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WHAT DO AMERICANS THINK ABOUT FEDERAL TAX OPTIONS
TO SUPPORT PUBLIC TRANSIT, HIGHWAYS, AND LOCAL
STREETS AND ROADS? RESULTS FROM YEAR 5 OF A
NATIONAL SURVEY

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30 **ABSTRACT**

31 This paper summarizes the results of a national random-digit-dial public opinion poll that asked
32 1,503 respondents if they would support various tax options for raising federal transportation
33 revenues, with a special focus on understanding support for increasing revenues for public
34 transit. Eleven specific tax options tested were variations on raising the federal gas tax rate,
35 creating a new mileage tax, and creating a new federal sales tax. Other questions probed various
36 perceptions related to public transit, including knowledge and opinions about federal taxes to
37 support transit. In addition, the survey collected data on standard socio-demographic factors,
38 travel behavior (public transit usage, annual miles driven, and vehicle fuel efficiency), and
39 attitudinal data about how respondents view the quality of their local transportation system and
40 their priorities for government spending on transportation in their state. All of this information is
41 used to assess support levels for the tax options among population subgroups.

42 **INTRODUCTION**

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

49 This dilemma—major desired system improvements but inadequate revenues available to
50 fund them—can be resolved in only two ways: either the nation must dramatically lower its goals
51 for system preservation and enhancement, or new revenues must be raised. If the latter is to
52 happen, legislators must be convinced that increasing taxes or fees is politically feasible. One
53 portion of the political calculus that legislators make when deciding whether or not to raise new
54 revenues is, of course, considering likely public support for—or opposition to—raising different
55 kinds of taxes.

56 This paper contributes to the understanding of current public sentiment about increasing
57 transportation taxes by presenting the results of Year 5 of a telephone survey investigating public
58 opinion about a variety of transportation tax options at the federal level. The specific taxes tested
59 were 10 variations on raising the federal gas tax rate or creating a new mileage tax, as well as
60 one option for creating a new federal sales tax. In addition, the survey collected standard socio-
61 demographic data, some travel behavior data, and attitudinal data about how respondents view
62 the quality of their local transportation system and their priorities for government spending on
63 transportation in their state. All of this information was used to assess support levels for the tax
64 options among different population subgroups.

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

69 In 2012 (the third year), questions were added to understand perceptions related to public
70 transit, including knowledge and opinions about federal taxes to support transit. Also, new
71 questions were added to explore respondents' knowledge of whether different levels of
72 government help to pay for transit, their opinion about whether gas tax revenues should be spent
73 on transit, and their support for different Congressional options to raise additional revenues to
74 improve and expand transit.

75 Because the survey was the fifth year of a project to assess how public support for federal
76 transportation taxes may change over time, most of the questions asked were identical to those in
77 the earlier surveys carried out in the series (1, 2, 3, 4). This paper compares the results of the
78 five surveys to establish how public views may have shifted over the past years.

79 Readers interested in seeing a more extensive discussion of the study results may consult
80 the project report on which this paper is based (5).

81 **EXISTING SURVEY RESEARCH**

82 To provide context for interpreting the survey results presented in this paper, this section reviews
83 the results from 92 other public opinion polls that asked about support for gas, mileage, and sales
84 taxes whose revenues would be used for transportation purposes. Details on the 92 polls are
85 available in (5).

86 The surveys, mostly conducted in the past eight years, were identified by searching the
87 Internet-based archives of popular pollsters and aggregators of public opinion polls, including
88 the Pew Center for the People and the Press, the Roper Center for Public Opinion Research,
89 Rasmussen Reports, SurveyUSA, and PollingReport.com. This work was supplemented by
90 searching Google to find mainstream media coverage on polls about transportation taxes.
91 Complete survey results were obtained directly from the survey sponsors' websites or through
92 personal contact with the sponsors. Most of the surveys reviewed were conducted by public
93 agencies, advocacy groups, popular pollsters, or news media; a few others were conducted by
94 academics or research-oriented nonprofits.

95 **Gas Taxes**

96 Gas taxes are a primary source of transportation revenue at both the state and the federal level.
97 However, the federal government and many states have not raised the tax rates in two decades,
98 so the real value of the revenues collected has fallen with inflation. As a result, there is frequent
99 talk about raising gas tax rates, and public opinion on such increases has been extensively polled.

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

106 Two general trends do emerge across the polls, however. First, support levels tend to be
107 below 50% and are often considerably lower. Only about a quarter had support levels over 40%.
108 Second, support tends to be particularly high when the tax increase is linked to some sort of
109 environmental benefit. Table 20 in (5) presents the results for the 14 polls that link a gas tax
110 increase with environmental benefits, shows that more than two-thirds of these found support
111 levels above 40%.

112 **Mileage Taxes**

113 Far less polling has been done about mileage taxes because these are not currently in use
114 anywhere in the United States, although they are under active discussion among transportation
115 policymakers and researchers. A review of 17 polls shows that support is not especially strong
116 but can be strengthened when the taxes are linked to environmental benefits (see Table 21 in
117 (5)). The six polls linking a mileage tax to environmental benefits found support levels ranging

118 from 33% to 50%, but the other eleven polls without that environmental link found support
119 levels no higher than 39%.

120 **Sales Taxes**

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

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

135 Table 22 in (5) summarizes a sampling of 30 polls testing public opinion on sales taxes.
136 Overall support levels were quite high: 16 of the polls showed support at 50% or higher.

137 **SURVEY METHODOLOGY**

138 **Questionnaire Design**

139 The survey questionnaire was designed to test public support for three types of taxes: an increase
140 in the federal gas tax, a new national mileage tax, and a new national sales tax. In all cases,
141 respondents were told that the revenue raised would be dedicated to transportation purposes.
142 To make these hypothetical taxes easier for respondents to understand, the survey gave specific
143 amounts for each. The amounts were selected to be simple numbers within the range of
144 mainstream current policy discussion.

145 Because a gas tax and a mileage tax are revenue options likely to receive considerable policy
146 scrutiny in coming years, the survey tested support for these concepts when the taxes were
147 presented in different forms. Overall, 11 different tax options were tested—eight variants of a
148 gas tax increase, two variants of a new mileage tax, and one new sales tax option. The gas tax
149 was explored in the most depth because, at least for the near term, the most likely source of
150 additional federal revenues would be an increase in the gas tax rate. All variants were included in
151 all three years of the survey, except the gas tax questions about maintenance and safety, which
152 were not included in the first year of the project.

153 The specific tax options tested were as follows:
154

155 **Gas tax increases.** Every variant of a gas tax increase involved raising the existing 18¢ per
156 gallon tax to 28¢ per gallon, but each included a different set of information for respondents
157 to consider. (The current federal tax on gasoline is 18.4¢ per gallon, but respondents were
158 told that it was 18¢ per gallon to make the survey simpler to understand.) The eight
159 variations were:

- 160 • A base-case 10¢ increase in the gas tax without further stipulations.

- 161 • A 10¢ increase in the gas tax that would be phased in over five years, increasing by
162 2¢ a year.
- 163 • A 10¢ increase in the gas tax, with the revenues to be spent only for projects to reduce
164 local air pollution caused by the transportation system.
- 165 • A 10¢ increase in the gas tax, with the revenues to be spent only on projects to reduce
166 the transportation system's contribution to global warming.
- 167 • A 10¢ increase in the gas tax, with the revenues to be spent only on projects to
168 maintain streets, roads, and highways.
- 169 • A 10¢ increase in the gas tax, with the revenues to be spent only on projects to reduce
170 accidents and improve safety.
- 171 • A 10¢ increase in the gas tax, with the revenues to be spent only on projects to add
172 more modern, technologically advanced systems like real-time travel alerts, longer
173 lasting pavements, and better timed traffic lights.
- 174 • A 10¢ increase in the gas tax, with respondents informed of the annual tax burden for
175 a typical driver under both the current and increased tax rates. Respondents were told
176 that the tax burden would increase from an average of \$100 a year to \$150 a year for
177 someone driving 10,000 miles a year in a car with a fuel economy of 20 miles per
178 gallon.

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

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

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

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190 The exact wording used to describe each tax to respondents can be found in Appendix A of
191 (5), which reproduces the survey questionnaire.

192 A new feature for the survey project introduced in the third year was a special focus on
193 understanding support for raising revenues to support public transit. Questions were added
194 asking respondents if they knew whether different entities help to pay for transit (transit riders,
195 plus local, state, and the federal governments), their opinion about whether or not gas tax
196 revenues should be spent on public transit, and their support for and preference among different
197 Congressional options to find additional revenues to improve and expand transit services.

198 For both support of the tax options and opinions about public transit, the survey was
199 designed to assess how responses to the questions might vary by socio-demographic factors,
200 travel behavior characteristics, and respondents' opinions about their local and state
201 transportation systems. Introductory questions asked respondents to rate the quality of roads and
202 highways and transit service in their community and to indicate the priority they thought

203 government should place on various options for improving the transportation system for
204 everyone in their state. The questionnaire concluded with a standard set of socio-demographic
205 questions on such factors as age, race and ethnicity, and income. To assess travel behavior, the
206 survey included one question asking how many miles the respondent drove in the previous year
207 and another question asking if the respondent had used any form of public transit within the
208 previous 30 days. Respondents were also asked the average fuel efficiency of the vehicle they
209 drove the most for personal travel.

210 **Survey Implementation**

211 The Social Science Survey Center at California State University, Fullerton, conducted the survey
212 on behalf of the Mineta Transportation Institute's National Transportation Finance Center. The
213 interviewing was completed in two phases, from March 4 – April 7 and April 23 – April 30,
214 2014. A total of 1,503 adults nationwide were interviewed by telephone in either English or
215 Spanish, with 33 (2%) of the interviews conducted in Spanish.

216 Telephone numbers included in this sample were randomly generated, and survey
217 respondents were reached by both cell phone (N=352) and landline phone (N=1,151). Including
218 both cell and landline phone numbers meets the best practices in current survey research (5, 7).
219 According to a 2012 study by the Pew Center for the People and the Press, “telephone surveys
220 that include landlines and cell phones and are weighted to match the demographic composition
221 of the population continue to provide accurate data on most political, social and economic
222 measures” (5, p. 1).

223 Unless otherwise indicated, all results are weighted to match the Census Bureau's 2012
224 American Community Survey one-year estimates with respect to gender, race, Hispanic
225 ethnicity, education level, annual household income, and age (*Error! Reference source not
226 found.*).

227 The margin of error for the total sample is ± 2.53 percentage points at the 95%
228 confidence level. Smaller subgroups have larger margins of error.

229 **SURVEY FINDINGS**

230 This section presents highlights of the survey results. It first describes the survey respondents
231 and then presents support levels for the tax options among all respondents and also among
232 population subgroups. The section concludes with findings on how support for the base-case 10¢
233 gas tax increase and new flat-rate mileage tax compares with support for variants on these
234 options. (Appendix A of (5) presents the questionnaire and complete results of the survey.)

235 **Survey Respondents**

236 The survey respondents were generally representative of the U.S. adult population in terms of
237 Census region and socio-demographic characteristics, although the sample diverged from the
238 national average more (from 5 to 12 percentage points) along a few dimensions of ethnicity,
239 race, education, and age (see Table 1 of (5)).

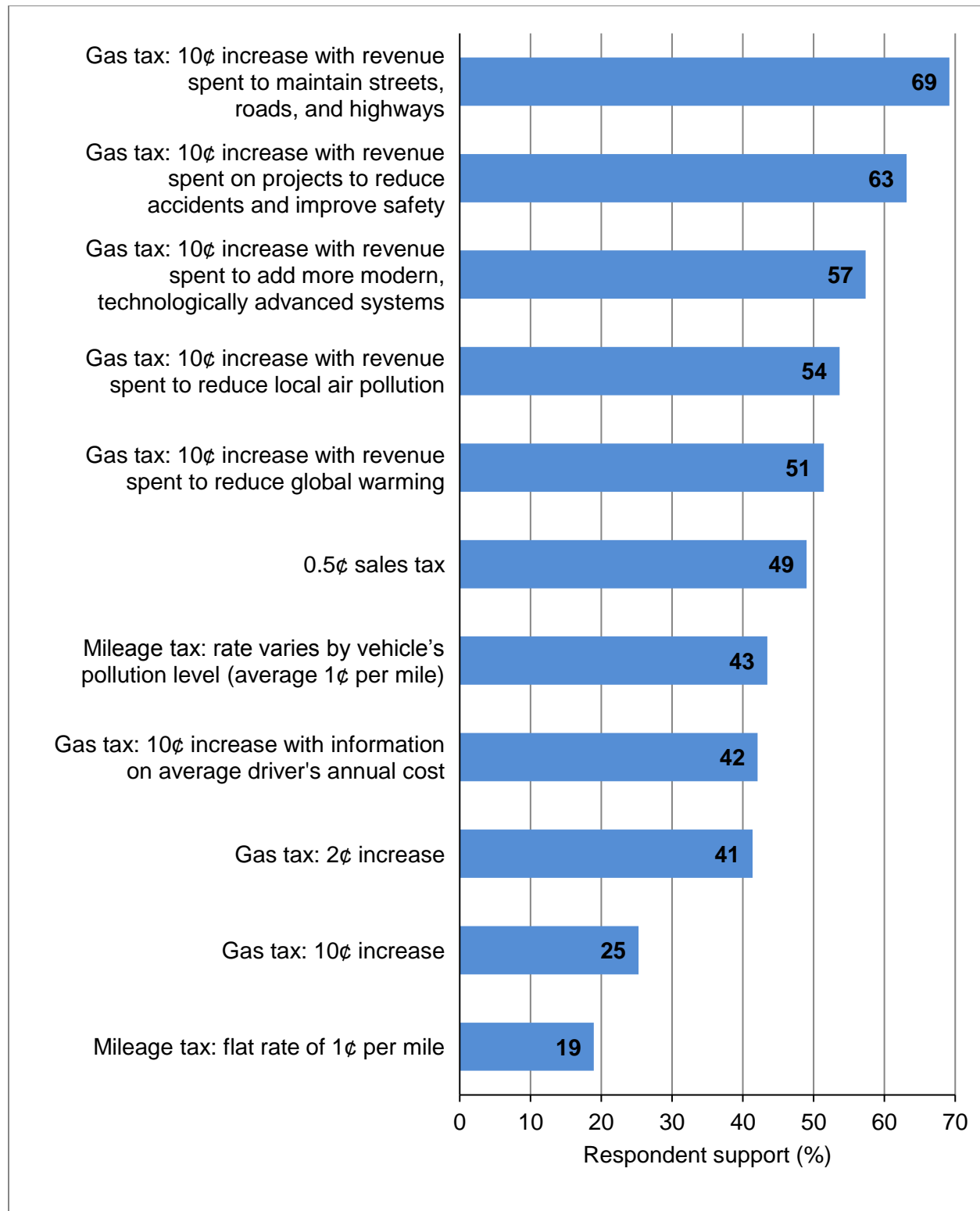
240 **Overall Support Levels for the Transportation Tax Options**

241 The survey results show that a majority of Americans would support higher taxes for
242 transportation—under certain conditions (see Figure 1). For example, a gas tax increase of 10¢
243 per gallon to improve road maintenance was supported by 69% of respondents, whereas support
244 levels dropped to 25% if the revenues were to be used more generally to maintain and improve

245 the transportation system. The only other variant on a gas tax that received at least 60% support
246 in 2014 was an increase of 10¢ per gallon with the revenues dedicated to reducing accidents and
247 improving safety. However, support for several other tax options was still above 50%, a healthy
248 showing of support for a tax increase of any kind.

249 For tax options where the revenues were to be spent for undefined transportation
250 purposes, support levels varied considerably by what kind of tax would be imposed, with a new
251 national sales tax roughly twice as popular as either the 10¢ per gallon gas tax increase or new
252 mileage tax with a flat rate of 1¢ per mile.

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FIGURE 1 Support for the Tax Options Surveyed in 2014. (Note: "Support" is the sum of those who said they strongly or somewhat supported the tax option.)

258 **Support by Population Subgroups**

259 We also examined support levels for the different tax options by subgroups within the
260 population. The statistical test of two proportions was used to check whether differences among
261 subgroups (e.g., men versus women) are statistically significant at the 95% and 99% confidence
262 levels. This section of the paper summarizes the key findings from this analysis. Readers
263 interested in reviewing the detailed findings should see Tables 2 through 5 in (5).

264 The following discussion focuses on those differences among subgroups where the
265 patterns are clearest. A pattern is defined as “clear” when (1) the variation in support is
266 statistically significant across at least five of the tax options, and (2) the average magnitude of
267 the difference between the groups across all 11 tax options is at least 7 percentage points or
268 more. Readers should note that the variations described below are not necessarily the only
269 important ones that may exist. Rather, the variations discussed are those that could be identified
270 by the particular statistical tests used and also fell within the cutoff points selected.

271 The clear socio-demographic patterns that emerge are linked to race, employment status,
272 and age. With respect to race, Asians/Asian-Americans were, on average, 17 percentage points
273 more likely to support each tax than whites. Similarly, African-Americans were on average 10
274 percentage points more likely to support each tax than were whites. As for age, respondents in
275 the youngest group (18- to 24-year olds) were more likely to support virtually all of the taxes
276 than respondents in the two older groups, especially as compared to the oldest group (55 years
277 and older). The average difference in support for the taxes was 17 percentage points for the
278 youngest group as compared to the oldest group. Finally, employed respondents were more
279 supportive of the taxes than retirees, mirroring the differences in support by age.

280 Political party affiliation played a strong role, with support for all of the taxes more likely
281 among registered Democrats than among registered Republicans, voters registered with other
282 parties, or registered voters who are party-independent. The level of support differed for
283 registered Democrats and registered Republicans by an average of 19 percentage points across
284 the 11 tax options. In addition, people who were not registered to vote were modestly more likely
285 to support most of the taxes than were registered voters.

286 The survey asked three questions about travel behavior and personal vehicle mileage in
287 order to examine whether support for the tax options varied by these factors. Respondents who
288 reported driving from 1 to 7,500 miles annually were more likely to support the taxes than
289 people who reported driving more than 12,500 miles annually, but they were less likely to
290 support the taxes than people who said they did not drive at all. Also, respondents who said that
291 they had taken public transit within the previous 30 days were more likely to support the tax
292 options than respondents who said that they had not.

293 Another set of analyses examined how support for the different tax options correlates
294 with respondents’ opinions about the transportation system. Respondents’ opinions about road
295 and transit services in their local community are not clearly correlated with support for the taxes,
296 but the quality of local public transit is. Respondents who rated the quality of public transit
297 service in their community as very good were more likely to support the taxes than those who
298 said they had no public transit service at all in their communities. Another set of questions asked
299 respondents about their priorities for how governments might spend transportation revenues:
300 reducing traffic congestion; maintaining streets, roads, and highways; expanding and improving
301 local public transit service; reducing accidents and improving safety; and increasing the use of
302 modern technologies. Not surprisingly, respondents who placed a high priority on these goals
303 were more likely to support almost every tax option than were those who assigned them a low

304 priority. The differences were, on average, very large—over 20 percentage points in three
305 cases. In addition, respondents who placed a high priority on the goals of improving public
306 transit service and increasing the use of modern technology were more supportive of the taxes
307 than those who had assigned those goals a “medium” priority.

308 **Support for Different Versions of the Mileage and Gas Taxes**

309 A central goal of the survey was to test how public support varied for different mileage and gas
310 tax proposals. In this study, the base-case proposals for each type of tax were the flat-rate
311 mileage tax of 1¢ per mile and the 10¢ gas tax increase without any additional detail. For
312 comparative purposes, respondents were also asked about a single variant of the mileage tax (a
313 variable tax based on how much pollution a vehicle produces) and a series of variants on the gas
314 tax (several proposals that dedicate additional revenues to specific purposes, a phased-in tax
315 increase, and a proposal that informs respondents of the typical annual cost). Figure 2 shows how
316 variants on the tax proposals increased support in comparison to the base-case tax options. For
317 both tax types, the base-case version had the lowest support level, and applying the test of two
318 proportions confirmed that in all cases the increase in support is statistically significant.
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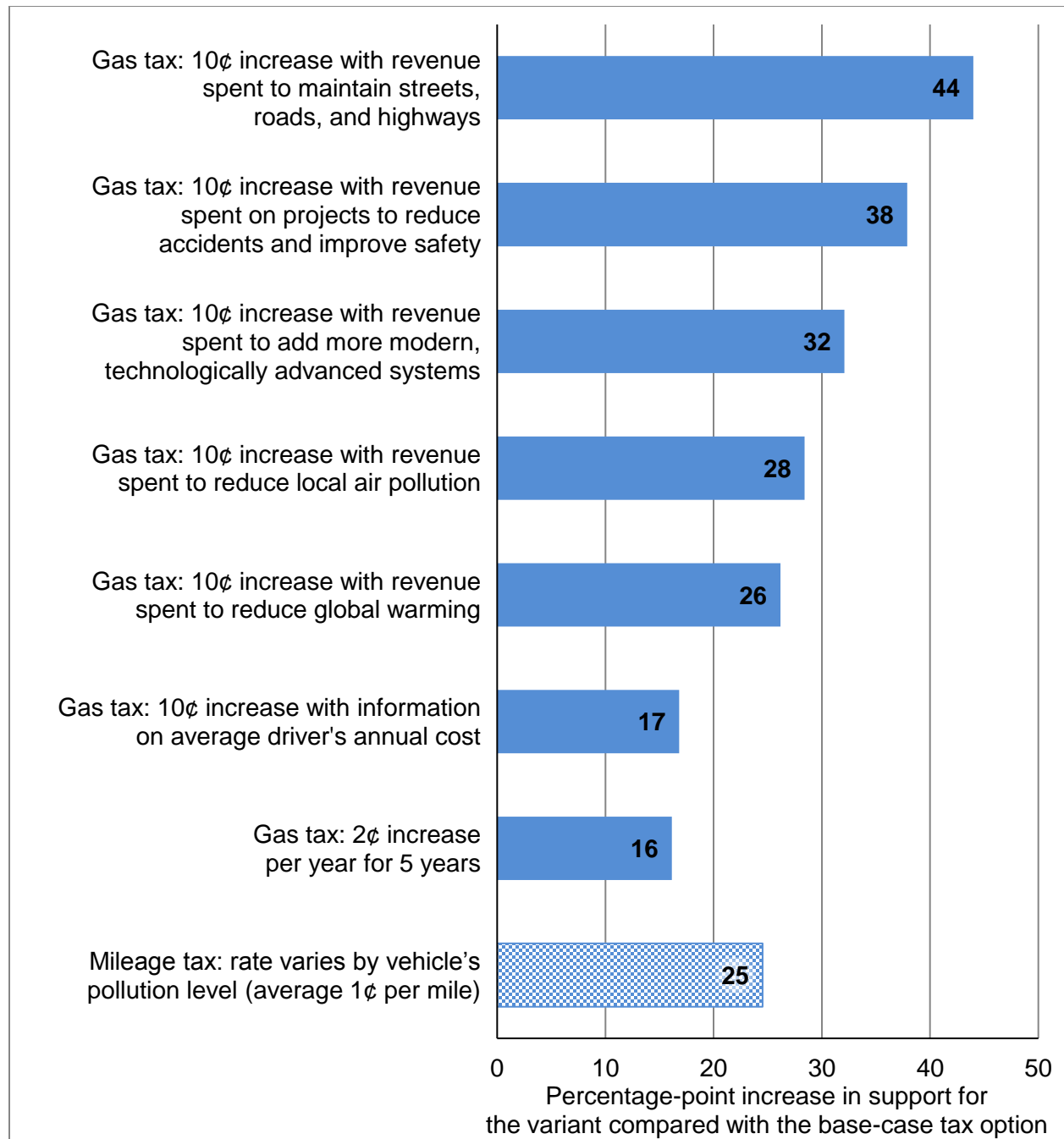


FIGURE 2 Relative Increases in 2014 Support for Variations of the Base-Case Gas Tax and Mileage Tax Concepts. (Note: "Support" is the sum of those who said they strongly or somewhat supported the tax option.)

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We also looked at the change in support levels for each tax variant by respondent subgroups that are defined by Census region, socio-demographic and political characteristics, travel behavior characteristics, and opinions about the transportation system. Overall, the analysis considered 63 population subgroups, for each of which there are 8 tax comparisons, resulting in a total of 504 cases examined. (Readers interested in reviewing the detailed findings should see Tables 6 through 9 in (5).)

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

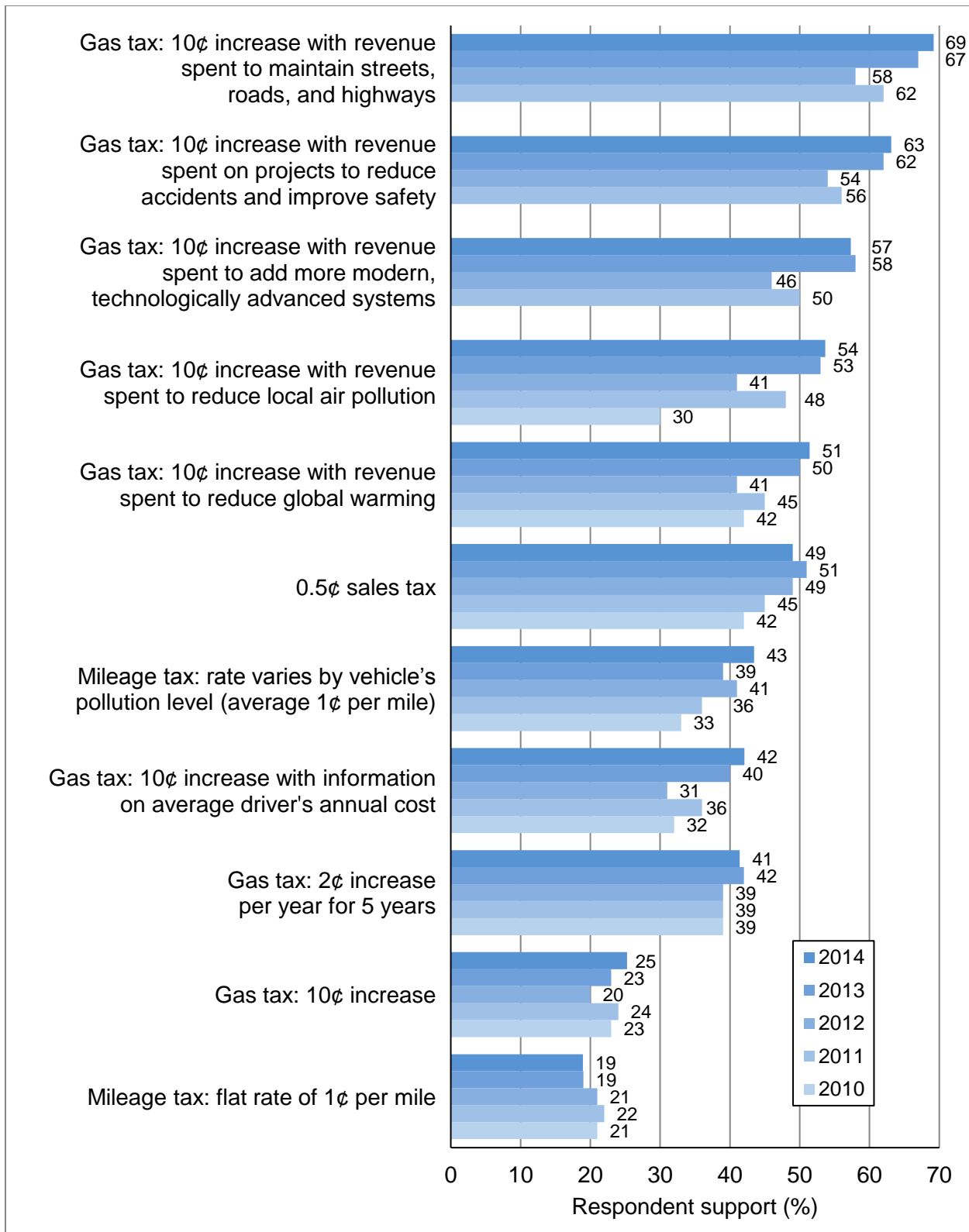
- 336
- 337 • At least 10 percentage points for 97% of cases
- 338 • At least 20 percentage points for 74% of cases
- 339 • At least 30 percentage points for 42% of cases
- 340 • At least 40 percentage points for 17% of cases

341 **Comparison of Support over Time (2010 - 2013)**

342 Most of the survey questions replicate those in the four surveys previously administered in this
343 series, so it is possible to look at trends in support over time. The trend analysis shows that
344 support levels have changed only a little over the five surveys (see Figure 3). In most cases the
345 support for a tax varied by 5 or fewer percentage points from 2010 to 2011 to 2012, a change too
346 small to suggest a meaningful change in support. However, Americans were modestly more
347 willing to support most of the tax increases in 2013 and 2014 than they were in the previous
348 three years. In 2014, support levels were at their highest ever for 7 of the tax options tested.

349 The one striking exception to the trend of fairly similar support levels across all the taxes
350 for all five surveys is the gas tax increase with revenues dedicated to projects that reduce air
351 pollution. Here, support has varied considerably from year to year, with a low of 30% support in
352 2010 to a high of 54% support in 2014.

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FIGURE 3 Trends in Support for the Tax Options, 2010 – 2014 (Note: “Support” is the sum of those who said they strongly or somewhat supported the tax option.)

358 We also found that a few population subgroups were clearly more likely to support the
359 taxes across all five surveys:

- 360
- 361 • Asians/Asian-Americans and blacks/African-Americans (compared to whites)
 - 362 • Younger people (compared to people in both older age groups)
 - 363 • Democrats (compared to Republicans and Independents)
 - 364 • People who drove the fewest miles per year (compared to people who did not know
365 how many miles per year they drove or who did not drive)
 - 366 • People who had used transit in the previous 30 days (compared to people who did
367 not)
 - 368 • People who think government should place a high priority on expanding and
369 improving local public transit service, maintaining streets and roads, reducing
370 accidents and improving safety, and using modern technology (compared with people
371 who think government should place a low priority on these goals).
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373 Our analysis of how the tax variations boosted support over the base cases shows
374 relatively little change from 2010 to 2014 (Figure 4). In every case, the variations had higher
375 support levels than the base-case options, and the boosts in support were fairly similar each year
376 the questions were asked. The gas tax variant with the most consistent boost has been the option
377 to phase in the tax increase over five years. The increase in support for this variant has remained
378 within a 4 percentage point range across all survey years. The boosts for the other gas tax
379 variants have fluctuated a little more but still within a range of 9 points or fewer, except for the
380 gas tax linked to projects that would reduce local air pollution. This variant received a small
381 boost in support in 2010 but then received relatively large boosts since then (between 21 and 30
382 percentage points). Additionally, there has been a gradual but steady increase in support for the
383 mileage tax with variable rates based on vehicle emissions. For that tax variant, the boost has
384 climbed from 12 percentage points in 2010 to 25 percentage points in 2014.

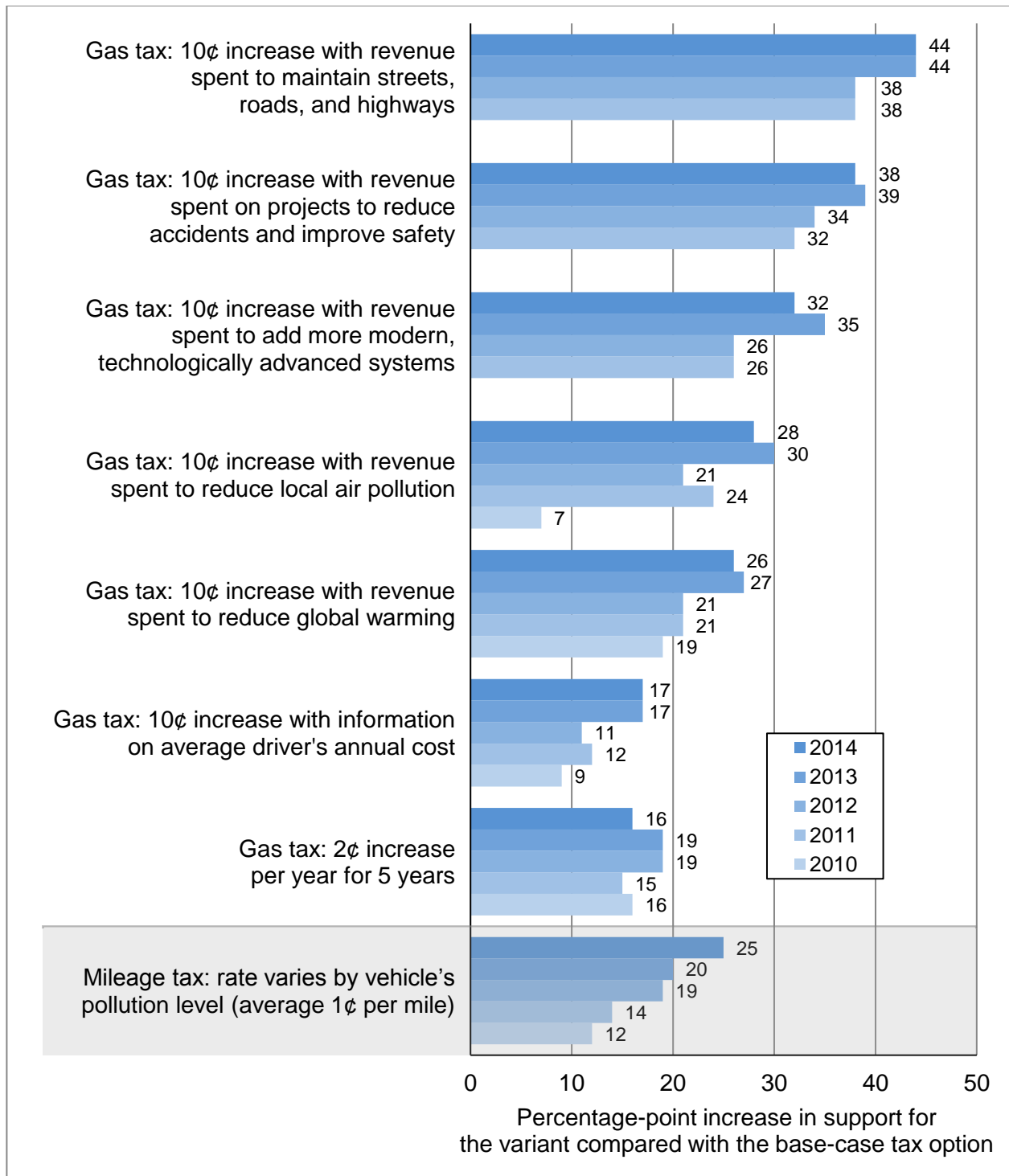


FIGURE 4 Changes over Time for the Relative Increases in Support for Variations of the Base-Case Gas Tax and Mileage Tax Concepts (2010 – 2014). (Notes: “Support” is the sum of those who said they strongly or somewhat supported the tax option. The base-case proposals were a new flat-rate mileage tax of 1¢ per mile and a 10¢ per gallon gas tax increase, without any additional detail)

FINDINGS RELATED TO 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 section 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%) said that it is very or somewhat good, 15% said that it is poor, and 28% 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.

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.” 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%), 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% of respondents felt this way, compared to the other options that ranged from a low of 80% to a high of 95%. The two most popular priorities were road maintenance and improving safety.

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% said that they did not know, and only 50% (correctly) said “no.” These responses are similar to those from the 2013 survey.

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% of the full cost, 38% said that fares cover 34 to 66% of the full cost, 17% said that fares cover 67 to 100% of the full cost, and 18% 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%) knew that the federal government helps pay for transit, with more respondents aware of the local contribution (64%) and the state contribution (76%). 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% of all respondents knew the federal government pays for transit, 42% knew of the local government role, and 50% knew of the state government role.

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

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

Sixty-four percent of respondents supported spending gas tax revenues on transit and 36% opposed this.

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%), followed by raising transit fares (52%), and trailed by raising the federal gas tax (36%). When respondents were asked which of the three choices they preferred, the same hierarchy emerged: 48% preferred reducing spending on other programs, 24% preferred raising transit fares, and 17% preferred raising the federal gas tax.

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. However, the percent of respondents choosing each option as their preferred alternative remained almost the same from year to year.

SUMMARY OF KEY FINDINGS

Support Levels for the 11 Tax Options

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 *relative* preferences among different transportation tax options.

With this caveat in mind, 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% of respondents, whereas support levels dropped to 51% if the revenues were to be devoted to reducing global warming, or only 25% 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%) than either a gas tax increase (25%) or a new mileage tax (19%).

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.

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 socio-demographic categories reveals surprisingly few links with support for the taxes. Some of the only statistically significant patterns that emerge are that the taxes generally had greater support from respondents who were younger, non-white, Democrat, not registered to vote, 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), rated transit service in their community as very good, or

placed a high priority on having government improve various aspects of the transportation system in their state.

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% of the cases.

Changes in Support for the 11 Tax Options, 2010 - 2013

Our surveys indicate that American public opinion about the federal transportation tax options tested has changed very little since 2010. The 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

The questions focused on public transit revealed that a very high percentage of people (79%) placed a high or medium priority on improving and expanding public transit in their state, though some other priorities had even higher support levels. Many respondents were not aware of the different government entities that fund transit. Knowledge was the lowest about the federal role; only 36% of people knew that the federal government helps to pay for public transit. As to how respondents wanted to see the federal government pay for improving and expanding public transit, raising neither the gas tax nor transit fares was particularly popular. The most popular option was to cut spending on other government programs.

IMPLICATIONS FOR PRACTICE

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

Careful program design can increase support for higher gas taxes or a new mileage tax.

The survey results show that the very low support levels for a gas tax increase or a new mileage tax can be raised by modifying how the tax is structured and the way it is described. For example, support rises when revenues are dedicated to specific purposes popular with the public, the tax increase is spread out over several years, or information is provided about how much the increase will cost drivers annually.

Stressing the environmental, safety, and maintenance benefits will increase support for transportation taxes, including ones for transit.

Devoting revenues to maintenance and safety can increase support levels substantially across the whole population. Also, linking a transportation tax to environmental benefits can strongly increase support among most population subgroups. Linking transit with environmental benefits may be a particularly successful way to increase support for transit revenues.

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

The surveys found that the youngest respondents were much more supportive of the tax options than older respondents. If this variation reflects a true generational shift, then these opinions would persist as those currently young respondents age and might also hold with the age cohorts behind them who soon become adults.

FUTURE RESEARCH NEEDS

It should be noted that the results presented in this paper are derived from bivariate analysis only. In order to more fully explore the complex reasons behind individuals' support or opposition to the transportation taxes surveyed, the authors' future research plans include conducting multivariate analyses that pool all five years of survey data.

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