

**International Center for Public Policy**  
**Working Paper 23-25**  
**December 2023**

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# Getting Mileage Fees Right: What Does the U.S. Public Think?

Asha Weinstein Agrawal and Hilary Nixon\*

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## Abstract

The United States faces a critical policy dilemma with respect to transportation funding: how to fund roads, highways, and public transportation into the future given the dwindling productivity of fuel taxes. This paper explores survey data that sheds light on public opinion about one promising replacement for fuel taxes, so-called “mileage fees.” We analyzed 14 years of national survey data from U.S. adults to provide policymakers and researchers with evidence to answer three questions. First, what percent of Americans support the concept of mileage fees and has that support changed over time? Second, does support for mileage fees vary substantially by personal characteristics such as income or annual mileage driven? And third, are some mileage fee design choices more popular with the public than others?

**Keywords:** transportation funding, fuel tax, mileage fees, public opinion

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Acknowledgements: We thank the Mineta Transportation Institute for funding the survey through a grant from the U.S. Department of Transportation’s University Transportation Center program (grant no. 69A3551747127).

## Introduction

The United States faces a critical policy dilemma with respect to transportation funding: how to fund roads, highways, and public transportation into the future given the dwindling productivity of fuel taxes. This paper explores survey data that sheds light on public opinion about one promising replacement for fuel taxes, so-called “mileage fees.” We analyzed 14 years of national survey findings from U.S. adults to provide policymakers and researchers with evidence about not only overall public support for the mileage fee concept but also support among population subgroups and preferences for certain mileage fee design choices.

Mileage fees, also known as road-user charges or vehicle-miles traveled (VMT) fees, are increasingly discussed as a potential replacement for fuel taxes. Like fuel taxes, mileage fees can raise large revenue streams by charging drivers in proportion to how far the vehicle is driven. Because American vehicles cover roughly three trillion miles a year (Federal Highway Administration, 2023), even a small charge per mile would raise substantial revenue.

The interest in mileage fees has grown swiftly over the past decade as the fuel tax has come to be seen as an increasingly unreliable source, especially in the future. Motor fuel excise taxes suffer from three specific problems: a structural problem, a political problem, and a technological problem. The first, a problem of tax structure, has bedeviled state and federal fuel taxes ever since they were first introduced in Oregon in 1919. These excise taxes have almost always been levied as a fixed number of cents per gallon and so do not maintain their spending power in the face of inflation. The typical fix for this tax structure weakness, regular legislative votes to increase the rate, creates the second problem: elected officials have regularly failed to pass legislation to raise fuel tax rates enough to keep revenues growing at the pace of inflation. This failure has been particularly dire at the federal level; Congress has not raised the cents-per-

gallon gasoline excise tax rates for gasoline and diesel since 1993, when it rose to 18.4 cents per gallon. Finally, fuel taxes face a technological problem: motor vehicles are increasingly burning less fuel per mile—or using none at all. Increasing vehicle fuel efficiency for gasoline and diesel vehicles has translated into drivers paying less fuel tax per mile driven. Further, the nation is poised to see a rapid growth in electric vehicles (EVs) that require no gasoline or diesel purchases at all.

For decades, mileage fees had been the focus of periodic research studies by scholars but of little interest to policymakers. One key reason policymakers have dismissed mileage fees as a practical replacement for fuel taxes is the assumption that the public would not accept the mileage fee concept. However, in the face of falling fuel tax revenue, some legislators are increasingly interested in exploring if perhaps the American public would, after all, be willing to accept mileage fees as a major new source of revenue for roads, highways, and public transportation.

This paper contributes to the growing literature on public opinion about mileage fees by drawing on fourteen years of data from an annual trend survey conducted by the Mineta Transportation Institute that asks respondents a variety of questions about transportation taxes and fees (Agrawal and Nixon, 2023). Core questions asked over multiple years include support for mileage fees and for raising the federal gas tax rate. We conducted bivariate analyses of all 14 years of survey data to provide policymakers and researchers with an opportunity to explore findings related to three key questions about mileage fees:

1. What percent of Americans support the concept of mileage fees and has that support changed over time?

2. Does support for mileage fees vary substantially by personal characteristics such as income or annual mileage driven?
3. Are some mileage fee design choices more popular with the public than others?

The remaining sections of the paper present an overview of the literature on public support for mileage fees, describe the study methods and findings, and conclude with a discussion of findings, policy implications, and recommendations for future research.

### **Literature Review**

This paper builds upon a growing literature about public opinion on mileage fees and gasoline taxes that has been conducted largely to aid policymaking. Public approval for a policy typically increases (though does not guarantee) the likelihood that elected officials will support the initiative (Saris and Sniderman, 2004, Page and Shapiro, 1983). This is especially true if the proposed policy is of personal interest to community members. Since the great majority of Americans travel in personal vehicles as either drivers or passengers, changes to taxes on driving are indeed of direct interest to many people.

Most studies on public support for transportation tax policies have looked at support among the full population in a single point in time. The great majority of these studies have found support among the public at large to be well below 50%, though findings vary widely from study to study, and public support has ticked up over the past decade (Agrawal and Nixon, 2018). A 2016 study by Agrawal, Nixon, and Hooper reviewed 38 U.S. surveys with questions about mileage fees and found support ranging from 7% all the way to 77%. An additional unique feature of the current study is that we explore how public support has changed over time.

A much smaller set of studies have considered the second question at the core of this study: what personal characteristics and mileage-fee program design choices predict support for

a mileage fee (Zhang, et al. 2012, McMullen, Zhang, and Nakahara, 2010, Weatherford, 2011, Robitaille, Methpara, and Zhang, 2011). The studies analyzing support by personal characteristics most often rely on simple crosstab analysis without any statistical significance testing. A few studies do, however, use multivariate analysis to explore support by personal characteristics. Collectively, these studies find relatively few consistent patterns of what personal characteristics correlate with higher support for mileage fees (Duncan, et al. 2017, Dill and Weinstein 2007, Agrawal, Dill, and Nixon 2010). Again, a unique feature of the current study is that we explore whether support by different segments of the population has changed over time.

Finally, a few studies have directly explored how the specific design of a mileage fee may shape public opinion, and these found that program design does indeed matter, including the rate structure, technology for documenting miles driven, and how the revenue will be spent (Agrawal, Nixon, and Hooper 2016, Duncan, Li, and Graham 2020, Ubbels and Verhoef 2006).

## **Methods**

The dataset analyzed in this paper combines the results from fourteen national public opinion surveys administered annually from 2010 to 2023. This section of the paper describes the survey questionnaire, survey administration process, sampling approach to recruit respondents who were representative of the US adult population, and approach to the analysis.

### The Survey Questions Analyzed

For all fourteen years the survey asked respondents core questions about their opinions and knowledge related to tax and fee options for raising federal transportation revenue. Additional questions probed opinions about the quality of the transportation system and gathered details on the respondents' personal characteristics (socio-demographic characteristics, travel choices, and

residential location). To allow for longitudinal analysis, the researchers made as few changes as possible to the core survey questions from year to year.

This paper explores a subset of the survey questions. Table 1 shows the exact language of each question asking respondents their opinions related to federal transportation revenue options. (The survey questions asked to gather information on the personal characteristics used for analysis are discussed below and presented in Table 3.)

Since 2010, the survey has asked respondents about their support for a flat-rate mileage fee as well as a green mileage fee where the rate would vary based on how much the vehicle pollutes. More recently, questions have been added to the survey that focus on mileage fee program design and rate structure. These questions include opinions about whether electric vehicles should pay the same or less than internal combustion engine (ICE) vehicles, whether low-income drivers should be assessed a discounted rate, preference for a flat-rate vs. block rate fee structure, and respondents' preferences for how often they would pay the mileage fee.

In addition, we consider a set of six questions asking respondents if they would support raising the federal gas tax rate. In each case the rate would be raised by 10 cents per gallon, but the purpose of the revenue raised is different in each question. For the first question, respondents are told that the revenue would be spent "for transportation", with no other details. The next five alternatives presented to respondents each present a different, dedicated purpose for the tax revenues: maintenance of the transportation system, improving safety, reducing congestion, reducing local air pollution, and reducing transportation's impact on climate change. As discussed below, the findings from these questions reveal how mileage fee program designers could increase public support by dedicating the revenue raised to specific types of transportation expenditures.

Table 1: Survey Questions Analyzed

Topic	Question language	Response options and recoding for analysis	Years asked
Adopt a mileage fee to replace the federal gas tax			
Adopt a flat-rate mileage fee	<p>Now, imagine that the US Congress decides to replace the gas tax with a mileage fee of 3¢ per mile driven. That means someone driving 10,000 miles a year would pay \$300. Vehicles would have an electronic meter to keep track of the miles driven. Would you support or oppose replacing the gas tax with such a mileage fee?</p> <p><i>In 2019, the question wording was revised slightly to explicitly state that the mileage fee would replace the gas tax. In 2021, the stated rate changed from 1¢ per mile to 3¢ per mile.</i></p>	<p>Strongly support</p> <p>Somewhat support</p> <p>Somewhat oppose</p> <p>Strongly oppose</p> <p><i>Recoded for analysis to:</i></p> <p>Support = strongly + somewhat support</p> <p>Oppose = strongly + somewhat oppose</p>	2010 – 2023
Adopt a green-rate mileage fee	<p>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 3¢ per mile, but vehicles that pollute less would be charged less, and vehicles that pollute more would be charged more. Would you support or oppose this new mileage tax?</p> <p><i>In 2021, the stated rate changed from 1¢ per mile to 3¢ per mile.</i></p>	<p>Strongly support</p> <p>Somewhat support</p> <p>Somewhat oppose</p> <p>Strongly oppose</p> <p><i>Recoded for analysis to:</i></p> <p>Support = strongly + somewhat support</p> <p>Oppose = strongly + somewhat oppose</p>	2010 – 2023
Mileage fee program design and rate structure preferences			
Electric vehicle rate	<p>A different variation on the mileage fee concept is to replace the gas tax with a mileage fee of one penny per mile for all gas and diesel vehicles, but with a different rate for all-electric vehicles. What rate per mile do you think electric vehicles should pay?</p>	<p>The same rate as gas/diesel vehicles</p> <p>Half the rate set for gas/diesel vehicles</p> <p>Nothing (electric vehicles pay no fee)</p>	2020-2023

		<p><i>Recorded for analysis to:</i></p> <p>The same rate as gas/diesel vehicles</p> <p>Half the rate set for gas/diesel vehicles or nothing (electric vehicles pay no fee)</p>	
Low-income driver rate	If Congress adopts a mileage fee, would you support or oppose charging a lower rate to low-income drivers?	<p>Strongly support</p> <p>Somewhat support</p> <p>Somewhat oppose</p> <p>Strongly oppose</p>	2021-2023
		<p><i>Recorded for analysis to:</i></p> <p>Support = strongly + somewhat support</p> <p>Oppose = strongly + somewhat oppose</p>	
Block rate	If Congress creates a federal mileage fee, which of the following possible fee structures would be fairer?	<p>The fee is the same for every mile the vehicle drives during the year</p> <p>The fee is lower for the first 5,000 miles the vehicle drives during the year, and higher for all additional miles driven that year</p>	2022-2023
Payment frequency	If Congress does create a federal mileage fee, how would you prefer to pay? Remember that the total amount you pay annually would be the same in each option.	<p>Pay a bill that comes once a year</p> <p>Pay a bill that comes once a month</p> <p>Pay each time I purchase gas/diesel or charge an electric vehicle</p>	2019-2023
		<p><i>Recorded for analysis to:</i></p> <p>Pay a bill once a year or once a month</p> <p>Pay each time I purchase gas/diesel or charge an electric vehicle</p>	
Gas tax rate increases			
Base case (revenue “for transportation,” with no other detail offered)	One idea to raise money for transportation is to increase the federal gas tax by 10¢ a gallon, from 18¢ to 28¢. Would you support or oppose this gas tax increase?	<p>Strongly support</p> <p>Somewhat support</p>	2010 - 2023

		Somewhat oppose	
		Strongly oppose	
		<i>Recoded for analysis to:</i>	
		Support = strongly + somewhat support	
		Oppose = strongly + somewhat oppose	
Maintenance	Would you support or oppose the gas tax increase if the new money were spent only on projects to maintain streets, roads, and highways?	Strongly support	2011 - 2023
		Somewhat support	
		Somewhat oppose	
		Strongly oppose	
		<i>Recoded for analysis to:</i>	
		Support = strongly + somewhat support	
		Oppose = strongly + somewhat oppose	
Safety	Would you support or oppose the gas tax increase if the new money were spent only on projects to reduce accidents and improve safety?	Strongly support	2011 - 2023
		Somewhat support	
		Somewhat oppose	
		Strongly oppose	
		<i>Recoded for analysis to:</i>	
		Support = strongly + somewhat support	
		Oppose = strongly + somewhat oppose	
Congestion	Would you support or oppose the gas tax increase if the new money were spent only on projects to reduce traffic congestion?	Strongly support	2019 - 2023
		Somewhat support	
		Somewhat oppose	
		Strongly oppose	
		<i>Recoded for analysis to:</i>	

		Support = strongly + somewhat support	
		Oppose = strongly + somewhat oppose	
Air pollution	Would you support or oppose the gas tax increase if the new money were spent only on projects to reduce local air pollution caused by the transportation system?	Strongly support	2010 - 2023
		Somewhat support	
		Somewhat oppose	
		Strongly oppose	
		<i>Recoded for analysis to:</i>	
		Support = strongly + somewhat support	
		Oppose = strongly + somewhat oppose	
GHG emissions	Would you support or oppose the gas tax increase if the new money were spent only on projects to reduce the transportation system's contribution to global warming?	Strongly support	2010 - 2023
		Somewhat support	
		Somewhat oppose	
		Strongly oppose	
		<i>Recoded for analysis to:</i>	
		Support = strongly + somewhat support	
		Oppose = strongly + somewhat oppose	

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## Survey Administration

The surveys were administered as random-digit-dial (RDD) phone surveys until 2018, and then from 2019 onwards the surveys were administered online. The sample size ranged from 1,201 to 2,796 annually. Table 2 presents an overview of the survey administration details for each year.

*Table 2: Survey Administration Details*

Year	Survey mode	# of respondents	Dates survey was in the field	Margin of error	AAPOR response rate 3 <sup>a</sup>	AAPOR cooperation rate 3 <sup>a</sup>
2010	Phone	1,545	April 27 to May 22	+/- 2.5	0.036	0.101
2011	Phone	1,516	March 1 to April 6	+/- 2.5	0.034	0.105
2012	Phone	1,519	March 6 to May 11	+/- 2.5	0.027	0.093
2013	Phone	1,501	March 4 to April 4	+/- 2.5	0.141	n.a.
2014	Phone	1,503	March 4 to April 30	+/- 2.5	0.128	0.286
2015	Phone	1,503	February 26 to March 31	+/- 2.5	0.085	0.161
2016	Phone	1,503	February 19 to March 31	+/- 2.5	0.047	0.142
2017	Phone	1,201	February 21 to April 28	+/- 2.8	0.060	0.220
2018	Phone	1,201	February 8 to March 23	+/- 2.8	0.100	0.250
2019	Online	2,796	April 23 to May 14, 2019	n.a. <sup>b</sup>	0.031	0.276
2020	Online	2,515	February 14 to 28	n.a. <sup>b</sup>	n.a.	n.a.
2021	Online	2,516	February 5 to 23	n.a. <sup>b</sup>	n.a.	n.a.
2022	Online	2,620	January 31 to March 10	n.a. <sup>b</sup>	n.a.	n.a.
2023	Online	2,531	February 13 to March 23	n.a. <sup>b</sup>	n.a.	n.a.

<sup>a</sup> As defined by the American Association for Public Opinion Research (AAPOR, 2016).

<sup>b</sup> No margin of error is calculated because respondents to the online surveys were drawn from an opt-in sample, which cannot be considered a true random sample.

The surveys through 2018 were administered as random-digit-dial surveys by several different survey firms. Then in 2019, when the cost of phone surveys became unsustainable, we shifted to online administration to take advantage of the many benefits of online surveys. In addition to their much lower cost, online surveys are more convenient for respondents and can include question design options that are difficult or impossible to implement via telephone or mail surveys (Sue and Ritter, 2012). A 2021 analysis from the Pew Research Center found that 93% of Americans are online (Perrin and Saska), evidence that online surveys are currently a reasonable method to reach a representative sample of U.S. adults, despite the fact that some population subgroups are often underrepresented in online surveys. Groups that are less well-represented online include people who are older, have low-income, have less formal education, live in rural communities, and do not have high-speed internet access at home (Pew Research Center, *Collecting Survey Data*). As discussed below, we addressed this potential limitation with a quota sampling strategy.

Survey mode can influence the way respondents answer questions, so readers are cautioned that when trends are discussed in this report's findings, the change in survey mode could account for some of the difference between responses before and after 2019. A study by the authors of this report, for example, found higher support levels for some of the same tax options described here when responses were collected from an online panel of respondents than when responses were collected with a random-digit-dial phone survey (Nixon and Agrawal, 2018). However, research suggests that questions about abstract policy matters like those in this survey are less affected by survey mode than questions about potentially embarrassing personal topics where respondents may feel pressured to give socially acceptable answers. Researchers

have also found that rating questions typically receive lower scores from online respondents than from phone survey respondents (Kennedy and Deane, 2019).

The online surveys were administered using Qualtrics' survey platform and respondent panel. Qualtrics is a so-called "panel aggregator" that recruits most survey respondents through partner organizations that maintain opt-in market research panels. In some cases, Qualtrics also recruits respondents through targeted email lists, social media, and member referrals. Qualtrics uses third parties to verify the identity of panel members (e.g., name, address, and age) and works with sample partners to ensure they meet Qualtrics' quality control standards. Respondents receive the survey invitation in various ways, including email invitation, in-app notifications, and upon signing into a panel portal. The invitation to participate describes the length of the survey and incentive amount offered, but not the specific subject matter. The nature and amount of the incentive varies, but can be cash, gift cards, or points for a customer loyalty program such as an airline frequent-flyer program.

### Sampling Approach

Sampling for all fourteen surveys was designed to reach a representative sample of adults living in the United States. Both the phone and online surveys established minimum quotas for key population characteristics, including age, gender, income, race, and ethnicity. We oversampled selected small subgroups of the population, including Black and Asian residents, to increase the sample size for these subgroups enough to allow for more detailed analysis.

The data for each survey year was lightly weighted to match American Community Survey population estimates based on gender, ethnicity, race, education, income, and age. With minor exceptions, the differences between the sample and the U.S. population are small. Readers wishing to see a comparison of the respondent demographics to the full U.S. population for each

survey year will find these in the project reports for each survey (Agrawal and Nixon, 2023, and earlier surveys cited therein). Appendix A of this paper provides a detailed overview of respondents' characteristics for each year of the survey.

### Data Processing

The dataset for each online survey was scrubbed to remove respondents who exhibited suspicious behaviors such as finishing the survey in less than half the median survey completion length, straight-lining through a survey, or providing gibberish answers to open-ended questions. This step is important because a recent study by the Pew Research Center found that opt-in online panels can have a larger difference between the measured value and the true compared to probability-based panels (Pew Research Center, 2023). To minimize this, careful screening of the survey responses is needed to eliminate “bogus respondents” who contribute to much of the error reported for opt-in samples.

To facilitate analysis and ensure consistency across all survey years, a consolidated dataset that combined all 14 years of data was developed. As part of creating the consolidated dataset, variables of interest for this paper were re-coded as shown in Table 1 and Table 3, and the dataset was cleaned to remove any extreme outliers. In addition, treatment of missing observations for analysis was standardized across the years. As a result of this last step, there may be very slight differences when comparing the analysis in this paper to any single annual survey report published previously.

Table 3: Personal Characteristics Used for Analysis

Characteristic	Subgroups/categories for analysis	Years asked
Age	18 to 34 years	2010-2023
	35 to 64 years	
	65 years+	
Income (annual, in \$000s)	<\$50	2010-2023
	\$50 to \$99	
	\$100 to \$149	
	\$150+	
	<i>Additional categories were presented in the survey instrument, including higher income amounts in later years (\$200,000+). However, this set is consistently available across every year.</i>	
Race	White	2010-2023
	Black	
	Asian	
	Other/multiracial	
	<i>Hispanic ethnicity was asked in a separate question. There were few large differences in opinions between Hispanic and non-Hispanic respondents so that analysis is not presented in this paper.</i>	
Political affiliation	Republican	2010-2023
	Democrat	
	Other	
	<i>In 2017, the survey was slightly changed to include a follow-on question related to political affiliation. If a respondent did not initially indicate affiliation with either of the two major political parties, they were subsequently asked if they “leaned” towards either Republican or Democrat. In this analysis, Republican also includes those who “lean” Republican, while Democrat also includes those who “lean” Democrat. Other includes those respondents who had no party affiliation, considered themselves independent, or were affiliated with a political party other than Republican or Democrat.</i>	

Annual miles driven	<p>1 to 7,500</p> <p>7,501 to 12,500</p> <p>12,501+</p> <p>Don't drive</p> <p><i>Respondents were asked to indicate the number of miles driven in the previous year in all motorized vehicles, excluding miles driven for work. From 2010-2019, respondents provided raw numbers for total annual miles driven. Starting in 2020, the question structure was changed to display categories to make it easier for respondents to answer.</i></p>	2010-2023
Miles per gallon	<p>≤19</p> <p>20 to 30</p> <p>31+</p> <p><i>Respondents were asked to indicate the miles per gallon for the vehicle they drove the most in the past 12 months for personal resources like shopping, commuting to work, or vacation trips.</i></p>	2013-2023
Transit use in last 30 days	<p>Used transit</p> <p>Did not use transit</p> <p><i>This question was not asked in 2018.</i></p>	2010-2017 & 2019-2023
Community type	<p>Urban</p> <p>Suburban</p> <p>Small town</p> <p>Rural</p> <p><i>Respondents self-reported their community type through this survey question. How an individual identifies their community type could vary. Geospatial analysis has not been conducted to "verify" or confirm an individual's response.</i></p>	2019 - 2023

## Analytic Approach

This paper focuses on exploratory data analysis using both non-graphical and graphical techniques. We focus on examining relationships between variables and data visualizations to identify patterns and gain insight into the data across two primary dimensions: (1) longitudinal trends in support for the flat-rate and green mileage fee options and six gas tax alternatives, including how support varies across subgroups of the population, and (2) public opinion regarding mileage fee program design and rate structure alternatives for 2023, the most recent year of survey data. We chose this approach in order to provide policymakers and researchers with an understanding of how support for taxes may change with time and also how different personal characteristics correlate with opinions. This approach also provides insight into possible relationships to explore in more depth through future multivariate and repeated cross-sectional analyses.

### **Longitudinal Trends in Support**

We first examined overall support for mileage fees and gas tax rate increases across the fourteen years of survey data. Using a simple data visualization, we compared trends in support for a flat-rate and green mileage fee as well as comparing trends in support for the six gas tax rate increase options.

### **Support by Personal Characteristics**

For the analysis by personal characteristics, we first reviewed the results from all fourteen annual survey reports and selected a set of key variables to explore in more depth for this analysis. Eight key variables were selected: three demographic characteristics (age, income, race), political affiliation, three travel behavior characteristics (annual VMT, MPG, and transit use), and

residential community type (see Table 3). These characteristics were chosen either because prior analysis of the annual survey series found the characteristic to be associated with particularly large variations in opinions among sub-groups (age, political party, and community type) or because there is wide-spread policy interest in whether opinions vary by that characteristic (income, race, travel behavior). In addition, data for these variables is readily available from the American Community Survey in communities across the U.S., so policy makers could use the results from our analysis to get a sense regarding how their community might respond to similar tax options.

We eliminated from the analysis those personal characteristics for which prior analysis in the survey series found few statistically significant patterns in support for the tax options. Although in some years the survey included questions about attitudes related to transportation funding questions, we did not include those variables in this paper because the questions had been asked for only a small subset of the survey years. Thus, there was not enough data for the trend analysis that is the focus of this paper.<sup>1</sup>

We use the statistical test of two proportions to determine whether differences in opinion between subgroups of the respondents were statistically significant (see detailed tables in Appendix B). For example: were older adults more or less likely to support a mileage fee option compared to younger adults? Although we do not discuss the results of the statistical testing,

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<sup>1</sup> These survey questions asked about opinion on transportation spending priorities, knowledge of when the federal gas tax was last raised, and whether respondents ever struggled to pay for transportation needs.

readers interested in more closely evaluating differences in opinion across subgroups can consult these tables.

### **Program Design Preferences**

The last dimension we focused on for this paper was an in-depth look at public opinion on mileage fee program design and rate structure alternatives from the 2023 survey data. This set of questions has only been included in recent survey years, so a full longitudinal analysis is not possible. Appendix B includes the detailed results from the statistical test of two proportions for subgroups of the population for these questions.

### **Findings: Support for Adopting a Mileage Fee**

Every survey in the series asked respondents about their support for adopting flat-rate and green-rate mileage fee options to replace the federal gas tax. Through 2018, the surveys specified that the flat-rate mileage fee would assess a charge of 1¢ per mile of travel and the green mileage fee would assess a fee that averages 1¢ per mile but varies depending on “how much the vehicle pollutes.” In 2019, we modified the questions in two ways: the rate was changed from 1¢ to 3¢ per mile, and question language was added to state that the mileage fee would replace the gas tax.

In the 2023 survey, the green mileage fee variant was modestly more popular than the flat-rate option. Fifty-one percent of respondents supported replacing the gas tax with a mileage fee where the average rate would be three cent per mile, but vehicles that pollute less would be charged less and vehicles that pollute more would be charged more. In contrast, support for the flat-rate mileage fee was 6 percentage points lower (45%).

### Trends in Support Over Time

Support for both mileage fees has risen steadily over time (Figure 1). Support for the flat-rate RUC roughly doubled between 2010 and 2023, rising from 22% in 2010 to 45% in 2023.

Support remained quite low through 2017 (from 19% to 23% support), rose slightly in 2018, and jumped sharply in 2019. That year, support rose from 27% to 45%. This jump is likely explained by a survey language change: starting in 2019, the survey explicitly stated that the RUC would *replace* the gas tax. That year the stated rate also increased from 1 cent to 3 cents, but this change did not obviously reduce support. As of 2019, support has remained around 45%, with one year when it dipped down to 39%.

Support for the green mileage fee started at 34% in 2010 and peaked at 53% in 2021. Although support dipped slightly up and down over the period, it rose steadily over the full period. Unlike for the flat-rate mileage fee, there was no notable change in support in 2019, the year that the survey question changed to specify that the mileage fee would replace the gas tax.

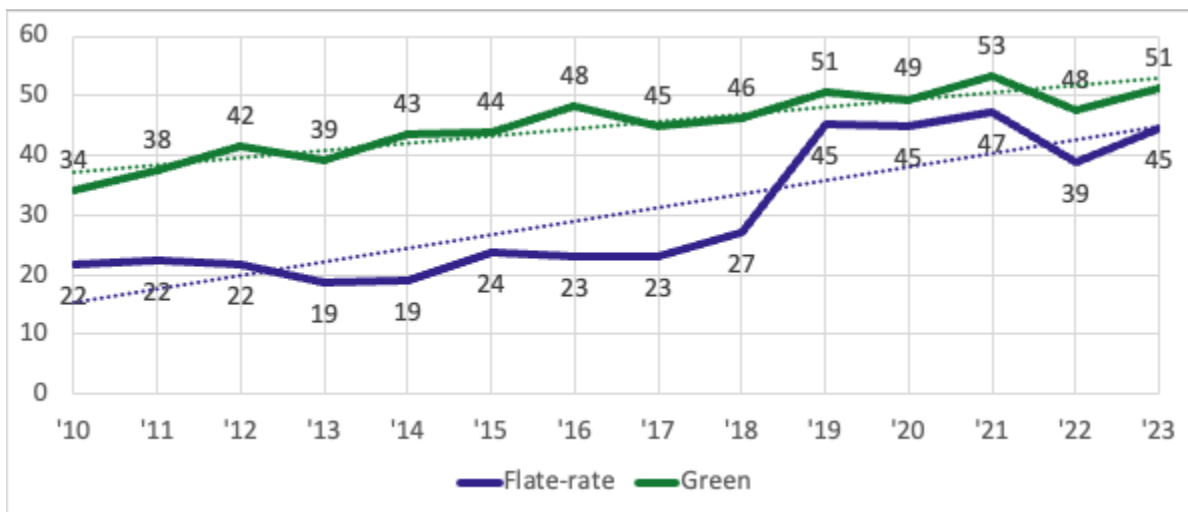


Figure 1: Percent Support for the Flat-Rate and Green Mileage Fees (2010 - 2023)

### Trends in Support by Personal Characteristics

Figure 2 and Figure 3 present support for the two mileage fees among each subgroup of the eight personal characteristics analyzed: age, income, race, political affiliation, transit use, annual mileage driven, fuel efficiency of primary vehicle driven, community type. These characteristics were associated with the following patterns in support:

- Age: The young respondents were always more supportive of the green mileage fee, and most years the spread in support was fairly large. The same pattern holds for the flat-rate mileage fee only since 2020. Prior to 2020, there were only small differences by age in support for the flat-rate fee.
- Household income: Income is the characteristic associated with by far the least variation in support for both taxes. No income group was always the most or least supportive. Also, the spread in support among the different income groups was small for many years and never more than 16 percentage points for either tax. The spread was slightly larger, on average, for the green tax than for the flat-rate tax.
- Race: There have been wide variations in support for both taxes by race, with the spread ranging from 8 to 37 percentage points and at least 15 or more percentage points for half the years. White respondents were almost always less supportive than Asian and black respondents, for both tax options, though sometimes the spread was modest. There was more divergence in opinions by race for the green than flat-rate mileage fee.
- Political affiliation: Democrats were always more supportive of both mileage fee options than Republicans or people with “other” affiliation. The differences were larger for the green than flat-rate mileage fee, with the spread for the former ranging from 10 to 28

points and usually at least 15 points. By contrast, for the flat-rate mileage fee, the spread in support among respondents of different political affiliation ranged from 4 to 25 but was below 15 points more than half the time.

- Fuel efficiency: For the flat-rate mileage fee, there was no clear trend in support linked to fuel efficiency until 2020. Since then, drivers of the most fuel-efficient vehicles have been somewhat more supportive of the flat-rate fee. For the green mileage fee, the most drivers of the most fuel-efficient vehicles have been more supportive for all but one year.
- Annual miles driven: For both mileage fee options, there was little difference in support according to whether people were low, middle, or high-mileage drivers. However, in the early years of the survey people who reported that they didn't drive at all were typically the most supportive of the mileage fees, often by a considerable amount. By 2019, respondents who didn't drive were no longer notably more supportive than drivers for either tax option.
- Transit use: For both mileage fee options, transit riders were always more supportive for all but one year. Further, the difference was at least fifteen percentage points for the green tax for almost every year and almost as often for the flat-rate tax.
- Community type: Urbanites were the most supportive for both mileage fee options. Support among the other three groups clustered together, though the rural respondents were usually less supportive than suburban and small town respondents.

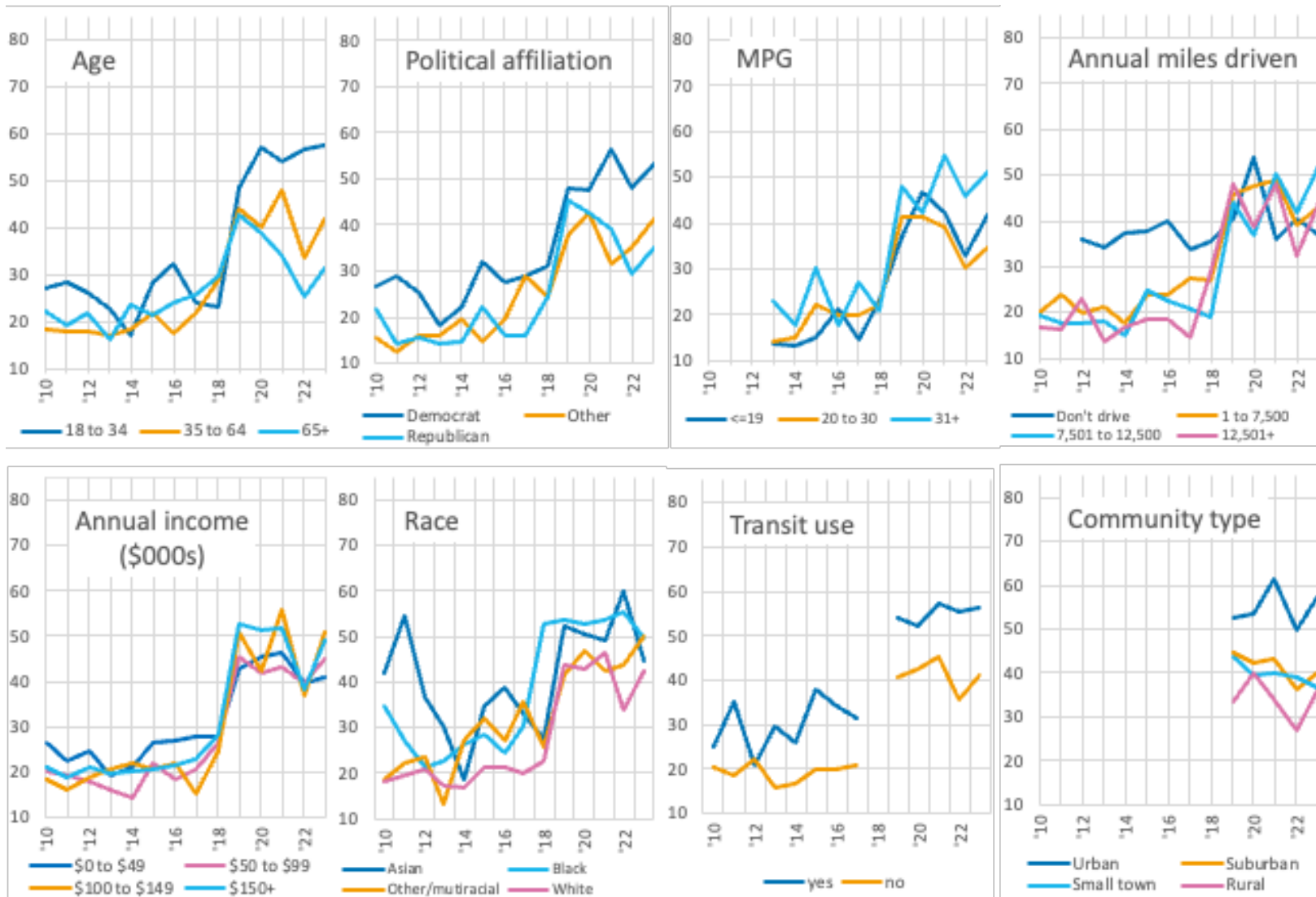


Figure 2: Support for the Flat-Rate VMT Fee by Personal Characteristics, 2010 - 2023. Note: Table 3 presents definitions for legend labels and years of data available.

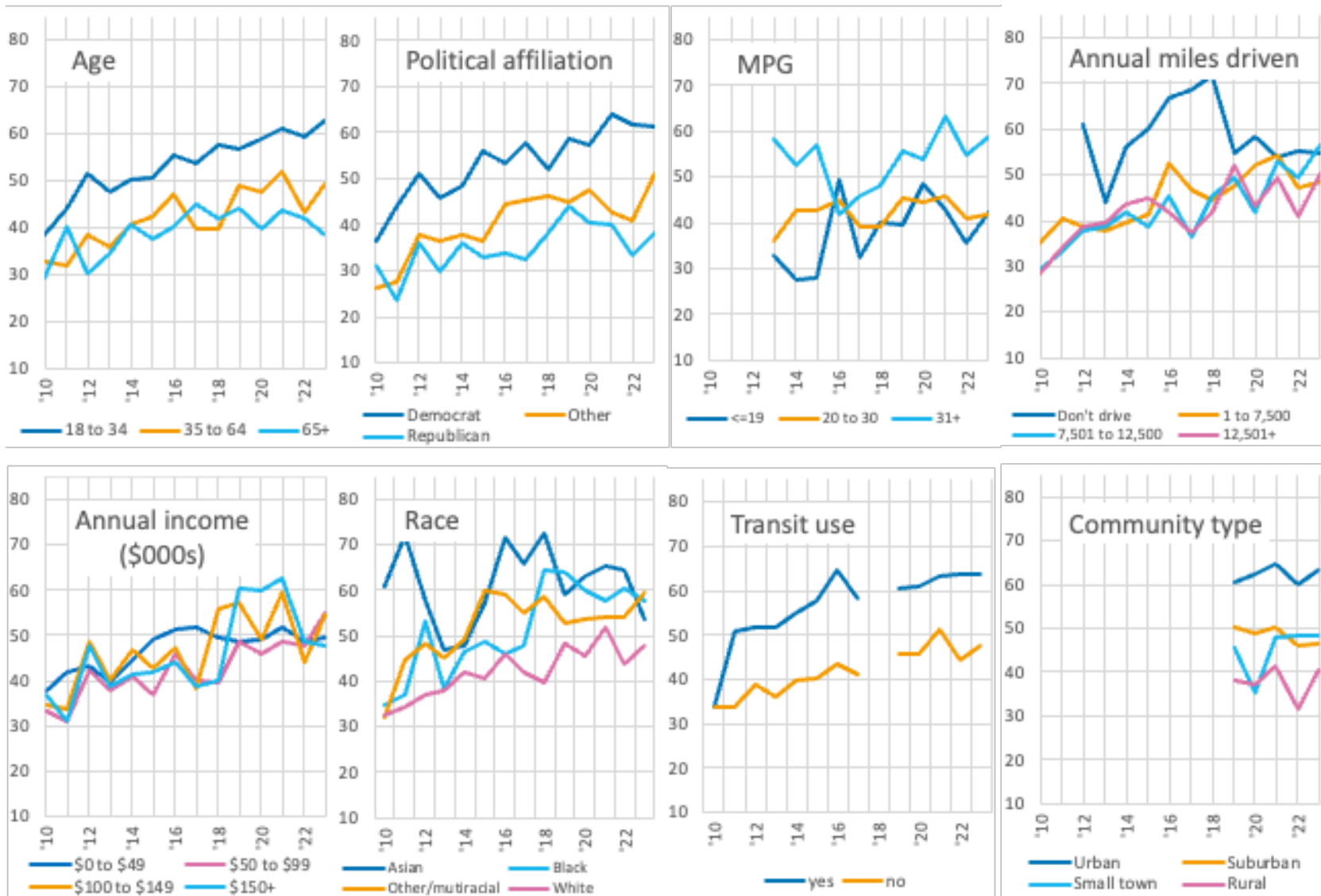


Figure 3: Support for the Green Mileage Fee by Personal Characteristics (2010 - 2023). Note: Table 3 presents definitions for legend labels and years of data available.

## Findings: Questions Testing RUC Design Preferences

This section focuses on four questions that asked respondents to choose between different mileage fee design options. Three questions asked about different rate structure options and the fourth about how frequently payments should be collected.

### Rate for Electric Vehicles

The survey asked respondents their opinion on what rate electric vehicles should pay if Congress were to implement a mileage fee on all travel. The answer options were to charge electric vehicles the same rate as gas/diesel vehicles, half the rate, or nothing at all. This question was included on the survey because a number of research studies have found that some members of the public dislike the idea of a flat-rate mileage fee on the grounds that, unlike gas taxes, this version of a mileage fee provides no incentive to purchase and drive more sustainable vehicles (Agrawal, Nixon, and Hooper, 2016). Some pro-environment advocacy organizations have also advocated for research and mileage fee pilot programs rates that discount the charge for less polluting vehicles. For example, the State of California is about to begin a mileage fee pilot program that tests charging half the participants a rate “equal to the state per-gallon fuel tax divided by the United States Environmental Protection Agency’s estimated fuel economy rating for that vehicle based on the manufacturer, model, and year of the vehicle” ([Senate Bill \(SB\) 339](#) ([Wiener, Statutes of 2021](#))).

Just under half of 2023 survey respondents (49%) thought electric vehicles should pay the same rate as gas and diesel vehicles, slightly more than a third (36%) preferred charging electric vehicles only half, and a small minority (16%) preferred that there be no fee at all for electric vehicles. Three earlier surveys asking the same question found quite similar results.

To examine how support varies by characteristics (Table B3), we collapsed the three answer options into just two: support for frequent payments vs. annual payments. The spread across all subgroups was 31 percentage points. Characteristics associated with particularly large spreads were age and political party. Many groups had support of at least 50%; these included respondents who rode transit (62%), don't drive at all (61%), are Democratic (59%), or are Black or Asian (58% or 59%). The least supportive groups were Republicans and respondents 65 or older (both 40%).

#### Rate for Low-Income Drivers

Another survey question asked respondents, "If Congress adopts a mileage fee, would you support or oppose charging a lower rate to low-income drivers?"

This rate structure question was included on the survey to test support for an option to address widespread concern about the impact that mileage fees would have on low-income drivers. Further, there is precedent within the transportation and utilities sectors for charging discounted rates to low-income travelers; some tolling authorities and public transit agencies offer this type of discount, as well as most power utilities. In California, for example, the California Alternate Rates for Energy (CARE) program discounts electric bills for low-income rate-payers by 30 to 35%, depending on income and household size (California Public Utilities Commission).

In 2023, well over half of survey respondents (62%) preferred to offer a discounted low-income rate, instead of charging the same rate to all drivers (Table B4). Two previous surveys asking the question had very similar results.

The analysis of 2023 findings by personal characteristics found that the concept was widely popular. The low-income rate was favored by the majority in every subgroup except the oldest respondents (65 or older). There was supermajority support from Democrats, 18 – 34-year-old respondents, transit users, urbanites, respondents who identified their race as either black or multiracial, and respondents in the middle income group (\$50,000 - \$99,000). Characteristics associated with particularly large spreads in support were age (25 percentage points) and political party (22 percentage points). The smallest spread was associated with annual miles driven (5 percentage points).

### Block Rate

The survey also tested support for the concept of a block-pricing rate structure. The survey described the block rate option as a rate that is lower for the first 5,000 miles driven annually and higher for all additional miles driven that year.

This option was included in the survey because block-rate pricing provides low-income drivers the option to drive some amount of mileage at low cost yet does not require the administrative complexity of varying the rate by vehicle owner or driver characteristics. Within transportation, there is precedent for block rate pricing at parking garages that raise the hourly rate for vehicles parked longer more hours. Further, there is also precedent in water and power utilities. Within utilities, for example, Southern California Edison charges 31¢ per kWh up to a “baseline” consumption level, 40¢ per kWh for kWh consumed between 101% and 400% of the baseline, and a “high-usage” rate of 50¢ per kWh for usage beyond 400% of the baseline allocation (Southern California Edison).

The 2023 respondents were almost evenly split on whether they preferred a block-rate or flat-rate mileage fee structure, with 48% considering the block rate fairer vs. 52% who thought it

fairer to charge the same rate for every mile driven during the year. Responses were very similar the previous year.

The analysis of how preferences differed by personal characteristics found that by far the largest spread (20 percentage points) shows up when comparing responses by people driving different total annual miles. Preference for the block rate was 53% among people who drive 1 to 7,500 miles annually but only 33% among people who drive the most (12,501 or more miles annually). The groups with at least 50% support for the block rate were respondents 65 or older (56%), those drivers covering the fewest miles annually (53%), suburban respondents (52%), those driving a primarily vehicle with fuel efficiency of 20 to 30 mpg (51%) or 31+ mpg (50%), and Democrats (51%). The characteristics with the least spread in support were income (4 percentage points), race (3 percentage points), and vehicle fuel efficiency (3 percentage points).

### Payment Frequency

Another survey question asked respondents to select their preferred frequency to pay for a mileage fee, should one be introduced. The options were to pay at the time of purchasing fuel or charging an electric vehicle, pay a monthly bill, or pay an annual bill.

Payment frequency is important to both the agency administering a mileage fee and drivers. For agencies, more frequent payments add complexity and cost to program administration. For drivers, however, large, infrequent payments are much harder for low-income households to afford, and many equity advocates oppose annual payments for this reason.

The most popular payment frequency option in 2023, selected by 45% of respondents, was to “Pay each time I purchase gas/diesel or charge an electric vehicle.” Thirty percent

preferred a monthly bill, and one quarter preferred an annual bill. To simplify our analysis, we collapsed the data for this question into two categories and compared respondents who prefer to pay when refueling/recharging versus those prefer to pay annually/monthly

There were relatively few large differences by characteristic in 2023. There is only an 18 percentage point difference between the subgroup with the lowest proportion of support for paying when refueling/recharging (38%) and the highest (56%). Characteristics with the largest spread are age (17 points), community type (14 points), and fuel efficiency (13). Groups with support at or above 50% for paying when refueling/recharging are respondents aged 65 and older, people living in small towns, and Republicans (50%).

### **Findings: Spending Plans Matters**

The survey asked respondents about their support for six different versions of a 10-cent-per-gallon increase in the federal gas tax rate, from 18 cents to 28 cents per gallon. (The current rate is actually 18.4 cents per gallon, but the survey rounded the rate to a whole number to make the question simpler to understand.) The first option presented, labeled the “base-case” option, asked respondents if they would support raising the gas tax rate “to raise money for transportation.” No other information was given about how the revenue would be spent. The other five gas tax rate increase options each specified a targeted use of the revenue raised. These asked about support for the gas tax rate increase if revenue would be spent on projects to:

- Maintain streets, roads, and highways
- Reduce accidents and improve safety
- Reduce the transportation system’s contribution to global warming
- Reduce local air pollution caused by the transportation system
- Reduce traffic congestion

The 2023 survey found that a majority of Americans would support paying a higher gas tax—under certain conditions (Figure 4). Only 40% supported the base-case option presented, the 10¢-per-gallon gas tax increase to raise money “for transportation.” However, the five variants on that idea of a 10¢-per-gallon gas tax increase each received from 50% to 71% support. For these variants, respondents were told that the revenue from the increase would be dedicated to a specific type of spending. The very highest level of support among all the tax options tested was for a gas tax increase of 10¢ per gallon with the proceeds dedicated to street, road, and highway maintenance. Seventy-one percent of respondents supported this option, an increase of 31 percentage points over the 40% support for the base-case gas tax increase. The next most popular options were a gas tax increase with funds devoted to reducing accidents and improving safety (70% support) and an increase with the funds devoted to reducing congestion (67%). As for the two options that linked a gas tax increase to environmental objectives—reducing local air pollution or global warming emissions—both had majority support (55% and 50%, respectively).

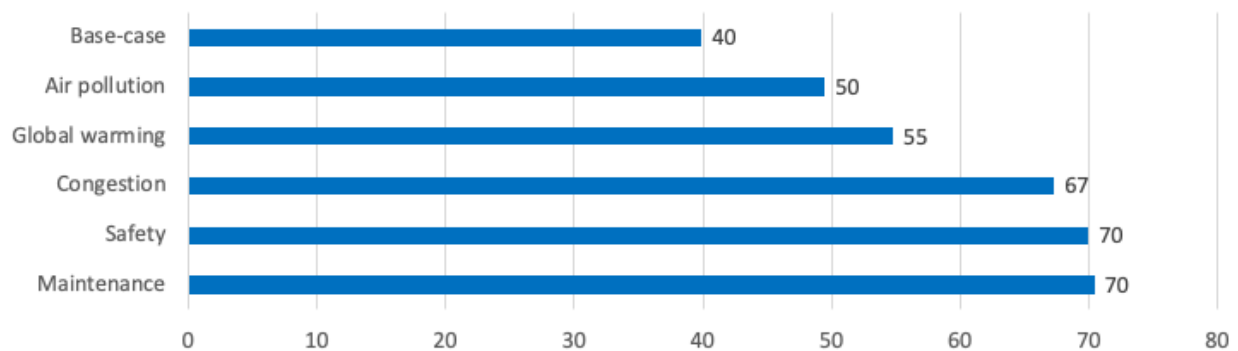


Figure 4: Support for the Gas Tax Rate Increase Options in 2023

### Trends Over Time in Support for Gas Tax Rate Increases

Support for all the gas tax rate increase options has risen overall since 2010 (Figure 5). The changes from year to year are small, usually no more than a few percentage points. The largest increases across the full time period have been in support for the base-case option (a 17 percentage point increase) and the air pollution option (20 percentage points). For the base-case option, support grew from 23% to 40%. In contrast, the smallest increase (9 percentage points) has been for the most popular option, the maintenance variant. For the past few years, support for all the taxes has dropped slightly.

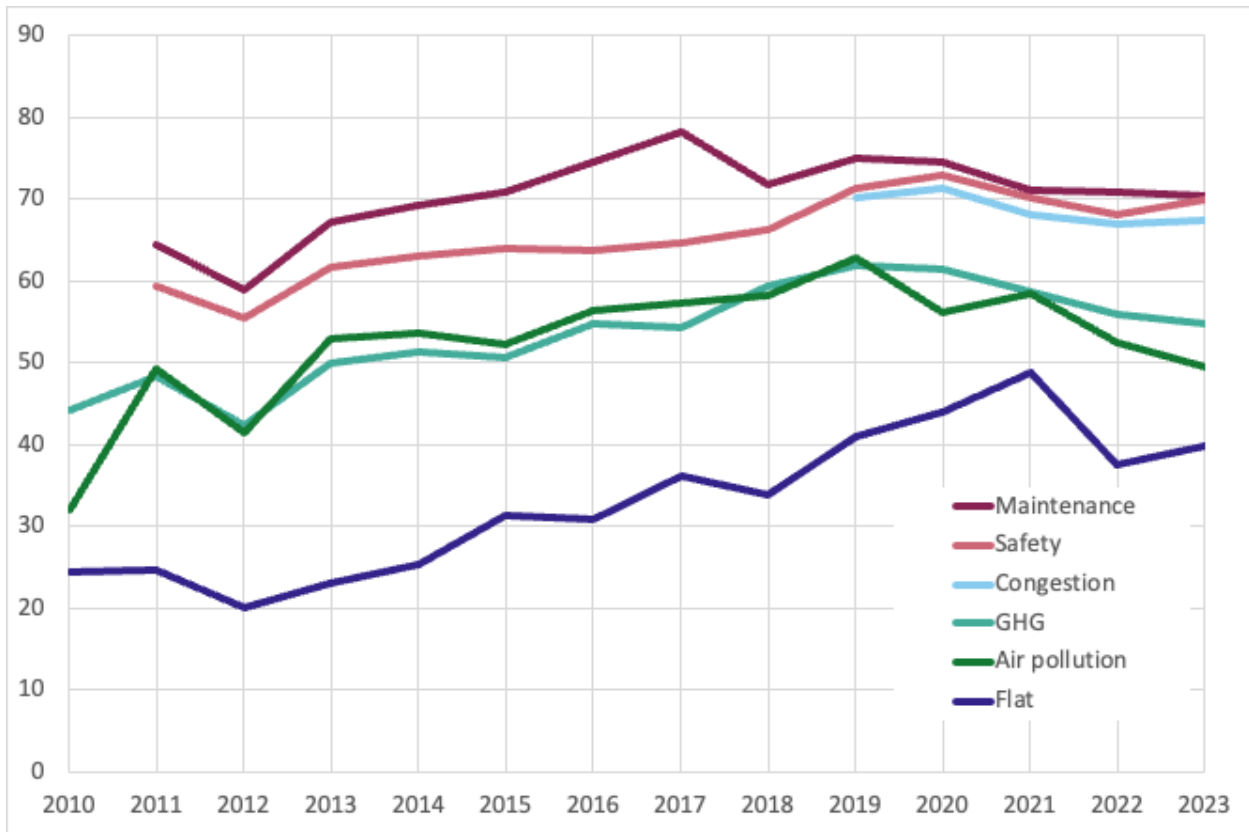


Figure 5: Support for the Gas Tax Rate Increase Variants (2010 - 2023)

### Support for the Gas Tax Increases by Personal Characteristics

Figures 6 through 11 present trends in support for each of the six gas tax rate increase options, looking at trends by all eight personal characteristics.

- Base-case (Figure 6): The size of variation in support among sub-groups varied by characteristic. There were few variations by income and annual miles driven, but larger variations by other characteristics.
- Maintenance (Figure 7): The variations among subgroups for each characteristic were very small.
- Safety (Figure 8): The amount of variation in support among sub-groups varied by characteristic. There were little variations by vehicle fuel efficiency, but modestly larger variations by other characteristics.
- Congestion (Figure 9): The variations among subgroups for each characteristic were small.
- Air pollution (Figure 10): The amount of variation in support among sub-groups was large for most characteristics, with especially large differences by age, political affiliation, annual miles driven, and race.
- Green-house gas emissions (Figure 11): The amount of variation in support among sub-groups was large for most characteristics. The spread in support among subgroups was more modest for income, fuel efficiency, and community type.

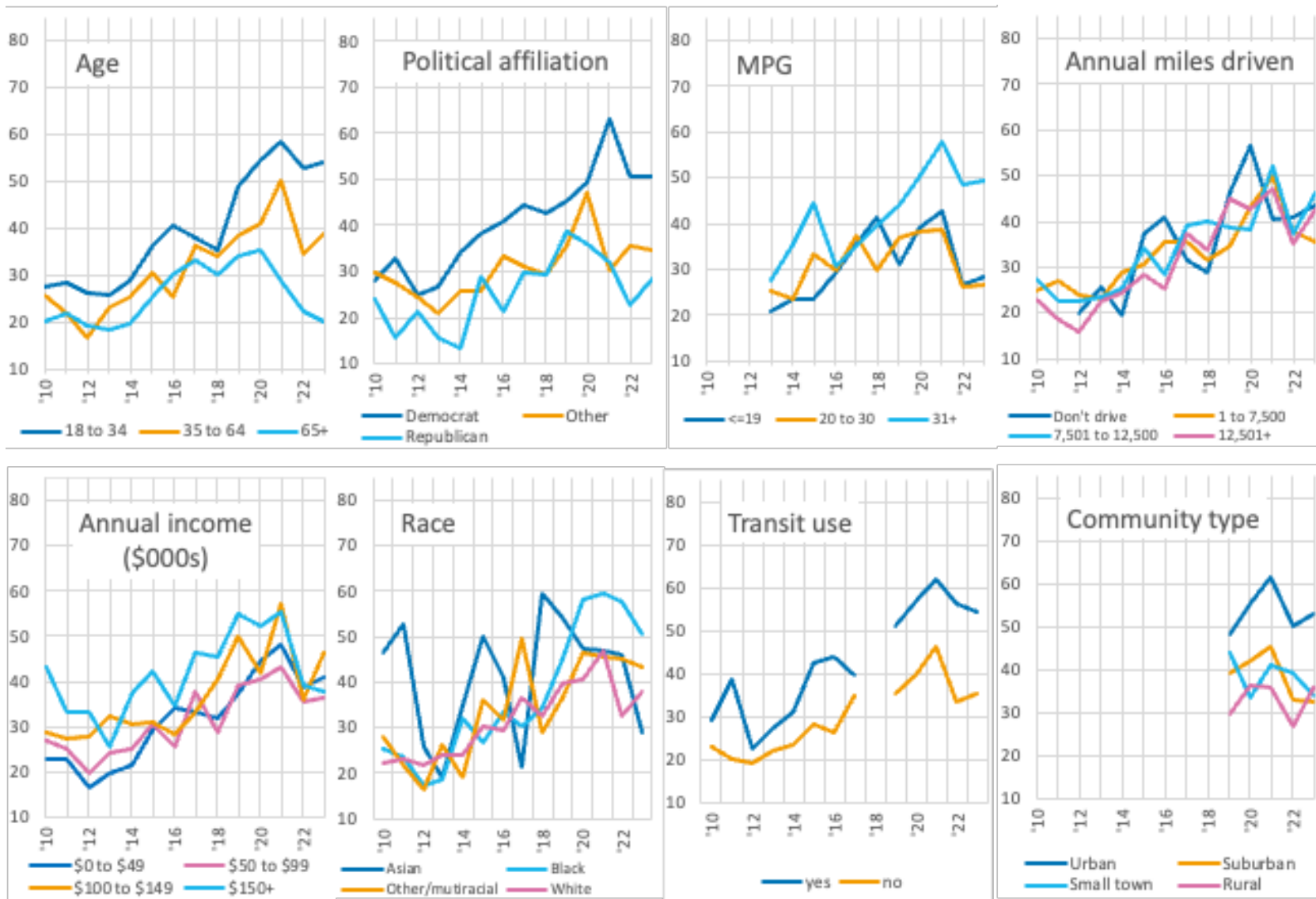


Figure 6: Percent Support for the Base-Case Gas Tax Rate Increase by Characteristics, 2010 - 2023. Note: Table 3 presents definitions for legend labels and years of data available.

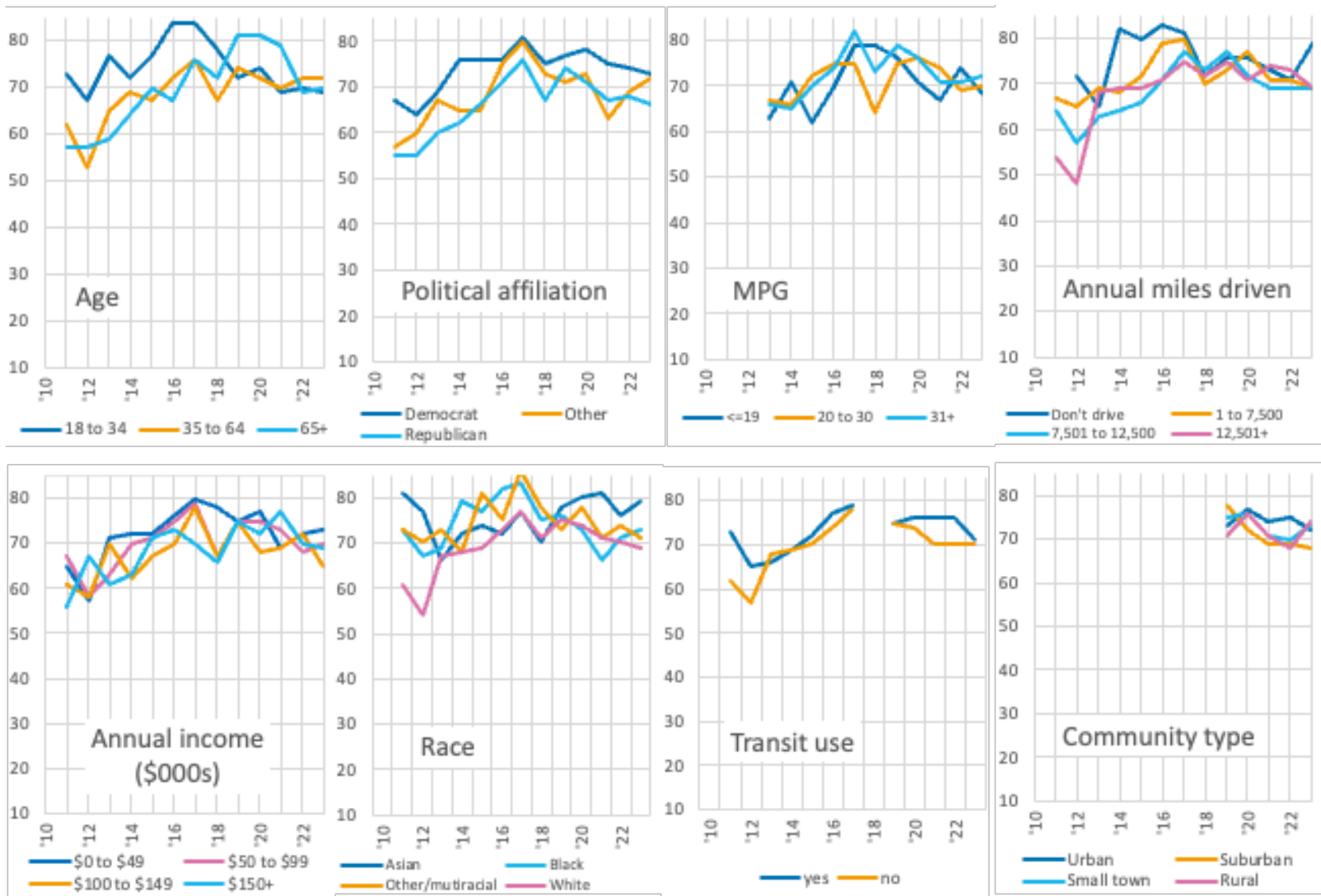


Figure 7: Support for the Maintenance Gas Tax by Personal Characteristics, 2010 - 2023. Note: Table 3 presents definitions for legend labels and years of data available.

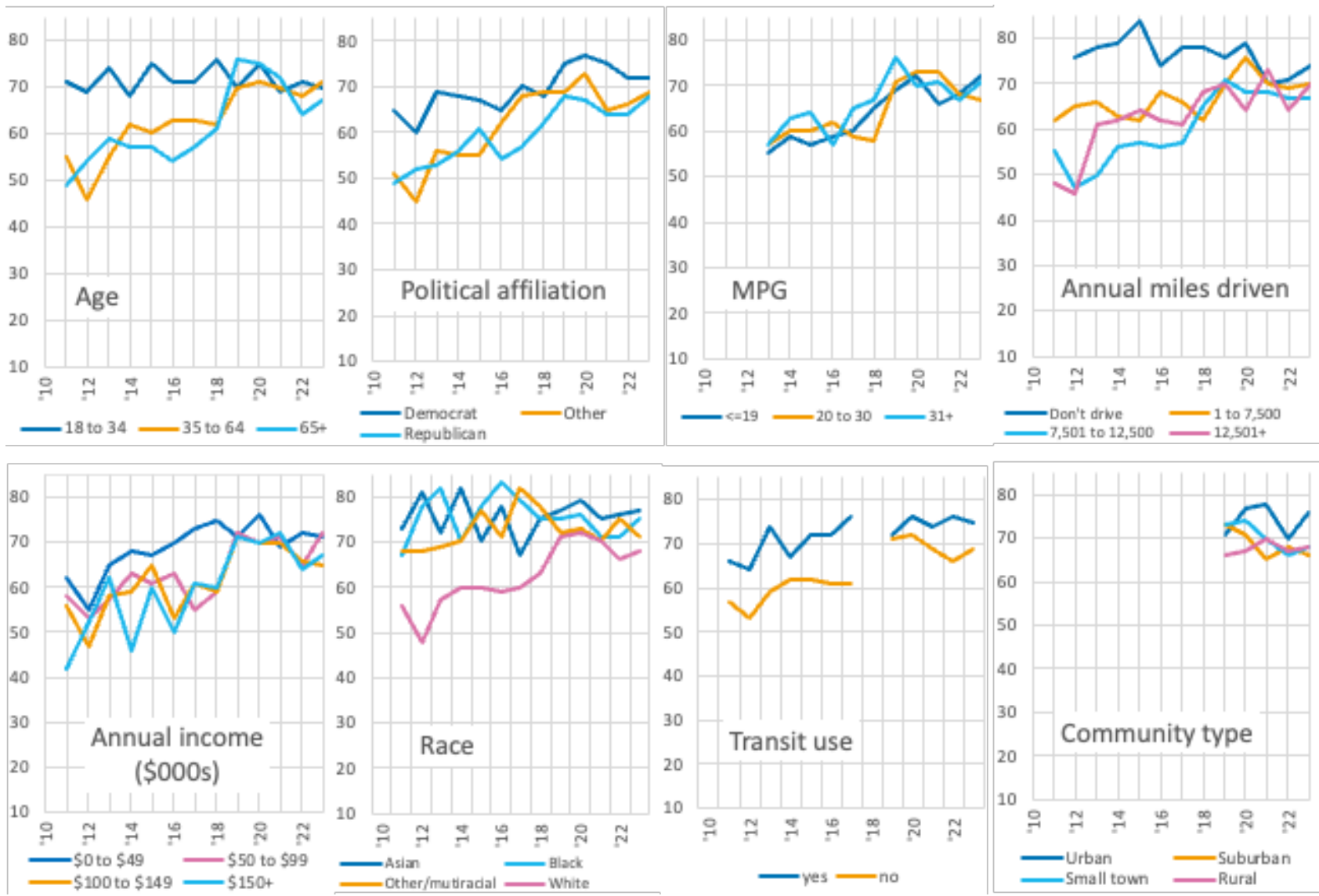


Figure 8: Support for the Safety Gas Tax by Personal Characteristics, 2010 - 2023. Note: Table 3 presents definitions for legend labels and years of data available.

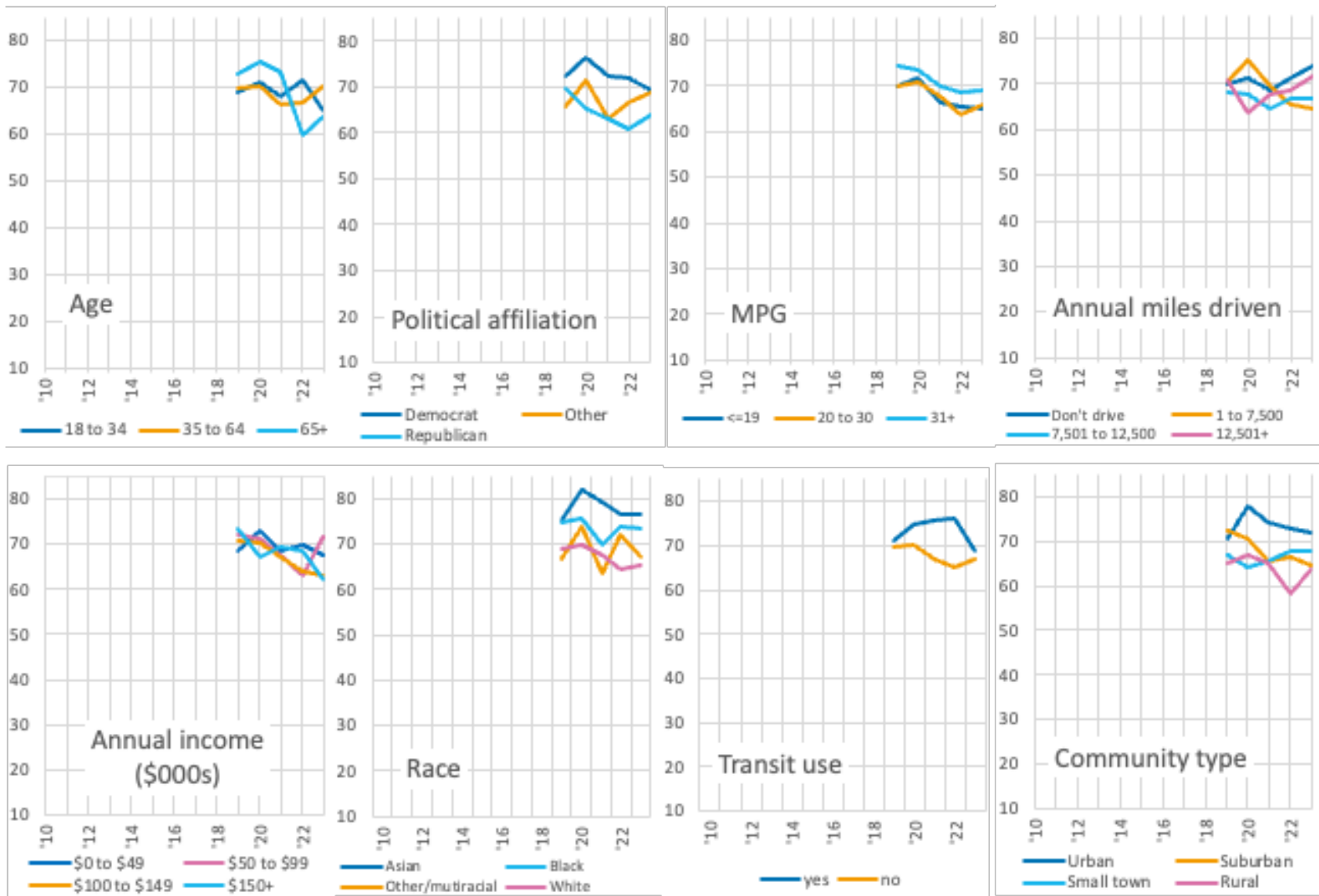


Figure 9: Support for the Congestion Gas Tax by Personal Characteristics, 2010 - 2023. Note: Table 3 presents definitions for legend labels and years of data available.



Figure 10: Support for the Air Pollution Gas Tax by Personal Characteristics. Note: Table 3 presents definitions for legend labels and years of data available.

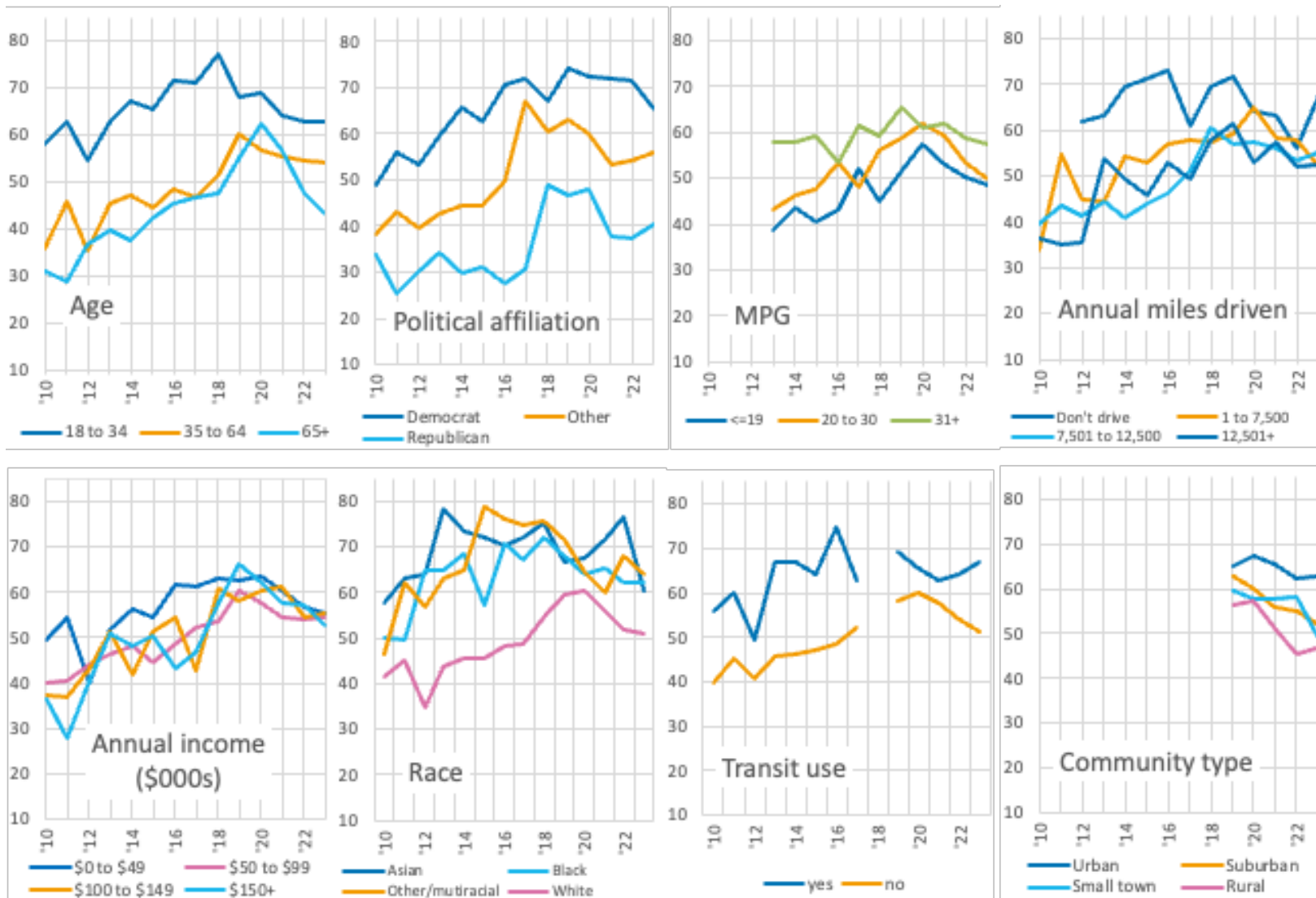


Figure 11: Support for the Greenhouse Gas Gas Tax by Personal Characteristics. Note: Table 3 presents definitions for legend labels and years of data available.

## Findings: Trends by Characteristics

The last component of analysis explores whether personal characteristics correlate with strong differences in opinion across both mileage fees and the six gas tax questions. Figures 12 through 19 each show support for each of these tax options according to a single personal characteristic.

- Age (Figure 12): The youngest respondents were usually the most supportive age group for all the tax options. There with just a few exceptions, most notably since 2019 for the maintenance, safety, and congestion gas taxes. The other exception is for the flat mileage fee *until* 2020. Support was very similar for the middle-aged and oldest groups on all taxes, though the spread is slightly larger as of 2020 for the two least popular tax options, the flat mileage fee and base-case gas tax rate increase.
- Annual household income (Figure 13): Income was the characteristic with the smallest variation among subgroups. The spread in support among groups for each characteristic was always small. Further, no one income group was consistently the most or least supportive, though the lowest-income group was often the most supportive (by a small amount) for the air pollution, greenhouse gas, and safety gas taxes.
- Race (Figure 14): There are few large or consistent differences in support by race. The one exception is that white respondents are at or near the bottom in support for all except two taxes. These two exceptions are the maintenance gas tax (the most popular gas tax option) and the base gas tax (the least popular gas tax option).
- Political affiliation (Figure 15): Democratic-leaning respondents were always more supportive than Republicans, though not always by a large spread. There was the most variation between the political parties for the environmentally-oriented taxes, as well as the least popular gas tax increase, the one with revenue “for transportation.” Conversely,

for the most popular gas tax increase, the maintenance gas tax, there were very small differences in support by political affiliation. Support from respondents who leaned towards neither the Republican nor Democratic tended to fall between the parties, though often closer to the support levels among Republicans.

- Annual miles driven (Figure 16): The clearest pattern for this characteristic is that respondents who don't drive at all were typically more supportive. However, among the respondents who did drive, there is only a small spread in support according to annual mileage.
- Fuel efficiency (Figure 17): There were modest differences in support according to the fuel efficiency of the respondent's primary personal vehicle for the maintenance, safety, and congestion gas tax increases, but more spread for the green mileage fee and two environmentally-focused gas taxes. For these taxes, respondents with the more fuel-efficient vehicles were more supportive.
- Transit users (Figure 18): This set of graphs presents perhaps the simplest picture of all: respondents who had used transit in the previous 30 days were more notably more supportive of all but one tax option. The spread in support was particularly large for the three environmentally-oriented taxes. The one exception to the larger pattern is that support for the maintenance gas tax was very similar for transit riders and non-riders, though for most years the riders were slightly more supportive.
- Community type (Figure 19): This question was only asked for four years, but over that time period urban respondents were significantly more supportive of all the taxes except the three most popular ones: the maintenance, safety, and congestion gas tax rate increases. For these three taxes, the spread was quite small and the urban respondents

were not the most supportive every single year. The other three groups—suburban, small town, and rural respondents—had very similar support levels, although rural respondents were usually less supportive for all but the maintenance gas tax.

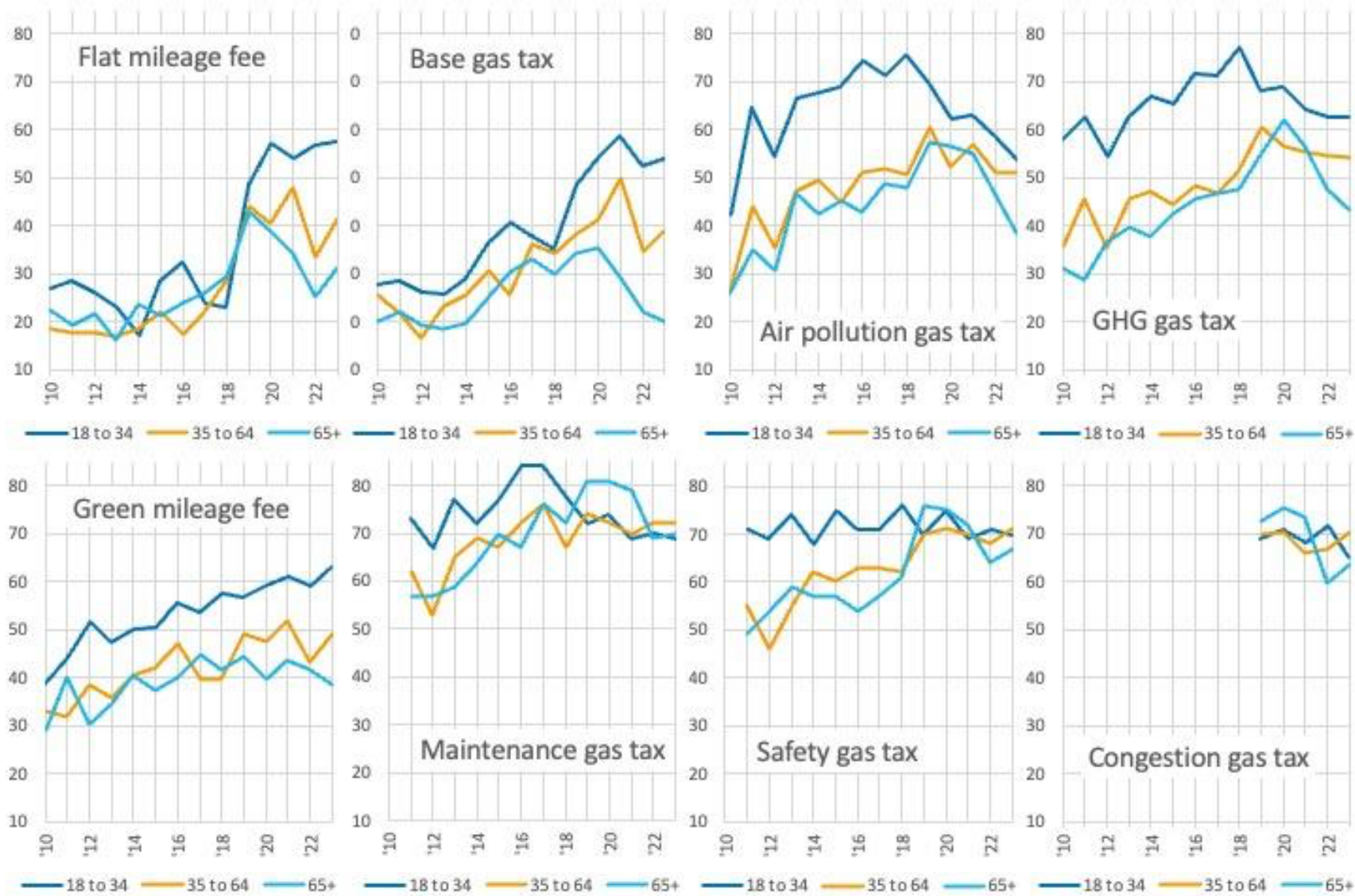


Figure 12: Mileage Fee and Gas Tax Support by Age, 2010 - 2023. Note: Table 3 presents definitions for legend labels and years of data available.

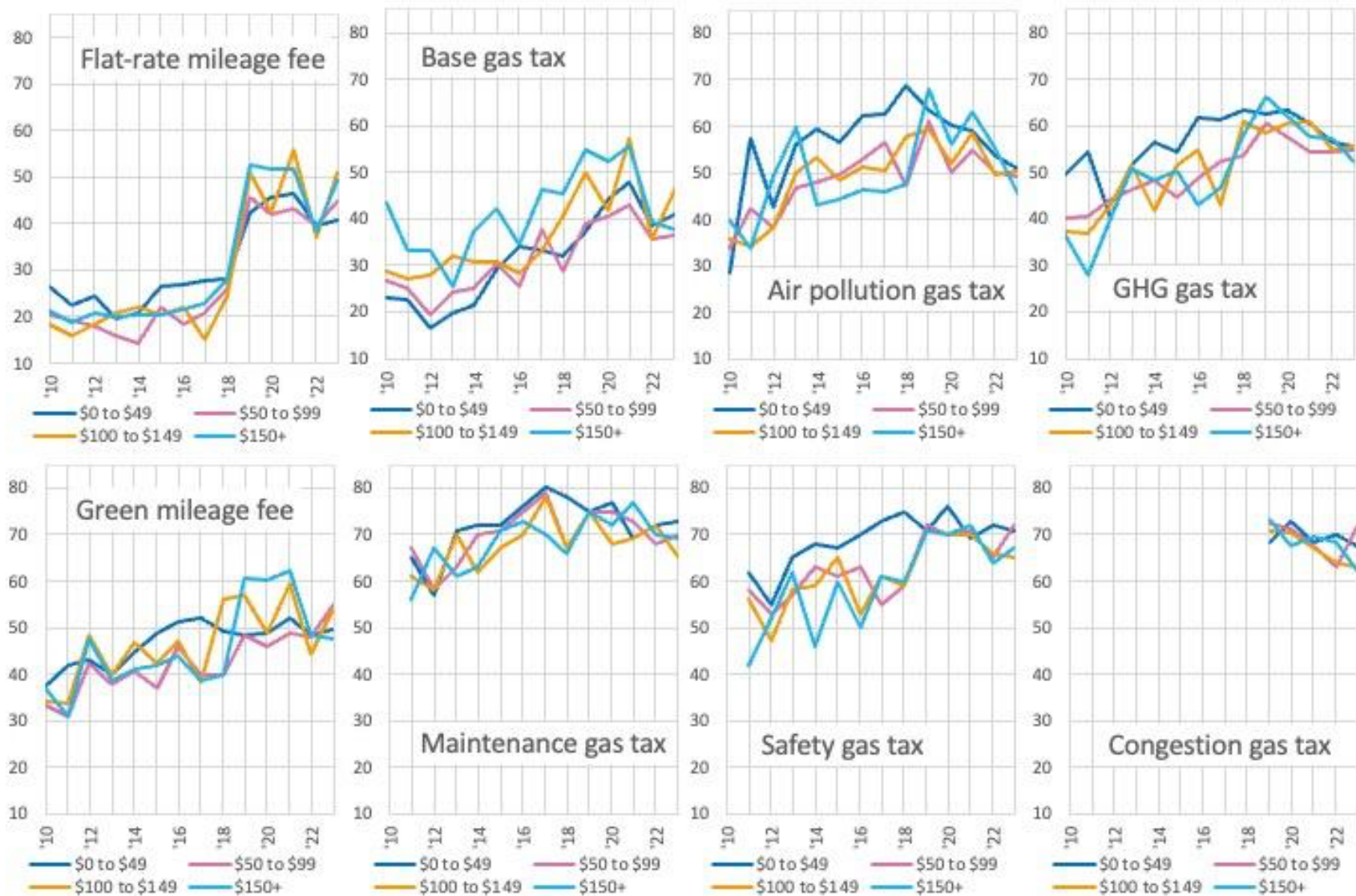


Figure 13: Mileage Fee and Gas Tax Support by Income, 2010 - 2023. Note: Table 3 presents definitions for legend labels and years of data available.

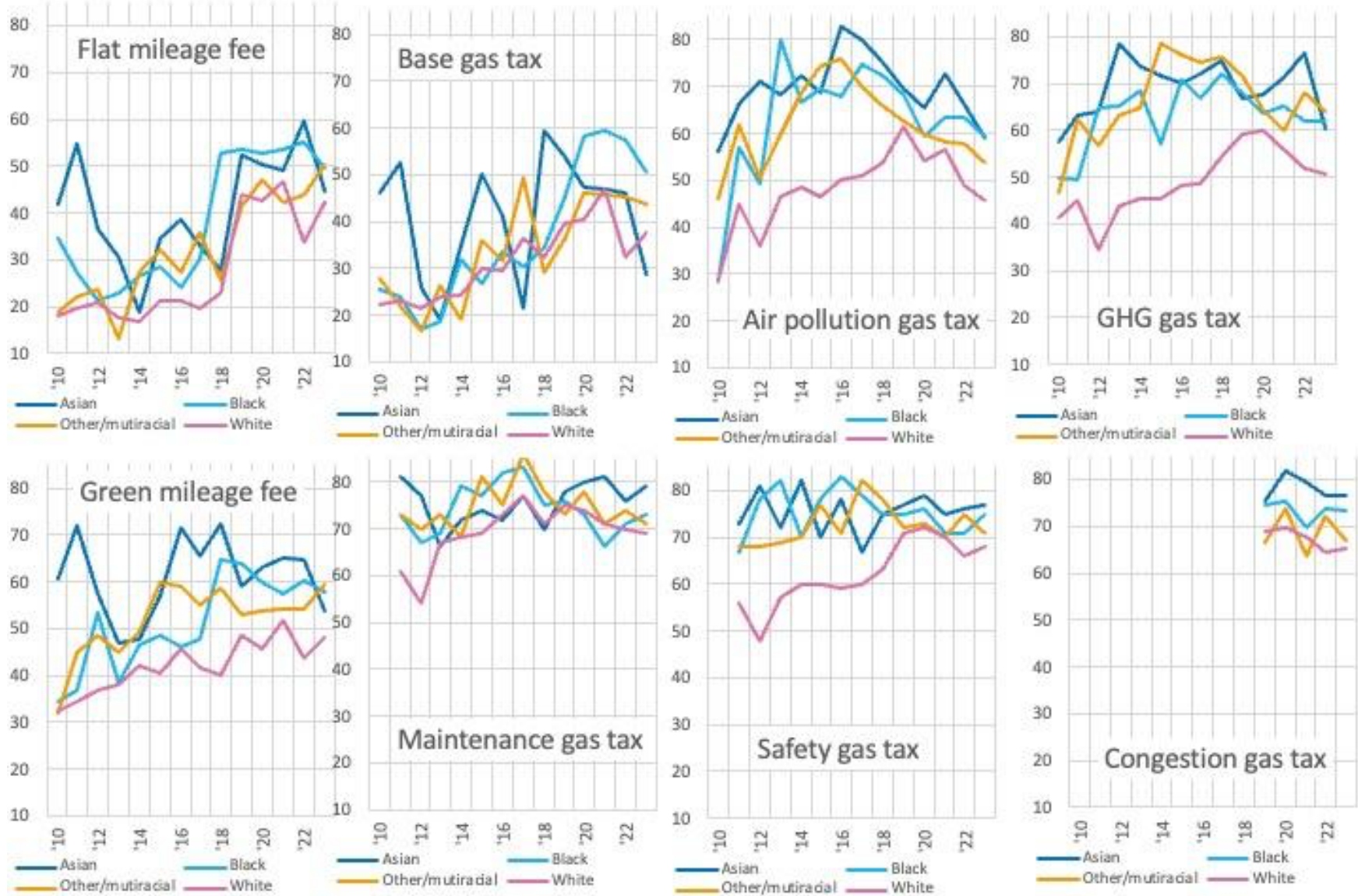


Figure 14: Mileage Fee and Gas Tax Support by Race, 2010 - 2023. Note: Table 3 presents definitions for legend labels and years of data available.

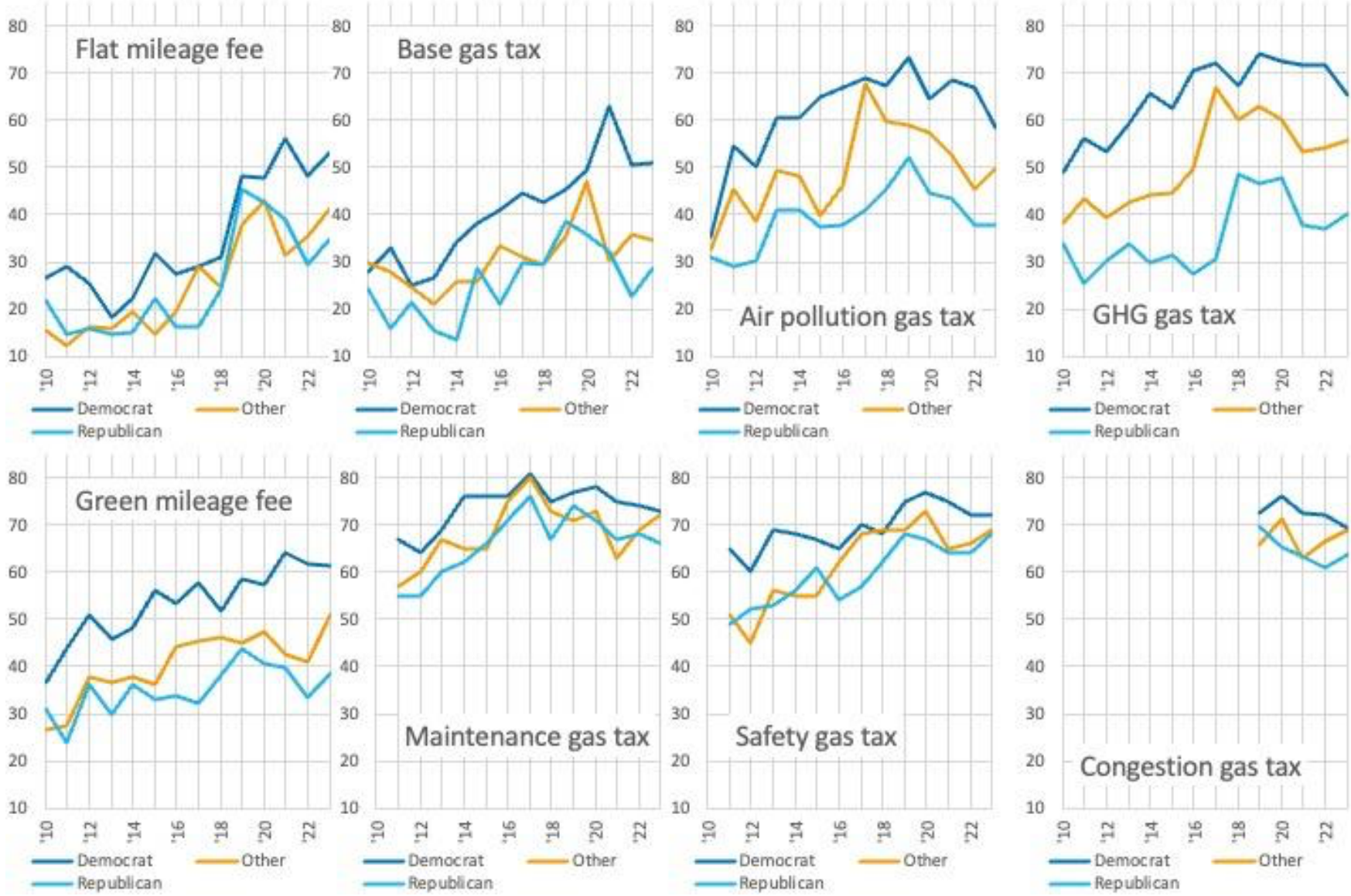


Figure 15: Mileage Fee and Gas Tax Support by Political Affiliation, 2010 – 2023. Note: Table 3 presents definitions for legend labels and years of data available.

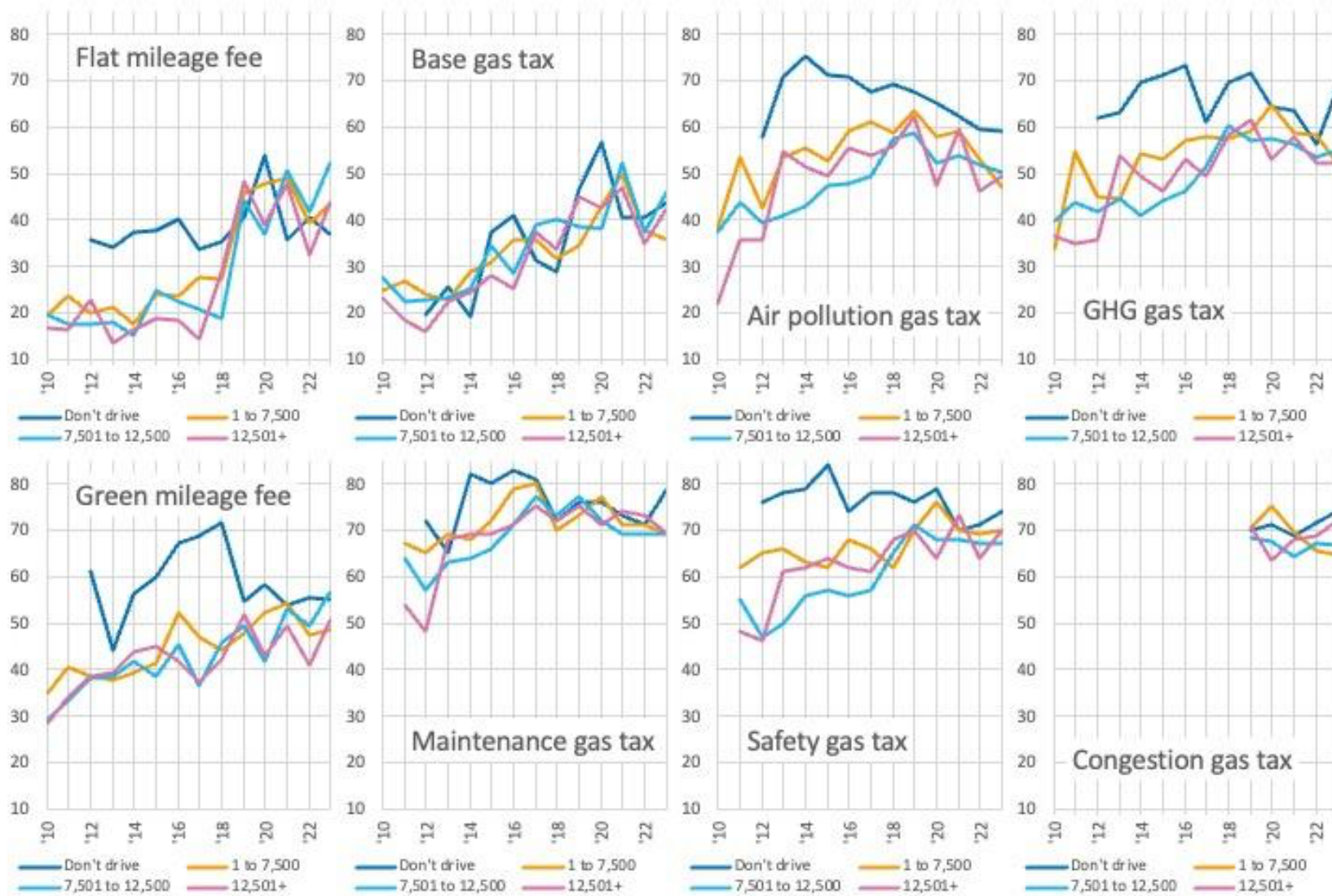


Figure 16: Mileage Fee and Gas Tax Support by Annual Mileage, 2010 - 2023. Note: Table 3 presents definitions for legend labels and years of data available.

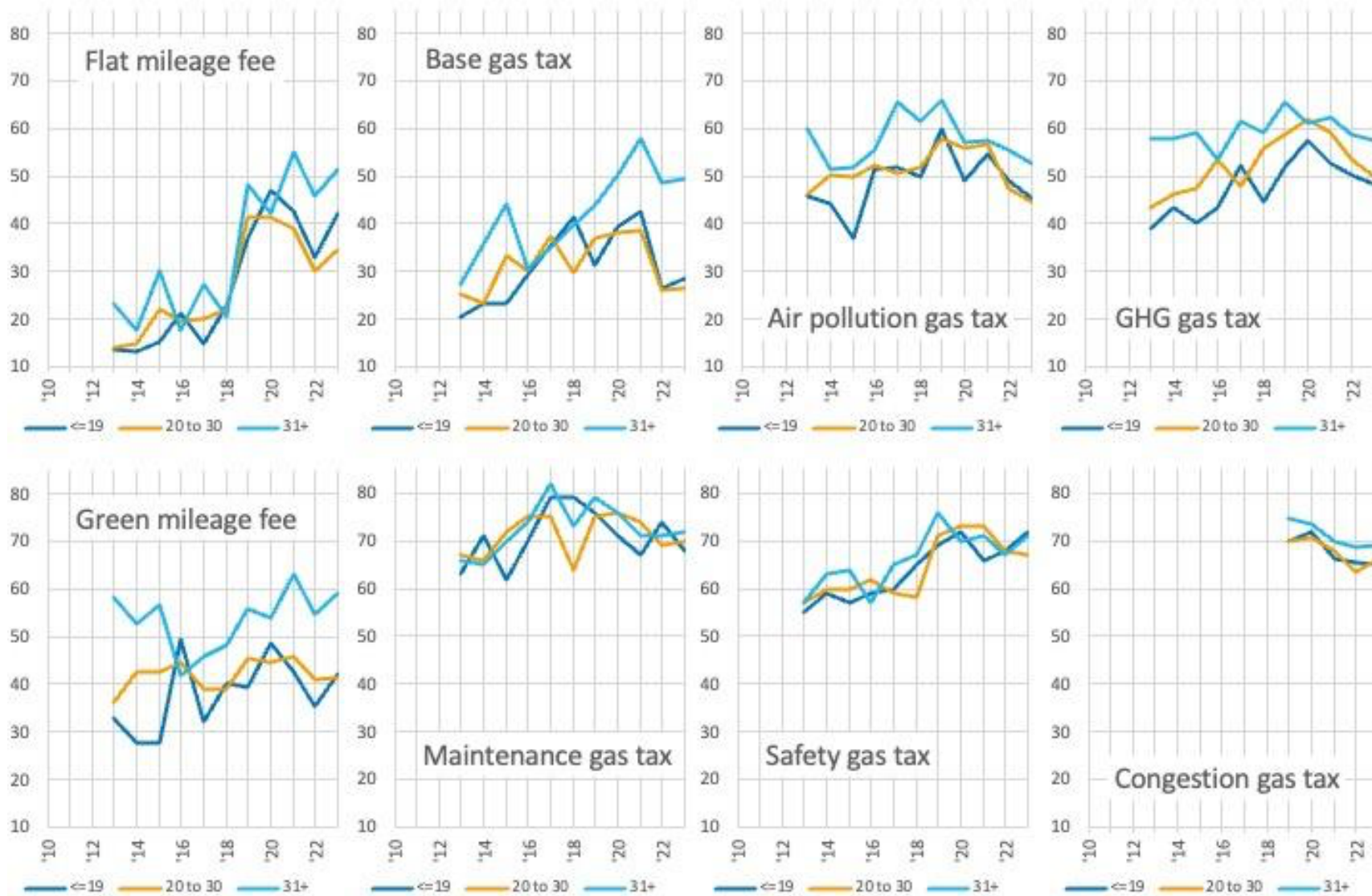


Figure 17: Mileage Fee and Gas Tax Support by Fuel Efficiency, 2010 - 2023. Note: Table 3 presents definitions for legend labels and years of data available.

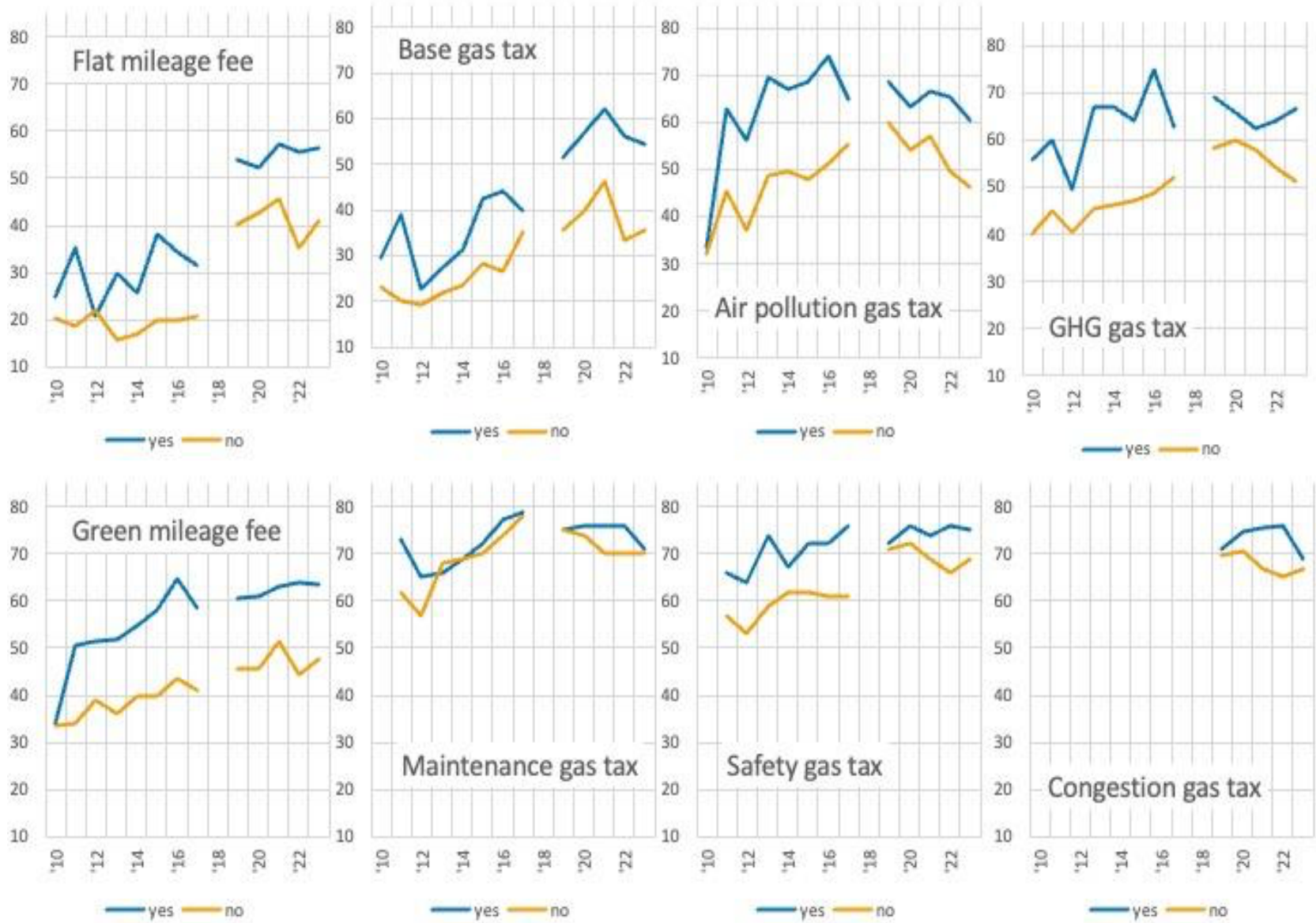


Figure 18: Mileage Fee and Gas Tax Support by Transit Use, 2010 – 2023. Note: Table 3 presents definitions for legend labels and years of data available.

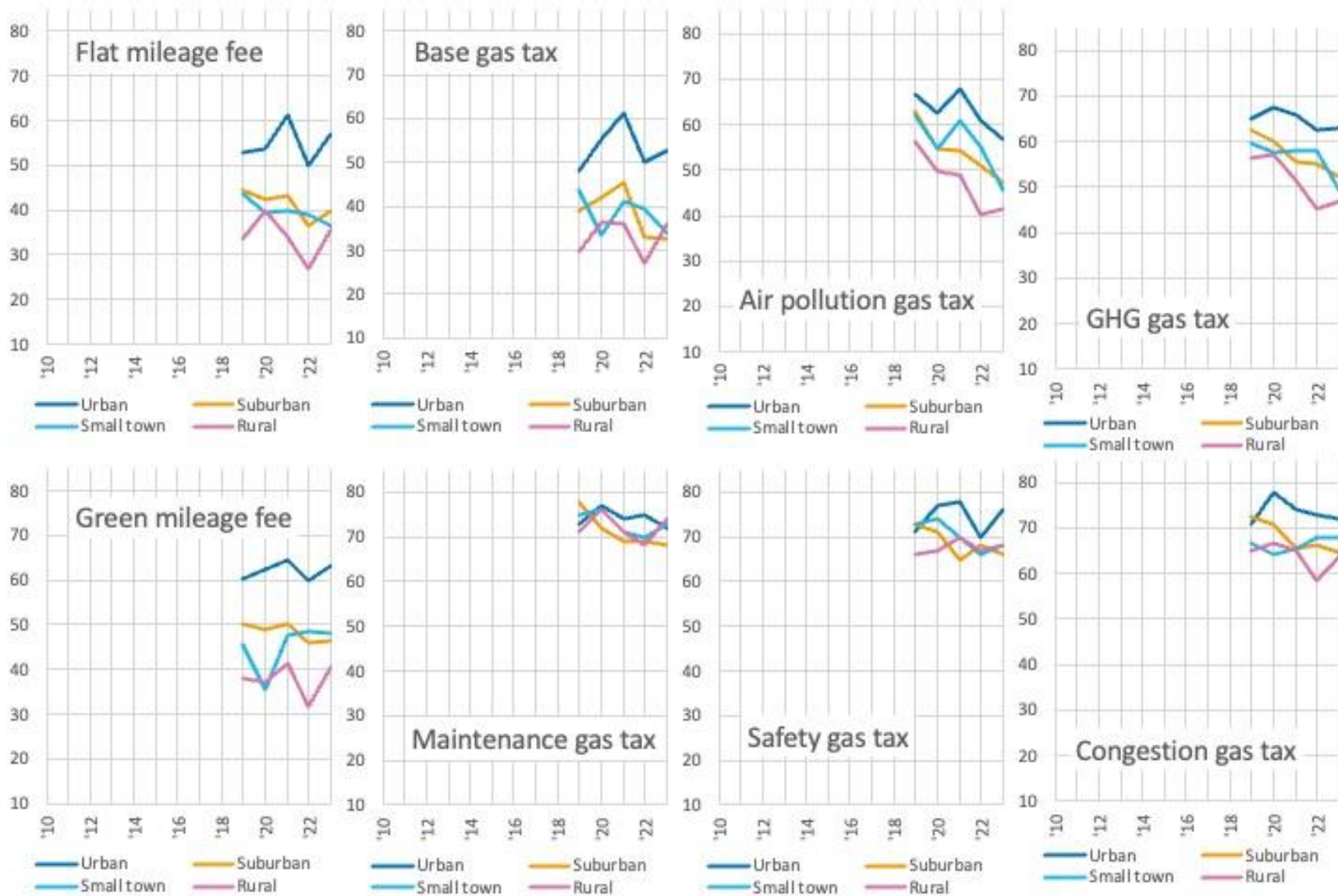


Figure 19: Mileage Fee and Gas Tax Support by Community Type, 2019 - 2023. Note: Table 3 presents definitions for legend labels and years of data available.

## Conclusions

This chapter begins with a discussion of key study findings and their policy implications and then concludes with reflection on the study limitations and options for future research.

### Discussion of Findings and Policy Implications

**The public is growing open to mileage fees.** The primary evidence for this claim comes from the survey questions about the flat-rate and green mileage fees. Support for both fees has been increasing for more than a decade, and in 2023 a majority supported the green mileage fee (51%). While no existing study in the literature conducts a similar multi-year analysis, the meta-analysis by Agrawal, Nixon, and Hooper (2016) also found evidence to suggest that support for mileage fees has increased over time. Secondary evidence showing that the public is growing more likely to support mileage fees comes from the survey findings about the growth in support for gas taxes since 2010. For example, by 2023 support for increasing the gas tax rate to support either better maintenance or safety had risen to 71% and 70%, respectively. The growing gas tax support suggests that more and more of the public believes there is a need for additional revenue to support better transportation.

**Careful program design will increase support for mileage fees.** Similar to findings from Duncan, Li, and Graham (2016), we find that program design and different rate structures can influence support. The survey results presented here underscore three reasons to have confidence that public support depends on the way a mileage fee is designed.

First, policymakers should consider rate structure carefully and explore options beyond just the flat-rate per mile that has been most commonly discussed and piloted. Not only is this

not obviously the most popular choice but there is some evidence that it may be less popular than alternatives. The difference in support between the flat-rate and green mileage fees provides the clearest evidence that public support varies according to program design—and that a flat rate for all is not most people’s first choice. Further, the concept of a low-income discount had strong support for the three years the survey asked about the option (63% in 2023). Finally, roughly half of respondents supported a reduced rate for electric vehicles (51% in 2023) or a block-rate pricing structure (48%).

A second key program design choice is the frequency with which drivers pay a mileage fee. The survey found that only a quarter of respondents preferred an annual payment. The most popular option was to mimic the gas tax, with payment due whenever a driver purchases fuel or charges an electric vehicle (45% support).

Finally, findings on support for the different gas tax increase options shows that support is closely tied to how the revenue will be spent. For all fourteen years of the survey, far fewer respondents supported a federal gas tax rate increase if the money would be spent generically “for transportation” than supported that same rate increase if the money were dedicated to a narrower transportation purpose they supported. The two most popular uses for gas tax revenue were always to improve maintenance and safety, so it seems very likely that a mileage fee proposal will earn stronger support if the public believes the funds will target those or other high-priority needs. Evidence from a voter referendum that supports this claim comes from the history of California’s most recent gas tax increase, Senate Bill 1: The Road Repair and Accountability Act of 2017, legislation that states in the very title that “repair” (maintenance) is a primary purpose. Not only did the law pass the legislature in 2017 but it survived a state referendum the following year (Proposition 6), with 57% of voters choosing to keep Senate Bill 1 in place.

**There is considerable variation in support by some personal characteristics, though not all, and this varies by tax option.** Four subgroups of respondents were more likely to support all the mileage fee and gas tax increase options: respondents who were in the youngest group, leaned Democratic, rode transit, and lived urban communities. However, for some tax options there was little variation in support according to those characteristics of age, political leaning, transit use, and community type. In particular, for the most popular tax options there was little variation in support by subgroups. For example, 66% of Republicans supported the maintenance gas tax and 68% supported the safety gas tax in 2023. In sum, it is possible to craft tax options that will likely be widely popular across people with very different personal characteristics.

The study findings also highlighted three personal characteristics that were the least likely to be associated with varying levels of support among subgroups. Counterintuitively, these are the characteristics that have generated the most policy discussion and concern about fairness: income and two related to vehicle use. The surveys consistently found the least variation in tax support among respondents with different household incomes. Further, there was also little variation in support according to the two characteristics included in the survey that directly determine how much people would pay in either a mileage fee or higher gas taxes: the number of miles the respondent drove annually and the fuel efficiency of the vehicle the respondent drove most for personal use.

The final characteristic explored, race, was often associated with large variations in support, but these were often inconsistent, with people of each racial group sometimes more or less likely to support a particular tax option. However, in general white respondents were less supportive than those of other races.

As noted in the literature review, there are few studies that explore the influence of personal characteristics in depth and those that do often find few consistent patterns. For example, Duncan et al. (2017) also found that support for mileage fees was not associated with many personal characteristics, although that study did identify political affiliation as a key predictor, similar to our findings.

#### Study Limitations and Suggestions for Future Research

Readers considering the results of this research and the associated policy implications should keep in mind that the sample differs slightly from the general population, so the results can be generalized with caution. In addition, the surveys were designed to explore people's *relative* preferences for different types of tax proposals, so the results should not be assumed to accurately predict support for any specific tax proposal put forward for an actual public vote.

A second limitation of this research is that the survey questions do not provide evidence of *why* people supported some taxes and opposed others. Additional surveying can explore what factors are most important. For example, it would be worth investigating if support for the mileage fees is related to people's trust in the accuracy of odometers or other technologies used to track miles driven.

This paper also only looks at the overall public opinion regarding the key issues explored in the survey and bivariate comparisons between survey responses from subgroups of the population. Future research could explore this unique dataset using a multivariate approach that predicts how support varies within the context of multiple factors. As noted in the literature review, past studies have shown that an individual's attitudes and beliefs are often more important factors for predicting support for mileage fees than socio-demographic characteristics (for example, Agrawal, Dill, and Nixon, 2010). Ajzen's Theory of Planned Behavior (1991)

could provide a useful theoretical framework for developing such a line of study. The theory has been widely used in the field of transportation to predict use of public transportation (Heath & Gifford, 2002), willingness to pay tolls ((Wie) Yusuf, et al. 2018), and voting intention (Hennessy, et al., 2015). The latter two examples have clear parallels with understanding people's attitudes towards mileage fees.

Finally, it is worth noting that economic and policy conditions changed over the years of the annual surveys, which could impact people's attitudes towards transportation taxes and fees. Also, many states considered increasing their gasoline tax rates during the years of this study, and related media coverage likely raised public awareness about transportation funding. Multivariate models that combine personal characteristics and attitudes with variables that capture changing macroeconomic and political conditions would allow for a more detailed and nuanced understanding of the factors that influence support for mileage fees and mileage fee program design. Factors to consider in such work include gas prices, state gas tax rates, and federal and state electric vehicles policies.

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## Appendix A: Respondent Demographic Characteristics, 2010-2023

Table A1 presents respondent characteristics for key variables used for analysis for each survey year. Missing and refused responses have been removed from the dataset prior to analysis. Data are rounded to whole numbers so columns for individual characteristics may not sum to 100%.

Table A1. Respondent Demographics, 2010-2023

Characteristic	Subgroup	% of respondents													
		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Age (years)	18 to 34	34	35	36	31	30	31	29	31	34	33	30	33	30	31
	35 to 64	48	46	47	50	50	49	52	49	49	47	51	48	52	49
	65+	17	18	17	19	20	20	19	20	18	19	20	19	18	20
Income (annual, in \$000s)	<\$50	61	64	62	49	49	48	47	45	44	54	49	49	44	43
	\$50 to \$99	27	24	26	30	30	30	30	30	30	25	25	25	26	29
	\$100 to \$149	8	7	8	12	12	13	13	14	14	11	14	12	13	14
	\$150+	4	5	5	9	9	10	10	11	12	11	12	14	17	15
Race	White	68	68	69	49	74	75	73	73	74	77	70	71	73	66
	Black	15	13	13	30	13	12	13	13	12	14	15	15	14	14
	Asian	4	5	5	12	5	5	5	5	6	4	5	5	5	5
	Other/multiracial	12	13	14	9	9	7	9	9	8	6	11	9	8	15
Political affiliation	Republican	29	31	30	31	30	35	35	42	37	37	37	32	37	35
	Democrat	48	46	44	43	42	36	40	42	39	45	48	55	45	46

Characteristic	Subgroup	% of respondents													
		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
	Other	23	23	26	26	28	29	26	16	23	18	15	14	18	20
Annual miles driven	1 to 7,500	39	44	30	30	30	33	33	37	34	30	49	55	49	51
	7,501 to 12,500	33	32	16	21	21	21	22	22	19	18	22	20	22	22
	12,501+	28	25	42	39	37	35	36	28	37	33	14	12	16	15
	Don't drive	-	-	12	10	12	11	10	14	10	19	15	13	12	12
Miles per gallon	≤19	-	-	-	27	26	26	28	26	25	23	23	26	20	19
	20 to 30	-	-	-	63	60	61	58	62	61	60	55	53	48	45
	31+	-	-	-	11	14	13	14	13	14	17	22	20	32	36
Transit use in last 30 days	Used transit	22	25	25	20	24	21	23	22	-	35	24	17	18	23
	Did not use transit	78	75	75	80	76	79	77	78	-	65	76	83	82	77
Community type (self-reported)	Urban	-	-	-	-	-	-	-	-	-	30	30	33	27	33
	Suburban	-	-	-	-	-	-	-	-	-	40	43	43	44	42
	Small town	-	-	-	-	-	-	-	-	-	14	13	9	12	11
	Rural	-	-	-	-	-	-	-	-	-	16	14	15	17	13

## Appendix B: Data Tables for Subgroup Analysis

Appendix B presents a series of tables showing how different subgroups within the full set of respondents answered the survey questions each year. For example, we compare the percent support for the flat-rate mileage fee for adults aged 18 to 34 vs. those aged 35 to 64, and those 65 and older, or for urban vs. suburban, small town, and rural residents.

The statistical test of two proportions was used to check whether differences between pairs of subgroups in a category (e.g., Republican versus Democrat) are statistically significant at the 95% and 99% confidence levels. In the tables, the first subgroup listed for each category (e.g., age, annual miles driven, or political affiliation) is the reference case to which the proportion of respondents in other subgroups in that category is compared.

Where the response between the reference case and another subgroup in that category is statistically significant, this is indicated as follows:

\* Statistically significant at  $p < 0.05$

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

Missing and refused responses were removed from the dataset before analysis.

Data are rounded to whole numbers. As a result, columns for individual characteristics may not sum to 100%. Also, two identical whole numbers likely mask a slight difference (for example, 2.01 and 2.49 will both round to 2).

Table B1. Support for the flat-rate mileage fee, by demographics, 2010-2023

Characteristic	Subgroup	% support													Spread for the year														
		'10	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20	'21	'22	'23	'10	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20	'21	'22	'23
All respondents		22	22	22	19	19	24	23	23	27	45	45	47	39	45														
Age (years)	18 to 34	27	28	26	23	17	28	32	24	23	49	57	54	57	57	8	11	8	7	6	7	15	4	7	6	18	20	31	26
	35 to 64	18**	18**	18**	17*	18	22*	17**	22	29	44*	40**	48**	33**	42**														
	65+	22	19**	22	16*	23*	21*	24*	26	30	43*	39**	34**	25**	31**														
Income (annual, in \$000s)	<\$50	26	22	25	19	21	27	27	28	28	43	46	47	39	41	8	6	7	5	8	6	9	13	4	10	9	13	3	10
	\$50 to \$99	20	19	18*	16	14**	22	18**	21*	26	46	42	43	40	45														
	\$100 to \$149	18	16	19	21	22	20	22	15**	25	51**	42	56**	37	51**														
	\$150+	21	19	21	20	20	21	21	23	28	53**	52	52	38	49**														
Race	White	18	20	21	17	17	21	21	20	23	44	43	47	34	42	24	35	16	17	10	14	17	16	30	12	10	11	26	8
	Black	35**	27*	21	23	26**	29*	24	30**	53**	54**	53**	53*	55**	50*														
	Asian	42**	55**	37**	30**	19	35**	39**	33*	28	52	50	49	60**	45														
	Other/multiracial	19	22	24	13	27**	32*	27	36**	26	41	47	42	44**	50**														
Political affiliation	Republican	22	14	16	14	15	22	16	16	24	45	42	39	29	35	11	17	10	4	7	17	11	13	7	11	5	25	19	19
	Democrat	27	29**	25**	18	22*	32**	27**	29**	31*	48	48*	56**	48**	53**														
	Other	15	12	16	16	19	15*	20	29**	24	38**	43	31*	35*	41*														
Annual miles driven	1 to 7,500	20	24	20	21	18	24	24	28	27	46	48	49	39	43	3	7	18	21	22	19	22	19	17	8	17	15	9	15
	7,501 to 12,500	20	18*	18	18	15	25	23	21	19*	44	37**	51	42	52**														

Characteristic	Subgroup	% support													Spread for the year														
		'10	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20	'21	'22	'23	'10	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20	'21	'22	'23
	12,501+	17	16*	23	14**	17	19*	19	14**	29	48	39**	48	33*	44														
	Don't drive	-	-	36**	34**	37**	38**	40**	34	35	41	54*	36**	41	37*														
Miles per gallon	≤19	-	-	-	14	13	15	21	15	23	37	47	42	33	42	-	-	-	10	5	15	4	12	2	11	5	16	16	17
	20 to 30	-	-	-	14	15	22*	20	20	22	41	41*	39	30	35*														
	31+	-	-	-	23*	18	30**	18	27**	21	48**	42	55**	46**	51**														
Transit use in last 30 days	Used transit	25	35	21	30	26	38	34	32	-	54	52	57	55	56	5	17	1	14	9	18	14	11	-	14	10	12	20	15
	Did not use transit	20	19**	22	16**	17**	20**	20**	21**	-	40**	43**	45**	35**	41**														
Community type (self-reported)	Urban	-	-	-	-	-	-	-	-	-	53	54	61	50	57	-	-	-	-	-	-	-	-	-	19	14	28	23	21
	Suburban	-	-	-	-	-	-	-	-	-	45**	42**	43**	36**	40**														
	Small town	-	-	-	-	-	-	-	-	-	44**	39**	40**	39**	37**														
	Rural	-	-	-	-	-	-	-	-	-	33**	40**	34**	27**	36**														

Table B2 Support for the green mileage fee, by demographics, 2010-2023

Characteristic	Subgroup	% support												Spread for the year															
		'10	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20	'21	'22	'23	'10	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20	'21	'22	'23
All respondents		34	38	42	39	43	44	48	45	46	51	49	53	48	51														
Age (years)	18 to 34	39	44	51	47	50	50	55	54	58	57	59	61	59	63	10	12	21	13	10	13	15	14	18	13	19	17	17	25
	35 to 64	33	32**	39**	36**	40**	42**	47**	40**	40**	49**	48**	52**	43**	49**														
	65+	29*	40	30**	34**	40*	38**	40**	45*	42**	44**	40**	44**	42**	38**														
Income (annual, in <\$50 \$000s)		38	42	43	40	45	49	51	52	49	49	49	52	48	49	4	11	6	2	6	12	7	14	16	12	14	14	4	7
	\$50 to \$99	33	31**	42	38	41	37**	46	40**	40**	48	46	49	48	55*														
	\$100 to \$149	34	34	48	40	47	43	47	38**	56	57**	49	59*	44	54														
	\$150+	37	31	48	39	41	42	44	39**	40	61**	60**	62**	49	48														
Race	White	32	35	37	38	42	41	46	42	40	48	46	52	44	48	29	37	21	9	7	19	26	24	32	15	17	13	21	11
	Black	35	37	53**	38	46	48	46	48	65**	64**	60**	57*	60**	58**														
	Asian	61**	72**	58**	47	48	57**	71**	66**	72**	59*	63**	65**	65**	54														
	Other/multiracial	32	45**	48**	45	49	60**	59**	55*	59**	53	54*	54	54**	59**														
Political affiliation	Republican	31	24	36	30	36	33	34	32	38	44	40	40	34	38	10	20	15	16	12	23	19	25	14	15	17	24	28	23
	Democrat	36	44**	51**	46**	48**	56**	53**	58**	52**	59**	57**	64**	62**	61**														
	Other	26	28	38	36	38	36	44*	45**	46	45	47*	43	41**	51**														
Annual miles driven	1 to 7,500	35	40	38	38	39	41	52	47	44	48	52	54	47	49	7	7	23	6	17	21	25	32	30	7	17	5	14	8
	7,501 to 12,500	29	33*	38	39	42	39	45	37*	46	50	42**	53	50	56**														

Characteristic	Subgroup	% support													Spread for the year														
		'10	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20	'21	'22	'23	'10	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20	'21	'22	'23
	12,501+	28	34	39	39	44	45	42**	37*	42	52	43**	49	41*	50														
	Don't drive	-	-	61**	44	56**	60**	67**	69**	72**	55**	58*	54	55*	55*														
Miles per gallon	≤19	-	-	-	33	28	28	49	32	40	39	49	43	36	42	-	-	-	25	25	29	8	14	9	16	9	20	19	17
	20 to 30	-	-	-	36	43**	43**	45	39	39	45*	45	46	41*	42														
	31+	-	-	-	58**	52**	57**	42	46*	48	56**	54	63**	55**	59**														
Transit use in last 30 days	Used transit	34	51	52	52	55	58	65	58	-	61	61	63	64	64	0	17	13	16	15	18	21	17	-	15	15	12	20	16
	Did not use transit	34	34**	39**	36**	40**	40**	44**	41**	-	45**	46**	51**	44**	48**														
Community type (self-reported)	Urban	-	-	-	-	-	-	-	-	-	60	63	65	60	63	-	-	-	-	-	-	-	-	-	22	27	23	28	23
	Suburban	-	-	-	-	-	-	-	-	-	50**	49**	50**	46**	46**														
	Small town	-	-	-	-	-	-	-	-	-	46**	35**	48**	48**	48**														
	Rural	-	-	-	-	-	-	-	-	-	38**	37**	41**	32**	40**														

Table B3. Support for the electric vehicle mileage fee rate, by demographics, 2010-2023

Characteristic	Subgroup	% support												Spread for the year															
		'10	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20	'21	'22	'23	'10	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20	'21	'22	'23
All respondents		-	-	-	-	-	-	-	-	-	-	57	52	53	51	-	-	-	-	-	-	-	-	-	-	-	-	-	
Age (years)	18 to 34	-	-	-	-	-	-	-	-	-	-	62	60	61	56	-	-	-	-	-	-	-	-	-	-	12	12	17	16
	35 to 64	-	-	-	-	-	-	-	-	-	-	57*	48**	51**	53	-	-	-	-	-	-	-	-	-	-	-	-	-	
	65+	-	-	-	-	-	-	-	-	-	-	50**	50**	44**	40**	-	-	-	-	-	-	-	-	-	-	-	-	-	
Income (annual, in \$000s)	<\$50	-	-	-	-	-	-	-	-	-	59	57	54	55	-	-	-	-	-	-	-	-	-	-	5	12	6	11	
	\$50 to \$99	-	-	-	-	-	-	-	-	-	54	50**	53	54	-	-	-	-	-	-	-	-	-	-	-	-	-		
	\$100 to \$149	-	-	-	-	-	-	-	-	-	58	48*	48	45**	-	-	-	-	-	-	-	-	-	-	-	-	-		
	\$150+	-	-	-	-	-	-	-	-	-	56	45**	54	44**	-	-	-	-	-	-	-	-	-	-	-	-	-		
Race	White	-	-	-	-	-	-	-	-	-	55	48	48	48	-	-	-	-	-	-	-	-	-	-	9	18	21	11	
	Black	-	-	-	-	-	-	-	-	-	63**	64**	63**	59**	-	-	-	-	-	-	-	-	-	-	-	-	-		
	Asian	-	-	-	-	-	-	-	-	-	64	66**	69**	58*	-	-	-	-	-	-	-	-	-	-	-	-	-		
	Other/multiracial	-	-	-	-	-	-	-	-	-	62*	62**	67**	56**	-	-	-	-	-	-	-	-	-	-	-	-	-		
Political affiliation	Republican	-	-	-	-	-	-	-	-	-	44	41	39	40	-	-	-	-	-	-	-	-	-	-	21	18	23	19	
	Democrat	-	-	-	-	-	-	-	-	-	65**	57**	62**	59**	-	-	-	-	-	-	-	-	-	-	-	-	-		
	Other	-	-	-	-	-	-	-	-	-	64**	59**	57**	55**	-	-	-	-	-	-	-	-	-	-	-	-	-		
Annual miles driven	1 to 7,500	-	-	-	-	-	-	-	-	-	58	52	52	50	-	-	-	-	-	-	-	-	-	-	15	30	8	11	
	7,501 to 12,500	-	-	-	-	-	-	-	-	-	54	50	51	49	-	-	-	-	-	-	-	-	-	-	-	-	-		
	12,501+	-	-	-	-	-	-	-	-	-	50**	40**	53	52	-	-	-	-	-	-	-	-	-	-	-	-	-		

Characteristic	Subgroup	% support												Spread for the year															
		'10	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20	'21	'22	'23	'10	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20	'21	'22	'23
	Don't drive	-	-	-	-	-	-	-	-	-	-	65*	70**	59*	61**														
Miles per gallon	≤19	-	-	-	-	-	-	-	-	-	-	49	44	49	47	-	-	-	-	-	-	-	-	-	-	11	12	8	7
	20 to 30	-	-	-	-	-	-	-	-	-	-	57**	57**	51	48														
	31+	-	-	-	-	-	-	-	-	-	-	60**	51*	57**	54*														
Transit use in last 30 days	Used transit	-	-	-	-	-	-	-	-	-	-	64	56	63	62	-	-	-	-	-	-	-	-	-	-	10	5	12	14
	Did not use transit	-	-	-	-	-	-	-	-	-	-	55**	52	51**	48**														
Community type (self-reported)	Urban	-	-	-	-	-	-	-	-	-	-	57	49	56	57	-	-	-	-	-	-	-	-	-	-	9	11	19	13
	Suburban	-	-	-	-	-	-	-	-	-	-	59	55**	53	50**														
	Small town	-	-	-	-	-	-	-	-	-	-	58	47	61	50														
	Rural	-	-	-	-	-	-	-	-	-	-	50*	58**	42**	44**														





Characteristic	Subgroup	% support												Spread for the year															
		'10	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20	'21	'22	'23	'10	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20	'21	'22	'23
Income (annual, \$50 to \$99 in \$000s)		-	-	-	-	-	-	-	-	-	-	-	-	51	47														
	\$100 to \$149	-	-	-	-	-	-	-	-	-	-	-	-	48	49														
	\$150+	-	-	-	-	-	-	-	-	-	-	-	-	49	51														
Race	White	-	-	-	-	-	-	-	-	-	-	-	-	51	48	-	-	-	-	-	-	-	-	-	-	-	-	5	3
	Black	-	-	-	-	-	-	-	-	-	-	-	-	45	45														
	Asian	-	-	-	-	-	-	-	-	-	-	-	-	50	45														
	Other/multiracial	-	-	-	-	-	-	-	-	-	-	-	-	50	47														
Political affiliation	Republican	-	-	-	-	-	-	-	-	-	-	-	-	45	46	-	-	-	-	-	-	-	-	-	-	-	-	10	8
	Democrat	-	-	-	-	-	-	-	-	-	-	-	-	51**	51														
	Other	-	-	-	-	-	-	-	-	-	-	-	-	55**	43														
Annual miles driven	1 to 7,500	-	-	-	-	-	-	-	-	-	-	-	-	54	53	-	-	-	-	-	-	-	-	-	-	-	-	9	20
	7,501 to 12,500	-	-	-	-	-	-	-	-	-	-	-	-	46**	47*														
	12,501+	-	-	-	-	-	-	-	-	-	-	-	-	45**	33**														
	Don't drive	-	-	-	-	-	-	-	-	-	-	-	-	47*	43**														
Miles per gallon	≤19	-	-	-	-	-	-	-	-	-	-	-	-	55	48	-	-	-	-	-	-	-	-	-	-	-	-	10	3
	20 to 30	-	-	-	-	-	-	-	-	-	-	-	-	55	51														
	31+	-	-	-	-	-	-	-	-	-	-	-	-	44**	50														
Transit use in last 30 days	Used transit	-	-	-	-	-	-	-	-	-	-	-	-	45	42	-	-	-	-	-	-	-	-	-	-	-	-	5	7
	Did not use transit	-	-	-	-	-	-	-	-	-	-	-	-	51*	49**														

Characteristic	Subgroup	% support													Spread for the year															
		'10	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20	'21	'22	'23	'10	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20	'21	'22	'23	
Community type (self-reported)	Urban	-	-	-	-	-	-	-	-	-	-	-	-	44	41	-	-	-	-	-	-	-	-	-	-	-	-	-	10	11
	Suburban	-	-	-	-	-	-	-	-	-	-	-	-	54**	52**															
	Small town	-	-	-	-	-	-	-	-	-	-	-	-	53**	49															
	Rural	-	-	-	-	-	-	-	-	-	-	-	-	47	49**															

Table B6. Respondent preference for paying a mileage fee when refueling/recharging instead of annually or monthly, by demographics, 2010-2023

Characteristic	Subgroup	% prefer to pay when refueling/recharging instead of annually or monthly													Spread for the year														
		'10	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20	'21	'22	'23	'10	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20	'21	'22	'23
All respondents		-	-	-	-	-	-	-	-	-	47	47	44	48	45														
Age (years)	18 to 34	-	-	-	-	-	-	-	-	-	37	35	37	38	39	-	-	-	-	-	-	-	-	-	20	22	14	28	17
	35 to 64	-	-	-	-	-	-	-	-	-	50**	50**	45**	48**	45														
	65+	-	-	-	-	-	-	-	-	-	57**	57**	51**	65**	56**														
Income (annual, in \$000s)	<\$50	-	-	-	-	-	-	-	-	-	47	48	42	47	47	-	-	-	-	-	-	-	-	-	4	5	5	5	5
	\$50 to \$99	-	-	-	-	-	-	-	-	-	47	47	47*	48	43														
	\$100 to \$149	-	-	-	-	-	-	-	-	-	49	44	42	51	46														
	\$150+	-	-	-	-	-	-	-	-	-	45	45	46	48	44														
Race	White	-	-	-	-	-	-	-	-	-	50	50	44	51	48	-	-	-	-	-	-	-	-	-	21	13	13	14	11
	Black	-	-	-	-	-	-	-	-	-	31**	37**	36**	38**	39**														
	Asian	-	-	-	-	-	-	-	-	-	42	41	43	41*	43														
	Other/multiracial	-	-	-	-	-	-	-	-	-	52	45	49	39**	38**														
Political affiliation	Republican	-	-	-	-	-	-	-	-	-	53	47	46	52	50	-	-	-	-	-	-	-	-	-	10	4	5	6	9
	Democrat	-	-	-	-	-	-	-	-	-	43**	48	41*	45**	42**														
	Other	-	-	-	-	-	-	-	-	-	48	43	46	48	44*														
Annual miles driven	1 to 7,500	-	-	-	-	-	-	-	-	-	54	45	45	50	46	-	-	-	-	-	-	-	-	-	16	6	5	10	6
	7,501 to 12,500	-	-	-	-	-	-	-	-	-	50	50	42	47	47														

Characteristic	Subgroup	% prefer to pay when refueling/recharging instead of annually or monthly													Spread for the year														
		'10	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20	'21	'22	'23	'10	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20	'21	'22	'23
	12,501+	-	-	-	-	-	-	-	-	-	44**	49	40	48	42														
	Don't drive	-	-	-	-	-	-	-	-	-	38**	44	42	40**	40														
Miles per gallon	≤19	-	-	-	-	-	-	-	-	-	52	43	51	51	49	-	-	-	-	-	-	-	-	-	7	7	15	8	12
	20 to 30	-	-	-	-	-	-	-	-	-	52	50*	46*	52	51														
	31+	-	-	-	-	-	-	-	-	-	45	45	37**	45*	39**														
Transit use in last 30 days	Used transit	-	-	-	-	-	-	-	-	-	39	41	41	37	38	-	-	-	-	-	-	-	-	-	12	8	3	13	9
	Did not use transit	-	-	-	-	-	-	-	-	-	51**	49**	44	50**	47**														
Community type (self-reported)	Urban	-	-	-	-	-	-	-	-	-	41	43	39	43	38	-	-	-	-	-	-	-	-	-	11	15	9	12	14
	Suburban	-	-	-	-	-	-	-	-	-	48**	46	46**	48	49**														
	Small town	-	-	-	-	-	-	-	-	-	52**	47	48*	53**	52**														
	Rural	-	-	-	-	-	-	-	-	-	50**	57**	43	55**	45*														

Table B7. Respondent opinion that a mileage fee is “more fair” than a gas tax because all vehicles are charged the same, by demographics, 2010-2023

Characteristic	Subgroup	% stating a mileage fee is “more fair”												Spread for the year															
		'10	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20	'21	'22	'23	'10	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20	'21	'22	'23
All respondents		-	-	-	-	-	-	-	-	-	-	50	51	52	54														
Age (years)	18 to 34	-	-	-	-	-	-	-	-	-	-	48	46	48	49	-	-	-	-	-	-	-	-	-	-	10	9	12	15
	35 to 64	-	-	-	-	-	-	-	-	-	-	48	53**	51	54														
	65+	-	-	-	-	-	-	-	-	-	-	58**	56**	60**	64**														
Income (annual, in \$000s)	<\$50	-	-	-	-	-	-	-	-	-	48	48	52	54	-	-	-	-	-	-	-	-	-	-	5	12	2	7	
	\$50 to \$99	-	-	-	-	-	-	-	-	-	53	52	51	52															
	\$100 to \$149	-	-	-	-	-	-	-	-	-	49	54*	52	57															
	\$150+	-	-	-	-	-	-	-	-	-	53	59**	50	59															
Race	White	-	-	-	-	-	-	-	-	-	51	52	52	57	-	-	-	-	-	-	-	-	-	-	5	9	6	13	
	Black	-	-	-	-	-	-	-	-	-	48	53	51	51															
	Asian	-	-	-	-	-	-	-	-	-	51	44	55	58															
	Other/multiracial	-	-	-	-	-	-	-	-	-	46	46	50	45**															
Political affiliation	Republican	-	-	-	-	-	-	-	-	-	53	54	56	56	-	-	-	-	-	-	-	-	-	-	7	7	10	3	
	Democrat	-	-	-	-	-	-	-	-	-	49*	51	50*	53															
	Other	-	-	-	-	-	-	-	-	-	47*	47*	46**	55															
Annual miles driven	1 to 7,500	-	-	-	-	-	-	-	-	-	50	53	51	56	-	-	-	-	-	-	-	-	-	-	3	12	11	6	
	7,501 to 12,500	-	-	-	-	-	-	-	-	-	52	52	53	55															

Characteristic	Subgroup	% stating a mileage fee is "more fair"												Spread for the year															
		'10	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20	'21	'22	'23	'10	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20	'21	'22	'23
	12,501+	-	-	-	-	-	-	-	-	-	-	48	54	46	52														
	Don't drive	-	-	-	-	-	-	-	-	-	-	49	42**	57	49*														
Miles per gallon	≤19	-	-	-	-	-	-	-	-	-	-	52	54	54	54	-	-	-	-	-	-	-	-	-	-	6	6	5	2
	20 to 30	-	-	-	-	-	-	-	-	-	-	52	49*	49	56														
	31+	-	-	-	-	-	-	-	-	-	-	46	52	49	55														
Transit use in last 30 days	Used transit	-	-	-	-	-	-	-	-	-	-	46	55	49	55	-	-	-	-	-	-	-	-	-	-	5	4	3	1
	Did not use transit	-	-	-	-	-	-	-	-	-	-	52*	50	52	54														
Community type (self-reported)	Urban	-	-	-	-	-	-	-	-	-	-	52	55	56	54	-	-	-	-	-	-	-	-	-	-	6	11	9	7
	Suburban	-	-	-	-	-	-	-	-	-	-	50	49*	50*	53														
	Small town	-	-	-	-	-	-	-	-	-	-	51	56	47*	56														
	Rural	-	-	-	-	-	-	-	-	-	-	46	46**	51	60														

Table B8. Respondents' agreement that having mileage tracked for a mileage fee wouldn't bother them, by demographics, 2010-2023

Characteristic	Subgroup	% agreeing that having mileage tracked wouldn't bother them													Spread for the year															
		'10	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20	'21	'22	'23	'10	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20	'21	'22	'23	
All respondents		-	-	-	-	-	-	-	-	-	48	45	48	43	45	-	-	-	-	-	-	-	-	-	-	-	-	-		
Age (years)	18 to 34	-	-	-	-	-	-	-	-	-	51	56	56	56	55	-	-	-	-	-	-	-	-	-	-	4	17	28	26	24
	35 to 64	-	-	-	-	-	-	-	-	-	47	41**	51*	39**	44**															
	65+	-	-	-	-	-	-	-	-	-	47	39**	28**	31**	31**															
Income (annual, in \$000s)	<\$50	-	-	-	-	-	-	-	-	-	48	48	49	42	42	-	-	-	-	-	-	-	-	-	12	8	15	6	8	
	\$50 to \$99	-	-	-	-	-	-	-	-	-	44*	41**	42**	45	46															
	\$100 to \$149	-	-	-	-	-	-	-	-	-	52	41*	57*	40	49*															
	\$150+	-	-	-	-	-	-	-	-	-	56*	47	53	44	49*															
Race	White	-	-	-	-	-	-	-	-	-	47	42	47	38	44	-	-	-	-	-	-	-	-	-	10	15	9	21	8	
	Black	-	-	-	-	-	-	-	-	-	55**	58**	55*	60**	52**															
	Asian	-	-	-	-	-	-	-	-	-	53	54*	49	60**	45															
	Other/multiracial	-	-	-	-	-	-	-	-	-	57*	43	45	42	44															
Political affiliation	Republican	-	-	-	-	-	-	-	-	-	48	42	39	32	37	-	-	-	-	-	-	-	-	-	8	8	25	21	16	
	Democrat	-	-	-	-	-	-	-	-	-	51	49**	58**	53**	53**															
	Other	-	-	-	-	-	-	-	-	-	43*	41	33	38*	40															
Annual miles driven	1 to 7,500	-	-	-	-	-	-	-	-	-	46	47	50	43	44	-	-	-	-	-	-	-	-	-	7	10	15	7	16	
	7,501 to 12,500	-	-	-	-	-	-	-	-	-	46	44	54	46	50*															
	12,501+	-	-	-	-	-	-	-	-	-	53**	38**	43*	40	50*															

Characteristic	Subgroup	% agreeing that having mileage tracked wouldn't bother them													Spread for the year														
		'10	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20	'21	'22	'23	'10	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20	'21	'22	'23
	Don't drive	-	-	-	-	-	-	-	-	-	47	48	39**	41	34**														
Miles per gallon	≤19	-	-	-	-	-	-	-	-	-	42	45	44	33	41	-	-	-	-	-	-	-	-	-	8	3	20	19	17
	20 to 30	-	-	-	-	-	-	-	-	-	45	43	39*	34	37														
	31+	-	-	-	-	-	-	-	-	-	50*	46	58**	52**	53**														
Transit use in last 30 days	Used transit	-	-	-	-	-	-	-	-	-	58	55	65	59	54	-	-	-	-	-	-	-	-	-	15	13	20	19	11
	Did not use transit	-	-	-	-	-	-	-	-	-	43**	42**	45**	39**	43**														
Community type (self-reported)	Urban	-	-	-	-	-	-	-	-	-	53	55	64	56	59	-	-	-	-	-	-	-	-	-	8	20	26	24	26
	Suburban	-	-	-	-	-	-	-	-	-	47**	44**	43**	40**	41**														
	Small town	-	-	-	-	-	-	-	-	-	46*	35**	38**	36**	35**														
	Rural	-	-	-	-	-	-	-	-	-	45**	40**	38**	33**	33**														

Table B9. Support for the base-case gas tax, by demographics, 2010-2023

Characteristic	Subgroup	% stating a mileage fee is "more fair"													Spread for the year														
		'10	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20	'21	'22	'23	'10	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20	'21	'22	'23
All respondents		24	25	20	23	25	31	31	36	34	41	44	49	38	40														
Age (years)	18 to 34	28	28	26	26	29	36	41	38	35	49	54	59	53	54	8	7	10	7	9	11	15	5	5	15	19	30	30	34
	35 to 64	26	22**	16**	23	25	31	26**	36	34	38**	41**	50**	34**	39**														
	65+	20*	22*	19*	18*	20**	25**	30**	33	30	34**	35**	29**	22**	20**														
Income (annual, in \$000s)	<\$50	23	23	17	20	22	29	34	33	32	37	44	48	39	41	20	11	17	12	16	13	9	13	17	17	12	14	4	10
	\$50 to \$99	27	25	19	24	25	31	25**	38	29	39	40	43*	36	36														
	\$100 to \$149	29	27	28**	32**	31*	31	28	33	41	50**	42	57**	36	46														
	\$150+	43**	33	33**	26	38**	42**	35	46**	46**	55**	52*	55*	39	38														
Race	White	22	23	22	24	24	30	30	37	32	40	40	47	32	38	24	31	9	8	16	23	12	28	30	17	18	14	25	22
	Black	26	24	17	19	32*	27	34	30	34	45*	58**	59**	58**	50**														
	Asian	46**	53**	26	19	35*	50**	41*	21*	59**	54**	47	47	46**	29*														
	Other/multiracial	28	22	17	26	19	36	32	49*	29	36	46	46	45**	44*														
Political affiliation	Republican	24	16	21	15	13	29	21	30	29	39	36	32	23	29	6	17	4	11	21	13	20	15	13	10	14	33	28	22
	Democrat	28	33**	25	27**	34**	38**	41**	45**	43**	45**	49**	63**	50**	51**														
	Other	30	28**	24	21	26**	26	33**	31	29	35	47**	30	36**	35*														
Annual miles driven	1 to 7,500	25	27	24	23	29	31	36	36	32	35	43	50	38	36	4	9	8	3	9	9	16	8	11	12	18	12	6	11
	7,501 to 12,500	28	23	23	23	25	34	29*	39	40*	39	38	52	37	46**														
	12,501+	23	18**	16**	23	24	28	25**	37	34	45**	43	47	35	43*														

Characteristic	Subgroup	% stating a mileage fee is "more fair"													Spread for the year														
		'10	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20	'21	'22	'23	'10	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20	'21	'22	'23
	Don't drive	-	-	20	26	19*	37	41	31	29	46**	57**	41**	41	44**														
Miles per gallon	≤19	-	-	-	21	23	23	29	35	41	31	39	43	27	28	-	-	-	7	12	21	1	2	11	13	12	19	23	23
	20 to 30	-	-	-	25	23	33**	30	37	30**	37*	38	39	26	27														
	31+	-	-	-	27	36**	44**	31	35	40	44**	50**	58**	49**	49**														
Transit use in last 30 days	Used transit	29	39	23	27	31	42	44	40	-	51	57	62	56	54	6	19	3	5	8	14	18	5	-	16	17	16	23	19
	Did not use transit	23*	20**	19	22	23**	28**	27**	35	-	35**	40**	46**	34**	36**														
Community type (self-reported)	Urban	-	-	-	-	-	-	-	-	-	48	55	61	50	53	-	-	-	-	-	-	-	-	-	18	22	25	23	20
	Suburban	-	-	-	-	-	-	-	-	-	39**	42**	46**	33**	33**														
	Small town	-	-	-	-	-	-	-	-	-	44	33**	41**	39**	34**														
	Rural	-	-	-	-	-	-	-	-	-	30**	36**	36**	27**	36**														

Table B10. Support for the maintenance-focused gas tax, by demographics, 2010-2023

Characteristic	Subgroup	% support													Spread for the year														
		'10	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20	'21	'22	'23	'10	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20	'21	'22	'23
All respondents		-	65	59	67	69	71	75	78	72	75	75	71	71	70														
Age (years)	18 to 34	-	73	67	77	72	77	84	84	78	72	74	69	70	69	-	16	14	18	9	9	16	8	11	9	9	10	3	3
	35 to 64	-	62**	53**	65**	69	67**	72**	76**	67**	74	72	70	72	72														
	65+	-	57**	57**	59**	64*	70*	67**	76*	72	81**	81**	79**	69	70														
Income (annual, in \$000s)	<\$50	-	65	57	71	72	72	76	80	78	75	77	69	72	73	-	12	10	10	10	5	6	10	11	0	9	8	4	8
	\$50 to \$99	-	67	58	63**	70	71	75	79	67**	75	75	73	68	70														
	\$100 to \$149	-	61	58	70	62*	67	70	78	67*	75	68**	69	72	65**														
	\$150+	-	56	67	61*	63*	71	73	70*	66*	75	72	77**	70	69														
Race	White	-	61	54	67	68	69	73	77	71	75	74	71	70	69	-	19	23	7	11	12	10	9	7	5	7	14	6	10
	Black	-	73**	67**	69	79**	77*	82*	83	75	76	73	66	71	73														
	Asian	-	81**	77**	66	72	74	72	77	70	78	80	81*	76	79*														
	Other/multiracial	-	73**	70**	73	68	81*	75	86*	78	73	78	71	74	71														
Political affiliation	Republican	-	55	55	60	62	66	71	76	67	74	71	67	68	66	-	13	9	9	14	11	4	5	8	6	7	12	7	7
	Democrat	-	67**	64*	69*	76**	76**	76	81	75*	77	78**	75**	74**	73**														
	Other	-	57	60	67	65	65	75	80	73	71	73	63	69	72*														
Annual miles driven	1 to 7,500	-	67	65	69	68	72	79	80	70	73	77	71	71	69	-	13	24	5	18	14	13	6	4	3	6	5	4	10
	7,501 to 12,500	-	64	57*	63	64	66	71*	77	73	77	72*	69	69	69														
	12,501+	-	54**	48**	68	69	69	71**	75	72	75	71*	74	73	69														

Characteristic	Subgroup	% support													Spread for the year														
		'10	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20	'21	'22	'23	'10	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20	'21	'22	'23
	Don't drive	-	-	72	65	82**	80	83	81	72	76	76	73	71	79**														
Miles per gallon	≤19	-	-	-	63	71	62	70	79	79	76	71	67	74	68	-	-	-	4	6	10	5	7	15	4	6	7	5	4
	20 to 30	-	-	-	67	66	72**	75	75	64**	75	76*	74**	69	70														
	31+	-	-	-	66	65	70	74	82	73	79	76*	71	71	72														
Transit use in last 30 days	Used transit	-	73	65	66	69	72	77	79	-	75	76	76	76	71	-	11	8	2	0	2	4	1	-	0	1	5	6	0
	Did not use transit	-	62**	57**	68	69	70	74	78	-	75	74	70*	70*	70														
Community type (self-reported)	Urban	-	-	-	-	-	-	-	-	-	73	77	74	75	72	-	-	-	-	-	-	-	-	-	7	6	6	8	6
	Suburban	-	-	-	-	-	-	-	-	-	78*	72**	69**	69**	68*														
	Small town	-	-	-	-	-	-	-	-	-	75	76	71	70	73														
	Rural	-	-	-	-	-	-	-	-	-	71	76	71	68**	74														

Table B11. Support for the safety-focused gas tax, by demographics, 2010-2023

Characteristic	Subgroup	% support												Spread for the year															
		'10	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20	'21	'22	'23	'10	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20	'21	'22	'23
All respondents		-	59	56	62	63	64	64	65	66	71	73	70	68	70														
Age (years)	18 to 34	-	71	69	74	68	75	71	71	76	70	75	69	71	70	-	21	23	19	11	18	17	15	15	6	3	3	7	4
	35 to 64	-	55**	46**	55**	62	60**	63*	63*	62**	70	71	70	68	71														
	65+	-	49**	54**	59**	57**	57**	54**	57**	61**	76*	75	72	64*	67														
Income (annual, in \$000s)	<\$50	-	62	55	65	68	67	70	73	75	71	76	69	72	71	-	20	8	8	21	7	20	18	17	1	7	2	8	7
	\$50 to \$99	-	58	53	57**	63	61	63*	55**	59**	72	70**	71	65**	72														
	\$100 to \$149	-	56	47	58	59*	65	53**	61**	59**	71	70**	70	66*	65														
	\$150+	-	42**	52	62	46**	60	50**	61**	60**	71	70*	72	64**	67														
Race	White	-	56	48	57	60	60	59	60	63	71	72	70	66	68	-	17	33	26	22	18	24	22	15	6	8	6	9	8
	Black	-	67**	78**	82**	70*	78**	83**	79**	75*	75	76	71	71	75*														
	Asian	-	73**	81**	72**	82**	70	78**	67	75	77	79	75	76*	77*														
	Other/multiracial	-	68**	68**	69*	70*	77**	71*	82**	78**	72	73	70	75*	71														
Political affiliation	Republican	-	49	52	53	56	61	54	57	62	68	67	64	64	68	-	16	15	16	13	11	11	13	7	7	10	11	9	4
	Democrat	-	65**	60*	69**	68**	67	65**	70**	68	75**	77**	75**	72**	72*														
	Other	-	51	45	56	55	55	62	68*	69	69	73*	65	66	69														
Annual miles driven	1 to 7,500	-	62	65	66	63	62	68	66	62	70	76	70	69	70	-	13	30	28	22	27	18	22	16	6	15	5	7	7
	7,501 to 12,500	-	55	47**	50**	56	57	56**	57*	65	71	68**	68	67	67														
	12,501+	-	48**	46**	61	62	64	62*	61	68	70	64**	73	64	70														

Characteristic	Subgroup	% support												Spread for the year															
		'10	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20	'21	'22	'23	'10	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20	'21	'22	'23
	Don't drive	-	-	76**	78*	79**	84**	74	78**	78**	76*	79	70	71	74														
Miles per gallon	≤19	-	-	-	55	59	57	59	60	65	69	72	66	68	72	-	-	-	2	3	7	4	6	8	7	3	6	1	4
	20 to 30	-	-	-	57	60	60	62	59	58	71	73	73*	68	67														
	31+	-	-	-	57	63	64	57	65	67	76*	70	71	67	71														
Transit use in last 30 days	Used transit	-	66	64	74	67	72	72	76	-	72	76	74	76	75	-	9	10	15	5	10	10	15	-	1	4	4	10	6
	Did not use transit	-	57**	53**	59**	62	62**	61**	61**	-	71	72*	69	66**	69**														
Community type (self-reported)	Urban	-	-	-	-	-	-	-	-	-	71	77	78	70	76	-	-	-	-	-	-	-	-	-	7	10	13	4	10
	Suburban	-	-	-	-	-	-	-	-	-	73	71**	65**	68	66**														
	Small town	-	-	-	-	-	-	-	-	-	73	74	70*	66	68*														
	Rural	-	-	-	-	-	-	-	-	-	66*	67**	70**	67	68**														

Table B12. Support for the congestion-focused gas tax, by demographics, 2010-2023

Characteristic	Subgroup	% support													Spread for the year															
		'10	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20	'21	'22	'23	'10	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20	'21	'22	'23	
All respondents		-	-	-	-	-	-	-	-	-	70	71	68	67	67	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Age (years)	18 to 34	-	-	-	-	-	-	-	-	-	69	71	68	72	65	-	-	-	-	-	-	-	-	-	-	4	5	7	12	7
	35 to 64	-	-	-	-	-	-	-	-	-	70	70	66	67*	70*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	65+	-	-	-	-	-	-	-	-	-	73	75	73	60**	64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Income (annual, in \$000s)	<\$50	-	-	-	-	-	-	-	-	-	68	73	68	70	68	-	-	-	-	-	-	-	-	-	5	5	2	7	9	
	\$50 to \$99	-	-	-	-	-	-	-	-	-	72*	71	68	63**	72	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	\$100 to \$149	-	-	-	-	-	-	-	-	-	71	70	67	64*	63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	\$150+	-	-	-	-	-	-	-	-	-	73	67	70	68	62	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Race	White	-	-	-	-	-	-	-	-	-	69	70	68	65	65	-	-	-	-	-	-	-	-	-	-	9	12	16	12	11
	Black	-	-	-	-	-	-	-	-	-	75*	75*	70	74**	73**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Asian	-	-	-	-	-	-	-	-	-	75	82**	79**	76**	77**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Other/multiracial	-	-	-	-	-	-	-	-	-	66	74	64	72*	67	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Political affiliation	Republican	-	-	-	-	-	-	-	-	-	70	65	63	61	64	-	-	-	-	-	-	-	-	-	7	11	9	11	6	
	Democrat	-	-	-	-	-	-	-	-	-	73	76**	72**	72**	69**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Other	-	-	-	-	-	-	-	-	-	66	71*	63	67*	69	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Annual driven miles	1 to 7,500	-	-	-	-	-	-	-	-	-	71	75	70	65	65	-	-	-	-	-	-	-	-	-	-	3	12	5	6	9
	7,501 to 12,500	-	-	-	-	-	-	-	-	-	68	68**	64*	67	67	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	12,501+	-	-	-	-	-	-	-	-	-	71	64**	68	69	72*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	



Table B13. Support for the air pollution-focused gas tax, by demographics, 2010-2023

Characteristic	Subgroup	% support													Spread for the year														
		'10	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20	'21	'22	'23	'10	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20	'21	'22	'23
All respondents		32	49	41	53	54	52	56	57	58	63	56	59	52	50														
Age (years)	18 to 34	42	65	54	67	68	69	74	71	76	70	62	63	59	54	16	30	24	20	26	24	32	23	28	12	10	8	12	15
	35 to 64	26**	44**	35**	47**	49**	45**	51**	52**	51**	60**	52**	57**	51**	51														
	65+	26**	35**	31**	47**	42**	45**	43**	49**	48**	57**	57*	55**	46**	39**														
Income (annual, in \$000s)	<\$50	28	57	43	56	59	57	62	63	69	63	60	59	54	51	12	23	11	13	16	12	16	17	22	9	10	8	6	5
	\$50 to \$99	34	42**	38	47**	48**	49*	53**	57	47**	61	50**	55	50	49														
	\$100 to \$149	36	34**	38	50	53	48*	51*	50**	58*	59	52**	59	50	51														
	\$150+	40	34**	49	60	43**	44**	46**	46**	48**	68	56	63	55	46														
Race	White	29	45	36	46	48	46	50	51	54	62	54	56	49	46	28	21	35	34	24	28	33	29	21	8	11	16	17	14
	Black	28	57**	49**	80**	67**	69**	68**	75**	72**	68*	60	63*	63**	60**														
	Asian	56**	66**	71**	68**	72**	69**	83**	80**	75**	70	66*	73**	66**	59**														
	Other/multiracial	46**	62**	51**	60**	69**	74**	76**	70**	66*	63	60	58	58*	54**														
Political affiliation	Republican	31	29	30	41	41	37	38	41	45	52	45	44	38	38	4	25	20	19	19	28	29	28	22	21	20	25	29	21
	Democrat	35	54**	50**	60**	60**	65**	67**	69**	67**	73**	65**	69**	67**	58**														
	Other	33	45**	39*	49*	48	40	46	68**	60**	59**	57**	53**	45**	50**														
Annual miles driven	1 to 7,500	38	53	43	53	56	53	59	61	59	63	58	59	53	47	16	18	22	30	32	24	23	18	13	9	18	8	13	12
	7,501 to 12,500	37	44**	39	41**	43**	47	48**	49**	57	59	52*	54	52	50														
	12,501+	22**	36**	36*	55	52	49	56	54*	56	62	47**	59	46*	50														

Characteristic	Subgroup	% support													Spread for the year														
		'10	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20	'21	'22	'23	'10	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20	'21	'22	'23
	Don't drive	-	-	58**	71**	75**	71**	71*	68	69	67	65*	62	59*	59**														
Miles per gallon	≤19	-	-	-	46	44	37	51	52	50	60	49	55	49	46	-	-	-	14	7	15	4	15	11	8	8	3	8	8
	20 to 30	-	-	-	46	50	50**	52	50	52	58	56*	57	48	44														
	31+	-	-	-	60*	51	52**	55	65*	61	66	57*	58	56*	53*														
Transit use in last 30 days	Used transit	33	63	56	69	67	69	74	65	-	69	63	67	65	60	1	18	19	21	17	21	23	10	-	9	9	10	16	14
	Did not use transit	32	45**	37**	49**	50**	48**	51**	55**	-	60**	54**	57**	50**	46**														
Community type (self-reported)	Urban	-	-	-	-	-	-	-	-	-	67	62	68	61	57	-	-	-	-	-	-	-	-	-	10	13	19	21	16
	Suburban	-	-	-	-	-	-	-	-	-	63	55**	54**	51**	47**														
	Small town	-	-	-	-	-	-	-	-	-	62	54*	61*	55	46*														
	Rural	-	-	-	-	-	-	-	-	-	56**	50**	49**	40**	41**														

Table B14. Support for the greenhouse gas emissions-focused gas tax, by demographics, 2010-2023

Characteristic	Subgroup	% support												Spread for the year															
		'10	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20	'21	'22	'23	'10	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20	'21	'22	'23
All respondents		44	48	42	50	51	51	55	54	59	62	61	59	56	55														
Age (years)	18 to 34	58	63	55	63	67	66	72	71	77	68	69	64	63	63	27	34	19	23	29	23	26	25	30	13	12	9	15	19
	35 to 64	36**	46**	35**	45**	47**	44**	48**	47**	52**	60**	57**	56**	55**	54**														
	65+	31**	29**	37**	40**	38**	42**	45**	47**	48**	55**	62*	57**	48**	43**														
Income (annual, in \$000s)	<\$50	50	54	40	52	56	54	62	61	63	63	63	60	57	56	13	26	4	5	15	10	19	18	9	8	6	7	3	3
	\$50 to \$99	40	41**	44	46	48*	45**	49**	52*	54*	61	58*	54*	54	55														
	\$100 to \$149	38	37**	43	52	42**	51	55	43**	61	58	60	61	55	55														
	\$150+	36	28**	40	51	48	50	43**	47**	58	66	62	58	57	53														
Race	White	42	45	35	44	45	45	48	49	54	59	60	56	52	51	16	18	30	35	28	33	27	26	21	12	7	15	24	13
	Black	50	49	65**	65**	68**	57**	71**	67**	72**	68**	64	65**	62**	62**														
	Asian	58	63**	64**	78**	74**	72**	70**	72**	75**	67	68	71**	76**	60*														
	Other/multiracial	46	62**	57**	63**	65**	79**	76**	74**	76**	72**	64	60	68**	64**														
Political affiliation	Republican	34	25	30	34	30	31	28	31	49	47	48	38	37	40	15	31	23	25	36	31	43	41	19	28	25	34	34	25
	Democrat	49**	56**	53**	59**	66**	63**	70**	72**	67**	74**	73**	72**	72**	65**														
	Other	38	43**	40*	43*	44**	45**	50**	67**	60**	63**	60**	53**	54**	56**														
Annual miles driven	1 to 7,500	34	55	45	45	54	53	57	58	57	59	65	58	58	52	6	20	26	19	29	27	27	12	12	15	12	7	6	16
	7,501 to 12,500	40	44**	42	45	41**	44*	46**	51	60	57	58**	56	53	55														
	12,501+	37	35**	36**	54**	49	46*	53	49*	58	62	53**	58	52*	52														

Characteristic	Subgroup	% support													Spread for the year														
		'10	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20	'21	'22	'23	'10	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20	'21	'22	'23
	Don't drive	-	-	62**	63**	70**	71**	73**	61	70*	72**	64	63	56	68**														
Miles per gallon	≤19	-	-	-	39	43	40	43	52	45	52	58	53	50	48	-	-	-	19	14	19	10	13	14	14	4	9	8	9
	20 to 30	-	-	-	43	46	48*	53**	48	56*	59*	62	59*	53	50														
	31+	-	-	-	58**	58**	59**	54*	61	59*	65**	61	62**	59**	58**														
Transit use in last 30 days	Used transit	56	60	49	67	67	64	75	63	-	69	66	63	64	67	16	15	9	22	21	17	26	11	-	11	6	5	10	16
	Did not use transit	40**	45**	41**	46**	46**	47**	49**	52**	-	58**	60*	58	54**	51**														
Community type (self-reported)	Urban	-	-	-	-	-	-	-	-	-	65	67	66	62	63	-	-	-	-	-	-	-	-	-	8	10	14	17	16
	Suburban	-	-	-	-	-	-	-	-	-	63	60**	56**	55**	52**														
	Small town	-	-	-	-	-	-	-	-	-	60	58**	58*	58	49**														
	Rural	-	-	-	-	-	-	-	-	-	57**	57**	51**	45**	47**														