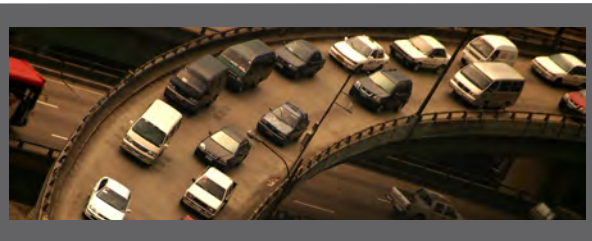


# What do Americans Think About Federal Tax Options to Support Public Transit, Highways, and Local Streets and Roads? Results from Year Five of a National Survey



MTI Report 12-36









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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 from the fifth year of an annual 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 emphasis added in 2012 (the third year) was to understand 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 fifth 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 four prior years.<sup>1</sup> This report compares the results of the five 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 92 other public opinion polls that asked about support for gas, mileage, and sales taxes whose revenues would be used for transportation purposes. Almost all surveys are from the past eight years.

The surveys were identified through a search of 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 collected 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 19 in Appendix B presents the key findings from 68 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 20 in Appendix B, which presents the results for the 14 polls that link a gas tax increase 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 17 polls shows that support is not especially strong but can be strengthened when the taxes are linked to environmental benefits (see Table 21 in Appendix B). The six polls linking a mileage tax to environmental benefits found support levels ranging from 33 percent to 50 percent, but the other eleven 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 22 in Appendix B summarizes a sampling of 30 polls testing public opinion on sales taxes. Overall support levels were quite high: 16 of the polls showed support at 50 percent or higher.

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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 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 were also 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 on behalf of the Mineta Transportation Institute's National Transportation Finance Center. The interviewing was completed in two phases, from March 4 – April 7 and April 23 – April 30, 2014. A total of 1,503 adults nationwide were interviewed by telephone in either English or Spanish, with 33 (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 = 352) and landline phone (N = 1,151).

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 to match the Census Bureau's 2012 *American Community Survey* one-year estimates with respect to gender, race, Hispanic ethnicity, education level, annual household income, and age.<sup>4</sup>



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## 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 1,503 adult survey respondents were generally representative of the U.S. population in terms of region and sociodemographic characteristics (see Table 1). The sample's divergence from the national population was greatest (from 5 to 12 percentage points) along a few dimensions of ethnicity, race, education, and age. With respect to ethnicity, the unweighted sample contained fewer people of Hispanic or Latino origin or descent, while in terms of race the sample had more whites and fewer African-Americans. Our sample had fewer people whose formal education ended before or upon graduation from high school, and more people with a graduate degree. Finally, the sample included fewer adults aged 18 to 39, but more adults aged 60 to 79 years old.

**Table 1. Comparison of Survey Respondents to the Adult U.S. Population by Census Region and Sociodemographic Characteristics (2014)**

	RDD sample (%)	Cell sample (%)	Total sample, unweighted (%)	U.S. adults <sup>a</sup> (%)
Census region <sup>b</sup>				
Northeast	21	14	19	18
Midwest	24	21	23	21
South	34	39	35	37
West	21	26	22	23
Gender				
Male	42	55	45	49
Female	58	45	55	51
Of Hispanic/Latino origin/descent	7	15	9	17
Race				
White	81	71	79	74
Black/African-American	7	10	8	13
Asian/Asian-American	3	5	3	5
Other	9	13	10	9
Education				
Less than high school graduate	5	6	5	14
High school graduate	18	16	18	28
Some college	26	34	28	24
College graduate	27	23	26	25
Some grad school	2	3	2	--
Graduate degree	5	19	20	10
Income (annual household)				
\$0 - \$25,000	22	20	21	24
\$25,001 - \$50,000	24	21	23	25
\$50,001 - \$75,000	20	17	19	18
\$75,001 - \$100,000	11	13	12	12
\$100,001 - \$150,000	14	20	15	12
\$150,001+	10	9	10	9
Age				
18 – 29	4	30	10	22
30 – 39	9	16	11	17
40 – 49	14	15	14	18
50 – 59	21	19	21	18
60 – 69	26	13	23	13
70 – 79	17	7	14	7
80+	10	1	8	5

<sup>a</sup> All data are for adults 18 years and older, with the exception of household income, which is for all U.S. households. The U.S. population estimates are from U.S. Census Bureau, “2012 American Community Survey 1-Year Estimates” (no date), <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml> (accessed May 19, 2014).

<sup>b</sup> Census regions are defined at U.S. Census Bureau, “Census Regions and Divisions of the United States” (no date), [http://www.census.gov/geo/maps-data/maps/pdfs/reference/us\\_regdiv.pdf](http://www.census.gov/geo/maps-data/maps/pdfs/reference/us_regdiv.pdf) (accessed May 19, 2014).

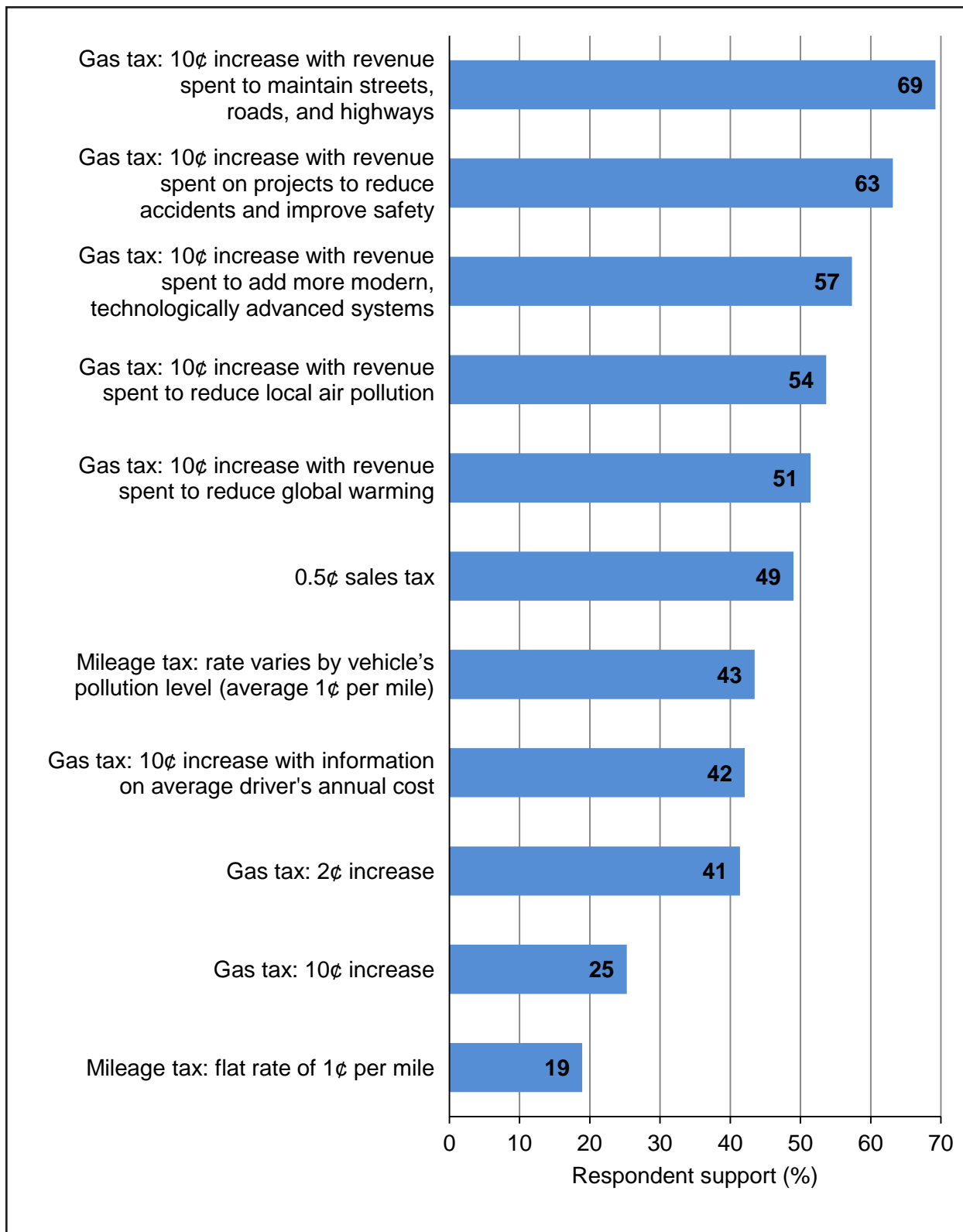
Note: Some percentages do not sum to 100% due to rounding.



## **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 69 percent of respondents, whereas support levels dropped to 25 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 2014 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 new national sales tax roughly twice as popular as either the 10¢ per gallon gas tax increase or a new mileage tax with a flat rate of 1¢ per mile.



**Figure 1. Support<sup>a</sup> Levels for the Tax Options Surveyed (2014)**

<sup>a</sup> "Support" is the sum of those who said that they "strongly" or "somewhat" support the tax option.

---

## 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. A pattern is defined as “clear” when (1) the variation in support is statistically significant across at least five of the tax options, and (2) the average magnitude of the difference between the groups across all 11 tax options is at least 7 percentage points or more. Readers should note that the variations described below are not necessarily the only important ones that may exist. Rather, the variations discussed 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, employment status, and age. With respect to race, Asians/Asian-Americans were, on average, 17 percentage points more likely to support each tax than whites. Similarly, African-Americans were on average 10 percentage points more likely to support each tax than were whites. As for age, respondents in the youngest group (18- to 24-year olds) were more likely to support virtually all of the taxes than respondents in the two older groups, especially as compared to the oldest group (55 years and older). The average difference in support for the taxes was 17 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 (2014)**

Sociodemographic category	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 global warming (%)	Revenue to maintain streets/highways (%)	Revenue to improve safety (%)		Revenue to add high-tech systems (%)
All respondents	49	19	43	25	41	54	69	63	57	42
Census region										
Northeast	53	18	49	27	39	55	69	65	57	42
Midwest	46	18	36**	23	40	47	73	56*	55	38
South	48	21	44	31	43	57	71	68	59	47
West	57	19	46	21	45	54	67	61	57	44
Gender										
Male	47	17	42	31	42	51	67	59	60	45
Female	51	21	45	20**	41	57*	71	68**	55	39*
Race										
White	48	17	42	24	40	48	68	60	56	39
Black/African-American	51	26**	46	32*	40	67**	79**	70*	67**	46
Asian/Asian-American	67**	19	48	35*	66**	73**	72	82**	67	75**
Other	46	27**	49	19	42	69**	68	70*	52	44
Of Hispanic/Latino origin/descent										
Yes	48	26	54	22	40	64	71	70	55	47
No	49	18**	41**	26	42	52**	69	62*	58	41
Education										
High school graduate or less	45	20	40	24	38	57	74	68	60	39
More than high school	51*	19	46*	26	44*	51*	66**	60**	55	45*

Table 2, continued

Sociodemographic category	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 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	20	43	27	42	53	53	71	64	56	43
No	51	18	47	26	44	60*	56	71	66	63*	46
Retired	37**	18	37	18*	33*	42**	37**	60**	55*	50	31**
Annual household income											
0 - \$50,000	47	21	45	22	41	60	56	72	68	58	40
\$50,001 - \$100,000	50	14**	41	25	37	48**	48*	70	63	57	39
\$100,001+	52	21	44	34**	48*	49**	44**	62**	53**	57	51**
Age											
18 - 24 years	56	16	56	34	58	70	69	76	71	63	56
25 - 54 years	52	18	43**	26*	42**	57**	55**	71	65	62	46*
55 years+	42**	22	39**	21**	34**	42**	39**	64**	58**	49**	31**

\* Statistically significant at p&lt;0.05.

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

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

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

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 strong role, with support for all of the taxes more likely among registered Democrats than among registered Republicans, voters registered with other parties, or registered voters who are party-independent. The level of support differed for registered Democrats and registered Republicans by an average of 19 percentage points across the 11 tax options. In addition, people who were not registered to vote were more likely to support most of the taxes than were registered voters, with an average support difference of 7 percentage points across all the taxes.

**Table 3. Support<sup>a</sup> for the Tax Options, by Political Characteristics (2014)**

	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	49	19	43	25	41	54	51	69	63	57	42
Registered voter											
Yes	48	19	42	26	40	51	49	69	60	56	41
No	58**	17	51**	24	47*	63**	61**	73	74**	65**	50**
Likely voter <sup>b</sup>											
Yes	47	18	40	25	40	47	44	65	58	54	37
No	52	20	49**	26	44	64**	63**	75**	71**	63**	49**
Political affiliation for registered voters											
Democrat	62	22	48	34	48	60	66	76	68	65	48
Republican	37**	15*	36**	13**	34**	41**	30**	62**	56**	43**	25**
Independent <sup>c</sup>	45**	19	41	29	37*	46**	42**	63**	57*	52**	45
Other <sup>d</sup>	41**	20	32**	19**	24**	52	47**	69	52**	56	39

\* Statistically significant at p&lt;0.05.

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

<sup>a</sup> Sum of those who said that they “strongly” or “somewhat” support the option.<sup>b</sup> Likely voters are those respondents who said that 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.

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

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 (Table 4). Respondents who reported driving from 1 to 7,500 miles annually were more likely to support the taxes than people who reported driving more than 12,500 miles annually, but they were less likely to support the taxes than people who said they did not drive at all. Also, respondents who said that they had taken public transit within the previous 30 days were more likely to support the tax options than respondents who said that they had not.



Table 4. Support<sup>a</sup> for the Tax Options, by Travel Behavior (2014)

	Mileage tax			Gas tax					Info about 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	49	19	43	25	41	54	51	69	63	57	42
Annual miles driven											
1 - 7,500	53	18	41	29	42	56	56	69	64	58	42
7,501 - 12,500	50	15	42	25	43	43**	41**	64	56*	57	46
12,501+	44*	12*	35	22*	37	41**	42**	65	55*	51	36
Don't know	48	23	53**	26	38	63	56	73	68	55	38
Don't drive	48	37**	56**	19*	49	75**	70**	82**	79**	71**	52*
Miles per gallon <sup>b</sup>											
≤ 24	50	14	32	21	40	45	44	67	58	58	39
25 - 38	52	15	50**	28*	44	54**	52*	67	63	53	41
39+ <sup>c</sup>	41	24	54**	48**	42	44	49	64	55	54	54
Taken transit in last 30 days											
Yes	55	26	55	31	49	67	67	69	67	61	54
No	47*	17**	40**	23**	39**	50**	46**	69	62	56	38**

\* Statistically significant at p&lt;0.05.

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

<sup>a</sup> Sum of those who said that they "strongly" or "somewhat" support 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)).<sup>c</sup> The sample size for this subgroup is <50. Although the sample size is large enough to conduct statistical testing, results should be interpreted with particular caution, which is why this row of numbers has a strikethrough.

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

Another set of analyses examined how support for the different tax options correlates with respondents' opinions about the transportation system (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 who rated the quality of public transit service in their community as very good were more likely to support the taxes than those who said they had no public transit service at all in their communities. Another set of questions asked 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 the 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 assigned them a low priority.<sup>6</sup> The differences were, on average, very large—over 20 percentage points in three cases. In addition, respondents who placed a high priority on the goals of improving public transit service and increasing the use of modern technology were more supportive of the taxes than those who had assigned those goals a “medium” priority.

Table 5. Support<sup>a</sup> for the Tax Options, by Opinions of the Transportation System (2014)

	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	49	19	43	25	41	54	51	69	63	57	42
Opinion on condition of roads and highways in local community											
Very good	55	18	46	29	43	53	44	63	61	52	48
Somewhat good	50	18	44	26	44	56	55**	70*	65	59*	42
Bad	43**	20	39	21*	34*	48	47	73**	61	58	37**
Opinion on public transit service in local community											
Very good	63	26	54	30	48	63	57	72	72	60	50
Somewhat good	46**	19*	41**	28	46	57	56	69	62**	59	43
Poor	49**	21	48	26	45	50**	50	73	61*	63	51
No service	43**	14**	36**	16**	27**	45**	43**	61**	58**	47**	25**
Role of government in reducing traffic congestion											
High priority	55	21	47	27	46	57	56	72	68	62	45
Medium priority	48*	19	46	29	43	57	52	67	62*	56	42
Low priority	34**	12**	31**	16**	30**	39**	40**	63*	50**	45**	32**
Role of government in maintaining streets, roads, and highways											
High priority	50	19	44	25	44	54	52	71	65	59	44
Medium priority	48	17	45	27	33**	53	52	60**	56**	54	35*
Low priority	30**	-9 <sup>b</sup>	-29 <sup>ab</sup>	15	25**	39*	-39 <sup>b</sup>	64	49*	-44 <sup>ab</sup>	26**
Role of government in expanding and improving local public transit service											
High priority	60	23	50	31	52	62	62	72	68	63	50
Medium priority	46**	18*	45	22**	38**	53**	51**	70	64	57*	39**
Low priority	32**	12**	27**	19**	27**	40**	30**	63*	52**	45**	31**
Role of government in reducing accidents and improving safety											
High priority	55	20	48	27	46	58	56	73	72	61	46
Medium priority	42**	20	41*	27	38*	49**	50	65*	48**	57	38*
Low priority	27**	6**	24**	14**	21**	36**	28**	54**	36**	40**	27**

Table 5, continued

	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 using modern technology											
High priority	58	23	45	28	48	59	57	74	69	70	48
Medium priority	44**	17*	45	26	40**	54	52	68*	62*	52**	41*
Low priority	33**	11**	35*	16**	23**	34**	35**	56**	46**	27**	27**

\* Statistically significant at  $p < 0.05$ .

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

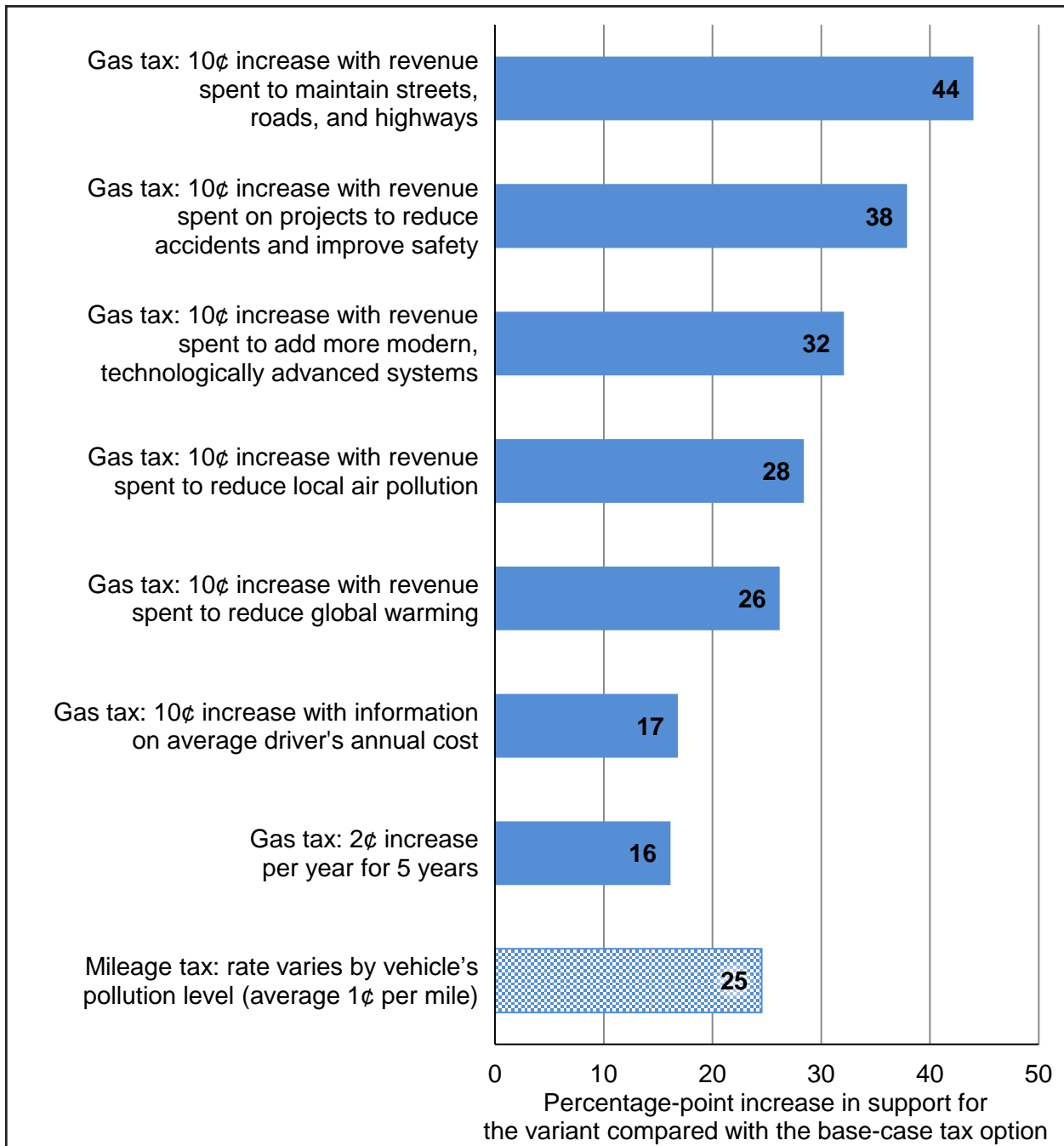
<sup>a</sup> Sum of those who said that they "strongly" or "somewhat" support the option.

<sup>b</sup> The sample size for this subgroup is  $< 50$ . Although the sample size is large enough to conduct statistical testing, this result should be interpreted with particular caution, which is why the number has a strikethrough.

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

**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, the base-case proposals for each type of tax were the flat-rate mileage tax of 1¢ per mile and the 10¢ gas tax increase without any additional detail. For comparative purposes, respondents were also asked about 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 base-case tax options. For both tax types, the base-case version 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<sup>a</sup> for Variations of the Base-Case<sup>b</sup> Gas Tax and Mileage Tax Concepts (2014)**

<sup>a</sup> "Support" is the sum of those who said they "strongly" or "somewhat" support the tax option.

<sup>b</sup> The base-case proposals were a new flat-rate mileage tax of 1¢ per mile and a 10¢ per gallon gas tax increase, without any additional detail.

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 63 population subgroups, for each of which there are 8 tax comparisons, resulting in a total of 504 cases examined.

The overall pattern of increased support for the variants holds for the subgroups, just as for the respondent pool as a whole. Across all 504 cases examined, the tax variants improved support in all but one case (and this one case was for a subgroup with fewer than 50 respondents). The increase in support for the variants as compared to the base cases was statistically significant for 93 percent of cases. Further, the increases were very large:

- At least 10 percentage points for 97 percent of cases
- At least 20 percentage points for 74 percent of cases
- At least 30 percentage points for 42 percent of cases
- At least 40 percentage points for 17 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<sup>b</sup> Versions of Those Taxes, by Census Region and Sociodemographic Categories (2014)**

Sociodemographic category	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	25	16	28	26	44	38	32	17
Census regions								
Northeast	31**	12**	28**	23**	42**	38**	30**	15**
Midwest	18**	17**	24**	20**	50**	33**	32**	15**
South	23**	12**	26**	28**	40**	37**	28**	16**
West	27**	24**	33**	32**	46**	40**	36**	23**
Gender								
Male	25**	11**	20**	20**	36**	28**	29**	14**
Female	24**	21**	37**	32**	51**	48**	35**	19**
Race								
White	25**	16**	24**	21**	44**	36**	32**	15**
Black/African-American	20**	8	35**	36**	47**	38**	35**	14**
Asian/Asian-American	29**	31**	38**	39**	37**	47**	32**	40**
Other	22**	23**	50**	46**	49**	51**	33**	25**
Of Hispanic/Latino origin/descent								
No	28**	18**	42**	39**	49**	48**	33**	25**
Yes	23**	16**	26**	24**	43**	36**	32**	15**
Education								
High school graduate or less	20**	14**	33**	28**	50**	44**	36**	15**
More than high school	27**	18**	25**	25**	40**	34**	29**	19**
Employed								
Yes	23**	15**	26**	26**	44**	37**	29**	16**
No	29**	18**	34**	30**	45**	40**	37**	20**
Retired	19**	15**	24**	19**	42**	37**	32**	13**



Table 6, continued

Sociodemographic category	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 (%)
Annual household income								
0 - \$50,000	24**	19**	38**	34**	50**	46**	36**	18**
\$50,001 - \$100,000	27**	12**	23**	23**	45**	38**	32**	14**
\$100,001+	23**	14**	15**	10*	28**	19**	23**	17**
Age								
18 - 24 years	40**	24**	36**	35**	42**	37**	29**	22**
25 - 54 years	25**	16**	31**	29**	45**	39**	36**	20**
55 years+	17**	13**	21**	18**	43**	37**	28**	10**

\* Statistically significant at  $p < 0.05$ .

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

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

<sup>b</sup> The base-case proposals were a new flat-rate mileage tax of 1¢ per mile and a 10¢ per gallon gas tax increase, without any additional detail.

Note: 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<sup>b</sup> Versions of Those Taxes, by Political Affiliation (2014)**

	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	25	16	28	26	44	38	32	17	
Registered voter									
Yes	23**	19	42	23**	43**	34**	30**	15**	
No	34**	17	51**	37**	49**	50**	41**	26**	
Likely voter <sup>c</sup>									
Yes	22**	18	40	19**	40**	33**	29**	12**	
No	29**	20	49**	37**	49**	45**	37**	23**	
Political affiliation for registered voters									
Democrat	26**	22	48	32**	42**	34**	31**	14**	
Republican	21**	15*	36**	17**	49**	43**	30**	12**	
Independent <sup>d</sup>	22**	19	41	13*	34**	28**	23**	16**	
Other <sup>e</sup>	12	20	32**	28**	50**	33**	37**	20**	

\* Statistically significant at p<0.05.

\*\* Statistically significant at p<0.01.

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

<sup>b</sup> The base-case proposals were a new flat-rate mileage tax of 1¢ per mile and a 10¢ per gallon gas tax increase, without additional details.

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

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

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

Note: 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<sup>b</sup> Versions of Those Taxes, by Opinions of the Transportation System (2014)**

	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	25	16	28	26	44	38	32	17	
Opinion on condition of roads and highways in local community									
Very good	28**	14**	24**	15**	34**	32**	23**	19**	
Somewhat good	26**	18**	30**	29**	44**	39**	33**	16**	
Bad	19**	13**	27**	26**	52**	40**	37**	16**	
Opinion on public transit service in local community									
Very good	28**	18**	33**	27**	42**	42**	30**	20**	
Somewhat good	22**	18**	29**	28**	41**	34**	31**	15**	
Poor	27**	19**	24**	24**	47**	35**	37**	25**	
No service	22**	11**	29**	27**	45**	42**	31**	9*	
Role of government in reducing traffic congestion									
High priority	26**	19**	30**	29**	45**	41**	35**	18**	
Medium priority	27**	14**	28**	23**	38**	33**	27**	13**	
Low priority	19**	14**	23**	24**	47**	34**	29**	16**	
Role of government in maintaining streets, roads, and highways									
High priority	25**	19**	29**	27**	46**	40**	34**	19**	
Medium priority	28**	6	26**	25**	33**	29**	27**	8	
Low priority	-20 <sup>ac</sup>	10	24**	-24 <sup>ac</sup>	49**	34**	-26 <sup>ac</sup>	11	
Role of government in expanding and improving local public transit service									
High priority	27**	21**	31**	31**	41**	37**	32**	19**	
Medium priority	27**	16**	31**	29**	48**	42**	35**	17**	
Low priority	15**	8*	21**	11**	44**	33**	26**	12**	

Table 8, continued

	Mileage tax (%)	Gas 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 (%)
Role of government on reducing accidents and improving safety								
High priority	28**	19**	31**	29**	46**	45**	34**	19**
Medium priority	21**	11**	22**	23**	38**	21**	30**	11**
Low priority	18**	7	22**	14**	40**	22**	26**	13**
Role of government in using modern technology								
High priority	22**	20**	31**	29**	46**	41**	42**	20**
Medium priority	28**	14**	28**	26**	42**	36**	26**	15**
Low priority	24**	7	18**	19**	40**	30**	11*	11*

\* Statistically significant at  $p < 0.05$ .

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

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

<sup>b</sup> The base-case proposals were a new flat-rate mileage tax of 1¢ per mile and a 10¢ per gallon gas tax increase, without any additional detail.

<sup>c</sup> The sample size for this subgroup is <50. Although the sample size is large enough to conduct statistical testing, this result should be interpreted with particular caution, which is why this number has a strikethrough.

Note: 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 9. Percentage-Point Increases in Support<sup>a</sup> for Variants of the Mileage Tax and Gas Tax over Support for the Base-Case<sup>b</sup> Versions of Those Taxes, by Travel Behavior (2014)**

	Gas tax							Info about average annual costs (%)
	Mileage tax (%)	2¢ increase per year, for 5 years (%)	Revenue to reduce air pollution (%)	Revenue to reduce global warming (%)	Revenue to maintain streets/highways (%)	Revenue to improve safety (%)	Revenue to add high-tech systems (%)	
All respondents	25	16	28	26	44	38	32	17
Annual miles driven								
1 - 7,500	23**	13**	27**	27**	40**	35**	29**	13**
7,501 - 12,500	27**	18**	18**	16**	39**	31**	32**	21**
12,501+	23**	15**	19**	20**	43**	33**	29**	14**
Don't know	30**	12**	37**	30**	47**	42**	29**	12**
Don't drive	19**	30**	56**	51**	63**	60**	52**	33**
Miles per gallon								
≤ 24	18**	19**	24**	23**	46**	37**	37**	18**
25 - 38	35**	16**	26**	24**	39**	35**	25**	13**
39+ <sup>c</sup>	36**	-6	-4	-4	-16	-7	-6	-6
Taken transit in last 30 days								
Yes	29**	18**	36**	36**	38**	36**	30**	23**
No	23**	16**	27**	23**	46**	39**	33**	15**

\* Statistically significant at p<0.05.

\*\* Statistically significant at p<0.01.

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

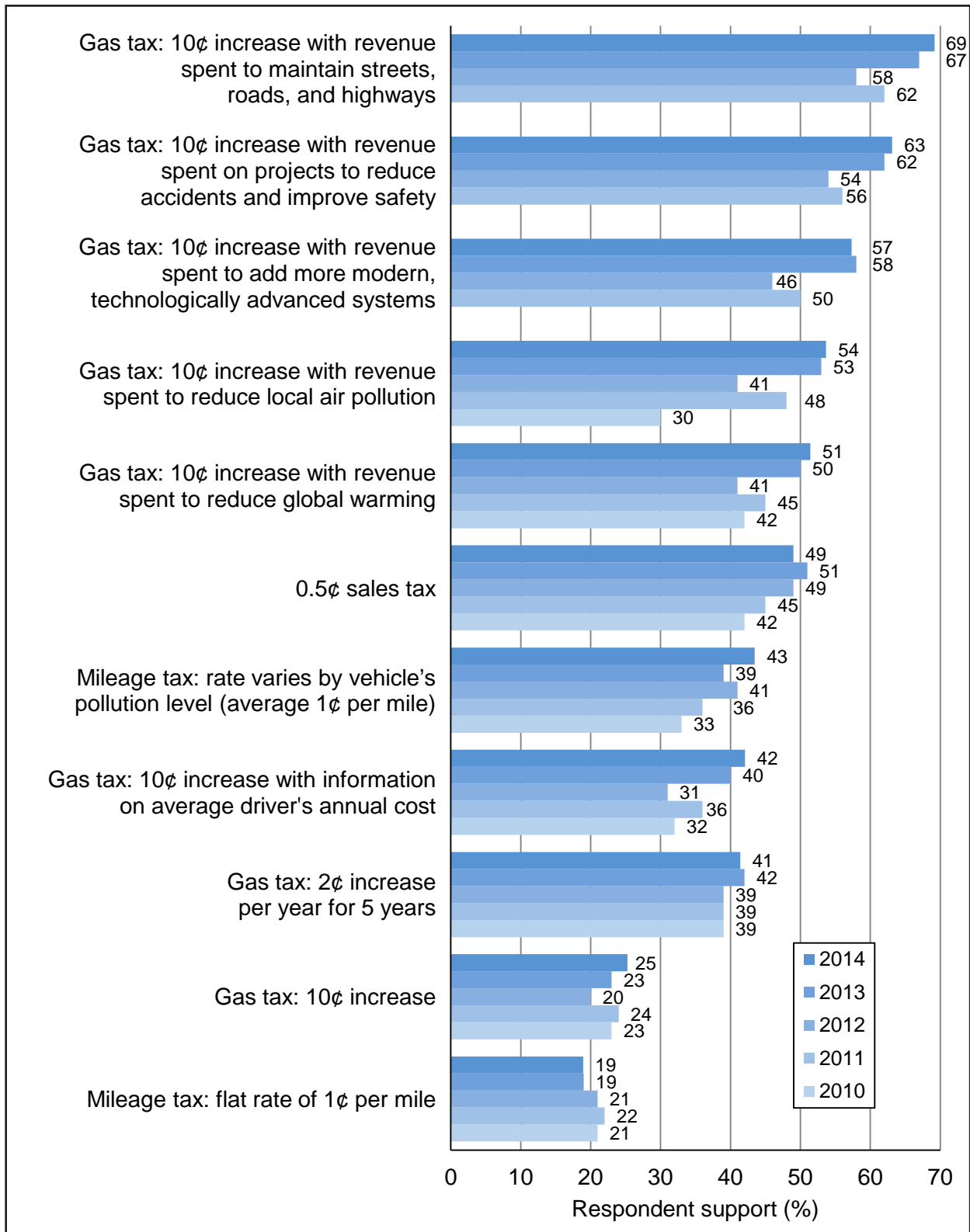
<sup>b</sup> The base-case proposals were a new flat-rate mileage tax of 1¢ per mile and a 10¢ per gallon gas tax increase, without any additional detail.

<sup>c</sup> The sample size for this subgroup is <50. Although the sample size is large enough to conduct statistical testing, results may not be generalizable to the population for this subgroup, which is why this row of numbers has a strikethrough.

Note: 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 – 2014)**

Most of the survey questions replicate those in the four surveys previously administered in this series, so it is possible to look at trends in support over time.<sup>7</sup> The trend analysis shows that support levels have changed only a little over the five 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 and 2014 than they were in the previous three years. In 2014, support levels were at their highest ever for 7 of the tax options tested.



**Figure 3. Trends in Support<sup>a</sup> for the Tax Options (2010 – 2014)**

<sup>a</sup> “Support” is the sum of those who said that they “strongly” or “somewhat” support the tax option.

**Table 10. Trends in Support<sup>a</sup> for the Tax Options (2010 – 2014)**

Tax option	2010	2011	2012	2013	2014	Difference		Difference	
	(%)	(%)	(%)	(%)	(%)	2014-2010	2014-2011	2014-2012	2014-2013
						(%)	(%)	(%)	(%)
Gas tax									
10¢ increase	23	24	20	23	25	2	1	5**	2
10¢ increase, phased in over 5 years at 2¢ per year	39	39	39	42	41	2	2	2	-1
10¢ increase, revenues spent to reduce local air pollution	30	48	41	53	54	24**	6**	13**	1
10¢ increase, revenues spent to reduce global warming	42	45	41	50	51	9**	6**	10**	1
10¢ increase, revenues spent to maintain streets, roads, and highways	-- <sup>b</sup>	62	58	67	69	--	7**	11**	2
10¢ increase, revenues spent to reduce accidents and improve safety	-- <sup>b</sup>	56	54	62	63	--	7**	9**	1
10¢ increase, revenues spent to add more modern, technologically advanced systems	-- <sup>b</sup>	50	46	58	57	--	7**	11**	-1
10¢ increase, respondents informed of the annual tax burden for the typical driver	32	36	31	40	42	10**	6**	11**	2
Mileage tax									
1¢ per mile	21	22	21	19	19	-2	-3*	-2	0
1¢ per mile average, but vehicles that pollute more pay more and vehicles that pollute less pay less	33	36	41	39	43	10**	7**	2	4*
National 0.5% sales tax	43	45	49	51	49	6**	4*	0	-2

\* Statistically significant at p<0.05.

\*\* Statistically significant at p<0.01.

<sup>a</sup> Sum of those who said that they “strongly” or “somewhat” support 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 2014 to 2010, 2014 to 2011, 2014 to 2012, and 2014 to 2013.



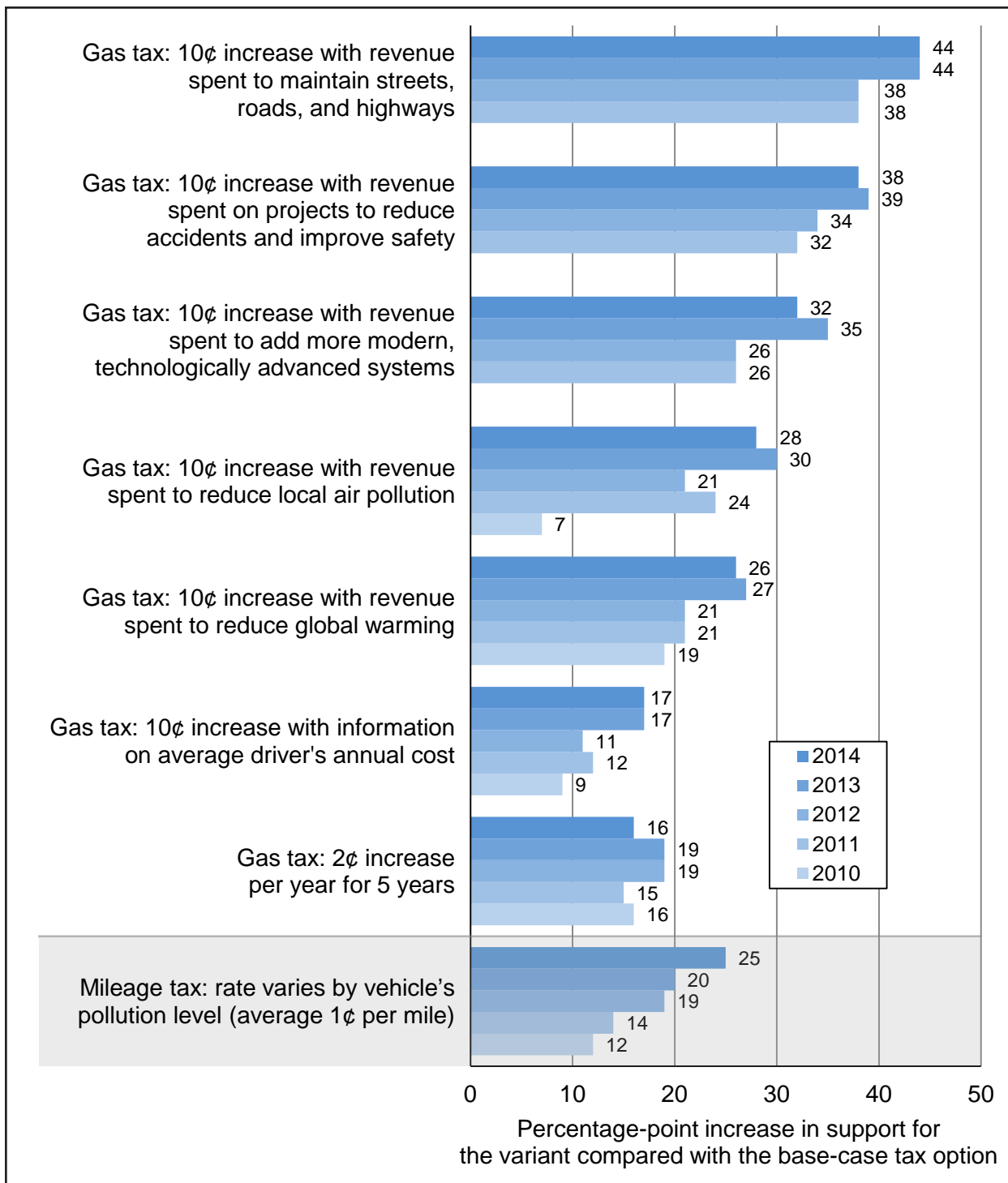
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The one striking exception to the trend of fairly similar support levels across all the taxes for all five surveys is the gas tax increase with revenues dedicated to projects that reduce air pollution. Here, support has varied considerably from year to year, with a low of 30 percent support in 2010 to a high of 54 percent support in 2014.

We also found that a few population subgroups were clearly more likely to support the taxes across all five surveys:<sup>8</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 think government should place a low priority on these goals)

Our analysis of how the tax variations boosted support over the base cases shows relatively little change from 2010 to 2014 (see Figure 4). In every case, the variations had higher support levels than the base-case options, and the boosts in support were fairly similar each year the questions were asked. The gas tax variant with the most consistent boost has been the option to phase in the tax increase over five years. The increase in support for this variant has remained within a 4 percentage point range across all survey years. The boosts for the other gas tax variants have fluctuated a little more but still within a range of 9 points or fewer, except for the gas tax linked to projects that would reduce local air pollution. This variant received a small boost in support in 2010 but then received relatively large boosts since then (between 21 and 30 percentage points). Additionally, there has been a gradual but steady increase in support for the mileage tax with variable rates based on vehicle emissions. For that tax variant, the boost has climbed from 12 percentage points in 2010 to 25 percentage points in 2014.



**Figure 4. Changes over Time for the Relative Increases in Support<sup>a</sup> for Variations of the Base-Case<sup>b</sup> Gas Tax and Mileage Tax Concepts (2010 – 2014)**

<sup>a</sup> “Support” is the sum of those who said they “strongly” or “somewhat” support the tax option.

<sup>b</sup> The base-case proposals were a new flat-rate mileage tax of 1¢ per mile and a 10¢ per gallon gas tax increase, without any additional detail.

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## V. FINDINGS RELATED TO OPINIONS ON PUBLIC TRANSIT

For 2012, 2013, and 2014 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.

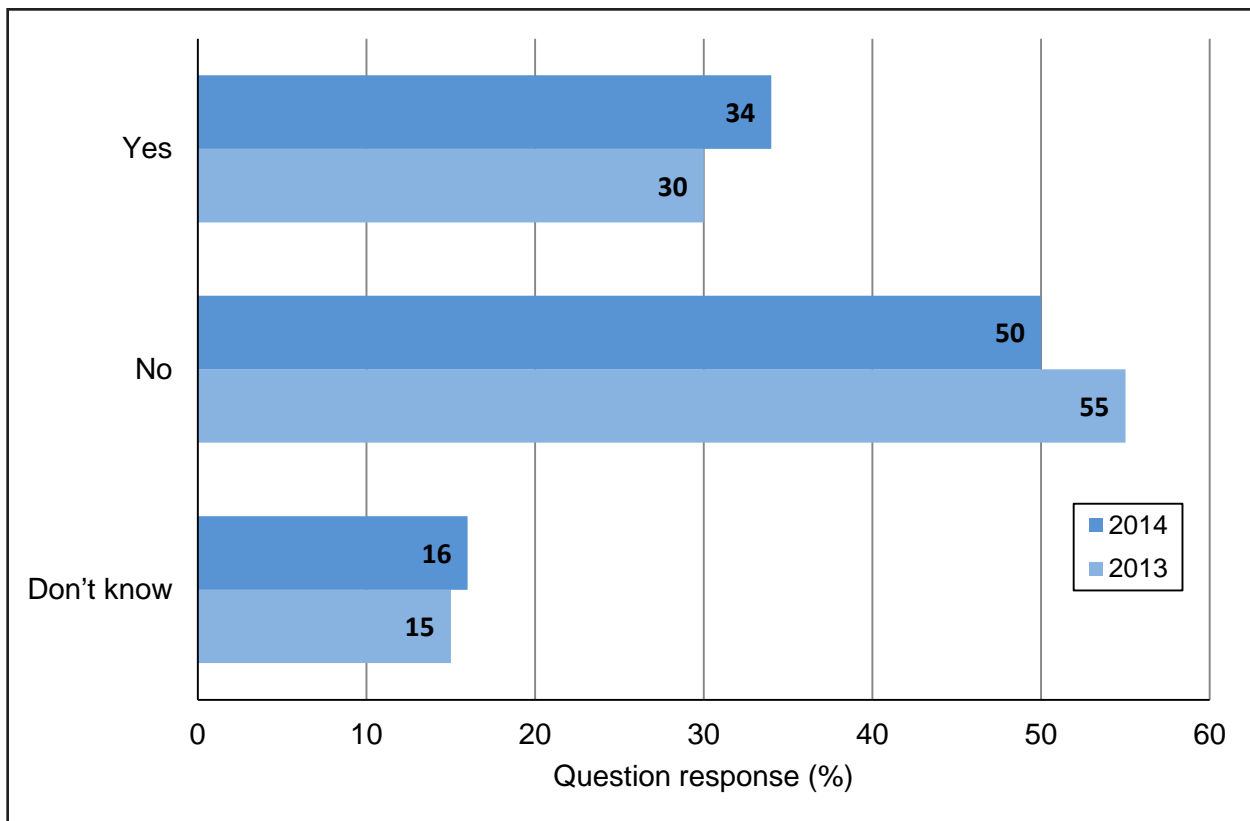
A question early in the survey asked respondents their opinion on the quality of public transit in their community. The majority of respondents (57 percent) said that it is very or somewhat good, 15 percent said that it is poor, and 28 percent said either that there is no service in their community or that they do not know about transit quality. These values are very close to those from identical questions asked in all four prior surveys. (To compare the responses from all five 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 (44 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—79 percent of respondents felt this way, compared to the other options that ranged from a low of 80 percent to a high of 95 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 – 2014)**

	2012	2013	2014				
	High or medium (%)	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	95	78	17	4	1
Reducing accidents and improving safety	90	91	89	69	19	10	1
Adding more modern, technologically advanced systems like real-time travel alerts, longer lasting pavements, and better-timed traffic lights	83	84	86	49	37	12	2
Reducing traffic congestion	81	84	80	51	30	17	3
Expanding and improving local public transit service, like buses or light rail	83	80	79	44	35	18	3

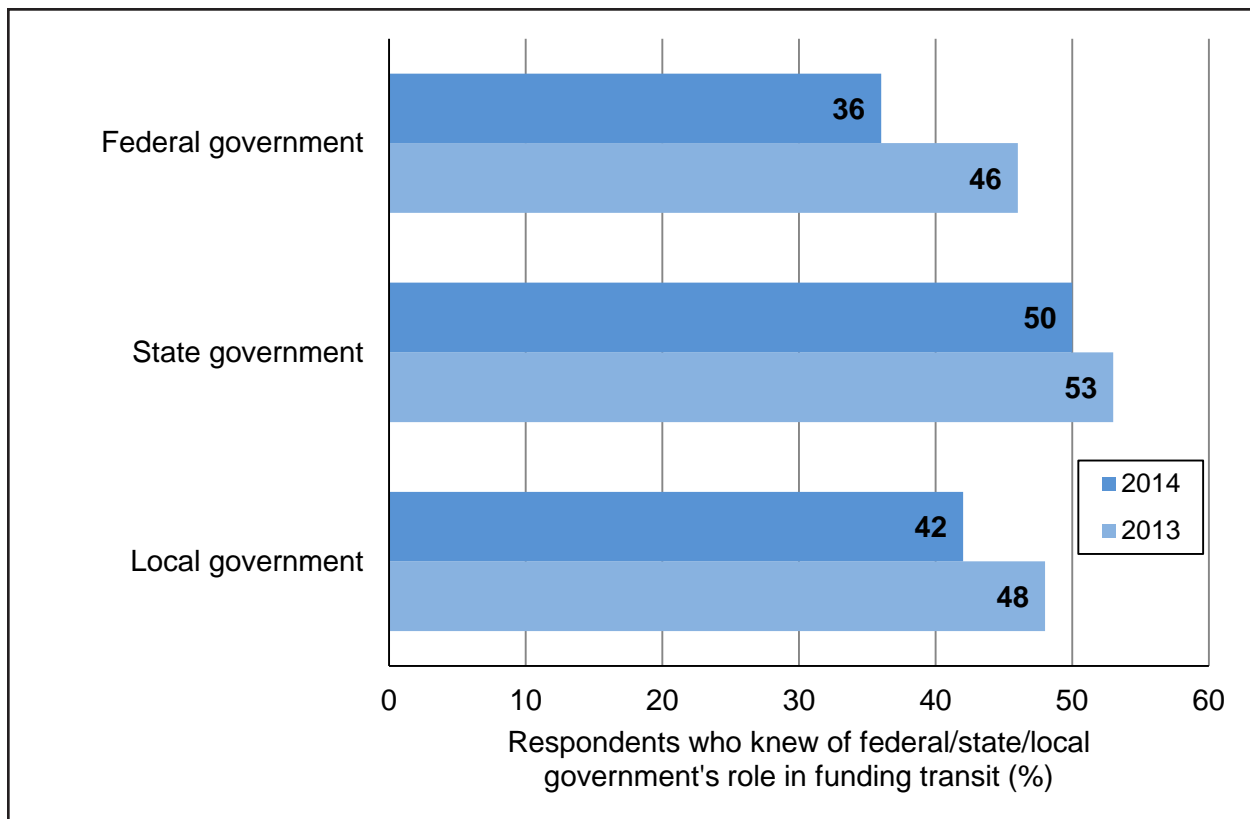
Later in the survey, respondents were asked if they knew how the cost of providing transit service is covered. The first question in the series was as follows: “When people ride public transit, they pay a fare. This money is used to pay for the service. Do you think that the money collected from public transit fares in general covers the full cost of the service?” Thirty-four percent of respondents (incorrectly) said “yes,” 16 percent said that they did not know, and only 50 percent (correctly) said “no.” These responses are similar to those from the 2013 survey (Figure 5).<sup>9</sup>



**Figure 5. Respondents' Belief about Whether Transit Fares Cover the Full Cost of Transit (2013 and 2014)**

Those respondents who did not think that fares 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-eight percent said that fares cover 1 to 33 percent of the full cost, 38 percent said that fares cover 34 to 66 percent of the full cost, 17 percent said that fares cover 67 to 100 percent of the full cost, and 18 percent said that they did not know.

For those respondents who did not think that fares cover 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." Slightly more than half (55 percent) knew that the federal government helps pay for transit, with more respondents aware of the local contribution (64 percent) and the state contribution (76 percent). An alternative way to think about the survey findings on this topic is in terms of the percent of *all* respondents who were aware of the role each government entity plays in funding. Calculating the numbers this way, 36 percent of all respondents knew the federal government pays for transit, 42 percent knew of the local government role, and 50 percent knew of the state government role (Figure 6).



**Figure 6. Knowledge among All Respondents about which Government Entities Pay for Public Transit around the U.S. (2013 and 2014)**

Knowledge of whether or not fares cover transit and which government entities pay for transit varies considerably among many subgroups. Table 12 shows that quite a few subgroups are more than 15 percentage points more likely than the others in that category to incorrectly think that fares cover all transit costs. These respondents were:

- Black/African-American (compared to white respondents)
- Not of Latino or Hispanic descent (compared to those of Latino or Hispanic descent)
- Within the lowest income group (compared to people with household incomes over \$50,000 per year)
- In the youngest group (compared to the two older age groups)
- Not registered to vote or unlikely to vote (compared to those registered and likely to vote)
- Unaware of their annual mileage or were non-drivers (compared to those who did know their annual mileage)

**Table 12. Opinions on Whether Fares Cover the Full Cost of Transit Service, by Subgroup (2014)**

	Yes (%)	No (%)	Don't know (%)
All respondents	34	50	16
Census region			
Northeast	31	53	15
Midwest	31	56	13
South	34	47	19
West	37	50	14
Gender			
Male	34	51	15
Female	34	48	17
Race			
White	30	52	18
Black/African-American	46**	42*	12
Asian/Asian-American	39	52	9
Other	44**	42*	14
Of Hispanic/Latino origin/descent			
No	48	41	10
Yes	31**	52**	17**
Education			
High school graduate or less	42	38	20
More than high school	29**	58**	13**
Employed			
Yes	33	53	14
No	39	44**	18
Retired	27	52	21*
Annual household income			
0 - \$50,000	42	41	17
\$50,001 - \$100,000	24**	60**	16
\$100,001+	30**	56**	15
Age			
18 - 24 years	41	45	13
25 - 54 years	35	51	14
55 years+	29**	50	20*
Registered voter			
Yes	29	55	16
No	53**	30**	17
Likely voter <sup>a</sup>			
Yes	28	56	16
No	43**	41**	16
Political affiliation for registered voters			
Democrat	36	50	14
Republican	27*	51	22**
Independent <sup>b</sup>	21**	65**	14
Other <sup>c</sup>	20**	64*	16

**Table 12, continued**

	Yes (%)	No (%)	Don't know (%)
<b>Annual miles driven</b>			
1 - 7,500	35	47	18
7,501 - 12,500	25**	59**	17
12,501+	26**	59**	15
Don't know	38	47	16
Don't drive	56**	30**	14
<b>Miles per gallon<sup>d</sup></b>			
≤ 24 mpg	33	49	18
25 - 38 mpg	25**	58**	17
39+ mpg <sup>e</sup>	<del>24</del>	<del>64*</del>	<del>14</del>
<b>Taken transit in last 30 days</b>			
Yes	43	49	8
No	31**	50	19**
<b>Transit service in community</b>			
Has transit service	35	52	13
No transit service	32	47	21**

\* Statistically significant at  $p < 0.05$ .

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

<sup>a</sup> Likely voters are those respondents who said that 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, "SmartWay Vehicle Thresholds, MY 2011 & MY 2012" EPA-420-B-13-015 (January 2010), <http://www.epa.gov/greenvehicles/documents/420b13015.pdf> (accessed May 20, 2014)).

<sup>e</sup> The sample size for this subgroup is <50. Although the sample size is large enough to conduct statistical testing, results should be interpreted with particular caution, which is why this row of numbers has a strikethrough.

*Note:* The test of two proportions was used to check if there is a statistically significant difference between responses among subgroups. The first subgroup in each category is the "base" case for the test; it is compared to the proportion of respondents in each of the other subgroups within that category who chose the same response.

With respect to knowledge of which government entities fund transit, the most variation occurs in knowledge about federal funding (Table 13). The subgroups that are at least 10 percentage points *less* likely to know about federal funding are people with no education beyond high school, people in the youngest age group (compared to people in the oldest age group), and people who don't drive. Asians/Asian-Americans are 10 percentage points *more* likely to know about federal funding than any other race.

The only subgroups at least 10 percentage points more likely to know about state government funding were employed people (compared to retired people) and people aged 25-54 years old (compared to people over 55).

Subgroups that were at least 10 percentage points more likely to know about local government funding were those living in the South and West (compared to those living in the Midwest and Northeast), whites and Asian/Asian-Americans (compared to black/African-Americans), voters registered with political parties other than the Democratic and



Republican parties, people who drive more than 7,500 miles per year (compared to non-drivers), and those living in communities with transit services.

**Table 13. Knowledge of Which Levels of Government Pay for Transit, by Subgroup (2014)<sup>a</sup>**

	Federal gov't (%)	State gov't (%)	Local gov't (%)
All respondents asked the question <sup>a</sup>	62	82	72
Census region			
Northeast	63	90	67
Midwest	69	86	67
South	63	87	79*
West	71	91	81**
Gender			
Male	69	88	78
Female	62*	89	71*
Race			
White	66	88	76
Black/African-American	62	86	66
Asian/Asian-American	76	91	76
Other	64	86	69
Of Hispanic/Latino origin/descent			
No	58	92	79
Yes	67	88	74
Education			
High school graduate or less	59	86	72
More than high school	69*	89	76
Employed			
Yes	66	91	75
No	64	87	75
Retired	68	79**	71
Annual household income			
0 - \$50,000	62	83	70
\$50,001 - \$100,000	66	92**	79*
\$100,001+	70	91**	74
Age			
18 - 24 years	57	91	74
25 - 54 years	65	92	78
55 years+	69*	82*	70
Registered voter			
Yes	65	88	75
No	59	85	69
Likely voter <sup>b</sup>			
Yes	68	87	75
No	61	89	74

Table 13, continued

	Federal gov't (%)	State gov't (%)	Local gov't (%)
Political affiliation for registered voters			
Democrat	64	87	74
Republican	66	87	78
Independent <sup>c</sup>	61	90	75
Other <sup>d</sup>	68	92	85
Annual miles driven			
1 - 7,500	68	86	70
7,501 - 12,500	65	89	79*
12,501+	67	90	76
Don't know	63	88	78
Don't drive	57	84 <sup>e</sup>	67 <sup>e</sup>
Miles per gallon <sup>f</sup>			
≤ 24 mpg	66	89	72
25 - 38 mpg	65	87	79*
39+ mpg <sup>e</sup>	77	84	71
Taken transit in last 30 days			
Yes	73	89	75
No	63*	88	74
Transit service in community			
Has transit service	68	89	76
No transit service	60*	85	65**

\* Statistically significant at  $p < 0.05$ .

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

<sup>a</sup> This question was asked of only those respondents 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 that 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> The sample size for this subgroup is <50. Although the sample size is large enough to conduct statistical testing, results should be interpreted with particular caution, which is why this row of numbers has a strikethrough.

<sup>f</sup> Categories correspond to the EPA's "SmartWay" vehicle rating system (U.S. Environmental Protection Agency, "SmartWay Vehicle Thresholds, MY 2011 & MY 2012" EPA-420-B-13-015 (January 2010), <http://www.epa.gov/greenvehicles/documents/420b13015.pdf> (accessed May 20, 2014)).

*Note:* The test of two proportions was used to check if there is a statistically significant difference between responses among subgroups. The first subgroup 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.

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 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>10</sup>

Sixty-four percent of respondents supported spending gas tax revenues on transit, and 36 percent opposed this. Table 14 shows support and opposition levels for the different population subgroups. There are few large variations by subgroup, though support is considerably greater—by at least 12 percentage points over other subgroups in the same category—among the following groups:

- People in the West (compared to people in the Midwest)
- Asian/Asian-Americans (compared to all other racial groups)
- Black/African-Americans (compared to whites)
- The unemployed (compared to retirees)
- Young people (compared to those in the oldest category)
- Democrats (compared to both Republicans and party-independent voters)
- People who drive vehicles in the two most fuel-efficient categories
- People who had taken transit in the past 30 days

**Table 14. Opinion on Whether Gas Taxes Should Be Spent on Public Transit in Addition to Roads and Highways, by Subgroup (2014)**

	Support (%)	Oppose (%)
All respondents	64	36
Census region		
Northeast	65	35
Midwest	57	43
South	64	36
West	69	31
Gender		
Male	65	35
Female	63	37
Race		
White	60	40
Black/African-American	72**	28**
Asian/Asian-American	91**	9**
Other	69	31
Of Hispanic/Latino origin/descent		
No	67	33
Yes	63	37
Education		
High school graduate or less	62	38
More than high school	65	35
Employed		
Yes	63	37
No	68	32
Retired	55	45
Annual household income		
0 - \$50,000	66	34
\$50,001 - \$100,000	59*	41*
\$100,001+	65	35
Age		
18 - 24 years	72	28
25 - 54 years	64*	36*
55 years+	59**	41**
Registered voter		
Yes	63	37
No	70*	30*
Likely voter <sup>a</sup>		
Yes	61	39
No	68**	32**
Political affiliation for registered voters		
Democrat	75	25
Republican	48**	52**
Independent <sup>b</sup>	59**	41**
Other <sup>c</sup>	66	34

Table 14, continued

	Support (%)	Oppose (%)
Annual miles driven		
1 - 7,500	66	34
7,501 - 12,500	59*	41*
12,501+	62	38
Don't know	65	35
Don't drive	64	36
Miles per gallon <sup>d</sup>		
≤ 24 mpg	56	44
25 - 38 mpg	71**	29**
39+ mpg <sup>e</sup>	<del>70</del>	<del>30</del>
Taken transit in last 30 days		
Yes	77	23
No	59**	41**
Transit service in community		
Has transit service	66	34
No transit service	56**	44**

\* Statistically significant at  $p < 0.05$ .

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

<sup>a</sup> Likely voters are those respondents who said that 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, "SmartWay Vehicle Thresholds, MY 2011 & MY 2012" EPA-420-B-13-015 (January 2010), <http://www.epa.gov/greenvehicles/documents/420b13015.pdf> (accessed May 20, 2014)).

<sup>e</sup> The sample size for this subgroup is <50. Although the sample size is large enough to conduct statistical testing, results for this subgroup should be interpreted with particular caution, which is why the numbers in the row have a strikethrough.

*Note:* The test of two proportions was used to check if there is a statistically significant difference between responses among subgroups. The first subgroup listed in each category is the "base" case for the test; it is compared to the proportion of respondents who supported or opposed using gas taxes to 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 2014, reducing federal spending on other programs received the most support (60 percent), followed by raising transit fares (52 percent), and trailed by raising the federal gas tax (36 percent). (See Table 15 and Figure 7.) When respondents were asked which of the three choices they *preferred*, the same hierarchy emerged: 48 percent preferred reducing spending on other programs, 24 percent preferred raising transit fares, and 17 percent preferred raising the federal gas tax (Table 16).

Across the three years of surveying, there was a statistically significant increase in support for each individual option from 2012 to 2014: four percentage points more support for reducing federal spending, seven points more support for raising transit fares, and eight points more support for raising the federal gas tax (Table 15). However, the percent of respondents choosing each option as their preferred alternative remained almost the same from year to year (Table 16).

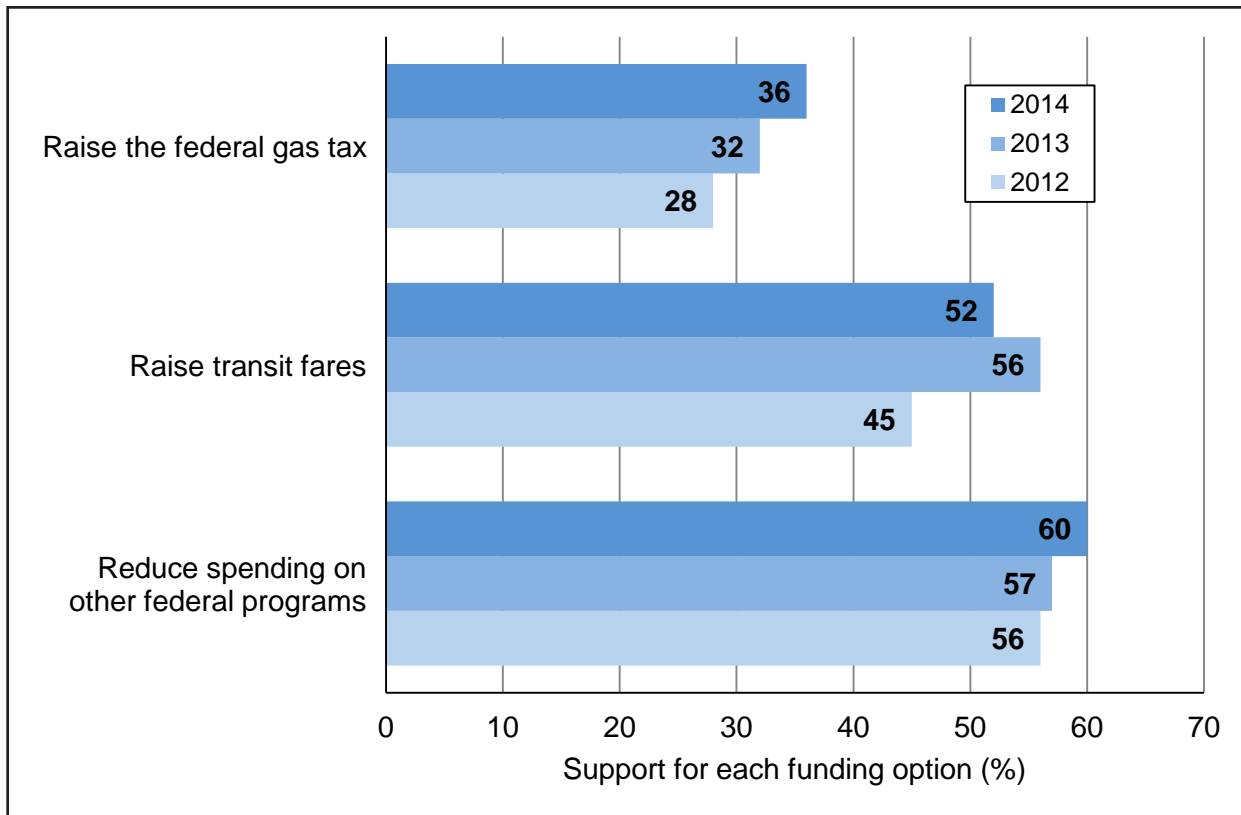
**Table 15. Attitudes about Three Ways Congress Could Pay for Expanding and Improving Public Transportation (2012 – 2014)**

	2012			2013			2014		
	Support <sup>a</sup> (%)	Oppose <sup>b</sup> (%)	Don't know <sup>c</sup> (%)	Support <sup>a</sup> (%)	Oppose <sup>b</sup> (%)	Don't know <sup>c</sup> (%)	Support <sup>a</sup> (%)	Oppose <sup>b</sup> (%)	Don't know <sup>c</sup> (%)
Reduce spending on other federal programs	56	35	9	57	37	6	60	32	8
Raise transit fares	45	48	7	56	41	3	52	42	6
Raise the federal gas tax	28	69	3	32	66	1	36	62	2

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

<sup>b</sup> Sum of respondents who “strongly oppose” or “somewhat oppose” each method to raise funds for public transportation.

<sup>c</sup> Some respondents volunteered this answer, which was not an option presented in the questionnaire.



**Figure 7. Support<sup>a</sup> for Three Ways Congress Could Pay for Expanding and Improving Public Transportation (2012 – 2014)**

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

**Table 16. Preferred Alternative among Three Ways Congress Could Pay for Expanding and Improving Public Transportation (2012 – 2014)**

	2012 <sup>a</sup>	2013 <sup>b</sup>	2014 <sup>c</sup>
Reduce spending on other federal programs	48	48	48
Raise transit fares	27	27	24
Raise the federal gas tax	14	17	17

<sup>a</sup> An additional 10 percent declined to choose a preferred alternative and instead volunteered an answer (don’t know, equally oppose all three, or equally support all three).

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

<sup>c</sup> An additional 11 percent didn’t know, equally opposed all three, or equally supported all three.

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

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 17), 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:

- The subgroups that showed the most support for **raising the federal gas tax** contained people who: lived in the Northeast (compared to the Midwest), were Asian/Asian-American, had annual household incomes over \$100,000, were employed (compared to retired respondents), were in one of the two youngest age groups (as opposed to the oldest age group), were registered Democrats (compared to registered Republicans or those who had not registered a party preference), drove the most fuel-efficient cars,<sup>11</sup> had taken transit within the previous 30 days, and reported having transit service in their community.
- Those most supportive of **reducing spending on other government programs** fell into one of the following subgroups: men, those with household incomes over \$50,000 per year, independent voters (compared to Democrats), those who reported driving any mileage at all (compared to those who don't drive or don't know their annual mileage), and those driving the most fuel-efficient cars.<sup>12</sup>
- Those most supportive of **raising transit fares** were respondents who: identified as Asian/Asian-American or white (as compared to black/African-American or other race), are of Hispanic or Latino descent, had completed more years of schooling than high school, were employed (compared to unemployed respondents), had annual household incomes over \$50,000, were registered voters and likely voters, had not taken transit in the previous 30 days, or drove more than 7,500 miles per year (compared to those who didn't drive or didn't know their annual mileage). Those who didn't drive were notably less supportive of raising transit fares.



**Table 17. Support<sup>a</sup> for Three Ways Congress Could Pay for Expanding and Improving Public Transportation, by Subgroup (2014)**

	Raise federal gas tax (%)	Reduce spending on other gov't programs (%)	Raise transit fares (%)
All respondents	36	60	52
Census region			
Northeast	40	60	52
Midwest	30*	61	58
South	39	61	54
West	39	58	47
Gender			
Male	39	65	55
Female	34*	55**	49*
Race			
White	35	61	56
Black/African-American	32	59	43**
Asian/Asian-American	72**	52	65
Other	33	53	31**
Of Hispanic/Latino origin/descent			
No	37	53	39
Yes	36	61*	55**
Education			
High school graduate or less	31	55	46
More than high school	40**	63**	57**
Employed			
Yes	38	63	56
No	37	56*	45**
Retired	25**	54*	52
Annual household income			
0 - \$50,000	35	55	44
\$50,001 - \$100,000	33	65**	60**
\$100,001+	45**	65**	61**
Age			
18 - 24 years	46	60	50
25 - 54 years	40	62	54
55 years+	27**	57	51
Registered voter			
Yes	37	60	55
No	36	60	45**
Likely voter <sup>b</sup>			
Yes	35	60	57
No	38	60	46**

Table 17, continued

	Raise federal gas tax (%)	Reduce spending on other gov't programs (%)	Raise transit fares (%)
Political affiliation for registered voters			
Democrat	44	55	56
Republican	27**	62*	52
Independent <sup>c</sup>	38	71**	60
Other <sup>d</sup>	30*	61	51
Annual miles driven			
1 - 7,500	35	61	52
7,501 - 12,500	36	65	62**
12,501+	33	66	60*
Don't know	42	50**	49
Don't drive	36	51*	30**
Miles per gallon <sup>e</sup>			
≤ 24 mpg	32	62	53
25 - 38 mpg	37	64	60
39+ mpg <sup>f</sup>	<del>51**</del>	<del>44*</del>	<del>58</del>
Taken transit in last 30 days			
Yes	46	55	41
No	33**	61*	56**
Transit service in community			
Has transit service	40	59	52
No transit service	26**	63	53

\* Statistically significant at  $p < 0.05$ .

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

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

<sup>b</sup> Likely voters are those respondents who said that 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, “SmartWay Vehicle Thresholds, MY 2011 & MY 2012” EPA-420-B-13-015 (January 2010), <http://www.epa.gov/greenvehicles/documents/420b13015.pdf> (accessed May 20, 2014)).

<sup>f</sup> The sample size for this subgroup is <50. Although the sample size is large enough to conduct statistical testing, results should be interpreted with particular caution, which is why this row of numbers has a strikethrough.

*Notes:* The test of two proportions was used to check if there was a statistically significant difference between responses among subgroups. The first subgroup listed in each category is the “base” case for the test; it is compared to the proportion of respondents who “supported” using each method for raising funds to pay for transit in each of the other subgroups within that category. As detailed in Table 15, up to 8 percent of respondents responded “don’t know” rather than support/oppose; these people are excluded from this analysis.

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When respondents were asked which of the three options they *preferred*, some but not all of the same subgroups were at least 10 percentage points more supportive than other subgroups within the same category (Table 18). 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 any one of the following subgroups: Asian/Asian-Americans, registered Democrats (compared to registered Republicans), or drivers of the least fuel-efficient vehicles.<sup>13</sup>
- Those most likely to prefer **reducing spending on other government programs** were respondents who fell into any one of the following subgroups: those living in the Northeast (compared to the Midwest or Northeast); black/African-Americans (compared to white or “other” race respondents); those of Hispanic or Latino descent; those not educated beyond high school; those living in households with an annual income below \$50,000; those unlikely to vote; registered voters who did not indicate a party preference or chose a party other than Democrat; or drivers of the least fuel-efficient vehicles (as compared to drivers of the most fuel-efficient vehicles).<sup>14</sup>
- Those most likely to prefer **raising transit fares** were respondents who fell into one any one of the following subgroups: those living in the Midwest (compared to those in the Northeast and West); black/African-Americans or whites (compared to Asian/Asian-Americans); registered voters (compared to respondents not registered to vote); voters registered as Democrat, Republican, or party-independent (compared to “Other” voters); drivers (compared to non-drivers); or those who had not taken transit within the last 30 days.

**Table 18. Respondents' Preferred Method to Expand and Improve Public Transportation, by Subgroup (2014)**

	Raise federal gas tax (%)	Reduce spending on other gov't programs (%)	Raise transit fares (%)	Equally oppose all three (%)	Equally support all three (%)
All respondents	18	50	25	5	2
Census region					
Northeast	20	56	18	4	1
Midwest	13*	45*	35**	4	3
South	20	48	26*	4	2
West	17	52	23	6	2
Gender					
Male	20	49	23	5	2
Female	15**	51	27	5	2
Race					
White	17	49	28	4	2
Black/African-American	12	60*	19*	7	2
Asian/Asian-American	37**	51	9**	1	1
Other	18	50	20	11**	2
Of Hispanic/Latino origin/descent					
No	22	42	24	9	2
Yes	17*	52*	25	4**	2
Education					
High school graduate or less	13	59	21	5	2
More than high school	20**	44**	28**	5	2
Employed					
Yes	19	48	25	6	2
No	18	54	25	3*	1
Retired	11*	50	28	7	3
Annual household income					
0 - \$50,000	15	56	22	6	1
\$50,001 - \$100,000	17	45**	30**	4	3
\$100,001+	23**	44**	25	5	3*
Age					
18 - 24 years	17	56	23	2	2
25 - 54 years	21	47*	26	5	2
55 years+	13	53	25	6*	3
Registered voter					
Yes	17	48	29	5	2
No	21	56*	16**	5	2
Likely voter <sup>a</sup>					
Yes	19	46	29	5	2
No	16	57**	20**	5	2

Table 18, continued

	Raise federal gas tax (%)	Reduce spending on other gov't programs (%)	Raise transit fares (%)	Equally oppose all three (%)	Equally support all three (%)
Political affiliation for registered voters					
Democrat	23	38	31	4	3
Republican	12**	51**	30	5	1
Independent <sup>b</sup>	20	48*	29	2	2
Other <sup>c</sup>	16	53**	18*	11**	2
Annual miles driven					
1 - 7,500	15	54	25	5	1
7,501 - 12,500	23*	45*	29	2	1
12,501+	17	46	31	4	2
Don't know	15	52	22	8	4
Don't drive	18	55	14**	10*	3
Miles per gallon <sup>d</sup>					
≤ 24 mpg	16	51	28	4	2
25 - 38 mpg	20	45	29	3	2
39+ mpg <sup>e</sup>	34**	41	14*	9	2
Taken transit in last 30 days					
Yes	24	53	14	7	2
No	15**	49	29**	4	2
Transit service in community					
Has transit service	20	49	24	5	2
No transit service	12**	50	32**	4	2

\* Statistically significant at  $p < 0.05$ .

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

<sup>a</sup> Likely voters are those respondents who said that 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, "SmartWay Vehicle Thresholds, MY 2011 & MY 2012" EPA-420-B-13-015 (January 2010), <http://www.epa.gov/greenvehicles/documents/420b13015.pdf> (accessed May 20, 2014)).

<sup>e</sup> The sample size for this subgroup is <50. Although the sample size is large enough to conduct statistical testing, results should be interpreted with particular caution, which is why this row of numbers has a strikethrough.

*Note:* The test of two proportions was used to check if there was a statistically significant difference between responses among subgroups. The first subgroup listed in each category is the "base" case for the test; it is compared to the proportion of respondents who indicated their "preferred method" for raising funds to 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 Eleven Tax Options in 2014

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 69 percent of respondents, whereas support levels dropped to 51 percent if the revenues were to be devoted to reducing global warming, or only 25 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 (49 percent) than either a gas tax increase (25 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 16 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 2014

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-American, black/African-American, in the youngest age group, and employed (as opposed to retired). 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. Respondents not registered to vote were also more likely supporters.

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 did not drive at all within the past year or did not know their mileage, drove the least (1 to 7,500 miles per year), 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 population 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 for virtually every subgroup. Further, that boost in support for the variants is generally quite large. We examined 504 cases (8 tax variants for each of 63 subgroups) and found that the boost in support for the variant was at least 30 percentage points for 42 percent of the cases.

### **Changes in Support for the Eleven Tax Options, 2010 - 2014**

Our surveys indicate that American public opinion about the federal transportation tax options tested has changed very little since 2010. The 2014 survey found approximately the same support for the tax increases as in the previous four years, though support levels have generally risen a bit over the five-year period and were the highest ever in 2014 for seven of the tax options. In addition, 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 only truly notable change over time is the continued rise in support for a variable-rate mileage tax based on vehicle pollution levels. The boost in support for this tax option has risen from 12 percentage points in 2010 to 25 points in 2014.

The fact that all five surveys generally 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 2014**

The questions that focused on public transit revealed that a very high percentage of people (79 percent) place a high or medium priority on improving and expanding public transit in their state, though other priorities have even higher support levels.

Most respondents were not knowledgeable about how public transit is funded. For example, 34 percent incorrectly thought that fares cover the full cost of the service. In addition, only 36 percent knew the federal government pays for transit, 42 percent knew of the local government role, and 50 percent knew of the state government role.

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 (36 percent). Both of the other options presented to respondents—raising transit fares or cutting spending on other government programs—had majority support at 52 percent and 60 percent, respectively.



When respondents were asked which of the three choices for raising new revenues they *preferred*, a clear hierarchy emerged: 48 percent preferred reducing spending on other programs, 24 percent preferred raising the federal gas tax, and 17 percent preferred raising transit fares.

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

The results of the five 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 five 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 five years show that while a new mileage fee may be very unpopular, support could be increased by modifying the tax structure so that the rate varies according 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 25-point boost in 2014. 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 US 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 rather than different views at different life-stages, 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 five years show that most people want good public transit service in their state. However, the 2014 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

This appendix presents the results of the 2014 survey described above, comparing these to the results from similar surveys conducted by MTI in 2010, 2011, 2012, and 2013.<sup>15</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, and age to match the U.S. population estimates from the Census Bureau’s American Community Survey 1-year estimates for 2012.<sup>16</sup>

For the tables in this appendix, we removed missing and refused responses from the dataset before calculating the response rates.

\* \* \*

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	2014	
	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Unweighted (%)
Very good condition	25	19	20	23	19	20
Somewhat good condition	54	62	64	60	57	57
Bad condition	20	19	16	16	23	23
Don’t know (volunteered)	<1	<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	2014	
	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Unweighted (%)
Very good	17	16	19	19	20	18
Somewhat good	38	38	41	41	38	36
Poor	15	19	16	13	15	16
No service	23	21	17	21	20	22
Don’t know (volunteered)	7	7	7	5	8	8

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	2014	
	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Unweighted (%)
High priority	47	49	47	49	51	51
Medium priority	35	36	33	35	30	30
Low priority	15	14	17	15	17	17
Don't know (volunteered)	4	2	2	1	3	3

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	2014	
	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Unweighted (%)
High priority	68	73	68	75	78	78
Medium priority	26	23	27	22	17	17
Low priority	5	4	5	2	4	5
Don't know (volunteered)	1	<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	2014	
	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Unweighted (%)
High priority	47	47	45	43	44	44
Medium priority	36	33	37	38	35	34
Low priority	14	17	16	18	18	19
Don't know (volunteered)	4	3	2	2	3	3

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

	2010	2011	2012	2013	2014	
	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Unweighted (%)
High priority	n.a.	65	68	71	69	68
Medium priority	n.a.	26	22	20	19	21
Low priority	n.a.	7	9	8	10	9
Don't know (volunteered)	n.a.	1	2	1	1	2

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	2014	
	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Unweighted (%)
High priority	n.a.	47	46	45	49	46
Medium priority	n.a.	36	37	39	37	37
Low priority	n.a.	15	15	15	12	14
Don't know (volunteered)	n.a.	1	2	1	2	3

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	2014	
	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Unweighted (%)
Strongly support	12	14	12	13	15	16
Somewhat support	30	31	37	37	32	30
Somewhat oppose	16	20	19	20	19	18
Strongly oppose	38	30	27	28	30	34
Don't know (volunteered)	4	5	4	3	4	4

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	2014	
	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Unweighted (%)
Strongly support	9	7	6	5	8	8
Somewhat support	14	17	14	18	17	16
Somewhat oppose	20	22	19	18	19	17
Strongly oppose	54	52	61	57	54	58
Don't know (volunteered)	2	2	1	2	1	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	2014	
	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Unweighted (%)
Strongly support	14	13	10	14	14	14
Somewhat support	25	25	29	28	26	25
Somewhat oppose	21	20	18	20	19	18
Strongly oppose	36	39	43	38	38	41
Don't know (volunteered)	3	2	1	1	3	2

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	2014	
	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Unweighted (%)
Strongly support	9	6	6	5	6	6
Somewhat support	12	16	15	13	12	12
Somewhat oppose	15	17	17	16	20	18
Strongly oppose	61	58	60	64	59	62
Don't know (volunteered)	3	2	3	2	3	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	2014	
	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Unweighted (%)
Strongly support	14	14	17	16	17	17
Somewhat support	19	22	24	23	26	23
Somewhat oppose	18	18	17	18	19	16
Strongly oppose	46	42	40	42	37	41
Don't know (volunteered)	3	4	2	2	2	3

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	2014	
	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Unweighted (%)
Strongly support	9	14	14	18	19	17
Somewhat support	21	33	27	35	33	29
Somewhat oppose	23	16	16	19	19	20
Strongly oppose	42	33	41	28	26	32
Don't know (volunteered)	6	3	2	2	2	3

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	2014	
	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Unweighted (%)
Strongly support	12	14	14	19	20	18
Somewhat support	30	32	26	30	29	26
Somewhat oppose	19	15	14	17	17	18
Strongly oppose	36	34	41	32	30	35
Don't know (volunteered)	3	6	4	2	3	4

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	2014	
	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Unweighted (%)
Strongly support	n.a.	26	23	33	33	28
Somewhat support	n.a.	36	35	34	36	35
Somewhat oppose	n.a.	12	10	12	13	14
Strongly oppose	n.a.	22	31	20	17	22
Don't know (volunteered)	n.a.	4	2	1	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	2014	
	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Unweighted (%)
Strongly support	n.a.	23	25	27	27	22
Somewhat support	n.a.	34	29	35	35	34
Somewhat oppose	n.a.	15	12	17	16	17
Strongly oppose	n.a.	24	31	21	21	26
Don't know (volunteered)	n.a.	5	3	1	1	2

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	2014	
	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Unweighted (%)
Strongly support	n.a.	16	15	22	21	17
Somewhat support	n.a.	34	31	34	36	34
Somewhat oppose	n.a.	18	15	17	19	19
Strongly oppose	n.a.	28	36	25	23	28
Don't know (volunteered)	n.a.	4	2	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	2014	
	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Unweighted (%)
Strongly support	13	11	10	12	12	13
Somewhat support	19	25	21	28	29	25
Somewhat oppose	19	18	16	17	19	17
Strongly oppose	46	42	50	42	38	43
Don't know (volunteered)	3	4	3	1	2	2

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	2014	
	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Unweighted (%)
Yes	n.a.	n.a.	n.a.	30	34	26
No	n.a.	n.a.	n.a.	55	50	57
Don't know (volunteered)	n.a.	n.a.	n.a.	15	16	17



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	2014*	
	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Unweighted (%)
1 to 33%	n.a.	n.a.	n.a.	21	28	25
34 to 66%	n.a.	n.a.	n.a.	35	38	42
67 to 100%	n.a.	n.a.	n.a.	16	17	15
Don't know (volunteered)	n.a.	n.a.	n.a.	29	18	18

\*Respondents could select any percentage from 0-100. The mean percent was 46%, with a standard deviation of 21% (weighted) and 20% (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	2014	
	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Unweighted (%)
Does pay	n.a.	n.a.	42	65	55	60
Does not pay	n.a.	n.a.	22	26	29	26
Don't know (volunteered)	n.a.	n.a.	36	10	17	15

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

	2010	2011	2012	2013	2014	
	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Unweighted (%)
Does pay	n.a.	n.a.	56	76	76	75
Does not pay	n.a.	n.a.	12	14	10	12
Don't know (volunteered)	n.a.	n.a.	32	10	14	13

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

	2010	2011	2012	2013	2014	
	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Unweighted (%)
Does pay	n.a.	n.a.	51	68	64	65
Does not pay	n.a.	n.a.	16	20	22	22
Don't know (volunteered)	n.a.	n.a.	33	12	14	12

- 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	2014	
	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Unweighted (%)
Support	n.a.	n.a.	n.a.	64	61	60
Oppose	n.a.	n.a.	n.a.	33	35	36
Don't know (volunteered)	n.a.	n.a.	n.a.	2	4	4

\*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., "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	2014	
	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Unweighted (%)
Strongly support	n.a.	n.a.	9	9	10	11
Somewhat support	n.a.	n.a.	19	24	26	23
Somewhat oppose	n.a.	n.a.	16	19	16	16
Strongly oppose	n.a.	n.a.	53	48	45	48
Don't know (volunteered)	n.a.	n.a.	3	1	2	2

- Q19B. Reduce spending on other federal programs

	2010	2011	2012	2013	2014	
	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Unweighted (%)
Strongly support	n.a.	n.a.	25	27	28	30
Somewhat support	n.a.	n.a.	31	30	32	31
Somewhat oppose	n.a.	n.a.	18	18	17	15
Strongly oppose	n.a.	n.a.	18	18	15	16
Don't know (volunteered)	n.a.	n.a.	9	6	8	8

## Q19C. Raise transit fares

	2010	2011	2012	2013	2014	
	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Unweighted (%)
Strongly support	n.a.	n.a.	14	18	15	15
Somewhat support	n.a.	n.a.	31	38	37	38
Somewhat oppose	n.a.	n.a.	21	19	19	17
Strongly oppose	n.a.	n.a.	27	22	23	23
Don't know (volunteered)	n.a.	n.a.	7	3	6	7

Q20. 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]

1. Raise the federal gas tax
2. Reduce spending on OTHER federal programs
3. Raise transit fares
  
4. I WOULD EQUALLY OPPOSE ALL THREE MEASURES
5. I WOULD EQUALLY SUPPORT ALL THREE MEASURES
6. DON'T KNOW

	2010	2011	2012	2013	2014	
	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Weighted (%)	Unweighted (%)
Raise the federal gas tax	n.a.	n.a.	14	17	17	17
Reduce spending on other federal programs	n.a.	n.a.	48	48	48	46
Raise transit fares	n.a.	n.a.	27	27	24	25
Equally oppose all three (volunteered)	n.a.	n.a.	5	3	5	6
Equally support all three (volunteered)	n.a.	n.a.	2	1	2	2
Don't know (volunteered)	n.a.	n.a.	4	3	5	4



## **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 19. 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.
Rutgers Eagleton Institute of Politics (Eagleton Center for Public Interest Polling)	2014 (April)	New Jersey adult residents	58% of New Jerseyans would support increasing the gas tax when told that the (recently proposed) increase "would be five cents per year over three years, raising an additional \$250 million per year for road and bridge repairs" and that "given current prices, this would increase gas costs by about one and one half percent per year." This represents an increase from a 48% approval rate when the question did not explain the percentage increase in the price of gas and a 31% approval rate when the question merely stated that "any increase would be dedicated to pay for road maintenance and improvements."
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.
HNTB (Kelton Research)	2011 (March)	U.S. residents	57% of respondents agree "that the gas tax should be increased and decreased with inflation."

Table 19, continued

Sponsor (and author, if different)	Survey date	Sampling frame	Findings
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.
NCPRP (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, Texas, 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.

Table 19, continued

Sponsor (and author, if different)	Survey date	Sampling frame	Findings
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.
Alameda County Transportation Commission (EMC Research)	2011 (March)	Alameda County, California, 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."
Rutgers Eagleton Institute of Politics (Eagleton Center for Public Interest Polling)	2014 (March)	New Jersey residents	38% of New Jerseyans supported raising the gas tax when they were informed that it "is currently the third lowest in the nation and has not been raised in twenty years." This rate of support is higher than the 27% of New Jerseyans who supported the raising the gas tax when not given the additional information.
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."



Table 19, continued

Sponsor (and author, if different)	Survey date	Sampling frame	Findings
Seizer 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."
Indian Nations Council of Governments (Collective Strength)	2010	Tulsa (Oklahoma) region residents	34% of Tulsa residents were somewhat or very willing "to use . . . 'slight increase in the gas and diesel tax' to 'help fund public transportation improvements.'"
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."
Quinnipiac University	2014 (April)	New Jersey voters	33% of respondents supported an increase in the gasoline tax to balance the New Jersey state budget.
HNTB (Kelton Research)	2013 (September)	U.S. residents	33% of respondents supported an unspecified increase in the gas tax to fund highway improvements. Support for using increases in the gas tax to fund other transportation improvements was lower.
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.
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."
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."

Table 19, continued

Sponsor (and author, if different)	Survey date	Sampling frame	Findings
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."
The Wall Street Journal	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 Research 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."
Washington Post	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."

Table 19, continued

Sponsor (and author, if different)	Survey date	Sampling frame	Findings
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%.
Public Mind, Fairleigh Dickinson University	2014	New Jersey residents	23% of New Jerseyans support raising the state gas tax "because all of the current money is committed and without new revenue there cannot be any new road or bridge projects." 72% of respondents opposed a new gas tax, "regardless of the need."
Mineta Transportation Institute (Agrawal and Nixon)	2013 (June)	U.S. residents	23% of respondents "supported" a 10¢ per gallon increase "to pay for transportation." Respondents were informed of the original and new amounts of the gas tax. Support increased to 67% if revenues were dedicated to "projects to MAINTAIN streets, roads, and highways," 62% if they went to "reduce accidents and improve safety," 58% if they went to "add more modern, technologically advanced systems like real-time travel alerts, longer lasting pavements, and better-timed traffic lights," 53% if they went to "projects to reduce LOCAL AIR POLLUTION caused by the transportation system," 50% if they went to projects to reduce the transportation system's contribution to GLOBAL WARMING," 42% if the increase was spread across five years, and 40% when respondents were informed of the annual cost of the increase.
Gonzales Research 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."
Gonzales Research and Marketing Strategies	2013 (October)	Likely Maryland voters	22% of voters in Maryland approve of their state government's 2013 decision to raise the gas tax by 21¢ over three years.

Table 19, continued

Sponsor (and author, if different)	Survey date	Sampling frame	Findings
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."
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."
Quinnipiac University	2009 (January)	New York state registered voters	18% of respondents supported increasing the gasoline tax by an unspecified amount
Quinnipiac University	2011 (March)	Connecticut registered voters	17% of respondents supported increasing the gasoline tax by 3¢ per gallon

Table 19, continued

Sponsor (and author, if different)	Survey date	Sampling frame	Findings
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 20. 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)	2013 (June)	U.S. residents	53% 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." Support was 50% if revenues were dedicated to "projects to reduce the transportation system's contribution to 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.

Table 20, continued

Sponsor (and author, if different)	Survey date	Sampling frame	Findings
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, Texas, 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.
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 21. 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."
Mineta Transportation Institute (Agrawal and Nixon)	2013	U.S. residents	39% of respondents 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." Support decreased to 19% of respondents when all vehicles paid the same flat fee of one cent per mile.
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. They survey described the tax "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."
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.



Table 21, continued

Sponsor (and author, if different)	Survey date	Sampling frame	Findings
Indian Nations Council of Governments (Collective Strength)	2010	Tulsa (Oklahoma) region residents	33% of Tulsa residents were somewhat or very willing to pay "a small user tax that would be based on the number of miles a vehicle is driven each year" to "help fund public transportation improvements."
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.
<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 22. Public Opinion Polling on Sales Taxes**

Sponsor (and author, if different)	Survey date	Sampling frame	Findings
San Bernardino County, CA and Riverside County, CA	2002	Riverside County and San Bernardino County, (California) residents	72.2% of Riverside County residents and 75.8% of San Bernardino County residents said that they would support local sales tax measures in upcoming referendums (in 2002). Analysis of the survey data showed that the measures were supported consistently across a variety of subgroups (income level, racial identity, voter registration status, and likelihood of voting). All groups except black/African-Americans in Riverside County showed more than 69% support for the measures.
Alameda County Transportation Commission (EMC Research)	2011 (March)	Alameda County, California, 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, California, 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."
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, North Carolina, 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").

Table 22, continued

Sponsor (and author, if different)	Survey date	Sampling frame	Findings
Triangle Transportation Authority (Fallon Research)	2010	Durham, Orange, and Wake Counties, North Carolina, 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."
Los Angeles Metro (Fairbank Maslin Maulin)	2007	Los Angeles County, California, 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, California, 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."
Mineta Transportation Institute (Agrawal, Nixon)	2011	U.S. residents	51% of respondents "supported" a 0.5¢ national sales tax "to pay for transportation."
Denver RTD (The Kenney Group)	2010	Metro Denver and Boulder County, Colorado, 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, Georgia, 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, North Carolina, 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."

Table 22, continued

Sponsor (and author, if different)	Survey date	Sampling frame	Findings
Public Policy Institute of California (Baldassare)	2005	Los Angeles County, California, 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."
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, Georgia, 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, Georgia, 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, California, 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."

Table 22, continued

Sponsor (and author, if different)	Survey date	Sampling frame	Findings
<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)	2013 (February)	U.S. residents	24% of respondents stated that they would be "willing to spend more money on" a sales tax "if it was dedicated to long term surface transportation improvements in their area."
HNTB Corporation (Kelton Research)	2012	U.S. residents	21% of respondents stated that they would be "willing to spend more money on" a sales tax "if it was allocated to long-term interstate improvements in [their] area."
HNTB Corporation (Kelton Research)	2011 (March)	U.S. residents	18% of respondents would be "willing to spend more money on" sales taxes if the money was allocated to "long-term transportation investments such as expanding highway capacity to reduce congestion or introducing high-speed rail in [their] area."



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## ENDNOTES

1. For the results of the first four 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); and Asha Weinstein Agrawal and Hilary Nixon, *What Do Americans Think About Federal Tax Options to Support Public Transit, Highways, and Local Streets and Roads? Results from Year 4 of a National Survey* (San José, CA: Mineta Transportation Institute, June 2013), <http://transweb.sjsu.edu/PDFs/research/1228-American-tax-poll-2013-public-transit-highways-streets-roads.pdf> (accessed May 19, 2014).
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, “2012 American Community Survey 1-Year Estimates” (no date), downloaded <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml> (accessed May 19, 2014).
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. So few respondents placed a low priority on having government prioritize the condition of roads and highways in the local community that these results should be interpreted with particular caution.
7. For the results of the first years of polling in this series, see Agrawal and Nixon (2010), Agrawal and Nixon (2011), Agrawal, Nixon, and Murthy (2012), and Agrawal and Nixon (2013).
8. Clear support is defined as subgroups meeting the following criteria in at least three of the four years: (1) support varied in a statistically significant manner across at least

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- 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.
9. The 2012 survey asked a similar question, but the authors determined from the responses that respondents had misunderstood the question. Therefore, the 2012 results are not presented here for comparison.
  10. 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?”
  11. This last subgroup, drivers of the most fuel-efficient vehicles, had so few respondents that the results should be interpreted with particular caution.
  12. This last subgroup, drivers of the most fuel-efficient vehicles, had so few respondents that the results should be interpreted with particular caution.
  13. This last subgroup, drivers of the most fuel-efficient vehicles, had so few respondents that the results should be interpreted with particular caution.
  14. This last subgroup, drivers of the most fuel-efficient vehicles, had so few respondents that the results should be interpreted with particular caution.
  15. For the complete 2010, 2011, 2012, and 2013 results, see Agrawal and Nixon (2010), Agrawal and Nixon (2011), Agrawal, Nixon, and Murthy (2012), and Agrawal and Nixon (2013).
  16. U.S. Census Bureau, “2012 American Community Survey 1-Year Estimates” (no date), downloaded from <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml> (accessed May 19, 2014).



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