming (%)	Revenue to maintain streets / highways (%)	Revenue to improve safety (%)	Revenue to add high tech systems (%)	
All respondents	51	19	39	23	42	53	50	67	62	58	40
Opinion on condition of roads and highways in local community											
Very good	50	24	45	32	49	55	58	67	61	58	49
Somewhat good	51	18*	39	21**	39**	53	48**	68	64	57	36**
Bad	53	15*	32**	22*	44	49	44**	68	55	60	45
Opinion on public transit service in local community											
Very good	49	23	41	28	45	56	56	70	63	62	47
Somewhat good	54	20	41	23	44	58	56	68	66	61	42
Poor	51	19	41	27	45	54	42**	66	57	59	41
No service	51	13**	36	21	37	43**	39**	66	56	52*	34**
Role of government in reducing traffic congestion											
High priority	54	21	41	27	44	60	58	70	68	64	44
Medium priority	53	16*	43	20**	45	50**	48**	70	60**	56**	40
Low priority	40**	17	28**	19*	30**	39**	30**	55**	51**	41**	33**
Role of government in maintaining streets, roads, and highways											
High priority	53	18	39	23	41	55	52	72	65	60	41
Medium priority	49	24*	42	26	48*	48*	45*	57**	54**	52*	42
Low priority	35	10	13**	14	24	40	30*	24	43*	29**	23*
Role of government in expanding and improving local public transit service											
High priority	56	22	46	25	46	64	63	70	70	67	48
Medium priority	53	17*	39*	24	44	50**	46**	70	60**	55**	37**
Low priority	34**	15*	26**	18*	29**	32**	29**	57**	46**	42**	31**

Table 5, continued

Opinions about the transportation system	Mileage tax				Gas tax							Info about average annual costs (%)
	Sales tax (%)	Flat (%)	Variable (%)	10¢ increase (%)	2¢ increase per year, for 5 years (%)	Revenue to reduce local air pollution (%)	Revenue to reduce global warming (%)	Revenue to maintain streets / highways (%)	Revenue to improve safety (%)	Revenue to add high tech systems (%)		
Role of government in reducing accidents and improving safety												
High priority	55	21	45	25	46	61	56	71	71	62	44	
Medium priority	48*	16	28**	20	38*	37**	38**	63*	47**	52**	35**	
Low priority	25**	8**	17**	19	25**	22**	24**	43**	24**	34**	20**	
Role of government in using modern technology												
High priority	57	25	46	24	46	59	58	72	67	72	47	
Medium priority	51*	14**	38**	22	42	52*	48**	67	60*	53**	37**	
Low priority	36**	15**	25**	26	31**	40**	29**	51**	49**	26**	29**	

\* Statistically significant at  $p < 0.05$ .

\*\* Statistically significant at  $p < 0.01$ .

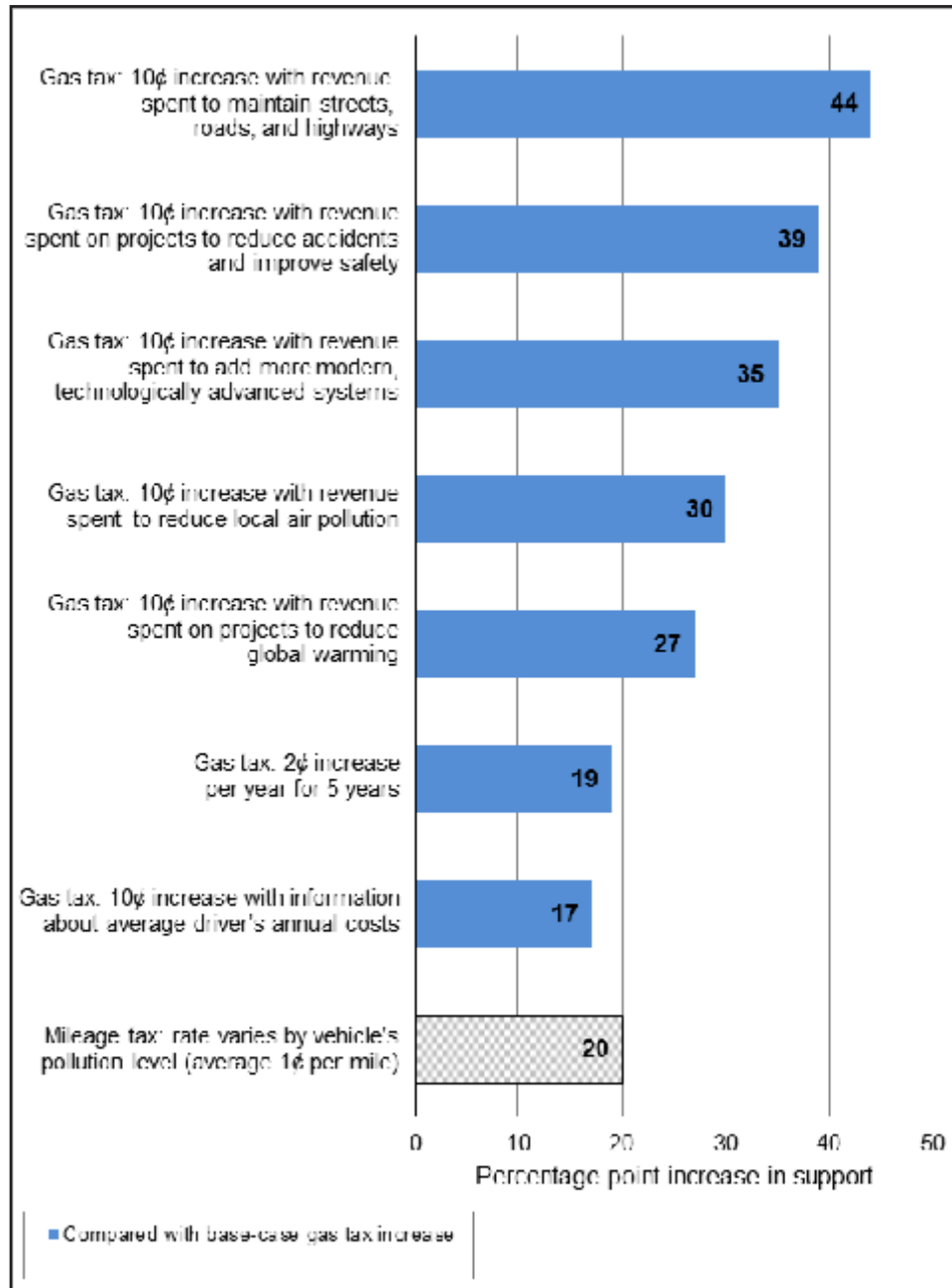
<sup>a</sup> Sum of those who said they "strongly" or "somewhat" supported the option.

Notes: The test of two proportions was used to check if there is a statistically significant difference between "support" levels among subgroups. The first sub-group listed in each category is the "base" case for the test; it is compared to the proportion of respondents who supported the individual policies in each of the other subgroups within that category. "Support" levels that are crossed out indicate that too few respondents supported the policies to run the test of two proportions.

## **SUPPORT FOR DIFFERENT VERSIONS OF THE MILEAGE AND GAS TAXES**

A central goal of the survey was to test how public support varied for different mileage and gas tax proposals. In this study, a “standard” proposal for each type of tax (the flat-rate mileage tax of 1¢ per mile and the 10¢ gas tax increase without any additional detail) was put forward, along with a single variant of the mileage tax (a variable tax based on how much pollution a vehicle produces) and a series of variants on the gas tax (several proposals that dedicate additional revenues to specific purposes, a phased-in tax increase, and a proposal that informs respondents of the typical annual cost). Figure 2 shows how variants on the tax proposals increased support in comparison to the standard proposal. For both tax types, the base case had the lowest support level, and applying the test of two proportions confirmed that in all cases the increase in support is statistically significant.

**Figure 2. Relative Increases in Support for Variations of the Base-Case Gas Tax and Mileage Tax Concepts (2013)**



Note: "Support" is the sum of those who said they strongly or somewhat supported the tax option.

Tables 6 through 9 present the change in support levels for each tax variant by respondent subgroups that are defined by census region, sociodemographic and political characteristics, travel behavior characteristics, and opinions about the transportation system. Collectively, the tables include 64 population subgroups, for each of which there are 8 tax comparisons, resulting in a total of 512 cases examined.

The overall pattern of increased support among subgroups is quite similar to the respondent pool as a whole. Across all cases examined, the tax variants improved support in more

than 98 percent of the 512 cases, and in no cases at all was an alternative less popular than the base case. The increase in support for the variants as compared to the base cases was statistically significant for 95 percent of cases. Further, the magnitude of the increases was very large:

- At least 10 percentage points for 96 percent of cases
- At least 20 percentage points for 73 percent of cases
- At least 30 percentage points for 43 percent of the case
- At least 40 percentage points for 19 percent of cases

**Table 6. Percentage-Point Increases in Support<sup>a</sup> for Variants of the Mileage Tax and Gas Tax over Support for the “Base-Case” Versions of Those Taxes, by Census Region and Sociodemographic Categories (2013)**

Census regions and sociodemographic categories	Mileage tax (%)	2¢ increase per year, for 5 years (%)	Revenue to reduce local air pollution (%)	Revenue to reduce global warming (%)	Revenue to maintain streets / highways (%)	Revenue to improve safety (%)	Revenue to add high tech systems (%)	Info about average annual costs (%)
All respondents	20	19	30	27	44	39	35	17
Census regions								
Northeast	21**	21**	41**	40**	53**	50**	43**	23**
Midwest	13**	20**	29**	26**	48**	40**	36**	16**
South	26**	16**	27**	21**	44**	37**	38**	15**
West	17**	21**	30**	28**	37**	36**	27**	18**
Gender								
Male	18**	16**	23**	20**	40**	31**	32**	17**
Female	23**	21**	36**	32**	47**	46**	36**	17**
Race								
White	20**	19**	23**	20**	43**	33**	31**	14**
Black/African-American	15**	28**	61**	46**	50**	64**	44**	32**
Asian/Asian-American	17*	21**	49**	60**	47**	53**	56**	24**
Other	32**	4	34**	37**	47**	43**	36**	16*
Of Hispanic/Latino origin/descent								
No	37**	24**	34**	36**	51**	43**	35**	18**
Yes	17**	18**	29**	25**	43**	38**	35**	17**
Education								
High school graduate or less	19**	20**	36**	32**	50**	47**	40**	17**
More than high school	22**	18**	25**	23**	39**	32**	30**	17**



Table 6, continued

Census regions and sociodemographic categories	Mileage tax (%)	2¢ increase per year, for 5 years (%)	Revenue to reduce local air pollution (%)	Revenue to reduce global warming (%)	Revenue to maintain streets / highways (%)	Revenue to improve safety (%)	Revenue to add high tech systems (%)	Info about average annual costs (%)
Employed								
Yes	20**	19**	30**	25**	45**	36**	31**	17**
No	22**	20**	31**	32**	43**	43**	41**	19**
Retired	17**	17**	26**	21**	39**	40**	36**	13**
Annual household income								
0 - \$50,000	21**	23**	39**	32**	51**	46**	39**	19**
\$50,001 - \$100,000	22**	17**	22**	20**	38**	33**	30**	16**
\$100,001+	20**	10*	24**	21**	37**	31**	28**	14**
Age								
18 - 24 years	28**	26**	44**	37**	52**	58**	44**	27**
25 - 54 years	20**	19**	30**	29**	45**	34**	33**	16**
55 years+	18**	16**	24**	19**	40**	36**	32**	14**

\* Statistically significant at p&lt;0.05.

\*\* Statistically significant at p&lt;0.01.

a Sum of those who said they "strongly" or "somewhat" supported the option.

Notes: The test of two proportions was used to determine whether the change in support from the "base"-case option (either the flat-rate mileage tax or the 10¢ gas-tax increase in a single year) is statistically significant.

**Table 7. Percentage-Point Increases in Support<sup>a</sup> for Variants of the Mileage Tax and Gas Tax Over Support for the “Base-Case” Versions of Those Taxes, by Political Characteristics (2013)**

Political characteristics	Gas tax							
	Mileage tax (%)	2¢ increase per year, for 5 years (%)	Revenue to reduce local air pollution (%)	Revenue to reduce global warming (%)	Revenue to maintain streets / highways (%)	Revenue to improve safety (%)	Revenue to add high tech systems (%)	Info about average annual costs (%)
All respondents	20	19	30	27	44	39	35	17
Registered voter								
Yes	21**	20**	29**	25**	44**	39**	35**	18**
No	16**	19**	28**	30**	44**	38**	29**	13**
Likely voter <sup>b</sup>								
Yes	20**	20**	29**	24**	45**	38**	34**	18**
No	16**	19**	28**	30**	44**	38**	29**	13**
Political affiliation								
Democrat	28**	22**	33**	32**	42**	42**	36**	19**
Republican	15**	16**	26**	19**	45**	38**	35**	12**
Independent <sup>c</sup>	21**	22**	29**	20**	47**	35**	34**	24**
Other <sup>d</sup>	18*	14*	29**	27**	44**	37**	40**	22**

\* Statistically significant at  $p < 0.05$ .

\*\* Statistically significant at  $p < 0.01$ .

<sup>a</sup> Sum of those who said they “strongly” or “somewhat” supported the option.

<sup>b</sup> Likely voters are those respondents who said they are registered voters and that they vote “all of the time” or “most of the time.”

<sup>c</sup> Registered, but declined to state a party.

<sup>d</sup> Registered member of any other party, including the American Independent party.

Notes: The test of two proportions was used to determine whether the change in support from the “base-case” option (either the flat-rate mileage tax or the 10¢ gas-tax increase in a single year) is statistically significant.

**Table 8. Percentage-Point Increases in Support<sup>a</sup> for Variants of the Mileage Tax and Gas Tax Over Support for the “Base-Case” Versions of Those Taxes, by Opinions of the Transportation System (2013)**

	Mileage tax (%)	Gas tax							Info about average annual costs (%)
		2¢ increase per year, for 5 years (%)	Revenue to reduce local air pollution (%)	Revenue to reduce global warming (%)	Revenue to maintain streets / highways (%)	Revenue to improve safety (%)	Revenue to add high tech systems (%)		
All respondents	20	19	30	27	44	39	35	17	
Opinion on condition of roads and highways in local community									
Very good	21**	17**	23**	26**	35**	29**	26**	17**	
Somewhat good	21**	18**	32**	27**	47**	43**	36**	15**	
Bad	17**	22**	27**	22**	46**	33**	38**	23**	
Opinion on public transit service in local community									
Very good	18**	17**	28**	28**	42**	35**	34**	19**	
Somewhat good	21**	21**	35**	33**	45**	43**	38**	19**	
Poor	22**	18**	27**	15**	39**	30**	32**	14**	
No service	23**	16**	22**	18**	45**	35**	31**	13**	
Role of government in reducing traffic congestion									
High priority	20**	17**	33**	31**	43**	41**	37**	17**	
Medium priority	27**	25**	30**	28**	50**	40**	36**	20**	
Low priority	11**	11*	20**	11*	36**	32**	22**	14**	
Role of government in maintaining streets, roads, and highways									
High priority	21**	18**	32**	29**	49**	42**	37**	18**	
Medium priority	18**	22**	22**	19**	31**	28**	26**	16**	
Low priority	3	10	26	16	10	29	15	9	
Role of government in expanding and improving local public transit service									
High priority	24**	21**	39**	38**	45**	45**	42**	23**	
Medium priority	22**	20**	26**	22**	46**	36**	31**	13**	
Low priority	11**	11**	14**	11**	39**	28**	24**	13**	

Table 8, continued

	Mileage tax (%)	2¢ increase per year, for 5 years (%)	Gas tax					Info about average annual costs (%)
			Revenue to reduce local air pollution (%)	Revenue to reduce global warming (%)	Revenue to maintain streets / highways (%)	Revenue to improve safety (%)	Revenue to add high tech systems (%)	
<b>Opinions about the transportation system</b>								
Role of government on reducing accidents and improving safety								
High priority	24**	21**	36**	31**	46**	46**	19**	
Medium priority	12**	18**	17**	18**	43**	27**	15**	
Low priority	9*	6	3	5	24**	5	1	
Role of government in using modern technology								
High priority	21**	22**	35**	34**	48**	43**	23**	
Medium priority	24**	20**	30**	26**	45**	38**	15**	
Low priority	10*	5	14**	3	25**	23**	3	

\* Statistically significant at p<0.05.

\*\* Statistically significant at p<0.01.

<sup>a</sup> Sum of those who said they "strongly" or "somewhat" supported the option.

Notes: The test of two proportions was used to determine whether the change in support from the "base-case" option (either the flat-rate mileage tax or the 10¢ gas-tax increase in a single year) is statistically significant. "Support" levels that are crossed out indicate that too few respondents supported the policies to run the test of two proportions.

**Table 9. Percentage-Point Increases in Support<sup>a</sup> for Variants of the Mileage Tax and Gas Tax Over Support for the “Base-Case” Versions of Those Taxes, by Travel Behavior Characteristics (2013)**

Travel behavior characteristics	Mileage tax (%)	Gas tax						Info about average annual costs (%)
		2¢ increase per year, for 5 years (%)	Revenue to reduce local air pollution (%)	Revenue to reduce global warming (%)	Revenue to maintain streets / highways (%)	Revenue to improve safety (%)	Revenue to add high tech systems (%)	
All respondents	20	19	30	27	44	39	35	17
Annual miles driven								
1 - 7,500	17**	19**	30**	21**	46**	43**	32**	18**
7,501 - 12,500	21**	20**	18**	22**	40**	27**	30**	15**
12,501+	28**	18**	23**	21**	44**	29**	33**	13**
Don't know	22**	23**	51**	50**	51**	54**	42**	22**
Don't drive	10	16**	45**	37**	39**	52**	44**	22**
Miles per gallon								
≤ 24	20**	13**	21**	17**	41**	31**	30**	12**
25 - 38	26**	19**	25**	22**	43**	35**	30**	18**
39+	14*	16*	43**	36**	38**	47**	40**	21**
Taken transit in last 30 days								
Yes	22**	26**	43**	40**	39**	47**	39**	25**
No	20**	17**	27**	24**	46**	37**	33**	16**

\* Statistically significant at p<0.05.

\*\* Statistically significant at p<0.01.

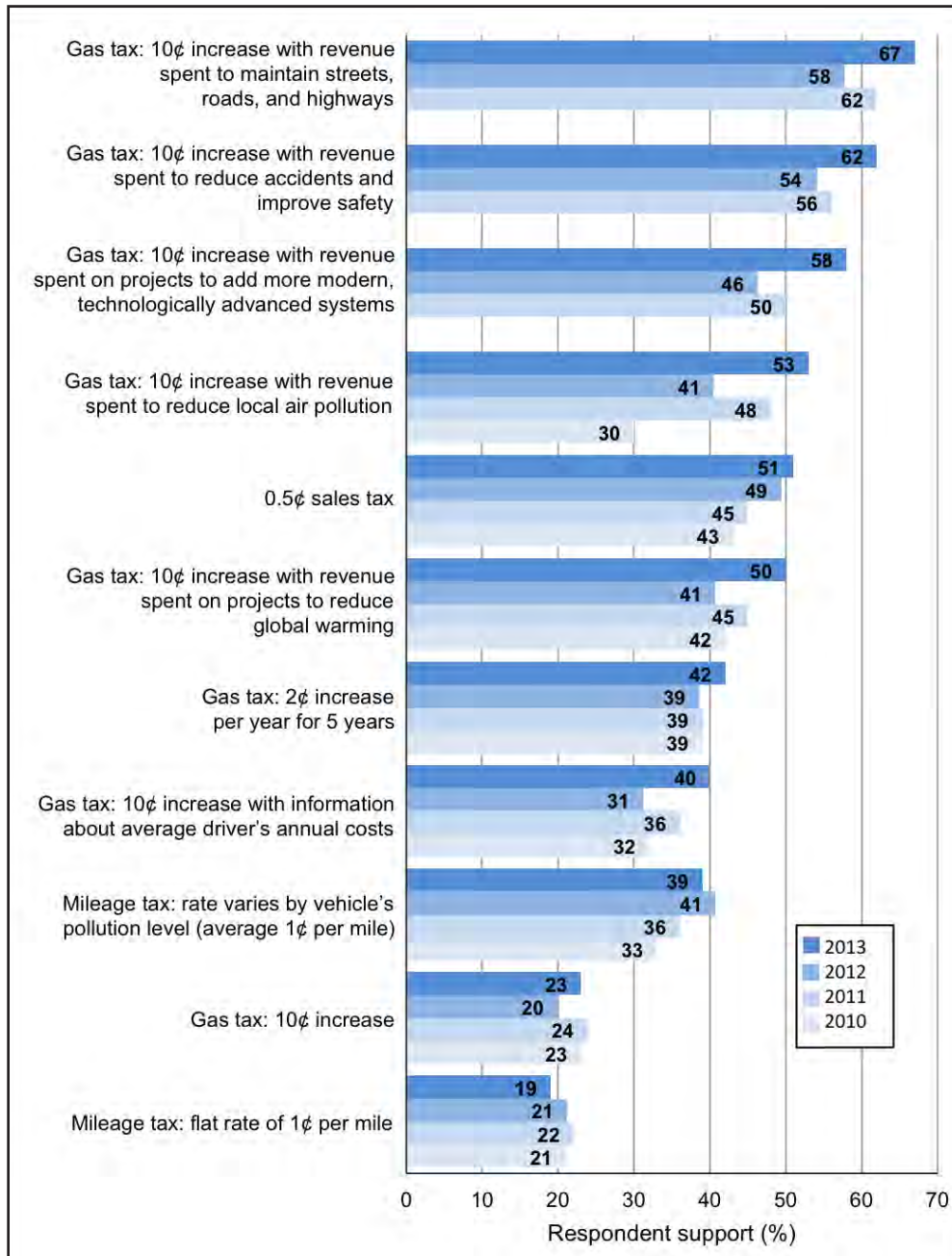
<sup>a</sup> Sum of those who said they “strongly” or “somewhat” supported the option.

Notes: The test of two proportions was used to determine whether the change in support from the “base-case” option (either the flat-rate mileage tax or the 10¢ gas-tax increase in a single year) is statistically significant.

### TRENDS IN SUPPORT OVER TIME (2010 – 2013)

Most of the survey questions replicate those in parallel surveys carried out in 2010, 2011, and 2012.<sup>6</sup> A trend analysis shows that support levels have not change much over the four surveys (see Figure 3 and Table 10). In most cases the support for a tax varied by 5 or fewer percentage points from 2010 to 2011 to 2012, a change too small to suggest a meaningful change in support. However, Americans were modestly more willing to support most of the tax increases in 2013 than they were in the previous three years.

**Figure 3. Trends in Support for the Tax Options (2010 – 2013)**



Note: "Support" is the sum of those who said they strongly or somewhat supported the tax option.

**Table 10. Trends in Support<sup>a</sup> for the Tax Options (2010 – 2013)**

Tax option	2010 (%)	2011 (%)	2012 (%)	2013 (%)	Difference 2013-2010 (percentage points)	Difference 2013-2011 (percentage points)	Difference 2013-2012 (percentage points)
Gas tax							
10¢ increase	23	24	20	23	0	-1	3*
10¢ increase, phased in over 5 years at 2¢ per year	39	39	39	42	3	3	3
10¢ increase, revenues spent to reduce local air pollution	30	48	41	53	23**	5**	12**
10¢ increase, revenues spent to reduce global warming	42	45	41	50	8**	5**	9**
10¢ increase, revenues spent to maintain streets, roads, & highways	-- <sup>b</sup>	62	58	67	--	5**	9**
10¢ increase, revenues spent to reduce accidents & improve safety	-- <sup>b</sup>	56	54	62	--	6**	8**
10¢ increase, revenues spent to add more modern, technologically advanced systems	-- <sup>b</sup>	50	46	58	--	8**	12**
10¢ increase, respondents informed of the annual tax burden for the typical driver	32	36	31	40	8**	4*	9**
Mileage tax							
1¢ per mile	21	22	21	19	-2	-3*	-2
1¢ per mile average, but vehicles that pollute more pay more and vehicles that pollute less pay less	33	36	41	39	6**	3	-2
National 0.5% sales tax	43	45	49	51	8	6**	2

\* Statistically significant at p<0.05.

\*\* Statistically significant at p<0.01.

<sup>a</sup> Sum of those who said they "strongly" or "somewhat" supported the option.

<sup>b</sup> These options were not included in the 2010 survey.

Note: The test of two proportions was used to check if there is a statistically significant difference in support for the different tax options from 2013 to 2010, 2013 to 2011, and 2013 to 2012.

The only notable exception to the trend of fairly similar support levels across all the taxes for all four surveys is the gas tax increase with revenues dedicated to projects that reduce air pollution. Here, support has varied more from year to year, with support noticeably lower in 2010 than in the subsequent years.

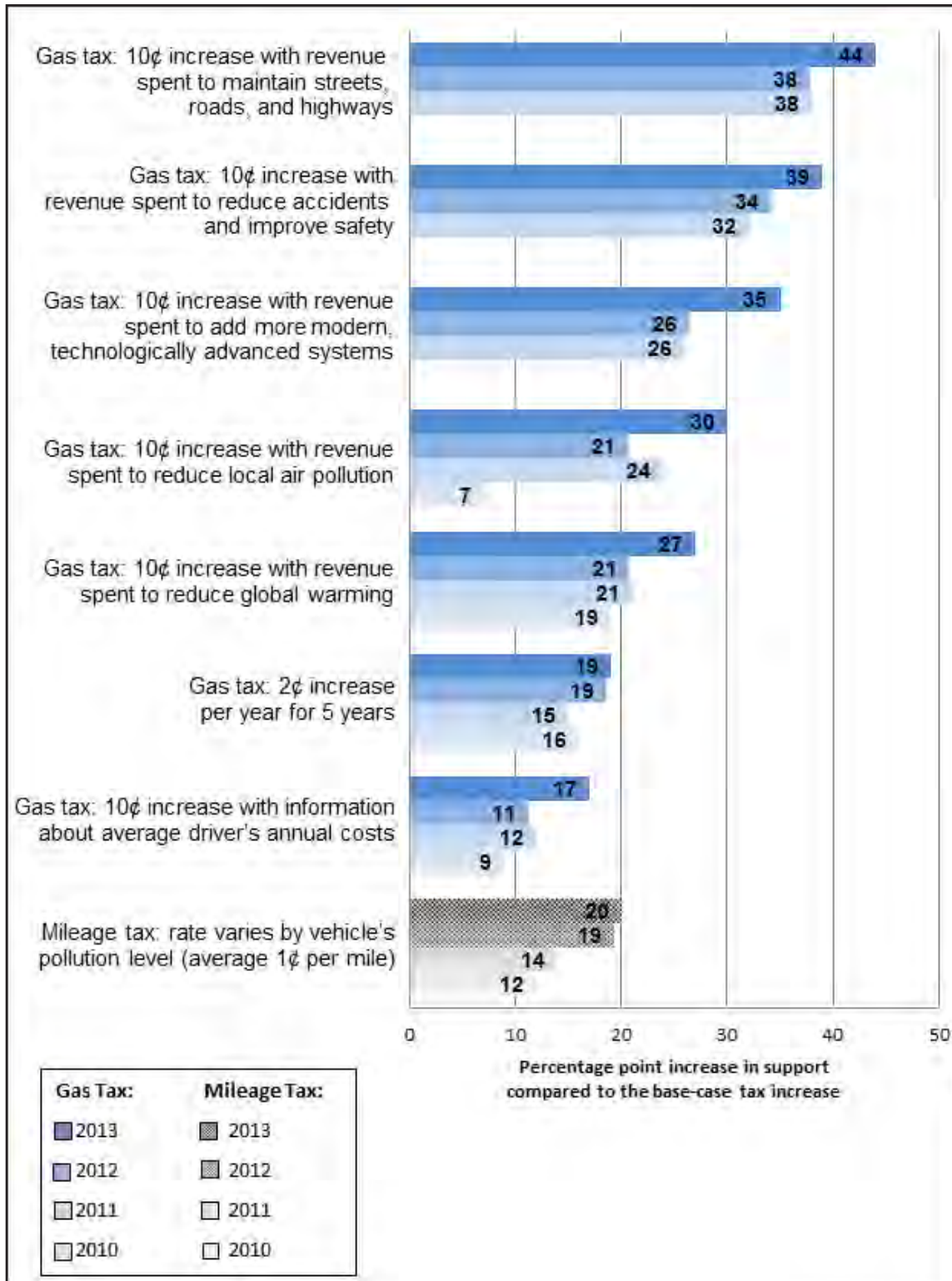
We also found that a few population subgroups were clearly more likely to support the taxes across all four surveys:<sup>7</sup>

- Asians/Asian-Americans and blacks/African-Americans (compared to whites)
- Younger people (compared to people in both older age groups)
- Democrats (compared to Republicans and Independents)
- People who drove the fewest miles per year (compared to people who did not know how many miles per year they drove or who did not drive)
- People who had used transit in the previous 30 days (compared to people who did not)
- People who think government should place a high priority on expanding and improving local public transit service, maintaining streets and roads, reducing accidents and improving safety, and using modern technology (compared with people who do not think government should prioritize these)

Our analysis of how the tax variations boosted support over the base cases shows little change from 2010 to 2013 (see Figure 4). In every case, the variations had higher support levels than the base-case options, and the boosts in support were quite similar each year the questions were asked. One exception is the gas tax linked to projects that would reduce local air pollution, which received a small increase in support in 2010, but has received a relatively consistent boost since then (24 percentage points in 2011, 21 points in 2012, and 27 points in 2013). Additionally, there was a gradual but steady increase in support for the mileage tax with variable rates based on vehicle emissions. For that tax variant, the boost was 12 percentage points in 2010, 14 points in 2011, 19 points in 2012, and, 20 percentage points in 2013.



**Figure 4. Changes over Time for the Relative Increases in Support for Variations of the Base-Case Gas Tax and Mileage Tax Concepts (2010 – 2013)**



Note: "Support" is the sum of those who said they strongly or somewhat supported the tax option.



## V. FINDINGS RELATED TO OPINIONS ON PUBLIC TRANSIT

For 2012 and 2013, a new emphasis in the survey project was to understand various perceptions related to public transit, including knowledge and opinions about federal taxes to support transit. This chapter pulls together the different pieces of the survey to highlight all findings related to transit.

A question early in the survey asked respondents their opinion on the quality of public transit in their community. The majority of respondents (60 percent) said that it is very or somewhat good, 13 percent said that it is poor, and 26 percent said either that there is no service in their community or that they did not know about transit quality. These values are very close to those from identical questions asked in the 2010, 2011, and 2012 surveys. (To compare the responses from all four surveys, see Q2 in Appendix A.)

Another early series of questions in the survey asked respondents how highly they would prioritize various things “government could do to improve the transportation system for everyone in the state where you live” (see Table 11). One of the priorities tested was expanding and improving local public transit service. Public transit was a high priority for close to half of respondents (43 percent), though this was the lowest percentage among the five priorities tested. However, when looking at those who felt transit was either a high or medium priority, transit rated not so differently from the other options—80 percent of respondents felt this way, compared to the other options that ranged from a low of 84 percent to a high of 97 percent. The two most popular priorities were road maintenance and improving safety.

**Table 11. Priority Placed on Ways that Government Could Improve the Transportation System for Everyone in the Respondent’s State (2012 and 2013)**

Transportation priorities	2012		2013			
	High or medium (%)	High or medium (%)	High (%)	Medium (%)	Low (%)	Don’t know (%)
Maintaining streets, roads, and highways in good condition, including filling potholes	95	97	75	22	2	0
Reducing accidents and improving safety	90	91	71	20	8	1
Reducing traffic congestion	81	84	49	35	15	1
Adding more modern, technologically advanced systems like real-time travel alerts, longer lasting pavements, and better-timed traffic lights	83	84	45	39	15	1
Expanding and improving local public transit service, like buses or light rail	83	80	43	37	17	2

Later in the survey, respondents were asked if they knew how the cost of providing transit service is covered.<sup>8</sup> The first question in the series was as follows: “When people ride public transit, they pay a fare. This money is used to pay for the service. Do you think that the money collected from public transit fares in general covers the full cost of the service?”

Thirty percent of respondents said yes, fares cover transit costs, 55 percent said no, and the remaining 15 percent said they did not know (Table 12).

**Table 12. Respondents' Belief About Whether Transit Fares Cover the Full Cost of Transit (2013)**

Do fares cover transit costs?	(%)
Yes	30
No <sup>a</sup>	55
Don't know <sup>a</sup>	15

<sup>a</sup> Of those respondents indicating that fares do not cover the full costs of transit or that they didn't know the answer to the question, 21 percent said that fares cover 1 to 33 percent of the full cost, 35 percent said that fares cover 34 to 66 percent of the full cost, 16 percent said that fares cover 67 to 100 percent of the full cost, and 29 percent said that they didn't know what percent of the full cost fares cover.

Those respondents indicating that fares do not cover the full costs of transit were asked some follow-up questions. First, they were asked, "In general, what percent of the full cost of public transit services do you think the fares cover?" Twenty-one percent said that fares cover 1 to 33 percent of the full cost, 35 percent said that fares cover 34 to 66 percent of the full cost, 16 percent said that fares cover 67 to 100 percent of the full cost, and 29 percent said that they did not know what percent of the full cost fares cover.

For those respondents who did *not* think fares covered all transit costs, the survey asked if they thought the federal, state, and local government also "helps to pay for public transit services around the country." Table 13 shows their responses for those who were asked the questions. Roughly two-thirds knew that each entity does help pay for transit, with the largest share (76 percent) aware that state governments contribute and the smallest share (65 percent) aware of the federal contribution. An alternative way to think about the findings is in terms of the percent of *all* respondents who are aware of the role each government entity plays in funding. Calculating the numbers this way, 46 percent knew the federal government pays for transit, 48 percent knew of local governments' role, and 53 percent knew of state governments' role.

**Table 13. Respondents' Knowledge About Which Government Entities Pay for Public Transit Around the U.S. (2013)**

Government entities	Does pay (%)	Does not pay (%)	Don't know (%)
Federal government	65	26	10
State government	76	14	10
Local government	68	20	12

*Note:* A similar set of questions was asked in the 2012 survey. In 2012, the survey questions were asked of all respondents and also included the option to indicate whether transit riders do or do not pay for transit. By contrast, in 2013, these questions were only asked of those individuals who knew that transit fares do not cover the full cost of transit or didn't know if this were true, and public transit riders were not included as one of the entities paying for transit in this question.

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Knowledge of whether or not fares cover transit and which government entities pay for transit varies considerably among many subgroups. For example, Table 14 shows that quite a few subgroups are more than 15 percentage points more likely to incorrectly think that fares cover all transit costs. These were respondents who:

- Had no more education than a high school degree (compared to respondents with more education)
- Were in the lowest income group (compared to people in the highest income group)
- Were in the youngest group (compared to the two older age groups)
- Were not registered to vote or were unlikely to vote (compared to those registered and likely to vote)
- Did not know their annual mileage or don't drive (compared to those who do know their annual mileage)
- Drove the most fuel-efficient cars (compared to those in the two less-fuel-efficient categories)
- Had taken transit in the last 30 days

By contrast, there are few differences among subgroups when estimating what fraction of transit costs fares cover (Table 15).

With respect to knowledge of which government entities fund transit, the most variation occurs in knowledge about federal funding (Table 16). The subgroups that are at least 15 percentage points less likely to know about federal funding are people of "other race" (as compared to whites), people in the lowest income group, people in the youngest age group, and people unregistered to vote or unlikely to vote. The only subgroups at least 15 percentage points less likely to know about local government funding are people who are not Hispanic, not registered to vote, and unlikely to vote. With respect to state funding, no subgroups within a category differ from each other by 15 or more percentage points.

**Table 14. Opinions on Whether Fares Cover the Full Cost of the Transit Service, by Subgroup (2013)**

Respondent subgroups	Yes (%)	No (%)	Don't know (%)
All respondents	30	55	15
Census region			
Northeast	34	51	16
Midwest	25*	58	17
South	28	59*	14
West	29	58	13
Gender			
Male	29	57	14
Female	31	54	16
Race			
White	27	58	15
Black/African-American	34	53	14
Asian/Asian-American	51**	42**	8
Other	36	47*	17
Of Hispanic/Latino origin/descent			
No	46	43	11
Yes	27**	58**	15
Education			
High school graduate or less	39	44	17
More than high school	23**	64**	13*
Employed			
Yes	27	60	13
No	40**	42**	17
Retired	22	59	18
Annual household income			
0 - \$50,000	35	49	16
\$50,001 - \$100,000	29	60**	12
\$100,001+	22**	64**	15
Age			
18 - 24 years	44	40	16
25 - 54 years	30**	59**	11
55 years+	23**	58**	19
Registered voter			
Yes	27	60	13
No	45**	34**	21**
Likely voter <sup>a</sup>			
Yes	24	63	13
No	45**	34**	21**
Political affiliation			
Democrat	32	56	12
Republican	20**	63	17
Independent <sup>b</sup>	23*	67*	10
Other <sup>c</sup>	<b>26</b>	60	14

**Table 14, continued**

<b>Respondent subgroups</b>	<b>Yes (%)</b>	<b>No (%)</b>	<b>Don't know (%)</b>
Annual miles driven			
1 - 7,500	28	56	16
7,501 - 12,500	24	63	13
12,501+	22	67**	11
Don't know	42**	39**	19
Don't drive	53**	34**	12
Miles per gallon <sup>d</sup>			
≤ 24 mpg	28	58	14
25 - 38 mpg	23	63	14
39 - 65 mpg	52**	36**	13
Taken transit in last 30 days			
Yes	44	52	4
No	26**	56	17**
Transit service in community			
Has transit service	33	55	12
No transit service	21**	58	21**

\* Statistically significant at  $p < 0.05$ .

\*\* Statistically significant at  $p < 0.01$ .

<sup>a</sup> Likely voters are those respondents who said they are registered voters and that they vote "all of the time" or "most of the time."

<sup>b</sup> Registered, but declined to state a party.

<sup>c</sup> Registered member of any other party, including the American Independent party.

<sup>d</sup> Categories correspond to the EPA's "SmartWay" vehicle rating system (U.S. Environmental Protection Agency, "Vehicle Rating System and SmartWay Thresholds, MY 2011 & MY 2012" (no date), [http://ofmpub.epa.gov/greenvehicles/SmartWay\\_2012.pdf](http://ofmpub.epa.gov/greenvehicles/SmartWay_2012.pdf) (accessed May 15, 2013)).

*Notes:* The test of two proportions was used to check if there is a statistically significant difference between responses among subgroups. The first sub-group listed in each category is the "base" case for the test; it is compared to the proportion of respondents who responded that the different entities "do" pay for transit in each of the other subgroups within that category.

**Table 15. Opinions on What Percent of Transit Costs Fares Cover, by Subgroup (2013)**

Respondent	1 to 33% (%)	34 to 66% (%)	67 to 100% (%)	Don't know (%)
All respondents asked the question <sup>a</sup>	21	35	16	29
Census region				
Northeast	20	33	16	32
Midwest	18	37	15	29
South	23	35	15	26
West	21	33	19	28
Gender				
Male	20	38	17	25
Female	21	32	15	32*
Race				
White	18	35	18	29
Black/African-American	32**	37	7**	24
Asian/Asian-American	28	40	13	20
Other	20	27	13	41*
Of Hispanic/Latino origin/descent				
No	21	32	21	27
Yes	21	36	15	29
Education				
High school graduate or less	16	36	11	37
More than high school	23**	35	19**	24**
Employed				
Yes	23	37	18	22
No	15*	36	13	37**
Retired	20	29	11*	40**
Annual household income				
0 - \$50,000	18	34	13	34
\$50,001 - \$100,000	19	35	21**	25*
\$100,001+	29**	36	14	21**
Age				
18 - 24 years	23	38	12	27
25 - 54 years	21	37	20*	22
55 years+	19	32	11	38*
Registered voter				
Yes	22	37	15	26
No	17	26*	18	39**
Likely voter <sup>b</sup>				
Yes	22	37	16	26
No	17	26*	18	39**
Political affiliation				
Democrat	19	39	15	28
Republican	22	38	16	25
Independent <sup>c</sup>	28*	35	16	21
Other <sup>d</sup>	26	33	14	28



**Table 15, continued**

<b>Respondent</b>	<b>1 to 33% (%)</b>	<b>34 to 66% (%)</b>	<b>67 to 100% (%)</b>	<b>Don't know (%)</b>
Annual miles driven				
1 - 7,500	23	35	14	29
7,501 - 12,500	21	32	21*	26
12,501+	19	41	18	22
Don't know	22	23*	12	42*
Don't drive	12	39	7	43*
Miles per gallon <sup>e</sup>				
≤ 24 mpg	22	38	15	25
25 - 38 mpg	18	38	19	25
39 - 65 mpg	15	33	10	42**
Taken transit in last 30 days				
Yes	27	44	13	17
No	19*	33**	17	31**
Transit service in community				
Has transit service	21	37	16	26
No transit service	20	33	15	31

\* Statistically significant at  $p < 0.05$ .

\*\* Statistically significant at  $p < 0.01$ .

<sup>a</sup> This question was asked of these people who, when asked if transit fares cover the full cost of transit, responded “no” or “don’t know.”

<sup>b</sup> Likely voters are those respondents who said they are registered voters and that they vote “all of the time” or “most of the time.”

<sup>c</sup> Registered, but declined to state a party.

<sup>d</sup> Registered member of any other party, including the American Independent party.

<sup>e</sup> Categories correspond to the EPA’s “SmartWay” vehicle rating system (U.S. Environmental Protection Agency, “Vehicle Rating System and SmartWay Thresholds, MY 2011 & MY 2012” (no date), [http://ofmpub.epa.gov/greenvehicles/SmartWay\\_2012.pdf](http://ofmpub.epa.gov/greenvehicles/SmartWay_2012.pdf) (accessed May 15, 2013)).

*Notes:* The test of two proportions was used to check if there is a statistically significant difference between responses among subgroups. The first sub-group listed in each category is the “base” case for the test; it is compared to the proportion of respondents who responded that the different entities “do” pay for transit in each of the other subgroups within that category.

**Table 16. Knowledge of Who Does<sup>a</sup> Pay for Transit, by Subgroup (2013)**

<b>Respondent subgroups</b>	<b>Federal gov't (%)</b>	<b>State gov't (%)</b>	<b>Local gov't (%)</b>
All respondents asked the question <sup>a</sup>	65	76	68
Census region			
Northeast	79	88	75
Midwest	69*	80*	77
South	70*	83	79
West	70	91	78
Gender			
Male	72	86	80
Female	71	83	75
Race			
White	74	85	77
Black/African-American	61**	80	79
Asian/Asian-American	87	95	90
Other	57**	83	74
Of Hispanic/Latino origin/descent			
No	65	82	60
Yes	73	85	79**
Education			
High school graduate or less	64	78	74
More than high school	76**	88**	79
Employed			
Yes	72	84	79
No	69	88	77
Retired	73	81	71*
Annual household income			
0 - \$50,000	61	82	72
\$50,001 - \$100,000	80**	85	80*
\$100,001+	76**	91**	84**
Age			
18 - 24 years	57	79	69
25 - 54 years	72**	87*	81**
55 years+	76**	83	76
Registered voter			
Yes	74	86	79
No	57**	72**	62**
Likely voter <sup>b</sup>			
Yes	75	86	79
No	57**	72**	62**
Political affiliation			
Democrat	71	82	77
Republican	75	88	78
Independent <sup>c</sup>	74	89	82
Other <sup>d</sup>	67	81	79

**Table 16, continued**

<b>Respondent subgroups</b>	<b>Federal gov't (%)</b>	<b>State gov't (%)</b>	<b>Local gov't (%)</b>
Annual miles driven			
1 - 7,500	68	83	72
7,501 - 12,500	77*	86	78
12,501+	77*	86	81*
Don't know	65	85	79
Don't drive	63	78	85
Miles per gallon <sup>e</sup>			
≤ 24 mpg	75	86	77
25 - 38 mpg	70	87	78
39 - 65 mpg	67	78	81
Taken transit in last 30 days			
Yes	66	83	74
No	73	85	78
Transit service in community			
Has transit service	72	85	80
No transit service	70	82	71**

\* Statistically significant at  $p < 0.05$ .

\*\* Statistically significant at  $p < 0.01$ .

<sup>a</sup> This question was asked of these people who, when asked if transit fares cover the full cost of transit, responded "no" or "don't know."

<sup>b</sup> Likely voters are those respondents who said they are registered voters and that they vote "all of the time" or "most of the time."

<sup>c</sup> Registered, but declined to state a party.

<sup>d</sup> Registered member of any other party, including the American Independent party.

<sup>e</sup> Categories correspond to the EPA's "SmartWay" vehicle rating system (U.S. Environmental Protection Agency, "Vehicle Rating System and SmartWay Thresholds, MY 2011 & MY 2012" (no date), [http://ofmpub.epa.gov/greenvehicles/SmartWay\\_2012.pdf](http://ofmpub.epa.gov/greenvehicles/SmartWay_2012.pdf) (accessed May 15, 2013)).

*Notes:* The test of two proportions was used to check if there is a statistically significant difference between responses among subgroups. The first sub-group listed in each category is the "base" case for the test; it is compared to the proportion of respondents who responded that the different entities "do" pay for transit in each of the other subgroups within that category. For the numbers crossed-out, there were too few respondents to run the test.

Finally, a set of questions delved into respondents' beliefs about the best ways for Congress to help pay for transit. The first of these asked respondents the following question:

Now I have a question about whether or not GAS tax money should be spent to pay for public transit. Some people say that money from gas taxes should only be spent on roads and highways, since drivers pay the tax. Other people say gas tax money should be used to pay for public transit IN ADDITION to roads and highways, because transit helps reduce traffic congestion and wear-and-tear on the roads. Would you support or oppose spending SOME gas tax money on public transit?<sup>9</sup>

Sixty-four percent of respondents supported spending gas tax revenues on transit, 33 percent opposed this, and only 2 percent said they did not know.<sup>10</sup> Table 17 shows support and opposition levels for the different population subgroups.<sup>11</sup> There are few large variations by subgroup, though support is considerably greater—by at least 15 percentage points over other subgroups in the same category—among the following groups:

- Black/African-Americans and Asian/Asian-Americans (compared to whites)
- Non-Hispanics (compared to Hispanics)
- Democrats (compared to Republicans)
- The youngest respondents (compared to the oldest ones)

**Table 17. Opinion on Whether Gas Taxes Should be Spent on Public Transit in Addition to Roads and Highways, by Subgroup (2013)**

Respondent subgroups	Support (%)	Oppose (%)
All respondents	64	33
Census region		
Northeast	64	37
Midwest	61	39
South	63	37
West	74*	27*
Gender		
Male	63	37
Female	69*	31*
Race		
White	62	38
Black/African-American	76**	24**
Asian/Asian-American	86**	14**
Other	71	29
Of Hispanic/Latino origin/descent		
No	79	22
Yes	63**	37**
Education		
High school graduate or less	64	36
More than high school	67	33
Employed		
Yes	67	33
No	67	33
Retired	58*	43**
Annual household income		
0 - \$50,000	67	33
\$50,001 - \$100,000	64	36
\$100,001+	65	36
Age		
18 - 24 years	77	23
25 - 54 years	65**	35**
55 years+	62**	38**
Registered voter		
Yes	65	35
No	67	33
Likely voter <sup>a</sup>		
Yes	64	36
No	67	33
Political affiliation		
Democrat	72	28
Republican	53**	47**
Independent <sup>b</sup>	65	35
Other <sup>c</sup>	68	32

**Table 17, continued**

Respondent subgroups	Support (%)	Oppose (%)
Annual miles driven		
1 - 7,500	68	33
7,501 - 12,500	64	36
12,501+	59*	41*
Don't know	74	26
Don't drive	71	30
Miles per gallon <sup>d</sup>		
≤ 24 mpg	61	39
25 - 38 mpg	68*	32*
39 - 65 mpg	74**	26**
Taken transit in last 30 days		
Yes	74	26
No	64**	36**
Transit service in community		
Has transit service	69	31
No transit service	57**	43**

\* Statistically significant at  $p < 0.05$ .

\*\* Statistically significant at  $p < 0.01$ .

<sup>a</sup> Likely voters are those respondents who said they are registered voters and that they vote “all of the time” or “most of the time.”

<sup>b</sup> Registered, but declined to state a party.

<sup>c</sup> Registered member of any other party, including the American Independent party.

<sup>d</sup> Categories correspond to the EPA’s “SmartWay” vehicle rating system (U.S. Environmental Protection Agency, “Vehicle Rating System and SmartWay Thresholds, MY 2011 & MY 2012” (no date), [http://ofmpub.epa.gov/greenvehicles/SmartWay\\_2012.pdf](http://ofmpub.epa.gov/greenvehicles/SmartWay_2012.pdf) (accessed May 15, 2013)).

Notes: The test of two proportions was used to check if there is a statistically significant difference between responses among subgroups. The first sub-group listed in each category is the “base” case for the test; it is compared to the proportion of respondents who responded that the different entities “do” pay for transit in each of the other subgroups within that category.

A multipart question then posed the scenario that Congress had decided to spend more money on public transit but had not decided how to pay for this. Respondents were first asked whether they would support each of the following three options to pay for expanding and improving public transportation: reducing spending on other federal programs, raising transit fares, or raising the federal gas tax. In 2013, reducing federal spending on other programs received the most support (57 percent), followed by raising transit fares (56 percent), and trailed by raising the federal gas tax (32 percent). However, when respondents were asked which of the three choices they *preferred*, a clearer hierarchy emerged: 48 percent preferred reducing spending on other programs, 27 percent preferred raising the federal gas tax, and 17 percent preferred raising transit fares (see Table 18).

**Table 18. Support<sup>a</sup> for Three Ways Congress Could Pay for Expanding and Improving Public Transportation, Plus the Preferred Alternative (2012 and 2013)**

Revenue alternatives	2013				2012			
	Support for the option				Support for the option			
	Support (%)	Oppose (%)	Don't know (%)	Preferred alternative <sup>b</sup> (%)	Support (%)	Oppose (%)	Don't know (%)	Preferred alternative <sup>c</sup> (%)
Reduce spending on other federal programs	57	37	6	48	56	35	9	48
Raise transit fares	56	41	3	17	45	48	7	27
Raise the federal gas tax	32	66	1	27	28	69	3	14

<sup>a</sup> Percent of respondents who “strongly supported” or “supported” each method to raise funds for public transportation.

<sup>b</sup> An additional 7 percent either didn't know, opposed all three, or equally supported all three.

<sup>c</sup> An additional 10 percent either didn't know, opposed all three, or equally supported all three.

The 2012 and 2013 surveys used identical wording to ask these questions on how Congress could pay for expanding and improving transit, but some of the results were notably different. Although the popularity of, and preference for, reducing spending on other federal programs remained almost the same from 2012 to 2013, the preference for raising transit fares and raising the federal gas tax reversed.

Investigating how the respondent subgroups responded to each of the three options for raising more federal money for transit shows a few clear differences by subgroup (Table 19), with the most clearly supportive subgroups defined as those showing at least 10 percentage points more support than one or more subgroups within the category. For each policy option, the most supportive subgroups were as follows:

- Those most supportive of **raising the federal gas tax** were respondents who fell into one any one of the following subgroups: living in the West, in the youngest age group, Democrat, drove the fewest miles per year or not at all, or had taken transit within the last 30 days.
- Those most supportive of **reducing spending on other government programs** were respondents who fell into one any one of the following subgroups: living in the West, Asian/Asian-American, or not of Hispanic or Latino origin or descent.
- Those most supportive of **raising transit fares** were respondents who fell into one any one of the following subgroups: white, of Hispanic or Latino origin or descent, living in households earning \$100,001 or more a year, likely voter, Republican, drove annual mileage in the 2 higher categories, drove vehicles with fuel efficiency in the two lower categories of fuel efficiency, or lived in communities that offered no transit service.

**Table 19. Support<sup>a</sup> for Three Ways Congress Could Pay for Expanding and Improving Public Transportation, by Subgroup (2013)**

Respondent subgroups	Raise federal gas tax (%)	Reduce spending on other gov't programs (%)	Raise transit fares (%)
All respondents	32	57	56
Census region			
Northeast	27	58	55
Midwest	31	56	63
South	33	61	64*
West	38**	68*	50
Gender			
Male	35	66	60
Female	31	57**	56
Race			
White	33	61	62
Black/African-American	36	57	44**
Asian/Asian-American	33	76*	55
Other	28	58	38**
Of Hispanic/Latino origin/descent			
No	33	70	49
Yes	33	59**	60**
Education			
High school graduate or less	31	60	53
More than high school	35	62	61**
Employed			
Yes	32	62	61
No	38*	61	52**
Retired	27	54*	54
Annual household income			
0 - \$50,000	32	63	54
\$50,001 - \$100,000	35	59	62*
\$100,001+	38	57	65**
Age			
18 - 24 years	44	61	55
25 - 54 years	33**	65	61
55 years+	27**	55	53
Registered voter			
Yes	33	60	60
No	32	63	51*
Likely voter <sup>b</sup>			
Yes	31	59	61
No	32	63	51**
Political affiliation			
Democrat	38	57	54
Republican	25**	62	69**
Independent <sup>c</sup>	37	65	63*
Other <sup>d</sup>	28	63	53



Table 19, continued

Respondent subgroups	Raise federal gas tax (%)	Reduce spending on other gov't programs (%)	Raise transit fares (%)
Annual miles driven			
1 - 7,500	38	62	54
7,501 - 12,500	30*	63	68**
12,501+	30*	62	66**
Don't know	27**	51*	44*
Don't drive	41	60	47
Miles per gallon <sup>e</sup>			
≤ 24 mpg	30	60	62
25 - 38 mpg	36*	62	64
39 - 65 mpg	38	56	45**
Taken transit in last 30 days			
Yes	41	65	52
No	31**	60	59*
Transit service in community			
Has transit service	35	61	55
No transit service	29	61	65**

\* Statistically significant at  $p < 0.05$ .

\*\* Statistically significant at  $p < 0.01$ .

<sup>a</sup> Percent of respondents who "strongly supported" or "supported" each method to raise funds for public transportation.

<sup>b</sup> Likely voters are those respondents who said they are registered voters and that they vote "all of the time" or "most of the time."

<sup>c</sup> Registered, but declined to state a party.

<sup>d</sup> Registered member of any other party, including the American Independent party.

<sup>e</sup> Categories correspond to the EPA's "SmartWay" vehicle rating system (U.S. Environmental Protection Agency, "Vehicle Rating System and SmartWay Thresholds, MY 2011 & MY 2012" (no date), [http://ofmpub.epa.gov/greenvehicles/SmartWay\\_2012.pdf](http://ofmpub.epa.gov/greenvehicles/SmartWay_2012.pdf) (accessed May 15, 2013).

Notes: The test of two proportions was used to check if there is a statistically significant difference between responses among subgroups. The first sub-group listed in each category is the "base" case for the test; it is compared to the proportion of respondents who responded that the different entities "do" pay for transit in each of the other subgroups within that category.

When respondents were asked which of the three options they *preferred*, some, but not all, of the same subgroups showed up (Table 20). For each preferred policy option, the most supportive subgroups were as follows:

- Those most likely to prefer **raising the federal gas tax** were respondents who fell into one any one of the following subgroups: white or black/African American, living in households with annual incomes of \$100,001 or more, drove vehicles in the two least-fuel-efficient categories, or either had not taken transit in the last 30 days or were living in communities with no transit service.
- Those most likely to prefer **reducing spending on other government programs** were respondents who fell into one any one of the following subgroups: Asian/Asian-American, not of Hispanic or Latino descent or origin, or living in households with the lowest annual income.
- Those most likely to prefer **raising transit fares** were respondents who fell into one any one of the following subgroups: Democrat, drove the most fuel-efficient vehicles, or had taken transit within the last 30 days.

**Table 20. Respondents' Preferred Method to Expand and Improve Public Transportation, by Subgroup (2013)**

Respondent subgroups	Raise federal gas tax (%)	Reduce spending on other gov't programs (%)	Raise transit fares (%)	Equally oppose all three (%)	Equally support all three (%)
All respondents	27	48	17	5	2
Census region					
Northeast	28	49	20	2	0
Midwest	30	47	17	3	3**
South	30	53	14*	3	1
West	26	47	21	4	1
Gender					
Male	25	51	19	3	1
Female	31*	48	17	3	1
Race					
White	30	48	18	3	1
Black/African-American	29	52	16	2	1
Asian/Asian-American	8**	67**	25	0	0
Other	22	51	19	8**	0
Of Hispanic/Latino origin/descent					
No	24	61	14	1	0
Yes	29	48**	19	3	1
Education					
High school graduate or less	26	54	16	3	1
More than high school	29	47*	20	3	1
Employed					
Yes	28	50	18	3	1
No	29	46	21	3	1
Retired	25	56	14	5	1
Annual household income					
0 - \$50,000	23	57	15	3	2
\$50,001 - \$100,000	30*	43**	24**	2	1
\$100,001+	36**	40**	21*	2	1
Age					
18 - 24 years	29	49	22	0	0
25 - 54 years	29	49	18	3*	2*
55 years+	27	52	16	5**	1
Registered voter					
Yes	30	48	17	3	1
No	22*	51	23*	3	0
Likely voter <sup>a</sup>					
Yes	30	48	17	3	1
No	22*	51	23*	3	0

Table 20, continued

Respondent subgroups	Raise federal gas tax (%)	Reduce spending on other gov't programs (%)	Raise transit fares (%)	Equally oppose all three (%)	Equally support all three (%)
Political affiliation					
Democrat	31	43	22	3	2
Republican	35	52*	11**	2	0*
Independent <sup>b</sup>	27	52*	14*	5	2
Other <sup>c</sup>	14**	57*	23	1	4
Annual miles driven					
1 - 7,500	30	46	20	3	1
7,501 - 12,500	31	50	14*	3	3
12,501+	27	49	20	4	0
Don't know	33	51	11**	4	1
Don't drive	10**	60**	26	3	2
Miles per gallon <sup>d</sup>					
≤ 24 mpg	32	48	16	3	1
25 - 38 mpg	30	47	19	3	1
39 - 65 mpg	12**	57	27**	4	1
Taken transit in last 30 days					
Yes	15	55	26	3	1
No	31**	49	16**	3	1
Transit service in community					
Has transit service	24	51	21	3	1
No transit service	36**	48	12**	5	0

\* Statistically significant at  $p < 0.05$ .

\*\* Statistically significant at  $p < 0.01$ .

<sup>a</sup> Likely voters are those respondents who said they are registered voters and that they vote "all of the time" or "most of the time."

<sup>b</sup> Registered, but declined to state a party.

<sup>c</sup> Registered member of any other party, including the American Independent party.

<sup>d</sup> Categories correspond to the EPA's "SmartWay" vehicle rating system (U.S. Environmental Protection Agency, "Vehicle Rating System and SmartWay Thresholds, MY 2011 & MY 2012" (no date), [http://ofmpub.epa.gov/greenvehicles/SmartWay\\_2012.pdf](http://ofmpub.epa.gov/greenvehicles/SmartWay_2012.pdf) (accessed May 15, 2013).

Notes: The test of two proportions was used to check if there is a statistically significant difference between responses among subgroups. The first sub-group listed in each category is the "base" case for the test; it is compared to the proportion of respondents who responded that the different entities "do" pay for transit in each of the other subgroups within that category.

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## VI. CONCLUSIONS

### SUMMARY OF KEY FINDINGS

#### Overall Support Levels for the 11 Tax Options in 2013

The survey results show that a majority of Americans would support higher taxes for transportation—under certain conditions. For example, a gas tax increase of 10¢ per gallon to improve road maintenance was supported by 67 percent of respondents, whereas support levels dropped to 50 percent if the revenues were to be devoted to reducing global warming, or only 23 percent if the revenues were to support undefined transportation purposes. As for tax options where the revenues were to be spent for undefined transportation purposes, support levels varied considerably by the kind of tax that would be imposed, with a sales tax much more popular (58 percent) than either a gas tax increase (24 percent) or a new mileage tax (19 percent).

A central goal of the survey was to compare public support for two alternative versions of the mileage tax and eight versions of a gas tax increase. Variations on the two taxes increased support substantially over that for the base case of each (a flat-rate mileage tax of 1¢ per mile and a 10¢ gas tax increase proposed without any additional detail). Those boosts in support ranged from a low of 17 percentage points to a high of 44 points.

When interpreting the survey results, it is important to keep in mind that the questionnaire described the various tax proposals in only general terms, so the results cannot be assumed to reflect support for any actual proposal put forward. Nevertheless, the results show likely patterns of support and, more important, the public's likely *relative* preferences among different transportation tax options.

#### Support Levels among Population Subgroups for the Tax Options in 2013

In addition to examining support for the different tax options among the overall population, we examined support by subgroups within the population. Breaking the population into subgroups by sociodemographic categories reveals only a few links with support for the taxes. Subgroups showing clearly higher levels of support compared to other subgroups in the same category are respondents who are Asian/Asian-Americans, of Hispanic or Latino origin or descent, in the youngest age group, and employed. In terms of politics, party affiliation played a clear role, with Democrats significantly more likely than Republicans or party-independent respondents to support every one of the taxes.

Breaking the respondents into subgroups according to their travel behavior and perceptions of the transportation system reveals only a few clear correlations with support for the tax options. However, support for many of the taxes is clearly higher among respondents who stated that they do not drive at all, drive vehicles with the highest fuel efficiency (39+ miles per gallon), or had taken public transit within the previous 30 days. Also, support was clearly higher among respondents who rated transit service in their community as very good compared with residents who said they have no transit service in their community. Finally, support is clearly much higher among respondents who place a high priority on

having government reduce traffic congestion; maintain streets, roads, and highways; expand and improve local public transit service; reduce accidents and improve safety; and increase use of modern technologies.

When comparing support by subgroup for the gas tax and mileage tax variations to the base-case versions, the overall picture that emerges is simple and clear: the base-case taxes were less popular than the alternative tax options among virtually every subgroup. Further, that boost in support for the variant is generally quite large, running to at least 30 percentage points for 43 percent of the cases.

### **Changes in Support for the 11 Tax Options, 2010 – 2013**

Our surveys indicate that American public opinion about the federal transportation tax options tested has changed very little since 2010. The 2013 survey found approximately the same support for the tax increases in all four years, though support levels in 2013 are slightly higher overall. Finally, the analysis of how the variations on the gas and mileage taxes boosted support over the base cases for each shows very little change from one year to the next.

The fact that all four surveys show such similar results suggests that the views expressed are indeed generally representative of the American public and are not aberrations caused by an unusual and unrepresentative sample in any year of the survey.

### **Knowledge and Preferences Related to Public Transit in 2013**

The questions that focused on public transit revealed that a very high percentage of people (80 percent) place a high or medium priority on improving and expanding public transit in their state, though other priorities have even higher support levels.

Many respondents were not knowledgeable about how public transit is funded. For example, 30 percent thought that fares cover the full cost of the service. Of those who did *not* incorrectly think that fares cover all transit costs, only about two-thirds knew that federal, state, and local governments each provide transit funding. Knowledge was the lowest regarding the federal role; only 65 percent of respondents knew that the federal government helps to pay for public transit.

Several questions looked at different aspects of support for various methods the federal government could use to generate revenues for improving transit service. Sixty-four percent of respondents supported the *concept* of spending gas tax revenues on transit. However, when asked about each of three mechanisms the federal government could use to raise new revenues to expand and improve transit, raising the gas tax was supported by the fewest respondents (32 percent). The other options—raising transit fares or cutting spending on other government programs—were both supported by slightly over half of respondents.

When respondents were asked which of the three choices for raising new revenues they *preferred*, a clearer hierarchy emerged: 48 percent preferred reducing spending on other

programs, 27 percent preferred raising the federal gas tax, and 17 percent preferred raising transit fares. This last finding on the relative preference for raising fares or the gas tax contrasts with results from the 2012 survey, in which 27 percent preferred raising transit fares and 14 percent preferred raising the gas tax.

### **Policy Implications for Transportation Professionals and Policymakers**

The results of the four surveys suggest several key implications for policymakers who wish to craft transportation revenue increases that will be more appealing—or at least less objectionable—to the public:

*The basic concept of a gas tax increase is not popular, but there are ways to structure such an increase that would significantly boost its acceptability.*

The survey results from all four years show that while support for a one-time gas tax increase can be very low, support could be increased by modifying the way the tax is implemented or described. Dedicating the revenue to purposes that are popular with the public, spreading out the increase over several years, and providing information about how much the increase will cost drivers annually are all options for improving support levels.

*The basic concept of a mileage tax is not popular, but there are ways to structure such a tax that would increase its acceptability.*

The survey results from all four years show that while a new mileage fee may be very unpopular, support could be increased by modifying the tax structure to incorporate a variable rate linked to the vehicle's environmental performance (defined in this survey as the vehicle's pollution level). The survey did not test any other variations on the mileage tax, but it is likely that there are others that would also have support levels above the very low 19 percent support for a flat 1¢-per-mile tax.

*Linking a transportation tax to environmental benefits can increase public support.*

Linking a transportation tax increase to environmental benefits can increase support, a trend found among other public opinion polls as well. In all years of our survey, support improved notably for both the gas tax increase and the mileage tax increase when they were linked to environmental benefits. For the mileage tax, the pollution-linked variant boosted support as compared to the flat-rate version a few more percentage points each year, from a 12-percentage-point boost in 2010 to a 20-point boost in 2013. The boost crossed political party lines, too, though the magnitude of increased support was greater among Democrats than people with other political affiliations.

*Demographic change in the U.S. population may increase support for transportation taxes.*

The surveys found that the youngest respondents were much more supportive of the tax options than older respondents. If this variation reflects a true generational shift, then

these opinions would persist as those currently young respondents age and might also hold with the age cohorts behind them who soon become adults.

*Transit is a popular concept, but it will face the same challenges as other transportation programs in finding new revenues.*

The survey results from all four years show that most people want good public transit service in their state. However, the 2013 questions exploring different methods to raise new revenues found relatively low levels of support for all of them. Policymakers seeking new funding for transit will likely find that their programs are similarly popular to more traditional priorities like reducing traffic congestion, but nevertheless face the same obstacles as other transportation programs in finding new tax revenue sources. One strategy to increase support for transit relative to other transportation programs may be to stress transit's environmental benefits. Another may be to focus on local tax measures in those communities that have existing transit networks, given the survey finding that people in communities with no transit service are less supportive of funding it.



## APPENDIX A: SURVEY QUESTIONNAIRE AND RESULTS

The following pages present the results of the 2013 survey described above, comparing them to the results from similar surveys conducted by MTI in 2010, 2011 and 2012.<sup>12</sup>

Note that in the tables below, some categories do not sum to 100 percent due to rounding.

The data labeled as “weighted” have been weighted by gender, race, Hispanic ethnicity, education level, and imputed income values to match the 2011 U.S. population estimates from the Census Bureau’s American Community Survey.

\* \* \*

Hello, I’m calling from the Social Science Research Center at Cal State University, Fullerton. We’re conducting an important research study on people’s thoughts about transportation in the US. May we please have a few minutes of your time for this study?

We are interested in your opinions about the transportation system. When I talk about the transportation system, I mean local streets and roads, highways, and public transit services like buses, light rail, and trains.

Ok. Here’s my first question.

Q1. In the community where you live, would you say that roads and highways are in very good condition, somewhat good condition, or bad condition?

	2010	2011	2012	2013	
	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Unweighted (%)
Very good condition	25	19	20	23	23
Somewhat good condition	54	62	64	60	60
Bad condition	20	19	16	16	17
Don’t know (volunteered)	<1	<1	1	1	<1

Q2. Does your community offer very good public transit service, somewhat good public transit service, poor public transit service, or no public transit service at all?

	2010	2011	2012	2013	
	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Unweighted (%)
Very good	17	16	19	19	18
Somewhat good	38	38	41	41	39
Poor	15	19	16	13	16
No service	23	21	17	21	21
Don’t know (volunteered)	7	7	7	5	6

Now, please think about what the government could do to improve the transportation system for EVERYONE in the state where you live. I’m going to read you several options.

For each one, tell me whether you think government should make that a high priority, medium priority, or low priority.

[Q3-Q7 RANDOMIZED]

Q3. How about reducing traffic congestion? Should government make that a high, medium, or low priority?

	2010	2011	2012	2013	
	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Unweighted (%)
High priority	47	49	47	49	48
Medium priority	35	36	33	35	34
Low priority	15	14	17	15	17
Don't know (volunteered)	4	2	2	1	2

Q4. How about maintaining streets, roads, and highways in good condition, including filling potholes? Should government make that a high, medium, or low priority?

	2010	2011	2012	2013	
	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Unweighted (%)
High priority	68	73	68	75	75
Medium priority	26	23	27	22	21
Low priority	5	4	5	2	3
Don't know (volunteered)	1	<1	1	<1	1

Q5. How about expanding and improving local public transit service, like buses or light rail? Should government make that a high, medium or low priority?

	2010	2011	2012	2013	
	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Unweighted (%)
High priority	47	47	45	43	43
Medium priority	36	33	37	38	36
Low priority	14	17	16	18	19
Don't know (volunteered)	4	3	2	2	3

Q6. How about reducing accidents and improving safety? Should government make that a high, medium, or low priority?

	2010	2011	2012	2013	
	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Unweighted (%)
High priority	n.a.	65	68	71	68
Medium priority	n.a.	26	22	20	21
Low priority	n.a.	7	9	8	10
Don't know (volunteered)	n.a.	1	2	1	1

Q7. How about adding more modern, technologically advanced systems like real-time travel alerts, longer lasting pavements, and better-timed traffic lights? Should government make that a high, medium, or low priority?

	2010	2011	2012	2013	
	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Unweighted (%)
High priority	n.a.	47	46	45	44
Medium priority	n.a.	36	37	39	39
Low priority	n.a.	15	15	15	16
Don't know (volunteered)	n.a.	1	2	1	2

There are many ways the U.S. Congress could raise money to pay for maintaining and improving the transportation system. I'm going to ask your opinion about some of these different options. In each case, assume that the money collected would be spent ONLY for transportation purposes.

[RANDOMIZE BLOCKS Q8, Q9, Q10]

Q8. One idea (a DIFFERENT idea) is to adopt a new national half-cent sales tax to pay for transportation. Would you strongly support, somewhat support, somewhat oppose, or strongly oppose this new sales tax?

	2010	2011	2012	2013	
	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Unweighted (%)
Strongly support	12	14	12	13	14
Somewhat support	30	31	37	37	32
Somewhat oppose	16	20	19	20	18
Strongly oppose	38	30	27	28	34
Don't know (volunteered)	4	5	4	3	3

Q9A. Right now the federal government collects a tax of 18 cents per gallon when people buy gasoline. One idea (a DIFFERENT idea) to raise money for transportation is to increase the federal gas tax by 10 cents a gallon, from 18 cents to 28 cents. Would you strongly support, somewhat support, somewhat oppose, or strongly oppose this gas tax increase?

	2010	2011	2012	2013	
	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Unweighted (%)
Strongly support	9	7	6	5	6
Somewhat support	14	17	14	18	17
Somewhat oppose	20	22	19	18	18
Strongly oppose	54	52	61	57	57
Don't know (volunteered)	2	2	1	2	1

Q9B. A VARIATION on the idea of raising the gas tax by 10 cents AT ONE TIME would be to spread the increase over 5 years. The tax would go up by 2 cents a year for each of the five years. Would you strongly support, somewhat support, somewhat oppose, or strongly oppose THIS gas tax increase?

	2010	2011	2012	2013	
	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Unweighted (%)
Strongly support	14	13	10	14	13
Somewhat support	25	25	29	28	28
Somewhat oppose	21	20	18	20	18
Strongly oppose	36	39	43	38	41
Don't know (volunteered)	3	2	1	1	1

Q10A. One idea (a DIFFERENT idea) is to adopt a new tax based on the number of miles a person drives. Each driver would pay a tax of one cent for every mile driven. For example, someone driving one hundred miles would pay a tax of one dollar. Vehicles would have an electronic meter to keep track of the miles driven, and the tax would be paid each time drivers buy gas. Would you strongly support, somewhat support, somewhat oppose, or strongly oppose this new mileage tax?

	2010	2011	2012	2013	
	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Unweighted (%)
Strongly support	9	6	6	5	5
Somewhat support	12	16	15	13	12
Somewhat oppose	15	17	17	16	15
Strongly oppose	61	58	60	64	66
Don't know (volunteered)	3	2	3	2	2

Q10B. A VARIATION on the mileage tax just described is to have the tax rate VARY depending upon how much the vehicle pollutes. On average, vehicles would be charged one cent per mile, but vehicles that pollute less would be charged less, and vehicles that pollute more would be charged more. Would you strongly support, somewhat support, somewhat oppose, or strongly oppose THIS new mileage tax?

	2010	2011	2012	2013	
	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Unweighted (%)
Strongly support	14	14	17	16	15
Somewhat support	19	22	24	23	22
Somewhat oppose	18	18	17	18	19
Strongly oppose	46	42	40	42	43
Don't know (volunteered)	3	4	2	2	2

Now, imagine that the US Congress decided that the best option to raise money for transportation is to increase the federal gas tax by ten cents per gallon. I'm going to read you several different options for how the money is spent. For each, please tell me if you would strongly support, somewhat support, somewhat oppose, or strongly oppose the gas tax increase.

## [RANDOMIZE BLOCKS Q11 TO Q15]

Q11. Would you support the gas tax increase if the new money were spent ONLY on projects to reduce LOCAL AIR POLLUTION caused by the transportation system?

	2010	2011	2012	2013	
	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Unweighted (%)
Strongly support	9	14	14	18	14
Somewhat support	21	33	27	35	33
Somewhat oppose	23	16	16	19	19
Strongly oppose	42	33	41	28	31
Don't know (volunteered)	6	3	2	2	2

Q12. Would you support the gas tax increase if the money were spent ONLY on projects to reduce the transportation system's contribution to GLOBAL WARMING?

	2010	2011	2012	2013	
	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Unweighted (%)
Strongly support	12	14	14	19	16
Somewhat support	30	32	26	30	28
Somewhat oppose	19	15	14	17	17
Strongly oppose	36	34	41	32	36
Don't know (volunteered)	3	6	4	2	3

Q13. Would you support the gas tax increase if the money were spent ONLY on projects to MAINTAIN streets, roads, and highways?

	2010	2011	2012	2013	
	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Unweighted (%)
Strongly support	n.a.	26	23	33	28
Somewhat support	n.a.	36	35	34	33
Somewhat oppose	n.a.	12	10	12	14
Strongly oppose	n.a.	22	31	20	24
Don't know (volunteered)	n.a.	4	2	1	1

Q14. Would you support the gas tax increase if the money were spent ONLY on projects to reduce accidents and improve safety?

	2010	2011	2012	2013	
	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Unweighted (%)
Strongly support	n.a.	23	25	27	21
Somewhat support	n.a.	34	29	35	34
Somewhat oppose	n.a.	15	12	17	17
Strongly oppose	n.a.	24	31	21	27
Don't know (volunteered)	n.a.	5	3	1	1

Q15. Would you support the gas tax increase if the money were spent ONLY on projects to add more modern, technologically advanced systems like real-time travel alerts, longer lasting pavements, and better-timed traffic lights?

	2010	2011	2012	2013	
	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Unweighted (%)
Strongly support	n.a.	16	15	22	18
Somewhat support	n.a.	34	31	34	35
Somewhat oppose	n.a.	18	15	17	16
Strongly oppose	n.a.	28	36	25	30
Don't know (volunteered)	n.a.	4	2	2	2

Q16. Let me give you some information about how much the CURRENT federal gas tax costs an AVERAGE driver. Someone who drives 10,000 miles a year, in a vehicle that gets 20 miles to the gallon, will pay about 100 dollars a year. If Congress raised the gas tax by 10 cents a gallon, that same driver would now pay about 150 dollars a year. Now that you have this information, would you strongly support, somewhat support, somewhat oppose, or strongly oppose a 10 cent gas tax increase?

	2010	2011	2012	2013	
	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Unweighted (%)
Strongly support	13	11	10	12	12
Somewhat support	19	25	21	28	25
Somewhat oppose	19	18	16	17	17
Strongly oppose	46	42	50	42	44
Don't know (volunteered)	3	4	3	1	1

Now I have a few questions about public transportation. By public transit, I mean buses, light rail, and trains.

Q17. When people ride public transit, they pay a fare. This money is used to pay for the service. Do you think that the money collected from public transit fares in general covers the full cost of the service?

[NOTE: IF RESPONDENT ASKS WHAT KIND OF COSTS, SAY: "PLEASE THINK ABOUT COSTS TO BUILD, OPERATE, AND MAINTAIN THE SYSTEM."]

	2010	2011	2012	2013	
				Weighted (%)	Unweighted (%)
Yes	n.a.	n.a.	n.a.	30	23
No	n.a.	n.a.	n.a.	55	63
Don't know (volunteered)	n.a.	n.a.	n.a.	15	15

Note: Questions Q17A-D were not asked of respondents who answered “yes” to Q17.

Q17A. In general, what percent of the full cost of public transit services do you think the fares cover?

	2010	2011	2012	2013*	
				Weighted (%)	Unweighted (%)
1 to 33%	n.a.	n.a.	n.a.	21	22
34 to 66%	n.a.	n.a.	n.a.	35	34
67 to 100%	n.a.	n.a.	n.a.	16	16
Don't know (volunteered)	n.a.	n.a.	n.a.	29	29

\*Respondents could select any percentage from 0-100. The mean percent was 48%, with a standard deviation of 21% (same values both weighted and unweighted).

I'm going to read you a list of potential funding sources. For each, please tell me if you think it helps to pay for public transit services.

[NOTE: IF THE RESPONDENT ASKS ABOUT THE DEFINITION OF LOCAL GOVERNMENT, SAY “EITHER CITIES, COUNTIES, PARISHES, OR BOROUGHES.”]

Q17B. Who helps pay for public transit around the country? The federal government.

	2010	2011	2012	2013	
	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Unweighted (%)
Does pay	n.a.	n.a.	n.a.	65	67
Does not pay	n.a.	n.a.	n.a.	26	23
Don't know (volunteered)	n.a.	n.a.	n.a.	10	11

Q17C. Who helps pay for public transit around the country? State governments.

	2010	2011	2012	2013	
	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Unweighted (%)
Does pay	n.a.	n.a.	n.a.	76	77
Does not pay	n.a.	n.a.	n.a.	14	13
Don't know (volunteered)	n.a.	n.a.	n.a.	10	10

Q17D. Who helps pay for public transit around the country? Local governments.

	2010	2011	2012	2013	
	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Unweighted (%)
Does pay	n.a.	n.a.	n.a.	68	71
Does not pay	n.a.	n.a.	n.a.	20	19
Don't know (volunteered)	n.a.	n.a.	n.a.	12	10

- Q18. Now I have a question about whether or not GAS tax money should be spent to pay for public transit. Some people say that money from gas taxes should only be spent on roads and highways, since drivers pay the tax. Other people say gas tax money should be used to pay for public transit IN ADDITION to roads and highways, because transit helps reduce traffic congestion and wear-and-tear on the roads. Would you support or oppose spending SOME gas tax money on public transit?

	2010	2011	2012	2013	
	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Unweighted (%)
Support	n.a.	n.a.	n.a.	64	62
Oppose	n.a.	n.a.	n.a.	33	35
Don't know (volunteered)	n.a.	n.a.	n.a.	2	3

\* Half the sample received the question with this wording, and the other half received the question with the options presented in reverse order, i.e., "Now I have a question about whether or not GAS tax money should be spent to pay for public transit. Some people say gas tax money should be used to pay for public transit IN ADDITION to roads and highways, because transit helps reduce traffic congestion and wear-and-tear on the roads. Other people say that money from gas taxes should only be spent on roads and highways, since drivers pay the tax. Would you support or oppose spending SOME gas tax money on public transit?"

- Q19. Suppose Congress has voted to spend more money to expand and improve public transit around the country but has NOT yet decided how to pay for the improvements. Would you strongly support, somewhat support, somewhat oppose, or strongly oppose each of the following ways to raise money for public transit?

[RANDOMIZE LIST A – C]

- Q19A. Raise the federal gas tax

	2010	2011	2012	2013	
	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Unweighted (%)
Strongly support	n.a.	n.a.	9	9	10
Somewhat support	n.a.	n.a.	19	24	23
Somewhat oppose	n.a.	n.a.	16	19	17
Strongly oppose	n.a.	n.a.	53	48	49
Don't know (volunteered)	n.a.	n.a.	3	1	1

- Q19B. Reduce spending on other federal programs

	2010	2011	2012	2013	
	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Unweighted (%)
Strongly support	n.a.	n.a.	25	27	27
Somewhat support	n.a.	n.a.	31	30	28
Somewhat oppose	n.a.	n.a.	18	18	18
Strongly oppose	n.a.	n.a.	18	18	20
Don't know (volunteered)	n.a.	n.a.	9	6	6



## Q19C. Raise transit fares

	2010	2011	2012	2013	
	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Unweighted (%)
Strongly support	n.a.	n.a.	14	18	18
Somewhat support	n.a.	n.a.	31	38	39
Somewhat oppose	n.a.	n.a.	21	19	18
Strongly oppose	n.a.	n.a.	27	22	22
Don't know (volunteered)	n.a.	n.a.	7	3	4

Q20. Suppose Congress has voted to spend more money to expand and improve public transit around the country but has NOT yet decided how to pay for the improvements. Would you strongly support, somewhat support, somewhat oppose, or strongly oppose each of the following ways to raise money for public transit? [RANDOMIZE LIST A – C]

	2010	2011	2012	2013	
	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Unweighted (%)
Raise the federal gas tax	n.a.	n.a.	14	27	28
Reduce spending on other federal programs	n.a.	n.a.	48	48	46
Raise transit fares	n.a.	n.a.	27	17	18
Equally oppose all three (volunteered)	n.a.	n.a.	5	3	4
Equally support all three (volunteered)	n.a.	n.a.	2	1	1
Don't know (volunteered)	n.a.	n.a.	4	3	3

Q21. Now, if you could only select ONE of the three options I just described, which would you prefer? Let me read them again for you. [READ FIRST 3 ONLY] [ROTATE LIST 1-3]

	2010	2011	2012	2013	
	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Unweighted (%)
Raise the federal gas tax	n.a.	n.a.	14	27	28
Reduce spending on other federal programs	n.a.	n.a.	48	48	46
Raise transit fares	n.a.	n.a.	27	17	18
Equally oppose all three (volunteered)	n.a.	n.a.	5	3	4
Equally support all three (volunteered)	n.a.	n.a.	2	1	1
Don't know (volunteered)	n.a.	n.a.	4	3	3



## **APPENDIX B: OPINION POLLS REVIEWED**

The tables in this appendix summarize key findings from a sampling of recent public opinion polls asking respondents about their support for taxes to raise transportation revenues. Table 19 and Table 20 present responses to gas tax proposals; Table 21 presents responses to mileage tax proposals; and Table 22 presents responses to sales tax proposals. Complete source citations for all items in the tables are given in the bibliography.

**Table 21. Public Opinion Polling on Gas Tax Increases**

Sponsor (and author, if different)	Survey date	Sampling frame	Findings
Boston Globe (Smith)	2008	Massachusetts residents	77% "would be willing to increase" the gas tax 5¢ or more, "knowing that maintaining roads and bridges is expensive." 40% would "favor" increasing the gas tax to reduce tolls or state debt.
National Highway Users Association (Fabrizio McLaughlin & Associates)	2008	U.S. likely voters	71% of respondents "supported" some form of unspecified increase in the gas tax "to pay for needed transportation projects" when the question followed a series of informative questions on the values of investing in roads and bridges. Initially, 57% of respondents had supported the increase. In both cases, respondents were informed about the current level of the tax and how long it has been set at its current level.
CBS/New York Times	2007	U.S. residents	64% of respondents "would be willing to pay" an unspecified increase in the gas tax if proceeds were used to research renewable energy sources, while 38% would "favor" an increase to promote conservation and reduce global warming.
Mass Inc. Polling Group	2013	Massachusetts registered voters	61% of respondents "support" increasing the state gas tax "if the money were spent ONLY on projects to MAINTAIN streets, roads, and highways?" Lower percentages supported a gas tax increase for other transportation purposes.
New York Times/CBS News	2006	U.S. residents	59% of respondents "favored" an unspecified increase in the gas tax if it "would cut down on energy consumption and reduce global warming." 55% also favored the increase if it "would reduce the United States' dependence on foreign oil." This dropped to 28% if the tax increase reduced other taxes, 24% if it helped pay for the war on terror, and 12% if no reason was given. 17% of respondents continued to "favor" the tax increase when it was specified as a \$2 per gallon increase.
Metropolitan Transportation Commission (BW Research Partnership)	2007	San Francisco Bay Area residents	56% of respondents would "support" an unspecified increase in the cost of gasoline to either reduce public transit fares or increase transit service. 57% supported the increase for providing incentives for carpooling, but only 47% supported the increase to pay for bike lanes and sidewalks. 46%, 28%, and 17% were "willing to pay" 25¢, 50¢, or \$1 more per gallon of gas, respectively, when these amounts were called out. All questions framed increased gas costs as a way to reduce greenhouse-gas emissions or global warming.
Minnesota Public Radio (Pugmire)	2007	Minnesota registered voters	51% of respondents supported a 5¢ per gallon increase in the state gas tax "to pay for improvements to roads and bridges." This was a follow-up question regarding a 10¢ per gallon increase for which support was only 37%. The poll was conducted two months after a bridge collapsed in Minnesota.
Washington Post (Abt-SRBI, Inc.)	2012	Maryland residents	48% of respondents "favored" a 5¢ per gallon increase in the state gas tax "if the money is used for transportation projects." Follow-up questions for 10¢ and 15¢ increases were "favored" by 26% and 25% of respondents respectively.
Washington Post (Morin and Ginsberg)	2005	Washington, DC, area residents	48% of respondents "supported" a gas-tax increase if the money was used for "transportation projects such as building roads, traffic management, or public transportation." This question was asked after a series of questions on congestion-reduction strategies.

Table 21, continued

Sponsor (and author, if different)	Survey date	Sampling frame	Findings
NCPWR (Wilson Research Strategies)	2008	U.S. likely voters	47% of respondents "would be willing to pay" some level of increased gas tax as a way to promote conservation and reduce greenhouse-gas emissions. 62% reported that they would be less likely to accept such an increase if Americans' transportation emissions were shown to be "a small fraction of a percentage point" of all greenhouse-gas emissions.
Washington State Transportation Commission (EMC Research)	2012	Washington State residents	46% of respondents thought that the state gas tax was "definitely" or "probably" a "good way to fund increased transportation investment." Additionally, 41% of respondents "supported" allowing the gas tax to "rise with the rate of inflation so it provides a more stable funding source."
Public Agenda (Bittle et al.)	2009	U.S. residents	45% of respondents "favored" a 40¢ per gallon gas tax "to support development of clean renewable energy sources" when presented in a series of energy-related proposals. Levels of favor for other gas-tax proposals included 40% for a 40¢ tax "to help achieve energy independence," 38% for a 40¢ tax "to improve roads, bridges, tunnels, and other public works," and 25% for a federal \$4 per gallon fixed price on gasoline to "encourage the development of alternative fuels."
Metropolitan Transportation Commission (EMC Research)	2012	San Francisco Bay Area likely voters	43% of respondents "approved" a 10¢ per gallon gas tax increase across the region "for no longer than 20 years with expenditures subject to strict citizen oversight and requiring that at least 95 percent of revenue generated by each county be spent on benefits for that county" after mentioning some potential improvements. 36% of respondents "agreed" to support the increase without additional information, although follow-up questions on 5¢ and 2¢ increases garnered 51% and 66% agreement. 44% of respondents "agreed" to support the 10¢ increase "only for road improvements," while 41% "agreed" to support the increase "only for transit improvements."
University of Texas, Austin (Musti et al.)	2010	Austin, TX, area residents	43% of respondents "supported" a \$1 per gallon increase in the gas tax "to combat climate change." 62% of respondents "supported" energy taxes with this same purpose -- a \$50 tax per ton of greenhouse gas emissions "produced by electricity generation and motor fuel use" was given as an example of such a tax.
CBS News/New York Times	2009	U.S. residents	43% of respondents "favored" an unspecified increase to the federal gas tax "if it would reduce U.S. dependence on foreign oil."
Mineta Transportation Institute (Weinstein, et al.)	2006	California likely voters	43% of respondents "would vote for" a 1¢ per gallon increase in the state gas tax during each of the next 10 years. 28% of respondents "would vote for" indexing the state gas tax to inflation when the question prompted that such an increase would have been 0.5¢ per gallon in the previous year.
ABC News/Time Magazine/Washington Post (Langer)	2005	U.S. residents	42% of respondents were "willing to pay" some higher level of gas tax "to fund transportation projects." 32% of respondents "supported" higher gas taxes for building roads, public transportation, or managing traffic.
National Association of Realtors (Hart Research Associates)	2009	U.S. registered voters	40% of respondents favored a 5¢ per gallon gas-tax increase "to pay for transportation projects and create jobs." Support fell to 23% for a 10¢ increase.

Table 21, continued

Sponsor (and author, if different)	Survey date	Sampling frame	Findings
Alameda County Transportation Commission (EMC Research)	2011 (March)	Alameda County (Oakland), CA, registered voters	39% of respondents were "likely to vote yes" for a 10¢ per gallon increase in gas taxes for the surrounding region to "pay for maintenance of local streets and roads as well as improvements to public transportation." Approval dropped to 38% when more information was provided. In contrast, 71% of respondents "were likely to vote yes" for an extension of a 0.5¢ county sales tax "to address an updated plan for the county's current and future transportation needs" after being informed that "money from this measure could only be spent on the voter-approved expenditure plan... and could not be taken by the state."
Washington Post	2007	Maryland residents	38% of respondents "favored" a 10¢ per gallon increase in the state gas tax "if the money is used for transportation projects such as building roads, traffic management, or public transportation."
Quinnipiac University Polling Institute	2009	New Jersey voters	37% of respondents "supported" an unspecified gas tax increase "to help finance road improvements and mass transportation."
Quinnipiac University Polling Institute	2005	Connecticut registered voters	37% of respondents "supported" a 6¢ per gallon gas-tax increase to pay for "transportation improvement projects to reduce traffic congestion."
HNTB Corporation (Kelton Research)	2011	U.S. residents	36% of respondents agreed that they "would support" a 10¢ per gallon gas tax increase "now that the economy has improved" after being informed that the tax had not risen since 1993 and that it no longer "collects enough funds to fully support current or future federal highway and transit programs." In a follow-up question, 58% of respondents agreed that the gas tax "should rise and fall along with the rate of inflation."
Selzer and Company	2013	Iowa adults	35% of respondents "favored" raising the gas tax "by around 10 cents a gallon to pay for road and bridge repairs."
HNTB Corporation (Kelton Research)	2009	U.S. residents	35% of respondents "would support" a 10¢ per gallon gas-tax increase "once the economy improves." The question informed respondents about the level of the federal gas tax, when it was set, and the reasons why it is no longer sufficient. Earlier in the poll, 57% of respondents agreed that current gas taxes "are no longer sufficient to properly maintain our roads and bridges."
CNN (Bursk)	2007	U.S. residents	33% of respondents "favored" an unspecified increase in the federal gas tax to pay for additional "inspection and repair of bridges across the country." The poll was conducted one week after a bridge collapsed in Minnesota.
Quinnipiac University	2012	Virginia voters	32% of respondents would rather have higher gas taxes than tolls to raise money for road improvements.
ABC News/Washington Post/Stanford University (Krosnick)	2007	U.S. residents	32% of respondents "favored" an unspecified increase in gas taxes to promote fuel-efficient vehicles and conservation. This question was asked as part of a series of questions on strategies to reduce global warming.
Christopher Newport University's Judy Ford Watson Center for Public Policy	2013	Virginia registered voters	31% of respondents would "support" an increase in the state gas tax in order to fund the state's "transportation needs, including building new roads and bridges and maintaining current roads and bridges."

Table 21, continued

Sponsor (and author, if different)	Survey date	Sampling frame	Findings
Fiscal Research Center, Andrew Young School of Policy Studies, Georgia State University (Ellen, Sjoquist, and Stoycheva)	2012	Georgia adult drivers	31% of respondents would "support" a gas tax increase of 10 cents per gallon to fund transportation. 23% of respondents would "support" a gas tax increase of 15 cents per gallon. 21% of respondents would "support" a gas tax increase of 25 cents per gallon.
Des Moines Register (Seizer & Co.)	2012	Iowa residents	31% of respondents "favored" raising the state gas tax "8 to 10 cents a gallon to pay for road and bridge repairs."
Metropolitan Washington Council of Governments	2013	Washington, DC-area participants in forums on congestion pricing	29% of respondents "strongly agree" that the gas tax should be raised to pay for transportation (this was after an informational presentation). Before the presentation, only 13% of respondents "strongly agreed" with this proposal.
Gallup (Brown)	2013	National phone survey	29% of respondents would "vote for" a "law in your state that would increase the gas tax up to 20 cents a gallon, with the new gas tax money going to improve roads and bridges and build more mass transportation in your state."
Roanoke College	2013	Virginia residents	29% of respondents "favored" linking the gas tax to inflation in order to raise revenues for transportation. 24% of respondents said that raising taxes and designating them for roads is "closest to their view" point.
Yale Project on Climate Change Communication (Leiserowitz, et al.)	2013	U.S. adults	29% of respondents strongly or somewhat support a policy to "increase taxes on gasoline by 25 cents per gallon and return the revenues to taxpayers by reducing the Federal income tax."
<i>The Wall Street Journal</i>	2012	Readers of the paper's blog who responded to an invitation to vote	28% said the gas tax should be "increased." 16% said that the gas tax should be indexed to inflation.
Quinnipiac University Polling Institute (Brown)	2011	Virginia registered voters	28% of respondents "would rather have...a higher gas tax to raise money for road improvement" when asked to choose between gas taxes and tolls. In contrast, 60% "would rather have highway tolls."
Marquette Law School	2013	Wisconsin voters	28% of respondents were "willing" to "raise gas taxes and vehicle registration fees for highway projects."
Elway Research	2013	Washington State registered voters	28% of respondents would "favor" or "accept" a gas tax increase as a transportation funding option.
The Rockefeller Foundation (Hart Research Associates)	2011	U.S. registered voters	27% of respondents found it "acceptable" to increase the federal gas tax an unspecified amount in order to "provide additional funding for transportation projects" after being informed that the tax had not increased since 1993.
Gonzales Reserach Marketing Strategies	2013	Maryland registered voters who vote regularly	27% of respondents would "favor" a "10 cent per gallon increase in Maryland's gas tax rate to be used for transportation projects."

Table 21, continued

Sponsor (and author, if different)	Survey date	Sampling frame	Findings
<i>Washington Post</i>	2013	Maryland residents	26% of respondents would "favor" a "new 3 percent sales tax on gasoline, if the money were used for transportation projects such as building roads, traffic management or public transportation."
Old Dominion University	2012	Hampton Roads, Virginia, residents	25% of respondents would "support" increasing the state fuel tax "if additional funds are needed to maintain or expand the road, highway, and bridge systems in Hampton Roads."
Mineta Transportation Institute (Agrawal and Nixon)	2011	U.S. residents	24% of respondents "supported" a 10¢ per gallon gas tax increase "to pay for transportation." Respondents were informed of the original and new amounts of the gas tax. Support increased to 62% if revenues were dedicated to "projects to MAINTAIN streets, roads, and highways," 57% if they went to "reduce accidents and improve safety," 50% if they went to "add more modern, technologically advanced systems like real-time travel alerts, longer lasting pavements, and better timed traffic lights." 48% if they went to "projects to reduce LOCAL AIR POLLUTION caused by the transportation system," 46% if they went to "projects to reduce the transportation system's contribution to GLOBAL WARMING," 38% if the increase was spread across five years, and 36% when respondents were informed of the annual cost of the increase. In comparison, 45% of respondents "supported" a national 0.5¢ sales tax, while the proportion of respondents "supporting" two mileage tax proposals were 36% and 22%.
Mineta Transportation Institute (Agrawal and Nixon)	2010	U.S. residents	24% of respondents "supported" a 10¢ per gallon gas tax increase "to pay for transportation." Respondents were informed of the original and new amounts of the gas tax. Support increased to 43% if revenues were dedicated to "projects to reduce the transportation system's contribution to GLOBAL WARMING," 40% if the increase was spread across five years, 32% when respondents were informed of the annual cost of the increase, and 31% if revenues went to "projects to reduce LOCAL AIR POLLUTION caused by the transportation system." In comparison, 42% of respondents "supported" a national 0.5¢ sales tax, while the proportion of respondents "supporting" two mileage tax proposals were 33% and 22%.
Gonzales Reserach Marketing Strategies	2012	Maryland voters who vote regularly	23% of respondents would "favor" a "10 cents per gallon increase in Maryland's gas tax rate to be used for transportation projects." 3% of respondents "favored" a "law in Maryland that would automatically increase the gas tax rate each year without Legislative review or approval."
Pew Research Center	2010	U.S. residents	22% of respondents "approved" of an unspecified increase to the national gasoline tax when "thinking about ways to reduce the federal budget deficit."
Rasmussen Reports	2009	U.S. residents	22% preferred raising the gas tax an unspecified amount to "cutting back nationally on transportation projects." 15% of respondents agreed that the federal government should increase gas taxes "to help meet new transportation needs."
Pew Research Center	2008	U.S. residents	22% of respondents "favored" an unspecified increase in the gas tax "to encourage carpooling and conservation." This was in response to a series of questions on policies that "address America's energy supply."



Table 21, continued

Sponsor (and author, if different)	Survey date	Sampling frame	Findings
Virginia Transportation Construction Alliance (Public Opinion Strategies)	2013	Virginia likely voters	21% of respondents said that the following proposal to increase transportation funding was “closest” to their opinion: “in order to increase transportation funding, the current gas tax of seventeen point five cents per gallon should be increased by ten cents to twenty seven point five cents per gallon. The gas tax would also be indexed to inflation so that it would increase at the same rate as inflation.” (The alternative presented was to eliminate the gas tax and increase the state sales tax.)
Mineta Transportation Institute (Agrawal, Nixon, and Murthy)	2012	U.S. residents	20% of respondents “supported” a 10¢ per gallon gas tax increase “to pay for transportation.” Respondents were informed of the original and new amounts of the gas tax. Support increased to 58% if revenues were dedicated to “projects to MAINTAIN streets, roads, and highways,” 54% if they went to “reduce accidents and improve safety,” 46% if they went to “add more modern, technologically advanced systems like real-time travel alerts, longer lasting pavements, and better-timed traffic lights,” 41% if they went to “projects to reduce LOCAL AIR POLLUTION caused by the transportation system,” 41% if they went to “projects to reduce the transportation system’s contribution to GLOBAL WARMING,” 39% if the increase was spread across five years, and 36% when respondents were informed of the annual cost of the increase.
Reason Foundation	2011	U.S. residents	19% of respondents “favored” an unspecified increase in the gas tax. Respondents were informed that the tax pays for highways and transit, and were given the following opposing viewpoints: “Roads and transit systems are crumbling and need more funding” and “The government wastes a lot of the gas money it already receives.”
Rasmussen Reports (Pulse Opinion Research)	2012	U.S. residents	18% of respondents agreed that the government should “raise the gas tax to help meet new transportation needs.” 48% of respondents agreed that the government should “eliminate the federal gasoline tax until gas prices come down.”
HNTB Corporation (Kelton Research)	2012	U.S. residents	17% of respondents stated they would be “willing to spend more money on” the gas tax “if it was allocated to long-term interstate improvements in [their] area.”
HNTB Corporation (Kelton Research)	2012	U.S. residents	16% of respondents would “prefer” that “the United States get funding for the nation’s interstate projects” through an “increased federal gas tax” (as compared to tolls or a miles driven user fee).
Rasmussen Reports	2009	U.S. residents	10% of respondents “favored” a federal government policy to increase gas taxes “a large amount” to encourage the purchase of fuel-efficient cars.
Duke Nicholas Institute	2013	U.S. adults	8% of respondents “strongly support” “[i]ncreasing taxes on all fossil fuels (gasoline, coal, and natural gas) to encourage conservation and use of alternative energy sources.” The number of individuals who “strongly support” the tax increased to 10% if the increase in taxes on fossil fuels provided “each person with a \$500 energy rebate on their tax return.”

**Table 22. Public Opinion Polling on Gas Tax Increases Linked to Environmental Benefits**

Sponsor (and author, if different)	Survey date	Sampling frame	Findings
CBS/New York Times	2007	U.S. residents	64% of respondents "would be willing to pay" an unspecified increase in the gas tax if proceeds were used to research renewable energy sources, while 38% would "favor" an increase to promote conservation and reduce global warming.
Washington State Transportation Commission (EMC Research)	2012	Washington State residents	61% of respondents thought "a vehicle emissions fee – vehicles that pollute more would pay a higher fee" – was "definitely" or "probably" a "good way to fund increased transportation investment." 45% of respondents thought the same of "a fee based on fuel efficiency of a vehicle – less fuel efficient vehicles would pay a higher fee."
New York Times/CBS News	2006	U.S. residents	59% of respondents "favored" an unspecified increase in the gas tax if it "would cut down on energy consumption and reduce global warming." 55% also favored the increase if it "would reduce the United States' dependence on foreign oil." This dropped to 28% if the tax increase reduced other taxes, 24% if it helped pay for the war on terror, and 12% if no reason was given. 17% of respondents continued to "favor" the tax increase when it was specified as a \$2-per-gallon increase.
Metropolitan Transportation Commission (BW Research Partnership)	2007	San Francisco Bay Area residents	56% of respondents would "support" an unspecified increase in the cost of gas to either reduce public transit fares or increase transit service. 57% supported the increase for providing incentives for carpooling, but only 47% supported the increase to pay for bike lanes and sidewalks. 46%, 28%, and 17% were "willing to pay" 25¢, 50¢, or \$1 more per gallon of gas, respectively, when these amounts were called out. All questions framed increased gas costs as a way to reduce greenhouse-gas emissions or global warming.
Mineta Transportation Institute (Agrawal and Nixon)	2011	U.S. residents	48% of respondents "supported" a 10¢ per gallon gas tax increase where revenues were dedicated to "projects to reduce LOCAL AIR POLLUTION caused by the transportation system," while support was 46% if revenues were dedicated to "projects to reduce the transportation system's contribution to GLOBAL WARMING." When asked if they "supported" the increase without a funding restriction, only 24% of respondents did so, but this did increase to 36% of respondents when they were informed of the annual costs and 38% if the increase was spread over 5 years.
NCPPR (Wilson Research Strategies)	2008	U.S. likely voters	47% of respondents "would be willing to pay" some level of increased gas tax as a way to promote conservation and reduce greenhouse-gas emissions. 62% reported that they would be less likely to accept such an increase if Americans' transportation emissions were shown to be "a small fraction of a percentage point" of all greenhouse-gas emissions.
Mineta Transportation Institute (Agrawal and Nixon)	2010	U.S. residents	43% of respondents "supported" a 10¢ per gallon gas tax increase where revenues were dedicated to "projects to reduce the transportation system's contribution to GLOBAL WARMING," while support was 31% if revenues were dedicated to "projects to reduce LOCAL AIR POLLUTION caused by the transportation system." When asked if they "supported" the increase without a funding restriction, only 22% of respondents did so, but this did increase to 32% of respondents when they were informed of the annual costs and 40% if the increase was spread over 5 years.
University of Texas, Austin (Musti et al.)	2010	Austin, TX, area residents	43% of respondents "supported" a \$1 per gallon increase in the gas tax "to combat climate change." 62% of respondents "supported" energy taxes with this same purpose – a tax of \$50 per ton of greenhouse gas emissions "produced by electricity generation and motor fuel use" was given as an example.

Table 22, continued

Sponsor (and author, if different)	Survey date	Sampling frame	Findings
Mineta Transportation Institute (Agrawal, Nixon, and Murthy)	2012	U.S. residents	41% of respondents "supported" a 10¢ per gallon gas tax increase where revenues were dedicated to "projects to reduce the transportation system's contribution to GLOBAL WARMING." Support was also 41% if revenues were dedicated to "projects to reduce LOCAL AIR POLLUTION caused by the transportation system."
ABC News/Washington Post/Stanford University (Krosnick)	2007	U.S. residents	32% of respondents "favored" an unspecified increase in gas taxes to promote fuel-efficient vehicles and conservation. This was in response to a series of questions on strategies to reduce global warming.
Pew Research Center	2008	U.S. residents	22% of respondents "favored" an unspecified increase in the gas tax "to encourage carpooling and conservation." This was in response to a series of questions on policies that "address America's energy supply."
Rasmussen Reports	2009	U.S. residents	10% of respondents "favored" a federal government policy to increase gas taxes "a large amount" to encourage the purchase of fuel-efficient cars.
Duke Nicholas Institute	2013	U.S. adults	8% of respondents "strongly supported" "[i]ncreasing taxes on all fossil fuels (gasoline, coal, and natural gas) to encourage conservation and use of alternative energy sources." The number of individuals who "strongly support" the tax increased to 10% if the increase in taxes on fossil fuels provided "each person with a \$500 energy rebate on their tax return."

**Table 23. Public Opinion Polling on Mileage Taxes**

Sponsor (and author, if different)	Survey date	Sampling frame	Findings
Mineta Transportation Institute (Agrawal et al.)	2009	California residents	50% of respondents "supported" replacing the state gas tax with a fee averaging 1¢ per mile for every mile driven within the state, with the fee rate varying by how much the vehicle pollutes so that "vehicles that pollute the least would pay less, and vehicles that pollute the most would pay more per mile." Respondents were informed that "vehicles would be equipped with an electronic meter to keep track of miles driven, and the fee would be paid when drivers buy gas." Support for the proposal was only 28% for a variation in which all vehicles paid the same 1¢ per mile rate.
Washington State Transportation Commission (EMC Research)	2012	Washington state residents	44% of respondents thought that "a fee based on the number of miles driven – people who used the system more would pay a higher fee" was "definitely" or "probably" a "good way to fund increased transportation investment."
Mineta Transportation Institute (Agrawal, Nixon, and Murthy)	2012	U.S. residents	41% of respondents "supported" a tax where "vehicles would be charged one cent per mile, but vehicles that pollute less would be charged less, and vehicles that pollute more would be charged more. . . . Vehicles would have an electronic meter to keep track of the miles driven, and the tax would be paid each time drivers buy gas."
HNTB Corporation (Kelton Research)	2010	U.S. residents	39% of respondents agreed with the statement "the U.S. should try to reduce transportation greenhouse-gas emissions by reducing the number of miles that vehicles travel through a mileage use tax."
Mineta Transportation Institute (Agrawal and Nixon)	2011	U.S. residents	36% of respondents "supported" a tax where "vehicles would be charged one cent per mile, but vehicles that pollute less would be charged less, and vehicles that pollute more would be charged more. . . . Vehicles would have an electronic meter to keep track of the miles driven, and the tax would be paid each time drivers buy gas." Support decreased to 22% of respondents when all vehicles paid the same flat fee of one cent per mile.
The Rockefeller Foundation (Hart Research Associates)	2011	U.S. registered voters	34% of respondents found it "acceptable" to replace the federal gas tax with "a fee based on the number of miles driven per year." 40% of respondents "favored" developing a pilot program in "select states and localities" to test such a replacement.
Mineta Transportation Institute (Agrawal and Nixon)	2010	U.S. residents	33% of respondents "supported" a tax where "vehicles would be charged one cent per mile, but vehicles that pollute less would be charged less, and vehicles that pollute more would be charged more. . . . Vehicles would have an electronic meter to keep track of the miles driven, and the tax would be paid each time drivers buy gas." Support decreased to 22% of respondents when all vehicles paid the same flat fee of one cent per mile.

Table 23, contineud

Sponsor (and author, if different)	Survey date	Sampling frame	Findings
Fiscal Research Center, Andrew Young School of Policy Studies, Georgia State University (Ellen, Sjoquist, and Stoycheva)	2012	Georgia adult drivers	39% of respondents would "support" a VMT tax of 1.60 cents per mile "as a replacement for the current gas tax without describing the mechanism by which miles would be determined. Respondents were asked to imagine that, instead of paying a state gas tax, they could pay at the gas pump a tax based solely on the number of miles the vehicle was driven in Georgia since it was last refueled." 36% of respondents would "support" a VMT tax of 2.10 cents per mile "as a replacement for the current gas tax without describing the mechanism by which miles would be determined. 33% of respondents would "support" a VMT tax of 1.35 cents per mile "as a replacement for the current gas tax without describing the mechanism by which miles would be determined.
<i>Wall Street Journal</i>	2012	Readers of the paper's blog who responded to an invitation to vote	28% of respondents said that in place of the gas tax there should be a "tax instead by miles driven."
HNTB Corporation (Kelton Research)	2012	U.S. residents	23% of respondents would "most prefer" a "vehicle miles driven user fee" when asked to choose whether they would "most prefer" as a way to "get funding for the nation's interstate projects." (The alternatives were tolls or an increased federal gas tax.)
Mineta Transportation Institute (Weinstein et al.)	2006	California likely voters	23% of respondents "would vote for" replacing the state gas tax with a mileage fee where "each driver would pay a fee of 1¢ per mile for every mile driven within the state." Respondents were informed that "vehicles would be equipped with an electronic means to keep track of miles driven, and the fee would be paid when drivers buy gas."
Rasmussen Reports	2009	U.S. residents	18% of respondents "favored" some form of mileage tax "to help fund the building and repair of roads and bridges."
MassINC Polling Group	2013	Massachusetts registered voters	17% of respondents would "support" the state adopting "a new tax based on the number of miles a person drives. Each driver would pay a tax for every mile driven. The car's mileage would be read during annual vehicle inspections, and the tax would be paid at that time."
Rasmussen Reports (Pulse Opinion Research)	2012	U.S. residents	12% of respondents "favored" a mileage tax when it was presented as "a good way to raise funds for highway maintenance."
Civitas Institute	2009	North Carolina registered voters	12% of respondents "would view favorably" a switch to "a plan that would charge all drivers based on the number of miles they drive in North Carolina." (The question did not specify what the "current system" was.)

**Table 24. Public Opinion Polling on Sales Taxes**

Sponsor (and author, if different)	Survey date	Sampling frame	Findings
Alameda County Transportation Commission (EMC Research)	2011 (March)	Alameda County, CA, registered voters	71% of respondents were "likely to vote yes to approve" an extension of a 0.5¢ county sales tax "to address an updated plan for the county's current and future transportation needs." Respondents were informed about the fact that the tax passed twelve years previously and that "money from this measure could only be spent on the voter-approved expenditure plan, and all money from this measure would stay in Alameda County and could not be taken by the state." In separate questions, respondents showed a preference for making the tax permanent with votes on the spending plan every 20 years to just extending the tax 20 years (54% to 29%) and maintaining the tax at its current rate rather than increasing it by 0.25¢ (45% to 39%).
Virginia Transportation Construction Alliance (Public Opinion Strategies)	2013	Virginia likely voters	69% of respondents said that the following proposal to increase transportation funding was "closest" to their opinion: "in order to increase transportation funding, the current gas tax of seventeen point five cents per gallon should be eliminated and replaced with an eight tenths of a penny increase in the state sales tax. The additional revenue from the state sales tax increase would be dedicated entirely to transportation and Virginia's state sales tax would still be the lowest in the region." (The alternative presented was to raise the state per-gallon gas tax and also index the rate to inflation.)
Alameda County Transportation Commission (EMC Research)	2011 (October)	Alameda County, CA, registered voters	69% of one group of respondents were "likely to vote yes to approve" a measure "extending the existing transportation sales tax and increasing it by one half cent." 59% of a second group of respondents were "likely to vote yes to approve" a measure that "authorizes a one half cent transportation sales tax." In both cases, respondents were informed that the measure would "address the County's current and future transportation needs," would require "voter approval every 20 years on a new expenditure plan, with citizen oversight and a local jobs creation program" and that "no money can be taken by the state."
Christopher Newport University's Judy Ford Watson Center for Public Policy	2013	Virginia registered voters	63% of respondents said they would "support replacing the gas tax with an increased sales tax." 45% of respondents said they would support an "increase the state sales tax" in order to fund "transportation needs, including building new roads and bridges and maintaining current roads and bridges."
Regional Transportation Alliance (Fallon Research)	2012	Orange County (Chapel Hill), NC, registered voters	60% of respondents "would vote for" a 0.5¢ local sales tax "to pay for new or expanded public transportation." Exempting "food, medicine, utilities, and gasoline" from the tax increased support for the measure (41% said they were "more likely" to vote for the measure vs. 7% "less likely"), as did a scenario where gas prices rose to \$5/gallon (27% "more likely" to 14% "less likely"). A scenario where "funding was used just for more bus routes and services, and did not include any rail systems" reduced support for the measure (8% "more likely" to 35% "less likely").
Triangle Transportation Authority (Fallon Research)	2010	Durham, Orange, and Wake Counties, NC, registered voters	58% of respondents "would vote for" a 0.5¢ sales-tax increase "to pay for new or expanded public transportation." 53% of a segment of respondents "would vote for" a 0.75¢ county sales tax to fund "new or expanded public transportation, new school construction, and the purchase of open space for preservation."

Table 24, continued

Sponsor (and author, if different)	Survey date	Sampling frame	Findings
Los Angeles Metro (Fairbank Maslin Maulin)	2007	Los Angeles County, CA, registered voters	56% of respondents "would vote yes in favor" of a 0.5¢ county sales tax for transportation projects "with local control, required annual independent financial audits, and no funds to be used for administrators' salaries." Respondents were presented with the types of projects that would be funded with the tax. 57% of respondents "would vote yes in favor" of the same measure if the tax was set at 0.25¢.
Center for the Study of Los Angeles, Loyola Marymount University	2012	Los Angeles, CA, registered voters	54% of respondents "would vote yes" to extend a 0.5¢ county sales tax "for transportation-related projects, like the metro rail." Respondents were informed about the fact that the tax was passed four years previously and was going to last a total of thirty years, and that their vote would be to extend the tax another thirty years.
University of Arkansas (Parry)	2012	Arkansas adult residents	53% of respondents "favor" a measure that would "increase the statewide sales tax from 6 percent to 6.5 percent for the next 10 years in order to generate money for Arkansas highways and other road construction projects. The increase would not apply to groceries."
Denver RTD (The Kenney Group)	2010	Metro Denver and Boulder County, CO, likely voters	51% of respondents "would vote for" a 0.4¢ increase in county sales taxes devoted to a set of regional transportation projects. Earlier in the survey, 48% of respondents agreed that "we should double the sales tax from four pennies on ten dollars to a total of eight pennies on ten dollars" in order to complete the set of projects "on time in 2017."
Atlanta Journal-Constitution and Channel 2 Action News (Mason-Dixon Polling & Research, Inc.)	2011	Atlanta, GA, area registered voters	51% of respondents "would vote yes, in favor" of a 1¢ local sales tax to "fund transportation projects in the [local] special transportation district." Respondents were informed that "projects to be funded would be requested by each county and then selected by a regional group of elected officials."
Regional Transportation Alliance (Fallon Research)	2012	Wake County (Raleigh), NC, registered voters	50% of respondents "would vote for" a 0.5¢ local sales tax "to pay for new or expanded public transportation." Exempting "food, medicine, utilities, and gasoline" from the tax increased support for the measure (44% said they were "more likely" to vote for the measure vs. 9% "less likely"), as did a scenario where gas prices rose to \$5/gallon (23% "more likely" to 20% "less likely"). A scenario where "funding was used just for more bus routes and services, and did not include any rail systems" reduced support for the measure (12% "more likely" to 40% "less likely").
Mineta Transportation Institute (Agrawal, Nixon, and Murthy)	2012	U.S. residents	49% of respondents "supported" a 0.5¢ national sales tax "to pay for transportation."
Public Policy Institute of California (Baldassare)	2005	Los Angeles County residents	47% of respondents "would vote yes" for a 0.5¢ local sales tax "for local transportation projects."
Mineta Transportation Institute (Agrawal and Nixon)	2011	U.S. residents	45% of respondents "supported" a 0.5¢ national sales tax "to pay for transportation."

Table 24, continued

Sponsor (and author, if different)	Survey date	Sampling frame	Findings
Mineta Transportation Institute (Agrawal and Nixon)	2010	U.S. residents	42% of respondents "supported" a 0.5¢ national sales tax "to pay for transportation."
Talkbusiness.net (Brock)	2012	Arkansas likely voters	42% of respondents "would vote for" a 0.5¢ statewide sales tax increase that "would be used to pay for a four-lane highway system statewide."
Mineta Transportation Institute (Weinstein et al.)	2006	California likely voters	41% of respondents would "support" a 0.5¢ increase in the state sales tax "for transportation purposes, such as maintaining and improving local streets, highways, and mass transit."
SurveyUSA	2007	Seattle-Tacoma MSA residents	38% of respondents "would support" raising the sales tax by 0.6¢ "in order to pay for transportation projects." Also, 25% of respondents "would support" the sales-tax increase in concert with an increased "car license tab tax" to pay for "a combination of road, highway, and mass transit improvements" in the survey area.
SurveyUSA	2012	Atlanta, GA, area likely voters	36% of respondents were "certain to vote yes" on a 1¢ sales tax increase "to fund regional transportation projects."
Roanoke College	2013	Virginia residents	33% "favor" a proposal that "[t]he gas tax would be eliminated, but the sales tax would be increased. Vehicle registration fees would also increase. The additional funds from the sales tax would go to transportation and a higher percentage of the existing sales tax revenue would go to transportation as well."
20/20 Insight Polling	2011	Atlanta, GA, area registered voters	33% of respondents "favored" a measure "to increase their local sales tax by one cent for every dollar spent" if "the money raised... will be used solely for transportation projects on a list approved by regional leaders."
USC Sol Price School of Public Policy (M4 Strategies and Benson Strategy Group)	2013	City of Los Angeles likely voters	30% of respondents would vote "definitely yes" on Proposition A which "would enact a one-half cent sales tax in order to offset severe and repeated state cuts and provide local funding for: 911 emergency response services; maintaining firefighter, paramedic, and police officer staffing levels; continuing community policing, senior services, after-school gang and drug prevention programs; repairing potholes and sidewalks; and other general municipal services."
Washington State Transportation Commission (EMC Research)	2012	Washington state residents	30% of respondents thought that "adding the sales tax to gas purchases" was "definitely" or "probably" a "good way to fund increased transportation investment."
<i>The Washington Post</i>	2013	Maryland adult residents	27% of respondents would "favor . . . raising Maryland's overall sales tax from 6 percent to 7 percent, if the money were used for transportation projects such as building roads, traffic management or public transportation."
HNTB Corporation (Kelton Research)	2012	U.S. residents	21% of respondents stated they would be "willing to spend more money on" a sales tax "if it was allocated to long-term interstate improvements in [their] area."



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## ENDNOTES

1. For the results of the first three years of polling in this series, see Asha Weinstein Agrawal and Hilary Nixon, *What Do Americans Think about Federal Transportation Tax Options? Results from a National Survey* (San José, CA: Mineta Transportation Institute, June 2010), [http://transweb.sjsu.edu/MTIportal/research/publications/documents/2928\\_09-18.pdf](http://transweb.sjsu.edu/MTIportal/research/publications/documents/2928_09-18.pdf) (accessed May 31, 2012); Asha Weinstein Agrawal and Hilary Nixon, *What Do Americans Think About Federal Transportation Tax Options? Results from Year 2 of a National Survey* (San José, CA: Mineta Transportation Institute, June 2011), [http://transweb.sjsu.edu/PDFs/research/Transportation\\_taxes\\_public\\_opinion\\_1031.pdf](http://transweb.sjsu.edu/PDFs/research/Transportation_taxes_public_opinion_1031.pdf) (accessed May 31, 2012); Asha Weinstein Agrawal, Hilary Nixon, and Vinay Murthy, *What Do Americans Think About Federal Tax Options to Support Public Transit, Highways, and Local Streets and Roads? Results from Year 3 of a National Survey* (San José, CA: Mineta Transportation Institute, June 2012), <http://transweb.sjsu.edu/PDFs/research/1128-american-survey-federal-taxes-public-transit-highways-streets-roads.pdf> (accessed May 27, 2013).
2. The search terms used included transportation tax, transit tax, gas tax, mileage tax, sales tax, and transportation finance.
3. The current federal tax on gasoline is 18.4¢ per gallon, but respondents were told that it was 18¢ per gallon to make the survey simpler to understand.
4. U.S. Census Bureau, “2011 American Community Survey 1-Year Estimates” (no date), downloaded from <http://factfinder2.census.gov/faces/nav/jsf/pages/searchresults.xhtml> (accessed May 21, 2013).
5. To test whether support levels might be lowest among people with the very lowest incomes, we compared support among households with an annual income of \$25,000 per year or less to support among households with higher income levels, but no clear pattern emerged.
6. For the results of the first years of polling in this series, see Agrawal and Nixon (2010), Agrawal and Nixon (2011), and Agrawal, Nixon, and Murthy (2012).
7. Clear support is defined as subgroups who meet the following criteria in at least three of the four years: (1) support varied in a statistically significant manner across at least 5 of the tax options, and (2) the average magnitude of the difference between the groups across all 11 tax options was at least 8 percentage points or more.
8. The 2012 survey asked a similar question, but the authors determined from the responses that respondents had misunderstood the question. Because the 2013 survey uses new question wording, the 2012 and 2013 responses are not directly comparable.

9. Half of respondents were asked the question this way, while the other half were asked the question with the two arguments presented in reverse order: “Now I have a question about whether or not GAS tax money should be spent to pay for public transit. Some people say gas tax money should be used to pay for public transit IN ADDITION to roads and highways, because transit helps reduce traffic congestion and wear-and-tear on the roads. Other people say that money from gas taxes should only be spent on roads and highways, since drivers pay the tax. Would you support or oppose spending SOME gas tax money on public transit?”
10. The 2012 survey asked a similar question, but the authors determined from the responses that respondents had misunderstood the question. Because the 2013 survey uses different question wording, the 2012 and 2013 responses are not directly comparable.
11. Too few respondents answered “don’t know” to make it useful to report the breakdown by population subgroup.
12. For the complete 2010, 2011 and 2012 results, see Agrawal and Nixon (2010), Agrawal and Nixon (2011), and Agrawal, Nixon, and Murthy (2012).

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