Finding Support for "Green" Transportation Taxes: Should We Look for Supportive Places or Supportive People? (#18-01976)

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ABSTRACT

The urban-rural divide is a common trope in social and political discourse in the United States. Policy makers and voters are influenced by this dichotomy and by the common assumption that populations in these geographies think differently about taxation and public spending. We examine this assumption using a representative dataset from a nationwide random phone survey containing opinions on transportation taxation from 2010 to 2016. This analysis compares respondents from cities, small towns, and rural locations along socio-economic and transportation-related personal characteristics. Initial exploratory analysis suggests that people from cities are indeed different than those from small towns and rural locations, while people from small towns and rural locations are less dissimilar. City dwellers are slightly more supportive of green transportation taxes than those from smaller towns and rural geographies. In advanced evaluations, however, mixed-effects logistic specifications that control for spatial and temporal variation and specific differences in socio-economics and transportation factors reveal that it may not matter as much where you live as who you are. The analysis shows that no matter where you live, you are likely to support transportation taxes if you are younger, female, Hispanic, and identify as a Democrat.

Keywords: cities; gasoline tax; mileage tax; public opinion; rural; small towns

Dear readers, please begin our article by considering this quiz:

> *Two TRB Annual Meeting 2018 attendees are eating lunch together in a crowded cafeteria at the Washington D.C. Convention Center. One is a city councilmember from Tiny Town and the other a councilmember from Big City. Both councilmembers are considering whether their constituents would support a new transportation tax with revenues dedicated to making the transportation system more environmentally friendly. Both councilmembers also happen to represent communities with roughly similar socio-demographic characteristics. Which councilmember is likely to have a larger proportion of constituents who support the new tax concept?*
>
> *(a) Tiny Town*
>
> *(b) Big City*
>
> *(c) Neither – both councilmembers will have similar proportions of supportive constituents*

1. INTRODUCTION

The transportation sector is a major generator of both greenhouse gases and air pollutants. Policy and planning tools can reduce these impacts in many ways, through so-called "green" policies that encourage drivers to choose more sustainable fuels, more sustainable modes or to reduce vehicle miles driven. Starting in the 1970s, the federal and state governments in the United States took the lead in adopting measures to promote greener travel, but in recent years regional and local governments are increasingly active in green transportation policies, whether by introducing complete streets, improving transit service, or buying gross polluting older vehicles and removing them from the vehicle fleet. If regions and smaller communities are to have a major impact addressing the environmental impacts of transportation, however, a broadening spectrum of communities need to more actively pursue such policies. And in order for broader local adoption of green transportation policies, elected officials need to feel confident that they can identify appropriate policies that the electorate will support (or at least tolerate).

This paper explores that broader subject from the angle of public support for "green" transportation taxes or fees, ones designed to improve environmental quality at the same time as raising essential transportation revenues. A handful of other studies have explored public support for green transportation taxes and fees at a state or national level, but not tried to pinpoint lessons useful for local government officials interested in green transportation taxes. In this paper, we look specifically at the question of how support for green taxes may be linked to the type of community, comparing urban areas, small towns, and rural communities. In particular, we address two research questions:

- Question #1: Does support vary by *place*? In other words, does support correlate with geography as indicated by community type (cities, small towns, and rural areas)?

- Question #2A: If yes, does support come from the *place* or the *people*? In other words, if support varies by community type, is this variation caused more by factors related to the community type (geography) or by the personal characteristics of the people who live there, measured in terms of socio-demographic and transportation factors?

- Question #2B: If *people*, which personal characteristics are correlated with support for green transportation taxes?

We answer these questions using data from seven years of an annual random-digit-dial survey of Americans that asks if they would support or oppose raising various transportation taxes. The survey asks respondents their opinions about raising federal taxes rather than local ones, but we believe the data set is reasonable to use for this study on the assumption that opinions *between groups,* whether categorized by place or personal characteristics, will be similar for national and local green transportation taxes. To answer the research questions, we use simple descriptive statistics and statistical tests to check for significant differences by community type, as well as use mixed-effect modeling.

The following paper sections are organized as follows. Section 2 reviews relevant literature, Section 3 describes the survey data used in the analysis, Section 4 presents findings that answer Question 1, Section 5 presents findings that answer Questions 2a and 2b, and Section 6 concludes the paper with a summary of findings, policy implications, study limitations, and suggestions for future research.

2. LITERATURE REVIEW

Only a few relevant studies explore whether linking a transportation tax to a green objective raises support compared to a non-green version, but these all find that the green versions are indeed more popular. A 2010 study of Californians by Agrawal, Nixon, and Dill (*1*), two studies by Austin and Callow in 2012 and 2013 (*3, 2*), and a 2010 - 2017 annual series of US-wide polls by Agrawal and Nixon have all asked about support for green versions of gas taxes and mileage fees (*3*).

Because research on public support for "green" transportation taxes is limited, one must primarily look to related literature on transportation taxes in general for insight. In general, demographic characteristics tended to be poor predictors of support for green taxes compared with attitudinal variables. Agrawal, Nixon, and Dill (*1*) found that overall support for green versions of a gas tax or mileage fee was higher than for non-green versions, while multi-variate analyses demonstrated that pro-environment and pro-government attitudes were strong predictors of support. Similarly, in (*2*), survey respondents who exhibited high levels of environmental concern were more supportive of green transportation tax alternatives while demographic variables, other than gender, were insignificant. Austin and Callow (*3*) also consider these issues and note that attitudinal variables often play a mediating role between demographic characteristics and preferences for different revenue alternatives including variable fees based on vehicle pollution levels. In (*3*), a detailed comparison of support for ten tax options including three green variants across a wide range of sociodemographic, travel behavior, and attitudinal variables is presented. Linking a tax to environmental benefits dramatically increased support, across all population subgroups, although some groups saw greater boosts in support for the green options including younger adults, Democrats, those with pro-government attitudes, and people who drive more fuel-efficient vehicles.

Since the literature on public opinion about green taxes is sparse, it is useful to look at studies that explore, broadly, the factors that influence support for transportation taxes in general. Although many surveys have tested public support levels for different gas tax and mileage fee

options (*3*, Chapter 2 and Appendix B), relatively few of these look at all at how personal characteristics correlate with support. Among those that do, common variables studied are age, gender, ethnicity and race, and political affiliation. Analytically, the most common method used is a cross-tab analysis to show how support varies among people with different characteristics, such as support among women versus men (e.g., *5*). Just a handful of studies take a deeper look, such as using statistical modeling tools to isolate the influence of specific factors (*1*, *6, 7, 8*, *9, 10*).

Looking across those studies that used more nuanced methods to look at how personal characteristics may correlate with support for transportation taxes, no clear patterns emerge other than the role of political affiliation. For example, only two studies found any correlation at all with gender, and the directions were inconsistent—women were more supportive in (*1*) but less supportive in (*7*). Similarly, with respect to age, only three studies found age linked to support, and the direction of the influence was inconsistent. In two studies younger people were more supportive of some but not all the tax options tested (*1*, *6*), while in another study younger respondents were less supportive (*7*). Findings are similarly inconsistent when one looks across the six studies at the role of income and race/ethnicity. However, political orientation does play a clearer role: most (though not all) the studies found a correlation between political orientation and tax support. In those, self-identified Democrats or liberals were more supportive of raising transportation taxes (*6*, *8, 7*, *10*, *9*).

Finally, none of the studies discussed above are designed to predict support for different types of communities (urban vs. small town vs. rural).

3. THE SURVEY DATA

This paper analyzes the results of a series of national, random-digit-dial (RDD) public opinion surveys conducted once a year for seven years, each spring, from 2010 to 2016. The complete dataset has 10,590 participants, as each year's survey produced 1,500 or more respondents. The surveys were implemented by professional survey research institutes at San José State University and later, Cal State University, Fullerton. Respondents were reached by cell and landline phone. For the first five years, about 20% of respondents responded on a cell numbers, with that number rising to 40% in the last two years. The surveys were administered in English and Spanish. The language of the questions analyzed in this paper remained identical from year to year. A copy of the exact questionnaire language is available in Agrawal and Nixon (*11*).

The researchers designed the survey questionnaire to test relative levels of public support for different federal taxes that would be used to raise new revenue for transportation. The three green tax options discussed in this article are variations on the idea of an increase in the per-gallon federal gasoline tax and a new national mileage tax. The survey told respondents specific rates for each new tax, to make the hypothetical revenue options easier for respondents to understand. The taxes analyzed in this paper are:

- *An "air pollution" gas tax*: Raising the federal gas tax rate from 18¢-per-gallon tax to 28¢ per gallon with the revenues to be spent only for projects to reduce local air pollution caused by the transportation system
- *A "global warming" gas tax*: Raising the federal gas tax rate from 18¢-per-gallon tax to 28¢ per gallon with the revenues to be spent only for projects to reduce the transportation system's contribution to global warming

- *A new mileage tax:* This new tax would be levied on every mile driven, with electronic meters being used to track miles driven and drivers being billed when they buy gas. The rate charged would average 1¢ per mile, but vehicles that pollute less would be charged less and vehicles that pollute more would be charged more

The survey also included a standard set of sociodemographic questions (age, education, gender, income, political affiliation, and race/ethnicity); questions about travel behavior (annual miles driven, vehicle fuel efficiency, and transit use in the past 30 days); as well as questions about respondents' opinions about their local and state transportation system. These latter questions focused on respondents' rating of the quality of the transportation system where they live and the priority they felt government should place on making improvements to the system.

The pooled survey data (2010-2016) compares reasonably closely to national U.S. population data. There are some minor differences. Our sample has a smaller proportion of Hispanics and Blacks, but more Whites. Survey respondents tend to have more formal education and are older compared to the U.S. population. These differences are not unusual for telephone surveys. With minor exceptions, the differences between the sample and the U.S. population are not large, but care should be taken when generalizing from our results to the national population. Readers wishing to see a comparison of the respondent demographics to the full US population for each survey year will find these in the project reports for each survey (*11*, and earlier surveys cited therein).

4. DOES SUPPORT VARY BY PLACE?

Sub-groups within the population may vary based on where they live. For example, the urban-rural divide is a common trope used in social and political discussion suggesting that people from cities and rural locations are different in important ways. Given the definitions used by the US Census it is possible to segment the population even further. Specifically, the US Census defines urbanized areas as locations with 50,000 people or more and urban clusters as places with at least 2,500 and less than 50,000 people—the remaining locations with human habitation are considered rural (*12*). These definitions are used here to segment the sample into those living in cities, small towns, and rural locations respectively.

We assign each survey respondent to one of these three geographic groups based on the home zip code they report. This is done by first locating the centroid within each zip code polygon and then performing a spatial join with a TIGER/Line® file for urban areas from the U.S. Census. This process allows us to identify zip codes that are inside and proximate to cities and small towns. In this research, a five-mile distance is considered proximate with the assumption that households in zip codes within this distance of an urban area will be influenced by the urban geography and will therefore have similar choices regarding green transportation taxes. In the sample, there are 6,866 (or 65%) city respondents, 1,461 (or 14%) are in small towns, and 1,207 (or 11%) are in rural locations—1,056 (or 10%) respondents did not provide zip code information.

Table 1 shows comparisons between the three sub-samples: cities, small towns, and rural locations, presenting first the support for the three green tax options followed by the variables that describe the personal characteristics of the respondents—demographic, transportation use/availability, and geographic.

TABLE 1 Comparing Respondents' Support for "Green" Transportation Taxes and Key Sample Characteristics by Geography (Cities, Small Towns, and Rural Locations)

	Cities [a]		Small towns [a]		Rural locations [a]	
Support for Taxes						
Mileage tax (1 cent/mile) tied to vehicle's pollution level [b]	47%		38%		34%	
Gasoline tax (10 cents more/gallon) with spending tied to reducing local air pollution caused by the transportation system [b]	42%		33%		30%	
Gasoline tax (10 cents more/gallon) with spending tied to reducing the transportation system's contribution to global warming [b]	47%		37%		34%	
Demographic Variables	Mean	SD	Mean	SD	Mean	SD
Age (years)	53	18	56	17	55	16
Female [c]	53%		54%		55%	
Hispanic [c]	11%		5%		5%	
Years of education	15	2	14	2	14	2
Annual household income ($)	77,899	50,349	66,961	45,117	59,719	40,100
Identify as a Democrat [c]	41%		32%		33%	
Transportation Variables	Mean	SD	Mean	SD	Mean	SD
Annual miles driven using all owned vehicles	10,086	14,124	12,093	17,630	13,149	19,503
Fuel efficiency of primary vehicle (miles/gallon)	22	10	23	9	23	9
Good local transit service available [c] (very good or somewhat good service = 1, poor or no service = 0)	67%		37%		28%	
Geographic Variables	Mean	SD	Mean	SD	Mean	SD
Population density in home zip code in 2013 (people/mi^2) [d]	4,299	8,783	186	275	55	87
Density of children fourteen years and under in home zip code in 2013 (children/mi^2) [d]	770	1,500	35	52	10	17
Housing unit density in home zip code in 2013 (housing units/mi^2) [d]	1,824	4,210	84	130	25	42

Note: A more detailed analysis comprising of chi-square tests and phi statistics of association was carried out (not shown) for nominal variables, which revealed that there is very weak to no association (phi value under 0.26) for the hypotheses tested. Similarly, pairwise comparison using ANOVA tests (not shown) was carried out to compare means between samples.
[a] US Census definitions and TIGER/Line® shapefiles for Urbanized Areas (= Cities), Urban Clusters (= Small Towns), and Rural locations are used to categorize respondent by Zip Codes into the sub-samples shown (https://www.census.gov/geo/reference/ua/urban-rural-2010.html).
[b] Act as dependent variables for the models presented in TABLE 2. These variables were recoded from responses "strongly support" or "somewhat support" as one and "somewhat oppose" or "strongly oppose" as zero.
[c] Binary variables. Reported percentages show what portion of sample has the feature of interest.
[d] Entered the models transformed as natural log.

A detailed analysis comprising of chi-square tests and phi statistics of association as well as pairwise comparison using ANOVA tests was carried out (not shown). The analysis looked at levels of support or opposition for the three transportation tax options. Comparisons across the three groups reveal that support for the tax options is higher among city dwellers as compared to respondents in both small towns and rural locations. Roughly a third of the small town and rural respondents say that they would support gasoline taxes that dedicate revenues to reducing local air pollution or addressing global warming or a green mileage tax that is tied to vehicle pollution levels—city dwellers' support for these taxes is around 45%. Overall, the findings indicate that city dwellers are indeed statistically different with respect to socio-economic factors and transportation use than their counterparts from small towns and rural locations, but residents in the latter two categories are fairly similar to each other.

5. DOES SUPPORT VARY BECAUSE OF THE PLACE OR BECAUSE OF THE PEOPLE?

The basic descriptive statistics presented in section 4 show that support levels do vary somewhat by city versus small town versus rural geography. That analysis, however, leaves open the question of why that difference exists and whether it will hold for all urban and rural areas, regardless of who lives in them. Are levels of support deeply related to the geography—the place—or are they explained more by the personal characteristics of the people? For example, if people in cities are more supportive than people in rural areas, is that because cities have a higher proportion of the *type* of person who supports green taxes or because the place itself (e.g., through higher population density) leads to more support for green taxes? The answer to this issue—research question #2 in the paper—is teased out using fixed-effects models. Section 5 first explains why this model was chosen and how it works, and then describes how the model results help answer both parts of research question #2.

5.1 Model Specification

To further explore the question as to whether it matters more where you live, or who you are, models are developed to examine support for the three transportation tax options. A mixed-effects model, combining both fixed and random effects, is utilized, where the binary dependent variables are support (coded 1) or opposition (coded 0). The advantage of a mixed model is that is allows for a flexible approach when correlated data is present in the analysis. Table 2 presents the full model results consisting of both fixed-effects as well as random effects (*13*).

The fixed effects include variables capturing respondents' specific socio-economic and transportation characteristics (see the upper part of Table 2). Spatial and temporal factors comprise the random effects shown in the middle section of Table 2. A household's location within the surrounding geography can impact transportation activities such as miles driven, thus suggesting the prevalence of spatial effects. Additionally, since the data was collected between 2010 and 2016, there are time-related effects that are not otherwise captured. For example, fluctuations in gasoline prices are likely to vary by both location and time; however, data are not available at a fine spatiotemporal resolution for such factors. Since it is possible for outcomes to be correlated within geography and time, leading to potential biases, random effects are used to control for these spatial and temporal variations (*13*).

Several socio-economic variables were included in the models including: age, gender, ethnicity, education, income, and political affiliation. Race variables (for Black, Asian, and Other) were also tried as explanatory variables in the modeling effort, but they were dropped since they had insignificant coefficients. White as a nominal variable was not included since there was concern with double counting with Hispanic individuals.

5.2 Modeling Results

Model results are reported in Table 2. In addition, graphical representations of the incremental impact on likelihood of support for the three tax options due to changes in key transportation and socio-economic variables are shown in Figure 1 and Figure 2. These average marginal effects graphs allow for a more nuanced understanding of how these variables influence support across the various tax alternatives.

5.2.1 The Role of Place

The first key finding is that place-based variables such as density play a *relatively* weaker role compared to socio-demographics, given that the density coefficients are very small. In other words, people matter more than place. Table 2 shows the random effects for the density covariates holding all else equal, are small but positive. This suggests that at higher densities for population, families with children, or housing units, more people are likely to support green transportation taxes.

5.2.2 The Role of People: Personal Characteristics Linked to Support

This research looks at which personal characteristics are correlated with support across the three tax options. The assumption is that the more consistent the predictors are (i.e., significant across all three options and same direction), the more likely that these characteristics would influence support for green transportation taxes, in general, not just for the three policies. The personal characteristics vary in how consistently they predict support:

- Consistent predictors: Younger age, female gender, Hispanic, and Democrat affiliation (significant for all three taxes)
- Moderate predictors: More education, lower income, good transit availability (significant for two taxes)
- Unreliable predictors: Fewer miles driven, more fuel efficient vehicle (significant for one tax)

In other words, people who are young, female, Hispanic, and/or Democrats are especially likely to support green taxes. There is mixed evidence that support is linked with more years of education, lower income, and good transit service availability, as these characteristics are linked to higher support for only two of the three tax options tested. Finally, the two travel behavior variables show that few annual miles driven and more fuel efficient vehicle are poor predictors of green taxes as they were significant for only one of the tax types. Figure 1 and Figure 2 show the impacts of these variables in more detail and are discussed next. The focus is on significant findings in the discussion but all graphs are presented. The comparisons allow the reader to see not just how the likelihood of support changes between the three taxes, but also the proportional magnitude of changes across the three tested tax regimes.

TABLE 2 Influence of Personal and Geographic Factors on Green Transportation Tax Support from Mixed-Effects Modeling

	Green mileage tax (MT)		Gasoline tax to reduce local air pollution (GT-Air)		Gasoline tax to reduce global warming (GT-GW)		Direction of Impacts (see Figures 1 and 2)		
							MT	GT-Air	GT-GW
Fixed-effects	Coef. [a]	P > |z|	Coef. [a]	P > |z|	Coef. [a]	P > |z|			
Age (years)	**-0.06**	0.00	**-0.06**	0.00	**-0.07**	0.00	–	–	–
Age squared	**0.0005**	0.00	**0.0004**	0.00	**0.0005**	0.00	+	+	+
Female (=1)	**0.32**	0.00	**0.26**	0.00	**0.29**	0.00	+	+	+
Hispanic (=1)	**0.31**	0.04	**0.31**	0.04	**0.34**	0.03	+	+	+
Years of education	**0.07**	0.00	0.02	0.32	**0.07**	0.00	+		+
Annual household income ($100,000)	-0.04	0.66	**-0.19**	0.02	**-0.22**	0.01		–	–
Identify as a Democrat (=1)	**0.58**	0.00	**0.65**	0.00	**1.05**	0.00	+	+	+
Annual miles driven using all owned vehicles (100,000)	-0.28	0.20	**-0.44**	0.05	-0.23	0.30		–	
Fuel efficiency of primary vehicle (miles/gallon)	**0.01**	0.04	0.00	0.79	0.00	0.30	+		
Good local transit service available (very or somewhat good = 1)	**0.15**	0.05	**0.25**	0.00	0.11	0.17	+	+	
Intercept	-0.57	0.17	0.92	0.02	-0.03	0.95			
Random-effects [b]									
Upper Nest (Spatial – Cities, Small Towns, Rural Locations)									
Population density in home zip code in 2013 (people/mi^2) [c]	1.71 E-12				1.61 E-07				
Density of children fourteen years and under in home zip code in 2013 (children/mi^2) [c]			1.75 E-03						
Housing unit density in home zip code in 2013 (housing units/mi^2) [c]	2.26 E-03		5.06 E-13		5.08 E-03				
Intercept	3.27 E-15		5.56 E-13		8.71 E-09				
Lower Nest (Temporal - Year of survey)									
Intercept	1.46 E-02		1.34 E-02		8.73 E-03				
Diagnostics									
Number of observations	3,412		3,407		3,392				
Initial log-likelihood	-2,237.68		-2,227.74		-2,156.93				
Final log-likelihood	-2,218.47		-2,217.22		-2,141.49				
Wald χ^2 (10)	146.85		184.53		288.73				
Prob. > χ^2	0.0000		0.0000		0.0000				
LR test vs. logistic model									
χ^2 (4)	15.65		13.40		24.21				
Prob. > χ^2	0.0035		0.0095		0.0001				

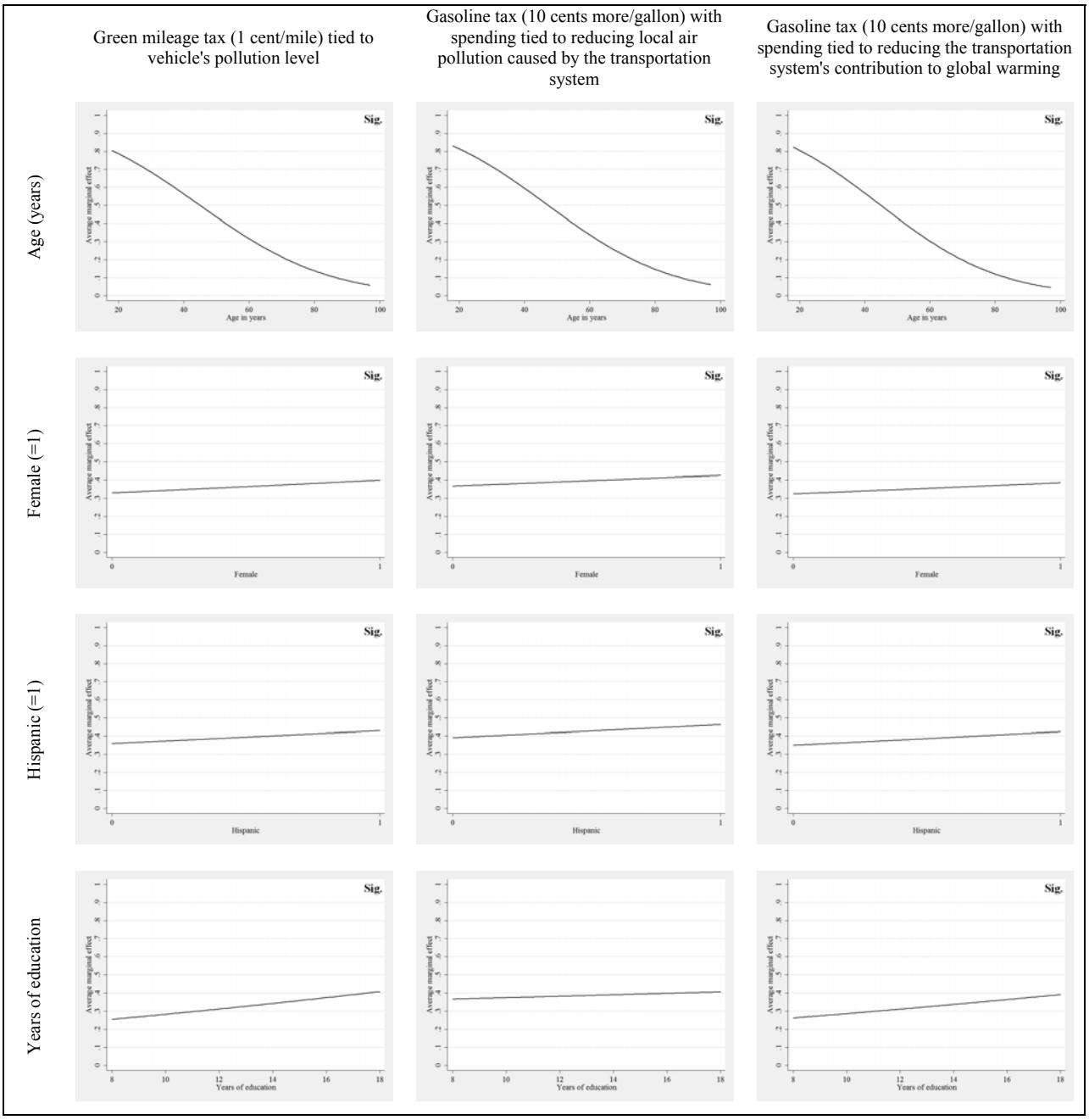
Notes:

[a] Bolded values in the fixed-effects section of the table are significant at 0.05.

[b] The upper level nest (grouping) is for geography and within each upper-level cluster are seven sub-nests for each survey year. Geography is the upper-level cluster since location choices are more firmly embedded in day-to-day living while the impacts of time are largely random and not controlled by individuals.

[c] Entered the model transformed as natural log.

Age has a negative impact on the likelihood of support for the three tax options; this diminishing support increases with each added year as shown with the squared term in Table 2. So an individual going from 20 to 21 years is less likely to change her mind on a green tax due growing a year older than an individual going from 60 to 61. The effect of age is starkly visible in Figure 1. Women show a slightly higher likelihood of supporting these three taxes than men. Respondents who identify as Hispanic similarly have a somewhat higher likelihood of support for the three green taxes.



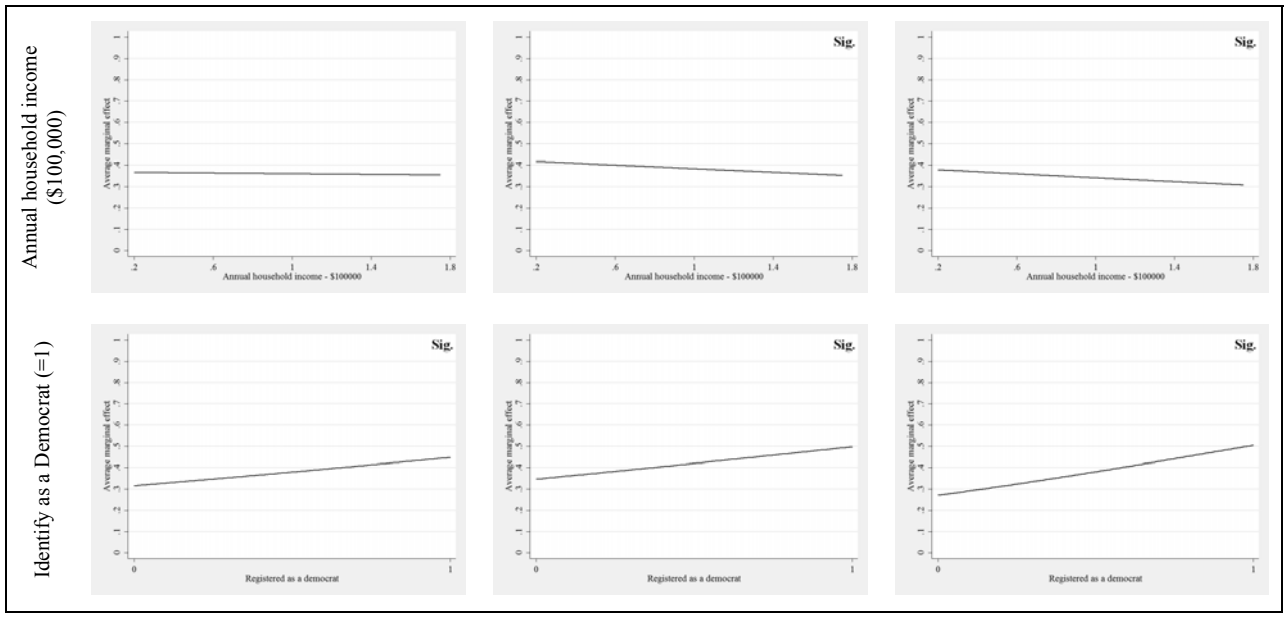


Figure 1 Average marginal effects for socio-economic factors.

Notes:

- The y-axis shows average marginal effect as probability for changing from opposition = 0 (intersection with x-axis) to support = 1. The x-axis shows the dependent variable under consideration.
- "Sig." on a graph indicates that the corresponding dependent variable has a significant coefficient in Table 2.

More years of education increases an individual's likelihood of support for the green mileage tax and the gasoline tax tied to reducing transportation system's global warming contribution holding all else constant. Households with higher annual income are less likely to support the two gasoline taxes. Respondents who identify as Democrats have a higher likelihood of supporting all three taxes holding all else equal. Marginal effects (Figure 2) show that green gasoline taxes have a greater likelihood of change, even among respondents who identify as Democrats, compared to a green mileage tax.

Figure 2 shows diminishing support for the gas tax linked to spending on air pollution reduction as annual miles driven increase. Specifically, individuals who drive less than 50,000 miles are more likely to support this tax than those who drive more than 250,000 miles per year. Individuals who report greater fuel efficiency for their primary vehicle have a higher likelihood of supporting a green mileage tax holding all else equal. Respondents who say that they have access to good local transit services are likely to support the green mileage tax and the gasoline tax tied to local air pollution projects—though having transit has a small impact on the likelihood of support.

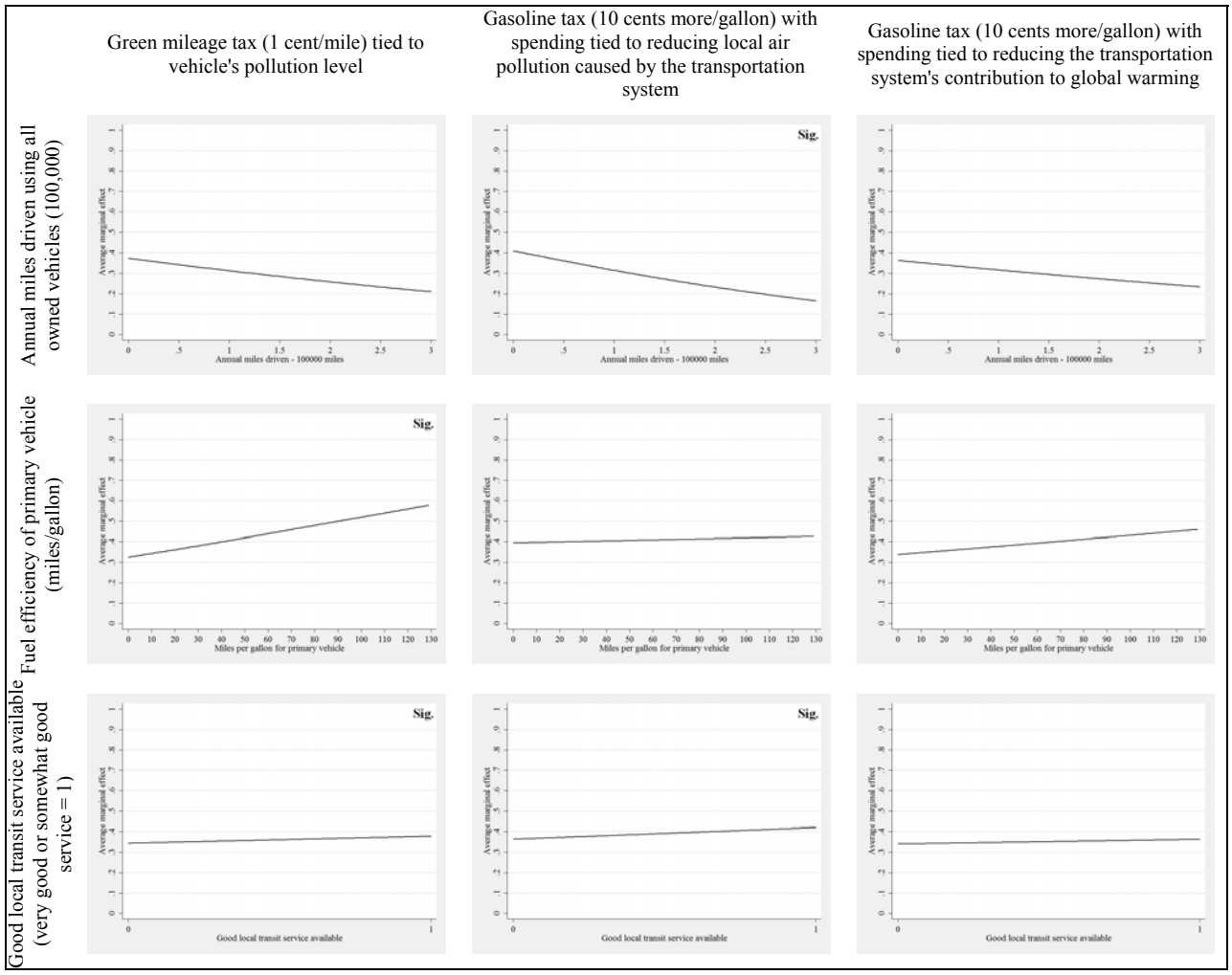


Figure 2 Average marginal effects for transportation factors.

Notes:

- The y-axis shows average marginal effect as probability for changing from opposition = 0 (intersection with x-axis) to support = 1. The x-axis shows the dependent variable under consideration.
- "Sig." on a graph indicates that the corresponding dependent variable has a significant coefficient in Table 2.

6. RELEVANCE FOR POLICYMAKING

This research uses a unique longitudinal dataset of public opinion on "green" transportation taxes, whereas most studies focus on cross-sectional surveys (e.g., *1* and *8*). Annually collected information from a representative random sample for the question of interest is rare in the United States. Further, the modeling framework successfully controls for random and fixed factors revealing marginal effects that are meaningful for policymaking. The findings from this work as they relate to the three research questions are as follows:

- Question #1: Does support vary by *place*? In other words, does support correlate with geography as indicated by community type (cities, small towns, and rural areas)?

  Answer #1: The study results show that yes, support levels vary by place. Support is

higher in cities than in small towns and rural areas. Differences between the latter two are small suggesting that small towns and rural locations have similar opinions about green transportation taxes.

- Question #2A: If yes, does support come from the *place* or the *people*? In other words, if support varies by community type, is this variation caused more by factors related to the community type (geography) or by the personal characteristics of the people who live there, measured in terms of socio-demographic and transportation factors?

  Answer #2A: The modeling results show that individual characteristics matter more than the location factors. Specifically, the impacts of location factors are multiple orders of magnitude smaller compared to those variables that are about the people living in each kind of community.

- Question #2B: If *people*, which personal characteristics are correlated with support for green transportation taxes?

  Answer #2B The personal characteristics that matter the most are younger age, female gender, Hispanic, and identifying as a Democrat.

As with any research, this study has some limitations. One point worth noting is that using data on people's *opinions* is an imperfect way to predict later behavior, such as voting on a ballot measure about a green transportation tax. Future research on support for green transportation taxes might focus on revealed preferences through other measures (e.g., *14*). A second key limitation is that the survey did not include information about environmental attitudes, which has been shown to be consistent predictor for support on environmental issues (*1*, *3*, *2*, *15*, *16*).

In summation, the quiz at the beginning of this paper is answered through this research — where the correct answer is (c): support for green transportation taxes is much less about a place and much more about the people. In other words, when it comes to green transportation taxes, similar kinds of Tiny Town residents are likely to have a similar level of support as Big City residents.

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